FORM S-1 · REGISTRATION STATEMENT

Health Catalyst Inc

IPO priced 2019-07-25 · $26.00 a share · HCAT



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As filed with the Securities and Exchange Commission on June 27, 2019.

Registration Statement No. 333- .

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

HEALTH CATALYST, INC.

(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

DELAWARE	7389	45-3337483
(STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION)	(PRIMARY STANDARD INDUSTRIAL CLASSIFICATION CODE NUMBER)	(I.R.S. EMPLOYER IDENTIFICATION NUMBER)

3165 MILLROCK DRIVE #400
SALT LAKE CITY, UT 84121
(801) 708-6800

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

DANIEL BURTON
CHIEF EXECUTIVE OFFICER

Health Catalyst, Inc.

3165 MILLROCK DRIVE #400
SALT LAKE CITY, UT 84121
(801) 708-6800

(NAME, ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF AGENT FOR SERVICE)

Copies to:

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Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended, check the following box. ¨ If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨ If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨ If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering. ¨ Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ¨	Accelerated Filer ¨
Non-accelerated Filer ý	Emerging growth company ý

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act of 1933, as amended. ý

CALCULATION OF REGISTRATION FEE

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	PROPOSED MAXIMUM AGGREGATE OFFERING PRICE(1)(2)	AMOUNT OF REGISTRATION FEE
Common Stock, $0.001 par value per share	$100,000,000	$12,120

(1) In accordance with Rule 457(o) under the Securities Act of 1933, as amended, the number of shares being registered and the proposed maximum offering price per share are not included in this table.

(2) Estimated solely for purposes of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended. Includes the aggregate offering price of additional shares that the underwriters have the option to purchase.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment that specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED , 2019

SHARES

COMMON STOCK

This is the initial public offering of common shares of Health Catalyst, Inc.

We are offering shares of our common stock. Prior to this offering, there has been no public market for our common stock. It is currently estimated that the initial public offering price per share will be between $ and $. We have applied to list our common stock on The Nasdaq Global Select Market under the symbol “HCAT”.

We are an emerging growth company under the federal securities laws and will be subject to reduced public company reporting requirements. See “Prospectus Summary—Implications of Being an Emerging Growth Company.”

Investing in our common stock involves a high degree of risk. See “Risk Factors” beginning on page 18.

	PER SHARE	TOTAL
Initial public offering price	$	$
Underwriting discount and commissions(1)	$	$
Proceeds, before expenses, to us	$	$

(1) See “Underwriting” for additional information regarding compensation payable to the underwriters.

We have granted the underwriters the right to purchase up to an additional shares of common stock.

The underwriters expect to deliver the shares against payment in New York, New York on , 2019.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities, or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

GOLDMAN SACHS & CO. LLC	J.P. MORGAN	WILLIAM BLAIR
PIPER JAFFRAY	EVERCORE ISI	SVB LEERINK
	SUNTRUST ROBINSON HUMPHREY	

, 2019

	PAGE
Prospectus Summary	
Risk Factors	
Special Note Regarding Forward-Looking Statements	

Industry and Market Data	
Use of Proceeds	
Dividend Policy	
Capitalization	
Dilution	
Selected Consolidated Financial and Other Data	
Management's Discussion and Analysis of Financial Condition and Results of Operations	
Business	
Management	
	PAGE
Executive Compensation	
Certain Relationships and Related Party Transactions	
Principal Stockholders	
Description of Capital Stock	
Shares Eligible for Future Sale	
Material U.S. Federal Income Tax Consequences for Non-U.S. Holders of Our Common Stock	
Underwriting	
Legal Matters	
Experts	
Where You Can Find Additional Information	
Index to Consolidated Financial Statements	

We and the underwriters have not authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses we have prepared. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may provide you. We are offering to sell, and seeking others to buy, shares of common stock only in jurisdictions where offers and sales permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of the common stock.

Until , 2019 (25 days after the date of this prospectus), all dealers that buy, sell or trade our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

For investors outside the United States: We and the underwriters have not done anything that would permit this offering or the possession or distribution of this prospectus in any jurisdiction where action for those purposes is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside of the United States.

Prospectus Summary

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus, including our consolidated financial statements and the related notes and the information set forth under the sections titled "Risk Factors," "Special Note Regarding Forward-Looking Statements," and "Management's Discussion and Analysis of Financial Condition and Results of Operations," in each case, included elsewhere in this prospectus. Unless the context otherwise requires, we use the terms "Health Catalyst," "company," "our," "us," and "we" in this prospectus to refer to Health Catalyst, Inc. and, where appropriate, our consolidated subsidiaries.

Overview

We are a leading provider of data and analytics technology and services to healthcare organizations. Our Solution comprises a cloud-based data platform, analytics software, and professional services expertise. Our customers, which are primarily healthcare providers, use our Solution to manage their data, derive analytical insights to operate their organization, and produce measurable clinical, financial, and operational improvements. We envision a future where all healthcare decisions are data informed.

The Health Catalyst Way

Our Mission

Our mission is to be the catalyst for massive, measurable, data-informed healthcare improvement. We fulfill our mission through a confluence of the following elements:

- Data Platform: integrate data in a flexible, open, and scalable platform to power healthcare's digital transformation;
- Analytics Applications: deliver insights on how to measurably improve through the use of analytics applications;
- Services Expertise: enable data-informed improvement by providing analytical, clinical, financial, and operational experts; and
- Engagement: attract, develop, and retain world-class team members by being a best place to work.

The Health Catalyst Flywheel

We accomplish our mission with each of our customers by following a process we call the Health Catalyst Flywheel or the Flywheel. This process includes delivering on the three components of our Solution: data platform, analytics applications, and services expertise, which together drive measurable improvements. At the center of the Flywheel is the engagement of our team members. Team member engagement is foundational to everything we do and is the #1 priority of our CEO and broader leadership team. When team members feel connected to our mission and are listened to, cared for, and respected at an extraordinary level, they produce outstanding work, which enables our customers to measurably improve. As customers realize improvements, their trust in Health Catalyst builds, their engagement in our shared work increases, and they choose to renew and expand their relationship with us, while also referring Health Catalyst to key decision-makers at other potential customers. Customer renewal, expansion, and referral produce growing, scalable, and predictable financial performance.

The virtuous cycle described above creates momentum for our business and is encapsulated in the following diagram:

Given the central importance of team member engagement to our company's long-term success, we have been purposeful in defining and emphasizing operating principles and cultural attributes that reinforce the commitment to our mission and to team member engagement. We consistently focus on our operating principles and cultural attributes, as well as our mission and Flywheel (collectively, the Health Catalyst Way), which we review in all new hire orientations, company-wide meetings, and board of directors' meetings. Furthermore, we regularly measure our team member engagement and adjust our practices based on team member feedback. We have demonstrated an elite, consistent level of team member engagement over time as demonstrated by a 95th to 99th percentile ranking by Gallup.

We will continue to emphasize the Health Catalyst Way, including our operating principles and cultural attributes, which we believe will be central to our long-term success.

Our Operating Principles

The principles that govern our daily interactions include:

Improvement

- We are deeply committed to enabling our customers to achieve and sustain measurable clinical, financial, and operational improvements
- We nurture deep, long-term customer partnerships because achieving and sustaining improvement is a transformational journey (not a quick trip)
- We pragmatically balance the vision, priority, and pace of innovation for data and analytics technology. We prioritize innovations that accelerate improvement
- We attract, develop, and retain experts who know best practices in their domain, leverage analytics for insight, and accelerate adoption for sustained improvement

Ownership

- We are accountable, as owners, to enable our customers' measurable improvements
- We make decisions that balance and optimize the interests of our teammates, customers, patients, and owners
- We avoid an entitlement mentality and are good stewards of our assets
- We don't micro-manage and we encourage autonomy while also supporting scalable consistency

Respect

- We recognize the immeasurable value of every individual
- We listen carefully to one another and learn from each of our colleagues

- We care deeply about our colleagues, including teammates, customers, patients, and owners
- We benefit from one another's diverse backgrounds and experiences

Transparency

- We courageously tell the truth and we face the truth
- We are the same company, culture, and people in all settings
- We treat confidential information appropriately, and we protect the private data of our customers' patients
- We recommend the best solutions for our customers, whether or not those solutions come from Health Catalyst

Our Cultural Attributes

The attributes we prioritize in hiring, retention, and promotion include:

Continuous Learner

- I can learn from anyone
- I love to learn, and I am a lifelong student
- I recognize my mistakes and correct them quickly; I fail fast
- I am open to and respond favorably to feedback and coaching
- I value my autonomy and use it to gain new knowledge and skills
- I recognize that diversity of perspectives leads to better decisions
- I am self-aware and seek improvement, personally and professionally
- I watch, listen, and learn from others; thank them for their teachings; and apply the teachings to the mastery of my profession

Hard Working

- I have a deep commitment to massive healthcare improvement
- I stick to the task until the job is completed, then take on new work
- I lead a balanced, healthy life that enables me to sustain my pace
- I am willing to contribute more than my fair share to a project
- I make personal sacrifices, as needed, to get the work done
- I recognize that not every part of my job will be fun

Humble

- I listen first
- I assume positive intent
- I ask for help when I need it
- I serve others without looking for recognition
- I am secure in my own abilities (quiet self-confidence)
- I seek to improve myself before trying to improve others

- I am excited when others succeed and I offer sincere praise

- I often acknowledge others for their contributions to my success

- I frequently express gratitude and appreciation to those around me

World-Class

- I strive to be the best in the world at what I do by continuously learning

- I recognize the importance of excellence in pursuit of our mission

- I am well informed about events and trends in healthcare, data, and analytics

- I actively contribute to the company's pursuit of excellence – in the data and analytics technology we build, in the domain expertise we provide, and in the functions that support this important work

Business Overview

Healthcare organizations operate in an environment that is characterized by waste, changing economics, and data complexity. Organizations that leverage analytics to make data-informed decisions will be better positioned to succeed in this environment. Our customers, which are primarily healthcare providers, use our Solution to manage their data, derive analytical insights to operate their organization, and produce measurable clinical, financial, and operational improvements.

The core elements of our Solution include:

- Data platform. Our cloud-based Data Operating System (DOS™) is a healthcare-specific, open, flexible, and scalable data platform that provides customers a single comprehensive environment to integrate and organize data from their disparate software systems, enabling a broad range of analytics.

- Analytics applications. Our software analytics applications build on top of our data platform to provide foundational or domain-specific insights that improve our customers' clinical, financial, and operational performance. We also provide a broad range of pre-built data models and visualizations that can be tailored to specific customer needs, which we refer to as analytics accelerators.

- Services expertise. Our world-class team consists of both analytics experts and domain experts who leverage our technology to help our customers shorten time-to-value and achieve sustainable measurable improvements.

Our approach to integrate data, analytics, and expertise into a holistic Solution is differentiated and has been recognized as among the best in the industry by multiple third parties, including KLAS, Chilmark Research, and Black Book. Our customers achieve sustainable measurable improvements through our Solution. Example improvements include:

- Allina Health generated savings of up to $125 million in a given year using our Solution across numerous clinical, financial, and operational improvement projects. In one example improvement, Allina Health utilized our Solution to drive higher adherence to sepsis treatment best practices, achieving over $1 million of cost savings and over 30% reduction in severe sepsis and septic shock mortality.

- UPMC utilized our Solution to more deeply understand their cost and clinical variation, realizing $38 million in clinical, financial, and operational improvements over a multiyear period. The improvements spanned across its service lines, including $15 million in supply, drug, and pharmaceutical reductions from interventions such as order set standardization and protocol development.

- Mission Health became recognized as one of the best Accountable Care Organizations (ACO) in the nation by utilizing our Solution to improve processes in order to optimize performance against its ACO's Medicare Shared Savings Program (MSSP) measures, saving Medicare over $11 million and achieving 100% of all at-risk dollars.

Since 2015, we have generated more than 650 documented, customer-verified improvements across clinical, financial, and operational domains. In addition to the positive ROI of customers utilizing our Solution versus a homegrown solution, each of these documented improvements is highly valuable to our customers, enabling them to realize substantial clinical improvements, financial savings, or operational efficiencies. As we deliver measurable improvements, trust builds, and our customers engage with us more broadly and refer new business to us. This is evidenced by the continued increase in documented improvements achieved by our customers over time. Customers who have recently contracted with us have already started achieving measurable improvements, while longer-standing customers have seen the number of annual improvements meaningfully grow. For the 12 months ended March 31, 2019, customers who contracted with us in 2017 and 2018 experienced approximately one improvement on average, customers who contracted with us in 2015 and 2016 experienced approximately six improvements on average, and customers who contracted with us prior to 2015 experienced more than 15 improvements on average.

We serve the majority of our customers through a subscription-based contract model. As of December 31, 2018, we served 126 customers, including 50 customers with a DOS subscription contract (DOS Subscription Customers). The majority of our customers not on a DOS subscription contract are interoperability subscription customers resulting from our recent acquisition of Medicity LLC (Medicity). We have achieved rapid DOS Subscription customer growth in part due to strong customer retention and customer referrals. We have achieved Dollar-based Retention Rates of 108% and 107% for the years ended December 31, 2017 and 2018, respectively. As of May 2019, our last 12 months average KLAS Evangelism score, similar to a net promoter score, for our Solution was 62, which is twice the industry average of 30. Our customers include academic medical centers, integrated delivery networks,

community hospitals, large physician practices, ACOs, health information exchanges, health insurers, and other risk-bearing entities. Example customers include Acuitas Health, Allina Health, AlohaCare, Children's Hospital of Orange County, Community Health Network, Partners HealthCare, UnityPoint Health, and UPMC.

We currently employ more than 700 team members including over 200 analytics experts and over 65 domain experts. For the years ended December 31, 2017 and 2018, and for the three months ended March 31, 2018 and 2019, our total revenue was $73.1 million, $112.6 million, $20.6 million, and $35.2 million, respectively. For the years ended December 31, 2017 and 2018, and for the three months ended March 31, 2018 and 2019, we incurred net losses of $47.0 million, $62.0 million, $12.2 million, and $13.7 million, respectively. For the years ended December 31, 2017 and 2018, and for the three months ended March 31, 2018 and 2019, our Adjusted EBITDA was $(35.4) million, $(38.1) million, $(9.3) million, and $(6.7) million, respectively. See “Selected Consolidated Financial and Other Data - Reconciliation of Non-GAAP Financial Measures” for more information about Adjusted EBITDA, including the limitations of such measure and a reconciliation to the most directly comparable measure calculated in accordance with GAAP.

Industry Overview

A number of important industry challenges and market dynamics are transforming the way data and analytics are used by healthcare organizations. We believe the current confluence of healthcare waste, changing economics, and data complexity create a unique opportunity for meaningful clinical, financial, and operational improvements in healthcare.

Unprecedented waste amidst unsustainably high and rising healthcare costs

Research estimates 30% of U.S. healthcare spending is wasteful in nature, implying more than $1 trillion of waste amongst $3.6 trillion of total healthcare expenditure in 2018. For the healthcare system to operate more sustainably and thrive in the long term, constituents must be data informed to reduce excess utilization, unnecessary variation, and inefficiency.

Changing economics due to financial pressure and the move to value-based care

Over the past several years, public- and private-sector payors have reduced fee-for-service reimbursement rates, increasing pressure on healthcare providers’ profitability. At the same time, providers are experiencing a shift from volume to value-based payment models, impacting reimbursement. Increasing margin pressure coupled with the move to value-based care models present economic complexity and uncertainty for healthcare providers that can be better managed through the use of data and analytics.

Proliferation and increasing complexity of healthcare data

The U.S. healthcare system has invested billions of dollars to collect vast amounts of detailed information in digital format. Examples of major areas of this investment include electronic transactional systems that digitize clinical information (e.g., Electronic Health Record (EHR) systems, pharmacy, laboratory, imaging, patient satisfaction, and healthcare information exchanges), financial information (e.g., general ledger, costing, and billing), and operational information (e.g., supply chain, human resources, time and attendance, IT support, and patient engagement). These investments have led to a proliferation of healthcare data, which is expected to exceed 10 zettabytes by 2025, and will include socioeconomic, genomic, and remote patient monitoring information.

Collecting, storing, and using healthcare data is complicated by the breadth and depth of disparate sources, the multitude of formats, and increasing regulatory requirements. Legacy clinical software and industry-agnostic horizontal data vendors have attempted to enter the healthcare data space but have been unsuccessful due to the healthcare-specific content, logic, and advanced analytics capabilities required. In addition, many healthcare organizations have attempted to develop their own analytics solutions but have found them to be too costly to develop and maintain. They have also looked to traditional EHR vendors; however, these vendors lack the capabilities needed to compile and derive analytics insights from the vast number of available data sources in a flexible manner that drives time-to-value.

After decades of investing in EHR technology, the state of interoperability is insufficient and inhibits care coordination, health data exchange, clinical efficiency, and the quality of care provided to patients. Given that the EHR is the principal electronic interface used today at the point of care, the path to improved data-driven decision support will require integration between EHR systems and other data and analytics providers. Incidentally, the U.S. healthcare system is in the midst of an “open data wave,” with increasing focus and demand for patient data interoperability. Additionally, recent laws and regulations, such as the 21st Century Cures Act, promote and prioritize interoperability and the free exchange of health information.

Problems Our Customers Face

As the U.S. healthcare system continues to evolve due to the aforementioned waste, changing economics, and data complexity, healthcare organizations must undergo fundamental transformations to stay relevant, compliant, and competitive. To meaningfully change and improve, we believe healthcare organizations must solve key problems related to data, analytics, and expertise, which most have not solved today.

Problems Related to Data, Analytics, and Expertise	
Data	■ Harmonizing disparate and siloed data into a "single source of truth" ■ Ingesting large quantities of structured and unstructured data ■ Building and maintaining healthcare registries, measures, and data models ■ Operationalizing machine learning models and natural language processing queries ■ Realizing value in a timely, scalable, and cost efficient manner
Analytics	■ Identifying the highest value and most impactful improvement opportunities ■ Producing meaningful insights from using only industry-agnostic analytics tools ■ Leveraging analytical insights generated across the healthcare industry
Expertise	■ Conducting sophisticated analytics, including opportunity prioritization, quality and process improvement, and data modeling ■ Recruiting and retaining top talent, including data analysts and scientists, and clinical, financial, and operational subject-matter experts ■ Leveraging industry best practices and expertise developed from numerous domain- specific engagements

Only after healthcare organizations have resolved their data, analytics, and expertise challenges, can they focus on addressing key clinical, financial, and operational problems that are critical to realizing improvements. We believe our Solution enables our customers to solve these problems.

Key Clinical, Financial, and Operational Problems

Clinical	Financial	Operational
■ Maintaining consistency in quality and quantity of care ■ Optimizing clinical success and patient safety metrics ■ Identifying high-risk, high-cost patients to enhance care management	■ Measuring the true cost of care from current cost accounting methods ■ Comprehending population-level cost and quality of care to engage in value-based care risk models ■ Understanding and improving the revenue cycle and cash collection processes	■ Monitoring, prioritizing, and submitting complex and evolving metrics to regulatory agencies ■ Creating automated, real-time reporting methods ■ Streamlining supply chain processes and optimizing costs ■ Implementing efficient staffing models to optimize labor costs

Our Solution

Our Solution empowers our customers to run a data-informed business, driving measurable clinical, financial, and operational improvements. The diagram below illustrates the three layers of our comprehensive Solution:

- Data platform. The first part of our Solution and the foundation of what we do is DOS, a healthcare-specific, cloud-based, open, flexible, and scalable data platform that provides customers a single comprehensive environment to integrate and organize data from their disparate software systems. It has been built with modern technology and is deeply embedded with healthcare domain knowledge, enabling a broad range of analytics. DOS has amassed one of the largest and most comprehensive data assets of its kind, which enables us to deliver differentiated insights to our customers.

- Analytics applications. The second part of our Solution is our suite of software analytics applications which are built on top of DOS and are designed to analyze the most common problems our customers face. These analytics applications allow our customers to pinpoint opportunities for measurable improvements across their entire enterprise and are employed by a broad range of users from healthcare executives to front-line clinicians providing care. We developed this suite of foundational and domain-specific software analytics applications over the last three years based on thoughtful measurement of the most critical analytics needs faced by our customers. The majority of them became generally available for deployment in 2018, with more to be released in the coming years. Our software analytics applications are further enhanced by a broad range of analytics accelerators, which are pre-built, configurable data models with customizable visualizations that can be tailored to specific customer needs.

- Services expertise. The third part of our Solution is our services expertise. Our world-class team consists of both analytics experts, such as data analysts, data engineers, and data scientists, and domain experts, such as healthcare administrators, physicians, and nurses. These team members leverage our technology to help our customers shorten time-to-value and achieve sustainable measurable improvements.

Our Opportunity

We believe the market opportunity for our Solution is large and rapidly growing with strong tailwinds. We estimate the addressable market for our data platform to be approximately $2 billion, our analytics applications portfolio to be approximately $3 billion, and our professional services offerings to be approximately $3 billion, which total an approximately $8 billion addressable market. We calculate our market opportunity from the number of health systems and risk-bearing entities that can benefit from our Solution using market pricing. We estimate our core market to include more than 1,200 U.S. health systems and risk-bearing entities. We intend to grow our addressable market through new product offerings, international expansion, market adjacencies such as life sciences, and growth of relationships with risk-bearing entities.

Our Strengths

Our operational and financial success is based on the following key strengths:

- Healthcare-specific, flexible, open, and scalable data platform. DOS was purpose-built to handle healthcare-specific data management and analytics use cases, including the ingestion of disparate healthcare data sources. Through our flexible, open, and scalable design, we enable faster and more repeatable analytics, easier adoption, and integration by our customers, and quicker product iteration and deployment.

- Expansive and growing data asset. DOS contains one of the largest and most comprehensive data assets of its kind with more than 100 million patient records, encompassing trillions of facts. We source data from more than 300 distinct siloed sources including clinical, claims, financial, patient satisfaction, and administrative data domains. The extensiveness and richness of the data asset allow us to deliver differentiated solutions to our customers.

- Integrated and comprehensive nature of our Solution creates measurable improvements. Through the delivery of our comprehensive and integrated Solution of data, analytics, and services expertise, we enable measurable improvements for our customers. Since 2015, our Solution has generated more than 650 documented, customer-verified improvements across clinical, financial, and operational domains.

- Attractive operating model. We have an attractive operating model due to the recurring nature of our revenue and the scalability of our data platform and analytics applications. The open and flexible nature of DOS makes it highly scalable, which allows us to deliver additional applications on top of DOS with limited incremental costs.

- Unique and differentiated culture focused on team member engagement. Our commitment to building and maintaining a culture where team members are highly engaged in our mission leads team members to build world-class data and analytics technology and to provide industry-leading expertise.

- Recognized industry leader by multiple third parties. The strength of our Solution has been recognized by multiple third-parties, including KLAS, Chilmark Research, and Black Book, as among the best in the industry. We have invested meaningful time and resources over the last decade to build a comprehensive and differentiated set of products and services, which is not easily replicated.

- Tenured management team with healthcare technology experience. Health Catalyst is led by a team of healthcare and data veterans with many years of combined experience leading digital transformation at health systems, such as Intermountain Healthcare and Northwestern University. The unique combination of talent and experience across healthcare and technology, as well as our management team's commitment to the Health Catalyst Way, underpin everything we do.

Our Growth Strategies

Our growth strategies reflect our mission to be the catalyst for massive, measurable, data-informed healthcare improvement. We believe our focus on multiple channels, as well as our collaborative company culture, will contribute to high levels of sustainable growth. Our strategic levers to drive growth include:

- Grow our overall customer base. As of December 31, 2018, we served 126 customers, of which 50 were on a DOS subscription contract, yielding total DOS Subscription Customer market penetration of approximately 4% of the more than 1,200 healthcare organizations in our core market. Further, healthcare providers outside of the United States face similar challenges to those in the United States, so we plan to opportunistically pursue international markets.

- Expand within our current customer base. Our relationship with a new customer oftentimes starts through the use of targeted analytics applications and services to pinpoint and achieve a single measurable clinical, financial, or operational improvement. As we deliver measurable improvements, trust builds, and our customers engage with us more broadly and purchase additional applications and services.

- Add new analytics applications and services offerings. Because our platform is open and we partner with our customers, we are able to identify new opportunities for further improvements and leverage that insight with other customers to develop new analytics applications and services offerings. We have used this process to build eight new software applications over the past three years and we will continue to invest in product development, particularly at the analytics applications layer of our technology stack.

- Grow our addressable market through additional healthcare business segment adjacencies. We believe there are significant applications for our Solution outside of our core market, as evidenced by our recent expansion into the life sciences market. Other business segment adjacencies include serving the employer space and additional types of providers and risk-bearing entities.

- Selectively pursue acquisitions and partnerships. We plan to continue identifying and evaluating opportunities where we can leverage our platform to scale and consolidate both data assets and best-of-breed applications. We believe that competing point-solutions vendors will have difficulty in growing their offerings into sustainable businesses, which we believe translates into a robust mergers and acquisitions pipeline for us. We have a track record of identifying and integrating new and complementary capabilities, including our acquisitions of Healthcare Data Works and Medicity. Moreover, we believe the companies we partner with and acquire choose us because of our collaborative, best-in-class culture, which we view as a differentiating factor in sourcing acquisitions and partnerships.

Risks Associated with Our Business and Government Regulation

Our business is subject to numerous risks, as more fully described in the “Risk Factors” immediately following this prospectus summary. You should read these risks before you invest in our common stock. In particular, risks we face include, but are not limited to, the following:

- We operate in a highly competitive industry, and if we are not able to compete effectively, our business and results of operations will be harmed.

- We may be unable to successfully execute on our growth initiatives, business strategies, or operating plans.

- If we fail to effectively manage our growth and organizational change, our business and results of operations could be harmed.

- If we do not continue to innovate and provide services that are useful to customers and users, we may not remain competitive, and our revenue and results of operations could suffer.

- Our business could be adversely affected if our customers are not satisfied with our Solution.

- If our existing customers do not continue or renew their contracts with us, renew at lower fee levels or decline to purchase additional technology and services from us, it could have a material adverse effect on our business, financial condition, and results of operations.

- Our Solution is dependent on our ability to source data from third parties, and such third parties could take steps to block our access to data, which could impair our ability to provide our Solution or limit the effectiveness of our Solution.

- Failure by our customers to obtain proper permissions and waivers may result in claims against us or may limit or prevent our use of data, which could harm our business.

- If our security measures are breached or unauthorized access to customer data is otherwise obtained, our Solution may be perceived as not being secure, customers may reduce the use of or stop using our Solution, and we may incur significant liabilities.

- Our results of operations have in the past fluctuated and may continue to fluctuate significantly, and if we fail to meet the expectations of analysts or investors, our stock price and the value of an investment in our common stock could decline substantially.

- Our pricing may change over time and our ability to efficiently price our Solution will affect our results of operations and our ability to attract or retain customers.

- Government regulation of healthcare creates risks and challenges with respect to our compliance efforts and our business strategies.

Corporate Information

We were incorporated under the laws of the State of Delaware in September 2011 under the name HQC Holdings, Inc. We changed our name to Health Catalyst, Inc. in March 2017.

Our principal executive offices are located at 3165 Millrock Drive #400, Salt Lake City, Utah 84121. Our telephone number is (801) 708-6800. Our website address is www.healthcatalyst.com. The information contained on, or that can be accessed through, our website is not incorporated by reference into this prospectus, and you should not consider any information contained on, or that can be accessed through, our website as part of this prospectus or in deciding whether to purchase our common stock.

"Health Catalyst" and other trademarks or service marks of Health Catalyst, Inc. appearing in this prospectus are the property of Health Catalyst, Inc. This prospectus contains additional trade names, trademarks and service marks of others, which are the property of their respective owners. Solely for convenience, trademarks and trade names referred to in this prospectus may appear without the ® or ™ symbols.

Implications of Being an Emerging Growth Company

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012 (the JOBS Act). We will remain an emerging growth company until the earlier of (1) December 31, 2024 (the last day of the fiscal year following the fifth anniversary of our initial public offering), (2) the last day of the fiscal year in which we have total annual gross revenue of at least $1.07 billion, (3) the last day of the fiscal year in which we are deemed to be a "large accelerated filer," as defined in the rules under the Securities Exchange Act of 1934, as amended (the Exchange Act), and (4) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period. Any reference herein to "emerging growth company" has the meaning ascribed to it in the JOBS Act.

An emerging growth company may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

- being permitted to present only two years of audited financial statements in this prospectus and only two years of related "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our periodic reports and registration statements, including this prospectus;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended (the Sarbanes-Oxley Act);
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements, and registration statements, including in this prospectus; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We have elected to take advantage of certain of the reduced disclosure obligations in this prospectus and may elect to take advantage of other reduced reporting requirements in our future filings with the SEC. As a result, the information that we provide to our stockholders may be different than you might receive from other public reporting companies in which you hold equity interests.

The JOBS Act also provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. We have irrevocably elected not to avail ourselves of this exemption and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

The Offering

Common stock offered by us	shares
Option to purchase additional shares of common stock from us	shares
Common stock to be outstanding immediately after this offering	shares (shares, if the underwriters exercise their option to purchase additional shares in full)
Use of proceeds	We estimate that we will receive net proceeds of approximately $ million (or approximately $ million if the underwriters exercise their option to purchase additional shares in full), assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. The principal purposes of this offering are to increase our financial flexibility, create a public market for our common stock, and facilitate our future access to the capital markets. We intend to use the net proceeds of this offering for working capital and other general corporate purposes. We may also use a portion of the net proceeds of this offering for acquisitions or strategic transactions, though we have not entered into any agreements or commitments with respect to any specific transactions and have no understandings or agreements with respect to any such transactions at this time. See "Use of Proceeds" for additional information.
Risk factors	See "Risk Factors" and the other information included in this prospectus for a discussion of factors you should carefully consider before deciding to invest in our common stock.
Proposed Nasdaq trading symbol	"HCAT"

The number of shares of our common stock that will be outstanding after this offering is based on 56,156,484 shares of common stock (including our redeemable convertible preferred stock on an as-converted basis and 105,557 shares of common stock issued to former employees for non-recourse notes) outstanding as of March 31, 2019, and excludes:

- 16,266,375 shares of common stock issuable upon the exercise of options outstanding as of March 31, 2019, at a weighted-average exercise price of $5.26 per share;
- 82,250 shares of common stock issuable upon the exercise of options outstanding that were granted after March 31, 2019, at a weighted-average exercise price of $10.31 per share;
- 75,000 shares of our common stock subject to restricted stock units that were granted after March 31, 2019, releasable upon satisfaction of service and liquidity conditions;
- 510,674 shares of common stock issuable upon the exercise of common stock warrants outstanding as of March 31, 2019, at an exercise price of $5.33 per share;
- 507,364 shares of common stock reserved for future issuance under our Amended and Restated 2011 Stock Incentive Plan (2011 Plan), which shares will cease to be available for issuance at the time our 2019 Stock Option and Incentive Plan (2019 Plan), becomes effective;
- shares of common stock reserved for future issuance pursuant to our 2019 Plan, which will become effective prior to the completion of this offering and will include provisions that automatically increase the number of shares of common stock reserved for issuance thereunder each year; and
- shares of common stock reserved for future issuance under our 2019 Employee Stock Purchase Plan (2019 ESPP), which will become effective prior to the completion of this offering and will include provisions that automatically increase the number of shares of common stock reserved for issuance thereunder each year.

Unless otherwise indicated, this prospectus reflects and assumes the following:

- the automatic conversion of all outstanding shares of our redeemable convertible preferred stock as of March 31, 2019 into an aggregate of 46,303,026 shares of our common stock immediately prior to the completion of this offering;
- no exercise of outstanding stock options or warrants;
- no exercise by the underwriters of their option to purchase additional shares of our common stock; and
- the filing and effectiveness of our amended and restated certificate of incorporation in Delaware and the adoption of our amended and restated bylaws immediately prior to the completion of this offering.

Summary Consolidated Financial and Other Data

We derived the summary consolidated statements of operations data for the years ended December 31, 2017 and 2018 from our audited consolidated financial statements included elsewhere in this prospectus. We derived the selected consolidated statements of operations data for the three months ended March 31, 2018 and 2019 and our selected consolidated balance sheet data as of March 31, 2019 from our unaudited interim consolidated financial statements included elsewhere in this prospectus. Our unaudited interim consolidated financial statements have been prepared on the same basis as our audited consolidated financial statements and reflect, in the opinion of management, all adjustments of a normal, recurring nature that are necessary for a fair statement of our unaudited interim consolidated financial statements.

Our historical results are not necessarily indicative of the results to be expected in the future. The following summary consolidated financial and other data should be read in conjunction with "Selected Consolidated Financial and Other Data," "Management's Discussion and Analysis of Financial Condition and Results of Operations," and our consolidated financial statements and the related notes included elsewhere in this prospectus.

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
Consolidated Statements of Operations Data:	(in thousands)			
Revenue:				
Technology	$ 31,693	$ 57,224	$ 9,451	$ 20,148
Professional services	41,388	55,350	11,181	15,065
Total revenue	73,081	112,574	20,632	35,213
Cost of revenue, excluding depreciation and amortization:				
Technology[(1)]	11,610	19,429	3,359	6,752
Professional services[(1)]	32,032	40,423	8,251	10,574
Total cost of revenue, excluding depreciation and amortization	43,642	59,852	11,610	17,326

Operating expenses:				
Sales and marketing[1]	25,920	44,123	6,721	10,473
Research and development[1]	28,470	38,592	8,705	10,022
General and administrative[1]	14,697	22,690	3,902	6,174
Depreciation and amortization	5,892	7,412	1,550	2,312
Total operating expenses	74,979	112,817	20,878	28,981
Loss from operations	(45,540)	(60,095)	(11,856)	(11,094)
Loss on extinguishment of debt	—	—	—	(1,670)
Interest and other expense, net	(1,469)	(2,024)	(509)	(945)
Loss before income taxes	(47,009)	(62,119)	(12,365)	(13,709)
Income tax provision (benefit)		(135)	(156)	
Net loss	$ (47,035)	$ (61,984)	$ (12,209)	$ (13,720)

(1) Includes stock-based compensation expense, tender offer payments deemed compensation expense, and post-acquisition restructuring costs.

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
Stock-Based Compensation Expense:	(in thousands)			
Cost of revenue, excluding depreciation and amortization:				
Technology	$	$	$	$
Professional services				
Sales and marketing	1,192	1,514		
Research and development				
General and administrative	1,763	1,339		
Total	$ 4,241	$ 4,198	$ 1,040	$ 1,656

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
Tender Offer Payments Deemed Compensation Expense:	(in thousands)			
Cost of revenue, excluding depreciation and amortization:				
Technology	$ —	$	$ —	$ —
Professional services	—		—	—
Sales and marketing	—	3,967	—	—
Research and development	—		—	—
General and administrative	—	3,133	—	—
Total	$ —	$ 8,318	$ —	$ —

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
Post-Acquisition Restructuring Costs:	(in thousands)			
Cost of revenue, excluding depreciation and amortization:				
Technology	$ —	$ —	$ —	$ —
Professional services	—		—	
Sales and marketing	—		—	
Research and development	—		—	
General and administrative	—		—	—
Total	$ —	$ 2,114	$ —	$

	As of March 31, 2019		
	Actual	Pro Forma(1)	Pro Forma, As Adjusted(2)(3)
Consolidated Balance Sheet Data:	(in thousands)		
Cash and cash equivalents	$ 32,208	$ 32,208	
Short-term investments	32,426	32,426	
Working capital[4]	81,574	81,574	
Total assets	144,212	144,212	
Deferred revenue, current and non-current	36,047	36,047	
Long-term debt, net of current portion	47,263	47,263	
Redeemable convertible preferred stock	485,933	—	
Accumulated deficit	(450,048)	(453,846)	
Total stockholders' (deficit) equity	(450,036)	35,897	

(1) The pro forma column in the consolidated balance sheet data table above gives effect to the (i) automatic conversion of all outstanding shares of our redeemable convertible preferred stock as of March 31, 2019 into an aggregate of 46,303,026 shares of our common stock in connection with this offering, (ii) stock-based compensation expense of approximately $3.8 million associated with outstanding stock options subject to a performance condition for which stock-based compensation would have been recognized as of March 31, 2019 based on the service-based vesting condition alone, and which we will recognize upon the effectiveness of our registration statement in connection with this offering, as further described in note 16 to our consolidated financial statements included elsewhere in this prospectus, and (iii) the filing and effectiveness of our amended and restated certificate of incorporation that will become effective immediately prior to the completion of this offering.

(2) The pro forma as adjusted column in the consolidated balance sheet data table above gives effect to (i) the pro forma adjustments set forth in footnote (1) above and (ii) the sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

(3) Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, each of our pro forma as adjusted cash and cash equivalents, working capital, total assets, and total stockholders' (deficit) equity by $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and commissions payable by us. We may also increase or decrease the number of shares we are offering. Each increase or decrease of 1.0 million shares in the number of shares offered by us would increase or decrease, as applicable, each of our pro forma as adjusted cash and cash equivalents, working capital, total assets, and total stockholders' (deficit) equity by $ million, assuming that the assumed initial offering price to the public remains the same, and after deducting underwriting discounts and commissions payable by us. The pro forma as adjusted information is illustrative only, and we will adjust this information based on the actual initial public offering price, the number of shares offered, and the other terms of this offering determined at pricing.

(4) Working capital is calculated as current assets less current liabilities, excluding current deferred revenue. See our consolidated financial statements and related notes thereto included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
Non-GAAP Financial Data:	(in thousands, except percentages)			
Adjusted Technology Gross Profit[1]	$ 20,148	$ 37,901	$ 6,106	$ 13,429
Adjusted Technology Gross Margin[1]	64%	66%	%	%
Adjusted Professional Services Gross Profit[1]	$ 9,870	$ 16,028	$ 3,030	$ 4,747
Adjusted Professional Services Gross Margin[1]	24%	29%	%	%
Total Adjusted Gross Profit[1]	$ 30,018	$ 53,929	$ 9,136	$ 18,176
Total Adjusted Gross Margin[1]	41%	48%	%	%
Adjusted EBITDA [1]	$ (35,407)	$ (38,053)	$ (9,266)	$ (6,680)

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(1) These measures are not calculated in accordance with U.S. Generally Accepted Accounting Principles (GAAP). See "Selected Consolidated Financial and Other Data - Reconciliation of Non-GAAP Financial Measures" for more information about these financial measures, including the limitations of such measures and a reconciliation of each measure to the most directly comparable measure calculated in accordance with GAAP.

Other Key Metrics

	As of December 31,	
	2017	2018
DOS Subscription Customers[1]		

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(1) See "Management's Discussion and Analysis of Financial Condition and Results of Operations - Key Business Metrics " for more information about this metric.

	Year Ended December 31,	
	2017	2018
Dollar-based Retention Rate[1]	%	%

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(1) See "Management's Discussion and Analysis of Financial Condition and Results of Operations - Key Business Metrics " for more information about this metric.

Risk Factors

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information in this prospectus, before making a decision to invest in our common stock. The risks and uncertainties described below may not be the only ones we face. If any of the risks actually occur, our business, results of operations, financial condition and prospects could be harmed. In that event, the trading price of our common stock could decline, and you could lose part or all of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations.

Risks Related to Our Business

We operate in a highly competitive industry, and if we are not able to compete effectively, our business and results of operations will be harmed.

The market for healthcare solutions is intensely competitive. We compete across various segments within the healthcare market, including with respect to data analytics and technology platforms, healthcare consulting, care management and coordination, population health management, and health information exchange. Competition in our market involves rapidly changing technologies, evolving regulatory requirements and industry expectations, frequent new

product introductions, and changes in customer requirements. If we are unable to keep pace with the evolving needs of our customers and continue to develop and introduce new applications and services in a timely and efficient manner, demand for our Solution may be reduced and our business and results of operations will be adversely affected.

We face competition from industry-agnostic analytics companies and EHR companies, such as Epic Systems and Cerner. We also compete with other large, well-financed, and technologically sophisticated entities. Some of our current large competitors, such as Optum Analytics and IBM, have greater name recognition, longer operating histories, significantly greater resources than we do, and/or more established distribution networks and relationships with healthcare providers. As a result, our current and potential competitors may be able to respond more quickly and effectively than we can to new or changing opportunities, technologies, standards, or customer requirements. In addition, current and potential competitors have established, and may in the future establish, cooperative relationships with vendors of complementary products, or services to increase the availability of their products or services to the marketplace. Current or future competitors may consolidate to improve the breadth of their products, directly competing with our Solution. Accordingly, new competitors may emerge that have greater market share, larger customer bases, greater breadth and volume of data, more widely adopted proprietary technologies, broader offerings, greater marketing expertise, greater financial resources, and larger sales forces than we have, which could put us at a competitive disadvantage. Further, in light of these advantages, even if our Solution is more effective than the product or service offerings of our competitors, current or potential customers might select competitive products and services in lieu of purchasing our Solution. We face competition from niche vendors, who offer stand-alone products and services, and from existing enterprise vendors, including those currently focused on software products, which have information systems in place with customers in our target markets. These existing enterprise vendors may now, or in the future, offer or promise products or services with less functionality than our Solution, but offer ease of integration with existing systems and that leverage existing vendor relationships. Increased competition is likely to result in pricing pressures, which could negatively impact our sales, profitability, or market share.

Our patient engagement, population health, and care coordination services face competition from a wide variety of market participants. For example, certain health systems have developed their own population health and care coordination systems. If we fail to distinguish our offerings from the other options available to healthcare providers, the demand for and market share of those offerings may decrease.

We may be unable to successfully execute on our growth initiatives, business strategies, or operating plans.

We are continually executing a number of growth initiatives, strategies, and operating plans designed to enhance our business. For example, we recently expanded our data analytics services into the payor and life sciences markets. We may not be able to successfully complete these growth initiatives, strategies, and operating plans and realize all of the benefits, including growth targets and cost savings, that we expect to achieve or it may be more costly to do so than we anticipate. A variety of factors could cause us not to realize some or all of the expected benefits. These factors include, among others, delays in the anticipated timing of activities related to such growth initiatives, strategies, and operating plans, increased difficulty and cost in implementing these efforts, including difficulties in complying with new regulatory requirements and the incurrence of other unexpected costs associated with operating the business. Moreover, our continued implementation of these programs may disrupt our operations and performance. As a result, we cannot assure you that we will realize these benefits. If, for any reason, the benefits we realize are less than our estimates or the implementation of these growth initiatives, strategies, and operating plans adversely affect our operations or cost more or take longer to effectuate than we expect, or if our assumptions prove inaccurate, our business, financial condition, and results of operations may be materially adversely affected.

If we fail to effectively manage our growth and organizational change, our business and results of operations could be harmed.

We have experienced, and may continue to experience, rapid growth and organizational change, which has placed, and may continue to place, significant demands on our management, operational, and financial resources. For example, our headcount has grown from 517 team members as of December 31, 2017 to 734 team members as of December 31, 2018. In addition, if we fail to successfully integrate new team members, it could harm our culture. We must continue to maintain, and may need to enhance, our information technology infrastructure and financial and accounting systems and controls, as well as manage expanded operations in geographically distributed locations, which will place additional demands on our resources and operations. We also must attract, train, and retain a significant number of qualified sales and marketing personnel, professional services personnel, software engineers, technical personnel, service offering personnel, and management personnel. This will require us to invest in and commit significant financial, operational, and management resources to grow and change in these areas without undermining the corporate culture that has been critical to our growth so far. If we do not achieve the benefits anticipated from these investments, or if the realization of these benefits is delayed, our results of operations may be adversely affected. If we fail to provide effective customer training on our Solution and high-quality customer support, our business, and reputation could suffer. Failure to manage our growth effectively could lead us to over-invest or under-invest in technology and operations; result in weaknesses in our infrastructure, systems, or controls; give rise to operational mistakes, losses, or loss of productivity or business opportunities; reduce customer or user satisfaction; limit our ability to respond to competitive pressures; and result in loss of team members and reduced productivity of remaining team members. Our growth could require significant capital expenditures and may divert financial resources and management attention from other projects, such as the development of new or enhanced services or the acquisition of suitable businesses or technologies. If our management is unable to effectively manage our growth, our expenses may increase more than expected, our revenue could decline or may grow more slowly than expected, and we may be unable to implement our business strategy.

If we do not continue to innovate and provide services that are useful to customers and users, we may not remain competitive, and our revenue and results of operations could suffer.

The market for healthcare in the United States is in the early stages of structural change and is rapidly evolving toward a more value-based care model. Our success depends on our ability to keep pace with technological developments, satisfy increasingly sophisticated customer and user requirements, and sustain market acceptance. Our future financial performance will depend in part on growth in this market and on our ability to adapt to emerging demands of this market, including adapting to the ways our customers or users access and use our Solution. Although we have built eight new software analytics applications in the last three years, we may not be able to sustain this rate of innovation. Our competitors are constantly developing products and services that may become more efficient or appealing to our customers or users. As a result, we must continue to invest significant resources in research and development in order to enhance our existing services and introduce new high-quality services and applications that customers will want, while offering our Solution at

competitive prices. If we are unable to predict user preferences or industry changes, or if we are unable to modify our Solution on a timely or cost-effective basis, we may lose customers and users. Our results of operations would also suffer if our innovations are not responsive to the needs of our customers, are not appropriately timed with market opportunity, or are not effectively brought to market, including as the result of delayed releases or releases that are ineffective or have errors or defects. As technology continues to develop, our competitors may be able to offer results that are, or that are perceived to be, substantially similar to, or better than, those generated by our Solution. This may force us to compete on additional service attributes and to expend significant resources in order to remain competitive.

Our business could be adversely affected if our customers are not satisfied with our Solution.

We depend on customer satisfaction to succeed with respect to our cloud-based solutions. Our sales organization is dependent on the quality of our offerings, our business reputation, and the strong recommendations from existing customers. If our cloud-based software does not function reliably or fails to meet customer expectations in terms of performance and availability, customers could assert claims against us or terminate their contracts with us or publish negative feedback. This could damage our reputation and impair our ability to attract or retain customers. Furthermore, we provide professional services to customers to support their use of our applications and to achieve measurable clinical, financial, and operational improvements. Any failure to maintain high-quality professional services, or a market perception that we do not maintain high-quality professional services, could harm our reputation, adversely affect our ability to sell our Solution to existing and prospective customers, and harm our business, results of operations and financial condition.

If our existing customers do not continue or renew their contracts with us, renew at lower fee levels or decline to purchase additional technology and services from us, it could have a material adverse effect on our business, financial condition, and results of operations.

We expect to derive a significant portion of our revenue from the renewal of existing customer contracts and sales of additional technology and services to existing customers. As part of our growth strategy, for instance, we have recently focused on expanding our Solution among current customers. As a result, selling additional technology and services are critical to our future business, revenue growth, and results of operations.

Factors that may affect our ability to sell additional technology and services include, but are not limited to, the following:

- the price, performance, and functionality of our Solution;
- the availability, price, performance, and functionality of competing solutions;
- our ability to develop and sell complementary technology and services;
- the stability, performance, and security of our hosting infrastructure and hosting services;
- our ability to continuously deliver measurable improvements;
- health systems' demand for professional services to augment their internal data analytics function;
- changes in healthcare laws, regulations, or trends; and
- the business environment of our customers and, in particular, headcount reductions by our customers.

We enter into subscription contracts with our customers for access to our Solution. Many of these contracts have initial terms of one to three years. Most of our customers have no obligation to renew their subscriptions for our Solution after the initial term expires. Although we have long-term contracts with many customers, these contracts may be terminated by the customer before their term expires for various reasons, such as changes in the regulatory landscape and poor performance by us, subject to certain conditions. For example, after a specified period, certain of these contracts are terminable for convenience by our customers, subject to providing us with prior notice. Certain of our contracts may be terminated by the customer immediately following repeated failures by us to provide specified levels of service over periods ranging from six months to more than a year. Certain of our contracts may be terminated immediately by the customer if we lose applicable third party licenses, go bankrupt, or lose our liability insurance. If any of our contracts with our customers is terminated, we may not be able to recover all fees due under the terminated contract and we will lose future revenue from that customer, which may adversely affect our results of operations. We expect that future contracts will contain similar provisions.

In addition, our customers may negotiate terms less advantageous to us upon renewal, which may reduce our revenue from these customers. Our future results of operations also depend, in part, on our ability to upgrade and enhance our Solution. If our customers fail to renew their contracts, renew their contracts upon less favorable terms, or at lower fee levels or fail to purchase new technology and services from us, our revenue may decline or our future revenue growth may be constrained.

Our Solution is dependent on our ability to source data from third parties, and such third parties could take steps to block our access to data, which could impair our ability to provide our Solution or limit the effectiveness of our Solution.

Our data platform requires us to source data from multiple clinical, financial, and operational data sources, which sources are also typically third-party vendors of our customers. The functioning of our analytics applications and our ability to perform analytics services is predicated on our ability to establish interfaces that download the relevant data from these source systems on a repeated basis and in a reliable manner. We may encounter vendors who engage in information blocking practices that may inhibit our ability to access the relevant data on behalf of customers. A proposed rulemaking issued on March 3, 2019 (the Proposed Rule) pursuant to the 21st Century Cures Act anti-information blocking provisions prohibits practices that are meant to prevent, materially discourage, or otherwise inhibit access, exchange, or use of electronic health information. The Proposed Rule allows for certain exceptions such as

allowing vendors to charge a reasonable cost for access to interoperability elements of its technology to enable data access. However, the Proposed Rule may not be finalized for some time, and the final rule may be modified in ways that are less discouraging of information blocking practices than is the Proposed Rule. Further, healthcare organizations and vendors may decide in the interim not to observe the provisions of the Proposed Rule or may adapt interpretations of the Proposed Rule and/or the final rule that justify the continuation of various information blocking practices. If we face limitations on the development of data interfaces and other information blocking practices, our data access and ability to download relevant data may be limited, which could adversely affect our ability to provide our Solution as effectively as possible. Any steps we take to enforce the anti-information blocking provisions of the 21st Century Cures Act could be costly, could distract management attention from the business, and could have uncertain results.

Failure by our customers to obtain proper permissions and waivers may result in claims against us or may limit or prevent our use of data, which could harm our business.

We require our customers to provide necessary notices and to obtain necessary permissions and waivers for use and disclosure of the information that we receive, and we require contractual assurances from them that they have done so and will do so. If they do not obtain necessary permissions and waivers, then our use and disclosure of information that we receive from them or on their behalf may be restricted or prohibited by state, federal or international privacy or data protection laws, or other related privacy and data protection laws. This could impair our functions, processes, and databases that reflect, contain, or are based upon such data and may prevent the use of such data, including our ability to provide such data to third parties that are incorporated into our service offerings. Furthermore, this may cause us to breach obligations to third parties to whom we may provide such data, such as third-party service or technology providers that are incorporated into our service offerings. In addition, this could interfere with or prevent data sourcing, data analyses, or limit other data-driven activities that benefit us. Moreover, we may be subject to claims, civil and/or criminal liability or government or state attorneys general investigations for use or disclosure of information by reason of lack of valid notice, permission, or waiver. These claims, liabilities or government or state attorneys general investigations could subject us to unexpected costs and adversely affect our financial condition and results of operations.

If our security measures are breached or unauthorized access to customer data is otherwise obtained, our Solution may be perceived as not being secure, customers may reduce the use of or stop using our Solution, and we may incur significant liabilities.

Our Solution involves the storage and transmission of our customers' proprietary information, including personal or identifying information regarding patients and their protected health information (PHI). As a result, unauthorized access or security breaches as a result of third-party action, employee error, malfeasance, or otherwise could result in the loss or inappropriate use of information, litigation, indemnity obligations, damage to our reputation, and other liability such as government or state Attorney General investigations. Because the techniques used to obtain unauthorized access or sabotage systems change frequently and generally are not identified until they are launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures. Moreover, the detection, prevention, and remediation of known or unknown security vulnerabilities, including those arising from third-party hardware or software, may result in additional direct or indirect costs and management time. Any or all of these issues could adversely affect our ability to attract new customers, cause existing customers to elect to not renew their subscriptions, result in reputational damage, or subject us to third-party lawsuits, regulatory fines, mandatory disclosures, or other action or liability, which could adversely affect our results of operations. Our general liability insurance may not be adequate to cover all potential claims to which we are exposed and may not be adequate to indemnify us for liability that may be imposed or the losses associated with such events, and in any case, such insurance may not cover all of the specific costs, expenses, and losses we could incur in responding to and remediating a security breach. A security breach of another significant provider of cloud-based solutions may also negatively impact the demand for our Solution.

Our results of operations have in the past fluctuated and may continue to fluctuate significantly, and if we fail to meet the expectations of analysts or investors, our stock price and the value of an investment in our common stock could decline substantially.

Our results of operations are likely to fluctuate, and if we fail to meet or exceed the expectations of securities analysts or investors, the trading price of our common stock could decline. Moreover, our stock price may be based on expectations of our future performance that may be unrealistic or that may not be met. Some of the factors that could cause our revenue and results of operations to fluctuate from quarter to quarter include:

- the extent to which our Solution achieves or maintains market acceptance;
- our ability to introduce new applications, updates, and enhancements to our existing applications on a timely basis;
- new competitors and the introduction of enhanced products and services from new or existing competitors;
- the length of our contracting and implementation cycles and our fulfillment periods for our Solution;
- the mix of revenue generated from professional services as compared to technology subscriptions;
- the financial condition of our current and future customers;
- changes in customer budgets and procurement policies;
- changes in regulations or marketing strategies;
- the amount and timing of our investment in research and development activities;
- the amount and timing of our investment in sales and marketing activities;

- technical difficulties or interruptions to our DOS platform or analytics applications;
- our ability to hire and retain qualified personnel;
- changes in the regulatory environment related to healthcare;
- regulatory compliance costs;
- the timing, size, and integration success of potential future acquisitions;
- unforeseen legal expenses, including litigation and settlement costs; and
- buying patterns of our customers and the related seasonality impacts on our business.

Many of these factors are not within our control, and the occurrence of one or more of them might cause our results of operations to vary widely. As such, we believe that quarter-to-quarter comparisons of our revenue and results of operations may not be meaningful and should not be relied upon as an indication of future performance.

A significant portion of our operating expense is relatively fixed in nature in the short term, and planned expenditures are based in part on expectations regarding future revenue and profitability. Accordingly, unexpected revenue shortfalls, lower-than-expected revenue increases as a result of planned expenditures, and longer-than-expected impact on profitability and margins as a result of planned expenditures may decrease our gross margins and profitability and could cause significant changes in our results of operations from quarter to quarter. In addition, our future quarterly results of operations may fluctuate and may not meet the expectations of securities analysts or investors. If this occurs, the trading price of our common stock could fall substantially, either suddenly or over time.

Our pricing may change over time and our ability to efficiently price our Solution will affect our results of operations and our ability to attract or retain customers.

In the past, we have adjusted our prices as a result of offering new applications and services and customer demand. In the fourth quarter of 2018, we began to introduce new pricing for our Solution to new customers, the full effect of which we expect would be realized in future years. While we determined these prices based on prior experience and feedback from customers, our assessments may not be accurate and we could be underpricing or overpricing our Solution, which may require us to continue to adjust our pricing model. Furthermore, as our applications and services change, then we may need to, or choose to, revise our pricing as our prior experience in those areas will be limited. For example, we introduced our subscription model in 2015, and we may need to continually refine our pricing model. Such changes to our pricing model or our inability to efficiently price our Solution could harm our business, results of operations, and financial condition and impact our ability to predict our future performance.

If our Solution fails to provide accurate and timely information, or if our content or any other element of our Solution is associated with faulty clinical decisions or treatment, we could have liability to customers, members, clinicians, or patients, which could adversely affect our results of operations.

Our applications, content, and services may be used by customers to support clinical decision-making by providers and interpret information about patient medical histories, treatment plans, medical conditions, and the use of particular medications. If our applications, content, or services are associated with faulty clinical decisions or treatment, then customers or their patients could assert claims against us that could result in substantial costs to us, harm our reputation in the industry, and cause demand for our Solution to decline.

Our analytics services may be used by our customers to inform clinical decision-making, provide access to patient medical histories, and assist in creating patient treatment plans. Therefore, if data analyses are presented incorrectly in our applications or they are incomplete, or if we make mistakes in the capture or input of these data, adverse consequences, including death, may occur and give rise to product liability, medical malpractice liability, and other claims against us by customers, clinicians, patients, or others. We often have little control over data accuracy, yet a court or government agency may take the position that our storage and display of health information exposes us to personal injury liability or other liability for wrongful delivery or handling of healthcare services or erroneous health information.

Our clinical guidelines, algorithms, and protocols may be viewed as providing healthcare professionals with guidance on care management, care coordination, or treatment decisions. If our content, or content we obtain from third parties, contains inaccuracies, or we introduce inaccuracies in the process of implementing third-party content, it is possible that patients, physicians, consumers, the providers of the third-party content, or others may sue us if they are harmed as a result of such inaccuracies. We cannot assure you that our software development, editorial, and other quality control procedures will be sufficient to ensure that there are no errors or omissions in any particular content or our software or algorithms.

The assertion of such claims and ensuing litigation, regardless of its outcome, could result in substantial cost to us, divert management's attention from operations, damage our reputation, and decrease market acceptance of our Solution. We attempt to limit by contract our liability for damages, have our customers assume responsibility for clinical treatment, diagnoses, medical oversight, and dosing decisions, and require that our customers assume responsibility for medical care and approve key algorithms, clinical guidelines, clinical protocols, and data. Despite these precautions, the allocations of responsibility and limitations of liability set forth in our contracts may not be enforceable, be binding upon patients, or otherwise protect us from liability for damages. Furthermore, general liability and errors and omissions insurance coverage and medical malpractice liability coverage may not continue to be available on acceptable terms or may not be available in sufficient amounts to cover one or more large claims against us. In addition, the insurer might disclaim coverage as to any future claim. One or more large claims could exceed our available insurance coverage.

If any of these events occur, they could materially adversely affect our business, financial condition, or results of operations.

Although we carry insurance covering medical malpractice claims in amounts that we believe are appropriate in light of the risks attendant to our business, successful medical liability claims could result in substantial damage awards that exceed the limits of our insurance coverage. In addition, professional liability insurance is expensive and insurance premiums may increase significantly in the future, particularly as we expand our Solution. As a result, adequate professional liability insurance may not be available to our providers or to us in the future at acceptable costs or at all.

Any claims made against us that are not fully covered by insurance could be costly to defend against, result in substantial damage awards against us and divert the attention of our management and our providers from our operations, which could have a material adverse effect on our business, financial condition, and results of operations. In addition, any claims may adversely affect our business or reputation.

We rely on third-party providers, including Microsoft Azure, for computing infrastructure, network connectivity, and other technology-related services needed to deliver our Solution. Any disruption in the services provided by such third-party providers could adversely affect our business and subject us to liability.

Our DOS platform and analytics applications are hosted from and use computing infrastructure provided by third parties, including Microsoft Azure and Flexential, and other computing infrastructure service providers. We have migrated and expect to continue to migrate a significant portion of our computing infrastructure needs to Microsoft Azure. We have made and expect to continue to make substantial investments in transitioning customers from our own managed data center to Microsoft Azure. We anticipate that this transition will increase the cost of hosting our technology and negatively impact our technology gross margin. We currently expect our planned transitions to be substantially complete by the end of 2020. Such migrations are risky and may cause disruptions to our Solution, service outages, downtime, or other problems and may increase our costs. Despite precautions taken during such transitions, any unsuccessful transition of technology may impair customers' use of our technology which may cause greater costs or downtime and which may lead to, among other things, customer dissatisfaction and non-renewals.

Our computing infrastructure service providers have no obligation to renew their agreements with us on commercially reasonable terms or at all. If we are unable to renew these agreements on commercially reasonable terms, or if one of our computing infrastructure service providers is acquired, we may be required to transition to a new provider and we may incur significant costs and possible service interruption in connection with doing so.

Problems faced by our computing infrastructure service providers, including those operated by Microsoft, could adversely affect the experience of our customers. Microsoft Azure has also had and may in the future experience significant service outages. Additionally, if our computing infrastructure service providers are unable to keep up with our growing needs for capacity, this could have an adverse effect on our business. For example, a rapid expansion of our business could affect our service levels or cause our third-party hosted systems to fail. Our agreements with third- party computing infrastructure service providers may not entitle us to service level credits that correspond with those we offer to our customers. Any changes in third-party service levels at our computing infrastructure service providers, or any related disruptions or performance problems with our Solution, could adversely affect our reputation and may damage our customers' stored files, result in lengthy interruptions in our services, or result in potential losses of customer data. Interruptions in our services might reduce our revenue, cause us to issue refunds to customers for prepaid and unused subscriptions, subject us to service level credit claims and potential liability, allow our customers to terminate their contracts with us, or adversely affect our renewal rates.

We rely on Internet infrastructure, bandwidth providers, data center providers, other third parties, and our own systems for providing services to our users, and any failure or interruption in the services provided by these third parties or our own systems could expose us to litigation, potentially require us to issue credits to our customers, and negatively impact our relationships with users or customers, adversely affecting our brand and our business.

In addition to the services we provide from our offices, we serve our customers primarily from third-party data-hosting facilities. These facilities are vulnerable to damage or interruption from earthquakes, floods, fires, power loss, telecommunications failures, and similar events. They are also subject to break-ins, sabotage, intentional acts of vandalism, and similar misconduct. Their systems and servers could also be subject to hacking, spamming, ransomware, computer viruses or other malicious software, denial of service attacks, service disruptions, including the inability to process certain transactions, phishing attacks and unauthorized access attempts, including third parties gaining access to users' accounts using stolen or inferred credentials or other means, and may use such access to prevent use of users' accounts. Despite precautions taken at these facilities, the occurrence of a natural disaster or an act of terrorism, a decision to close the facilities without adequate notice, or other unanticipated problems at two or more of the facilities could result in lengthy interruptions in our services. Even with our disaster recovery arrangements, our services could be interrupted.

Our ability to deliver our Internet- and telecommunications-based services is dependent on the development and maintenance of the infrastructure of the Internet and other telecommunications services by third parties. This includes maintenance of a reliable network backbone with the necessary speed, data capacity, and security for providing reliable Internet access and services and reliable mobile device, telephone, facsimile, and pager systems, all at a predictable and reasonable cost. We have experienced and expect that we will experience interruptions and delays in services and availability from time to time. We rely on internal systems as well as third-party vendors, including data center, bandwidth, and telecommunications equipment or service providers, to provide our services. We do not maintain redundant systems or facilities for some of these services. In the event of a catastrophic event with respect to one or more of these systems or facilities, we may experience an extended period of system unavailability, which could negatively impact our relationship with users or customers. To operate without interruption, both we and our service providers must guard against:

- damage from fire, power loss, and other natural disasters;
- communications failures;
- software and hardware errors, failures, and crashes;
- security breaches, computer viruses, ransomware, and similar disruptive problems; and

- other potential interruptions.

Any disruption in the network access, telecommunications, or co-location services provided by these third-party providers or any failure of or by these third-party providers or our own systems to handle the current or higher volume of use could significantly harm our business. We exercise limited control over these third-party vendors, which increases our vulnerability to problems with the services they provide.

Any errors, failures, interruptions, or delays experienced in connection with these third-party technologies and information services or our own systems could negatively impact our relationships with users and customers, adversely affect our brands and business, and expose us to third-party liabilities. The insurance coverage under our policies may not be adequate to compensate us for all losses that may occur. In addition, we cannot provide assurance that we will continue to be able to obtain adequate insurance coverage at an acceptable cost.

The reliability and performance of the Internet may be harmed by increased usage or by denial-of-service attacks. The Internet has experienced a variety of outages and other delays as a result of damages to portions of its infrastructure, and it could face outages and delays in the future. These outages and delays could reduce the level of Internet usage as well as the availability of the Internet to us for delivery of our Internet-based services.

We typically provide service level commitments under our customer contracts. If we fail to meet these contractual commitments, we could be obligated to provide credits or refunds for prepaid amounts related to unused subscription services or face contract terminations, which could adversely affect our results of operations.

Finally, recent changes in law could impact the cost and availability of necessary Internet infrastructure. Increased costs and/or decreased availability would negatively affect our results of operations.

If we fail to provide effective professional services and high-quality customer support, our business and reputation would suffer.

Our professional services and high-quality, ongoing customer support are important to the successful marketing and sale of our products and services and for the renewal of existing customer agreements. Providing these services and support requires that our professional services and support personnel have healthcare, technical, and other knowledge and expertise, making it difficult for us to hire qualified personnel and scale our professional services and support operations. The demand on our customer support organization will increase as we expand our business and pursue new customers, and such increased support could require us to devote significant development services and support personnel, which could strain our team and infrastructure and reduce our profit margins. If we do not help our customers quickly resolve any post-implementation issues and provide effective ongoing customer support, our ability to sell additional products and services to existing and future customers could suffer and our reputation would be harmed.

Our sales cycles can be long and unpredictable, and our sales efforts require a considerable investment of time and expense. If our sales cycle lengthens or we invest substantial resources pursuing unsuccessful sales opportunities, our results of operations and growth would be harmed.

Our sales process entails planning discussions with prospective customers, analyzing their existing solutions and identifying how these potential customers can use and benefit from our Solution. The sales cycle for a new customer, from the time of prospect qualification to the completion of the first sale, has averaged 11 months and in some cases has exceeded 24 months. We spend substantial time, effort and money in our sales efforts without any assurance that our efforts will result in the sale of our Solution. In addition, our sales cycle and timing of sales can vary substantially from customer to customer because of various factors, including the discretionary nature of potential customers' purchasing and budget decisions, the announcement or planned introduction of new analytics applications or services by us or our competitors, and the purchasing approval processes of potential customers. If our sales cycle lengthens or we invest substantial resources pursuing unsuccessful sales opportunities, our results of operations and growth would be harmed.

Our DOS platform or our analytics applications may not operate properly, which could damage our reputation, give rise to claims against us, or divert application of our resources from other purposes, any of which could harm our business and results of operations.

Proprietary software development is time-consuming, expensive, and complex. Unforeseen difficulties can arise. We may encounter technical obstacles, and it is possible that we will discover additional problems that prevent our applications from operating properly. If our systems do not function reliably or fail to meet user or customer expectations in terms of performance, customers could assert liability claims against us or attempt to cancel their contracts with us, and members could choose to terminate their use of our Solution. This could damage our reputation and impair our ability to attract or retain customers and members.

Information services as complex as those we offer have, in the past, contained, and may in the future develop or contain, undetected defects, vulnerabilities, or errors. We cannot be assured that material performance problems or defects in our software will not arise in the future. Errors may result from sources beyond our control, including the receipt, entry, or interpretation of patient information; the interface of our software with legacy systems that we did not develop; or errors in data provided by third parties. Despite testing, defects or errors may arise in our existing or new software or service processes following introduction to the market.

Customers rely on our Solution to collect, manage, and report clinical, financial, and operational data, and to provide timely and accurate information regarding medical treatment and care delivery patterns. They may have a greater sensitivity to service errors and security vulnerabilities than customers of software products in general. Clinicians may also rely on our predictive models for care delivery prioritization, and to inform treatment protocols. Limitations of liability and disclaimers that purport to limit our liability for damages related to defects in our software or content which we may include in our subscription and services agreements may not be enforced by a court or other tribunal or otherwise effectively protect us from related claims. In most cases, we maintain liability insurance coverage, including coverage for errors and omissions. However, it is possible that claims could exceed the amount of our applicable insurance coverage or that this coverage may not continue to be available on acceptable terms or in sufficient amounts.

In light of this, defects, vulnerabilities, and errors and any failure by us to identify and address them could result in loss of revenue or market share; liability to customers, members, their patients, or others; failure to achieve market acceptance or expansion; diversion of development and management resources; delays in the introduction of new services; injury to our reputation; and increased service and maintenance costs. Defects, vulnerabilities, or errors in our

software and service processes might discourage existing or potential customers or members from purchasing services from us. Correction of defects, vulnerabilities, or errors could prove to be impossible or impracticable. The costs incurred in correcting any defects, vulnerabilities, or errors or in responding to resulting claims or liability may be substantial and could adversely affect our results of operations.

If we are not able to maintain and enhance our reputation and brand recognition, our business and results of operations will be harmed.

We believe that maintaining and enhancing our reputation and brand recognition is critical to our relationships with existing customers and to our ability to attract new customers. The promotion of our brands may require us to make substantial investments and we anticipate that, as our market becomes increasingly competitive, these marketing initiatives may become increasingly difficult and expensive. Our marketing activities may not be successful or yield increased revenue, and to the extent that these activities yield increased revenue, the increased revenue may not offset the expenses we incur and our results of operations could be harmed. In addition, any factor that diminishes our reputation or that of our management, including failing to meet the expectations of our customers, or any adverse publicity surrounding one of our investors or customers, could make it substantially more difficult for us to attract new customers. If we do not successfully maintain and enhance our reputation and brand recognition, our business may not grow and we could lose our relationships with customers, which would harm our business, results of operations, and financial condition.

We employ third-party licensed software and software components for use in or with our Solution, and the inability to maintain these licenses or the presence of errors in the software we license could limit the functionality of our Solution and result in increased costs or reduced service levels, which would adversely affect our business.

Our software applications might incorporate or interact with certain third-party software and software components (other than open source software), such as data visualization software, obtained under licenses from other companies. We pay these third parties a license fee or royalty payment. We anticipate that we will continue to use such third-party software in the future. Although we believe that there are commercially reasonable alternatives to the third-party software we currently make available, this may not always be the case, or it may be difficult or costly to replace. Furthermore, these third parties may increase the price for licensing their software, which could negatively impact our results of operations. Our use of additional or alternative third-party software could require customers to enter into license agreements with third parties. In addition, if the third-party software we make available has errors or otherwise malfunctions, or if the third-party terminates its agreement with us, the functionality of our Solution may be negatively impacted and our business may suffer.

We derive a significant portion of our revenue from our largest customers. The loss, termination, or renegotiation of any contract could negatively impact our results.

Historically, we have relied on a limited number of customers for a significant portion of our total revenue and accounts receivable. Our three largest customers in 2018 comprised 7.6%, 5.4%, and 4.5% of our revenue for 2018, or 17.5% in the aggregate. Our three largest customers during the three months ended March 31, 2019 comprised 5.4%, 4.2%, and 3.9% of our revenue, or 13.5% in the aggregate. Our three largest customers in terms of accounts receivable in 2018 comprised 12.8%, 5.1%, and 5.1% of such total amount as of December 31, 2018, or 23.0% in the aggregate. Our three largest customers in terms of accounts receivable as of March 31, 2019 comprised 8.1%, 7.9%, and 6.5% of such total amount as of March 31, 2019, or 22.5% in the aggregate. The sudden loss of any of our largest customers or the renegotiation of any of our largest customer contracts could adversely affect our results of operations. In the ordinary course of business, we engage in active discussions and renegotiations with our customers in respect of the solutions we provide and the terms of our customer agreements, including our fees. As our customers' businesses respond to market dynamics and financial pressures, and as our customers make strategic business decisions in respect of the lines of business they pursue and programs in which they participate, we expect that certain of our customers will, from time to time, seek to restructure their agreements with us. In the ordinary course, we renegotiate the terms of our agreements with our customers in connection with renewals or extensions of these agreements. These discussions and future discussions could result in reductions to the fees and changes to the scope of services contemplated by our original customer contracts and consequently could negatively impact our revenue, business, and prospects.

Because we rely on a limited number of customers for a significant portion of our revenue, we depend on the creditworthiness of these customers. Our customers are subject to a number of risks including reductions in payment rates from governmental payors, higher than expected health care costs, and lack of predictability of financial results when entering new lines of business. If the financial condition of our customers declines, our credit risk could increase. Should one or more of our significant customers declare bankruptcy, be declared insolvent, or otherwise be restricted by state or federal laws or regulation from continuing in some or all of their operations, this could adversely affect our ongoing revenue, the collectability of our accounts receivable, and affect our bad debt reserves and net income.

We may not grow at the rates we historically have achieved or at all, even if our key metrics may indicate growth.

We have experienced significant growth in the last five years. Future revenue may not grow at these same rates or may decline. Our future growth will depend, in part, on our ability to grow our revenue from existing customers, to complete sales to potential future customers, to expand our customer and member bases, to develop new solutions, and to expand internationally. We can provide no assurances that we will be successful in executing on these growth strategies or that we will continue to grow our revenue or to generate net income. Our historical results may not be indicative of future performance. Our ability to execute on our existing sales pipeline, create additional sales pipelines, and expand our customer base depends on, among other things, the attractiveness of our Solution relative to those offered by our competitors, our ability to demonstrate the value of our existing and future services, and our ability to attract and retain a sufficient number of qualified sales and marketing leadership and support personnel. In addition, our existing customers may be slower to adopt our Solution than we currently anticipate, which could adversely affect our results of operations and growth prospects.

Changes in the healthcare industry could affect the demand for our Solution, cause our existing contracts to be terminated, and negatively impact the process of negotiating future contracts.

As the healthcare industry evolves, changes in our customer and vendor bases may reduce the demand for our Solution, result in the termination of existing contracts or certain services provided under existing contracts, and make it more difficult to negotiate new contracts on terms that are acceptable to us. For example, the increasing market share of EHR companies in data analytic services at hospital systems may cause our existing customers to terminate contracts with us in order to engage EHR companies to provide these services. Similarly, customer and vendor consolidation results in fewer, larger entities with increased bargaining power and the ability to demand terms that are unfavorable to us. If these trends continue, we cannot assure you that we will be able to continue to maintain or expand our customer base, negotiate contracts with acceptable terms, or maintain our current pricing structure, and our revenue may decrease.

General reductions in expenditures by healthcare organizations, or reductions in such expenditures within market segments that we serve, could have similar impacts with regard to our Solution. Such reductions may result from, among other things, reduced governmental funding for healthcare; a decrease in the number of, or the market exclusivity available to, new drugs coming to market; or adverse changes in business or economic conditions affecting healthcare payors or providers, the pharmaceutical industry, or other healthcare companies that purchase our services (e.g., changes in the design of health plans). In addition, changes in government regulation of the healthcare industry could potentially negatively impact our existing and future contracts. Any of these changes could reduce the purchase of our Solution by such customers, reducing our revenue and possibly requiring us to materially revise our offerings. In addition, our customers' expectations regarding pending or potential industry developments may also affect their budgeting processes and spending plans with respect to our Solution.

Because we generally recognize technology and professional services revenue ratably over the term of the contract for our services, a significant downturn in our business may not be reflected immediately in our results of operations, which increases the difficulty of evaluating our future financial performance.

We generally recognize technology and professional services revenue ratably over the term of a contract. As a result, a substantial portion of our revenue is generated from contracts entered into during prior periods. Consequently, a decline in new contracts in any quarter may not affect our results of operations in that quarter but could reduce our revenue in future quarters. Additionally, the timing of renewals or non-renewals of a contract during any quarter may only affect our financial performance in future quarters. For example, the non-renewal of a subscription agreement late in a quarter will have minimal impact on revenue for that quarter but will reduce our revenue in future quarters. Accordingly, the effect of significant declines in sales may not be reflected in our short-term results of operations, which would make these reported results less indicative of our future financial results. By contrast, a non-renewal occurring early in a quarter may have a significant negative impact on revenue for that quarter and we may not be able to offset a decline in revenue due to non-renewal with revenue from new contracts entered into in the same quarter. In addition, we may be unable to quickly adjust our costs in response to reduced revenue.

The estimates of market opportunity and forecasts of market growth included in this prospectus may prove to be inaccurate, and even if the markets in which we compete achieve the forecasted growth, our business may not grow at similar rates, or at all.

Market opportunity estimates and growth forecasts included in this prospectus are subject to significant uncertainty and are based on assumptions and estimates which may not prove to be accurate. The estimates and forecasts included in this prospectus relating to size and expected growth of our target market may prove to be inaccurate. Even if the markets in which we compete meet the size estimates and growth forecasts included in this prospectus, our business may not grow at similar rates, or at all. Our growth is subject to many factors, including our success in implementing our business strategy, which is subject to many risks and uncertainties.

We have experienced significant net losses since inception, we expect to incur losses in the future, and we may not be able to generate sufficient revenue to achieve and maintain profitability.

We have incurred significant net losses in the past, including net losses of $47.0 million, $62.0 million, and $13.7 million in the years ended December 31, 2017 and 2018, and the three months ended March 31, 2019, respectively. We had an accumulated deficit of $450.0 million as of March 31, 2019. We expect our costs will increase over time as we continue to invest to grow our business and build relationships with customers, develop our platform, develop new solutions, and operate as a public company. These efforts may prove to be more expensive than we currently anticipate, and we may not succeed in increasing our revenue sufficiently to offset these higher expenses. As a result, we may need to raise additional capital through equity and debt financings in order to fund our operations. To date, we have financed our operations principally from the sale of redeemable convertible preferred stock, revenue from sales of our Solution and the incurrence of indebtedness. We may also fail to improve the gross margins of our business. If we are unable to effectively manage these risks and difficulties as we encounter them, our business, financial condition, and results of operations would be adversely affected. Our failure to achieve or maintain profitability could negatively impact the value of our common stock.

Because competition for our target employees is intense, we may not be able to attract and retain the highly skilled employees we need to support our continued growth.

To continue to execute on our growth plan, we must attract and retain highly qualified personnel. Competition for such personnel is intense, especially for senior sales executives and software engineers with high levels of experience in designing and developing applications and consulting and analytics services. We may not be successful in attracting and retaining qualified personnel. We have from time to time in the past experienced, and we expect to continue to experience in the future, difficulty in hiring and retaining highly skilled employees with appropriate qualifications. In addition, our search for replacements for departed employees may cause uncertainty regarding the future of our business, impact employee hiring and retention, and adversely impact our revenue, results of operations, and financial condition.

Many of the companies with which we compete for experienced personnel have greater resources than we have. In addition, in making employment decisions, particularly in the Internet and high-technology industries, job candidates often consider the value of the equity awards they may receive in connection with their employment. Volatility in the price of our stock or failure to obtain stockholder approval for increases in the number of shares available for grant under our equity plans may, therefore, adversely affect our ability to attract or retain key employees. If we fail to attract new personnel or fail to retain and motivate our current personnel, our business and future growth prospects could be severely harmed.

We depend on our senior management team, and the loss of one or more of our executive officers or key employees or an inability to attract and retain highly skilled employees could adversely affect our business.

Our success depends largely upon the continued services of our key executive officers and recruitment of additional highly skilled employees. From time to time, there may be changes in our senior management team resulting from the hiring or departure of executives, which could disrupt our business. Several of our senior leaders are active members of the Church of Jesus Christ of Latter-Day Saints. There is a risk that in the future, one or more of these individuals could receive a call to serve in a full-time capacity for the church. This has already occurred with one of the two co-founders of our company, Steven Barlow, who in November 2016 was called to serve from June 2017 to June 2020 in a full-time capacity. At the time of his call, he was serving as the President of our professional services organization and was one of the most senior leaders of our company. In connection with this call to serve, Mr. Barlow took a leave-of-absence from his company responsibilities starting in March 2017, and his leave of absence will likely extend until August 2020. Hiring executives with needed skills or the replacement of one or more of our executive officers or other key employees would likely involve significant time and costs and may significantly delay or prevent the achievement of our business objectives.

In addition, competition for qualified management in our industry is intense. Many of the companies with which we compete for management personnel have greater financial and other resources than we do. We have not entered into term-based employment agreements with our executive officers. All of our employees are "at-will" employees, and their employment can be terminated by us or them at any time, for any reason. The departure of key personnel could adversely affect the conduct of our business. In such event, we would be required to hire other personnel to manage and operate our business, and there can be no assurance that we would be able to employ a suitable replacement for the departing individual, or that a replacement could be hired on terms that are favorable to us. In addition, volatility or lack of performance in our stock price may affect our ability to attract replacements should key personnel depart. If we are not able to retain any of our key management personnel, our business could be harmed.

Our corporate culture has contributed to our success, and if we cannot maintain this culture as we grow, we could lose the innovation, creativity, and teamwork fostered by our culture, which could harm our business.

We believe that our corporate culture has been an important contributor to our success, which we believe fosters innovation, teamwork, and passion for providing high levels of customer satisfaction. Most of our employees have been with us for fewer than three years as a result of our rapid growth. As we continue to grow, we must effectively integrate, develop, and motivate a growing number of new employees. As a result, we may find it difficult to maintain our corporate culture, which could limit our ability to innovate and operate effectively. Any failure to preserve our culture could also negatively affect our ability to retain and recruit personnel, maintain our performance, or execute on our business strategy.

The terms of our credit facility require us to meet certain operating and financial covenants and place restrictions on our operating and financial flexibility. If we raise additional capital through debt financing, the terms of any new debt could further restrict our ability to operate our business.

On February 6, 2019, we entered into a term loan facility with OrbiMed Royalty Opportunities II, LP (OrbiMed) in the amount of $80.0 million (the OrbiMed Credit Facility). The OrbiMed Credit Facility consists of a $50.0 million term loan, which was drawn on the effective date of the OrbiMed Credit Facility, and an additional $30.0 million term loan contingently available on or prior to March 31, 2020. The principal on the OrbiMed Credit Facility accrues interest at an annual rate equal to the higher of the one-month LIBOR plus 7.5% and 10.0%. The OrbiMed Credit Facility is secured by a lien covering substantially all of our assets, including our intellectual property. Subject to the terms of the Credit Agreement entered into in connection with the OrbiMed Credit Facility (the Credit Agreement), amounts borrowed under the facility are repaid in twelve monthly installments beginning on the amortization commencement date, as defined in the Credit Agreement, prior to the February 6, 2024 maturity date, at which time all amounts borrowed will be due and payable. In addition, our revolving line of credit with Silicon Valley Bank (SVB) includes certain restrictive covenants.

The Credit Agreement contains customary affirmative and negative covenants, indemnification provisions, and events of default. The affirmative covenants include, among others, covenants requiring us to maintain our legal existence and regulatory authorizations, deliver certain financial reports, and maintain certain intellectual property rights. The negative covenants include, among others, restrictions on transferring or licensing our assets, changing our business, incurring additional indebtedness, engaging in mergers or acquisitions, paying dividends or making other distributions, and creating other liens on our assets, in each case subject to customary exceptions. If we default under the Credit Agreement, the lender will be able to declare all obligations immediately due and payable and take control of our pledged assets, potentially requiring us to renegotiate our agreement on terms less favorable to us or to immediately cease operations. Further, if we are liquidated, the lender's rights to repayment would be senior to the rights of the holders of our common stock to receive any proceeds from the liquidation. The lender could declare a default under the Credit Agreement upon the occurrence of any event that has had or could reasonably be expected to have a material adverse effect as defined under the Credit Agreement, thereby requiring us to repay the loan immediately or to attempt to reverse the declaration of default through negotiation or litigation. Any declaration by the lender of an event of default could significantly harm our business and prospects and could cause the price of our common shares to decline. If we raise any additional debt financing, the terms of such additional debt could further restrict our operating and financial flexibility.

We may acquire other companies or technologies, which could divert our management's attention, result in dilution to our stockholders, and otherwise disrupt our operations and we may have difficulty integrating any such acquisitions successfully or realizing the anticipated benefits therefrom, any of which could have an adverse effect on our business, financial condition, and results of operations.

We may seek to acquire or invest in businesses, applications, and services, or technologies that we believe could complement or expand our Solution, enhance our technical capabilities, or otherwise offer growth opportunities. The pursuit of potential acquisitions may divert the attention of management and cause us to incur various expenses in identifying, investigating, and pursuing suitable acquisitions, whether or not they are consummated. We have in the past and may in the future have difficulty integrating acquired businesses. For example, in June 2018 we acquired the interoperability services of the Medicity business, which we are in the process of integrating with our other services. We may have difficulty cross-selling our Solution to acquired customers, and we may have difficulty integrating newly acquired team members.

We have limited experience in acquiring other businesses. If we acquire additional businesses, we may not be able to integrate the acquired personnel, operations, and technologies successfully, or effectively manage the combined business following the acquisition. We also may not achieve the anticipated benefits from the acquired business due to a number of factors, including, but not limited to:

- inability to integrate or benefit from acquired technologies or services in a profitable manner;
- unanticipated costs or liabilities associated with the acquisition;
- difficulty integrating the accounting systems, operations, and personnel of the acquired business;
- difficulties and additional expenses associated with supporting legacy products and hosting infrastructure of the acquired business;
- difficulty converting the customers of the acquired business onto our platform and contract terms, including disparities in the revenue, licensing, support, or professional services model of the acquired company;
- diversion of management's attention from other business concerns;
- adverse effects on our existing business relationships with business partners and customers as a result of the acquisition;
- the potential loss of key employees;
- use of resources that are needed in other parts of our business; and
- use of substantial portions of our available cash to consummate the acquisition.

In addition, a significant portion of the purchase price of companies we acquire may be allocated to acquired goodwill and other intangible assets, which must be assessed for impairment at least annually. In the future, if our acquisitions do not yield expected returns, we may be required to take charges to our results of operations based on this impairment assessment process, which could adversely affect our results of operations.

Acquisitions could also result in dilutive issuances of equity securities or the incurrence of debt, which could adversely affect our results of operations. In addition, if an acquired business fails to meet our expectations, our business, financial condition, and results of operations may suffer.

Also, the anticipated benefit of any acquisition may not materialize or may be prohibited. In February 2019, we entered into the OrbiMed Credit Facility. The Credit Agreement restricts our ability to pursue certain mergers, acquisitions, or consolidations that we may believe to be in our best interest. Additionally, future acquisitions or dispositions could result in potentially dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities, or amortization expenses or write-offs of goodwill, any of which could harm our financial condition. We cannot predict the number, timing or size of future acquisitions, or the effect that any such transactions might have on our results of operations.

We may not be able to generate sufficient cash to service our indebtedness.

It is possible that we will in the future draw down on our credit facilities with OrbiMed or SVB or enter into new debt obligations. Our ability to make scheduled payments or to refinance such debt obligations depends on numerous factors, including the amount of our cash balances and our actual and projected financial and operating performance.

We may be unable to maintain a level of cash balances or cash flows sufficient to permit us to pay the principal, premium, if any, and interest on our existing or future indebtedness. If our cash flows and capital resources are insufficient to fund our debt service obligations, we may be forced to reduce or delay capital expenditures, sell assets or operations, seek additional capital, or restructure or refinance our indebtedness. We may not be able to take any of these actions, and even if we are, these actions may be insufficient to permit us to meet our scheduled debt service obligations. In addition, in the event of our breach of the Credit Agreement, we may be required to repay any outstanding amounts earlier than anticipated. If for any reason we become unable to service our debt obligations under the Credit Agreement, or any new debt obligations that we may enter into from time to time, holders of our common stock would be exposed to the risk that their holdings could be lost in an event of a default under such debt obligations and a foreclosure and sale of our assets for an amount that is less than the outstanding debt.

Any failure to protect our intellectual property rights could impair our ability to protect our proprietary technology and our brand.

Our success and ability to compete depend in part upon our intellectual property. As of January 31, 2019, we had filed applications for a number of patents, and we have eight issued U.S. and three issued Canadian patents. We also have twenty-five registered trademarks in the United States, Canada, China, and the European Union, and five trademark applications in the United States We also rely on copyright and trademark laws, trade secret protection, and confidentiality or license agreements with our employees, customers, partners, and others to protect our intellectual property rights. However, the steps we take to protect our intellectual property rights may be inadequate. For example, other parties, including our competitors, may independently develop similar technology, duplicate our services, or design around our intellectual property and, in such cases, we may not be able to assert our intellectual property rights against such parties. Further, our contractual arrangements may not effectively prevent disclosure of our confidential information or provide an adequate remedy in the event of unauthorized disclosure of our confidential information, and we may be unable to detect the unauthorized use of, or take appropriate steps to enforce, our intellectual property rights.

We make business decisions about when to seek patent protection for a particular technology and when to rely upon trade secret protection, and the approach we select may ultimately prove to be inadequate. Even in cases where we seek patent protection, there is no assurance that the resulting patents will effectively protect every significant feature of our Solution, technology, or proprietary information, or provide us with any competitive advantages. Moreover, we cannot guarantee that any of our pending patent applications will issue or be approved. The United States Patent and Trademark Office and various foreign governmental patent agencies also require compliance with a number of procedural, documentary, fee payment, and other similar provisions during the patent application process and after a patent has issued. There are situations in which noncompliance can result in abandonment or lapse of the patent, or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. If this occurs, our competitors might be able to enter the market, which would have a material adverse effect on our business. Effective trademark, copyright, patent, and trade secret protection may not be available in every country in which we conduct business. Further, intellectual property law, including statutory and case law, particularly in the United States, is constantly developing, and any changes in the law could make it harder for us to enforce our rights.

In order to protect our intellectual property rights, we may be required to spend significant resources to monitor and protect these rights. Litigation brought to protect and enforce our intellectual property rights could be costly, time-consuming, and distracting to management and could result in the impairment or loss of portions of our intellectual property. Furthermore, our efforts to enforce our intellectual property rights may be met with defenses, counterclaims, and countersuits attacking the validity and enforceability of our intellectual property rights. An adverse determination of any litigation proceedings could put our intellectual property at risk of being invalidated or interpreted narrowly and could put our related pending patent applications at risk of not issuing. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential or sensitive information could be compromised by disclosure in the event of litigation. In addition, during the course of litigation, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Negative publicity related to a decision by us to initiate such enforcement actions against a customer or former customer, regardless of its accuracy, may adversely impact our other customer relationships or prospective customer relationships, harm our brand and business, and could cause the market price of our common stock to decline. Our failure to secure, protect, and enforce our intellectual property rights could adversely affect our brand and our business.

We may be sued by third parties for alleged infringement of their proprietary rights or misappropriation of intellectual property.

There is considerable patent and other intellectual property development activity in our industry. Our future success depends in part on not infringing upon the intellectual property rights of others. Our competitors, as well as a number of other entities and individuals, including so-called non-practicing entities (NPEs), may own or claim to own intellectual property relating to our Solution. From time to time, third parties may claim that we are infringing upon their intellectual property rights or that we have misappropriated their intellectual property. For example, in some cases, very broad patents are granted that may be interpreted as covering a wide field of healthcare data storage and analytics solutions or machine learning and predictive modeling methods in healthcare. As competition in our market grows, the possibility of patent infringement, trademark infringement, and other intellectual property claims against us increases. In the future, we expect others to claim that our Solution and underlying technology infringe or violate their intellectual property rights. In a patent infringement claim against us, we may assert, as a defense, that we do not infringe the relevant patent claims, that the patent is invalid or both. The strength of our defenses will depend on the patents asserted, the interpretation of these patents, and our ability to invalidate the asserted patents. However, we could be unsuccessful in advancing non-infringement and/or invalidity arguments in our defense. In the United States, issued patents enjoy a presumption of validity, and the party challenging the validity of a patent claim must present clear and convincing evidence of invalidity, which is a high burden of proof. Conversely, the patent owner need only prove infringement by a preponderance of the evidence, which is a lower burden of proof. We may be unaware of the intellectual property rights that others may claim cover some or all of our technology or services. Because patent applications can take years to issue and are often afforded confidentiality for some period of time there may currently be pending applications, unknown to us, that later result in issued patents that could cover one or more aspects of our technology and services. Any claims or litigation could cause us to incur significant expenses and, whether or not successfully asserted against us, could require that we pay substantial damages, ongoing royalty or license payments, or settlement fees, prevent us from offering our Solution or using certain technologies, require us to re-engineer all or a portion of our platform, or require that we comply with other unfavorable terms. We may also be obligated to indemnify our customers or business partners or pay substantial settlement costs, including royalty payments, in connection with any such claim or litigation and to obtain licenses, modify applications, or refund fees, which could be costly. Even if we were to prevail in such a dispute, any litigation regarding our intellectual property could be costly and time-consuming and divert the attention of our management and key personnel from our business operations.

Economic uncertainties or downturns in the general economy or the industries in which our customers operate could disproportionately affect the demand for our Solution and negatively impact our results of operations.

General worldwide economic conditions have experienced significant downturns during the last ten years, and market volatility and uncertainty remain widespread, making it potentially very difficult for our customers and us to accurately forecast and plan future business activities. During challenging economic times, our customers may have difficulty gaining timely access to sufficient credit or obtaining credit on reasonable terms, which could impair their ability to make timely payments to us and adversely affect our revenue. If that were to occur, our financial results could be harmed. Further, challenging economic conditions may impair the ability of our customers to pay for the applications and services they already have purchased from us and, as a result, our write-offs of accounts receivable could increase. We cannot predict the timing, strength, or duration of any economic slowdown or recovery. If the condition of the general economy or markets in which we operate worsens, our business could be harmed.

Our Solution utilizes open source software, and any failure to comply with the terms of one or more of these open source licenses could adversely affect our business.

We use software modules licensed to us by third-party authors under “open source” licenses in our Solution. Some open source licenses require that users of the applicable software make available source code for modifications or derivative works created using that open source software. If we were to combine our proprietary software with open source software in a certain manner, we could, under certain open source licenses, be required to release or otherwise make

available the source code to our proprietary software to the public. This would allow our competitors to create similar products with lower development effort and time and ultimately could result in a loss of product sales for us.

Although we employ practices designed to manage our compliance with open source licenses and protect our proprietary source code, we may inadvertently use open source software in a manner we do not intend and that could expose us to claims for breach of contract and intellectual property infringement. If we are held to have breached the terms of an open source software license, we could be required to seek licenses from third parties to continue offering our products on terms that are not economically feasible, to re-engineer our products, to discontinue the sale of our products if re-engineering cannot be accomplished on a timely basis, or to make generally available, in source code form, a portion of our proprietary code, any of which could adversely affect our business, results of operations, and financial condition. The terms of many open source licenses have not been interpreted by U.S. courts, and, as a result, there is a risk that such licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to commercialize our Solution.

Taxing authorities may successfully assert that we should have collected or in the future should collect sales and use, value added or similar transactional taxes, and we could be subject to liability with respect to past or future sales, which could adversely affect our results of operations.

We do not collect sales and use, value added, and similar transactional taxes in all jurisdictions in which we have sales, based on our belief that such taxes are not applicable or that we are not required to collect such taxes with respect to the jurisdiction. Sales and use, value added, and similar tax laws and rates vary greatly by jurisdiction. Certain jurisdictions in which we do not collect such taxes may assert that such taxes are applicable, which could result in tax assessments, penalties, and interest, and we may be required to collect such taxes in the future. Such tax assessments, penalties, interest or future requirements, increase in tax rates, or a combination of the foregoing may result in an increase in our sales and similar transactional taxes, increase administrative burdens or costs, or otherwise adversely affect our business, results of operations, or financial condition.

Unanticipated changes in our effective tax rate and additional tax liabilities, including as a result of our international operations or implementation of new tax rules, could harm our future results.

We are subject to income taxes in the United States and are expanding into various foreign jurisdictions that are subject to income tax. Our domestic and international tax liabilities are subject to the allocation of expenses in differing jurisdictions and complex transfer pricing regulations administered by taxing authorities in various jurisdictions. Tax rates in the jurisdictions in which we operate may change as a result of factors outside of our control or relevant taxing authorities may disagree with our determinations as to the income and expenses attributable to specific jurisdictions. In addition, changes in tax and trade laws, treaties or regulations, or their interpretation or enforcement, have become more unpredictable and may become more stringent, which could materially adversely affect our tax position. Forecasting our estimated annual effective tax rate is complex and subject to uncertainty, and there may be material differences between our forecasted and actual effective tax rate. Our effective tax rate could be adversely affected by changes in the mix of earnings and losses in countries with differing statutory tax rates, certain non-deductible expenses, the valuation of deferred tax assets and liabilities, adjustments to income taxes upon finalization of tax returns, changes in available tax attributes, decision to repatriate non-U.S. earnings for which we have not previously provided for U.S. taxes, and changes in federal, state, or international tax laws and accounting principles.

Finally, we may be subject to income tax audits throughout the world. An adverse resolution of one or more uncertain tax positions in any period could have a material impact on our results of operations or financial condition for that period.

If we are unable to implement and maintain effective internal controls over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our common stock could be adversely affected.

As a public company, we will be required to maintain internal controls over financial reporting and to report any material weaknesses in such internal controls. Section 404 of the Sarbanes-Oxley Act requires that we evaluate and determine the effectiveness of our internal controls over financial reporting. However, we are not currently required to comply with the SEC rules that implement Section 404 of the Sarbanes-Oxley Act and are therefore not required to make a formal assessment of the effectiveness of our internal control over financial reporting for that purpose. As a public company, we will be required to provide an annual management report on the effectiveness of our internal control over financial reporting commencing with our second annual report on Form 10-K.

Many of the internal controls we have implemented pursuant to the Sarbanes-Oxley Act are process controls with respect to which a material weakness may be found whether or not any error has been identified in our reported financial statements. This may be confusing to investors and result in damage to our reputation, which may harm our business. Additionally, the proper design and assessment of internal controls over financial reporting are subject to varying interpretations, and, as a result, application in practice may evolve over time as new guidance is provided by regulatory and governing bodies and as common practices evolve. This could result in continuing uncertainty regarding the proper design and assessment of internal controls over financial reporting and higher costs necessitated by ongoing revisions to internal controls.

We must continue to monitor and assess our internal control over financial reporting. If in the future we have any material weaknesses, we may not detect errors on a timely basis and our financial statements may be materially misstated. Additionally, if in the future we are unable to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, are unable to assert that our internal controls over financial reporting are effective, identify material weaknesses in our internal controls over financial reporting, or if our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal controls over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, and the market price of our common stock could be adversely affected, and we could become subject to investigations by the stock exchange on which our securities are listed, the SEC, or other regulatory authorities, which could require additional financial and management resources.

Our ability to use our net operating losses to offset future taxable income may be subject to certain limitations.

As of December 31, 2018, we had net operating loss (NOL) carryforwards for federal and state income tax purposes of approximately $232.9 million and $186.2 million, respectively, which may be available to offset taxable income in the future, and which expire in various years beginning in 2032 for federal purposes if not utilized. The state NOLs will expire depending upon the various rules in the states in which we operate. A lack of future taxable income

would adversely affect our ability to utilize these NOLs before they expire. In general, under Section 382 of the Internal Revenue Code of 1986, as amended (the Code) a corporation that undergoes an "ownership change" (as defined under Section 382 of the Code and applicable Treasury Regulations) is subject to limitations on its ability to utilize its pre-change NOLs to offset its future taxable income. We may experience a future ownership change (including, potentially, in connection with this offering) under Section 382 of the Code that could affect our ability to utilize the NOLs to offset our income. Furthermore, our ability to utilize NOLs of companies that we have acquired or may acquire in the future may be subject to limitations. There is also a risk that due to regulatory changes, such as suspensions on the use of NOLs or other unforeseen reasons, our existing NOLs could expire or otherwise be unavailable to reduce future income tax liabilities, including for state income tax purposes. For these reasons, we may not be able to utilize a material portion of our NOLs, even if we attain profitability, which could potentially result in increased future tax liability to us and could adversely affect our results of operations and financial condition.

Comprehensive tax reform legislation could adversely affect our business and financial condition.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the Tax Act) was signed into law. The Tax Act contains, among other things, significant changes to corporate taxation, including (i) a reduction of the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%, (ii) a limitation of the tax deduction for interest expense to 30% of adjusted earnings (except for certain small businesses), (iii) a limitation of the deduction for NOLs to 80% of current year taxable income in respect of NOLs generated during or after 2018 and elimination of net operating loss carrybacks, (iv) a one-time tax on offshore earnings at reduced rates regardless of whether they are repatriated, (v) immediate deductions for certain new investments instead of deductions for depreciation expense over time, and (vi) a modification or repeal of many business deductions and credits. For federal NOLs arising in tax years beginning after December 31, 2017, the Tax Act limits a taxpayer's ability to utilize federal NOL carryforwards to 80% of taxable income. In addition, federal NOLs arising in tax years ending after December 31, 2017 can be carried forward indefinitely, but carryback is generally prohibited. It is uncertain if and to what extent various states will conform to the newly enacted federal tax law. We will continue to examine the impact the Tax Act may have on our results of operations and financial condition.

Future litigation against us could be costly and time-consuming to defend and could result in additional liabilities.

We may from time to time be subject to legal proceedings and claims that arise in the ordinary course of business, such as claims brought by our customers in connection with commercial disputes and employment claims made by our current or former employees. Claims may also be asserted by or on behalf of a variety of other parties, including government agencies, patients or vendors of our customers, or stockholders. Any litigation involving us may result in substantial costs, operationally restrict our business, and may divert management's attention and resources, which may seriously harm our business, overall financial condition, and results of operations. Insurance may not cover existing or future claims, be sufficient to fully compensate us for one or more of such claims, or continue to be available on terms acceptable to us. A claim brought against us that is uninsured or underinsured could result in unanticipated costs, thereby reducing our results of operations and resulting in a reduction in the trading price of our stock.

Changes in accounting principles may cause previously unanticipated fluctuations in our financial results, and the implementation of such changes may impact our ability to meet our financial reporting obligations.

We prepare our financial statements in accordance with U.S. GAAP which are subject to interpretation or changes by the Financial Accounting Standards Board (FASB), the SEC, and other various bodies formed to promulgate and interpret appropriate accounting principles. New accounting pronouncements and changes in accounting principles have occurred in the past and are expected to occur in the future which may have a significant effect on our financial results. Furthermore, any difficulties in implementation of changes in accounting principles, including the ability to modify our accounting systems, could cause us to fail to meet our financial reporting obligations, which could result in regulatory discipline and harm investors' confidence in us.

Risks Related to Governmental Regulation

Government regulation of healthcare creates risks and challenges with respect to our compliance efforts and our business strategies.

The healthcare industry is highly regulated and is subject to changing political, legislative, regulatory, and other influences. Existing and new laws and regulations affecting the healthcare industry, or changes to existing laws and regulations, including the potential amendment or repeal of all or parts of the Affordable Care Act (ACA), could create unexpected liabilities for us, cause us to incur additional costs, and restrict our operations. Reforming the healthcare industry has been a priority for U.S. politicians, and key members of the legislative and executive branches have proposed a wide variety of potential changes and policy goals. Certain changes to laws impacting our industry, or perceived intentions to do so, could affect our business and results of operations.

Many healthcare laws are complex, and their application to specific services and relationships may not be clear. In particular, many existing healthcare laws and regulations, when enacted, did not anticipate the data analytics and improvement services that we provide, and these laws and regulations may be applied to our Solution in ways that we do not anticipate, particularly as we develop and release new and more sophisticated solutions. Our failure to accurately anticipate the application of these laws and regulations, or our other failure to comply with them, could create significant liability for us, result in adverse publicity, and negatively affect our business. Some of the risks we face from healthcare regulation are described below:

- False Claims Laws. There are numerous federal and state laws that prohibit submission of false information, or the failure to disclose information, in connection with submission and payment of physician claims for reimbursement. For example, the federal civil False Claims Act prohibits, among other things, individuals or entities from knowingly presenting, or causing to be presented, to the U.S. federal government, claims for payment or approval that are false or fraudulent, or knowingly making, using or causing to be made or used, a false record or statement material to a false or fraudulent claim. In addition, the government may assert that a claim including items and services resulting from a violation of the U.S. federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act. If our advisory services to customers are associated with action by customers that is determined or alleged to be in violation of these laws and regulations, it is possible that an enforcement agency would also try to hold us accountable. Any determination by a court or regulatory agency that we have violated these laws could subject us to significant civil or criminal penalties, invalidate all or portions of some of our customer contracts, require us to change or terminate some portions of our business, require us to refund portions of our services fees, subject us to additional reporting requirements and oversight under a corporate integrity agreement or similar agreement to resolve allegations of noncompliance with these laws, cause us to be disqualified from serving customers doing business with government payors, and have an adverse effect on our business. Our customers' failure to comply with these laws and regulations in connection with our services could result in substantial liability (including, but not limited to, criminal liability), adversely affect demand for our Solution, and force us to expend
- significant capital, research and development, and other resources to address the failure.

- Health Data Privacy Laws. There are numerous federal and state laws related to health information privacy. In particular, the federal Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act (HITECH) and their implementing regulations, which we collectively refer to as HIPAA, include privacy standards that protect individual privacy by limiting the uses and disclosures of PHI and implementing data security standards that require covered entities to implement administrative, physical, and technological safeguards to ensure the confidentiality, integrity, availability, and security of PHI in electronic form. HIPAA also specifies formats that must be used in certain electronic transactions, such as admission and discharge messages. By processing and maintaining PHI on behalf of our covered entity customers, we are a HIPAA business associate and mandated by HIPAA to enter into written agreements with our covered entity clients – known as business associate agreements (BAAs) – that require us to safeguard PHI. BAAs typically include:

- a description of our permitted uses of PHI;
- a covenant not to disclose that information except as permitted under the BAA and to require that our subcontractors, if any, are subject to the substantially similar restrictions;
- assurances that reasonable and appropriate administrative, physical, and technical safeguards are in place to prevent misuse of PHI;
- an obligation to report to our customer any use or disclosure of PHI other than as provided for in the BAA;
- a prohibition against our use or disclosure of PHI if a similar use or disclosure by our customer would violate the HIPAA standards;
- the ability of our customers to terminate the underlying support agreement if we breach a material term of the BAA and are unable to cure the breach;
- the requirement to return or destroy all PHI at the end of our services agreement; and
- access by the Department of Health and Human Services (HHS) to our internal practices, books, and records to validate that we are safeguarding PHI.

In addition, we are also required to maintain BAAs, which contain similar provisions, with our subcontractors that access or otherwise process PHI on our behalf.

We may not be able to adequately address the business risks created by HIPAA implementation. Furthermore, we are unable to predict what changes to HIPAA or other laws or regulations might be made in the future or how those changes could affect our business or the costs of compliance. For example, in 2018, the HHS Office for Civil Rights published a Request for Information in the Federal Register seeking comments on a number of areas in which HHS is considering making both minor and significant modifications to the HIPAA privacy and security standards to, among other things, improve care coordination. We are unable to predict what, if any, impact the changes in such standards will have on our compliance costs or our Solution.

Finally, some of our analytics applications, for example one of our benchmarking applications, require that we obtain permissions consistent with HIPAA to provide “data aggregation services” and the right to create de-identified information and to use and disclose such de-identified information. We will also require large sets of de-identified information to enable us to continue to develop machine learning algorithms that enhance our Solution. If we are unable to secure these rights in customer BAAs or as a result of any future changes to HIPAA or other applicable laws, we may face limitations on the use of PHI and our ability to use de-identified information that could negatively affect the scope of our Solution as well as impair our ability to provide upgrades and enhancements to our Solution.

We outsource important aspects of the storage and transmission of customer and member information, and thus rely on third parties to manage functions that have material cyber-security risks. We attempt to address these risks by requiring outsourcing subcontractors who handle customer information to sign BAAs contractually requiring those subcontractors to adequately safeguard PHI in a similar manner that applies to us and in some cases by requiring such outsourcing subcontractors to undergo third-party security examinations as well as to protect the confidentiality of other sensitive customer information. In addition, we periodically hire third-party security experts to assess and test our security measures. However, we cannot be assured that these contractual measures and other safeguards will adequately protect us from the risks associated with the storage and transmission of customer proprietary information and PHI.

In addition to the HIPAA privacy and security standards, most states have enacted patient confidentiality laws that protect against the disclosure of confidential medical and other personally identifiable information (PII) and many states have adopted or are considering new privacy laws, including legislation that would mandate new privacy safeguards, security standards, and data security breach notification requirements. Such state laws, if more stringent than HIPAA requirements, are not preempted by the federal requirements, and we are required to comply with them.

Failure by us to comply with any of the federal and state standards regarding patient privacy and/or privacy more generally may subject us to penalties, including significant civil monetary penalties and, in some circumstances, criminal penalties. In addition, such failure may injure our reputation and adversely affect our ability to retain customers and attract new customers.

Even an unsuccessful challenge by regulatory authorities of our activities could result in adverse publicity and could require a costly response from us.

- Anti-Kickback and Anti-Bribery Laws. There are federal and state laws that prohibit payment for patient referrals, patient brokering, remuneration of patients, or billing based on referrals between individuals or entities that have various financial, ownership, or other business relationships with healthcare providers. In particular, the federal Anti-Kickback Statute prohibits offering, paying, soliciting, or receiving anything of value, directly or indirectly, for the referral of patients covered by Medicare, Medicaid, and other federal healthcare programs or the leasing, purchasing, ordering, or arranging for or recommending the lease, purchase, or order of any item, good, facility, or service covered by these programs. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. Some enforcement activities focus on below or above market payments for federally reimbursable health care items or services as evidence of the intent to provide a kickback. Many

states also have similar anti-kickback laws that are not necessarily limited to items or services for which payment is made by a federal healthcare program. In addition, the federal anti-referral law—the Stark Law—is very complex in its application, and prohibits physicians (and certain other healthcare professionals) from making a referral for a designated health service to a provider in which the referring healthcare professional (or spouse or any immediate family member) has a financial or ownership interest, unless an enumerated exception applies. The Stark Law also prohibits the billing for services rendered resulting from an impermissible referral. Many states also have similar anti-referral laws that are not necessarily limited to items or services for which payment is made by a federal healthcare program, and may include patient disclosure requirements. Moreover, both federal and state laws prohibit bribery and similar behavior. Any determination by a state or federal regulatory agency that we or any of our customers, vendors, or partners violate or have violated any of these laws could subject us to significant civil or criminal penalties, require us to change or terminate some portions of our business, require us to refund portions of our services fees, subject us to additional reporting requirements and oversight under a corporate integrity agreement or similar agreement to resolve allegations of noncompliance with these laws, cause us to be disqualified from serving customers doing business with government payors, and have an adverse effect on our business. Even an unsuccessful challenge by regulatory authorities of our activities could result in adverse publicity and could require a costly response from us.

- Corporate Practice of Medicine Laws and Fee-Splitting Laws. Many states have laws prohibiting physicians from practicing medicine in partnership with non-physicians, such as business corporations. In some states, including New York, these take the form of laws or regulations prohibiting splitting of physician fees with non-physicians or others. Any determination by a state court or regulatory agency that our service contracts with our clients violate these laws could subject us to civil or criminal penalties, invalidate all or portions of some of those contracts, require us to change or terminate some portions of our business, require us to refund portions of our services fees, and have an adverse effect on our business. Even an unsuccessful challenge by regulatory authorities of our activities could result in adverse publicity and could require a costly response from us.

- Medical professional regulation. The practice of most healthcare professions requires licensing under applicable state law. In addition, the laws in some states prohibit business entities from practicing medicine. We employ and contract with physicians who assist our customers with the customers' care coordination, care management, population health management, and patient safety activities. We do not intend to provide medical care, treatment, or advice. However, any determination that we are acting in the capacity of a healthcare provider and acted improperly as a healthcare provider may result in additional compliance requirements, expense, and liability to us, and require us to change or terminate some portions of our business.

- Medical Device Laws. The FDA may regulate medical or health-related software, including machine learning functionality and predictive algorithms, if such software falls within the definition of a "device" under the federal Food, Drug, and Cosmetic Act (FDCA). However, the FDA exercises enforcement discretion for certain low risk software, as described in its guidance documents for Mobile Medical Applications, General Wellness: Policy for Low Risk Devices, and Medical Device Data Systems, Medical Image Storage Devices, and Medical Image Communications Devices. In addition, in December of 2016, President Obama signed into law the 21st Century Cures Act, which included exemptions for certain medical-related software, including software used for administrative support functions at a healthcare facility, software intended for maintaining or encouraging a healthy lifestyle, EHR software, software for transferring, storing, or displaying medical device data or in vitro diagnostic data, and certain clinical decision support software. The FDA has also issued draft guidance documents to clarify how it intends to interpret and apply the new exemptions under the 21st Century Cures Act. Although we believe that our software products are currently not subject to active FDA regulation, we continue to follow the FDA's developments in this area. There is a risk that the FDA could disagree with our

determination or that the FDA could develop new final guidance documents that would subject our Solution to active FDA oversight. If the FDA determines that any of our current or future analytics applications are regulated as medical devices, we would become subject to various requirements under the FDCA and the FDA's implementing regulations. Depending on the functionality and FDA classification of our analytics applications, we may be required to:

- register and list our analytics applications with the FDA;
- notify the FDA and demonstrate substantial equivalence to other products on the market before marketing our analytics applications;
- submit a de novo request to the FDA to down-classify our analytics applications prior to marketing; or
- obtain FDA approval by demonstrating safety and effectiveness before marketing our analytics applications.

The FDA can impose extensive requirements governing pre- and post-market conditions, such as service investigation and others relating to approval, labeling, and manufacturing. In addition, the FDA can impose extensive requirements governing software development controls and quality assurance processes.

These laws and regulations may change rapidly, and it is frequently unclear how they apply to our business. Any failure of our products or services to comply with these laws and regulations could result in substantial civil or criminal liability and could, among other things, adversely affect demand for our services, force us to expend significant capital, research and development, and other resources to address the failure, invalidate all or portions of some of our contracts with our customers, require us to change or terminate some portions of our business, require us to refund portions of our revenue, cause us to be disqualified from serving customers doing business with government payors, and give our customers the right to terminate our contracts with them, any one of which could have an adverse effect on our business. Additionally, the introduction of new services may require us to comply with additional, yet undetermined, laws and regulations.

The security measures that we and our third-party vendors and subcontractors have in place to ensure compliance with privacy and data protection laws may not protect our facilities and systems from security breaches, acts of vandalism or theft, computer viruses, misplaced or lost data, programming and human errors, or other similar events. Under the HITECH Act, as a business associate we may also be liable for privacy and security breaches and failures of our subcontractors. Even though we provide for appropriate protections through our agreements with our subcontractors, we still have limited control over their actions and practices. A breach of privacy or security of individually identifiable health information by a subcontractor may result in an enforcement action, including criminal and civil liability, against us. We are not able to predict the extent of the impact such incidents may have on our business. Our failure to comply may result in criminal and civil liability because the potential for enforcement action against business associates is now greater.

Enforcement actions against us could be costly and could interrupt regular operations, which may adversely affect our business. While we have not received any notices of violation of the applicable privacy and data protection laws and believe we are in compliance with such laws, there can be no assurance that we will not receive such notices in the future.

There is ongoing concern from privacy advocates, regulators, and others regarding data protection and privacy issues, and the number of jurisdictions with data protection and privacy laws has been increasing. Also, there are ongoing public policy discussions regarding whether the standards for deidentified, anonymous, or pseudonymized health information are sufficient, and the risk of re-identification sufficiently small, to adequately protect patient privacy. We expect that there will continue to be new proposed laws, regulations, and industry standards concerning privacy, data protection, and information security in the United States, including the California Consumer Privacy Act, which will go into effect January 1, 2020, and we cannot yet determine the impact such future laws, regulations, and standards may have on our business. Future laws, regulations, standards, and other obligations, and changes in the interpretation of existing laws, regulations, standards, and other obligations could impair our or our customers' ability to collect, use, or disclose information relating to consumers, which could decrease demand for our platform, increase our costs, and impair our ability to maintain and grow our customer base and increase our revenue. New laws, amendments to or re-interpretations of existing laws and regulations, industry standards, contractual obligations, and other obligations may require us to incur additional costs and restrict our business operations. In view of new or modified federal, state, or foreign laws and regulations, industry standards, contractual obligations, and other legal obligations, or any changes in their interpretation, we may find it necessary or desirable to fundamentally change our business activities and practices or to expend significant resources to modify our software or platform and otherwise adapt to these changes.

Any failure or perceived failure by us to comply with federal or state laws or regulations, industry standards, or other legal obligations, or any actual or suspected security incident, whether or not resulting in unauthorized access to, or acquisition, release, or transfer of personally identifiable information or other data, may result in governmental enforcement actions and prosecutions, private litigation, fines, and penalties or adverse publicity and could cause our customers to lose trust in us, which could have an adverse effect on our reputation and business. We may be unable to make such changes and modifications in a commercially reasonable manner or at all, and our ability to develop new products and features could be limited. Any of these developments could harm our business, financial condition, and results of operations. Privacy and data security concerns, whether valid or not valid, may inhibit market adoption of our platform.

Further, on February 11, 2019, ONC and CMS proposed complementary new rules to support access, exchange, and use of EHI. The proposed rules are intended to clarify provisions of the 21st Century Cures Act regarding interoperability and "information blocking," and, if adopted, will create significant new requirements for health care industry participants. The proposed ONC rule, if adopted, would require certain electronic health record technology to incorporate standardized application programming interfaces (APIs) to allow individuals to securely and easily access structured EHI using smartphone applications. The ONC rule would also implement provisions of the 21st Century Cures Act requiring that patients be provided with electronic access to all of their EHI (structured and/or unstructured) at no cost. Finally, the proposed ONC rule would also implement the information blocking provisions of the 21st Century Cures Act, and proposes seven "reasonable and necessary activities" that will not be considered information blocking as long as specific conditions are met.

The CMS proposed rule focuses on health plans, payors, and health care providers and proposes measures to enable patients to move from health plan to health plan, provider to provider, and have both their clinical and administrative information travel with them.

It is unclear whether or when these rules, and others released simultaneously, will be adopted, in whole or in part. If adopted, the rules may benefit us in that certain EHR vendors will no longer be permitted to interfere with our attempts at integration, but the rules may also make it easier for other similar companies to enter the market, creating increased competition, and reducing our market share. It is unclear at this time what the costs of compliance with the proposed rules, if adopted, would be, and what additional risks there may be to our business.

Due to the particular nature of certain services we provide or the manner in which we provide them, we may be subject to additional government regulation and foreign government regulation.

While our Solution is primarily subject to government regulations pertaining to healthcare, certain aspects of our Solution may require us to comply with regulatory schema from other areas. Examples of such regulatory schema include:

- Antitrust Laws. Our national cloud-based network allows us access to cost and pricing data for a large number of providers in most regional markets, as well as to the contracted rates for third-party payors. To the extent that our Solution enables providers to compare their cost and pricing data with those of their competitors, those providers could collude to increase the pricing for their services, to reduce the compensation they pay their employees, or to collectively negotiate agreements with third parties. Similarly, if payors are able to compare their contracted rates of payment to providers, those payors may seek to reduce the amounts they might otherwise pay. Such actions may be deemed to be anti-competitive and a violation of federal antitrust laws. To the extent that we are deemed to have enabled such activities, we could be subject to fines and penalties

imposed by the U.S. Department of Justice or the FTC and be required to curtail or terminate the services that permitted such collusion.

- Consumer Protection Regulation. Federal and state government bodies and agencies have adopted or are considering adopting laws and regulations regarding the collection, use, and dissemination of data, and the presentation of website or other electronic content, which may require compliance with certain standards for notice, choice, security, and access. California recently adopted the California Consumer Privacy Act of 2018 (CCPA), which will come into effect on January 1, 2020. The CCPA has been characterized as the first "GDPR-like" privacy statute to be enacted in the United States because it mirrors a number of the key provisions of the GDPR (discussed below). The CCPA establishes a new privacy framework for covered businesses by creating an expanded definition of personal information, establishing new data privacy rights for consumers in the state of California, imposing special rules on the collection of consumer data from minors, and creating a new and potentially severe statutory damages framework for violations of the CCPA and for businesses that fail to implement reasonable security procedures and practices to prevent data breaches. If we fail to comply with any of these privacy laws that apply to us, and are subject to the aforementioned penalties, our business and financial results could be adversely affected.

- Foreign Corrupt Practices Act (FCPA) and Foreign Anti-Bribery Laws. The FCPA makes it illegal for U.S. persons, including U.S. companies, and their subsidiaries, directors, officers, employees, and agents, to promise, authorize or make any corrupt payment, or otherwise provide anything of value, directly or indirectly, to any foreign official, any foreign political party or party official, or candidate for foreign political office to obtain or retain business. Violations of the FCPA can also result in violations of other U.S. laws, including anti-money laundering, mail and wire fraud, and conspiracy laws. There are severe penalties for violating the FCPA. In addition, the Company may also be subject to other non-U.S. anti-corruption or anti-bribery laws, such as the U.K. Bribery Act 2010. If our employees, contractors, vendors, or partners fail to comply with the FCPA and/or foreign anti-bribery laws, we may be subject to penalties or sanctions, and our ability to develop new prospects and retain existing customers could be adversely affected.

- Economic Sanctions and Export Controls. Economic and trade sanctions programs that are administered by the U.S. Treasury Department's Office of Foreign Assets Control (OFAC) prohibit or restrict transactions to or from, and dealings with specified countries and territories, their governments, and in certain circumstances, with individuals and entities that are specially designated nationals of those countries, and other sanctioned persons, including narcotics traffickers and terrorists or terrorist organizations. As federal, state and foreign legislative regulatory scrutiny and enforcement actions in these areas increase, we expect our costs to comply with these requirements will increase as well. Failure to comply with any of these requirements could result in the limitation, suspension or termination of our services, imposition of significant civil and criminal penalties, including fines, and/or the seizure and/or forfeiture of our assets. Further, our Solution incorporates encryption technology. This encryption technology may be exported from the United States only with the required export authorizations, including by a license, a license exception or other appropriate government authorizations. Such solutions may also be subject to certain regulatory reporting requirements. Various countries also regulate the import of certain encryption technology, including through import permitting and licensing requirements, and have enacted laws that could limit our customers' ability to import our Solution into those countries. Governmental regulation of encryption technology and of exports and imports of encryption products, or our failure to obtain required approval for our Solution, when applicable, could harm our international sales and adversely affect our revenue. Compliance with applicable regulatory requirements regarding the provision of our Solution, including with respect to new applications, may delay the introduction of our Solution in various markets or, in some cases, prevent the provision of our Solution to some countries altogether.

- GDPR and Foreign Data Privacy Protection Laws - In addition, several foreign governments have regulations dealing with the collection and use of personal information obtained from their residents. For example, in the European Union, (EU), the General Data Protection Regulation (GDPR) went into effect on May 25, 2018. If we or our vendors fail to comply with the applicable EU privacy laws, we could be subject to government enforcement actions and significant penalties against us. GDPR introduced new data protection requirements in the EU relating to the consent of the individuals to whom the personal data relates, the information provided

to the individuals, the documentation we must retain, the security and confidentiality of the personal data, data breach notification and the use of third-party processors in connection with the processing of personal data. GDPR has increased our responsibility and potential liability in relation to personal data that we process, and we may be required to put in place mechanisms to ensure compliance with GDPR. Data protection authorities of the different EU Member States may interpret GDPR differently, and guidance on implementation and compliance practices are often updated or otherwise revised, which adds to the complexity of processing personal data in the EU. Any failure by us to comply with GDPR could result in proceedings or actions against us by governmental entities or others, which may subject us to significant penalties and negative publicity, require us to change our business practices, and increase our costs and severely disrupt our business. Similarly, Canada's Personal Information and Protection of Electronic Documents Act provides Canadian residents with privacy protections in regard to transactions with businesses and organizations in the private sector and sets out ground rules for how private sector organizations may collect, use, and disclose personal information in the course of commercial activities. Foreign governments may attempt to apply such laws extraterritorially or through treaties or other arrangements with U.S. governmental entities. Other jurisdictions besides the EU and Canada are similarly introducing or enhancing laws and regulations relating to privacy and data security, which enhances risks relating to compliance with such laws. Furthermore, as we enter into business arrangements in countries outside of the United States, we will need to be prepared to comply with applicable local privacy laws. The GDPR and other changes in laws or regulations associated with the enhanced protection of certain types of personal data, such as healthcare data or other sensitive information, could greatly increase our cost of providing our products and services or even prevent us from offering certain services in jurisdictions that we operate.

- Regulatory Certification. We must obtain certification from governmental agencies, such as the Agency for Healthcare Research and Quality (AHRQ) to sell certain of our analytics applications and services in the United States. We cannot be certain that our Solution will continue to meet these standards. The failure to comply with these certification requirements could result in the loss of certification, which could restrict our Solution offerings and cause us to lose customers.

We cannot be certain that the privacy policies and other statements regarding our practices will be found sufficient to protect us from liability or adverse publicity relating to the privacy and security of personal information. Whether and how existing local and international privacy and data protection laws in various jurisdictions apply to the Internet and other online technologies is still uncertain and may take years to resolve. Current and future privacy laws and regulations, if drafted or interpreted broadly, could be deemed to apply to the technology we use and could restrict our information collection methods or decrease the amount and utility of the information that we would be permitted to collect. The costs of compliance with, and the other burdens imposed by, these and other laws or regulatory actions may prevent us from selling our Solution, or increase the costs of doing so, and may affect our ability to invest in or jointly develop our analytics applications. In addition, a determination by a court or government agency that any of our practices, or those of our agents, do not meet these standards could result in civil and/or criminal liability, result in adverse publicity, and adversely affect our business.

The healthcare regulatory and political framework is uncertain and evolving.

Healthcare laws and regulations are rapidly evolving and may change significantly in the future, which could adversely affect our financial condition and results of operations. For example, in March 2010, the Patient Protection and ACA was adopted, which is a healthcare reform measure that provides healthcare insurance for approximately 30 million more Americans. The ACA includes a variety of healthcare reform provisions and requirements that became effective at varying times through 2018 and substantially changes the way healthcare is financed by both governmental and private insurers, which may significantly impact our industry and our business. Many of the provisions of the ACA phase in over the course of the next several years, and we may be unable to predict accurately what effect the ACA or other healthcare reform measures that may be adopted in the future, including amendments to the ACA, will have on our business. On December 14, 2018, a U.S. District Court Judge in the Northern District of Texas, ruled that the individual mandate is a critical and inseverable feature of the ACA, and therefore, because it was repealed as part of the Tax Act, the remaining provisions of the ACA are invalid as well. While the U.S. District Court Judge, as well as the Trump Administration and CMS, have stated that the ruling will have no immediate effect pending appeal, it is unclear how this decision, subsequent appeals and other efforts to repeal and replace the ACA will impact the ACA and our business.

Our business could be adversely impacted by changes in laws and regulations related to the Internet or changes in access to the Internet generally.

The future success of our business depends upon the continued use of the Internet as a primary medium for communication, business applications, and commerce. Federal or state government bodies or agencies have in the past adopted, and may in the future adopt, laws or regulations affecting the use of the Internet as a commercial medium. Legislators, regulators, or government bodies or agencies may also make legal or regulatory changes or interpret or apply existing laws or regulations that relate to the use of the Internet in new and materially different ways. Changes in these laws, regulations or interpretations could require us to modify our platform in order to comply with these changes, to incur substantial additional costs or divert resources that could otherwise be deployed to grow our business, or expose us to unanticipated civil or criminal liability, among other things.

In addition, government agencies and private organizations have imposed, and may in the future impose, additional taxes, fees or other charges for accessing the Internet or commerce conducted via the Internet. Internet access is frequently provided by companies that have significant market power and could take actions that degrade, disrupt or increase the cost of our customers' use of our platform, which could negatively impact our business. In December 2017, the Federal Communications Commission announced it will revise the "net neutrality" rules. These rules were designed to ensure that all online content is treated the same by Internet service providers and other companies that provide Internet services. Should the net neutrality rules be relaxed or eliminated, we could incur greater operating expenses or our customers' use of our platform could be adversely affected, either of which could harm our business and results of operations.

These developments could limit the growth of Internet-related commerce or communications generally or result in reductions in the demand for Internet-based platforms and services such as ours, increased costs to us or the disruption of our business. In addition, as the Internet continues to experience growth in the numbers of users, frequency of use and amount of data transmitted, the use of the Internet as a business tool could be adversely affected due to delays in the development or adoption of new standards and protocols to handle increased demands of Internet activity, security, reliability, cost, ease-of-use, accessibility, and quality of service. The performance of the Internet and its acceptance as a business tool has been adversely affected by "viruses," "worms," and similar malicious programs and the Internet has experienced a variety of outages and other delays as a result of damage to portions of its infrastructure. If the use of the Internet generally, or our platform specifically, is adversely affected by these or other issues, we could be forced to incur substantial costs, demand for our platform could decline, and our results of operations and financial condition could be harmed.

Risks Related to Ownership of Our Common Stock and this Offering

We have a limited operating history in an evolving industry which makes it difficult to evaluate our current business future prospects and increases the risk of your investment.

We launched operations in 2008 and we acquired Medicity in June 2018. Our limited operating history, in particular with respect to the Medicity business, makes it difficult to effectively assess or forecast our future prospects. You should consider our business and prospects in light of the risks and difficulties we encounter or may encounter. These risks and difficulties include our ability to cost-effectively acquire new customers and retain existing customers, maintain the quality of our technology infrastructure that can efficiently and reliably handle the requirements of our customers and the deployment of new features and solutions and successfully compete with other companies that are currently in, or may enter, the healthcare solution space. Additional risks include our ability to effectively manage growth, responsibly use the data that customers share with us, process, store, protect, and use personal data in compliance with governmental regulation, contractual obligations, and other legal obligations related to privacy and security and avoid interruptions or disruptions in our service or slower than expected load times for our platform. If we fail to address the risks and difficulties that we face, including those associated with the challenges listed above, our business and our results of operations will be adversely affected.

The market price of our common stock may be volatile and may decline regardless of our operating performance, and you may not be able to resell your shares at or above the initial public offering price.

Prior to this offering, there has been no public market for shares of our common stock. The initial public offering price of our common stock will be determined through negotiation among the underwriters and us and may vary from the market price of our common stock following this offering. The market prices of the securities of other newly public companies have historically been highly volatile. The market price of our common stock may fluctuate significantly in response to numerous factors, many of which are beyond our control, including:

- overall performance of the equity markets and/or publicly-listed technology companies;
- actual or anticipated fluctuations in our net revenue or other operating metrics;
- changes in the financial projections we provide to the public or our failure to meet these projections;
- failure of securities analysts to initiate or maintain coverage of us, changes in financial estimates by any securities analysts who follow our company, or our failure to meet the estimates or the expectations of investors;
- the economy as a whole and market conditions in our industry;
- rumors and market speculation involving us or other companies in our industry;
- announcements by us or our competitors of significant innovations, acquisitions, strategic partnerships, joint ventures, or capital commitments;
- new laws or regulations or new interpretations of existing laws or regulations applicable to our business;
- lawsuits threatened or filed against us;

- recruitment or departure of key personnel;
- other events or factors, including those resulting from war, incidents of terrorism, or responses to these events; and
- the expiration of contractual lock-up or market standoff agreements.

In addition, extreme price and volume fluctuations in the stock markets have affected and continue to affect many technology companies' stock prices. Often, their stock prices have fluctuated in ways unrelated or disproportionate to the companies' operating performance. In the past, stockholders have filed securities class action litigation following periods of market volatility. If we were to become involved in securities litigation, it could subject us to substantial costs, divert resources and the attention of management from our business, and harm our business.

Moreover, because of these fluctuations, comparing our results of operations on a period-to-period basis may not be meaningful. You should not rely on our past results as an indication of our future performance. This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our net revenue or results of operations fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated net revenue or earnings forecasts that we may provide.

There has been no prior public trading market for our common stock and an active trading market for our common stock may never develop or be sustained.

We have applied to list our common stock on The Nasdaq Global Select Market (Nasdaq), under the symbol "HCAT". However, there has been no prior public trading market for our common stock. We cannot assure you that an active trading market for our common stock will develop on that exchange or elsewhere or, if developed, that any market will be sustained. Accordingly, we cannot assure you of the likelihood that an active trading market for our common stock will develop or be maintained, the liquidity of any trading market, your ability to sell your shares of our common stock when desired, or the prices that you may obtain for your shares.

We are an emerging growth company, and any decision on our part to comply only with certain reduced reporting and disclosure requirements applicable to emerging growth companies could make our common stock less attractive to investors.

We are an emerging growth company, and, for as long as we continue to be an emerging growth company, we may choose to take advantage of exemptions from various reporting requirements applicable to other public companies but not to "emerging growth companies," including:

- not being required to have our independent registered public accounting firm attest to our internal control over financial reporting under Section 404 of the Sarbanes Oxley Act;
- reduced disclosure obligations regarding executive compensation in our periodic reports and annual report on Form 10-K; and
- exemptions from the requirements of holding a non-binding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We could be an emerging growth company for up to five years following the completion of this offering. Our status as an emerging growth company will end as soon as any of the following takes place:

- the last day of the fiscal year in which we have more than $1.07 billion in annual revenue;
- the date we qualify as a "large accelerated filer," with at least $700 million of equity securities held by non-affiliates;
- the date on which we have issued, in any three-year period, more than $1.0 billion in non-convertible debt securities; or
- the last day of the fiscal year ending after the fifth anniversary of the completion of this offering.

We cannot predict if investors will find our common stock less attractive if we choose to rely on the exemptions afforded emerging growth companies. If some investors find our common stock less attractive because we rely on any of these exemptions, there may be a less active trading market for our common stock and the market price of our common stock may be more volatile.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this accommodation allowing for delayed adoption of new or revised accounting standards, and therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

If securities or industry analysts do not publish research, or publish inaccurate or unfavorable research, about our business, the price of our common stock and trading volume could decline.

The trading market for our common stock will depend in part on the research and reports that securities or industry analysts publish about us or our business. Securities and industry analysts do not currently, and may never, publish research on our company. If few securities analysts commence coverage of us, or if industry analysts cease coverage of us, the trading price for our common stock could be negatively affected. If one or more of the analysts who

cover us downgrade our common stock or publish inaccurate or unfavorable research about our business, our common stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us on a regular basis, demand for our common stock could decrease, which might cause our common stock price and trading volume to decline.

Sales of substantial amounts of our common stock in the public markets, such as when our lock-up restrictions are released, or the perception that sales of common stock might occur, could cause the market price of our common stock to decline.

Sales of a substantial number of shares of our common stock into the public market, particularly sales by our directors, executive officers, and principal stockholders, or the perception that these sales might occur, could cause the market price of our common stock to decline. Based on the total number of outstanding shares of our common stock as of March 31, 2019, upon completion of this offering, we will have outstanding a total of shares of common stock. This assumes no exercise of outstanding options or warrants and gives effect to the conversion of all of our outstanding shares of redeemable convertible preferred stock into shares of common stock and the issuance of shares of common stock on the completion of this offering.

Substantially all of our securities outstanding prior to the completion of this offering are currently restricted from resale as a result of lock-up and market standoff agreements. See “Shares Eligible for Future Sale” for additional information. These securities will become available to be sold 180 days after the date of the final prospectus relating to the offering. Goldman Sachs & Co. LLC and J.P. Morgan Securities LLC may, in their discretion, permit our security holders to sell shares prior to the expiration of the restrictive provisions contained in the lock-up agreements. Sales of a substantial number of such shares upon expiration of the lock-up and market standoff agreements, the perception that such sales may occur or early release of these agreements could cause our market price to fall or make it more difficult for an investor to sell common stock at a time and price that an investor deems appropriate. Shares held by directors, executive officers, and other affiliates will also be subject to volume limitations under Rule 144 under the Securities Act of 1933, as amended (Securities Act), and various vesting agreements.

In addition, as of March 31, 2019, we had 16,266,375 options outstanding that, if fully exercised, would result in the issuance of shares of common stock. All of the shares of common stock issuable upon the exercise of stock options and the shares reserved for future issuance under our equity incentive plans will be registered for public resale under the Securities Act. Accordingly, these shares will be able to be freely sold in the public market upon issuance, subject to existing lock-up or market standoff agreements, volume limitations under Rule 144 for our executive officers and directors, and applicable vesting requirements.

Following this offering, the holders of 48,437,193 shares of our common stock will have rights, subject to some conditions, to require us to file registration statements for the public resale of the common stock issuable upon conversion of such shares or to include such shares in registration statements that we may file for us or other stockholders. Any registration statement we file to register additional shares, whether as a result of registration rights or otherwise, could cause the market price of our common stock to decline or be volatile.

Purchasers in this offering will immediately experience substantial dilution in net tangible book value.

The initial public offering price of our common stock is substantially higher than the pro forma net tangible book value per share of our common stock immediately following this offering based on the total value of our tangible assets less our total liabilities. Therefore, if you purchase shares of our common stock in this offering, you will experience immediate dilution of $ per share, the difference between the price per share you pay for our common stock and the pro forma net tangible book value per share as of March 31, 2019, after giving effect to the issuance of shares of our common stock in this offering. See “Dilution.”

Our management will have broad discretion in the use of proceeds from this offering and our use may not produce a positive rate of return.

The principal purposes of this offering are to increase our capitalization and financial flexibility, create a public market for our stock and thereby enable access to the public equity markets by our employees and stockholders, obtain additional capital, and strengthen our position in the healthcare data analytics applications and services market. We cannot specify with certainty our plans for the use of the net proceeds we receive from this offering. However, we intend to use the net proceeds we receive from this offering for working capital and other general corporate purposes. Our management will have broad discretion over the specific use of the net proceeds we receive in this offering and might not be able to obtain a significant return, if any, on investment of these net proceeds. Investors in this offering will need to rely upon the judgment of our management with respect to the use of proceeds. If we do not use the net proceeds that we receive in this offering effectively, our business, results of operations, and financial condition could be harmed.

Our issuance of additional capital stock in connection with financings, acquisitions, investments, our stock incentive plans or otherwise will dilute all other stockholders.

We expect to issue additional capital stock in the future that will result in dilution to all other stockholders. We expect to grant equity awards to employees, directors, and consultants under our stock incentive plans. We may also raise capital through equity financings in the future. As part of our business strategy, we may acquire or make investments in complementary companies, products, or technologies and issue equity securities to pay for any such acquisition or investment. Any such issuances of additional capital stock may cause stockholders to experience significant dilution of their ownership interests and the per share value of our common stock to decline.

The requirements of being a public company may strain our resources, divert management’s attention and affect our ability to attract and retain executive management and qualified board members.

As a public company, we will be subject to the reporting requirements of the Securities Exchange Act of 1934 (the Exchange Act), the listing standards of Nasdaq and other applicable securities rules and regulations. We expect that the requirements of these rules and regulations will continue to increase our legal, accounting, and financial compliance costs, make some activities more difficult, time-consuming, and costly, and place significant strain on our personnel, systems, and resources. For example, the Exchange Act requires, among other things, that we file annual, quarterly and current reports with

respect to our business and results of operations. As a result of the complexity involved in complying with the rules and regulations applicable to public companies, our management's attention may be diverted from other business concerns, which could harm our business, results of operations, and financial condition.

Although we have already hired additional employees to assist us in complying with these requirements, we may need to hire more employees in the future or engage outside consultants, which will increase our operating expenses.

In addition, changing laws, regulations, and standards relating to corporate governance and public disclosure are creating uncertainty for public companies, increasing legal and financial compliance costs, and making some activities more time-consuming. These laws, regulations, and standards are subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We intend to invest substantial resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from business operations to compliance activities. If our efforts to comply with new laws, regulations, and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to their application and practice, regulatory authorities may initiate legal proceedings against us and our business may be harmed.

We also expect that being a public company and these new rules and regulations will make it more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These factors could also make it more difficult for us to attract and retain qualified members of our board of directors, particularly to serve on our audit committee and compensation committee, and qualified executive officers.

As a result of disclosure of information in this prospectus and in filings required of a public company, our business and financial condition will become more visible, which may result in an increased risk of threatened or actual litigation, including by competitors and other third parties. If such claims are successful, our business and results of operations could be harmed, and even if the claims do not result in litigation or are resolved in our favor, these claims, and the time and resources necessary to resolve them, could divert the resources of our management and harm our business, results of operations, and financial condition.

The individuals who now constitute our senior management team have limited experience managing a publicly-traded company and limited experience complying with the increasingly complex laws pertaining to public companies. Our senior management team may not successfully or efficiently manage our transition to a public company that is subject to significant regulatory oversight and reporting obligations.

We do not intend to pay dividends on our common stock and, consequently, the ability of common stockholders to achieve a return on investment will depend on appreciation, if any, in the price of our common stock.

You should not rely on an investment in our common stock to provide dividend income. We have never declared or paid any dividends on our capital stock. We intend to retain any earnings to finance the operation and expansion of our business, and we do not anticipate paying any cash dividends in the foreseeable future. In addition, the terms of our debt facilities with OrbiMed and SVB contain, and any future credit facility or financing we obtain may contain, terms prohibiting or limiting the amount of dividends that may be declared or paid on our common stock. As a result, common stockholders may only receive a return on investment if the market price of our common stock increases.

Provisions in our charter documents and under Delaware law could make an acquisition of our company more difficult, limit attempts by our stockholders to replace or remove our current board of directors, and limit the market price of our common stock.

Provisions that will be in our amended and restated certificate of incorporation and amended and restated bylaws may have the effect of delaying or preventing a change of control or changes in our management. Our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective upon the completion of this offering, will include provisions that:

- provide that our board of directors will be classified into three classes of directors with staggered three-year terms;
- permit the board of directors to establish the number of directors and fill any vacancies and newly-created directorships;
- require super-majority voting to amend some provisions in our amended and restated certificate of incorporation and amended and restated bylaws;
- authorize the issuance of "blank check" preferred stock that our board of directors could use to implement a stockholder rights plan;
- provide that only a majority of our board of directors will be authorized to call a special meeting of stockholders;
- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;
- provide that the board of directors is expressly authorized to make, alter, or repeal our bylaws; and
- advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted upon by stockholders at annual stockholder meetings.

Moreover, Section 203 of the Delaware General Corporation Law may discourage, delay, or prevent a change in control of our company.

Section 203 imposes certain restrictions on mergers, business combinations, and other transactions between us and holders of 15% or more of our common stock. See "Description of Capital Stock" for additional information.

Our amended and restated bylaws will designate a state or federal court located within the State of Delaware as the exclusive forum for certain litigation that may be initiated by our stockholders, which could limit stockholders' ability to obtain a favorable judicial forum for disputes with us.

Our amended and restated bylaws will provide, to the fullest extent permitted by law, that a state or federal court located within the State of Delaware will be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law:

- any derivative action or proceeding brought on our behalf;
- any action asserting a breach of fiduciary duty;
- any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation, or our amended and restated bylaws; or
- any action asserting a claim against us that is governed by the internal affairs doctrine.

This exclusive forum provision will not apply to any causes of action arising under the Securities Act or the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Nothing in our amended and restated bylaws precludes stockholders that assert claims under the Securities Act or the Exchange Act from bringing such claims in state or federal court, subject to applicable law. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, or other employees, which may discourage lawsuits with respect to such claims. Alternatively, if a court were to find the choice of forum provision which will be contained in our amended and restated bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, results of operations, and financial condition.

We could be subject to securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because technology and healthcare technology companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business.

Special Note Regarding Forward-Looking Statements

This prospectus contains forward-looking statements that involve substantial risks and uncertainties. The forward-looking statements are contained principally in the sections of this prospectus titled "Prospectus Summary," "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Business," but are also contained elsewhere in this prospectus. In some cases, you can identify forward-looking statements by the words "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "might," "objective," "ongoing," "plan," "predict," "project," "potential," "should," "will," or "would," or the negative of these terms, or other comparable terminology intended to identify statements about the future. These statements involve known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance, or achievements to be materially different from the information expressed or implied by these forward-looking statements. These statements are inherently uncertain, and investors are cautioned not to unduly rely upon these statements. In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. The forward-looking statements and opinions contained in this prospectus are based upon information available to us as of the date of this prospectus and, while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. Forward-looking statements include statements about:

- our market opportunity;
- the effects of increased competition as well as innovations by new and existing competitors in our market;
- our ability to retain our existing customers and to increase our number of customers;
- the future growth of the healthcare industry and demands of our customers;
- our ability to effectively manage or sustain our growth;
- potential acquisitions and integration of complementary businesses and technologies;
- our expected use of proceeds;
- our ability to maintain, or strengthen awareness of, our brand;
- future revenue, hiring plans, expenses, capital expenditures, and capital requirements;

- our ability to comply with new or modified laws and regulations that currently apply or become applicable to our business both in the United States and internationally;
- the loss of key employees or management personnel;
- our ability to develop and maintain our corporate infrastructure, including our internal controls;
- our financial performance and capital requirements;
- our ability to maintain, protect, and enhance our intellectual property; and
- the future trading prices of our common stock and the impact of securities analysts' reports on these prices.

We caution you that the foregoing list may not contain all of the forward-looking statements made in this prospectus.

You should refer to the "Risk Factors" section of this prospectus for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame or at all. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. The Private Securities Litigation Reform Act of 1995 and Section 27A of the Securities Act do not protect any forward-looking statements that we make in connection with this offering.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

Industry and Market Data

Information contained in this prospectus concerning our industry and the market in which we operate is based on information from various sources. In presenting this information, we have also made assumptions based on such data and other similar sources, and on our knowledge of, and in our experience to date in, the markets for our services. This information involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. Although neither we nor the underwriters have independently verified the accuracy or completeness of any third-party information, we believe such information included in this prospectus is reliable. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the "Risk Factors." These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

Certain information in this prospectus is contained in independent industry publications. The source of these independent industry publications is provided below:

- Black Book Market Research, LLC, Accountable Care IT Solutions, February 2019.
- Black Book Market Research, LLC, Advanced Predictive Analytics, February 2019.
- Black Book Market Research, LLC, Data Warehousing & Mining, February 2019.
- Black Book Market Research, LLC, Healthcare Benchmarking, February 2019.
- Black Book Market Research, LLC, Provider Healthcare Analytics Solutions: Highest Client Satisfaction, February 2019.
- Chilmark Inc., 2017 Healthcare Analytics Market Trends Report, August 2017.
- Chilmark Inc., Provider Analytics: Solutions and Tools for Healthcare Delivery, March 2019.
- Crain Communications, Inc., Modern Healthcare, Best Places to Work 2018, May 14, 2018
- Gallup, Inc., Gallup Great Workplace Award, April 1, 2016.
- Gallup, Inc., Gallup Great Workplace Award, April 18, 2017.
- Gallup, Inc., Gallup Great Workplace Award, April 18, 2018.

- Gallup, Inc., Gallup Q12 Employee Engagement Survey, 2015, 2016, 2017, 2018.
- Glassdoor, Inc., Best Places to Work: 2017 Employees' Choice, December 1, 2016.
- International Data Corporation, Healthcare: DATCON Level 3, An Industry with a Weak Data Management Pulse, November 2018.
- KLAS Research, Best in KLAS, Software & Services 2017, January 2017.
- KLAS Research, Best in KLAS, Software & Services 2018, January 2018.
- KLAS Research, Best in KLAS, Software & Services 2019, January 2019.
- National Academy of Medicine, Vital Directions for Health and Health Care: Priorities from a National Academy of Medicine Initiative, March 21, 2017.

Use of Proceeds

We estimate that the net proceeds from our issuance and sale of shares of our common stock in this offering will be approximately $ million, or approximately $ million if the underwriters exercise their option to purchase additional shares in full, based upon an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the net proceeds to us from this offering by approximately $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and commissions. We may also increase or decrease the number of shares we are offering. Each 1.0 million share increase or decrease in the number of shares offered by us would increase or decrease, as applicable, the net proceeds to us from this offering by approximately $ million, assuming that the assumed initial offering price to the public remains the same, and after deducting underwriting discounts and commissions. We do not expect that a change in the initial price to the public or the number of shares by these amounts would have a material effect on the uses of the proceeds from this offering, although it may accelerate the time at which we will need to seek additional capital.

The principal purposes of this offering are to increase our financial flexibility, create a public market for our common stock, and facilitate our future access to the capital markets. We intend to use the net proceeds from this offering for working capital and other general corporate purposes.

We may also use a portion of the net proceeds from this offering for acquisitions or strategic transactions, though we have not entered into any agreements or commitments with respect to any specific transactions and have no understanding or agreements with respect to any such transactions at this time. We have not allocated specific amounts of net proceeds for any of these purposes.

The expected use of net proceeds from this offering represents our intentions based upon our present plans and business conditions. We cannot predict with certainty all of the particular uses for the proceeds of this offering or the amounts that we will actually spend on the uses set forth above. Accordingly, our management will have significant flexibility in applying the net proceeds of this offering. The timing and amount of our actual expenditures will be based on many factors, including cash flows from operations and the anticipated growth of our business. Pending their use, we intend to invest the net proceeds of this offering in a variety of capital-preservation investments, including short- and intermediate-term, interest-bearing, investment-grade securities, and government securities.

Dividend Policy

We have never declared or paid any dividends on our common stock. We currently intend to retain all available funds and any future earnings for the operation and expansion of our business. Accordingly, following this offering, we do not anticipate declaring or paying cash dividends in the foreseeable future. The payment of any future dividends will be at the discretion of our board of directors and will depend on our results of operations, capital requirements, financial condition, prospects, contractual arrangements, any limitations on payment of dividends present in our current and future debt agreements, and other factors that our board of directors may deem relevant. In addition, the terms of our debt facilities with OrbiMed and SVB restrict our ability to pay dividends to limited circumstances. We may also be subject to covenants under future debt arrangements that place restrictions on our ability to pay dividends.

Capitalization

The following table sets forth our cash and cash equivalents and our capitalization as of March 31, 2019:

- on an actual basis;

- on a pro forma basis, giving effect to: (i) the automatic conversion of all outstanding shares of our redeemable convertible preferred stock as of March 31, 2019 into an aggregate of 46,303,026 shares of our common stock as if such conversion had occurred on March 31, 2019, (ii) stock-based compensation expense of approximately $3.8 million associated with outstanding employee stock options subject to a performance-based vesting condition for the amount that would have been expensed based on the service-based vesting condition as of March 31, 2019, and which we will recognize upon the effectiveness of our registration statement in connection with this offering, as further described in note 16 to our consolidated financial statements included elsewhere in this prospectus, and (iii) the filing and effectiveness of our amended and restated certificate of incorporation, which will be in effect immediately prior to the completion of this offering; and

- on a pro forma as adjusted basis to reflect (i) the pro forma adjustments described above and (ii) the sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this table together with "Selected Consolidated Financial and Other Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our audited consolidated financial statements and the related notes included elsewhere in this prospectus.

	As of March 31, 2019		
	Actual	Pro Forma	Pro Forma As Adjusted(1)
	(in thousands, except share and per share data)		
Cash and cash equivalents	$ 32,208	$ 32,208	
Long-term debt	$ 47,263	$ 47,263	
Redeemable convertible preferred stock, $0.001 par value per share; 46,505,028 shares authorized, 46,303,026 issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	485,933	—	
Stockholders' (deficit) equity:			
Preferred stock, $0.001 par value per share; no shares authorized, issued, and outstanding, actual; and shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	—	—	
Common stock, $0.001 par value per share; 73,642,899 shares authorized, 9,747,901 shares issued and outstanding, actual; shares authorized, shares issued and outstanding, pro forma; and shares authorized, shares issued and outstanding, pro forma as adjusted			
Additional paid-in capital	—	489,685	
Accumulated other comprehensive income			
Accumulated deficit	(450,048)	(453,846)	
Total stockholders' (deficit) equity	(450,036)	35,897	
Total capitalization	$ 83,160	$ 83,160	

(1) Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the net proceeds to us from this offering by $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and commissions payable by us. We may also increase or decrease the number of shares we are offering. Each 1.0 million share increase or decrease, as applicable, in the number of shares offered by us would increase or decrease, as applicable, the net proceeds to us from this offering by $ million, assuming that the assumed initial offering price to the public remains the same, and after deducting underwriting discounts and commissions. The pro forma as adjusted information set forth above is illustrative only and will change based on the actual initial public offering price and other terms of this offering determined at pricing.

If the underwriters' option to purchase additional shares were exercised in full, our pro forma as adjusted cash and cash equivalents, additional paid-in capital, total stockholders' (deficit) equity, and total capitalization as of March 31, 2019, would be $ million, $ million, $ million, and $ million, respectively.

The number of shares of our common stock issued and outstanding, pro forma, and pro forma as adjusted in the table above is based on 56,156,484 shares of our common stock (including our redeemable convertible preferred stock on an as-converted basis and 105,557 shares of common stock issued to former employees for non-recourse notes) outstanding as of March 31, 2019, which excludes:

- 16,266,375 shares of common stock issuable upon the exercise of options outstanding as of March 31, 2019, at a weighted-average exercise price of $5.26 per share;

- 82,250 shares of common stock issuable upon the exercise of options outstanding that were granted after March 31, 2019, at a weighted-average exercise price of $10.31 per share;
- 75,000 shares of our common stock subject to restricted stock units that were granted after March 31, 2019, releasable upon satisfaction of service and liquidity conditions;
- 510,674 shares of common stock issuable upon the exercise of common stock warrants outstanding as of March 31, 2019, at an exercise price of $5.33 per share;
- 507,364 shares of common stock reserved for future issuance under our 2011 Plan, which shares will cease to be available for issuance at the time our 2019 Plan becomes effective;
- shares of common stock reserved for future issuance pursuant to our 2019 Plan, which will become effective prior to the completion of this offering and will include provisions that automatically increase the number of shares of common stock reserved for issuance thereunder each year; and
- shares of common stock reserved for future issuance under our 2019 ESPP, which will become effective prior to the completion of this offering and will include provisions that automatically increase the number of shares of common stock reserved for issuance thereunder each year.

Dilution

If you invest in our common stock, your interest will be diluted to the extent of the difference between the initial public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock immediately after the completion of this offering.

Our historical net tangible book deficit as of March 31, 2019 was $484.1 million, or $49.66 per share of common stock. Our historical net tangible book deficit per share represents our total tangible assets (total assets less intangible assets, goodwill, deferred costs, and capitalized offering costs) less our total liabilities and redeemable convertible preferred stock (which is not included within stockholders' equity), divided by 9,747,901 shares of common stock outstanding as of March 31, 2019.

Our pro forma net tangible book value as of March 31, 2019 was $1.9 million, or $0.03 per share of common stock. Pro forma net tangible book value per share represents our total tangible assets less our total liabilities, divided by the number of shares of common stock outstanding as of March 31, 2019, after giving effect to the automatic conversion of all outstanding shares of our redeemable convertible preferred stock as of March 31, 2019 into an aggregate of 46,303,026 shares of our common stock as if such conversion had occurred on March 31, 2019.

Our pro forma as adjusted net tangible book value represents our pro forma net tangible book value, plus the effect of the sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We determine dilution per share to investors participating in this offering by subtracting pro forma as adjusted net tangible book value per share after this offering from the assumed initial public offering price per share paid by investors participating in this offering.

The following table illustrates this dilution on a per share basis to new investors:

Assumed initial public offering price per share	$
Historical net tangible book (deficit) value per share as of March 31, 2019	$
Pro forma increase in historical net tangible book value per share as of March 31, 2019	
Pro forma net tangible book value per share as of March 31, 2019	
Increase in pro forma net tangible book value per share attributable to new investors purchasing shares from us in this offering	
Pro forma as adjusted net tangible book value per share	
Dilution per share to new investors participating in this offering	$

The pro forma as adjusted dilution information discussed above is illustrative only and will change based on the actual initial public offering price and other terms of this offering determined at pricing. Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the pro forma as adjusted net tangible book value per share by $ per share and the dilution per share to investors participating in this offering by $ per share, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions. We may also increase or decrease the number of shares we are offering. Each 1.0 million share increase or decrease in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase or decrease, as applicable, the pro forma as adjusted net tangible book value per share by $ and decrease the dilution per share to investors participating in this offering by $, assuming the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions payable by us.

If the underwriters exercise their option to purchase additional shares in full, the pro forma as adjusted net tangible book value of our common stock would increase to $ per share, representing an immediate increase to existing stockholders of $ per share and an immediate dilution of $ per share to investors participating in this offering.

The following table summarizes as of March 31, 2019, on the pro forma as adjusted basis described above, the number of shares of our common stock, the total consideration, and the average price per share (1) paid to us by our existing stockholders and (2) to be paid by investors purchasing our common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, before deducting underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		
	Number	Percent	Amount	Percent	Weighted-Average Price Per Share
Existing stockholders	%			$ %	$
Investors purchasing common stock					$
Total		100.0 %		$ 100.0 %	

If the underwriters exercise their option to purchase additional shares in full, the number of shares held by the existing stockholders after this offering would be reduced to shares, or % of the total number of shares of our common stock outstanding after this offering, and the number of shares held by new investors would increase to shares, or % of the total number of shares of our common stock outstanding after this offering.

The foregoing tables and calculations (other than the historical net tangible book value calculation) are based on 56,156,484 shares of our common stock (including our redeemable convertible preferred stock on an as-converted basis and 105,557 shares of common stock issued to former employees for non-recourse notes) outstanding as of March 31, 2019, which excludes:

- 16,266,375 shares of common stock issuable upon the exercise of options outstanding as of March 31, 2019, at a weighted-average exercise price of $5.26 per share;
- 82,250 shares of common stock issuable upon the exercise of options outstanding that were granted after March 31, 2019, at a weighted-average exercise price of $10.31 per share;
- 75,000 shares of our common stock subject to restricted stock units that were granted after March 31, 2019, releasable upon satisfaction of service and liquidity conditions;
- 510,674 shares of common stock issuable upon the exercise of common stock warrants outstanding as of March 31, 2019, at an exercise price of $5.33 per share;
- 507,364 shares of common stock reserved for future issuance under our 2011 Plan, which shares will cease to be available for issuance at the time our 2019 Plan becomes effective;
- shares of common stock reserved for future issuance pursuant to our 2019 Plan, which will become effective prior to the completion of this offering and will include provisions that automatically increase the number of shares of common stock reserved for issuance thereunder each year; and
- shares of common stock reserved for future issuance under our 2019 ESPP, which will become effective prior to the completion of this offering and will include provisions that automatically increase the number of shares of common stock reserved for issuance thereunder each year.

To the extent that outstanding options or warrants are exercised, new options or other securities are issued under our equity incentive plans, or we issue additional shares of common stock in the future, there will be further dilution to investors participating in this offering. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

Selected Consolidated Financial and Other Data

The following tables present our selected consolidated financial and other data. We have derived the selected consolidated statements of operations data for the years ended December 31, 2017 and 2018 and our selected consolidated balance sheet data as of December 31, 2017 and 2018 from our audited consolidated financial statements included elsewhere in this prospectus. We derived the selected consolidated statements of operations data for the three months ended March 31, 2018 and 2019 and our selected consolidated balance sheet data as of March 31, 2019 from our unaudited interim consolidated financial statements included elsewhere in this prospectus. Our unaudited interim consolidated financial statements have been prepared on the same basis as our audited consolidated financial statements and reflect, in the opinion of management, all adjustments of a normal, recurring nature that are necessary for a fair statement of our unaudited interim consolidated financial statements.

Our historical results are not necessarily indicative of the results that may be expected in the future. The following selected consolidated financial and other data should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes included elsewhere in this prospectus.

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
Consolidated Statements of Operations Data:	(in thousands, except per share data)			
Revenue:				
Technology	$ 31,693	$ 57,224	$ 9,451	$ 20,148
Professional services	41,388	55,350	11,181	15,065
Total revenue	73,081	112,574	20,632	35,213
Cost of revenue, excluding depreciation and amortization:				
Technology[(1)]	11,610	19,429	3,359	6,752
Professional services[(1)]	32,032	40,423	8,251	10,574
Total cost of revenue, excluding depreciation and amortization	43,642	59,852	11,610	17,326
Operating expenses:				
Sales and marketing[(1)]	25,920	44,123	6,721	10,473
Research and development[(1)]	28,470	38,592	8,705	10,022
General and administrative[(1)]	14,697	22,690	3,902	6,174
Depreciation and amortization	5,892	7,412	1,550	2,312
Total operating expenses	74,979	112,817	20,878	28,981
Loss from operations	(45,540)	(60,095)	(11,856)	(11,094)
Loss on extinguishment of debt	—	—	—	(1,670)
Interest and other expense, net	(1,469)	(2,024)	(509)	(945)
Loss before income taxes	(47,009)	(62,119)	(12,365)	(13,709)
Income tax provision (benefit)		(135)	(156)	
Net loss	$ (47,035)	$ (61,984)	$ (12,209)	$ (13,720)
Less: accretion (reversal of accretion) of redeemable convertible preferred stock	11,745	52,037	(10,481)	64,015
Net loss attributable to common stockholders	$ (58,780)	$ (114,021)	$ (1,728)	$ (77,735)
Net loss per share attributable to common stockholders, basic and diluted	$ (6.06)	$ (11.88)	$ (0.18)	$ (8.11)
Weighted-average number of shares outstanding used in calculating net loss per share attributable to common stockholders, basic and diluted[(2)]	9,693	9,597	9,734	9,590
Pro forma net loss per share attributable to common stockholders, basic and diluted[(2)]		$ (1.15)		$ (0.25)
Pro forma weighted-average number of shares outstanding used in calculating pro forma net loss per share, basic and diluted[(2)]		53,705		55,533

(1) Includes stock-based compensation expense, tender offer payments deemed compensation expense, and post-acquisition restructuring costs.

	Year Ended December 31,		Three Months Ended March 31,	

	2017	2018	2018	2019
Stock-Based Compensation Expense:	(in thousands)			
Cost of revenue, excluding depreciation and amortization:				
Technology	$	$	$	$
Professional services				
Sales and marketing expenses	1,192	1,514		
Research and development expenses				
General and administrative expenses	1,763	1,339		
Total	$ 4,241	$ 4,198	$ 1,040	$ 1,656

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
Tender Offer Payments Deemed Compensation Expense:	(in thousands)			
Cost of revenue, excluding depreciation and amortization:				
Technology	$ –	$	$ –	$ –
Professional services	–		–	–
Sales and marketing expenses	–	3,967	–	–
Research and development expenses	–		–	–
General and administrative expenses	–	3,133	–	–
Total	$ –	$ 8,318	$ –	$ –

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
Post-Acquisition Restructuring Costs:	(in thousands)			
Cost of revenue, excluding depreciation and amortization:				
Technology	$ –	$ –	$ –	$ –
Professional services	–		–	
Sales and marketing expenses	–		–	
Research and development expenses	–		–	
General and administrative expenses	–		–	–
Total	$ –	$ 2,114	$ –	$

(2) See notes 1 and 14 to our consolidated financial statements included elsewhere in this prospectus for an explanation of the calculations of our basic and diluted net loss per share and unaudited pro forma net loss per share and the weighted-average number of shares used in the computation of the per share amounts.

	As of December 31,		As of
	2017	2018	March 31, 2019
Consolidated Balance Sheet Data:	(in thousands)		
Cash and cash equivalents	$ 22,978	$ 28,431	$ 32,208
Short-term investments	28,484	4,761	32,426
Working capital[1]	51,337	49,807	81,574
Total assets	110,268	110,975	144,212
Deferred revenue, current and non-current	10,718	32,035	36,047
Long-term debt, net of current portion	9,618	18,814	47,263
Redeemable convertible preferred stock	321,569	409,845	485,933
Accumulated deficit	(259,473)	(374,777)	(450,048)
Total stockholders' deficit	(259,475)	(374,768)	(450,036)

(1) Working capital is calculated as current assets less current liabilities, excluding current deferred revenue. See our consolidated financial statements and the related notes included elsewhere in this prospectus for further details regarding our current assets, current liabilities and deferred revenue.

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
Non-GAAP Financial Data:	(in thousands, except percentages)			
Adjusted Technology Gross Profit[1]	$ 20,148	$ 37,901	$ 6,106	$ 13,429
Adjusted Technology Gross Margin[1]	64%	66%	%	%
Adjusted Professional Services Gross Profit[1]	$ 9,870	$ 16,028	$ 3,030	$ 4,747
Adjusted Professional Services Gross Margin[1]	24%	29%	%	%
Total Adjusted Gross Profit[1]	$ 30,018	$ 53,929	$ 9,136	$ 18,176
Total Adjusted Gross Margin[1]	41%	48%	%	%
Adjusted EBITDA[1]	$ (35,407)	$ (38,053)	$ (9,266)	$ (6,680)

(1) These measures are not calculated in accordance with GAAP. See "- Reconciliation of Non-GAAP Financial Measures" for more information about these financial measures, including the limitations of such measures and a reconciliation of each measure to the most directly comparable measure calculated in accordance with GAAP.

Other Key Metrics

	As of December 31,	
	2017	2018
DOS Subscription Customers[1]		

(1) See "Management's Discussion and Analysis of Financial Condition and Results of Operations - Key Business Metrics " for more information about this metric.

	Year Ended December 31,	
	2017	2018
Dollar-based Retention Rate[1]	%	%

(1) See “Management’s Discussion and Analysis of Financial Condition and Results of Operations - Key Business Metrics ” for more information about this metric.

Reconciliation of Non-GAAP Financial Measures

In addition to our results determined in accordance with GAAP, we believe the following non-GAAP measures are useful in evaluating our operating performance. We use the following non-GAAP financial information to evaluate our ongoing operations, as a component in determining employee bonus compensation, and for internal planning and forecasting purposes. We believe that non-GAAP financial information, when taken collectively, may be helpful to investors because it provides consistency and comparability with past financial performance. However, non-GAAP financial information is presented for supplemental informational purposes only, has limitations as an analytical tool and should not be considered in isolation or as a substitute for financial information presented in accordance with GAAP. In addition, other companies, including companies in our industry, may calculate similarly-titled non-GAAP measures differently or may use other measures to evaluate their performance, all of which could reduce the usefulness of our non-GAAP financial measures as tools for comparison. A reconciliation is provided below for each non-GAAP financial measure to the most directly comparable financial measure stated in accordance with GAAP. Investors are encouraged to review the related GAAP financial measures and the reconciliation of these non-GAAP financial measures to their most directly comparable GAAP financial measures, and not to rely on any single financial measure to evaluate our business.

Adjusted Gross Profit and Adjusted Gross Margin

Adjusted Gross Profit is a non-GAAP financial measure that we define as revenue less cost of revenue, excluding depreciation and amortization and excluding stock-based compensation, tender offer payments deemed compensation, and post-acquisition restructuring costs. We define Adjusted Gross Margin as our Adjusted Gross Profit divided by our revenue. Adjusted Technology Gross Profit and Adjusted Professional Services Gross Profit are the portions of Adjusted Gross Profit related to technology and professional services, respectively. We believe these non-GAAP financial measures are useful in evaluating our operating performance compared to that of other companies in our industry, as these metrics generally eliminate the effects of certain items that may vary from company to company for reasons unrelated to overall operating performance.

The following is a reconciliation of revenue to our Adjusted Gross Profit and Adjusted Gross Margin in total and for technology and professional services for the years ended December 31, 2017 and 2018:

	Year Ended December 31, 2017		
	(in thousands, except percentages)		
	Technology	Professional Services	Total
Revenue	$ 31,693	$ 41,388	$ 73,081
Cost of revenue, excluding depreciation and amortization	(11,610)	(32,032)	(43,642)
Gross profit, excluding depreciation and amortization	20,083	9,356	29,439
Add:			
Stock-based compensation			
Adjusted Gross Profit	$ 20,148	$ 9,870	$ 30,018
Gross margin, excluding depreciation and amortization	%	%	%
Adjusted Gross Margin	%	%	%

	Year Ended December 31, 2018		
	(in thousands, except percentages)		
	Technology	Professional Services	Total
Revenue	$ 57,224	$ 55,350	$ 112,574

Cost of revenue, excluding depreciation and amortization	(19,429)	(40,423)	(59,852)
Gross profit, excluding depreciation and amortization	37,795	14,927	52,722
Add:			
Stock-based compensation			
Tender offer payments deemed compensation[1]			
Post-acquisition restructuring costs[2]	—		
Adjusted Gross Profit	$ 37,901	$ 16,028	$ 53,929
Gross margin, excluding depreciation and amortization	%	%	%
Adjusted Gross Margin	%	%	%

(1) Tender offer payments deemed compensation relate to employee compensation from repurchases of common stock at a price in excess of its estimated fair value. For additional details refer to note 12 in the consolidated financial statements.

(2) Post-acquisition restructuring costs relate to severance charges following the acquisition of Medicity. For additional details refer to note 2 in the consolidated financial statements.

Adjusted Technology Gross Margin increased from 64% for the year ended December 31, 2017 to 66% for the year ended December 31, 2018, due primarily to revenue expansion under existing contracts without a commensurate increase in expenses. Adjusted Professional Services Gross Margin increased from 24% for the year ended December 31, 2017 to 29% for the year ended December 31, 2018, due primarily to increased utilization. We anticipate Adjusted Gross Margin will generally increase over the long term. We expect Adjusted Technology Gross Margin to fluctuate and potentially decline in the near term, primarily due to additional costs associated with transitioning customers from on-premise and our managed data centers to third-party hosted data centers with Microsoft Azure. Adjusted Professional Services Gross Margin will fluctuate due to the mix of services we provide.

The following is a reconciliation of revenue to our Adjusted Gross Profit and Adjusted Gross Margin in total and for technology and professional services for the three months ended March 31, 2018 and 2019:

	Three Months Ended March 31, 2018		
	(in thousands, except percentages)		
	Technology	**Professional Services**	**Total**
Revenue	$ 9,451	$ 11,181	$ 20,632
Cost of revenue, excluding depreciation and amortization	(3,359)	(8,251)	(11,610)
Gross profit, excluding depreciation and amortization	6,092	2,930	9,022
Add:			
Stock-based compensation			
Adjusted Gross Profit	$ 6,106	$ 3,030	$ 9,136
Gross margin, excluding depreciation and amortization	%	%	%
Adjusted Gross Margin	%	%	%

	Three Months Ended March 31, 2019		
	(in thousands, except percentages)		
	Technology	**Professional Services**	**Total**
Revenue	$ 20,148	$ 15,065	$ 35,213
Cost of revenue, excluding depreciation and amortization	(6,752)	(10,574)	(17,326)

Gross profit, excluding depreciation and amortization	13,396	4,491	17,887
Add:			
Stock-based compensation			
Post-acquisition restructuring costs[1]	—		
Adjusted Gross Profit	$ 13,429	$ 4,747	$ 18,176
Gross margin, excluding depreciation and amortization	%	%	%
Adjusted Gross Margin	%	%	%

(1) Post-acquisition restructuring costs relate to severance charges following the acquisition of Medicity. For additional details refer to note 2 in the consolidated financial statements.

Adjusted Technology Gross Margin increased from 65% for the three months ended March 31, 2018 to 67% for the three months ended March 31, 2019, due primarily to revenue expansion under existing contracts without a commensurate increase in expenses. Adjusted Professional Services Gross Margin increased from 27% for the three months ended March 31, 2018 to 32% for the three months ended March 31, 2019, due primarily to increased utilization. We anticipate Adjusted Gross Margin will generally increase over the long term. We expect Adjusted Technology Gross Margin to fluctuate and potentially decline in the near term, primarily due to additional costs associated with transitioning customers from on-premise and our managed data centers to third-party hosted data centers with Microsoft Azure. Adjusted Professional Services Gross Margin will fluctuate due to the mix of services we provide.

Adjusted EBITDA

Adjusted EBITDA is a non-GAAP financial measure that we define as net loss adjusted for interest and other expense, net, loss on extinguishment of debt, income tax provision (benefit), depreciation and amortization, stock-based compensation, tender offer payments deemed compensation, and post-acquisition restructuring costs. We believe Adjusted EBITDA is useful in evaluating our operating performance compared to that of other companies in our industry, as this metric generally eliminates the effects of certain items that may vary from company to company for reasons unrelated to overall operating performance.

The following is a reconciliation of our net loss to Adjusted EBITDA for the years ended December 31, 2017 and 2018 and the three months ended March 31, 2018 and 2019:

	Year Ended December 31,		Three Months Ended March 31,	
	2017	**2018**	**2018**	**2019**
	(in thousands)			
Net loss	$ (47,035)	$ (61,984)	$ (12,209)	$ (13,720)
Add:				
Interest and other expense, net	1,469	2,024		
Loss on extinguishment of debt	—	—	—	1,670
Income tax provision (benefit)		(135)	(156)	
Depreciation and amortization	5,892	7,412	1,550	2,312
Stock-based compensation	4,241	4,198	1,040	1,656
Tender offer payments deemed compensation[1]	—	8,318	—	—
Post-acquisition restructuring costs[2]	—	2,114	—	
Adjusted EBITDA	$ (35,407)	$ (38,053)	$ (9,266)	$ (6,680)

(1) Tender offer payments deemed compensation relate to employee compensation from repurchases of common stock at a price in excess of its estimated fair value. For additional details refer to note 12 in the consolidated financial statements.

(2) Post-acquisition restructuring costs relate to severance charges following the acquisition of Medicity. For additional details refer to note 2 in the consolidated financial statements.

Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our "Selected Consolidated Financial and Other Data," our consolidated financial statements, the accompanying notes, and other financial information included elsewhere in this prospectus. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those forward-looking statements below. Factors that could cause or contribute to those differences include, but are not limited to, those identified below and those discussed in "Risk Factors" included elsewhere in this prospectus.

Overview

We are a leading provider of data and analytics technology and services to healthcare organizations. Our Solution comprises a cloud-based data platform, analytics software, and professional services expertise. Our customers, which are primarily healthcare providers, use our Solution to manage their data, derive analytical insights to operate their organization, and produce measurable clinical, financial, and operational improvements. We envision a future where all healthcare decisions are data informed.

Health Catalyst was founded in 2008 by healthcare analytics industry pioneers. Our founders and team developed the initial version of our Solution, consisting of an early version of our data platform, select analytics accelerators, and professional services expertise. From the beginning, our Solution has been focused on enabling our mission: to be the catalyst for massive, measurable, data-informed healthcare improvement.

Our business has made significant progress since our founding as evidenced by the following key milestones:

We currently employ more than 700 team members. For the years ended December 31, 2017 and 2018, and the three months ended March 31, 2018 and 2019, our total revenue was $73.1 million, $112.6 million, $20.6 million, and $35.2 million, respectively. The year ended December 31, 2018 and the three months ended March 31, 2019 included $12.5 million and $6.6 million, respectively, of revenue attributable to the acquired business of Medicity. The organic growth in revenue was primarily due to revenue from new customers and existing customers paying higher technology access fees from contractual, annual escalators.

For the years ended December 31, 2017 and 2018, and the three months ended March 31, 2018 and 2019, we incurred net losses of $47.0 million, $62.0 million, $12.2 million, and $13.7 million, respectively. For the years ended December 31, 2017 and 2018, and the three months ended March 31, 2018 and 2019, our Adjusted EBITDA was $(35.4) million, $(38.1) million, $(9.3) million, and $(6.7) million, respectively. See "Selected Consolidated Financial and Other Data—Reconciliation of Non-GAAP Financial Measures" for more information about this financial measure, including the limitations of such measure and a reconciliation to the most directly comparable measure calculated in accordance with GAAP. See "Key Factors Affecting Our Performance" for more information about important opportunities and challenges related to our business.

Our Business Model

We offer our Solution to a variety of healthcare organizations, primarily in the United States, including academic medical centers, integrated delivery networks, community hospitals, large physician practices, ACOs, health information exchanges, health insurers, and other risk-bearing entities. Our 126 customers as of December 31, 2018 include more than 50 of the largest healthcare organizations in the United States. We categorize our customer count into two primary categories: DOS Subscription Customers and Other Customers. DOS Subscription Customers is defined as customers who access our DOS platform via a technology subscription contract. Other customers generally include: DOS non-subscription customers and Medicity interoperability customers. We had 34 DOS Subscription Customers with active subscriptions as of December 31, 2017 and 50 DOS Subscription Customers with active subscriptions as of December 31, 2018. We had 12 active Other Customers as of December 31, 2017 and 76 active Other Customers as of December 31, 2018, primarily increasing due to our Medicity acquisition.

We derive substantially all of our revenue through subscriptions for use of our technology and professional services on a recurring basis. In 2018, greater than 90% of our total revenue was recurring in nature. Customers pay for our technology primarily on a subscription basis for our entire technology suite or for pieces of our technology (e.g., DOS-only). We generally provide access to our technology and deliver professional services to customers on a recurring basis, with our technology invoiced upfront annually or quarterly and our professional services invoiced monthly. Most of our technology and professional services contracts have up to a three-year term, of which the vast majority are terminable after one year upon 90 days notice. As we increase the use cases we address at a given customer, we have the opportunity to upsell incremental technology and services. We have demonstrated an ability to upsell technology and services to our customer base over time as evidenced by a Dollar-based Retention Rate of 107% for the year ended December 31, 2018. Because we acquired Medicity in 2018, Medicity customers are not included in the 2018 Dollar-based Retention Rate metric.

The primary costs incurred to deliver our technology are hosting fees and headcount-related costs associated with our cloud services and support teams. Hosting fees are related to providing our technology through a cloud-based environment hosted primarily by Microsoft Azure. However, we also operate a private data center where certain customers are hosted and have deployed DOS on-premise to a small number of customers. Over time, we plan to migrate our on-premise and private data center customers to Azure-hosted environments, increasing our technology cost of revenue. We have experienced and expect to continue to experience operational inefficiencies associated with managing multiple hosting providers, resulting in a headwind against Adjusted Technology Gross Margin. The primary costs incurred to deliver our professional services are the salaries, benefits, and other headcount-related costs of our team members.

We delineate our sales organization by new customer acquisition and existing customer retention and expansion. Selling efforts to new customers vary. Many of our new customers engage with us broadly for multiple use cases, requiring buy-in during the sales cycle across the C-suite. Alternatively, in some instances, we engage with a customer in a single use case. After we demonstrate measurable improvements, we work with our customers to expand utilization of our Solution to other use cases or enterprise-wide. The average sales cycle for a new customer is approximately 11 months and generally ranges

from 4 to 18 months. Because of our vertical focus on the healthcare industry, we believe our sales and marketing resources can be deployed more efficiently than at horizontally-focused companies who provide technology and services to multiple industries. Over the past few years, we have invested heavily in growth infrastructure by adding to our sales operations and marketing teams, which are built to help us scale over the long term.

We have demonstrated a consistent track record of innovation through research and development over time as evidenced by our new product features and new product offerings. This innovation is driven by feedback we glean from our customers, professional services teams, and the market generally. Our investments in product development have been focused on increasing the capabilities of our Solution and expanding the number of use cases we address for our customers.

Key Business Metrics

We regularly review a number of metrics, including the following key financial metrics, to manage our business and evaluate our operating performance compared to that of other companies in our industry:

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
	(in thousands, except percentages)			
Total revenue	$ 73,081	$ 112,574	$ 20,632	$ 35,213
Adjusted Technology Gross Profit	20,148	37,901	6,106	13,429
Adjusted Technology Gross Margin	64%	66%	%	%
Adjusted Professional Services Gross Profit	$ 9,870	$ 16,028	$ 3,030	$ 4,747
Adjusted Professional Services Gross Margin	24%	29%	%	%
Total Adjusted Gross Profit	$ 30,018	$ 53,929	$ 9,136	$ 18,176
Total Adjusted Gross Margin	41%	48%	%	%
Adjusted EBITDA	$ (35,407)	$ (38,053)	$ (9,266)	$ (6,680)

We monitor the key metrics set forth in the preceding table to help us evaluate trends, establish budgets, measure the effectiveness and efficiency of our operations, and determine employee incentives. We discuss Adjusted Gross Profit, Adjusted Gross Margin, and Adjusted EBITDA in more detail below.

Adjusted Gross Profit and Adjusted Gross Margin

Adjusted Gross Profit is a non-GAAP financial measure that we define as revenue less cost of revenue, excluding depreciation and amortization and excluding stock-based compensation, tender offer payments deemed compensation, and post-acquisition restructuring costs. We define Adjusted Gross Margin as our Adjusted Gross Profit divided by our revenue. We believe Adjusted Gross Profit and Adjusted Gross Margin are useful to investors as they eliminate the impact of certain non-cash expenses and allow a direct comparison of these measures between periods without the impact of non-cash expenses and certain other non-recurring operating expenses. We believe these non-GAAP measures are useful in evaluating our operating performance compared to that of other companies in our industry, as these metrics generally eliminate the effects of certain items that may vary from company to company for reasons unrelated to overall profitability.

See above for information regarding the limitations of using our Adjusted Gross Profit and Adjusted Gross Margin as financial measures and for a reconciliation of revenue to our Adjusted Gross Profit, the most directly comparable financial measure calculated in accordance with GAAP.

Adjusted EBITDA

Adjusted EBITDA is a non-GAAP financial measure that we define as net loss adjusted for interest and other expense, net, loss on debt extinguishment, income tax provision (benefit), depreciation and amortization, stock-based compensation, tender offer payments deemed compensation, and post-acquisition restructuring costs. We believe Adjusted EBITDA provides investors with useful information on period-to-period performance as evaluated by management and comparison with our past financial performance. We believe Adjusted EBITDA is useful in evaluating our operating performance compared to that of other companies in our industry, as this metric generally eliminates the effects of certain items that may vary from company to company for reasons unrelated to overall operating performance.

See “Selected Consolidated Financial and Other Data - Reconciliation of Non-GAAP Financial Measures” for information regarding the limitations of using our Adjusted EBITDA as a financial measure and for a reconciliation of our net loss to Adjusted EBITDA, the most directly comparable financial measure calculated in accordance with GAAP.

Other Key Metrics

We also regularly monitor and review the number of DOS Subscription Customers and Dollar-based Retention Rate as shown in the following tables:

	As of December 31,

	2017	2018
DOS Subscription Customers		

DOS Subscription Customers

Since 2016, our primary contracting model is a subscription-based contract to our DOS platform, analytics applications, and professional services. Given how fundamental DOS is to our Solution, we believe our DOS Subscription Customer count, which represents customers with active subscriptions at period end, is the best representation of our market penetration and the growth of our business.

	Year Ended December 31,	
	2017	2018
Dollar-based Retention Rate	%	%

Dollar-based Retention Rate

We calculate our Dollar-based Retention Rate as of a period end by starting with the sum of the Annual Recurring Revenue (ARR) from all customers as of the date 12 months prior to such period end (prior period ARR). We then calculate the sum of the ARR from these same customers as of the current period end (current period ARR). Current period ARR includes any upsells and also reflects contraction or attrition over the trailing twelve months but excludes revenue from new customers added in the current period. We then divide the current period ARR by the prior period ARR to arrive at our Dollar-based Retention Rate. We calculate ARR for each customer as the expected monthly recurring revenue of our customers as of the last day of a period multiplied by 12. Because we acquired Medicity in 2018, Medicity customers are not included in 2017 and 2018 Dollar-based Retention Rate metrics.

The Health Catalyst Flywheel: Our Customer Success Model and Associated Metrics

The Health Catalyst Flywheel is how we accomplish our mission with each customer. Our operational and financial performance is based on our ability to execute successfully in all aspects of the Health Catalyst Flywheel.

Begin, Renew, Expand, Refer:

We begin a customer relationship with a fair, transparent economic exchange that is significantly less costly than a healthcare organization's 'build your own' options. As our customers experience success and see measurable improvements across their business, they renew and expand existing agreements while also often referring new business to us.

Associated Metrics

Number of Customers: Our ability to expand our customer base is a key indicator of our market penetration and the growth of our business. Since 2016, our primary contracting model has been a subscription-based contract to our DOS platform, applications, and professional services. Given how fundamental DOS is to our Solution, we believe our DOS Subscription Customer count is the best representation of our market penetration and the growth of our business. The following table summarizes the number of our customers at each year end for the periods indicated:

	As of December 31,	
	2017	2018
DOS Subscription Customers		
Other Customers[(1)]		
Total Customers		

(1) The Other Customer amount in 2018 includes more than 60 customers acquired through the Medicity acquisition and represents customers that generated revenue during the period and that are active at the end of the period.

In 2017, Other Customers was primarily composed of non-DOS subscription customers who had previously purchased perpetual licenses and had not yet transitioned to a DOS subscription contract model. In 2018, the increase in Other Customers was a result of the acquisition of Medicity. We expect our Other Customers count to remain flat or potentially decline over time.

Dollar-based Retention Rate: Our Dollar-based Retention Rate is a key measure to provide insight into the long-term value of our customers and our ability to retain and expand revenue from our customer base over time. See "—Key Business Metrics—Dollar-based Retention Rate" for a discussion of Dollar-based Retention Rate.

	Year Ended December 31,	
	2017	2018
Dollar-based Retention Rate	%	%

We moved to a subscription model over the last few years, so we do not have a long history of this data. Additionally, because we acquired Medicity in 2018, Medicity customers are not included in 2017 and 2018 Dollar-based Retention Rate metrics. Historically, the Medicity business had a lower Dollar-based Retention Rate profile compared to the rest of our business, which will negatively impact this metric moving forward.

KLAS Evangelism Score: In order to measure our customers' willingness to refer us to key decision-makers at other potential customers, we utilize KLAS' Evangelism Score. KLAS, a leading healthcare technology industry research publication firm, publishes an Evangelism score, similar to that of a net promoter score. As of May 2019, our last 12 months average KLAS Evangelism score, similar to a net promoter score, for our data platform was 62, which is twice the industry average of 30.

Data Platform: Integrate data in a flexible, open, and scalable platform to power healthcare's digital transformation Our customers face various challenges to manage data and unlock its use. DOS is an open, flexible, and scalable data platform that allows customers to integrate and organize their disparate data sources to enable analytics.

Associated Metrics

Number of Customer's Data Sources: The number of customer source systems ingested by DOS is an important indicator of the breadth and stickiness of our customer relationships. As our customers deepen their relationship and expand the number of use cases with us over time, the number of data sources required to be ingested by DOS increases. DOS can now ingest over 300 healthcare data sources through pre-built connectors. The following chart summarizes the average source systems ingested by DOS based on the year the organization became a customer:

DOS Unique Patients and Patient Facts: DOS houses one of the largest and most comprehensive data assets of its kind. Our unique data set includes more than 100 million patient records, encompassing trillions of facts. We source data from more than 300 distinct siloed sources and typically contract with customers to store and process between 10 and 100 terabytes of data per customer. The extensiveness and richness of our data asset is a strong and distinct competitive advantage and enables us to deliver differentiated solutions to our customers.

Analytics Applications: Deliver insights on how to measurably improve through the use of analytics applications Only when data is effectively managed can healthcare organizations focus on analytical infrastructure transformation by developing and running analytics to gain meaningful insights. Our broad set of analytics applications builds on top of our data platform to provide insights to improve our customers' clinical, financial, and operational performance.

Associated Metrics

Utilization Metrics: We enable our customers to run a myriad of analytics on top of DOS. Given this focus, we drive both the breadth of analytics use cases and the depth of use within a specific analytic domain. We specifically aim to increase our customers' use of analytics applications, analytics accelerators, and data marts, which are subject-oriented databases used to facilitate repeatable analytics, all with the aim of increasing the number of DOS end users. For DOS Subscription Customers who initially contracted with us in 2015 and prior, we average dozens of analytics use cases (across analytics applications, analytic accelerators, and data marts) and hundreds of end users. Furthermore, given the openness of our platform, the majority of analytics that are run on top of DOS are client-generated as opposed to outputs of our applications.

Services Expertise: enable data-informed improvement by providing analytical, clinical, financial, and operational experts Healthcare organizations often request for us to augment their capabilities to effectively manage and analyze data to help them garner meaningful insights and drive measurable improvements.

Associated Metrics

Size and Skillset of Health Catalyst Professional Services Team: Our world-class professional services team consists of both analytics experts, such as data analysts, data engineers, and data scientists, and domain experts, such as healthcare administrators, physicians, and nurses. These team members leverage our technology to provide our customers with analytical, clinical, financial, and operational expertise, enabling and accelerating sustainable improvements. Access to these resources meaningfully reduces our customers' need to hire numerous expensive resources. We currently employ over 200 analytics experts and over 65 domain experts.

Measurable Improvement Occurs: Improvement occurs, trust builds, and customer engagement increases Through our Solution, a combination of data, analytics, and expertise, our customers realize measurable clinical, financial, and operational improvements. This process builds trust and customer engagement increases.

Associated Metrics

Documented Measurable Improvements: A documented measurable improvement is a result that shows a positive change over an established time period in one or more clinical, financial, operational, or experience measures that have been validated and approved by our customers, and recorded in our improvement database. These improvements are a result of targeted interventions enabled by our Solution. These measures are analyzed relative to an established baseline, often using our technology, to determine if an improvement has occurred after the deployment of our technologies and services along with any customer interventions. Examples of documented improvements include reduced mortality rates, reduced readmissions, productivity gains, and reductions in variable and direct costs. Customers who have recently contracted with us have already started achieving measurable improvements, while longer-standing customers have seen the number of annual improvements meaningfully grow. For new customers, along with initial implementation and training efforts, we typically start by focusing on one improvement initiative that is particularly important to the customer. After our initial work yields measurable improvements for a new customer, trust builds, additional individuals at the customer are trained at leveraging our Solution, and our Solution is more broadly utilized to address multiple improvement initiatives simultaneously. This generally results in an acceleration of the customer's measurable improvements over time as compared to the initial years after we first engage with the customer. The graphics below present the total number of documented measurable improvements by period and the average number of documented measurable improvements per customer over the last twelve months (LTM) by customer cohort.

Note: LTM as of March 31, 2019; excludes Medicity-acquired customers _____

(1) There were 25, 18, and 16 active customers included in the 2017 and 2018 Cohort, the 2015 and 2016 Cohort, and the Pre-2015 Cohort, respectively.

Customer Satisfaction: Our customers' satisfaction is driven by the quality of our Solution across data, analytics, and expertise. We have been recognized as an industry leader in analytics from numerous external industry publications. Such examples include KLAS, a leading healthcare technology industry research publication firm, awarding Health Catalyst "Best in KLAS" in Healthcare Business Intelligence and Analytics in 2017 and 2018. Additionally, Chilmark Research, a leading healthcare IT research firm, named Health Catalyst the leader in the healthcare analytics market in product capabilities in its 2017 "Healthcare Analytics Market Trends Report." Additionally, Chilmark awarded Health Catalyst an "A" grade in "Product Capabilities" and "Market Execution" in its 2019 report "Provider Analytics: Solutions and Tools for Healthcare Delivery."

Engagement: Attract, develop and retain world-class team members by being a best place to work Building and maintaining a culture where team members are highly engaged in our mission directly benefits not only team members, but also our customers and other stakeholders. Deep team member engagement in our mission leads team members to build world-class data and analytics technology and to provide industry-leading expertise, coupled with a long-term commitment to enabling our customers to measurably improve patient outcomes and their operations.

Associated Metrics

Gallup scores: Gallup is a leading polling firm. We utilize Gallup consistently to measure the engagement of our team members. Since 2015, Health Catalyst has consistently ranked between the 95th and 99th percentile in overall employee satisfaction score.

	Six Months Ended:							
	Jun. 30, 2015	Dec. 31, 2015	Jun. 30, 2016	Dec. 31, 2016	Jun. 30, 2017	Dec. 31, 2017	Jun. 30, 2018	Dec. 31, 2018
Gallup Overall Satisfaction Score Percentile	%	%	%	%	%	%	%	%

The Gallup satisfaction score as of December 31, 2018 was lower than prior periods due to the incorporation of Medicity team members.

Other Industry Awards: We have received numerous awards and recognition for our culture and service to our customers. In total, we have been recognized over 40 times as a "best place to work" by Gallup, Glassdoor, Inc., and Modern Healthcare among others.

Key Factors Affecting Our Performance

We believe that our future growth, success, and performance are dependent on many factors, including those set forth below. While these factors present significant opportunities for us, they also represent the challenges that we must successfully address in order to grow our business and improve our results of operations.

- Add new customers. We believe that our ability to increase our customer base will enable us to drive growth. Our potential customer base is generally in the early stages of data and analytics adoption and maturity. As of December 31, 2018, our DOS Subscription Customers comprise approximately 4% of the potential buyers in our addressable market and we expect to further penetrate the market over time as potential customers invest in commercial data and analytics solutions. As one of the first data platform and analytics vendors focused specifically on healthcare organizations, we have an early-mover advantage and strong brand awareness. Our customers are large, complex organizations who typically have long procurement cycles which may lead to declines in the pace of our new customer additions.

- Leverage recent product and services offerings to drive expansion. We believe that our ability to expand within our customer base will enable us to drive growth. Over the last three years, we have developed and deployed several new analytics applications including CORUS, Touchstone, Patient Safety Monitor, Population Builder, and others. Because we are in the early stages of certain of our applications' lifecycles and maturity, we do not have enough information to know the impact on revenue growth by upselling these applications and associated services to current and new customers.

- Impact of Medicity acquisition on growth. Our customer base includes over 60 health systems and regional healthcare information exchanges added in the Medicity acquisition, representing a significant opportunity for us to cross-sell our Solution to Medicity customers. We are in the initial phases of that cross-selling initiative and do not have full visibility into the incremental growth opportunities from that effort. Historically, Medicity customers have generated a lower Dollar-based Retention Rate than DOS Subscription Customers and we expect flat to declining revenue from Medicity customers in the foreseeable future. If our cross-sell efforts and technology integration strategies are successful, this could offset revenue declines from Medicity customers. Overall, the impact of the Medicity acquisition could negatively impact our revenue growth rates over time.

- Changing revenue mix. Our technology and professional services offerings have materially different gross margin profiles. While our professional services help our customers achieve measurable improvements and make them stickier, they have lower gross margins than technology revenue. In 2018, our technology revenue and professional services revenue represented 51% and 49% of total revenue, respectively. Changes in our revenue mix between the two offerings would impact future Total Adjusted Gross Margin. See "Selected Consolidated Financial and Other Data—Reconciliation of Non-GAAP Financial Measures" for more information.

- Transitions to Microsoft Azure as DOS hosting provider. We incur hosting fees related to providing DOS through a cloud-based environment hosted by Microsoft Azure. We also operate a private data center where we host DOS for certain customers and we maintain a small number of customers that have deployed DOS on-premise. We are in the process of transitioning customers we host in our private data center and who deployed DOS on-premise to Azure-hosted environments. The Azure cloud provides customers with more advanced DOS product functionality and a more seamless customer experience; however, hosting customers in Azure is more costly than our private data center on a per customer basis. This transition will result in higher cost of technology revenue and provide a headwind against increases in Adjusted Technology Gross Margin.

- Refinement of pricing for our Solution. In the past, we have adjusted our prices as a result of offering new applications and services and customer demand. In the fourth quarter of 2018, we began to introduce new pricing for our Solution for new customers to account for the addition of new analytics applications and associated services. We expect to realize fully the effect of this pricing adjustment in future years as new customers renew their technology and services subscription contracts. Because these price adjustments were primarily related to new applications and services added to our Solution, our prior experience pricing these offerings is limited. As we gain more experience marketing and delivering these new analytics applications and associated services, we may need to further refine our pricing, which could result in either increases or decreases to the price of our Solution. During the twelve months ended December 31, 2018 and the three months ended March 31, 2019, there were no material revenue increases from the pricing adjustments made in 2018 as the increase in technology revenue from current customers is primarily attributable to contractual, annual escalators as opposed to pricing changes.

Medicity Acquisition

In June 2018, we acquired 100% of the LLC interests in Medicity from Aetna, Inc. (Aetna). The acquisition of Medicity was one element of an integrated transaction whereby we also issued 1,415,227 shares of our Series E redeemable convertible preferred stock to Aetna in exchange for $15.0 million in cash. The acquisition was accounted for as a business combination as specified under ASC 805, Business Combinations.

As part of the post-acquisition activities, we agreed to pay $2.6 million in cash as involuntary termination payments to certain Medicity team members. The termination expense was recognized as compensation expense when management committed to the plan and the severance terms were communicated to the team members.

Medicity's customer base is comprised of large health systems and regional healthcare information exchanges. We have invested in sales and marketing resources tasked with cross-selling our Solution to the Medicity customer base. We are in the initial phases of that cross-selling initiative and do not have full visibility into additional revenue growth opportunities from that customer base.

Medicity's technology platform also included significant technical functionality related to real-time interoperability with transactional software systems like EHRs. We plan to integrate portions of Medicity's technology into the DOS platform and are currently in the process of that technical integration. In addition, Medicity's technology platform houses several petabytes of data which can be added to DOS to leverage in the future.

Components of Our Results of Operations

Revenue

We derive our revenue from sales of technology and professional services. For the years ended December 31, 2017 and 2018, technology represented 43% and 51% of total revenue, respectively, and professional services represented 57% and 49%, of total revenue, respectively. For the three months ended March 31, 2018 and 2019, technology represented 46% and 57% of total revenue, respectively, and professional services represented 54% and 43% of total revenue, respectively.

Technology revenue. Technology revenue primarily consists of subscription fees charged to customers for access to use our data platform and analytics applications. We provide customers access to our technology through either an all-access or limited-access, modular subscription. Most of our subscription contracts are cloud-based and have up to a three-year term, of which the vast majority are terminable after one year upon 90 days notice. As of December 31, 2018, over 70% of our DOS Subscription Customers access our technology through all-access subscriptions, which in the vast majority of cases have built-in annual escalators for technology access fees. Since we began offering an all-access subscription in 2015, we have not lost an all-access DOS Subscription Customer. Also included in technology revenue is the maintenance and support we provide, which generally includes updates and support services.

Professional services revenue. Professional services revenue primarily includes analytics services, strategic advisory services, improvement services, and implementation services. Professional services arrangements typically include a fee for making full-time equivalent (FTE) services available to our customers on a monthly basis. FTE services generally consist of a blend of analytic engineers, analysts, data scientists, and domain experts based on the specific needs to best serve our customer.

Deferred revenue

Deferred revenue consists of customer billings in advance of revenue being recognized from our technology and professional services arrangements. We primarily invoice our customers for technology arrangements annually or quarterly in advance. Amounts anticipated to be recognized within one year of the balance sheet date are recorded as deferred revenue and the remaining portion is recorded as deferred revenue, net of current portion on the consolidated balance sheets.

Cost of revenue, excluding depreciation and amortization

Cost of technology revenue. Cost of technology revenue primarily consists of costs associated with hosting and supporting our technology, including third-party cloud computing and hosting costs, contractor costs, and salary and related personnel costs for our cloud services and support teams.

Although we expect cost of technology revenue to increase in absolute dollars as we transition customers to third-party hosted data centers with Microsoft Azure and increase headcount to accommodate growth. We anticipate cost of technology revenue as a percentage of technology revenue will generally decrease over the long term. We expect cost of technology revenue as a percentage of technology revenue to fluctuate and potentially increase in the near term, primarily due to additional costs associated with transitioning customers from on-premise and our managed data centers to Microsoft Azure.

Cost of professional services revenue. Cost of professional services revenue consists primarily of costs related to delivering our team's expertise in analytics, strategic advisory, improvement, and implementation services. These costs primarily include salary and related personnel costs, travel-related costs, and outside contractor costs. We expect cost of professional services revenue to increase in absolute dollars as we increase headcount to accommodate growth.

Operating expense

Sales and marketing. Sales and marketing expenses primarily include salary and related personnel costs for our sales, marketing, and account management teams, lead generation, marketing events, including our Healthcare Analytics Summit (HAS), marketing programs, and outside contractor costs associated with the sale and marketing of our offerings.

We plan to continue to invest in sales and marketing to grow our customer base, expand in new markets, and increase our brand awareness. The trend and timing of sales and marketing expenses will depend in part on the timing of our expansion into new markets and marketing campaigns. We expect that sales and marketing expenses will increase in absolute dollars in future periods, but decrease as a percentage of our revenue over the long term. Our sales and marketing expenses may fluctuate as a percentage of our revenue from period to period due to the timing and extent of these expenses.

Research and development. Research and development expenses primarily include salary and related personnel costs for our data platform and analytics applications teams, subscriptions, and outside contractor costs associated with the development of products.

As of March 31, 2019, we have invested more than $100 million in research and development to develop an open, flexible, and scalable data platform. We plan to continue to invest in research and development to develop new solutions and enhance our applications library. We expect that research and development expenses will increase in absolute dollars in future periods, but decrease as a percentage of our revenue over the long term. Our research and development expenses may fluctuate as a percentage of our revenue from period to period due to the timing and extent of these expenses.

General and administrative. General and administrative expenses primarily include salary and related personnel costs for our legal, finance, people operations, IT, and other administrative teams, including certain executives. General and administrative expenses also include facilities, subscriptions, corporate insurance, outside legal, accounting, and directors fees.

Following the completion of this offering, we expect to incur additional costs as a result of operating as a public company, including costs related to compliance and reporting obligations of public companies, and increased costs for insurance, investor relations, and corporate governance. As a result, we expect our general and administrative expenses to increase in absolute dollars for the foreseeable future, but decrease as a percentage of our revenue over the long term. Our general and administrative expenses may fluctuate as a percentage of our revenue from period to period due to the timing and extent of these expenses.

Depreciation and amortization. Depreciation and amortization expenses are primarily attributable to our capital investment and consist of fixed asset depreciation, amortization of intangibles considered to have definite lives, and amortization of capitalized internal-use software costs.

Interest and other expense, net

Interest and other expense, net primarily consists of interest income from our investment holdings and interest expense. Interest expense is primarily attributable to our revolving line of credit, term loan, and imputed interest on acquisition-related consideration payable. It also includes the amortization of discounts on debt and amortization of deferred financing costs related to our various debt arrangements.

Income tax provision (benefit)

Income tax provision (benefit) consists of U.S. federal and state income taxes. Because of the uncertainty of the realization of the deferred tax assets, we have a full valuation allowance for deferred tax assets, including net operating loss carryforwards (NOLs) and tax credits related primarily to research and development.

As of December 31, 2018, we had federal and state NOLs of $232.9 million and $186.2 million, respectively, which will begin to expire for federal and state tax purposes in 2032 and 2022, respectively. Our existing NOLs may be subject to limitations arising from ownership changes and, if we undergo an ownership change in connection with this offering or otherwise in the future, our ability to utilize our NOLs and tax credits could be further limited by Sections 382 and 383 of the Code. Future changes in our stock ownership, many of which are outside of our control, could result in an ownership change under Sections 382 and 383 of the Code. Our NOLs and tax credits may also be limited under similar provisions of state law.

Results of Operations

The following tables set forth our consolidated results of operations data and such data as a percentage of total revenue for each of the periods indicated:

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
	(in thousands)			
Revenue:				
Technology	$ 31,693	$ 57,224	$ 9,451	$ 20,148
Professional services	41,388	55,350	11,181	15,065
Total revenue	73,081	112,574	20,632	35,213
Cost of revenue, excluding depreciation and amortization shown below:				
Technology[(1)]	11,610	19,429	3,359	6,752

Professional services[(1)]	32,032	40,423	8,251	10,574
Total cost of revenue, excluding depreciation and amortization	43,642	59,852	11,610	17,326
Operating expenses:				
Sales and marketing[(1)]	25,920	44,123	6,721	10,473
Research and development[(1)]	28,470	38,592	8,705	10,022
General and administrative[(1)]	14,697	22,690	3,902	6,174
Depreciation and amortization	5,892	7,412	1,550	2,312
Total operating expenses	74,979	112,817	20,878	28,981
Loss from operations	(45,540)	(60,095)	(11,856)	(11,094)
Loss on extinguishment of debt	—	—	—	(1,670)
Interest and other expense, net	(1,469)	(2,024)	(509)	(945)
Loss before income taxes	(47,009)	(62,119)	(12,365)	(13,709)
Income tax provision (benefit)		(135)	(156)	
Net loss	$ (47,035)	$ (61,984)	$ (12,209)	$ (13,720)

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(1) Includes stock-based compensation expense, tender offer payments deemed compensation expense, and post-acquisition restructuring costs.

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
Stock-Based Compensation Expense:	(in thousands)			
Cost of revenue, excluding depreciation and amortization:				
Technology	$	$	$	$
Professional services				
Sales and marketing	1,192	1,514		
Research and development				
General and administrative	1,763	1,339		
Total	$ 4,241	$ 4,198	$ 1,040	$ 1,656

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
Tender Offer Payments Deemed Compensation Expense:	(in thousands)			
Cost of revenue, excluding depreciation and amortization:				
Technology	$ —	$	$ —	$ —
Professional services	—		—	—
Sales and marketing	—	3,967	—	—
Research and development	—		—	—

General and administrative	—	3,133	—	—
Total	$ —	$ 8,318	$ —	$ —

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
Post-Acquisition Restructuring Costs:	(in thousands)			
Cost of revenue, excluding depreciation and amortization:				
Technology	$ —	$ —	$ —	$ —
Professional services	—		—	
Sales and marketing	—		—	
Research and development	—		—	
General and administrative	—		—	—
Total	$ —	$ 2,114	$ —	$

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
Revenue:				
Technology	%	%	%	%
Professional services				
Total revenue				
Cost of revenue, excluding depreciation and amortization shown below:				
Technology				
Professional service				
Total cost of revenue, excluding depreciation and amortization				
Operating expenses				
Sales and marketing				
Research and development				
General and administrative				
Depreciation and amortization				
Total operating expenses				
Loss from operations	(62)	(53)	(58)	(32)
Loss on extinguishment of debt	—	—	—	(5)
Interest and other expense, net	(2)	(2)	(2)	(3)
Loss before income taxes	(64)	(55)	(60)	(40)
Income tax provision (benefit)	—	—	(1)	—
Net loss	(64)%	(55)%	(59)%	(40)%

Discussion of the Three Months Ended March 31, 2018 and 2019

Revenue

	Three Months Ended March 31,			
	2018	**2019**	**$ Change**	**% Change**
	(in thousands, except percentages)			
Revenue:				
Technology	$ 9,451	$ 20,148	$ 10,697	%
Professional services	11,181	15,065	3,884	%
Total revenue	$ 20,632	$ 35,213	$ 14,581	%
Percentage of revenue:				
Technology	%	%		
Professional services				
Total	%	%		

Total revenue was $35.2 million for the three months ended March 31, 2019, compared to $20.6 million for the three months ended March 31, 2018, an increase of $14.6 million, or 71%. Total revenue for the three months ended March 31, 2019 resulting from the Medicity acquisition completed in June 2018 was $6.6 million.

Technology revenue was $20.1 million, or 57% of total revenue, for the three months ended March 31, 2019, compared to $9.5 million, or 46% of total revenue, for the three months ended March 31, 2018. The increase in technology revenue was due to a $9.3 million increase from new customers and a $1.4 million increase from existing customers. The increase of $9.3 million in technology revenue from new customers is from acquired customers from Medicity and DOS Subscription Customers. Medicity customers and DOS Subscription Customers accounted for $6.3 million and $3.0 million of the increase from new customers, respectively. The increase of $1.4 million in technology revenue from existing customers is primarily due to customers paying higher technology access fees from contractual, annual escalators. The increase was also attributable to new offerings of expanded support services. The increase in technology revenue as a percentage of total revenue from 46% for the three months ended March 31, 2018 to 57% for the three months ended March 31, 2019 was primarily due to the Medicity acquisition. Our overall revenue mix has significantly changed post-acquisition as a result of the Medicity revenue being predominantly technology revenue.

Professional services revenue was $15.1 million, or 43% of total revenue, for the three months ended March 31, 2019, compared to $11.2 million, or 54% of total revenue, for the three months ended March 31, 2018. The increase in professional services revenue was due to a $3.1 million increase from new customers and a $0.8 million increase from existing customers. The increase of $3.1 million in professional services revenue from new customers is primarily due to implementation, analytics, and improvement services being provided to new DOS Subscription Customers. Professional services provided to Medicity customers accounted for $0.3 million. The increase of $0.8 million in professional services revenue from existing customers is primarily due to the expanded deployment of implementation, analytics, and improvement services.

Cost of revenue, excluding depreciation and amortization

	Three Months Ended March 31,			
	2018	**2019**	**$ Change**	**% Change**
	(in thousands, except percentages)			
Cost of revenue, excluding depreciation and amortization:				
Technology	$ 3,359	$ 6,752	$ 3,393	%
Professional services	8,251	10,574	2,323	%
Total cost of revenue, excluding depreciation and amortization	$ 11,610	$ 17,326	$ 5,716	%
Percentage of total revenue	%	%		

Cost of technology revenue, excluding depreciation and amortization, was $6.8 million for the three months ended March 31, 2019, compared to $3.4 million for the three months ended March 31, 2018, an increase of $3.4 million, or 101%. The increase in cost of technology revenue was primarily due to $1.5 million in increased cloud computing and hosting costs largely from the expanded use of Microsoft Azure to serve existing and new customers and an

increase of $0.9 million in salary and related personnel costs from an increase in cloud services and support headcount. The increase in cost of technology revenue was also attributable to an increase of $1.0 million in subscription fees, equipment maintenance charges, and outside contractor fees, of which $0.8 million were related to Medicity.

Cost of professional services revenue was $10.6 million for the three months ended March 31, 2019, compared to $8.3 million for the three months ended March 31, 2018, an increase of $2.3 million, or 28%. This increase was primarily due to an increase in salary and related personnel costs from additional professional services headcount.

Operating Expenses

Sales and marketing

	Three Months Ended March 31,			
	2018	2019	$ Change	% Change
	(in thousands, except percentages)			
Sales and marketing	$ 6,721	$ 10,473	$ 3,752	%
Percentage of total revenue	%	%		

Sales and marketing expenses were $10.5 million for the three months ended March 31, 2019, compared to $6.7 million for the three months ended March 31, 2018, an increase of $3.8 million, or 56%. The increase was primarily due to an increase of $3.0 million in salary and related personnel costs from additional sales, marketing, and account management headcount, of which $1.4 million related to new team members as a result of the Medicity acquisition. The remaining increase was primarily caused by an increase in advertising costs, subscription costs, and travel-related costs.

Sales and marketing expense as a percentage of total revenue decreased from 33% in the three months ended March 31, 2018 to 30% in the three months ended March 31, 2019.

Research and development

	Three Months Ended March 31,			
	2018	2019	$ Change	% Change
	(in thousands, except percentages)			
Research and development	$ 8,705	$ 10,022	$ 1,317	%
Percentage of total revenue	%	%		

Research and development expenses were $10.0 million for the three months ended March 31, 2019, compared to $8.7 million for the three months ended March 31, 2018, an increase of $1.3 million, or 15%. The increase was primarily due to an increase of $1.1 million in salary and related personnel costs from additional development team's headcount largely as a result of the Medicity acquisition. The remaining increase was primarily caused by an increase in third-party hosting costs and outside contractor fees.

Research and development expense as a percentage of revenue decreased from 42% in the three months ended March 31, 2018 to 28% in the three months ended March 31, 2019.

General and administrative

	Three Months Ended March 31,			
	2018	2019	$ Change	% Change
	(in thousands, except percentages)			
General and administrative	$ 3,902	$ 6,174	$ 2,272	%
Percentage of total revenue	%	%		

General and administrative expenses were $6.2 million for the three months ended March 31, 2019, compared to $3.9 million for the three months ended March 31, 2018, an increase of $2.3 million, or 58%. The increase was primarily due to an increase of $1.3 million in salary and related personnel costs from additional general and administrative headcount. The increase was also attributable to an increase of $0.6 million in legal, accounting, and outside contractor fees. The remaining increase was primarily caused by an increase in subscription and facility costs.

General and administrative expense as a percentage of revenue decreased from 19% in the three months ended March 31, 2018 to 18% in the three months ended March 31, 2019.

Depreciation and amortization

	Three Months Ended March 31,			
	2018	2019	$ Change	% Change
	(in thousands, except percentages)			
Depreciation and amortization	$ 1,550	$ 2,312	$	%
Percentage of total revenue	%	%		

Depreciation and amortization expenses were $2.3 million for the three months ended March 31, 2019, compared to $1.6 million for the three months ended March 31, 2018, an increase of $0.8 million, or 49%. This increase was primarily due to the amortization of capitalized internal-use software costs and additional depreciation and amortization on property, equipment, and intangibles from the Medicity acquisition.

Depreciation and amortization expense as a percentage of revenue decreased from 8% in the three months ended March 31, 2018 to 7% in the three months ended March 31, 2019.

Loss on extinguishment of debt

	Three Months Ended March 31,			
	2018	2019	$ Change	% Change
	(in thousands, except percentages)			
Loss on extinguishment of debt	$ —	$ (1,670)	$ (1,670)	n/m[1]

(1) Not meaningful.

On February 6, 2019, we entered into the OrbiMed Credit Facility that established a senior term loan facility of up to $80.0 million under certain conditions and we simultaneously borrowed $50.0 million. The use of proceeds from the OrbiMed senior term loan included an immediate repayment of our $20.0 million term loan from SVB that required a prepayment premium of $0.5 million and the write-off of deferred debt issuance costs of $1.2 million, resulting in a $1.7 million loss on extinguishment of debt.

Interest and other expense, net

	Three Months Ended March 31,			
	2018	2019	$ Change	% Change
	(in thousands, except percentages)			
Interest income	$		$	%
Interest expense	(684)	(1,247)	(563)	%
Other income			(27)	(75)%

Total interest and other expense, net	$ (509)	$ (945)	$ (436)	%

Interest and other expense, net increased $0.4 million, or 86%, for the three months ended March 31, 2019, compared to the three months ended March 31, 2018. This increase is primarily due to an increase in interest expense of $0.6 million from an increase in net borrowings under the SVB Mezzanine Loan and Security Agreement and borrowings under the OrbiMed Credit Facility.

Income tax (benefit) provision

	Three Months Ended March 31,			
	2018	2019	$ Change	% Change
	(in thousands, except percentages)			
Income tax (benefit) provision	$ (156)	$	$	n/m[1]

(1) Not meaningful.

Income tax provision (benefit) consists of current and deferred taxes for U.S. federal and state income taxes. On December 22, 2017, federal tax legislation was enacted that included lowering the U.S. corporate income tax rate to 21% effective in 2018. We remeasured certain deferred tax assets and liabilities based on the tax rates at which they are expected to reverse in the future, which is generally 21%. As we have a full valuation allowance on deferred tax assets, the allowance was adjusted accordingly based on the remeasured deferred tax asset and liability position. As a result, the federal tax legislation had a limited impact on our income tax expense.

Discussion of the Years Ended December 31, 2017 and 2018

Revenue

	Year Ended December 31,			
	2017	2018	$ Change	% Change
	(in thousands, except percentages)			
Revenue:				
Technology	$ 31,693	$ 57,224	$ 25,531	%
Professional services	41,388	55,350	13,962	%
Total revenue	$ 73,081	$ 112,574	$ 39,493	%
Percentage of revenue:				
Technology	%	%		
Professional services				
Total	%	%		

Total revenue was $112.6 million for the year ended December 31, 2018, compared to $73.1 million for the year ended December 31, 2017, an increase of $39.5 million, or 54%.

Technology revenue was $57.2 million, or 51% of total revenue, for the year ended December 31, 2018, compared to $31.7 million, or 43% of total revenue, for the year ended December 31, 2017. The increase in technology revenue was due to a $17.3 million increase from new customers and an $8.2 million increase from existing customers. The increase of $17.3 million in technology revenue from new customers is from DOS Subscription Customers and acquired customers from Medicity. DOS Subscription Customers and Medicity customers accounted for $5.2 million and $12.1 million of the increase from new customers, respectively. The increase of $8.2 million in technology revenue from existing customers is primarily due to customers paying higher technology access fees from contractual, annual escalators. The increase was also attributable to new offerings of expanded support services.

Professional services revenue was $55.4 million, or 49% of total revenue, for the year ended December 31, 2018, compared to $41.4 million, or 57% of total revenue, for the year ended December 31, 2017. The increase in professional services revenue was due to a $7.2 million increase from new customers and a $6.8 million increase from existing customers. The increase of $7.2 million in professional services revenue from new customers is primarily due to implementation, analytics, and improvement services being provided to new DOS Subscription Customers. Professional services provided to Medicity customers accounted for $0.4 million of professional services revenue. The increase of $6.8 million in professional services revenue from existing customers is primarily due to the expanded deployment of implementation, analytics, and improvement services.

Cost of revenue, excluding depreciation and amortization

	Year Ended December 31,			
	2017	2018	$ Change	% Change
	(in thousands, except percentages)			
Cost of revenue, excluding depreciation and amortization:				
Technology	$ 11,610	$ 19,429	$ 7,819	%
Professional services	32,032	40,423	8,391	%
Total cost of revenue, excluding depreciation and amortization	$ 43,642	$ 59,852	$ 16,210	%
Percentage of total revenue	%	%		

Cost of technology revenue, excluding depreciation and amortization, was $19.4 million for the year ended December 31, 2018, compared to $11.6 million for the year ended December 31, 2017, an increase of $7.8 million, or 67%. The increase in cost of technology revenue was primarily due to $3.4 million in increased cloud computing and hosting costs largely from the expanded use of Microsoft Azure to serve existing and new customers and $2.3 million in salary and related personnel costs from an increase in cloud services and support headcount. The increase in cost of technology revenue was also attributable to an increase of $2.1 million in subscription fees, equipment maintenance charges, and outside contractor fees.

Cost of professional services revenue was $40.4 million for the year ended December 31, 2018, compared to $32.0 million for the year ended December 31, 2017, an increase of $8.4 million, or 26%. This increase is primarily due to an increase in salary and related personnel costs from an increase in our professional services headcount.

Operating Expenses

Sales and marketing

	Year Ended December 31,			
	2017	2018	$ Change	% Change
	(in thousands, except percentages)			
Sales and marketing	$ 25,920	$ 44,123	$ 18,203	%
Percentage of total revenue	%	%		

Sales and marketing expenses were $44.1 million for the year December 31, 2018, compared to $25.9 million for the year ended December 31, 2017, an increase of $18.2 million, or 70%. The increase was primarily due to an increase of $13.0 million in salary and related personnel costs from an increase in our sales, marketing, and account management headcount, of which $3.3 million related to new team members as a result of the Medicity acquisition. The increase was also attributable to $4.0 million in compensation expense associated with the repurchase of common stock at a price in excess of its estimated fair value. The remaining increase was primarily caused by an increase in subscription costs, travel-related costs, and outside contractor fees.

Sales and marketing expense as a percentage of total revenue increased from 35% in the year ended December 31, 2017 to 39% in the year ended December 31, 2018.

Research and development

	Year Ended December 31,

	2017	2018	$ Change	% Change
	(in thousands, except percentages)			
Research and development	$ 28,470	$ 38,592	$ 10,122	%
Percentage of total revenue	%	%		

Research and development expenses were $38.6 million for the year ended December 31, 2018, compared to $28.5 million for the year ended December 31, 2017, an increase of $10.1 million, or 36%. The increase was primarily due to an increase of $8.5 million in salary and related personnel costs from an increase in our development team's headcount largely as a result of the Medicity acquisition. The increase was also attributable to $0.9 million in compensation expense associated with the repurchase of common stock at a price in excess of its estimated fair value. The remaining increase was primarily caused by an increase in subscription costs, travel-related costs, and outside contractor fees.

Research and development expense as a percentage of revenue decreased from 39% in the year ended December 31, 2017 to 34% in the year ended December 31, 2018.

General and administrative

	Year Ended December 31,			
	2017	2018	$ Change	% Change
	(in thousands, except percentages)			
General and administrative	$ 14,697	$ 22,690	$ 7,993	%
Percentage of total revenue	%	%		

General and administrative expenses were $22.7 million for the year ended December 31, 2018, compared to $14.7 million for the year ended December 31, 2017, an increase of $8.0 million, or 54%. The increase was primarily due to $3.1 million in compensation expense associated with the repurchase of common stock at a price in excess of its estimated fair value. The increase was also attributable to an increase of $1.9 million in legal, accounting, and outside contractor fees and an increase of $1.6 million in salary and related personnel costs from an increase in general and administrative headcount. The remaining increase was primarily caused by an increase in subscription and facility costs.

General and administrative expense as a percentage of revenue remained consistent at 20% in both of the years ended December 31, 2017 and 2018.

Depreciation and amortization

	Year Ended December 31,			
	2017	2018	$ Change	% Change
	(in thousands, except percentages)			
Depreciation and amortization	$ 5,892	$ 7,412	$ 1,520	%
Percentage of total revenue	%	%		

Depreciation and amortization expenses were $7.4 million for the year ended December 31, 2018, compared to $5.9 million for the year ended December 31, 2017, an increase of $1.5 million, or 26%. This increase was primarily due to the amortization of capitalized internal-use software costs and additional depreciation and amortization on property, equipment, and intangibles from the Medicity acquisition.

Depreciation and amortization expense as a percentage of revenue decreased from 8% in the year ended December 31, 2017 to 7% in the year ended December 31, 2018.

Interest and other expense, net

	Year Ended December 31,

	2017	2018	$ Change	% Change
	(in thousands, except percentages)			
Interest income	$		$	%
Interest expense	(2,007)	(2,587)	(580)	%
Other expense	(4)	(39)	(35)	n/m[1]
Total interest and other expense, net	$ (1,469)	$ (2,024)	$ (555)	%

(1) Not meaningful.

Interest and other expense, net increased $0.6 million, or 38%, for the year ended December 31, 2018 compared to the year ended December 31, 2017. This increase is primarily due to an increase in interest expense of $0.6 million from an increase in net borrowings under the SVB Mezzanine Loan and Security Agreement. In October 2017, we borrowed $10 million under the SVB Mezzanine Loan and Security Agreement with an additional $10 million borrowed in October 2018.

Income tax provision (benefit)

	Year Ended December 31,			
	2017	2018	$ Change	% Change
	(in thousands, except percentages)			
Income tax provision (benefit)	$	$ (135)	$ (161)	n/m[1]

(1) Not meaningful.

Income tax provision (benefit) consists of current and deferred taxes for U.S. federal and state income taxes. On December 22, 2017, federal tax legislation was enacted that included lowering the U.S. corporate income tax rate to 21% effective in 2018. We remeasured certain deferred tax assets and liabilities based on the tax rates at which they are expected to reverse in the future, which is generally 21%. As we have a full valuation allowance on deferred tax assets, the allowance was adjusted accordingly based on the remeasured deferred tax asset and liability position. As a result, the federal tax legislation had a limited impact on our income tax expense.

Quarterly Results of Operations

The following table sets forth our unaudited quarterly consolidated statements of operations data for each of the nine quarters in the period ended March 31, 2019. The unaudited consolidated statements of operations data set forth below has been prepared on the same basis as our audited consolidated financial statements and, in the opinion of management, reflect all adjustments, consisting only of normal recurring adjustments, that are necessary for the fair presentation of such data. Our historical results are not necessarily indicative of the results that may be expected in the future and the results for any quarter are not necessarily indicative of results to be expected for a full year or any other period. The following quarterly financial data should be read in conjunction with our consolidated financial statements and the related notes included elsewhere in this prospectus.

	Three Months Ended								
	March 31, 2017	June 30, 2017	Sept. 30, 2017	Dec. 31, 2017	March 31, 2018	June 30, 2018	Sept. 30, 2018	Dec. 31, 2018	March 31, 2019
	(in thousands)								
Revenue:									
Technology	$ 6,836	$ 7,653	$ 8,223	$ 8,981	$ 9,451	$ 10,725	$ 18,283	$ 18,765	$ 20,148

Professional services	9,579	9,889	9,401	12,519	11,181	12,265	14,585	17,319	15,065
Total revenue	16,415	17,542	17,624	21,500	20,632	22,990	32,868	36,084	35,213
Cost of revenue, excluding depreciation and amortization:									
Technology	2,184	2,483	3,986	2,957	3,359	3,291	6,132	6,647	6,752
Professional services	9,189	9,172	6,653	7,018	8,251	9,227	10,865	12,080	10,574
Total cost of revenue, excluding depreciation and amortization[1]	11,373	11,655	10,639	9,975	11,610	12,518	16,997	18,727	17,326
Operating expenses:									
Sales and marketing[1]	6,327	6,707	7,462	5,424	6,721	12,004	13,771	11,627	10,473
Research and development[1]	6,431	6,797	7,701	7,541	8,705	8,487	10,839	10,561	10,022
General and administrative[1]	3,955	3,583	3,463	3,696	3,902	7,241	5,605	5,942	6,174
Depreciation and amortization	1,518	1,541	1,421	1,412	1,550	1,551	2,151	2,160	2,312
Total operating expenses	18,231	18,628	20,047	18,073	20,878	29,283	32,366	30,290	28,981
Loss from operations	(13,189)	(12,741)	(13,062)	(6,548)	(11,856)	(18,811)	(16,495)	(12,933)	(11,094)
Loss on extinguishment of debt	—	—	—	—	—	—	—	—	(1,670)
Interest and other expense, net	(381)	(332)	(312)	(444)	(509)	(506)	(374)	(635)	(945)
Loss before income taxes	(13,570)	(13,073)	(13,374)	(6,992)	(12,365)	(19,317)	(16,869)	(13,568)	(13,709)
Income tax provision (benefit)	—				(156)				
Net loss	$ (13,570)	$ (13,084)	$ (13,379)	$ (7,002)	$ (12,209)	$ (19,324)	$ (16,876)	$ (13,575)	$ (13,720)

(1) Includes stock-based compensation expense, tender offer payments deemed compensation expense, and post-acquisition restructuring costs.

	Three Months Ended								
	March 31, 2017	June 30, 2017	Sept. 30, 2017	Dec. 31, 2017	March 31, 2018	June 30, 2018	Sept. 30, 2018	Dec. 31, 2018	March 31, 2019
Stock-Based Compensation Expense:	(in thousands)								
Cost of revenue, excluding depreciation and amortization:									
Technology	$ —	$ —	$	$	$	$	$	$	$
Professional services									
Sales and marketing									
Research and development									
General and administrative									
Total	$	$ 1,063	$	$ 1,418	$ 1,040	$	$	$ 1,311	$ 1,656

	Three Months Ended								
	March 31, 2017	June 30, 2017	Sept. 30, 2017	Dec. 31, 2017	March 31, 2018	June 30, 2018	Sept. 30, 2018	Dec. 31, 2018	March 31, 2019
Tender Offer Payments Deemed Compensation Expense:	(in thousands)								
Cost of revenue, excluding depreciation and amortization:									
Technology	$ —	$ —	$ —	$ —	$ —	$	$ —	$ —	$ —
Professional services	—	—	—	—	—		—	—	—
Sales and marketing	—	—	—	—	—	3,967	—	—	—
Research and development	—	—	—	—	—		—	—	—
General and administrative	—	—	—	—	—	3,133	—	—	—
Total	$ —	$ —	$ —	$ —	$ —	$ 8,318	$ —	$ —	$ —

	Three Months Ended								
	March 31, 2017	June 30, 2017	Sept. 30, 2017	Dec. 31, 2017	March 31, 2018	June 30, 2018	Sept. 30, 2018	Dec. 31, 2018	March 31, 2019
Post-Acquisition Restructuring Costs:	(in thousands)								
Cost of revenue, excluding depreciation and amortization:									
Technology	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Professional services	—	—	—	—	—	—			
Sales and marketing	—	—	—	—	—	—			
Research and development	—	—	—	—	—	—		—	
General and administrative	—	—	—	—	—	—		—	—
Total	$ —	$ —	$ —	$ —	$ —	$ —	$ 2,078	$	$

The following table sets forth our unaudited quarterly consolidated results of operations data for each of the periods indicated as a percentage of total revenue.

	Three Months Ended								
	March 31, 2017	June 30, 2017	Sept. 30, 2017	Dec. 31, 2017	March 31, 2018	June 30, 2018	Sept. 30, 2018	Dec. 31, 2018	March 31, 2019
Revenue:									
Technology	%	%	%	%	%	%	%	%	%
Professional services									
Total revenue									
Cost of revenue, excluding depreciation and amortization:									
Technology									
Professional services									
Total cost of revenue, excluding depreciation and amortization									
Operating expenses:									

Sales and marketing									
Research and development									
General and administrative									
Depreciation and amortization									
Total operating expenses									
Loss from operations	(80)	(72)	(75)	(31)	(58)	(81)	(51)	(34)	(32)
Loss on extinguishment of debt	—	—	—	—	—	—	—	—	(5)
Interest and other expense, net	(2)	(2)	(2)	(2)	(2)	(2)	(1)	(2)	(3)
Loss before income taxes	(82)	(74)	(77)	(33)	(60)	(83)	(52)	(36)	(40)
Income tax provision (benefit)	—	—	—	—	(1)	—	—	—	—
Net loss	(82)	(74)	(77)	(33)	(59)	(83)	(52)	(36)	(40)

Quarterly revenue trends

Our quarterly technology revenue increased sequentially in each of the periods presented due primarily to increases in the number of customers as well as the expansion of technology offerings to existing customers. Contracting activity can vary quarterly as a result of large healthcare provider buying patterns, though this seasonality is sometimes not apparent in our technology revenue because we generally recognize technology revenue over the term of the contract. The growth in quarterly technology revenue in the last two quarters of 2018 and the first quarter of 2019 was attributable to a combination of organic growth and the acquisition of Medicity. Technology revenue from Medicity accounted for $6.2 million, $5.9 million, and $6.3 million during the quarters ended September 30, 2018, December 31, 2018, and March 31, 2019, respectively.

Our quarterly professional services revenue generally increased over the periods presented due to increases in the number of customers as well as the expansion of professional services arrangements with existing customers. The increases in each of the fourth quarters of 2017 and 2018 were primarily due to performance-based revenue arrangements whereby performance was measured and achieved. We expect performance-based revenue arrangements to become a smaller portion of our overall revenue base and thus have less of an impact on future fourth quarters.

Quarterly cost of revenue, excluding depreciation and amortization trends

Our quarterly cost of revenue, excluding depreciation and amortization has varied over the quarterly periods due to the timing of hiring, bonus achievement, reorganization of team member duties that impacted the third quarter of 2017, and the acquisition of Medicity. In the last two quarters of 2018 and the first quarter of 2019, the increases in cost of revenue, excluding depreciation and amortization were primarily attributable to the Medicity acquisition.

Quarterly operating expenses trends

Total operating expenses have generally increased sequentially for the periods presented, primarily due to the addition of personnel in connection with the expansion of our business. The significant increase in the second quarter of 2018 is primarily attributable to deemed compensation expense associated with a tender offer for the repurchase of common stock at a price in excess of its estimated fair value. The additional increase in total operating expenses during the last two quarters of 2018 and the first quarter of 2019 is primarily attributable to the Medicity acquisition.

Sales and marketing expenses generally grew sequentially over the periods, due to the continued expansion of our sales, marketing, and account management teams. Sales and marketing expenses are higher in the third quarter due to our Healthcare Analytics Summit which is typically held in September. Research and development expenses have generally increased sequentially for the periods presented, due to continued investment in developing our Solution. Sales and marketing expenses and research and development expenses decreased slightly during the fourth quarter of 2018 and the first quarter of 2019 compared to the third quarter of 2018 primarily as a result of Medicity operational synergies achieved after closing the acquisition. General and administrative expenses increased over the periods presented due primarily to the expansion of the legal, finance, and IT teams and due to increased costs for accounting, legal, and outside contractors.

Our quarterly results of operations may fluctuate due to various factors affecting our performance. As noted above, we generally recognize revenue from technology ratably over the term of the contract. Therefore, changes in our contracting activity in the near term may not be apparent as a change to our reported revenues until future periods. Most of our expenses are recorded as period costs and thus factors affecting our cost structure may be reflected in our financial results sooner than changes to our contracting activity.

Liquidity and Capital Resources

As of March 31, 2019, we had cash, cash equivalents, and short-term investments of $64.6 million, which were held for working capital purposes. Our cash equivalents and short-term investments are comprised primarily of money market funds, U.S. treasury notes, commercial paper, corporate bonds, and asset-backed securities.

Since inception, we have financed our operations primarily from the proceeds we received through private sales of equity securities, payments received from customers under technology and professional services arrangements, and borrowings under our loan and security agreements. We believe our existing cash, cash equivalents, and short-term investments will be sufficient to meet our projected operating requirements for at least the next 12 months. Our future capital requirements will depend on many factors, including our pace of new customer growth and expanded customer relationships, technology and professional services renewal activity, and the timing and extent of spend to support the expansion of sales, marketing, and development activities. We may be required to seek additional equity or debt financing. In the event that additional financing is required from outside sources, we may not be able to raise it on terms acceptable to us, or at all. If we are unable to raise additional capital when desired, our business, results of operations, and financial condition would be adversely affected.

SVB Debt Agreements and OrbiMed Financings

In October 2017, we entered into the Amended Loan and Security Agreement and the Mezzanine Loan and Security Agreement (the SVB Debt Agreements) with SVB. The SVB Debt Agreements established a revolving line of credit and a term loan facility of up to $20.0 million under certain conditions and $20.0 million, respectively.

Revolving Line of Credit As of December 31, 2018, the Amended Loan and Security Agreement allowed us to borrow up to $20.0 million in advances on the revolving line of credit with a contractual interest rate of prime plus 0.5% and a maturity date of December 2019. As of December 31, 2018, the interest rate was 6.0% and we had drawn $1.3 million under this revolving line of credit.

The Amended Loan and Security Agreement was further amended on February 6, 2019 to reduce the revolving line of credit from up to $20.0 million to $5.0 million with an obligation to maintain a minimum of $5.0 million cash or cash equivalents on deposit with SVB to maintain the assurance of future credit availability. The line may be increased by $5.0 million upon request and approval by SVB. The maturity date of the revolving line of credit was amended to be February 6, 2021.

Term Loan

As of December 31, 2018, the SVB Debt Agreements allowed us to borrow up to $20.0 million in term loans with a contractual interest rate of prime plus 6.25%. The interest rate was 11.75% as of December 31, 2018. We were contractually allowed to prepay all outstanding principal and accrued interest at any time together with a prepayment penalty of $0.5 million. As of December 31, 2018, we had borrowed the full $20.0 million under this term loan.

Both the revolving line of credit and the term loan were subject to certain covenants and, as of December 31, 2018, we were in compliance with the covenants under the SVB Debt Agreements.

OrbiMed Financings

On February 6, 2019, we entered into the OrbiMed Credit Facility that established a senior term loan facility of up to $80.0 million under certain conditions. The contractual interest rate is the higher of LIBOR plus 7.5% and 10.0%. On February 6, 2019, we borrowed $50.0 million under the OrbiMed Debt Agreement with principal payments due beginning in 2023, and we simultaneously repaid our $20.0 million term loan from SVB in full. In addition, we repaid in full the outstanding balance of $1.3 million under the SVB revolving line of credit.

In addition, on February 6, 2019, we sold 875,585 shares of our Series F redeemable convertible preferred stock for a purchase price of $12.2 million. The effect of the OrbiMed debt proceeds, the Series F stock issuance, and the repayment of the SVB term loan resulted in a net increase in cash, cash equivalents, and short-term investments of $38.7 million, net of fees and debt prepayment premiums.

Cash Flows

The following table summarizes our cash flows for the years ended December 31, 2017 and 2018, and the three months ended March 31, 2018 and 2019:

	Year Ended December 31,		Three Months Ended March 31,	
	2017	**2018**	**2018**	**2019**
	(in thousands)			
Net cash used in operating activities	$ (36,829)	$ (40,296)	$ (7,387)	$ (5,224)
Net cash provided by (used in) investing activities	22,408	21,403	8,809	(28,656)
Net cash provided by (used in) financing activities	24,871	24,346	(6,226)	37,657
Net increase (decrease) in cash and cash equivalents	$ 10,450	$ 5,453	$ (4,804)	$ 3,777

Operating Activities Our largest source of operating cash flows is cash collections from our customers for technology and professional services arrangements. Our primary uses of cash from operating activities are for employee-related expenses, marketing expenses, and technology costs.

For the three months ended March 31, 2019, net cash used in operating activities was $5.2 million, which included a net loss of $13.7 million. Non-cash charges primarily consisted of $2.3 million in depreciation and amortization of property, equipment, and intangible assets, $1.7 million in stock-based compensation, and $1.7 million of loss from the extinguishment of debt.

For the three months ended March 31, 2018, net cash used in operating activities was $7.4 million, which included a net loss of $12.2 million. Non-cash charges primarily consisted of $1.6 million in depreciation and amortization of property, equipment, and intangible assets and $1.0 million in stock-based compensation. For the year ended December 31, 2018, net cash used in operating activities was $40.3 million, which included a net loss of $62.0 million. Non-cash charges primarily consisted of $4.2 million in stock-based compensation and $7.4 million in depreciation and amortization of property, equipment, and intangible assets. The 2018 net loss also included an $8.3 million charge that was paid in association with the repurchase of common stock at a price in excess of its estimated fair value as part of the 2018 tender offer that is further described in note 12 to the audited consolidated financial statements. The tender offer cash payments are not expected to be recurring in future periods.

For the year ended December 31, 2017, net cash used in operating activities was $36.8 million, which included a net loss of $47.0 million. Non-cash charges primarily consisted of $4.2 million in stock-based compensation and $5.9 million in depreciation and amortization of property, equipment, and intangible assets.

Investing Activities Net cash used in investing activities for the three months ended March 31, 2019 of $28.7 million was primarily due to $30.7 million used to purchase short-term investments and $1.1 million in purchases of property, equipment, and intangible assets, reduced by $3.1 million provided from the sale and maturity of short-term investments.

Net cash provided by investing activities for the three months ended March 31, 2018 of $8.8 million primarily was due to $9.2 million provided from the sale and maturity of short-term investments, reduced by $0.4 million in purchases of property, equipment, and intangible assets.

Net cash provided by investing activities for the year ended December 31, 2018 of $21.4 million was primarily due to $37.9 million provided from the sale and maturity of short-term investments, reduced by $14.0 million used to purchase short-term investments and $2.5 million in purchases of property, equipment, and intangible assets.

Net cash provided by investing activities for the year ended December 31, 2017 of $22.4 million primarily was due to $72.1 million provided from the sale and maturity of short-term investments, reduced by $46.4 million used to purchase short-term investments and $3.3 million in purchases of property, equipment, and intangible assets.

Financing Activities Net cash provided by financing activities for the three months ended March 31, 2019 of $37.7 million was primarily the result of $12.1 million in net proceeds from the sale and issuance of Series F redeemable convertible preferred stock, $47.2 million in net proceeds drawn under the OrbiMed Credit Facility, and $0.8 million in stock option exercise proceeds, reduced by the $21.8 million payoff of the SVB debt and $0.4 million in payments of acquisition-related obligations.

Net cash used in financing activities for the three months ended March 31, 2018 of $6.2 million was primarily the result of $10.3 million in payments of acquisition-related obligations, reduced by $4.0 million in proceeds from the sale and issuance of Series E redeemable convertible preferred stock.

Net cash provided by financing activities for the year ended December 31, 2018 of $24.3 million was primarily the result of $34.0 million in proceeds from the issuance of Series E redeemable convertible preferred stock, $10.0 million in proceeds drawn under the SVB Debt Agreements and $3.0 million in stock option exercise proceeds, reduced by an $8.7 million repurchase of our common stock, and $13.9 million in payments of acquisition-related obligations.

Net cash provided by financing activities for the year ended December 31, 2017 of $24.9 million was primarily the result of $23.8 million in proceeds from the issuance of Series E redeemable convertible preferred stock and $9.8 million in proceeds drawn under the SVB Debt Agreements, reduced by $8.8 million in payments of acquisition-related obligations.

Contractual Obligations and Commitments

The following table presents a summary of our payments due under contractual arrangements as of December 31, 2018:

	Payments Due by Period				
	Total	Less Than 1 Year	1 to 3 Years	3 to 5 Years	More Than 5 Years
	(in thousands)				
Revolving line of credit[(1)]	$ 1,321	$ 1,321	$ –	$ –	$ –
Term loan[(1)]	20,000	–	20,000	–	–
Operating leases	7,342	2,882	3,837		
Acquisition-related consideration	6,500	2,250	4,250	–	–
Total	$ 35,163	$ 6,453	$ 28,087	$	$

(1) On February 6, 2019, we borrowed $50.0 million under the OrbiMed Debt Agreement, and we simultaneously repaid our $20.0 million term loan from SVB in full. We also repaid in full our $1.3 million SVB revolving line of credit.

In the ordinary course of business, we enter into agreements of varying scope and terms pursuant to which we agree to indemnify customers or business partners and other parties with respect to certain matters, including, but not limited to, losses arising out of the breach of such agreements, services to be provided by us or from data breaches, or intellectual property infringement claims made by third parties. No demands have been made upon us to provide indemnification under such agreements and there are no claims that we are aware of that could have a material effect on our consolidated financial statements.

Off-Balance Sheet Arrangements

As of March 31, 2019, we did not have any relationships with unconsolidated organizations or financial partnerships, such as structured finance or special purpose entities that would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Quantitative and Qualitative Disclosures about Market Risk

We are exposed to certain market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily a result of fluctuations in interest rates but may include foreign currency exchange risk and inflation in the future.

Interest Rate Risk

We had cash, cash equivalents, and short-term investments of $64.6 million as of March 31, 2019, which are held for working capital purposes. We do not make investments for trading or speculative purposes.

Our cash equivalents and short-term investments are subject to market risk due to changes in interest rates. Fixed rate securities may have their market value adversely affected due to a rise in interest rates, while floating rate securities may produce less income than expected if interest rates fall. Due in part to these factors, our future investment income may fluctuate due to changes in interest rates or we may suffer losses in principal if we are forced to sell securities that decline in market value due to changes in interest rates. However, because we classify our investments as “available for sale,” no gains or losses are recognized due to changes in interest rates unless such securities are sold prior to maturity or declines in fair value are determined to be other-than-temporary.

Under the SVB Debt Agreements, we pay interest on any outstanding balances based on variable market rates. A significant increase in these market rates may adversely affect our results of operations.

As of March 31, 2019, a hypothetical 100 basis point change in interest rates would not have had a material impact on the value of our cash equivalents or investment portfolio. Fluctuations in the value of our cash equivalents and investment portfolio caused by a change in interest rates (gains or losses on the carrying value) are recorded in other comprehensive income and are realized only if we sell the underlying securities prior to maturity.

Inflation Risk

We do not believe that inflation has had a material effect on our business, results of operations or financial condition. Nonetheless, if our costs were to become subject to significant inflationary pressures, we may not be able to fully offset such higher costs. Our inability or failure to do so could harm our business, results of operations, or financial condition.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with U.S. GAAP. The preparation of these consolidated financial statements requires management to make estimates, assumptions, and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the applicable periods. We base our estimates, assumptions, and judgments on our knowledge and experience about past and current events and on various other factors that we believe to be reasonable under the circumstances. Different assumptions and judgments would change the estimates used in the preparation of our consolidated financial statements, which, in turn, could change the results from those reported. We evaluate our estimates, assumptions, and judgments on an ongoing basis.

The critical accounting estimates, assumptions, and judgments that we believe have the most significant impact on our consolidated financial statements are described below.

Revenue Recognition

We derive our revenues primarily from technology subscriptions and professional services. We determine revenue recognition by applying the following steps:

- Identification of the contract, or contracts, with a customer;
- Identification of the performance obligations in the contract;
- Determination of the transaction price;
- Allocation of the transaction price to the performance obligations in the contract; and

- Recognition of revenue when, or as, we satisfy the performance obligation.

We recognize revenue net of any taxes collected from customers and subsequently remitted to governmental authorities.

Technology Revenue

Technology revenue primarily consists of subscription fees charged to customers for access to use our technology. We provide customers access to our technology through either an all-access or limited-access, modular subscription. The majority of our subscription arrangements are cloud-based and do not provide customers the right to take possession of the technology or contain a significant penalty if the customer were to take possession of the technology. Revenue from cloud-based subscriptions is recognized ratably over the contract term beginning on the date that the service is made available to the customer. Most of our subscription contracts have up to a three-year term, of which the vast majority are terminable after one year upon 90 days notice.

Subscriptions that allow the customer to take software on-premise without significant penalty are treated as time-based licenses. These arrangements generally include access to technology, access to unspecified future products and maintenance and support. Revenue for upfront access to the technology library is recognized at a point in time when the technology is made available to the customer. Revenue for access to unspecified future products included in time-based license subscriptions is recognized ratably over the contract term beginning on the date that the access is made available to the customer.

We also have certain perpetual license arrangements. Revenue from these arrangements is recognized at a point in time upon delivery of the software.

Technology revenue also includes maintenance and support revenue which generally includes bug fixes, updates, and support services. Revenue related to maintenance and support is recognized over the contract term beginning on the date that the service is made available to the customer.

Professional Services Revenue Professional services revenue primarily includes implementation services, strategic advisory services, and improvement services. Professional services arrangements typically include a fee for making FTE services available to our customers on a monthly basis. FTE services generally consist of a blend of analytic engineers, analysts, and data scientists based on the domain expertise needed to best serve our customer. Professional services are typically considered distinct from the technology offerings and revenue is generally recognized as the service is provided using the “right to invoice” practical expedient.

Contracts with Multiple Performance Obligations Many of our contracts include multiple performance obligations. We account for performance obligations separately if they are capable of being distinct and distinct within the context of the contract. In these circumstances, the transaction price is allocated to separate performance obligations on a relative standalone selling price basis.

We determine standalone selling prices based on the observable price a good or service is sold for separately when available. In cases where standalone selling prices are not directly observable, based on information available, we utilize the expected cost plus a margin, adjusted market assessment, or residual estimation method. We consider all information available including our overall pricing objectives, market conditions, and other factors, which may include the value of contracts, customer demographics, and the types of users.

Standalone selling prices are not directly observable for our all-access and limited-access technology arrangements, which are composed of cloud-based subscriptions, time-based licenses, and perpetual licenses. For these technology arrangements, we use the residual estimation method due to the limited number of standalone transactions and/or prices that are highly variable.

Variable Consideration We have also entered into at-risk and shared savings arrangements with certain customers whereby we receive variable consideration based on the achievement of measurable improvements which may include cost savings or performance against metrics. For these arrangements, we estimate revenue using the most likely amount that we will receive. Estimates are based on our historical experience and best judgment at the time to the extent it is probable that a significant reversal of revenue recognized will not occur. Due to the nature of our arrangements, certain estimates may be constrained until the uncertainty is further resolved.

Stock-Based Compensation

We have granted stock-based awards, consisting of stock options to our employees, certain outside contractors, and certain members of our board of directors.

We have issued two types of employee stock options, standard and two-tier. Our standard employee stock options vest solely on a service-based condition. For these awards, we recognize stock-based compensation based on the grant date fair value of the awards and recognize that cost using the straight-line method over the requisite service period of the award. Two-tier employee stock options contain both a service-based condition and performance condition, defined as the earlier of (i) an acquisition or change in control of the company or (ii) upon the occurrence of our initial public offering. A change in control event and effective registration event are not deemed probable until consummated; accordingly, no expense is recorded related to two-tier stock options until the performance condition becomes probable of occurring. Awards which contain both service-based and performance conditions are recognized using the accelerated attribution method once the performance condition is probable of occurring. The service-based condition is generally a service period of four years.

As of March 31, 2019, all compensation expense related to two-tier employee stock options remained unrecognized because the performance condition was not satisfied. At the time the performance condition becomes probable, we will recognize the cumulative stock-based compensation expense for the two-tier employee stock options to the extent that they would have been expensed based on the service vesting condition using the accelerated attribution method. Under the Health Catalyst, Inc. Stock Incentive Plan as of March 31, 2019, 4.6 million two-tier employee stock options were outstanding, of which no two-tier employee stock options would have been vested based on the service condition alone. If the performance condition had occurred on March 31, 2019, we would have recorded $3.8 million of stock-based compensation expense on that date. If the performance condition had been satisfied on these two-tier employee stock options as of March 31, 2019, we would recognize future stock-based compensation expense of $10.7 million over a weighted-average period of approximately 1.9 years, if the requisite service is provided.

We estimate the fair value of our stock options using the Black-Scholes option-pricing model. This requires the input of highly subjective assumptions, including the fair value of our underlying common stock, the expected term of stock options, the expected volatility of the price of our common stock, risk-free interest rates, and the expected dividend yield of our common stock. The assumptions used in our option-pricing model represent our best estimates. These estimates involve inherent uncertainties and the application of management's judgment. If factors change and different assumptions are used, our stock-based compensation expense could be materially different in the future. The resulting fair value, net of actual forfeitures, is recognized on a straight-line basis over the period during which an employee is required to provide service in exchange for the award.

These assumptions used in the Black-Scholes option-pricing model, other than the fair value of our common stock, are estimated as follows:

- Expected volatility. Since a public market for our common stock has not existed and, therefore, we do not have a trading history of our common stock, we estimated the expected volatility based on the volatility of similar publicly-held entities (guideline companies) over a period equivalent to the expected term of the awards. In evaluating the similarity of guideline companies to us, we considered factors such as industry, stage of life cycle, size, and financial leverage. We intend to continue to consistently apply this process using the same or similar guideline companies to estimate the expected volatility until sufficient historical information regarding the volatility of the share price of our common stock becomes available.

- Expected term. We estimate the expected term using the simplified method, as we do not have sufficient historical exercise activity to develop reasonable expectations about future exercise patterns and post-vesting

employment termination behavior. The simplified method calculates the average period the stock options are expected to remain outstanding as the midpoint between the vesting date and the contractual expiration date of the award.

- Risk-free interest rate. The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant for maturities corresponding with the expected term of the option.

- Expected dividend yield. We have never declared or paid any dividends and do not presently plan to pay dividends in the foreseeable future. Consequently, we use an expected dividend yield of zero.

The following table summarizes the assumptions, other than the fair value of our common stock, relating to stock options granted during the periods indicated:

	Year Ended December 31,		Three Months Ended March 31,	
	2017	**2018**	**2018**	**2019**
Expected volatility	46.5-48.4%	43.6-47.6%	0.464	0.445
Expected term (in years)	6.3	6.3	6.3	6.3
Risk-free interest rate	2.0-2.2%	2.5-3.0%	0.025	0.025
Expected dividend yield	—	—	—	—

On January 1, 2017, we adopted ASU No. 2016-09, Improvement to Employee Share-based Payment Accounting (Topic 718), which among other items, provides an accounting policy election to account for forfeitures as they occur, rather than to account for them based on an estimate of expected forfeitures. We elected to account for forfeitures as they occur and therefore, stock-based compensation expense for the years ended December 31, 2017 and 2018, and the three months ended March 31, 2018 and 2019, have been calculated based on actual forfeitures in our consolidated statements of operations.

Prior to the adoption of ASU No. 2018-07, Compensation — Stock Compensation (ASU 2018-17), which simplifies the accounting for non-employee share-based payment transactions, the fair value measurement date for non-employee awards was the date the performance of services was completed. Upon adoption of ASU 2018-07 on January 1, 2019, the measurement date for non-employee awards is the date of grant. The compensation expense for non-employees is recognized, without changes in the fair value of the award, in the same period and in the same manner as though we had paid cash for the services, which is typically the vesting period of the respective award. The impact on our consolidated financial statements was immaterial. See "Accounting pronouncements adopted," in note 1 to our audited consolidated financial statements for more information.

We will continue to use judgment in evaluating the assumptions related to our stock-based compensation on a prospective basis. As we continue to accumulate additional data related to our common stock, we may have refinements to our estimates, which could materially impact our future stock-based compensation expense.

Common Stock Valuations

We are required to estimate the fair value of the common stock underlying our stock-based awards when performing fair value calculations. We have granted all options to purchase shares of our common stock with an exercise price per share no less than the fair value per share of our common stock underlying those options on the date of grant, based on the information known on the date of grant.

Given the absence of a public trading market for our common stock, and in accordance with the American Institute of Certified Public Accountants Practice Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation, or AICPA Guide, we exercised reasonable judgment and considered numerous objective and subjective factors to determine the best estimate of the fair value of our common stock including:

- contemporaneous valuations performed at periodic intervals by unrelated third-party specialists;

- rights, preferences, and privileges of our redeemable convertible preferred stock relative to those of our common stock;

- our actual operating and financial performance;
- relevant precedent transactions involving our capital stock;
- likelihood of achieving a liquidity event, such as an initial public offering or a sale of our company given prevailing market conditions and the nature and history of our business;
- market multiples of comparable companies in our industry;
- stage of development;
- industry information such as market size and growth;
- illiquidity of stock-based awards involving securities in a private company; and
- macroeconomic conditions.

The enterprise value of our company was determined using both the income approach and market approach valuation methods. The income approach estimates value based on the expectation of future cash flows that a company will generate. These future cash flows are discounted to their present values using a discount rate based on the cost of capital at a company's stage of development. The market approach estimates value based on a comparison of the subject company to comparable public companies in a similar line of business. From the comparable companies, a representative market value multiple is determined and then applied to the subject company's financial results to estimate the enterprise value of the subject company.

The resulting equity values derived by the income approach and market approach were then allocated between share classes by a hybrid of the Probability Weighted Expected Return Method (PWERM) and the Option Pricing Method (OPM). The hybrid method was selected to consider various outcomes for our company including an initial public offering or continuing as a private company. The values of the share classes under an initial public offering scenario were based on the expected pricing and timing of the anticipated event according to the PWERM. Conversely, the OPM was used to estimate the value of the share classes assuming we stayed private.

The PWERM estimates the value of the various equity classes based upon analysis of the future value for the enterprise under different potential outcomes including sale, merger, IPO, and dissolution. For each scenario, the value determined for the enterprise is allocated to each class of stock based upon the assumption that each class will maximize its value. The values determined for each class of stock under each scenario are weighted by the probability of each scenario and then discounted to a present value.

The OPM treats common stock and redeemable convertible preferred stock as call options on the enterprise's value, with exercise prices based on the liquidation preference of the redeemable convertible preferred stock. Under this method, the common stock has value only if the funds available for distribution exceed the value of liquidation preference at the time of a liquidity event. If the total equity value exceeds the total liquidation preference of the redeemable convertible preferred stock, the common stock will be worth one dollar for each dollar of the total equity value in excess of the total liquidation preference up to the point that the redeemable convertible preferred equity owners will convert their preferred ownership to common ownership. Any incremental value beyond that point would be shared based on the converted ownership interests. In the application of this method, the convertible features of the preferred equity classes, common options and warrants outstanding are considered.

After the equity value is determined and allocated to the various classes of shares, a discount for lack of marketability (DLOM) is applied to the various outcomes to arrive at the fair value of the common stock. A DLOM is applied based on the theory that as a private company, an owner of the stock has limited opportunities to sell this stock and any such sale would involve significant transaction costs, thereby reducing overall fair market value.

Application of these valuation approaches involves the use of estimates, judgment, and assumptions that are highly complex and subjective, such as those regarding our expected future revenue, expenses and future cash flows, discount rates, market multiples, the selection of comparable companies, and the probability of possible future events. Changes in any or all of these estimates and assumptions or the relationships between those assumptions impact our valuations as of each valuation date and may have a material impact on the valuation of our common stock.

Following this offering, we will rely on the closing price of our common stock as reported on the date of grant to determine the fair value of our common stock, as shares of our common stock will be traded in the public market.

Based on the assumed initial public offering price per share of $, which is the midpoint of the offering price range set forth on the cover page of this prospectus, the aggregate intrinsic value of our outstanding stock options as of March 31, 2019 was $ million, with $ million related to vested stock options.

JOBS Act Accounting Election

We are an emerging growth company, as defined in the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards, and therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Recent Accounting Pronouncements

See "Description of Business and Summary of Significant Accounting Policies" in note 1 to our audited consolidated financial statements for more information.

Business

Overview

We are a leading provider of data and analytics technology and services to healthcare organizations. Our Solution comprises a cloud-based data platform, analytics software, and professional services expertise. Our customers, which are primarily healthcare providers, use our Solution to manage their data, derive analytical insights to operate their organization, and produce measurable clinical, financial, and operational improvements. We envision a future where all healthcare decisions are data informed.

The Health Catalyst Way

Our Mission

Our mission is to be the catalyst for massive, measurable, data-informed healthcare improvement. We fulfill our mission through a confluence of the following elements:

- Data Platform: integrate data in a flexible, open, and scalable platform to power healthcare's digital transformation;
- Analytics Applications: deliver insights on how to measurably improve through the use of analytics applications;
- Services Expertise: enable data-informed improvement by providing analytical, clinical, financial, and operational experts; and
- Engagement: attract, develop, and retain world-class team members by being a best place to work.

The Health Catalyst Flywheel

We accomplish our mission with each of our customers by following a process we call the Health Catalyst Flywheel or the Flywheel. This process includes delivering on the three components of our Solution: data platform, analytics applications, and services expertise, which together drive measurable improvements. At the center of the Flywheel is the engagement of our team members. Team member engagement is foundational to everything we do and is the #1 priority of our CEO and broader leadership team. When team members feel connected to our mission and are listened to, cared for, and respected at an extraordinary level, they produce outstanding work, which enables our customers to measurably improve. As customers realize improvements, their trust in Health Catalyst builds, their engagement in our shared work increases, and they choose to renew and expand their relationship with us, while also referring Health Catalyst to key decision-makers at other potential customers. Customer renewal, expansion, and referral produce growing, scalable, and predictable financial performance.

The virtuous cycle described above creates momentum for our business and is encapsulated in the following diagram:

Given the central importance of team member engagement to our company's long-term success, we have been purposeful in defining and emphasizing operating principles and cultural attributes that reinforce the commitment to our mission and to team member engagement. We consistently focus on our operating principles and cultural attributes, as well as our mission and Flywheel (collectively, the Health Catalyst Way), which we review in all new hire orientations, company-wide meetings, and board of directors' meetings. Furthermore, we regularly measure our team member engagement and adjust our practices based on team member feedback. We have demonstrated an elite, consistent level of team member engagement over time as demonstrated by a 95th to 99th percentile ranking by Gallup.

We will continue to emphasize the Health Catalyst Way, including our operating principles and cultural attributes, which we believe will be central to our long-term success.

Our Operating Principles

The principles that govern our daily interactions include:

Improvement

- We are deeply committed to enabling our customers to achieve and sustain measurable clinical, financial, and operational improvements
- We nurture deep, long-term customer partnerships because achieving and sustaining improvement is a transformational journey (not a quick trip)
- We pragmatically balance the vision, priority, and pace of innovation for data and analytics technology. We prioritize innovations that accelerate improvement
- We attract, develop and retain experts who know best practices in their domain, leverage analytics for insight, and accelerate adoption for sustained improvement

Ownership

- We are accountable, as owners, to enable our customers' measurable improvements
- We make decisions that balance and optimize the interests of our teammates, customers, patients, and owners

- We avoid an entitlement mentality and are good stewards of our assets

- We don’t micro-manage and we encourage autonomy while also supporting scalable consistency

Respect

- We recognize the immeasurable value of every individual

- We listen carefully to one another and learn from each of our colleagues

- We care deeply about our colleagues, including teammates, customers, patients, and owners

- We benefit from one another’s diverse backgrounds and experiences

Transparency

- We courageously tell the truth and we face the truth

- We are the same company, culture, and people in all settings

- We treat confidential information appropriately, and we protect the private data of our customers’ patients

- We recommend the best solutions for our customers, whether or not those solutions come from Health Catalyst

Our Cultural Attributes

The attributes we prioritize in hiring, retention, and promotion include:

Continuous Learner

- I can learn from anyone

- I love to learn, and I am a lifelong student

- I recognize my mistakes and correct them quickly; I fail fast

- I am open to and respond favorably to feedback and coaching

- I value my autonomy and use it to gain new knowledge and skills

- I recognize that diversity of perspectives leads to better decisions

- I am self-aware and seek improvement, personally and professionally

- I watch, listen, and learn from others; thank them for their teachings; and apply the teachings to the mastery of my profession

Hard Working

- I have a deep commitment to massive healthcare improvement

- I stick to the task until the job is completed, then take on new work

- I lead a balanced, healthy life that enables me to sustain my pace

- I am willing to contribute more than my fair share to a project

- I make personal sacrifices, as needed, to get the work done

- I recognize that not every part of my job will be fun

Humble

- I listen first

- I assume positive intent
- I ask for help when I need it
- I serve others without looking for recognition
- I am secure in my own abilities (quiet self-confidence)
- I seek to improve myself before trying to improve others
- I am excited when others succeed and I offer sincere praise
- I often acknowledge others for their contributions to my success
- I frequently express gratitude and appreciation to those around me

World-Class

- I strive to be the best in the world at what I do by continuously learning
- I recognize the importance of excellence in pursuit of our mission
- I am well informed about events and trends in healthcare, data, and analytics
- I actively contribute to the company's pursuit of excellence - in the data and analytics technology we build, in the domain expertise we provide, and in the functions that support this important work

Business Overview

Healthcare organizations operate in an environment that is characterized by waste, changing economics, and data complexity. Organizations that leverage analytics to make data-informed decisions will be better positioned to succeed in this environment. Our customers, which are primarily healthcare providers, use our Solution to manage their data, derive analytical insights to operate their organization, and produce measurable clinical, financial, and operational improvements.

The core elements of our Solution include:

- Data platform. DOS is a healthcare-specific, cloud-based, open, flexible, and scalable data platform that provides customers a single comprehensive environment to integrate and organize data from their disparate software systems. It has been built with modern technology and is deeply embedded with healthcare domain knowledge, enabling a broad range of analytics. DOS has amassed one of the largest and most comprehensive data assets of its kind, which enables us to deliver differentiated insights to our customers.
- Analytics applications. Our software analytics applications build on top of our data platform and are designed to analyze the most common problems our customers face. These analytics applications allow our customers to pinpoint opportunities for measurable improvement across their entire enterprise and are employed by a broad range of users from healthcare executives to front-line clinicians providing care. We developed this suite of foundational and domain-specific software analytics applications over the last three years based on thoughtful measurement of the most critical analytics needs faced by our customers. The majority of them became generally available for deployment in 2018, with more to be released in the coming years. Our software analytics applications are further enhanced by a broad range of analytics accelerators, which are pre-built, configurable data models with customizable visualizations that can be tailored to specific customer needs.
- Services expertise. Our world-class team consists of both analytics experts, such as data analysts, data engineers, and data scientists, and domain experts, such as healthcare administrators, physicians, and nurses. These team members leverage our technology to help our customers shorten time-to-value and achieve sustainable measurable improvements. Examples of the services expertise we provide include opportunity analysis and prioritization, data governance, data modeling and analysis, quality and process improvement strategy, and population health strategies. Our approach to integrate data, analytics, and expertise into a holistic Solution is differentiated and has been recognized as among the best in the industry by multiple third parties, including KLAS, Chilmark Research, and Black Book. Our customers achieve sustainable measurable improvements through our Solution. Example improvements include:
- Allina Health generated savings of up to $125 million in a given year using our Solution across numerous clinical, financial, and operational improvement projects. In one example improvement, Allina Health utilized our Solution to drive higher adherence to sepsis treatment best practices, achieving over $1 million of cost savings and over 30% reduction in severe sepsis and septic shock mortality.
- UPMC utilized our Solution to more deeply understand their cost and clinical variation, realizing $38 million in clinical, financial and operational improvements over a multiyear period. The improvements spanned across its service lines, including $15 million in supply, drug, and pharmaceutical reductions from interventions such as order set standardization and protocol development.
- Mission Health became recognized as one of the best ACOs in the nation by utilizing our Solution to improve processes in order to optimize performance against its ACO's MSSP measures, saving Medicare over $11 million and achieving 100% of all at-risk dollars.
- Thibodaux Regional Medical Center (Thibodaux) leveraged our Solution to improve its discharged-not-final-billed problem, where bills remain incomplete due to coding or documentation gaps, to reduce accounts receivable days by 28%. Thibodaux achieved $1 million in additional annual reimbursement, attributable to improvements in the accuracy of clinical documentation and case mix index.

- Partners HealthCare utilized our Solution to identify patients at high-risk to enroll in the Integrated Care Management Program, reducing costs by $125 per member per month and simultaneously reducing emergency department utilization for these patients.

Since 2015, we have generated more than 650 documented, customer-verified improvements across clinical, financial, and operational domains. In addition to the positive ROI of customers utilizing our Solution versus a homegrown solution, each of these documented improvements is highly valuable to our customers, enabling them to realize substantial clinical improvements, financial savings, or operational efficiencies. As we deliver measurable improvements, trust builds, and our customers engage with us more broadly and refer new business. This is evidenced by a continued increase in documented improvements achieved by our customers over time. Customers who have recently contracted with us have already started achieving measurable improvements, while longer-standing customers have seen the number of annual improvements meaningfully grow. For the 12 months ended March 31, 2019, customers who contracted with us in 2017 and 2018 experienced approximately one improvement on average, customers who contracted with us in 2015 and 2016 experienced approximately six improvements on average, and customers who contracted with us prior to 2015 experienced more than 15 improvements on average.

We serve the majority of our customers through a subscription-based contract model. As of December 31, 2018, we served 126 customers, including 50 customers with a DOS subscription contract. The majority of our customers not on a DOS subscription contract are interoperability subscription customers resulting from our recent acquisition of Medicity. We have achieved rapid DOS Subscription customer growth in part due to strong customer retention and customer referrals. We have achieved Dollar-based Retention Rates of 108% and 107% for the years ended December 31, 2017 and 2018, respectively. As of May 2019, our last 12 months average KLAS Evangelism score, similar to a net promoter score, for our Solution was 62, which is twice the industry average of 30. Our customers include academic medical centers, integrated delivery networks, community hospitals, large physician practices, ACOs, health information exchanges, health insurers, and other risk-bearing entities. Example customers include Acuitas Health, Allina Health, AlohaCare, Children's Hospital of Orange County, Community Health Network, Partners HealthCare, UnityPoint Health, and UPMC.

We currently employ more than 700 team members including over 200 analytics experts and over 65 domain experts. For the years ended December 31, 2017 and 2018, and the three months ended March 31, 2018 and 2019, our total revenue was $73.1 million, $112.6 million, $20.6 million, and $35.2 million, respectively. For the years ended December 31, 2017 and 2018, and the three months ended March 31, 2018 and 2019, we incurred net losses of $47.0 million, $62.0 million, $12.2 million, and $13.7 million, respectively. For the years ended December 31, 2017 and 2018, and the three months ended March 31, 2018 and 2019, our Adjusted EBITDA was $(35.4) million, $(38.1) million, $(9.3) million, and $(6.7) million, respectively. See “Selected Consolidated Financial and Other Data - Reconciliation of Non-GAAP Financial Measures” for more information about Adjusted EBITDA, including the limitations of such measure and a reconciliation to the most directly comparable measure calculated in accordance with GAAP.

Industry Overview

A number of important industry challenges and market dynamics are transforming the way data and analytics are used by healthcare organizations. We believe the current confluence of healthcare waste, changing economics, and data complexity create a unique opportunity for meaningful clinical, financial, and operational improvements in healthcare.

Unprecedented waste amidst unsustainably high and rising healthcare costs

Research cited by the National Academy of Medicine estimates 30% of U.S. healthcare spending is wasteful in nature, implying more than $1 trillion of waste amongst $3.6 trillion of total healthcare expenditure in 2018. For the healthcare system to operate more sustainably and thrive in the long term, constituents must be data informed to remove excess utilization, unnecessary variation, and inefficiency:

- Utilization. Includes delivery of care not proven to be medically beneficial, care delivered in absence of complete information, and where delivery of care could have been prevented through earlier, cost-efficient interventions.

- Variation. Exists clinically and financially within an individual provider, between providers within health systems, and across geographies. Includes delivery of care that deviates from clinical protocols and accepted industry standards as well as avoidable patient injuries, such as serious safety events and wrongful deaths.

- Inefficiency. Includes administrative inefficiencies, such as manual reporting methods and regulatory reporting burdens as well as resource and supply chain inefficiencies.

Changing economics due to financial pressure and the move to value-based care

Over the past several years, public- and private-sector payors have reduced fee-for-service reimbursement rates, increasing pressure on healthcare providers’ profitability. At the same time, providers are experiencing a shift from volume to value-based payment models, impacting reimbursement. Increasing margin pressure coupled with the move to value-based care models present economic complexity and uncertainty for healthcare providers that can be better managed through the use of data and analytics.

Proliferation and increasing complexity of data

For more than a decade, the U.S. healthcare system has invested billions of dollars to collect vast amounts of detailed information in digital format. Examples of major areas of this investment include electronic transactional systems that digitize clinical information (e.g., EHR systems, pharmacy, laboratory, imaging, patient satisfaction, and healthcare information exchanges), financial information (e.g., general ledger, costing and billing) and operational information (e.g., supply chain, human resources, time and attendance, IT support, and patient engagement). These investments have led to a proliferation of healthcare data which, according to International Data Corporation, is expected to exceed 10 zettabytes by 2025, and will include socioeconomic, genomic, and remote patient monitoring information.

Collecting, storing, and using healthcare data is complicated by the breadth and depth of disparate sources, the multitude of formats, and increasing regulatory requirements. At the same time, treatment protocols and definitions of illnesses are constantly evolving. Legacy clinical software and industry-agnostic horizontal data vendors have attempted to enter the healthcare data space, but have been unsuccessful due to the healthcare-specific content, logic, and advanced analytics capabilities required. In addition, many healthcare organizations have attempted to develop their own analytics solutions but have found them to be too costly to develop and maintain. They have also looked to traditional EHR vendors; however, these vendors lack the capabilities needed to compile and derive analytics insights from the vast number of available data sources in a flexible manner that drives time-to-value.

After decades of investing in EHR technology, the state of interoperability is insufficient and inhibits care coordination, health data exchange, clinical efficiency, and the quality of care provided to patients. Given that the EHR is the principal electronic interface used today at the point of care, the path to improved data-driven decision support will require integration between EHR systems and other data and analytics providers. Incidentally, the U.S. healthcare system is in the midst of an “open data wave,” with increasing focus and demand for patient data interoperability. Additionally, recent laws and regulations, such as the 21st Century Cures Act, promote and prioritize interoperability and free exchange of health information.

Problems Our Customers Face

As the U.S. healthcare system continues to evolve due to the aforementioned waste, changing economics and data complexity, healthcare organizations must undergo fundamental transformations to stay relevant and competitive. To meaningfully change and improve, we believe healthcare organizations must solve key problems related to data, analytics, and expertise, which most have not solved today.

Problems Related to Data, Analytics, and Expertise

Data	■ Harmonizing disparate and siloed data into a "single source of truth" ■ Ingesting large quantities of structured and unstructured data ■ Building and maintaining healthcare registries, measures, and data models ■ Operationalizing machine learning models and natural language processing queries ■ Realizing value in a timely, scalable, and cost efficient manner
Analytics	■ Identifying the highest value and most impactful improvement opportunities ■ Producing meaningful insights from using only industry-agnostic analytics tools ■ Leveraging analytical insights generated across the healthcare industry
Expertise	■ Conducting sophisticated analytics, including opportunity prioritization, quality and process improvement, and data modeling ■ Recruiting and retaining top talent, including data analysts and scientists, and clinical, financial, and operational subject-matter experts ■ Leveraging industry best practices and expertise developed from numerous domain- specific engagements

Only after healthcare organizations have resolved their data, analytics, and expertise challenges, can they focus on addressing key clinical, financial, and operational problems that are critical to realizing improvements. We believe our Solution enables our customers to solve these problems.

Key Clinical, Financial, and Operational Problems

Clinical	Financial	Operational
■ Maintaining consistency in quality and quantity of care ■ Optimizing clinical success and patient safety metrics ■ Identifying high-risk, high-cost patients to enhance care management	■ Measuring true cost of care from current cost accounting methods ■ Comprehending population-level cost and quality of care to engage in value-based care risk models ■ Understanding and improving revenue cycle and cash collection processes	■ Monitoring, prioritizing, and submitting complex and evolving metrics to regulatory agencies ■ Creating automated, real-time reporting methods ■ Streamlining supply chain processes and optimizing costs ■ Implementing efficient staffing models to optimize labor costs

Our Opportunity

We believe the market opportunity for our Solution is large and rapidly growing with strong tailwinds. We estimate the addressable market for our data platform to be approximately $2 billion, our analytics applications portfolio to be approximately $3 billion, and our professional services offerings to be approximately $3 billion, which total an approximately $8 billion addressable market. We calculate our market opportunity from the number of health systems and risk-bearing entities that can benefit from our Solution using market pricing. We estimate our core market to include more than 1,200 U.S. health systems and risk-bearing entities. We intend to grow our addressable market through new product offerings, international expansion, market adjacencies such as life sciences, and growth of relationships with risk-bearing entities.

Our Strengths

Our operational and financial success is based on the following key strengths:

Healthcare-specific, flexible, open, and scalable data platform. DOS was purpose-built to handle healthcare-specific data management and analytics use cases, including the ingestion of disparate healthcare data sources. By linking healthcare-specific vocabularies and rules with a flexible and adaptable framework, we enable faster and more repeatable analytics. As an open platform, we support the development of analytics and applications on top of DOS, which accelerates the adoption and integration of our platform by our customers. The majority of analytics that are run on top of DOS are client-generated as opposed to outputs of our applications. The scalable, cloud-based infrastructure enables quicker product iteration and deployment.

Expansive and growing data asset. DOS contains one of the largest and most comprehensive data assets of its kind with more than 100 million patient records, encompassing trillions of facts. We source data from more than 300 siloed sources including clinical, claims, financial, patient satisfaction, and administrative data domains. The extensiveness and richness of the data asset is a strong and distinct competitive advantage and enables us to deliver differentiated products and services to our customers.

Integrated and comprehensive nature of our Solution creates measurable improvements. Through the delivery of our comprehensive and integrated Solution of data, analytics, and services expertise, we enable measurable improvements for our customers. Since 2015, our Solution has generated more than 650 documented, customer-verified improvements across clinical, financial, and operational domains. Over this period, total improvements have grown at a 92% CAGR while the number of annual improvements per customer has increased meaningfully as customers renew and expand the use of our Solution.

Attractive operating model. We have an attractive operating model due to the recurring nature of our revenue and the scalability of our data platform and analytics applications. Our recurring revenue subscription model provides a high degree of revenue visibility. The open and flexible nature of DOS makes it highly scalable, which allows us to deliver additional applications on top of DOS with limited incremental costs. We expect the benefits of our operating model and cost structure to generate operating leverage in our business.

Unique and differentiated culture focused on team member engagement. Our leadership team's commitment to the team member is central to our long-term success. Our commitment to building and maintaining a culture where team members are highly engaged in our mission directly benefits not only team members, but also customers and other stakeholders.

The team member experience is the #1 priority of our CEO and other members of our leadership team. On a daily basis, our leadership focuses on the team member experience, by listening carefully to team member feedback and making changes based on this feedback, by erring in favor of the team member, and by working as an advocate for each team member. This focus enables team members to become highly engaged in fulfilling our mission to be the catalyst for massive, measurable, data-informed improvement in healthcare.

This deep team member engagement in our mission leads team members to build world-class data and analytics technology and to provide industry-leading expertise. The care that the leadership team shows to team members becomes the same care that team members show to our customers, and through this care and commitment, our customers experience accelerating and measurable improvement, which leads them to renew, expand, and refer.

By focusing on the team member experience, our customers realize greater improvements, which leads to a high-growth, predictable business model.

Recognized industry leader by multiple third parties. The strength of our Solution has been recognized by multiple third-parties as among the best in the industry. These include KLAS Overall Customer Satisfaction Scores that are frequently among the highest in the peer group, as well as Chilmark Research and Black Book. We recognized early on that healthcare organizations need purpose-built technology products and services to support data-driven insights, and have spent more than a decade building and commercializing our healthcare-specific Solution. We invested meaningful time and resources over the last decade to build a comprehensive and differentiated set of products and services for our customers, which is not easily replicated by other healthcare and/or technology companies. Our customers benefit from our technology innovation and expertise which allows them to avoid the significant time, financial resources, and technical proficiency they would need to invest to build related capabilities in-house. Similarly, the overall complexity and dynamic nature of healthcare require purpose-built products and services to address the challenges our customers face, preventing traditional technology companies from easily leveraging and deploying existing platforms.

Tenured management team with healthcare technology experience. Health Catalyst is led by a team of healthcare and data veterans with many years of combined experience leading digital transformation at health systems, such as Intermountain Healthcare and Northwestern University. Our founders and executives collaborated for nearly a decade to pioneer and develop a new data warehousing architecture that resolves many of the problems encountered using traditional data warehousing methodologies. The unique combination of talent and experience across healthcare and technology, as well as our management team's commitment to the Health Catalyst Way, underpin everything we do.

Our Growth Strategies

Our growth strategies reflect our mission to be the catalyst for massive, measurable, data-informed healthcare improvement. Our focus on multiple channels, as well as our collaborative company culture, results in high levels of sustainable growth. Our strategic levers to drive growth include:

- Grow our overall customer base. We have substantial opportunity to continue growing our customer base through our active sales and marketing strategy and significant word-of-mouth references. We currently estimate our total core addressable market to include more than 1,200 healthcare organizations, including

health systems and risk-bearing entities. As of December 31, 2018, we served 126 of these potential customers, and only 50 on a DOS subscription contract, yielding total DOS Subscription Customer market penetration of approximately 4%. We believe there is ample room to win new business and deepen market penetration in our core market. Further, healthcare providers outside of the United States face similar challenges to those in the United States and can implement our Solution to address them. We plan to opportunistically pursue international markets by expanding our business in the United Kingdom, Canada, and Southeast Asia.

- Expand within our current customer base. We intend to deepen and expand the relationships we have with our existing customer base. Our relationship with a new customer oftentimes starts through the use of targeted analytics applications and services to pinpoint and achieve a single measurable clinical, financial, or operational improvement. As we deliver measurable improvements, trust builds, and our customers engage with us more broadly and purchase additional applications and services. This is evidenced by a continued increase in documented improvements achieved by our customers over time. Recent customers have already started achieving measurable improvements, while customers who began working with us in 2015 and 2016 on average experienced 6 improvements over the 12 months ended March 31, 2019, and customers who began working with us before 2015 on average experienced more than 15 improvements over the 12 months ended March 31, 2019. We will continue to invest in helping customers identify additional uses for our Solution, ensuring they achieve measurable improvements throughout our relationship with them.

- Add new analytics applications and services offerings. The expansion of our Solution and enhancement of our applications library will accelerate as we deepen our customer relationships and add to our dataset. Because our platform is open and we partner with our customers, we are able to identify new opportunities for further improvements and leverage that insight with other customers across our core market to develop new analytics applications and services offerings. We have used this process to build eight new software applications over the past three years, including our benchmarking and patient safety applications suites in 2018, and we will continue to invest in product development, particularly at the analytics applications layer of our technology stack.

- Grow our addressable market through additional healthcare business segment adjacencies. We believe there are significant applications for our Solution outside of our core market, as evidenced by our recent expansion into the life sciences market. Other business segment adjacencies include serving the employer space and additional types of providers and risk-bearing entities. While we believe there are significant opportunities in our core market, these business segment agencies have the potential to significantly grow our addressable market and business.

- Selectively pursue acquisitions and partnerships. We plan to continue identifying and evaluating opportunities where we can leverage our platform to scale and consolidate both data assets and best-of-breed applications. We believe that competing point solutions vendors will have difficulty in growing their offerings into sustainable businesses, which we believe translates into a robust mergers and acquisitions pipeline for us. We have a track record of identifying and integrating new and complementary capabilities, including our acquisitions of Healthcare Data Works and Medicity. Moreover, we believe the companies we partner with and acquire choose us because of our collaborative, best-in-class culture which we view as a differentiating factor in sourcing acquisitions and partnerships.

Our Solution

Our Solution empowers our customers to run a data-informed business. Our healthcare-specific, open, flexible, and scalable data platform, advanced analytics applications, and services expertise guide our customers to greater levels of digital maturity, enabling clinical, financial, and operational improvements. The diagram below illustrates the three layers of our comprehensive Solution.

Data Platform – the Data Operating System (DOS)

DOS is a healthcare-specific, open, flexible, and scalable data platform that allows customers to integrate and organize their disparate data sources to enable analytics. It serves as a digital backbone, allowing customers to easily extract data from transactional source systems, combine disparate data sets into a unified source of truth and query the dataset directly. DOS is a cloud-based technology that we primarily provide through Microsoft Azure and through our private data center. In order to enable more advanced feature development and functionality, we are in process of migrating our customers hosted in our private data center, and a few remaining on-premise customers, to Microsoft Azure.

DOS was uniquely designed and purpose-built to handle the complex, ever-evolving nature of healthcare-specific data. This includes healthcare-specific terminology, data governance, and meta-data management. By creating healthcare-specific data models to organize industry-specific data, we enable faster and more repeatable analytics and insights. We have developed the capabilities to turn these insights into actions by connecting our analytics into the workflow systems, such as an EHR.

Differentiating attributes of our DOS include:

- Data warehouse. We believe our innovative late-binding architecture has a proven track record of agility and adaptability to new rules, vocabularies, and data content. Our open and flexible platform enables database-level querying and custom analytics use-cases.

- Source connectors. Our platform is designed to quickly ingest data from the numerous information systems and siloed data sources our customers possess. We have more than 300 prebuilt connectors to the most common

transactional software systems used by healthcare organizations. The DOS data management console enables customers to manage robust ETL processes and scheduling.

- Cloud-based. Modern cloud-based architecture is secure and scalable. Being cloud-based enables quicker product iteration and innovation.

- Reusable data logic. Registries, value sets, and other data logic sit on top of the raw data and can be accessed, reused, and updated through open APIs, enabling customer and third-party application development. We update hundreds of registries, value sets, and measure logic regularly. This reusable, healthcare data content enables customers to achieve analytic value more quickly than leveraging homegrown or cross-industry products and services.

- Machine learning. Embedded within DOS are machine learning algorithms that our customers can easily leverage for predictive analytics. Customers can also build their own machine learning data pipelines within DOS.

- Terminology services. By standardizing the complex language used to code entries in various health records and clinical systems, DOS facilitates decision support, consistent reporting, and analytics and interoperability.

- Closed-loop EHR integration. Bridges the gap between insight and action by reducing data lag, interjecting knowledge at the point of decision-making, including back into the workflow of source systems, such as an EHR.

- Text processing. Enables the extraction of additional data currently trapped in various unstructured text blocks. The ability to gather insight from clinical notes remains an area of untapped healthcare intelligence with tremendous potential.

- Real-time streaming and interoperability. Near or real-time data streaming from the source all the way to the expression of that data through DOS, supporting both transaction-level exchange of data and analytic processing.

- Big data. Ability to access, organize, and analyze massive and unique, structured and unstructured, data sets allows us to drive differentiated analytic insights for our customers.

Analytics Applications

We have thoughtfully developed several scalable analytics applications that allow us to deliver the right data to the right place at the right time. Combining this pioneering technique with our data asset of more than one hundred million patient records, our customers systematically uncover opportunities for actionable interventions. We have organized our analytics applications into two categories: foundational applications and domain-specific applications. In addition, we have created a suite of analytics accelerators, which provide customers with a starting point to leverage for tailored insights.

Foundational Applications

- Registry and Measures Authoring (Population Builder). Enables non-SQL writers like clinicians and administrators to dynamically author, manage, view, and publish pre-built and custom population ruleset definitions using an elegant drag-and-drop interface. Rulesets can be published as a registry, leveraged across the DOS analytics platform and augmented with summary metrics using our tools. These registries can be used for internal quality improvement and research efforts or for reporting to external organizational registries.

- Benchmarking (Touchstone). Uses artificial intelligence to proactively identify where a customer is performing relative to benchmark sets composed of proprietary and publicly-available data; subsequently recommends and prioritizes opportunities for improvement.

- Dashboards and Reporting (Leading Wisely). Enables users to quickly and easily add clinical, financial, and operational measures in an executive dashboard format. Measures are trended over time and updated on a near real-time basis from DOS. Users can customize information, share it with others, and set their own alerts and notifications. As a result, executives and their teams are empowered to take control of the data deluge to plan, prioritize improvement projects, create alignment among groups, strategize the best products and services, and communicate decisions more effectively.

Domain-Specific Applications

- Activity-Based Costing (CORUS). Activity-based costing software application that leverages clinical and operational data from DOS to calculate a true cost of clinical processes and patients on the most granular level. Enables CFOs, physicians, service line leaders, and clinical and financial analysts to understand the true cost of providing care and relate those costs to patient outcomes.

- Patient Safety (Patient Safety Monitor). Trigger-based surveillance system enabled by DOS. This application monitors patient-level data and applies machine learning algorithms to predict whether a patient is currently at risk for a safety event so that clinicians can intervene to prevent harm events.

- Care Management. Patient-centric population health service that utilizes data integration, patient stratification and intake, care coordination, patient engagement, and performance measurement to optimize care delivery for high-risk patients.

- Population Health Foundations. Product suite designed to help health systems manage risk-based contracts and bundled payment models and allow providers to tailor patient care based upon population metrics and benchmarks.

- Quality and Regulatory Measures. Foundational product for integrating hundreds of measures across financial, regulatory, and quality departments and reporting those measures to third-party entities like CMS. Enables proactive measures surveillance to enhance outcomes and facilitates monitoring behaviors, interventions, and activities needed to influence, manage, or change outcomes.

Analytics Accelerators

- To further enhance our analytics applications we have also developed a library of analytics accelerators. Analytics accelerators are pre-built data models and customizable visualizations that leverage the broad set of integrated data stored within our DOS platform for a specific analytic use-case. Customers who utilize our analytics accelerators achieve a much faster time-to-value compared to building an analytic model from the ground up. Our customers frequently rely on our analytics expertise to customize our analytics accelerators, as well as our domain expertise in order to successfully leverage our analytics accelerators to drive data-informed improvement. The breadth of our analytics accelerators facilitates analytic insights across clinical, financial, and operational use-cases. Our suite of more than 30 analytics accelerators provides highly-specific clinical, financial, and operational insights. Examples of these accelerators include:

- Clinical: Sepsis, Readmissions, Heart Failure, Joint Replacement, CLABSI, and COPD;

- Financial: Payment Model Analyzer, Financial Management, Revenue Cycle, and Hierarchical Condition Categories; and

- Operational: Supply Chain, Patient Flow, Surgical Services, Labor Management, and Practice Management.

Services Expertise

We provide a range of high-value add professional services to help our customers implement and maximize the value of our Solution. Our professional services experts combine industry-leading talent across multiple domain areas with a deep working knowledge of our technology to help our customers achieve a faster time-to-value and drive more meaningful and sustainable measurable improvements. Our team is comprised of over 200 analytics experts and over 65 domain experts, including several nationally-recognized healthcare and analytics leaders.

Our domain experts provide services across a range of specialties, including:

Data and Analytics services expertise:

- Data Engineering Services: Help customers ingest data sources and provide consulting around DOS best practice and strategy around leveraging new DOS features.

- Analytic Engineer Services: Partner with clients to generate meaningful insights produced from Health Catalyst technology that lead improvement efforts. Guides best practice and training.

- Implementation Services: Implement and configure analytics applications.

- Data Science Services: Work with client teams to apply scientific methods, processes, algorithms, and systems to ask and answer questions using data. In addition, build software tools to enable self-service capabilities for customers.

- Analytics Strategy Services: Provide agile development workshops, continued data architecture and Extract Transform Load support, documentation and training, measure reporting efficiency, and prioritization and staff augmentation.

- Data Governance Services: Offer advisory services related to leveraging customers' unique, strategic data assets, managing data access and security, and establishing cross-functional governance structures.

Clinical, Financial, and Operational services expertise:

- Quality and Process Improvement Strategy: Organizational readiness assessments and opportunity analysis. Clinical pathways, best practices, and protocol implementation. Lean methodology and clinical variation reduction recommendations.

- Patient Safety Services: Transition from voluntary under-reporting to proactive prevention using data-driven triggers.

- Cost Accounting Services: Expert analysis of fine grain activity-based costing methods and cost-saving improvement opportunities.

- Population Health and Value-Based Care Services: Organizational transformation services to enhance abilities to take on cost risk for patient populations.

- Health Catalyst University - Educational Services: Hands-on courses, programs, and customizable training opportunities to provide our customers with knowledge, practical skills, and take-home tools needed to drive improvement efforts.

Our Customers

Our customers comprise academic medical centers, integrated delivery networks, community hospitals, large physician practices, ACOs, health information exchanges, health insurers, and other risk-bearing entities. Our customers include more than 50 of the largest healthcare organizations in the United States. Today, we help executives, administrators, clinicians, and technicians in hundreds of hospitals and thousands of clinics.

We work closely in collaboration with many key stakeholders including chief executive officers, chief financial officers, chief information officers, chief technology officers, population health teams, and IT teams among others. From our perspective, data and analytics have transitioned from a discussion with members of the IT department to an enterprise-wide, strategic discussion with the C-suite and other leadership members.

No customer represented more than 10% of our total revenue for the year ended December 31, 2018 and for the three months ended March 31, 2018 and 2019. One customer represented 12% of our total revenue for the year ended December 31, 2017. No other customers represented more than 10% of our total revenue for the year ended December 31, 2017.

Certain customers have participated as investors in our prior sales of redeemable convertible preferred stock, including Partners Healthcare and UPMC. As of March 31, 2019, our customers, in the aggregate, own 17.5% of our outstanding common stock on as as-converted basis.

The following table provides a representative list of our customers from whom we generated at least $75,000 of revenue in the year ended December 31, 2018:

Acuitas Health	MedStar Health
Allina Health	Memorial Hospital at Gulfport
AlohaCare	Michigan Medicine
Banner Health	Mission Health
Children's Hospital of Orange County	Ohio Health Information Partnership
Christiana Care Health System	Partners Healthcare
Crystal Run Healthcare	Texas Children's Hospital
Community Health Network	Thibodaux Regional Medical Center
Dartmouth-Hitchcock Medical Center	UnityPoint Health
Hospital Sisters Health System	UPMC
John Muir Health	Westchester Medical Center

Select Customer Case Studies

We have recorded over 650 documented examples of outcomes improvement. The following customer examples exemplify our impact across clinical, financial, and operational domains. Allina Health and UPMC also have other business relationships with us. See "Certain Relationships and Related Party Transactions—Customer Relationships."

Allina Health. Allina Health is a not-for-profit health care system based in Minneapolis, Minnesota. Allina Health owns or operates 13 hospitals and more than 90 clinics throughout Minnesota and western Wisconsin.

The Health Catalyst Flywheel Begin, Renew, Expand, Refer: Our collaboration with Allina Health is virtually unprecedented in healthcare. In 2008, Allina became our first customer. In 2014, we signed an agreement for up to $100 million under which Allina Health outsourced its data warehousing, analytics and performance improvement technology, content, and personnel to Health Catalyst to accelerate the health system's digital transformation. As part of our collaboration with Allina, approximately 50 Allina team members became Health Catalyst team members working onsite at Allina.

Over the course of our long-standing relationship with Allina Health, we have partnered to identify and realize measurable improvements across the organization, resulting in annual savings of up to $125 million in a given year. One area of collaborative focus over the last several years has been patient safety performance improvement.

Data: The DOS platform integrates and organizes over 50 sources of Allina Health's data that are necessary to better understand patient safety issues across the organization. Additionally, the machine learning and text processing capabilities of DOS underlie multiple patient safety analytics use cases.

Analytics: Allina Health utilizes a number of our analytics applications to provide insights into its patient safety performance and identify opportunities for improvement. Such applications include the Patient Safety Monitor™ Suite, along with the Sepsis Prevention and Enhanced Recover Program analytics accelerators.

Expertise: Our analytics and quality experts leverage our technology to identify opportunities for focused improvement in the patient safety space. Following identification, our process improvement experts work with the Allina Health teams to target and realize measurable improvements across multiple patient safety focus areas.

Measurable Improvement Occurs: We have partnered with Allina Health to drive the following clinical, financial, and operational patient safety improvements:

Clinical and Financial

- Over $1 million in sepsis cost savings;
- 30% reduction in severe sepsis/septic shock mortality rate;
- Approximately 2 million fewer opioids prescribed in 2017 vs. 2016, an 8% reduction; and
- 78% reduction in elective colorectal surgical site infections.

Operational

- 18% reduction in length of stay (LOS) for patients with severe sepsis and septic shock;
- 19% reduction in system-wide LOS for elective colorectal surgery; and
- 216 more cases of pressure injuries (PIs) identified by trigger tool than by voluntary reporting.

Engagement: Our highly engaged, world-class team members have enabled our partnership with Allina Health to grow and succeed for over a decade.

UPMC. UPMC, an academic medical center affiliated with the University of Pittsburgh, is a large integrated healthcare delivery system with 40 hospitals, as well as a robust network of clinics, cancer centers, outpatient centers, and a large network of employed and affiliated providers.

The Health Catalyst Flywheel Begin, Renew, Expand, Refer: UPMC recognized that (i) existing industry cost accounting methods did not provide enough granularity to understand the true cost of care they were delivering and (ii) understanding population-level cost and quality of care is essential to engage in VBC risk contracts. In this context, UPMC and Health Catalyst formed a strategic partnership in 2016 to co-develop and commercialize the CORUS activity-based costing application, with UPMC becoming an investor in Health Catalyst. Over the last three years, the scope of our partnership has expanded.

Data: DOS provides the foundational platform to extract, integrate and organize the requisite data from transactional source systems needed to undertake activity-based costing.

Analytics: Leveraging DOS, UPMC employs our CORUS activity-based costing application. The CORUS application provides insights into the (i) true cost of patient care to drive decisions and (ii) support for service line reporting relating cost to patient outcomes.

Expertise: We augmented UPMC's best practices and content with technology commercialization expertise and nationally recognized domain experts to co-develop the CORUS activity-based costing application. Our domain experts work with the UPMC teams to leverage our technology to more deeply understand their cost and clinical variation. Example expert services provided include order set standardization and protocol development, as well as clinical pathways implementation to reduce variation.

Measurable Improvement Occurs: Since 2016, we have partnered with UPMC to drive the following clinical, financial, and operational cost accounting-related improvements:

Clinical and Financial

- $38 million in improvements, including:
- $15 million in supply, drug, and pharmaceutical reduction initiatives;
- $13 million through reduction of under-utilized clinical space; and
- $5 million through restructure of OB programs.

Operational

- 3-day reduction in time to close – executives receive financial data up to 3 days sooner;
- Up to 97% improvement in time to access service line performance information; and
- 50% reduction in FTEs required for interdepartmental cost management integration.

Engagement: Our highly engaged, world-class team members have enabled our partnership with UPMC to grow and succeed for over three years. Our UPMC professional services team includes team members who transitioned from UPMC to Health Catalyst team members and remain working onsite at UPMC.

Memorial Health at Gulfport. Memorial Health at Gulfport (Memorial) is one of the most comprehensive healthcare systems in Mississippi and includes a 303-bed acute care hospital handling over 17,000 patient discharges annually.

The Health Catalyst Flywheel Begin, Renew, Expand, Refer: Faced with declining revenue related to changes in Medicare and Medicaid reimbursements, Memorial recognized additional methods of providing more efficient and cost-effective quality care were needed to maintain long-term success. Memorial partnered with Health Catalyst to establish a systematic, data-driven approach to reduce its Length of Stay (LOS) in an effort to lower costs and risk for patients. Reducing LOS improves a health system's clinical outcomes by minimizing the risk of hospital-acquired conditions, while simultaneously improving financial and operational outcomes by decreasing the cost of care for a patient.

Data: Health Catalyst's DOS platform integrates and organizes over 20 of Memorial's different data sources, many of which are necessary to understand in order to improve LOS.

Analytics: Memorial understood the importance of analytics in accomplishing its objectives. Needing insight into its performance and processes, Memorial leveraged our analytics to better recognize, understand, and eliminate non-value-added activities. These analytics enabled Memorial to track and monitor progress on its LOS initiatives, including the improvement of its weekend discharge process, and the active monitoring of readmission rates to attempt to ensure any decreases in LOS did not adversely impact the readmission rate.

Expertise: We provided Memorial with analytics, training, and strategic advisory expertise to help identify and measurably improve results related to LOS. As part of our expert services, a cross-functional team from Memorial participated in the Health Catalyst Accelerated Practices Program, an immersive and experiential program designed to prepare healthcare teams to accelerate outcomes improvement and lead change throughout their organizations.

Measurable Improvement Occurs: We have partnered with Memorial to help drive the following clinical, financial, and operational improvements:

Clinical and Financial

- $2 million in cost savings, the result of decreased LOS and decreased utilization of supplies and medications over one year;
- 0.47-day absolute reduction in LOS, which impacts supplies, medication, and staffing costs; and
- Avoided a 4% Medicare reimbursement adjustment from the Physician Quality Reporting System (PQRS) and the Centers for Medicaid and Medicare Services' Value-Based Payment Modifier (VM) programs by being able to quickly pull together the data needed by the submission deadline that was locked in two separate electronic health records (EHRs).

Operational

- 3% increase in the number of discharges occurring on the weekend over one year.

Engagement: Our highly engaged, world-class team members have enabled our partnership with Memorial to grow and succeed since 2013.

Thibodaux Regional Medical Center. Thibodaux Regional Medical Center (Thibodaux) is a 180-bed community hospital in Louisiana.

The Health Catalyst Flywheel Begin, Renew, Expand, Refer: Faced with declining revenue related to decreasing reimbursement rates, Thibodaux was seeking opportunities to boost revenue through improved reimbursement. Understanding that managing its discharged not final billed (DNFB) cases, where bills remain incomplete due to coding or documentation gaps, was a significant opportunity to improve its financial performance, Thibodaux partnered with Health Catalyst to establish a systematic, data-driven approach to improving these results.

Data: The DOS platform integrates and organizes 20 of Thibodaux's data sources, some of which are necessary to understand and improve DNFB.

Analytics: Thibodaux understood the importance of analytics in accomplishing its objectives. Thibodaux leveraged our analytics to optimize and monitor patterns and trends in its DNFB processes, Accounts Receivable (AR) days, and workflow procedures. In addition, the analysis of accurate coding and documentation led to interventions that improved the accuracy of clinical documentation, ensuring appropriate reimbursement for the level of care provided.

The applications utilized to help identify and enable these insights included:

- Health Information Management (HIM) Documentation Workflow Analyzer: A reporting and analysis tool that helps to quickly uncover issues and opportunities related to clinical documentation and coding.

- Cost Insights: An application that integrates clinical and financial data from multiple sources to help organizations understand and manage the cost of the services they deliver to patients.

Expertise: We provided Thibodaux with analytics and strategic advisory expertise to help identify and measurably improve results related to DNFB. As part of our expertise services, several cross-functional teams from Thibodaux attended the Health Catalyst Accelerated Practices Program, an immersive and experiential program designed to prepare healthcare teams to accelerate outcomes improvement and lead change throughout their organizations.

Measurable Improvement Occurs: We have partnered with Thibodaux to drive the following financial and operational improvements:

Financial and Operational

- $1 million in additional annual reimbursement, attributable to improvements in the accuracy of clinical documentation and case-mix index (CMI);
- 61% relative reduction in DNFB dollars, improving cash flow by $2.4 million dollars; and
- 6.2 day reduction in AR days.

Engagement: Our highly engaged, world-class team members have enabled our partnership with Thibodaux to grow and succeed since 2014.

Team Members and Culture

As of March 31, 2019, we had 728 team members. We believe that we have good relationships with our team members. None of our team members are subject to collective bargaining agreements or are represented by a union.

Our corporate culture is a critical component of our success. We believe that building and maintaining a remarkable culture benefits our customers and team members. Our culture promotes an environment where team members trust each other, strive to continually learn, are motivated to lead hard working yet balanced lives, make decisions with integrity and humility in mind, communicate openly and honestly, embrace teamwork and collaboration, and enjoy their days at work.

Our team members, who uphold our values and live our mission every day, are at the forefront of cultivating and spreading this culture across the healthcare organizations that we serve. This continuous interaction across the entire Health Catalyst community creates a virtuous cycle which further reinforces our culture and fuels our growth.

Our team member satisfaction scores, as measured by Gallup, have consistently ranked in the 95th to 99th percentile and our KLAS Overall Customer Satisfaction Score has regularly outpaced the segment average. Moreover, we have received numerous awards and recognition for our culture and service to our customers. In total, we have been recognized over 40 times as a “best place to work” by Glassdoor, Gallup, Inc., and Modern Healthcare among others. Additionally, we have received multiple awards for customer satisfaction and excellence from KLAS, Chilmark Research, and Black Book. We believe that these honors demonstrate the loyalty of our team members and our customers and that our culture is driving the behaviors that will help fuel our future growth.

Sales and Marketing

We market and sell our services to healthcare organizations primarily in the United States, but opportunistically in other geographies, including Canada, the United Kingdom, and Southeast Asia. Our dedicated sales team identifies healthcare organizations that would benefit from our Solution. Our sales team works closely with our subject matter experts to foster long-term relationships with our customers’ and sales prospects’ leadership teams. In the third quarter of each year, we hold the Healthcare Analytics Summit (HAS), an event showcasing data-informed improvement in healthcare.

Research and Development

Our ability to compete depends in large part on our continuous commitment to research and development and our ability to rapidly introduce new applications, technologies, features, and functionality. Our research and development organization is responsible for the design, development, and testing of our data platform and analytics applications. Based on customer feedback and needs, we focus our efforts on developing new products, functionality, applications, and core technologies and further enhancing the usability, functionality, reliability, performance, and flexibility of our data platform and existing analytics applications.

Research and development expenses were $28.5 million, $38.6 million, $8.7 million, and $10.0 million for our years ended December 31, 2017 and 2018, and for the three months ended March 31, 2018 and 2019, respectively.

Intellectual Property

We rely on a combination of patent, trademark, and copyright laws in the United States as well as confidentiality procedures and contractual provisions to protect our trade secrets, including proprietary technology, databases, and our brand.

As of December 31, 2018, we had eight issued U.S. and three issued Canadian patents, which expire between 2026 and 2032, and six patent applications pending in the United States, one patent application pending at the European Patent Office and one patent application pending in Canada. These patents and patent applications seek to protect proprietary inventions relevant to our business. We intend to pursue additional patent protection to the extent we believe it would be beneficial to our business and cost-effective.

We have registered “Health Catalyst” and our flame design logo as trademarks in the United States and certain other jurisdictions. We also have filed other trademark applications that are meaningful to our business in the United States and certain other jurisdictions and will pursue additional trademark registrations to the extent we believe it would be beneficial and cost-effective.

We are the registered holder of a variety of domain names that include “Health Catalyst” and similar variations.

We maintain our intellectual property and confidential business information in a number of ways. For instance, we have a policy of requiring all employees and consultants to execute confidentiality agreements upon the commencement of an employment or consulting relationship with us. Our employee agreements also require relevant employees to assign to us all rights to any inventions made or conceived during their employment with us in accordance with applicable law. In addition, we have a policy of requiring individuals and entities with which we discuss potential business relationships to sign non-disclosure agreements. Lastly, our agreements with customers include confidentiality and non-disclosure provisions.

Competition

We have experienced, and expect to continue to experience, intense competition from a number of companies. Our primary competitors are industry-agnostic analytics companies, EHR companies, point solution vendors, as well as healthcare organizations who perform their own analytics. Industry-agnostic analytics companies include IBM, Tableau, and Qlik. EHR companies include Cerner Systems and Epic Systems. Point solution companies include Optum Analytics, Premier, Strata Decision Technology, and Intersystems.

The principal competitive factors in our industry include:

- level of customer satisfaction;
- ease of deployment and use of solutions and applications;
- breadth and depth of solution and application functionality;
- access to, and ability to glean insights from, large data sets;
- brand awareness and reputation;
- modern and adaptive technology platform;
- capability for customization, configurability, integration, security, scalability, and reliability of applications;
- total cost of ownership;
- ability to innovate and respond to customer needs rapidly;
- size of customer base and level of user adoption;
- regulatory compliance verification and functionality;
- domain expertise with respect to healthcare; and
- ability to integrate with legacy enterprise infrastructures and third-party applications.

We believe that we compete favorably with our competitors on the basis of these factors. However, many of our competitors and potential competitors have significantly greater financial, technological, and other resources and name recognition than we do and more established distribution networks and relationships with healthcare providers. As a result, many of these companies may respond more quickly to new or emerging technologies and standards and changes in customer requirements. These companies may be able to invest more resources in research and development, strategic acquisitions, sales and marketing, patent prosecution, litigation, and financing capital equipment acquisitions for their customers.

Government Regulation

Our business is subject to extensive, complex, and rapidly changing federal and state laws and regulations. Various federal and state agencies have discretion to issue regulations and interpret and enforce healthcare laws. While we believe we comply in all material respects with applicable healthcare laws and regulations, these regulations can vary significantly from jurisdiction to jurisdiction, and interpretation of existing laws and regulations may change periodically. Federal and state legislatures also may enact various legislative proposals that could materially impact certain aspects of our business. The following are summaries of key federal and state laws and regulations that impact our operations:

Government Regulation of Health Information

Privacy and Security Laws and Regulations. HIPAA contains substantial restrictions and requirements with respect to the use and disclosure of individuals’ PHI. These are embodied in the implementing regulations’ privacy standards (Privacy Rule) and security standards (Security Rule). The Privacy and Security Rules apply directly to covered entities, including certain healthcare providers who engage in HIPAA-defined standard electronic transactions, health plans and healthcare clearinghouses, and business associates who perform certain services involving PHI on their behalf. The HIPAA Privacy Rule prohibits a covered entity or business associate from using or disclosing an individual’s PHI unless the use or disclosure is authorized by the individual or is specifically required or permitted under the Privacy Rule. The Privacy Rule imposes a complex set of requirements on covered entities and business associates to comply with these standards. The Security Rule requires covered entities and business associates to establish administrative, physical and technical

safeguards to protect the confidentiality, integrity, and availability of electronic PHI maintained or transmitted by them or by others on their behalf. In addition, HIPAA regulations in some cases require covered entities and business associates to provide notice in the event of an unauthorized disclosure of PHI.

Since we provide services that require us to use and disclose protected health information on behalf of our covered entity customers, we are also a business associate. The Privacy Rule requires us to enter into business associate agreements with our customers. Such agreements must, among other things, provide adequate written assurances:

- as to how we will use and disclose PHI;
- that we will enter into similar agreements with our agents and subcontractors that have access to the information;
- that we will report security incidents and other inappropriate uses or disclosures of PHI; and
- that we will assist the covered entity with certain of its duties under the Privacy Rule.

In addition, we are also required to maintain BAAs, which contain similar provisions, with our subcontractors that access or otherwise process PHI on our behalf.

State Laws. In addition to the HIPAA Privacy and Security Rules, most states have enacted patient confidentiality laws that protect against the disclosure of confidential medical information, including privacy safeguards, and security standards. Many states have also adopted data security breach notification requirements. Such state laws, if more stringent than HIPAA requirements, are not preempted by the federal requirements, and we must comply with them.

Consumer Protection Laws. Federal and state consumer protection laws are being applied increasingly by the FTC, Federal Communications Commission and states' attorneys general to regulate the collection, use, storage and disclosure of personal or patient information, through websites or otherwise, and to regulate the presentation of website content and to regulate direct marketing, including telemarketing and telephonic communication. Courts may also adopt the standards for fair information practices promulgated by the FTC, which concern consumer notice, choice, security, and access.

Fraud, Waste, and Abuse

A number of federal and state laws, generally referred to as fraud, waste, and abuse laws, are used to prosecute healthcare providers, physicians and others that make, offer, seek, or receive referrals or payments for products or services that may be paid for through any federal or state healthcare program and in some instances any private program. Given the breadth of these laws and regulations, they are potentially applicable to our business and to the financial arrangements through which we market, sell and provide our services. These laws and regulations include:

Anti-kickback and Anti-Self Referral Laws. There are numerous federal and state laws that govern patient referrals, physician financial relationships, and inducements to healthcare providers and patients. The federal Anti-Kickback Statute makes it illegal for any person, including a prescription drug manufacturer (or a party acting on its behalf) to knowingly and willfully solicit, receive, offer, or pay any remuneration (including any kickback, bribe, or rebate), directly or indirectly, overtly or covertly, in cash or in kind, in exchange for, or intended to induce or reward, including arranging for or recommending, either the referral of an individual, or the purchase, lease, order, prescription, or recommendation of any good, facility, item or service for which payment may be made, in whole or in part, under a federal healthcare program, such as the Medicare and Medicaid program. A person or entity does not need to have actual knowledge of the federal Anti-Kickback Statute or specific intent to violate it to have committed a violation. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act (see below) or federal civil money penalties statute. There are several limited statutory exceptions and regulatory exclusions (known as safe harbors) that may protect some arrangements from enforcement penalties. These exceptions and safe harbors have very limited application and must be strictly adhered to in order to obtain protection thereunder. Many states have similar anti-kickback laws, some of which are not limited to items or services for which payment is made by government healthcare programs. In addition, the federal anti-referral law (the Stark Law) is very complex in its application, and prohibits physicians (and certain other healthcare professionals) from making a referral for a designated health service to a provider in which the referring healthcare professional (or spouse or any immediate family member) has a financial or ownership interest, unless an enumerated exception applies. The Stark Law also prohibits the billing for services rendered resulting from an impermissible referral. Many states also have similar anti-referral laws that are not necessarily limited to items or services for which payment is made by a federal healthcare program, and may include patient disclosure requirements.

False Claims Laws. There are numerous federal and state laws that prohibit submission of false information or the failure to disclose information in connection with the submission and payment of physician claims for reimbursement.

- The federal civil and criminal false claims laws and civil monetary penalties laws, such as the federal False Claims Act, impose criminal and civil penalties and authorizes civil whistleblower or qui tam actions, against individuals or entities for, among other things: knowingly presenting, or causing to be presented, to a federal government healthcare program, claims for payment that are false or fraudulent; making, using or causing to be made or used, a false statement or record material to payment of a false or fraudulent claim or obligation to pay or transmit money or property to the federal government; or knowingly concealing or knowingly and improperly avoiding or decreasing an obligation to pay money to the federal government. The government may deem entities to have "caused" the submission of false or fraudulent claims by, for example, providing inaccurate billing or coding information to our customers.

- HIPAA also contains a provision that imposes criminal and civil liability for knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program (including private payors) or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items, or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. Similarly, the federal false statements statute prohibits knowingly and willfully falsifying, concealing, or covering up a material fact or making any materially false statement in connection with the delivery of or payment for healthcare benefits, items, or services.

Violations of federal and state fraud and abuse laws may be punishable by criminal and/or civil sanctions, including significant penalties, fines, disgorgement, additional reporting requirements and oversight under a corporate integrity agreement or similar agreement to resolve allegations of noncompliance with these laws, imprisonment and/or exclusion or suspension from federal and state healthcare programs such as Medicare and Medicaid, and debarment from contracting with the U.S. government. In addition, private individuals have the ability to bring actions on behalf of the U.S. government under the federal False Claims Act as well as under the false claims laws of several states.

Corporate Practice of Medicine Laws

In many states, there are laws that prevent corporations from being licensed as practitioners and that prohibit licensed medical practitioners from practicing medicine in partnership with non-physicians, such as business corporations. Overseeing a care coordination or care management team could be alleged in some cases to involve treatment or diagnosis of patients which requires a clinic license or other state license or permission. Any determination that we are acting in the capacity of a healthcare provider and acting improperly as a healthcare provider, exercising undue influence or control over a healthcare provider or impermissibly sharing fees with a healthcare provider, may result in additional compliance requirements, expense, and liability to us, and require us to change or terminate some portions of our contractual arrangements or business.

Patient Safety Organization Certification and Other Certification Requirements

Our patient safety organization (PSO) is certified by the Agency for Healthcare Research and Quality (AHRQ), an agency of HHS. We must meet certain requirements to maintain this certification. In addition, there may be other federal and state certification requirements which we may be required to meet from time to time in connection with our Solution. We cannot be certain that our Solution will continue to meet these standards. The failure to comply with these certification requirements could result in the loss of certification.

Interoperability Standards. ONC is charged under the 21st Century Cures Act with developing a Trusted Exchange Framework that establishes governance requirements for trusted health information exchange in the United States. ONC has developed the U.S. Common Data Set for Interoperability which may lay the groundwork for future data exchange requirements for trusted exchange. ONC continues to modify and refine these standards. We may incur increased software development and administrative expense and delays in delivering technology and services if we need to update our services to conform to these varying and evolving requirements. In addition, delays in interpreting these standards may result in postponement or cancellation of our clients' decisions to purchase our services. If our services are not compliant with these evolving standards, our market position and sales could be impaired, and we may have to invest significantly in changes to our technology and services.

Recently, in February 2019, ONC and CMS proposed complementary new rules to support access, exchange, and use of EHI. The proposed rules are intended to clarify provisions of the 21st Century Cures Act regarding interoperability and "information blocking," and, if adopted, will create significant new requirements for health care industry participants. The proposed ONC rule, if adopted, would require certain electronic health record technology to incorporate standardized application programming interfaces (APIs) to allow individuals to securely and easily access structured EHI using smartphone applications. The ONC rule would also implement provisions of the 21st Century Cures Act requiring that patients be provided with electronic access to all of their EHI (structured and/or unstructured) at no cost. Finally, the proposed ONC rule would also implement the information blocking provisions of the 21st Century Cures Act, and proposes seven "reasonable and necessary activities" that will not be considered information blocking as long as specific conditions are met. The CMS proposed rule focuses on health plans, payors, and health care providers and proposes measures to enable patients to move from health plan to health plan, provider to provider, and have both their clinical and administrative information travel with them.

It is unclear whether or when these proposed rules, and others released simultaneously, will be adopted, in whole or in part. If adopted, the rules may benefit us in that certain EHR vendors will no longer be permitted to interfere with our attempts at integration, but the rules may also make it easier for other similar companies to enter the market, creating increased competition and reducing our market share. It is unclear at this time what the costs of compliance with the proposed rules, if adopted, would be, and what additional risks there may be to our business.

In a regulatory climate that is uncertain, our operations may be subject to direct and indirect adoption, expansion or reinterpretation of various federal and state laws and regulations. Compliance with these amended and/or future laws and regulations may require us to change our practices at an undeterminable and possibly significant initial monetary and annual expense. There could be laws and regulations applicable to our business that we have not identified or that, if changed, may apply to our business operations. Additionally, the introduction of new services may require us to comply with additional, yet undetermined, laws and regulations.

U.S. Food and Drug Administration

The FDA may regulate medical or health-related software, including machine learning functionality and predictive algorithms, if such software falls within the definition of a "medical device" under the FDCA. However, the FDA exercises enforcement discretion for certain low risk software, as described in its guidance documents for Mobile Medical Applications, General Wellness: Policy for Low Risk Devices, and Medical Device Data Systems, Medical Image Storage Devices, and Medical Image Communications Devices. In addition the 21st Century Cures Act includes exemptions for certain medical-related software, including software used for administrative support functions at a healthcare facility, software intended for maintaining or encouraging a healthy lifestyle, EHR software, software for transferring, storing, or displaying medical device data or in vitro diagnostic data, and certain clinical decision support software. The FDA has also issued draft guidance documents to clarify how it intends to interpret and apply the exemptions under the 21st Century Cures Act.

FDA regulations govern, among other things, product development, testing, manufacture, packaging, labeling, storage, clearance or approval, advertising and promotion, sales and distribution, and import and export. FDA requirements with respect to devices that are determined to pose lesser risk to the public include:

- establishment registration and device listing with FDA;
- the Quality System Regulation (QSR), which requires manufacturers, including third-party or contract manufacturers, to follow stringent design, testing, control, documentation, and other quality assurance procedures during all aspects of manufacturing;
- labeling regulations and FDA prohibitions against the advertising and promotion of products for uncleared, unapproved off-label uses and other requirements related to advertising and promotional activities;
- medical device reporting regulations, which require that manufacturers report to the FDA if their device may have caused or contributed to a death or serious injury or malfunctioned in a way that would likely cause or contribute to a death or serious injury if the malfunction were to recur;
- corrections and removal reporting regulations, which require that manufacturers report to the FDA field corrections and product recalls or removals if undertaken to reduce a risk to health posed by the device or to remedy a violation of the FDCA that may present a risk to health; and
- post-market surveillance regulations, which apply when necessary to protect the public health or to provide additional safety and effectiveness data for the device.

Non-compliance with applicable FDA requirements can result in, among other things, public warning letters, fines, injunctions, civil penalties, recall or seizure of products, total or partial suspension of production, failure of the FDA to grant marketing approvals, withdrawal of marketing approvals, a recommendation by the FDA to disallow us from entering into government contracts and criminal prosecutions. The FDA also has the authority to request repair, replacement, or refund of the cost of any device.

Foreign Regulations

Our subsidiary in the United Kingdom is subject to additional regulations by the Government of the United Kingdom, as well as its subdivisions. These include federal and local corporation requirements, restrictions on exchange of funds, employment-related laws and qualification for tax status.

Foreign Data Collection. The collection and use of personal health data in the EU is governed by various laws concerning privacy, data protection and data security, most notably the GDPR. The GDPR applies to any company established in the EU as well as to those outside the EU if they collect and use personal data in connection with offering goods or services to individuals in the EU or the monitoring of their behavior. The GDPR enhances data protection obligations for processors and controllers of personal data, including, for example, expanded disclosures about how personal information is to be used, limitations on retention of information, mandatory data breach notification requirements and onerous new obligations on services providers. The GDPR also imposes strict rules on the transfer of personal data out of the EU to other countries, including the United States. Non-compliance with the GDPR may result in monetary penalties of up to €20 million or 4% of worldwide revenue, whichever is higher. The GDPR may impose additional responsibility and liability in relation to personal data that we process and we may be required to put in place additional mechanisms ensuring compliance with data protection rules. We may become subject to similar laws and regulations in other countries outside of the EU in which we do business.

Foreign Corrupt Practices Act (FCPA) and Foreign Anti-Bribery Laws. The FCPA makes it illegal for U.S. persons, including U.S. companies, and their subsidiaries, directors, officers, employees, and agents, to promise, authorize or make any corrupt payment, or otherwise provide any item of value, directly or indirectly, to any foreign official or any foreign political party or party official to obtain or retain business. Violations of the FCPA can also result in violations of other U.S. laws, including anti-money laundering, mail and wire fraud, and conspiracy laws. There are severe penalties for violating the FCPA. In addition, the Company may also be subject to other non-U.S. anti-corruption or anti-bribery laws, such as the U.K. Bribery Act 2010.

Export Controls. Economic and trade sanctions programs that are administered by OFAC prohibit or restrict transactions to or from, and dealings with specified countries, their governments, and in certain circumstances, with individuals and entities that are specially designated nationals of those countries, and other sanctioned persons, including narcotics traffickers and terrorists or terrorist organizations. Further, federal regulations impose authorization, reporting, and/or licensing requirements prior to the export of certain software that incorporates encryption technology. These requirements may apply to our Solution to the extent that our software with encryption functionality is implemented abroad or is hosted on servers in a foreign country to provide services to customers outside the United States. In addition, various countries also regulate the import of certain encryption technology, including through import permitting and licensing requirements, and have enacted laws that could limit our customers' ability to import our technology into those countries.

Facilities

Our principal executive offices are located in Salt Lake City, Utah where we occupy facilities totaling approximately 60,358 square feet under a lease that expires on December 31, 2020. We use this facility for administration, sales and marketing, technology and development and professional services. We also lease offices elsewhere in the United States, including Alpharetta, Georgia, and Minneapolis, Minnesota.

We intend to procure additional space as we add team members and expand geographically. We believe that our facilities are adequate to meet our needs for the immediate future, and that, should it be needed, suitable additional space will be available to accommodate any such expansion of our operations.

Legal Proceedings

We are not currently party to any material legal proceedings. We may be subject to other legal proceedings and claims in the ordinary course of business. We have received, and may from time to time receive, letters from third parties alleging patent infringement, violation of employment practices or trademark infringement, and we may in the future participate in litigation to defend ourselves. We cannot predict the results of any such disputes, and despite the

potential outcomes, the existence thereof may have an adverse material impact on us due to diversion of management time and attention as well as the financial costs related to resolving such disputes.

Management

Executive Officers and Directors

The following table sets forth certain information with respect to our executive officers and directors, including their ages as of March 31, 2019:

Name	Age	Position(s)
Executive Officers		
Daniel Burton		Chief Executive Officer and Director
J. Patrick Nelli		Chief Financial Officer
Paul Horstmeier		Chief Operating Officer
Dale Sanders		Chief Technology Officer
Linda Llewelyn		Chief People Officer
Daniel Orenstein		General Counsel
Non-Employee Directors		
Fraser Bullock[3]		Director
Todd Cozzens[2]		Director
Michael Dixon[2][3]		Director
Timothy G. Ferris		Director
Duncan Gallagher[1]		Director
Promod Haque[2]		Director
John A. Kane[1]		Director
Anita V. Pramoda[1]		Director

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(1) Member of the audit committee.

(2) Member of the compensation committee.

(3) Member of the nominating and corporate governance committee.

Executive Officers

Daniel Burton. Mr. Burton has served as our Chief Executive Officer since October 2012 and a member of our board of directors since September 2011. Mr. Burton served as our President from September 2011 to October 2012, and as an adviser from January 2011 to September 2011. Prior to that, Mr. Burton co-founded HB Ventures, LLC, a private investment firm. Mr. Burton holds a B.S. from Brigham Young University and an M.B.A. from Harvard Business School.

We believe that Mr. Burton is qualified to serve as a member of our board of directors based on the perspective and experience he brings as our Chief Executive Officer.

J. Patrick Nelli. Mr. Nelli has served as our Chief Financial Officer since September 2017. Since August 2013, Mr. Nelli has held various roles with us, including, Senior Vice President - Touchstone Product Line; Vice President - Corporate Analytics; and Manager - Financial Planning and Analysis. Mr. Nelli holds a B.A. from Wake Forest University.

Paul Horstmeier. Mr. Horstmeier has served as our Chief Operating Officer since October 2018. From April 2017 to October 2018, Mr. Horstmeier served as our Chief Operating Officer, Technology Business, as our Senior Vice President - Marketing from May 2012 to March 2017, and as our Chief Operating Officer from October 2011 to May 2012. Prior to that, Mr. Horstmeier was a co-founder of HB Ventures, LLC, a private investment firm. Mr. Horstmeier holds a B.S. and M.B.A. from Brigham Young University.

Dale Sanders. Mr. Sanders has served as our Chief Technology Officer since February 2019. He served as our President of Technology from September 2017 to February 2019 and as our Executive Vice President - Product Development from September 2015 to September 2017. Prior to that, Mr. Sanders served as our Senior Vice President - Strategy from October 2011 to September 2015. Mr. Sanders holds a B.S. from Ft. Lewis College.

Linda Llewelyn. Ms. Llewelyn has served as our Chief People Officer since February 2018. From August 2015 to February 2018, Ms. Llewelyn served as our Vice President - Human Resources. Prior to that, Ms. Llewelyn served as a Human Resources Director from January 2014 to August 2015 and as a Human Resources Manager from June 2013 to January 2014. Ms. Llewelyn holds a B.S. from the University of Utah.

Daniel Orenstein. Mr. Orenstein has served as our General Counsel since January 2016. From 2008 to September 2015 Mr. Orenstein served as General Counsel at athenahealth, Inc. (ATHN), a public healthcare company. As General Counsel at athenahealth, Inc., Mr. Orenstein managed all legal operations including regulatory matters, intellectual property protection, revenue and vendor contracting, and partnerships and acquisitions. He also served as secretary of the board. Mr. Orenstein holds a B.A. from Columbia University and a J.D. from Georgetown University Law Center.

Non-Employee Directors

Fraser Bullock. Mr. Bullock has served as a member of our board of directors since May 2014. Mr. Bullock is one of the co-founders of Sorenson Capital, a private equity firm, serving as a Senior Advisor since 2015, and previously serving as the Managing Director from 2003 to December 2015. Mr. Bullock joined the Salt Lake Organizing Committee for the Olympic Winter Games of 2002 in 1999 as its Chief Operating Officer and in 2002 was appointed President and Chief Executive Officer. He currently serves on the board of directors of Domo, Inc., a public computer software company. Mr. Bullock holds a B.A. in Economics and an M.B.A. from Brigham Young University.

We believe that Mr. Bullock is qualified to serve as a member of our board of directors because of his leadership experience, his extensive experience as a venture capital investor, and his experience serving on a public company board.

Todd Cozzens. Mr. Cozzens has served as a member of our board of directors since August 2012. Mr. Cozzens is one of the co-founders of Leerink Transformation Partners, a private equity firm, and has served as Managing Partner since September 2015. From 2012 to 2015, Mr. Cozzens was a healthcare information technology investor at Sequoia Capital, a venture capital firm. Mr. Cozzens currently serves on the boards of directors of a number of companies, including Natera, Inc., a public genetic testing company. Mr. Cozzens received a B.A. from Marquette University and completed Harvard Business School's Program for Management Development (PMD).

We believe that Mr. Cozzens is qualified to serve as a director based on his knowledge of the healthcare industry and his experience serving on a public company board.

Michael Dixon. Mr. Dixon has served as a member of our board of directors since September 2011. Mr. Dixon joined Sequoia Capital, a venture capital firm, in May 2008 and served as a Managing Member of Sequoia Capital Operations, LLC from January 2015 to September 2018. Mr. Dixon currently serves as a member of the board of directors for a number of private companies. Mr. Dixon holds a B.S. in Finance and Accounting from Boston College.

We believe that Mr. Dixon is qualified to serve as a member of our board of directors based on his experience as a seasoned investor, a current and former director of many companies, and his knowledge of the healthcare industry.

Timothy G. Ferris. Mr. Ferris has served as a member of our board of directors since January 2018. Since 2017, Mr. Ferris has served as the Chief Executive Officer of the Massachusetts General Physicians Organization, a multi-specialty medical group. Prior to that, Mr. Ferris served as the Senior Vice President for Population Health at Partners Healthcare, Massachusetts General Hospital, from 2011 to 2017. Mr. Ferris holds a B.A. from Middlebury College, an M.Phil. from Wolfson College, Oxford University, an M.D. from Harvard Medical School, and an M.P.H. from Harvard School of Public Health.

We believe that Mr. Ferris is qualified to serve as a member of our board of directors based on his experience as a chief executive officer and director and his knowledge of the healthcare industry.

Duncan Gallagher. Mr. Gallagher has served as a member of our board of directors since 2017. Since March 2017, Mr. Gallagher has served as President of Donegal Advisory Services, a healthcare consulting company. From August 2009 to January 2017, Mr. Gallagher held various positions at Allina Health, a healthcare services company, including Chief Financial Officer and Chief Administrative Officer. He currently serves on the board of directors of Carium, Inc., a privately-held healthcare technology company. Mr. Gallagher holds a B.S. from the University of South Dakota and an M.B.A. from the University of Minnesota.

We believe that Mr. Gallagher is qualified to serve as a member of our board of directors based on his experience as a chief financial officer and director and his knowledge of the healthcare industry.

Promod Haque. Dr. Haque has served as a member of our board of directors since December 2012. Dr. Haque has been Senior Managing Partner of Norwest Venture Partners, a venture capital firm, since January 2013 and had previously served as Managing Partner since 1990. He currently serves on the boards of directors of several privately held companies, including, Shape Security, Inc., CareCloud Corporation, and Cognitive Scale Inc. Dr. Haque also served on the board of directors of FireEye, Inc. from 2005 until October 2014, Cyan, Inc. from 2007 until August 2015 and Apigee Corp. from 2005 until October 2016. Dr. Haque holds a B.S. in Electrical Engineering from the University of Delhi, India, an M.B.A. from Northwestern's Kellogg Graduate School of Management, and a Ph.D. in Electrical Engineering from Northwestern University.

We believe that Dr. Haque is qualified to serve as a member of our board of directors based on his extensive experience in the venture capital industry analyzing, investing in, and serving on the boards of directors of technology companies.

John A. Kane. Mr. Kane has served as a member of our Board of Directors since 2015. Mr. Kane currently serves as a business consultant for various organizations. Mr. Kane served as the interim Chief Financial Officer of athenahealth, Inc, (ATHN), a public healthcare company, from July 2017 to January 2018. Mr. Kane was formerly Senior Vice President - Finance, Chief Financial Officer, and Treasurer of IDX Systems Corporation (IDXC), a leading provider of software, services, and technologies for healthcare provider organizations, from 1984 until the acquisition of IDX by GE Healthcare in January 2006. Prior to joining IDX, Mr. Kane was employed as an audit manager at Ernst & Young, LLP, in Boston, Massachusetts. Mr. Kane served as a director and chairman of the audit committee of Merchants Bancshares, Inc. (MBVT) from 2005 until 2014 and athenahealth, Inc. from 2007 until February 2019. He currently serves on the board of directors of several privately-held companies. Mr. Kane holds a B.S. and M.Acc. from Brigham Young University.

We believe that Mr. Kane is qualified to serve as a member of our board of directors and chair of our audit committee due to his background as a member of the board and audit committee of other public and private companies and his leadership experience in technology and healthcare businesses.

Anita V. Pramoda. Ms. Pramoda has served as a member of our board of directors since April 2016. Since 2014, Ms. Pramoda has served as the Chief Executive Officer of Owned Outcomes, Inc., a healthcare software company. Ms. Pramoda also has served as an Executive Advisor to Technology Crossover Ventures, a venture capital and private equity firm, since 2012. Previously, Ms. Pramoda served as the Chief Executive Officer of Ediom LLC, a healthcare analytics company, until its sale to Vizient, Inc. in 2018. She currently serves on the board of the Federal Reserve Bank of San Francisco (Los Angeles Branch) and also served on the board of directors and audit committee of Allscripts, Inc., a public healthcare software company, from 2013 to 2016. Ms. Pramoda holds a B.E. from the University of Madras and an M.B.A. from The Wharton School of the University of Pennsylvania.

We believe that Ms. Pramoda is qualified to serve as a member of our board of directors based on her experience as a chief executive officer, experience serving on a public company board, and her knowledge of the healthcare industry.

Family Relationships

There are no family relationships among any of our executive officers or directors, though the brother and brother-in-law of Mr. Burton, our CEO, are employed by us. See "Certain Relationships and Related Party Transactions."

Board Composition

Our business and affairs are managed under the direction of our board of directors. Our board of directors currently consists of nine members. The number of directors will be fixed from time to time by our board of directors, subject to the terms of our amended and restated certificate of incorporation and amended and restated bylaws that will become effective immediately prior to the completion of this offering.

In accordance with our amended and restated certificate of incorporation and our amended and restated bylaws, immediately after the completion of this offering our board of directors will be divided into three classes with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Our directors will be divided among the three classes as follows:

- the Class I directors will be Messrs. Ferris and Haque and Ms. Pramoda, and their terms will expire at the annual meeting of stockholders to be held in 2020;
- the Class II directors will be Messrs. Burton, Cozzens, and Kane, and their terms will expire at the annual meeting of stockholders to be held in 2021; and
- the Class III directors will be Messrs. Bullock, Dixon, and Gallagher, and their terms will expire at the annual meeting of stockholders to be held in 2022.

Each director's term will continue until the election and qualification of his or her successor, or his or her earlier death, resignation, or removal. Any increase or decrease in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors.

This classification of our board of directors may have the effect of delaying or preventing changes in control of our company.

All of our directors currently serve on the board of directors pursuant to the provisions of a stockholders agreement between us and several of our stockholders. We expect this agreement to terminate upon the completion of this offering, after which there will be no further contractual obligations regarding the election of our directors.

Director Independence

Our board of directors has undertaken a review of the independence of the directors and considered whether any director has a material relationship with us that could compromise his or her ability to exercise independent judgment in carrying out his or her responsibilities. Based upon information requested from and provided by each director concerning such director's background, employment and affiliations, including family relationships, our board of directors determined that each of our directors, other than Messrs. Burton and Ferris, representing seven of our nine directors, are "independent directors" as defined under current rules and regulations of the SEC and the listing standards of Nasdaq. In making these determinations, our board of directors considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances that our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director and the transactions involving them described in "Certain Relationships and Related Party Transactions."

Board Committees

Our board of directors has established or will establish an audit committee, a compensation committee, and a nominating and corporate governance committee. Each of the committees has the composition and responsibilities described below. From time to time, our board of directors may establish other committees to facilitate the management of our business.

Audit Committee

Upon the completion of this offering, our audit committee will consist of three directors, Messrs. Kane and Gallagher, and Ms. Pramoda, each of whom our board of directors has determined satisfies the independence requirements for audit committee members under the listing standards of Nasdaq and Rule 10A-3 of the Exchange Act. Each member of our audit committee meets the financial literacy requirements under the rules and regulations of Nasdaq and

the SEC. Mr. Kane is the chair of the audit committee and our board of directors has determined that is an audit committee "financial expert" as defined by Item 407(d) of Regulation S-K under the Securities Act. The principal duties and responsibilities of our audit committee include, among other things:

- selecting a qualified firm to serve as the independent registered public accounting firm to audit our consolidated financial statements;
- helping to ensure the independence and performance of the independent registered public accounting firm;
- discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and the independent accountants, our interim and year-end results of operations;
- developing procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- reviewing our policies on risk assessment and risk management;
- reviewing related party transactions;
- obtaining and reviewing a report by the independent registered public accounting firm, at least annually, that describes its internal quality-control procedures, any material issues with such procedures, and any steps taken to deal with such issues when required by applicable law; and
- approving (or, as permitted, pre-approving) all audit and all permissible non-audit services, other than de minimis non-audit services, to be performed by the independent registered public accounting firm.

Our audit committee will operate under a written charter, to be effective immediately prior to the completion of this offering, that satisfies the applicable rules of the SEC and the listing standards of Nasdaq.

Compensation Committee

Upon the completion of this offering, our compensation committee will consist of three directors, Messrs. Cozzens, Dixon, and Haque. Our board of directors has determined that each of the compensation committee members is a non-employee member of our board of directors as defined in Rule 16b-3 under the Exchange Act. Mr. Cozzens will be the chair of the compensation committee. The composition of our compensation committee meets the requirements for independence under the current listing standards of Nasdaq and current SEC rules and regulations. The principal duties and responsibilities of our compensation committee include, among other things:

- reviewing and approving, or recommending that our board of directors approve, the compensation of our executive officers;
- reviewing and recommending to our board of directors the compensation of our directors;
- reviewing and approving, or recommending that our board of directors approve, the terms of compensatory arrangements with our executive officers;
- administering our stock and equity incentive plans;
- reviewing and approving, or recommending that our board of directors approve, incentive compensation and equity plans; and
- reviewing and establishing general policies relating to compensation and benefits of our employees and reviewing our overall compensation philosophy.

Our compensation committee will operate under a written charter, to be effective immediately prior to the completion of this offering, that satisfies the applicable rules of the SEC and the listing standards of Nasdaq.

Nominating and Corporate Governance Committee

Upon the completion of this offering, our nominating and corporate governance committee will consist of two directors, Messrs. Bullock and Dixon. Mr. Bullock will be the chair of the nominating and corporate governance committee. The composition of our nominating and governance committee will meet the requirements for independence under the current listing standards of Nasdaq and current SEC rules and regulations. The nominating and corporate governance committee's responsibilities will include, among other things:

- identifying, evaluating and selecting, or recommending that our board of directors approve, nominees for election to our board of directors and its committees;
- evaluating the performance of our board of directors and of individual directors;
- considering and making recommendations to our board of directors regarding the composition of our board of directors and its committees;
- reviewing developments in corporate governance practices;
- evaluating the adequacy of our corporate governance practices;

- developing and making recommendations to our board of directors regarding corporate governance guidelines and matters; and

- overseeing an annual evaluation of our board of directors' performance.

Our nominating and governance committee will operate under a written charter, to be effective immediately prior to the completion of this offering, that satisfies the applicable rules of the SEC and the listing standards of Nasdaq.

Role of Board of Directors in Risk Oversight Process

Our board of directors has responsibility for the oversight of our risk management processes and, either as a whole or through its committees, regularly discusses with management our major risk exposures, their potential impact on our business and the steps we take to manage them. The risk oversight process includes receiving regular reports from board committees and members of senior management to enable our board of directors to understand our risk identification, risk management, and risk mitigation strategies with respect to areas of potential material risk, including operations, finance, legal, regulatory, cybersecurity, strategic, and reputational risk.

Code of Conduct

We have adopted a Code of Conduct applicable to each of our employees and non-employee directors. In connection with this offering, we intend to adopt an Amended and Restated Code of Conduct (the Code of Conduct) applicable to all of our employees, executive officers, and directors. Following the completion of this offering, the Code of Conduct will be available on our website at www.healthcatalyst.com. The nominating and corporate governance committee of our board of directors will be responsible for overseeing the Code of Conduct and must approve any waivers of the Code of Conduct for employees, executive officers, and directors. We expect that any amendments to the Code of Conduct, or any waivers of its requirements, will be disclosed on our website (www.healthcatalyst.com) as required by applicable law or the listing standards of Nasdaq. The inclusion of our website address in this prospectus does not include or incorporate by reference into this prospectus the information on or accessible through our website.

Compensation Committee Interlocks and Insider Participation

None of our executive officers currently serves, or in the past year has served, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving on our board of directors or compensation committee. None of the members of our compensation committee is an officer or employee of our company, nor have they ever been an officer or employee of our company.

Non-Employee Director Compensation

During the year ended December 31, 2018, we provided compensation to our non-employee directors, other than those associated with Norwest Venture Partners, Sequoia Capital, and Sorenson Capital, in the form of cash retainers and equity awards as set forth below, with cash retainers prorated for partial years of service:

Annual Retainer for service on the board of directors	$ 30,000
Additional Annual Retainer for Committee Membership (other than Chair)	5,000
Additional Annual Retainer for Audit Committee Chair	20,000
Additional Annual Retainer for Compensation Committee Chair	10,000

Upon initial election to our board of directors, each such non-employee director was generally granted an option to purchase 125,000 shares of our common stock, or the Initial Grant. The Initial Grant vests 25% on the first anniversary of the grant date and in equal monthly installments thereafter for the next three years, subject to continued service as a director through such date. The Initial Grants were granted with a per share exercise price equal to the fair value of a share of our common stock on the date of grant and with a term of ten years.

Employee directors received no additional compensation for their service as a director.

We reimbursed all reasonable out-of-pocket expenses incurred by directors for their attendance at meetings of our board of directors or any committee thereof.

Immediately prior to the completion of this offering, we intend to implement a formal policy pursuant to which our non-employee directors will be eligible to receive the following cash retainers and equity awards:

Annual Retainer for Board Membership	
Annual service on the board of directors	$ 35,000
Additional retainer for annual service as non-executive chairperson of the board	$ 30,000
Additional Annual Retainer for Committee Membership	
Annual service as chair of the audit committee	$ 20,000

Annual service as member of the audit committee (other than chair)	$ 10,000
Annual service as chair of the compensation committee	$ 10,000
Annual service as member of the compensation committee (other than chair)	$ 5,000
Annual service as chair of the nominating and corporate governance committee	$ 7,500
Annual service as member of the nominating and corporate governance committee (other than chair)	$ 3,750

Our policy will provide that, upon initial election to our board of directors, each new non-employee director will be granted a one-time grant of restricted stock units having a fair market value of $225,000 (Initial Grant). The Initial Grant will vest in three equal annual installments over three years. Furthermore, on the date of each of our annual meeting of stockholders following the completion of this offering, each non-employee director who will continue as a non-employee director following such meeting will be granted an annual award of restricted stock units having a fair market value of $150,000 (Annual Grant). The Annual Grant will vest in full on the earlier of the one-year anniversary of the grant date or on the date of our next annual meeting of stockholders. The Initial Grant and Annual Grant are subject to full accelerated vesting upon the sale of the Company. In addition, following this offering, our board intends to grant each non-employee director who was serving on the board as of the effective time of the registration statement related to such offering, an Annual Grant pro-rated based on the time between such date and our next annual meeting of stockholders.

The aggregate amount of compensation, including both equity compensation and cash compensation, paid to any non-employee director in a calendar year period will not exceed $1,000,000 in the first calendar year such individual becomes a non-employee director and $500,000 in any other year.

We will reimburse all reasonable out-of-pocket expenses incurred by directors for their attendance at meetings of our board of directors or any committee thereof.

Employee directors will receive no additional compensation for their service as a director.

Non-employee director compensation table

The following table provides information regarding the total compensation that was earned by or paid to each of our non-employee directors during the year ended December 31, 2018. Mr. Burton, who is our Chief Executive Officer, did not receive any additional compensation for his service as a director. The compensation received by Mr. Burton, as a named executive officer of the Company, is presented in "Executive Compensation-2018 Summary Compensation Table" below.

Name	FeesEarned orPaidin Cash	OptionAwards(1)	All OtherCompensation	Total
Fraser Bullock[2]	$ –	$ –	$ –	$ –
Todd Cozzens[3]	40,000	–	–	40,000
Michael Dixon[4]	–	–	–	–
Timothy G. Ferris[5]	35,000	354,970	–	389,970
Duncan Gallagher[6]	35,000	–	85,000 [7]	120,000
Promod Haque[8]	–	–	–	–
John A. Kane[9]	50,000	–	–	50,000
Anita Pramoda[10]	35,000	–	–	35,000

(1) The amounts reported represent the aggregate grant date fair value of the stock options awarded to the non-employee directors in the year ended December 31, 2018, calculated in accordance with FASB ASC Topic 718. Such grant date fair values do not take into account any estimated forfeitures. The assumptions used in calculating the grant date fair value of the stock options reported in this column are set forth in note 16 to our consolidated financial statements included elsewhere in this prospectus. The amounts reported in this column reflect the accounting cost for these stock options and do not correspond to the actual economic value that may be received by the non-employee directors upon the exercise of the stock options or any sale of the underlying shares of common stock.

(2) As of December 31, 2018, Mr. Bullock did not hold any outstanding equity awards.

(3) As of December 31, 2018, Mr. Cozzens held outstanding options to purchase a total of 225,000 shares of our common stock.

(4) As of December 31, 2018, Mr. Dixon did not hold any outstanding equity awards.

(5) As of December 31, 2018, Dr. Ferris held outstanding options to purchase a total of 125,000 shares of our common stock.

(6) As of December 31, 2018, Mr. Gallagher held outstanding options to purchase a total of 125,000 shares of our common stock.

(7) Amount represents consulting fees paid to Donegal Advisory Services, LLC for Mr. Gallagher's consulting services.

(8) As of December 31, 2018, Mr. Haque did not hold any outstanding equity awards.

(9) As of December 31, 2018, Mr. Kane held outstanding options to purchase a total of 125,000 shares of our common stock.

(10) As of December 31, 2018, Ms. Pramoda held outstanding options to purchase a total of 165,000 shares of our common stock.

Executive Compensation

Overview

The following discussion contains forward-looking statements that are based on our current plans and expectations regarding our future compensation programs. The actual amount and form of compensation that we pay and the compensation policies and practices that we adopt in the future may differ materially from the currently-planned programs that are summarized in this discussion.

The compensation provided to our named executive officers for the year ended December 31, 2018 is detailed in the 2018 Summary Compensation Table and accompanying footnotes and narrative that follow. Our named executive officers for the year ended December 31, 2018, which consists of our Chief Executive Officer and our two most highly-compensated individuals (other than our Chief Executive Officer) who were serving as executive officers on December 31, 2018 are:

- Daniel Burton, our Chief Executive Officer;
- Dale Sanders, our Chief Technology Officer; and
- J. Patrick Nelli, our Chief Financial Officer.

2018 Summary Compensation Table

The following table provides information regarding the total compensation awarded to, earned by, and paid to our named executive officers for services rendered to us in all capacities for the year ended December 31, 2018.

Name and Principal Position	Year	Salary	OptionAwards(1)	Nonequity Incentive Plan Compensation(2)	All OtherCompensation(3)	Total
Daniel Burton Chief Executive Officer	2018	$ 314,583	$ 4,068,139	$ 172,833	$ 17,185	$ 4,572,740
Dale Sanders Chief Technology Officer	2018	314,583	2,624,606	210,295	18,444	3,167,928
J. Patrick Nelli Chief Financial Officer	2018	292,917	1,181,073	161,141	68,263	1,703,394

(1) The amounts reported represent the aggregate grant date fair value of the stock options awarded to our named executive officers during the 2018 year, calculated in accordance with Financial Accounting Standards Board (FASB), Accounting Standards Codification (ASC), Topic 718. Such grant date fair values do not take into account any estimated forfeitures. The assumptions used in calculating the grant date fair value of the stock options reported in this column are set forth in note 16 of our consolidated financial statements included elsewhere in this prospectus. The amounts reported in this column reflect the accounting cost for these stock options and do not correspond to the actual economic value that may be received by our named executive officers upon the exercise of the stock options or any sale of the underlying shares of common stock.

(2) Represents amounts earned by our named executive officers under our short-term incentive plan, based on our achievement of certain corporate performance goals.

(3) For the 2018 year, the amounts reported represent: for Mr. Burton - $16,500 for matching contributions made by us under our 401(k) plan and $685 for executive life insurance premiums paid by us; for Mr. Sanders - $12,574 for matching contributions made by us under our 401(k) plan, $1,815 for executive life insurance premiums paid by us and $4,055 for executive long term disability insurance premiums paid by us; and for Mr. Nelli - $16,500 for matching contributions made by us under our 401(k) plan, $50,000 for relocation expenses, $600 for gift cards as part of a company-wide gift card sharing program, $210 for tax-gross ups paid by us for gift cards, $496 for executive life insurance premiums paid by us and $457 for long term executive disability insurance premiums paid by us.

Narrative to Summary Compensation Table

Base salaries

From January 1, 2018 through September 30, 2018, the annual base salaries for Messrs. Burton, Sanders, and Nelli were $300,000, $300,000, and $290,000, respectively. Effective as of October 1, 2018, the annual base salaries for Messrs. Burton, Sanders, and Nelli were increased to $350,000, $350,000, and $300,000, respectively.

Annual bonuses

During the year ended December 31, 2018, our named executive officers were eligible to participate in the our short-term incentive program, pursuant to which each was eligible to earn an annual bonus based on the achievement of certain company performance objectives, including customer satisfaction, team member satisfaction, platform utilization, number of measurable improvements, revenue, Adjusted EBITDA, Adjusted Gross Margin, new client growth, and annual recurring revenue. For the year ended December 31, 2018, the target annual bonuses for Messrs. Burton, Sanders, and Nelli were equal to 60%, 65%, and 60%, respectively, of the applicable named executive officer's annual base salary.

Equity compensation

During the year ended December 31, 2018, we granted stock options to purchase shares of our common stock to each of our named executive officers, as described in more detail in the "Outstanding equity awards at 2018 year-end" table.

401(k) plan

We maintain a tax-qualified retirement plan that provides eligible U.S. employees with an opportunity to save for retirement on a tax-advantaged basis. Plan participants are able to defer eligible compensation subject to applicable annual Internal Revenue Code limits. We provide a matching contribution of 100% of employee contributions up to 6% of compensation, which vests after two years of service. The 401(k) plan is intended to be qualified under Section 401(a) of the Internal Revenue Code with the 401(k) plan's related trust intended to be tax exempt under Section 501(a) of the Internal Revenue Code. As a tax-qualified retirement plan, contributions to the 401(k) plan and earnings on those contributions are not taxable to the employees until distributed from the 401(k) plan.

Perquisites

We generally do not provide perquisites to our employees, other than Company-paid executive life insurance and executive long-term disability insurance premiums, reimbursement for relocation expenses, and certain other de minimis perquisites to our executive officers, including our named executive officers.

Executive employment arrangements

We initially entered into an offer letter with each of the named executive officers in connection with his employment with us, which set forth the terms and conditions of his employment. Each named executive officer also entered into our standard employee agreement and invention and confidentiality agreement. In connection with this offering, we intend to adopt an executive severance plan providing for cash severance upon certain terminations of employment and "double-trigger" equity vesting acceleration in the event of certain terminations of employment in connection with or following a sale of the company.

Offer letters in place during the year ended December 31, 2018 for our named executive officers

Daniel Burton

On September 26, 2011, we entered into an offer letter with Daniel Burton, who currently serves as our Chief Executive Officer. The offer letter provides for Mr. Burton's at-will employment and sets forth his initial annual base salary, initial target annual bonus, and his eligibility to participate in our benefit plans generally.

Dale Sanders

On October 24, 2011, we entered into an offer letter with Dale Sanders, who currently serves as our Chief Technology Officer. The offer letter provides for Mr. Sanders' at-will employment and sets forth his initial annual base salary, initial target annual bonus and an initial equity award grant (which is fully-vested), as well as his eligibility to participate in our benefit plans generally.

J. Patrick Nelli

On May 20, 2013, we entered into an offer letter with J. Patrick Nelli, who currently serves as our Chief Financial Officer. The offer letter provides for Mr. Nelli's at-will employment and sets forth his initial annual base salary, initial target annual bonus and an initial equity award grant (which is fully-vested), as well as his eligibility to participate in our benefit plans generally.

Outstanding Equity Awards at 2018 Year-end

The following table sets forth information regarding outstanding equity awards held by our named executive officers as of December 31, 2018:

			Option Awards(1)				
Name	GrantDate	VestingCommencementDate	Number ofSecuritiesUnderlyingUnexercisedOptions (#)Exercisable		Number ofSecuritiesUnderlyingUnexercisedOptions (#)Unexercisable		Optio
Daniel Burton	7/1/13	7/1/13	215,089	(2)	—		$ 2
	6/12/14	5/13/14	152,931	(2)	—		$ 3
	12/17/15	12/17/15	450,000	(3)	150,000	(3)	$ 5
	9/27/18	9/25/18	—		1,550,000	(4)	$ 5
Dale Sanders	1/4/12	11/1/11	100,000	(2)	—		$ 1
	11/9/15	10/28/15	320,625	(3)	84,375	(3)	$ 5
	9/27/18	9/25/18	—		1,000,000	(4)	$ 5
J. Patrick Nelli	2/10/15	2/10/15	29,386	(3)	1,542	(3)	$ 4
	10/14/16	10/14/16	7,042	(3)	5,958	(3)	$ 5
	4/27/17	4/27/17	7,675	(3)	23,333	(3)	$ 5
	10/26/17	10/26/17	50,679	(3)	132,813	(3)	$ 5
	9/27/18	9/25/18	—		450,000	(4)	$ 5

_____

(1) Each equity award is subject to the terms of our 2011 Stock Incentive Plan, as amended from time to time, or the 2011 Plan.

(2) The stock option is fully vested.

(3) 25% of the shares subject to the stock option vest on the first anniversary of the vesting commencement date and the remaining 75% vest in 36 equal monthly installments thereafter, generally subject to the named executive officer's continuous service relationship with the Company through each applicable vesting date.

(4) The stock option vests based on the satisfaction of both a time-based vesting condition and a liquidity-based vesting condition. The time-based vesting condition is satisfied as follows: 25% of the shares subject to the stock option will satisfy the time-based vesting condition on the first anniversary of the vesting commencement date and the remaining 75% will satisfy the time-based vesting condition in 36 equal monthly installments thereafter, generally subject to the named executive officer's continuous service relationship with the Company through each applicable vesting date. The liquidity-based vesting condition is satisfied upon the earlier of the Company's initial public offering or a sale of the Company.

Employee Benefits and Equity Compensation Plans

2019 Stock option and incentive plan

In connection with this offering, our board of directors plans to adopt our 2019 Plan. Our 2019 Plan will become effective on the date immediately prior to the date on which the registration statement of which this prospectus is part is declared effective by the SEC. The 2019 Plan will replace our 2011 Plan, as our board of directors will not make additional awards under the 2011 Plan following the completion of this offering. The 2019 Plan will provide flexibility to our compensation committee to use various equity-based incentive awards as compensation tools to motivate our workforce.

We will initially reserve _____ shares of our common stock plus _____ shares of our common stock (the number of shares remaining available for issuance under the 2011 Plan immediately prior to the registration date) (Initial Limit) for the issuance of awards under the 2019 Plan. The 2019 Plan provides that the number of shares reserved available for issuance under the plan will automatically increase each January 1, beginning on January 1, 2020, by 5% of the outstanding number of shares of our common stock on the immediately preceding December 31, or such lesser number of shares as determined by our compensation committee. This is referred to herein as the Annual Increase. This number will be subject to adjustment in the event of a stock split, stock dividend or other change in our capitalization. The shares we issue under the 2019 Plan will be authorized but unissued shares or shares that we reacquire. The shares of common stock underlying any awards that are forfeited, canceled, held back upon exercise or settlement of an award to satisfy the exercise price or tax withholding, reacquired by us prior to vesting, satisfied without any issuance of stock, expire or are otherwise terminated (other than by exercise)

under the 2019 Plan and the 2011 Plan will be added back to the shares of common stock available for issuance under the 2019 Plan. The maximum aggregate number of shares that may be issued in the form of incentive stock options may not exceed the Initial Limit cumulatively increased on January 1, 2020, and on each January 1 thereafter by the lesser of (i) the Annual Increase for such year or (ii) _____ shares of common stock.

The grant date fair value of all awards made under our 2019 Plan and all other cash compensation paid by us to any non-employee director in any calendar year may not exceed $1,000,000 for the first year of service and $500,000 for each year of service thereafter.

The 2019 Plan will be administered by our compensation committee. Our compensation committee will have full power to select, from among the individuals eligible for awards, the individuals to whom awards will be granted, to make any combination of awards to participants, and to determine the specific terms and conditions of each award, subject to the provisions of the 2019 Plan. Persons eligible to participate in the 2019 Stock Plan will be those full or part-time employees, non-employee directors and consultants of the Company and its affiliates, as selected from time to time by our compensation committee in its discretion.

The 2019 Plan will permit the granting of both options to purchase common stock intended to qualify as incentive stock options under Section 422 of the Internal Revenue Code and options that do not so qualify. The option exercise price of each option will be determined by our compensation committee but may not be less than 100% of the fair market value of our common stock on the date of grant. The term of each option will be fixed by our compensation committee and may not exceed ten years from the date of grant. Our compensation committee will determine at what time or times each option may be exercised.

Our compensation committee will be able to award stock appreciation rights subject to such conditions and restrictions as it may determine. Stock appreciation rights will entitle the recipient to shares of common stock or cash, equal to the value of the appreciation in our stock price over the exercise price. The exercise price of each stock appreciation right may not be less than 100% of the fair market value of the common stock on the date of grant. The term of each stock appreciation right will be fixed by our compensation committee and may not exceed ten years from the date of grant. Our compensation committee will determine at what time or times each stock appreciation right may be exercised.

Our compensation committee will be able to award restricted shares of common stock and restricted stock units to participants subject to such conditions and restrictions as it may determine. These conditions and restrictions may include the achievement of certain performance goals and/or continued employment or service relationship with us through a specified vesting period. Our compensation committee may also be permitted to grant shares of common stock that are free from any restrictions under the 2019 Plan. Unrestricted stock may be granted to participants in recognition of past services or other valid consideration and may be issued in lieu of cash compensation due to such participant.

Our compensation committee will be able to grant cash bonuses under the 2019 Plan to participants, subject to the achievement of certain performance goals.

The 2019 Stock Plan will provide that upon the effectiveness of a “sale event,” as defined in the 2019 Plan, an acquirer or successor entity may assume, continue or substitute outstanding awards under the 2019 Plan. To the extent that awards granted under our 2019 Plan are not assumed or continued or substituted by the successor entity, except as may be otherwise provided in the relevant award certificate, all awards with time-based vesting, conditions or restrictions will become fully vested and nonforfeitable as of the effective time of the sale event, and all awards with conditions and restrictions relating to the attainment of performance goals may become vested and nonforfeitable in connection with a sale event in the compensation committee’s discretion or to the extent specified in the relevant award certificate. Upon the effective time of the sale event, all outstanding awards granted under the 2019 Plan will terminate to the extent not assumed, continued or substituted for. In the event of such termination, individuals holding options and stock appreciation rights will be permitted to exercise such options and stock appreciation rights (to the extent exercisable) within a specified period of time prior to the sale event. In addition, in connection with the termination of the 2019 Plan upon a sale event, we may make or provide for a payment, in cash or in kind, to participants holding vested and exercisable options and stock appreciation rights equal to the difference between the per share cash consideration payable to stockholders in the sale event and the exercise price of the options or stock appreciation rights and we may make or provide for a payment, in cash or in kind, to participants holding other vested awards.

Our board of directors will be able to amend or discontinue the 2019 Plan and our compensation committee will be permitted to amend the exercise price of options and amend or cancel outstanding awards for purposes of satisfying changes in law or any other lawful purpose but no such action may adversely affect rights under an award without the holder’s consent. Certain amendments to the 2019 Plan will require the approval of our stockholders. Our compensation committee is specifically authorized to reduce the exercise price of outstanding stock options or stock appreciation rights granted under the 2019 Plan.

No awards will be granted under the 2019 Plan after the date that is 10 years from the date of stockholder approval. No awards under the 2019 Plan will be made prior to the date of this prospectus.

Amended and restated 2011 stock incentive plan

The 2011 Plan was approved by our board of directors and our stockholders in October 2011. As of December 31, 2018, we reserved an aggregate of 17,545,757 shares of our common stock for the issuance of options and other equity awards under the 2011 Plan. This number is subject to adjustment in the event of a stock split, stock dividend, or other change in our capitalization. As of December 31, 2018, options to purchase 14,369,284 shares of our common stock at a weighted average exercise price of $4.82 per share were outstanding under the 2011 Plan and 2,593,587 shares remained available for future issuance under the 2011 Plan. Following this offering, we will not grant any further awards under our 2011 Plan, but all outstanding awards under the 2011 Plan will continue to be governed by their existing terms.

The shares we have issued under the 2011 Plan have been authorized but unissued shares or shares we reacquired. The shares of common stock underlying any awards that are expired, canceled, reacquired by us prior to vesting are currently added back to the shares of common stock available for issuance under the 2011 Plan. Following this offering, such shares will be added to the shares of common stock available for issuance under the 2019 Plan.

The 2011 Plan is currently administered by the board of directors. The board of directors or a committee appointed by the board of directors has the full authority and discretion to take any actions it deems necessary or advisable to administer our 2011 Plan.

The 2011 Plan permits us to make grants of incentive stock options to our employees and any of our subsidiary corporations' or parent's employees, and grants of non-qualified stock options and shares of the company common stock to company directors and the officers, employees, and consultants of the company, parent and our subsidiary corporations.

The 2011 Plan permits the granting of (i) stock options to purchase common stock intended to qualify as incentive stock options under Section 422 of the Internal Revenue Code and (ii) stock options that do not so qualify, or nonstatutory options. The option exercise price per share of our common stock underlying each stock option was determined by our board of directors and must have been at least equal to 100% of the fair value of a share of our common stock on the date of grant, based on the information we knew on the date of grant. In the case of an incentive stock option granted to a participant who, at the time of grant of such stock option, owned stock representing more than 10% of the voting power of all classes of stock of the Company, or a 10% owner, the exercise price per share of our common stock underlying each such stock option must have been at least equal to 110% of the fair market value of a share of our common stock on the date of grant. The term of each stock option may not have exceeded 10 years from the date of grant (or five years for a 10% owner). The exercise price of a stock option may be paid (i) in cash, (ii) at the discretion of the board of directors, with a full-recourse promissory note, (iii) at the discretion of the board of directors, by surrendering, or attesting to the ownership of, shares already owned, (iv) to the extent provided in the stock option agreement and if the shares of the company are publicly traded, by a broker-assisted sale arrangement, or (v) any other form permitted by the Delaware General Corporation Law, as amended, to the extent provided in the applicable option agreement After a participant's termination of service (other than a termination for cause), the participant generally may exercise his or her stock options, to the extent vested as of such date of termination, for three months after termination; provided, that if the termination is due to death or disability, the stock option generally will remain exercisable, to the extent vested as of such date of termination, until the six-month and one-year anniversary of such termination, respectively. However, in no event may a stock option be exercised later than the expiration of its term.

The 2011 Plan generally does not allow for the transfer or assignment of options, other than by a will or the laws of descent and distribution or, if set forth in the applicable stock option agreement, nonstatutory options may be transferable by gift or domestic relations order to a family member of the optionee. Shares issued upon the exercise of an option are subject to special forfeiture conditions, rights of repurchase, rights of first refusal and other transfer restrictions as the board of directors may determine and as set forth in each stock option agreement.

The 2011 Plan permits the granting of shares of company common stock that may be subject to special forfeiture conditions, rights of repurchase, rights of first refusal and other transfer restrictions as the board of directors may determine and as reflected in the applicable stock purchase agreement. Any right to acquire shares under the 2011 Plan, other than shares underlying option grants, will automatically expire if not exercised by the recipient within 30 days after the grant of the right to purchase shares is communicated to the recipient. Such rights are not transferable. If exercised, such shares may vest, and the restrictions on such shares may lapse, in accordance with terms and conditions provided in the applicable stock purchase agreement. Shares may also be awarded at the discretion of the board of directors in consideration of prior services rendered to the company, a parent or subsidiary. Any purchase price for the shares may be paid (i) in cash, (ii) at the discretion of the board of directors, with a full-recourse promissory note, or (iii) any other form permitted by the Delaware General Corporation Law, as amended, to the extent provided in the applicable option agreement The 2011 Plan provides that upon the occurrence of a "Change in Control" as defined in the 2011 Plan, unexercisable options may be cancelled for no consideration and exercisable options may (i) be continued, assumed or substituted by the surviving company; (ii) have vesting be accelerated in full followed by cancellation of such options; (iii) cancelled in exchange for payment equal to, for each share of our common stock underlying such option, the difference between the fair market value of a share as of the closing date of such Change in Control and the per share exercise price.

Our board of directors may amend, suspend, or terminate the 2011 Plan at any time and for any reason, provided that stockholder approval is obtained where such approval is required by applicable law. We will not make any further grants under the 2011 Plan following this offering.

2019 Employee stock purchase plan

In connection with this offering, our board of directors plans to adopt the 2019 ESPP which will become effective on the date immediately prior to the date on which the registration statement of which this prospectus is part is declared effective by the SEC. The 2019 ESPP will initially reserve and authorize the issuance of up to a total of _____ shares of common stock to participating employees. The 2019 ESPP will provide that the number of shares reserved and available for issuance will automatically increase each January 1, beginning on January 1, 2020, by the least of _____ shares of our common stock, 1% of the outstanding number of shares of our common stock on the immediately preceding December 31, or such lesser number of shares as determined by our compensation committee. This number will be subject to adjustment in the event of a stock split, stock dividend or other change in our capitalization.

All employees whose customary employment is for more than 20 hours per week and who have completed at least 14 days of employment will be eligible to participate in the 2019 ESPP. Any employee who owns 5% or more of the total combined voting power or value of all classes of stock will not be eligible to purchase shares under the 2019 ESPP.

We will make one or more offerings, consisting of one or more purchase periods, each year to our employees to purchase shares under the 2019 ESPP. Offerings will usually begin every six months and will continue for six-month periods, referred to as offering periods. Each eligible employee may elect to participate in any offering by submitting an enrollment form at least 15 business days before the relevant offering date.

Each employee who is a participant in the 2019 ESPP may purchase shares by authorizing contributions of between 1% and 15% of his or her compensation during an offering period. Unless the participating employee has previously withdrawn from the offering, his or her accumulated contributions will be used to purchase shares on the last business day of the purchase period at a price equal to 85% of the fair market value of the shares on the first business day of the offering period (or for the initial offering period, 85% of the "Price to Public" set forth on the cover page for the final prospectus relating to the Company's initial public offering) or the last business day of the purchase period, whichever is lower, provided that no more than _____ shares of common

stock (or a lesser number as established by the plan administrator in advance of the purchase period) may be purchased by any one employee during each purchase period. Under applicable tax rules, an employee may purchase no more than $25,000 worth of shares of common stock, valued at the start of the offering period, under the 2019 ESPP for each calendar year in which a purchase right is outstanding.

The accumulated contributions of any employee who is not a participant on the last day of a purchase period will be refunded. An employee's rights under the 2019 ESPP terminate upon voluntary withdrawal from the plan or when the employee ceases employment with us for any reason.

The 2019 ESPP may be terminated or amended by our board of directors at any time, but will automatically terminate on the 10-year anniversary of this offering. An amendment that increases the number of shares of common stock that are authorized under the 2019 ESPP and certain other amendments will require the approval of our stockholders. The plan administrator may adopt subplans under the 2019 ESPP for employees of our non-U.S. subsidiaries.

Senior executive cash incentive bonus plan

In connection with this offering, our board of directors plans to adopt a Senior Executive Cash Incentive Bonus Plan (Bonus Plan). The Bonus Plan will provide for cash bonus payments based upon the attainment of performance targets established by our compensation committee. The payment targets will be related to financial and operational measures or objectives with respect to our company, or corporate performance goals, as well as individual performance objectives.

Certain Relationships and Related Party Transactions

We describe below transactions and series of similar transactions, since January 1, 2016 or currently proposed, to which we were a party or will be a party, in which:

- the amounts involved exceed $120,000; and
- any of our directors, executive officers or beneficial holders of more than 5% of any class of our capital stock had or will have a direct or indirect material interest.

Other than as described below, there have not been, nor are there any currently proposed, transactions or series of similar transactions meeting these criteria to which we have been or will be a party other than compensation arrangements, which are described where required under "Management" and "Executive Compensation."

Redeemable Convertible Preferred Stock Financings

Series E Redeemable Convertible Preferred Stock Financing

From February 2016 to June 2018, we sold an aggregate of 12,061,525 shares of our Series E redeemable convertible preferred stock at a purchase price of $10.599 per share, for an aggregate purchase price of $127.8 million, pursuant to our Series E redeemable convertible preferred stock financing. The following table summarizes purchases of our Series E redeemable convertible preferred stock by related persons:

Stockholder	Shares of Series E Redeemable Convertible Preferred Stock	Total Purchase Price
Entities affiliated with Sequoia Capital[1][2]	161,689	$ 1,713,741
Entities affiliated with Norwest[3][4]	1,698,274	18,000,006
UPMC[5]	2,997,916	31,774,911

(1) Affiliates of Sequoia Capital holding our securities, whose shares are aggregated for purposes of reporting the above share ownership information, are Sequoia Capital U.S. Growth Fund IV, L.P. and Sequoia Capital U.S. Growth Fund V, L.P. Affiliates of Sequoia Capital beneficially own more than 5% of our outstanding capital stock as of April 30, 2019.

(2) Michael Dixon, a member of our board of directors, is a former partner at Sequoia Capital.

(3) Affiliates of Norwest holding our securities, whose shares are aggregated for purposes of reporting the above share ownership information, are Norwest Venture Partners XI, LP and Norwest Venture Partners XII, LP. Affiliates of Norwest beneficially own more than 5% of our outstanding capital stock as of April 30, 2019.

(4) Promod Haque, a member of our board of directors, is a senior managing partner at Norwest.

(5) UPMC beneficially owns more than 5% of our outstanding capital stock as of April 30, 2019.

Series F Redeemable Convertible Preferred Stock Financing

In February 2019, we sold an aggregate of 875,585 shares of our Series F redeemable convertible preferred stock at a purchase price of $13.92 per share, for an aggregate purchase price of $12.2 million, pursuant to our Series F redeemable convertible preferred stock financing. The following table summarizes purchases of our Series F redeemable convertible preferred stock by related persons:

Stockholder	Shares of Series F Redeemable Convertible Preferred Stock	Total Purchase Price
Entities affiliated with Sequoia Capital[1][2]	71,839	$ 999,998
Entities affiliated with Norwest[3][4]	143,678	1,999,997
UPMC[5]	74,937	1,043,123

(1) Affiliates of Sequoia Capital holding our securities, whose shares are aggregated for purposes of reporting the above share ownership information, are Sequoia Capital U.S. Growth Fund IV, L.P., Sequoia Capital USGF Principals Fund IV, L.P. and Sequoia Capital U.S. Growth Fund V, L.P. Affiliates of Sequoia Capital beneficially own more than 5% of our outstanding capital stock as of April 30, 2019.

(2) Michael Dixon, a member of our board of directors, is a former partner at Sequoia Capital.

(3) Affiliates of Norwest holding our securities, whose shares are aggregated for purposes of reporting the above share ownership information, are Norwest Venture Partners XI, LP and Norwest Venture Partners XII, LP. Affiliates of Norwest beneficially own more than 5% of our outstanding capital stock as of April 30, 2019.

(4) Promod Haque, a member of our board of directors, is a senior managing partner at Norwest.

(5) UPMC beneficially owns more than 5% of our outstanding capital stock as of April 30, 2019.

2018 Tender Offer

In May 2018, we repurchased an aggregate of 1,596,843 shares of our outstanding common stock from holders of our common stock, at a purchase price of $10.599 per share for an aggregate purchase price of $16.9 million, which we refer to as the 2018 Tender Offer. The following table summarizes our repurchases of common stock from related persons.

Name	Title	Shares of Common Stock	Aggregate Purchase Price
Daniel Burton	Chief Executive Officer	384,911	$ 4,079,672
J. Patrick Nelli	Chief Financial Officer	21,072	223,342
Dale Sanders	Chief Technology Officer	75,478	799,991
Linda Llewelyn	Chief People Officer	1,981	20,997
Entity affiliated with Thomas Burton[1]	President of Professional Services	122,653	1,299,999
Steven Barlow	Senior Vice President	179,262	1,899,998

(1) An affiliate of Thomas Burton, Catalyst Investments LLC, sold shares in the 2018 Tender Offer. Thomas Burton is the brother of Daniel Burton, our CEO.

Investor Rights, Registration, and Stockholders Agreements

In connection with our redeemable convertible preferred stock financings, we entered into investor rights and registration agreements containing registration rights and information rights, among other things, with certain holders of our redeemable convertible preferred stock and certain holders of our common stock. Additionally, we entered into a stockholders agreement (Stockholders Agreement) containing voting rights relating to the composition of the board of directors, certain transfer restrictions, certain preemptive rights, and other voting rights, with certain holders of our redeemable convertible preferred stock and certain holders of our common stock. The parties to each of these agreements include the following holders of more than 5% of our capital stock: entities affiliated with Sequoia Capital, entities affiliated with Norwest, UPMC, entities affiliated with Thomas Burton, and Steven Barlow. The parties to each of these agreements also include the following officers, directors, and/or their affiliated entities: HQC Acquisition, LLC, an entity affiliated with Fraser Bullock, Matoaka, LLC, an entity affiliated with Todd Cozzens, Leerink Transformation Fund I L.P., an entity affiliated with Todd Cozzens, Omkara LLC, an entity affiliated with Anita V. Pramoda, Todd Cozzens, and John A. Kane. The parties to the Stockholders Agreement also include the following officers, directors, and or their affiliated entities as key holders: Dale Sanders. In addition, entities affiliated with Thomas Burton, our President of Professional Services and the brother of Daniel Burton, our CEO, are parties to the stockholders' agreement. We expect these stockholder agreements to terminate upon the completion of this offering, except for the registration rights granted under our registration agreement, as more fully described in "Description of Capital Stock–Registration Rights."

Employment Arrangements

Thomas Burton, one of our co-founders, a holder of over 5% of our outstanding capital stock, and the brother of Daniel Burton, our Chief Executive Officer and one of our directors, is a non-executive employee, currently serves as President of Professional Services, and has served with us since July 2008. Thomas Burton's base salary is currently $275,000. Jeffrey Selander, the brother-in-law of Daniel Burton, is a non-executive employee, currently serves as Senior

Vice President, and has served with us since September 2011. Mr. Selander's base salary is currently $250,000. Neither Thomas Burton nor Jeffrey Selander lives in the same household as Daniel Burton.

Steven Barlow, one of our co-founders and a holder of over 5% of our outstanding capital stock, is a non-executive employee, currently serves as Senior Vice President, and has served with us since July 2008.

We have entered into employment agreements with certain of our executive officers. For more information regarding these agreements with our named executive officers, see "Executive Compensation—Narrative to Summary Compensation Table—Executive employment arrangements."

Customer Relationships

Penny Wheeler, a member of our board of directors from July 2015 through December 2017, serves as the President and Chief Executive Officer of Allina Health. We maintain several on-going technology and professional service relationships with Allina Health. In the year ended December 31, 2017, we recognized $8.6 million in revenue under these contracts. We also leased building space from Allina Health and made rental payments to them of $0.6 million in the year ended December 31, 2017.

Timothy G. Ferris, a member of our board of directors since January 2018, serves as the Senior Vice President for Population Health Management at Partners HealthCare, a non-profit hospital and physicians network. We maintain two on-going technology and professional service relationships with Partners HealthCare, including a technology access and professional services relationship, and a licensing arrangement in which we license certain technology and know-how from Partners HealthCare related to our care management offerings. In the year ended December 31, 2018, we recognized $3.8 million in revenue under these contracts.

UPMC is a holder of more than 5% of our outstanding capital stock. We maintain two on-going technology and professional service relationships with UPMC, including a technology access and professional services relationship, and a license arrangement related to our activity-based costing offerings. In the years ended December 31, 2017 and 2018, we recognized $3.0 million and $4.9 million, respectively, in revenue under these contracts.

Stock Option Grants to Directors and Executive Officers

We have granted stock options to certain of our directors and executive officers. For more information regarding the stock options and stock awards granted to our directors and named executive officers see "Management—Non-Employee Director Compensation" and "Executive Compensation."

Other Transactions

We had an agreement with Donegal Advisory Services, LLC from January 2017 to January 2019 whereby Duncan Gallagher, a member of our board of directors and President of Donegal Advisory Services, LLC, received $7,083.33 per month in compensation as a retainer to serve as a strategic advisor.

Other than as described above, since January 1, 2016, we have not entered into any transactions, nor are there any currently proposed transactions, between us and a related party where the amount involved exceeds, or would exceed, $120,000, and in which any related person had or will have a direct or indirect material interest. We believe the terms of the transactions described above were comparable to terms we could have obtained in arms-length dealings with unrelated third parties.

Limitation of Liability and Indemnification of Directors and Officers

We expect to adopt an amended and restated certificate of incorporation, which will become effective immediately prior to the completion of this offering, and which will contain provisions that limit the liability of our directors for monetary damages to the fullest extent permitted by Delaware law. Consequently, our directors will not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for the following:

- any breach of their duty of loyalty to our company or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- any transaction from which they derived an improper personal benefit.

Any amendment to, or repeal of, these provisions will not eliminate or reduce the effect of these provisions in respect of any act, omission or claim that occurred or arose prior to that amendment or repeal. If the Delaware General Corporation Law is amended to provide for further limitations on the personal liability of directors of corporations, then the personal liability of our directors will be further limited to the greatest extent permitted by the Delaware General Corporation Law.

In addition, we expect to adopt amended and restated bylaws, which will become effective immediately prior to the completion of this offering, and which will provide that we will indemnify, to the fullest extent permitted by law, any person who is or was a party or is threatened to be made a party to any action, suit, or proceeding by reason of the fact that he or she is or was one of our directors or officers or is or was serving at our request as a director or officer of another corporation, partnership, joint venture, trust, or other enterprise. Our amended and restated bylaws are expected to provide that we may indemnify to the fullest extent permitted by law any person who is or was a party or is threatened to be made a party to any action, suit, or proceeding by reason of the fact that he or she is or was one of our employees or agents or is or was serving at our request as an employee or agent of another corporation, partnership, joint venture, trust, or other enterprise. Our amended and restated bylaws will also provide that we must advance expenses incurred by or on behalf of a director or officer in advance of the final disposition of any action or proceeding, subject to limited exceptions.

Further, we have entered into or will enter into indemnification agreements with each of our directors and executive officers that may be broader than the specific indemnification provisions contained in the Delaware General Corporation Law. These indemnification agreements require us, among other things, to indemnify our directors and executive officers against liabilities that may arise by reason of their status or service. These indemnification agreements also require us to advance all expenses incurred by the directors and executive officers in investigating or defending any such action, suit, or proceeding. We believe that these agreements are necessary to attract and retain qualified individuals to serve as directors and executive officers.

The limitation of liability and indemnification provisions that are expected to be included in our amended and restated certificate of incorporation, amended and restated bylaws, and in indemnification agreements that we have entered into or will enter into with our directors and executive officers may discourage stockholders from bringing a lawsuit against our directors and executive officers for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against our directors and executive officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and executive officers as required by these indemnification provisions. At present, we are not aware of any pending litigation or proceeding involving any person who is or was one of our directors, officers, employees or other agents or is or was serving at our request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, or other enterprise, for which indemnification is sought, and we are not aware of any threatened litigation that may result in claims for indemnification.

We have obtained insurance policies under which, subject to the limitations of the policies, coverage is provided to our directors and executive officers against loss arising from claims made by reason of breach of fiduciary duty or other wrongful acts as a director or executive officer, including claims relating to public securities matters, and to us with respect to payments that may be made by us to these directors and executive officers pursuant to our indemnification obligations or otherwise as a matter of law.

Certain of our non-employee directors may, through their relationships with their employers, be insured and/or indemnified against certain liabilities incurred in their capacity as members of our board of directors.

The underwriting agreement will provide for indemnification by the underwriters of us and our officers and directors for certain liabilities arising under the Securities Act or otherwise.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling our company pursuant to the foregoing provisions, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Related Party Transaction Policy

Prior to this offering, we have not had a formal policy regarding approval of transactions with related parties. Prior to the completion of this offering, we expect to adopt a written related person transaction policy that sets forth our procedures for the identification, review, consideration and approval or ratification of related person transactions. The policy will become effective immediately upon the execution of the underwriting agreement for this offering. For purposes of our policy only, a related person transaction is a transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which we and any related person are, were, or will be participants and in which the amount involved exceeds $120,000. Transactions involving compensation for services provided to us as an employee or director are not covered by this policy. A related person is any executive officer, director, or beneficial owner of more than 5% of any class of our voting securities, including any of their immediate family members and any entity owned or controlled by such persons.

Under the policy, if a transaction has been identified as a related person transaction, including any transaction that was not a related person transaction when originally consummated or any transaction that was not initially identified as a related person transaction prior to consummation, our management must present information regarding the related person transaction to our audit committee, or, if audit committee approval would be inappropriate, to another independent body of our board of directors, for review, consideration, and approval or ratification. The presentation must include a description of, among other things, the material facts, the interests, direct and indirect, of the related persons, the benefits to us of the transaction, and whether the transaction is on terms that are comparable to the terms available to or from, as the case may be, an unrelated third party or to or from employees generally. Under the policy, we will collect information that we deem reasonably necessary from each director, executive officer, and, to the extent feasible, significant stockholder to enable us to identify any existing or potential related person transactions and to effectuate the terms of the policy.

In addition, under our Code of Conduct, which we intend to adopt in connection with this offering, our employees and directors have an affirmative responsibility to disclose any transaction or relationship that reasonably could be expected to give rise to a conflict of interest.

In considering related person transactions, our audit committee, or other independent body of our board of directors, will take into account the relevant available facts and circumstances including, but not limited to:

- the risks, costs, and benefits to us;
- the impact on a director's independence in the event that the related person is a director, immediate family member of a director, or an entity with which a director is affiliated;
- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties or to or from employees generally.

The policy requires that, in determining whether to approve, ratify, or reject a related person transaction, our audit committee, or other independent body of our board of directors, must consider, in light of known circumstances, whether the transaction is in, or is not inconsistent with, our best interests and those of our stockholders, as our audit committee, or other independent body of our board of directors, determines in the good faith exercise of its discretion.

All of the transactions described above were entered into prior to the adoption of the written policy, but all were approved by our board of directors considering similar factors to those described above.

Principal Stockholders

The following table sets forth the beneficial ownership of our common stock as of April 30, 2019 and as adjusted to reflect the sale of common stock offered by us in this offering, for:

- each person, or group of affiliated persons, who is known by us to beneficially own more than 5% of our common stock;
- each of our named executive officers;
- each of our directors; and
- all of our executive officers and directors as a group.

The percentage ownership information shown in the table prior to this offering is based upon 56,362,798 shares of common stock outstanding as of April 30, 2019, after giving effect to the conversion of all outstanding shares of redeemable convertible preferred stock as of April 30, 2019 into an aggregate of 46,303,026 shares of our common stock. The percentage ownership information shown in the table after this offering is based upon shares of common stock outstanding as of , assuming the sale of shares of common stock by us in the offering and no exercise of the underwriters' option to purchase additional shares.

We have determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities. In addition, the rules include shares of common stock issuable pursuant to the exercise of stock options that are either immediately exercisable or exercisable on or before June 29, 2019, which is 60 days after April 30, 2019. These shares are deemed to be outstanding and beneficially owned by the person holding those options or warrants for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. The information contained in the following table is not necessarily indicative of beneficial ownership for any other purpose, and the inclusion of any shares in the table does not constitute an admission of beneficial ownership of those shares. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws.

Except as otherwise noted below, the address for persons listed in the table is c/o Health Catalyst, Inc., 3165 Millrock Drive #400, Salt Lake City, Utah 84121.

	Shares Beneficially Owned Prior to the Offering		Shares Beneficially Owned After the Offering	
	Number	Percentage	Number	Percentage
5% Stockholders:				
Entities affiliated with Norwest[(1)]	11,808,370	21.0 %		
Entities affiliated with Sequoia[(2)]	12,356,769	21.9 %		
UPMC[(3)]	3,572,853	6.3 %		
Steven Barlow[(4)]	2,852,961	5.1 %		
Entities affiliated with Thomas Burton[(5)]	2,998,720	5.3 %		
Directors and Named Executive Officers:				
Fraser Bullock[(6)]	2,436,576	4.3 %		
Todd Cozzens[(7)]	2,176,136	3.9 %		
Michael Dixon[(8)]	—	—		
Timothy G. Ferris[(9)]	44,271	*		

Duncan Gallagher[10]	65,104	*
Promod Haque[11]	11,808,370	21.0 %
John A. Kane[12]	160,332	*
Anita V. Pramoda[13]	309,322	*
Daniel Burton[14]	893,020	1.6 %
J. Patrick Nelli[15]	139,387	*
Dale Sanders[16]	591,406	1.0 %
All directors and executive officers as a group (14 persons)[17]	19,189,318	32.7 %

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*Represents beneficial ownership of less than 1%.

(1) Consists of (a) 5,904,186 shares of common stock issuable upon the conversion of the Series B, Series C, Series D, Series E, and Series F redeemable convertible preferred stock held by Norwest Venture Partners XI, LP (NVP XI) and (b) 5,904,184 shares of common stock issuable upon the conversion of the Series B, Series C, Series D, Series E, and Series F redeemable convertible preferred stock held by Norwest Venture Partners XII, LP (NVP XII). Genesis VC Partners XI, LLC, or Genesis XI, is the general partner of NVP XI and may be deemed to have sole voting and dispositive power over the shares held by NVP XI. Genesis VC Partners XII, LLC, or Genesis XII, is the general partner of NVP XII and may be deemed to have sole voting and dispositive power over the shares held by NVP XII. NVP Associates, LLC, the managing member of Genesis XI and Genesis XII, and each of Promod Haque, Jeffrey Crowe, and Jon E. Kossow, as Co-Chief Executive Officers of NVP Associates, LLC and members of the general partners, may be deemed to share voting and dispositive power over the shares held by NVP XI and NVP XII. Such persons and entities disclaim beneficial ownership of the shares held by NVP XI and NVP XII, except to the extent of any proportionate pecuniary interest therein. The address for these entities is 525 University Avenue, #800, Palo Alto, CA 94301.

(2) Consists of (i) 6,872,215 Series A redeemable convertible preferred stock, 1,463,780 Series B redeemable convertible preferred stock, 352,445 Series D redeemable convertible preferred stock, 120,927 Series E redeemable convertible preferred stock, and 53,663 Series F redeemable convertible preferred stock held by Sequoia Capital U.S. Growth Fund IV, LP (SC USGF IV), (ii) 302,785 Series A redeemable convertible preferred stock and 64,493 Series B redeemable convertible preferred stock held by Sequoia Capital USGF Principals Fund IV, LP (SC USGF IV PF), (iii) 119,387 Series D redeemable convertible preferred stock, 40,762 Series E redeemable convertible preferred stock, and 18,176 Series F redeemable convertible preferred stock held by Sequoia Capital U.S. Growth Fund V, LP (SC USGF V), and (iv) 2,948,136 Series C redeemable convertible preferred stock held by SC US GF V Holdings, Ltd. (SC USGF V Holdco). SC US (TTGP), Ltd. is the general partner of SCGF IV Management, L.P., which is the general partner of SC USGF IV and SC USGF IV PF (collectively, the SC USGF IV Funds). As a result, SC US (TTGP), Ltd. and SCGF IV Management, L.P. may be deemed to share voting and dispositive power with respect to the shares held by the SC USGF IV Funds. SC US (TTGP), Ltd. is the general partner of SCGF V Management, L.P., which is the general partner of SC USGF V and Sequoia Capital USGF Principals Fund V, L.P., or collectively “the SC USGF V Funds”, which together own 100% of the outstanding shares of SC USGF V Holdco. As a result, SC US (TTGP), Ltd. and SCGF V Management, L.P. may be deemed to share voting and dispositive power with respect to the shares held by the SC USGF V Funds and SC USGF V Holdco. The address for each of the Sequoia Capital entities identified in this footnote is 2800 Sand Hill Road, Suite 101, Menlo Park, California 94025.

(3) Consists of (a) 500,000 shares of common stock and (b) 3,072,853 shares of common stock issuable upon conversion of the Series E and F redeemable convertible preferred stock.

(4) Consists of 2,852,961 shares of Common Stock.

(5) Consists of (a) 930,345 shares of common stock held by Catalyst Investments, LLC, (b) 1,102,935 shares of common stock held by the Burton 2013 Descendants Trust, which Patricia Cardon Burton is a trustee, and Ms. Burton and Mr. Burton share voting and dispositive power, and (c) 965,440 shares of common stock held by the Thomas David Burton and Patricia Cardon Burton Multi-Generational Trust-II, which Mr. Burton is a trustee, and Ms. Burton and Mr. Burton shares voting and dispositive power. Mr. Burton holds the voting and dispositive power of Catalyst Investments, LLC.

(6) Consists of 2,436,576 shares of common stock issuable upon conversion of Series B, Series C, and Series D redeemable convertible preferred stock held by HQC Acquisition, LLC. Mr. Fraser is the President of HQC Acquisition, LLC, which is controlled by Sorenson Capital Partners. Mr. Fraser is a founding member and General Partner of Sorenson Capital Partners. Mr. Fraser and certain other officers of Sorenson Capital together share voting and dispositive power of HQC Acquisition, LLC.

(7) Consists of (a) 12,689 shares of common stock issuable upon conversion of the Series D redeemable convertible preferred stock held by Matoaka LLC, (b) 1,886,970 shares of common stock issuable upon conversion of the Series E redeemable convertible preferred stock held by Leerink Transformation Fund I, L.P., (c) 87,935 shares of common stock issuable upon conversion of the Series C redeemable convertible preferred stock held by Mr. Cozzens, (d) 180,729 shares of common stock, and (e) 7,813 shares of common stock underlying options exercisable within 60 days of April 30, 2019. Mr. Cozzens holds the voting and dispositive power of Matoaka LLC. Mr. Cozzens is a co-founder and Managing Partner and holds voting and dispositive power of Leerink Transformation Fund I, L.P.

(8) Does not include shares held by Sequoia Capital.

(9) Consists of 44,271 shares of common stock underlying options exercisable within 60 days of April 30, 2019.

(10) Consists of 65,104 shares of common stock underlying options exercisable within 60 days of April 30, 2019.

(11) Consists of shares held by the Norwest Entities identified in footnote 1. Mr. Haque is a Senior Managing Partner of Norwest and jointly with other partners holds the voting and dispositive power for the Norwest Entities.

(12)	Consists of (a) 48,353 shares of common stock issuable upon conversion of Series E and Series F redeemable convertible preferred stock, (b) 106,771 shares of common stock, and (c) 5,208 shares of common stock underlying options exercisable within 60 days of April 30, 2019.
(13)	Consists of (a) 188,697 shares of Series E redeemable convertible preferred stock held by Omkara, LLC, and (b) 120,625 shares of common stock underlying options exercisable within 60 days of April 30, 2019. Ms. Pramoda wholly-owns and holds the voting and dispositive power of Omkara, LLC.
(14)	Consists of 893,020 shares of common stock underlying options exercisable within 60 days of April 30, 2019.
(15)	Consists of (a) 13,000 shares of common stock, and (b) 126,387 shares of common stock underlying options exercisable within 60 days of April 30, 2019.
(16)	Consists of (a) 120,156 shares of common stock, and (b) 471,250 shares of common stock underlying options exercisable within 60 days of April 30, 2019.
(17)	Consists of (a) 16,890,246 shares of common stock, and common stock issuable upon conversion of the Series B, Series C, Series D, Series E, and Series F redeemable convertible preferred stock, and (b) 2,299,072 shares of common stock underlying options exercisable within 60 days of April 30, 2019.

Description of Capital Stock

The following descriptions of our capital stock, certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws, as each will be in effect upon the completion of this offering, and certain provisions of Delaware law are summaries. You should also refer to the amended and restated certificate of incorporation and the amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus is a part. We refer in this section to our amended and restated certificate of incorporation and amended and restated bylaws that we intend to adopt in connection with this offering as our certificate of incorporation and bylaws, respectively.

General

Upon the completion of this offering, our authorized capital stock will consist of 500,000,000 shares of common stock, par value of $0.001 per share, and 25,000,000 shares of preferred stock, par value of $0.001 per share. All of our authorized preferred stock upon the completion of this offering will be undesignated.

Common Stock

As of March 31, 2019, after giving effect to the conversion of all outstanding shares of our redeemable convertible preferred stock into shares of common stock in connection with the completion of this offering, there would have been outstanding:

- 56,156,484 shares of common stock held by 127 stockholders; and
- 16,266,375 shares of common stock issuable upon exercise of outstanding options.

Voting Rights

Our common stock is entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, including the election of directors, and does not have cumulative voting rights. Accordingly, the holders of a majority of the shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election.

Dividends

Subject to preferences that may be applicable to any then outstanding redeemable convertible preferred stock, the holders of common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any outstanding shares of redeemable convertible preferred stock.

Rights and Preferences

Holders of our common stock have no preemptive, conversion, or subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences, and privileges of the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our redeemable convertible preferred stock that we may designate and issue in the future.

Fully Paid and Nonassessable

All of our outstanding shares of common stock are, and the shares of common stock to be issued in this offering will be, fully paid and nonassessable.

Preferred Stock

As of March 31, 2019, we had outstanding an aggregate of 46,303,026 shares of our redeemable convertible preferred stock held by 40 stockholders.

Immediately prior to the completion of this offering, all outstanding shares of our redeemable convertible preferred stock as of March 31, 2019 will convert into 46,303,026 shares of our common stock.

Immediately prior to the completion of this offering, our certificate of incorporation will be amended and restated to delete all references to such shares of redeemable convertible preferred stock. Under the amended and restated certificate of incorporation, our board of directors will have the authority, without further action by the stockholders, to issue up to 25,000,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the rights, preferences, and privileges of the shares of each wholly unissued series and any qualifications, limitations, or restrictions thereon and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control that may otherwise benefit holders of our common stock and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

Options and Restricted Stock Units

As of March 31, 2019, options to purchase an aggregate of 16,266,375 shares of our common stock were outstanding under our 2011 Plan at a weighted-average exercise price of $5.26 per share. After March 31, 2019, options to purchase an aggregate of 82,250 shares of our common stock were granted under our 2011 Plan at a weighted-average exercise price of $10.31 per share.

After March 31, 2019, 75,000 shares of our common stock subject to restricted stock units were granted under our 2011 Plan, releasable upon satisfaction of service and liquidity conditions.

For additional information regarding the terms of our 2011 Plan, see "Executive Compensation-Employee Benefits and Equity Compensation Plans—2011 Stock Incentive Plan."

Common Stock Warrants

As of March 31, 2019, warrants to purchase an aggregate of up to 510,674 shares of our common stock were outstanding at an exercise price of $5.33 per share.

Registration Rights

After the completion of this offering, certain holders of our common stock, including holders of the shares of our common stock that will be issued upon conversion of our redeemable convertible preferred stock in connection with this offering, will be entitled to certain rights with respect to registration of such shares under the Securities Act, pursuant to the terms of a registration agreement. These shares are collectively referred to herein as registrable securities.

The registration agreement provides the holders of registrable securities with demand, piggyback, and S-3 registration rights as described more fully below. As of March 31, 2019, after giving effect to the conversion of all outstanding shares of redeemable convertible preferred stock into shares of our common stock in connection with the completion of the offering, there would have been an aggregate of 48,437,193 shares of common stock that were entitled to demand and S-3 registration rights and 48,437,193 shares of common stock that were entitled to piggyback registration rights.

Demand Registration Rights

At any time beginning 180 days after the effective date of the registration statement of which this prospectus forms a part, the holders of a majority of the registrable securities then outstanding have the right to make up to two demands that we file a registration statement under the Securities Act covering registrable securities then outstanding having an aggregate offering price of at least $20.0 million, subject to specified exceptions.

Piggyback Registration Rights

If we register any securities for public sale, the holders of our registrable securities then outstanding will each be entitled to notice of the registration and will have the right to include their shares in the registration statement.

These piggyback registration rights are subject to specified conditions and limitations, including the right of the underwriters of any underwritten offering to limit the number of shares with registration rights to be included in the registration statement.

Registration on Form S-3

If we are eligible to file a registration statement on Form S-3, the holders of registrable securities have the right to demand that we file registration statements on Form S-3; provided, that the aggregate price to the public of the securities to be sold under the registration statement is at least $5.0 million. The right to have such shares registered on Form S-3 is further subject to other specified conditions and limitations.

Expenses of Registration

We will pay all expenses relating to any demand, piggyback, or Form S-3 registration, other than underwriting discounts and commissions, subject to specified conditions and limitations.

Termination of Registration Rights

The registration rights will terminate with respect to any particular stockholder when such stockholder is able to sell its shares without limitation pursuant to Rule 144 under the Securities Act.

Forum Selection

The Court of Chancery of the State of Delaware will be the sole and exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: (i) any derivative action or proceeding brought on behalf of the company, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer, or other employee of the company to the company or the company's stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, or (iv) any action asserting a claim governed by the internal affairs doctrine. This exclusive forum provision will not apply to any causes of action arising under the Securities Act or the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the company shall be deemed to have notice of and consented to the foregoing forum selection provisions. The provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act.

Anti-Takeover Provisions

Anti-Takeover Statute

We are subject to Section 203 of the Delaware General Corporation Law, or the DGCL, which generally prohibits a publicly held Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, those shares owned (1) by persons who are directors and also officers and (2) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 $^{2}/_{3}$% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines a "business combination" to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge, or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges, or other financial benefits by or through the corporation.

In general, Section 203 defines an "interested stockholder" as an entity or person who, together with the person's affiliates and associates, beneficially owns, or within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

Anti-Takeover Effects of Certain Provisions of our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws to be in Effect Upon the Completion of this Offering Our amended and restated certificate of incorporation and our amended and restated bylaws will include a number of provisions that could deter hostile takeovers or delay or prevent changes in control of our board of directors or management team, including the following:

- Board of Directors Vacancies. Our amended and restated certificate of incorporation and amended and restated bylaws will authorize only our board of directors to fill vacant directorships, including newly created seats. In addition, the number of directors constituting our board of directors will be permitted to be set only by a resolution adopted by a majority vote of our entire board of directors. These provisions would prevent a

stockholder from increasing the size of our board of directors and then gaining control of our board of directors by filling the resulting vacancies with its own nominees. This makes it more difficult to change the composition of our board of directors and promotes continuity of management.

- Classified Board. Our amended and restated certificate of incorporation and amended and restated bylaws will provide that our board of directors is classified into three classes of directors. A third party may be discouraged from making a tender offer or otherwise attempting to obtain control of us as it is more difficult and time consuming for stockholders to replace a majority of the directors on a classified board of directors. See "Management—Board Composition."
- Stockholder Action; Special Meeting of Stockholders. Our amended and restated certificate of incorporation will provide that our stockholders may not take action by written consent, but may only take action at annual or special meetings of our stockholders. As a result, a holder controlling a majority of our capital stock would not be able to amend our amended and restated bylaws or remove directors without holding a meeting of our stockholders called in accordance with our amended and restated bylaws. Our amended and restated bylaws will further provide that special meetings of our stockholders may be called only by a majority of our board of directors, the Chairperson of our board of directors, our Chief Executive Officer, or our President, thus prohibiting a stockholder from calling a special meeting. These provisions might delay the ability of our stockholders to force consideration of a proposal or for stockholders controlling a majority of our capital stock to take any action, including the removal of directors.

- Advance Notice Requirements for Stockholder Proposals and Director Nominations. Our amended and restated bylaws will provide advance notice procedures for stockholders seeking to bring business before our annual meeting of stockholders or to nominate candidates for election as directors at our annual meeting of stockholders. Our amended and restated bylaws will also specify certain requirements regarding the form and content of a stockholder's notice. These provisions might preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders if the proper procedures are not followed. We expect that these provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of our company.

- No Cumulative Voting. The Delaware General Corporation Law provides that stockholders are not entitled to cumulate votes in the election of directors unless a corporation's certificate of incorporation provides otherwise. Our amended and restated certificate of incorporation will not provide for cumulative voting.

- Directors Removed Only for Cause. Our amended and restated certificate of incorporation will provide that stockholders may remove directors only for cause.

- Amendment of Charter Provisions. Any amendment of the above provisions in our amended and restated certificate of incorporation would require approval by holders of at least two-thirds of our then outstanding common stock.

- Issuance of Undesignated Preferred Stock. Our board of directors will have the authority, without further action by the stockholders, to issue up to 25,000,000 shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by our board of directors. The existence of authorized but unissued shares of preferred stock would enable our board of directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or other means.

The combination of these provisions will make it more difficult for another party to obtain control of us by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for another party to effect a change in management.

These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to reduce our vulnerability to hostile takeovers and to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of delaying changes in our control or management. As a consequence, these provisions may also inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts. We believe that the benefits of these provisions, including increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure our company, outweigh the disadvantages of discouraging takeover proposals, because negotiation of takeover proposals could result in an improvement of their terms.

Listing

We have applied to list our common stock on The Nasdaq Global Select Market under the trading symbol "HCAT".

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC. The transfer agent's address is 6201 15th Avenue, Brooklyn, NY 11219.

Shares Eligible for Future Sale

Prior to this offering, no public market existed for our capital stock, and although we expect that our common stock will be approved for listing on The Nasdaq Global Select Market, we cannot assure investors that there will be an active public market for our common stock following this offering. We cannot predict what effect, if any, sales of our shares in the public market or the availability of shares for sale will have on the market price of our common stock. Future sales of substantial amounts of common stock in the public market, the availability of shares for future sale, or the perception that such sales may occur, however, could adversely affect the market price of our common stock and also could adversely affect our future ability to raise capital through the sale of our common stock or other equity-related securities at times and prices we believe appropriate.

Based on our shares outstanding as of March 31, 2019, upon the completion of this offering, shares of our common stock will be outstanding, or shares of our common stock if the underwriters exercise their option to purchase additional shares in full.

All of the shares of our common stock sold in this offering will be freely tradable without restrictions or further registration under the Securities Act, except for any shares sold to our "affiliates," as that term is defined under Rule 144 under the Securities Act. The outstanding shares of our common stock held by existing stockholders are "restricted securities," as that term is defined in Rule 144 under the Securities Act. Restricted securities may be sold in the public market only if the offer and sale is registered under the Securities Act or if the offer and sale of those securities qualifies for exemption from registration, including exemptions provided by Rules 144 or 701 promulgated under the Securities Act.

As a result of lock-up agreements and market standoff provisions described below and the provisions of Rules 144 and 701, shares of our common stock will be available for sale in the public market as follows:

- shares of our common stock will be eligible for immediate sale upon the completion of this offering; and

- approximately shares of our common stock will be eligible for sale upon expiration of lock-up agreements and market standoff provisions described below, beginning 181 days after the date of this prospectus, subject in certain circumstances to the volume, manner of sale, and other limitations under Rule 144 and Rule 701.

We may issue shares of our capital stock from time to time for a variety of corporate purposes, including in capital-raising activities through future public offerings or private placements, in connection with the exercise of stock options and warrants, vesting of restricted stock units, and other issuances relating to our employee benefit plans and as consideration for future acquisitions, investments, or other purposes. The number of shares of our capital stock that we may issue may be significant, depending on the events surrounding such issuances. In some cases, the shares we issue may be freely tradable without restriction or further registration under the Securities Act; in other cases, we may grant registration rights covering the shares issued in connection with these issuances, in which case the holders of the shares will have the right, under certain circumstances, to cause us to register any resale of such shares to the public.

Rule 144

In general, persons who have beneficially owned restricted shares of our common stock for at least six months, and any affiliate of ours who owns either restricted or unrestricted shares of our common stock, are entitled to sell their securities without registration with the SEC under an exemption from registration provided by Rule 144 under the Securities Act.

Non-Affiliates

Any person who is not deemed to have been one of our affiliates at the time of, or at any time during the three months preceding, a sale may sell an unlimited number of restricted securities under Rule 144 if:

- the restricted securities have been held for at least six months, including the holding period of any prior owner other than one of our affiliates;
- we have been subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale; and
- we are current in our Exchange Act reporting at the time of sale.

Any person who is not deemed to have been an affiliate of ours at the time of, or at any time during the three months preceding, a sale and has held the restricted securities for at least one year, including the holding period of any prior owner other than one of our affiliates, will be entitled to sell an unlimited number of restricted securities without regard to the length of time we have been subject to Exchange Act periodic reporting or whether we are current in our Exchange Act reporting.

Affiliates

Persons seeking to sell restricted securities who are our affiliates at the time of, or any time during the three months preceding, a sale, would be subject to the restrictions described above. Sales of restricted or unrestricted shares of our common stock by affiliates are also subject to additional restrictions, by which such person would be required to comply with the manner of sale and notice provisions of Rule 144 and would be entitled to sell within any three-month period only that number of securities that does not exceed the greater of either of the following:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately shares immediately after the completion of this offering based on the number of shares outstanding as of March 31, 2019; or
- the average weekly trading volume of our common stock on The Nasdaq Global Select Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Rule 701

In general, under Rule 701 a person who purchased shares of our common stock pursuant to a written compensatory plan or contract and who is not deemed to have been one of our affiliates during the immediately preceding 90 days may sell these shares in reliance upon Rule 144, but without being required to comply with the notice, manner of sale, public information requirements or volume limitation provisions of Rule 144. Rule 701 also permits affiliates to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144. All holders of Rule 701 shares, however, are required to wait until 90 days after the date of this prospectus before selling such shares pursuant to Rule 701. As of March 31, 2019, 196,327 shares of our outstanding common stock had been issued in reliance on Rule 701 as a result of exercises of stock options.

Form S-8 Registration Statements

As of March 31, 2019, options to purchase an aggregate 16,266,375 shares of our common stock were outstanding. As soon as practicable after the completion of this offering, we intend to file with the SEC one or more registration statements on Form S-8 under the Securities Act to register the shares of our common stock that are issuable pursuant to our equity incentive plans, including pursuant to outstanding options. See “Executive Compensation—Employee benefits and equity compensation plans” for a description of our equity incentive plans. These registration statements will become effective immediately upon filing. Shares covered by these registration statements will then be eligible for sale in the public markets, subject to vesting restrictions, any applicable lock-up agreements described below and Rule 144 limitations applicable to affiliates.

Lock-Up Agreements

In connection with this offering, we, our directors and officers, and the holders of substantially all of our common stock and substantially all of our option holders outstanding immediately prior to this offering have agreed, subject to certain exceptions, not to offer, sell, transfer, or hedge any of our common stock or securities convertible into or exchangeable for our common stock for 180 days after the date of this prospectus without the prior written consent of Goldman Sachs & Co. LLC and J.P. Morgan Securities LLC on behalf of the underwriters.

The agreements do not contain any pre-established conditions to the waiver by Goldman Sachs & Co. LLC and J.P. Morgan Securities LLC on behalf of the underwriters of any terms of the lock-up agreements. Any determination to release shares subject to the lock-up agreements would be based on a number of factors at the time of determination, including but not necessarily limited to the market price of our common stock, the liquidity of the trading market for our common stock, general market conditions, the number of shares proposed to be sold and the timing, purpose, and terms of the proposed sale.

In addition to the restrictions contained in the lock-up agreements described above, we have entered into agreements with certain of our security holders, including our investors' rights agreement and agreements governing our equity awards, that contain market stand-off provisions imposing restrictions on the ability of such security holders to offer, sell or transfer our equity securities for a period of 180 days following the date of this prospectus.

Registration Rights

Upon the completion of this offering, the holders of 48,437,193 shares of our common stock will be entitled to certain rights with respect to the registration of the offer and sale of their shares under the Securities Act. Registration of the offer and sale of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act immediately upon the effectiveness of the registration. See "Description of Capital Stock—Registration Rights" for additional information.

Material U.S. Federal Income Tax Consequences for Non-U.S. Holders of Our Common Stock

The following is a general discussion of the material U.S. federal income tax consequences of the acquisition, ownership, and disposition of our common stock by "Non-U.S. Holders" (as defined below). This discussion is for general information purposes only and does not consider all aspects of U.S. federal income taxation that may be relevant to particular Non-U.S. Holders in light of their individual circumstances or to certain types of Non-U.S. Holders subject to special tax rules, including banks, financial institutions or other financial services entities, broker-dealers, insurance companies, tax-exempt organizations, pension plans, real estate investment trusts, regulated investment companies, controlled foreign corporations, passive foreign investment companies, corporations that accumulate earnings to avoid U.S. federal income tax, persons who use or are required to use mark-to-market accounting, persons that have a functional currency other than the U.S. dollar, persons that hold our shares as part of a "straddle," a "hedge", a "conversion transaction," "synthetic security", integrated investment or other risk reduction strategy, certain former citizens or permanent residents of the United States, persons who hold or receive shares of our common stock pursuant to the exercise of an employee stock option or otherwise as compensation, persons that own, or are deemed to own, more than 5% of our common stock (except to the extent specifically set forth below), or investors in partnerships or other pass-through entities (or entities that are treated as partnerships or disregarded entities for U.S. federal income tax purposes). In addition, this discussion does not address the effects of any applicable gift or estate tax, the potential application of the alternative minimum tax, the rules regarding qualified small business stock within the meaning of Section 1202 of the Code, any election to apply Section 1400Z-2 of the Code to gains recognized with respect to shares of our common stock, the Medicare contribution tax on net investment income, or any tax considerations that may apply to Non-U.S. Holders of our common stock under state, local or non-U.S. tax laws and any other U.S. federal tax laws.

This discussion is based on the Code and applicable Treasury Regulations promulgated thereunder and rulings, administrative pronouncements and judicial decisions that are issued and available as of the date of this registration statement, all of which are subject to change or differing interpretations at any time with possible retroactive effect. We have not sought, and will not seek, any ruling from the Internal Revenue Service, or the IRS, with respect to the tax consequences discussed herein, and there can be no assurance that the IRS will not take a position contrary to the tax consequences discussed below or that any position taken by the IRS would not be sustained. This discussion is limited to a Non-U.S. Holder who will hold our common stock as a capital asset within the meaning of the Code (generally, property held for investment). For purposes of this discussion, the term "Non-U.S. Holder" means a beneficial owner of our shares that is not a partnership (or entity or arrangement treated as a partnership for U.S. federal income tax purposes) and is not, for U.S. federal income tax purposes, any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity treated as a corporation) created or organized in the United States or under the laws of the United States or of any state thereof or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust if (1) a court within the United States can exercise primary supervision over the trust's administration and one or more U.S. persons have the authority to control all of the trust's substantial decisions or (2) the trust has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person.

If a partnership (or entity or arrangement treated as a partnership for U.S. federal income tax purposes) is a beneficial owner of our common stock, the tax treatment of such partnership and a partner in such partnership generally will depend upon the status of the partner and the activities of the partnership. If you are a partner of a partnership holding our shares, you should consult your tax advisor regarding the tax consequences of the purchase, ownership, and disposition of our common stock.

THIS SUMMARY IS NOT INTENDED TO BE TAX ADVICE. PROSPECTIVE INVESTORS SHOULD CONSULT THEIR TAX ADVISORS REGARDING THE PARTICULAR U.S. FEDERAL INCOME TAX CONSEQUENCES TO THEM OF ACQUIRING, OWNING AND DISPOSING OF OUR COMMON STOCK, AS WELL AS ANY TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL, OR FOREIGN TAX LAWS AND ANY OTHER U.S. FEDERAL TAX LAWS.

Distributions on Our Common Stock

In general, subject to the discussion below under the headings "Information Reporting and Backup Withholding" and "Foreign Accounts," distributions, if any, paid on our common stock to a Non-U.S. Holder (to the extent paid out of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles) will constitute dividends and be subject to U.S. withholding tax at a rate equal to 30% of the gross amount of the dividend, or a lower rate prescribed by an applicable income tax treaty, unless the dividends are effectively connected with a trade or business carried on by the Non-U.S. Holder within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment or fixed base in the United States to which such dividends are attributable). Any distribution not constituting a dividend (because such distribution exceeds our current and accumulated earnings and profits) will be treated first as reducing the Non-U.S. Holder's basis in its shares of common stock, but not below zero, and to the extent it exceeds the Non-U.S. Holder's basis, as capital gain from the sale or exchange of such shares of common stock (see "Gain on Sale, Exchange or Other Disposition of Our Common Stock" below).

A Non-U.S. Holder who claims the benefit of an applicable income tax treaty generally will be required to satisfy certain certification and other requirements prior to the distribution date. Such Non-U.S. Holders must generally provide us and/or our paying agent, as applicable, with a properly executed IRS Form W-8BEN or IRS Form W-8BEN-E (or other appropriate form) claiming an exemption from or reduction in withholding under an applicable income tax treaty. Such certificate must be provided before the payment of dividends and must be updated periodically. If a Non-U.S. Holder holds common stock through a financial institution or other agent acting on the Non-U.S. Holder's behalf, the Non-U.S. Holder will be required to provide appropriate documentation to the agent, which then will be required to provide certification to us or our paying agent, either directly or through intermediaries. If tax is withheld in an amount in excess of the amount applicable under an income tax treaty, a refund of the excess amount may generally be obtained by a Non-U.S. Holder by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under an applicable income tax treaty.

Dividends that are effectively connected with a Non-U.S. Holder's conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, attributable to a U.S. permanent establishment or fixed base of the Non-U.S. Holder) generally will not be subject to U.S. federal withholding tax if the Non-U.S. Holder satisfies applicable certification and disclosure requirements, including on IRS Form W-8ECI, with us and/or our paying agent, as applicable, but instead generally will be subject to U.S. federal income tax on a net income basis at regular graduated rates in the same manner as if the Non-U.S. Holder were a resident of the United States. A corporate Non-U.S. Holder that receives effectively connected dividends may be subject to an additional branch profits tax at a rate of 30%, or a lower rate prescribed by an applicable income tax treaty.

Gain on Sale, Exchange, or Other Disposition of Our Common Stock

In general, subject to the discussion below under the headings "Information Reporting and Backup Withholding" and "Foreign Accounts," a Non-U.S. Holder will not be subject to U.S. federal income tax or withholding tax on any gain realized upon such holder's sale, exchange, or other disposition of shares of our common stock unless:

(1)	the gain is effectively connected with a trade or business carried on by the Non-U.S. Holder within the United States (and, if required by an applicable income tax treaty, attributable to a U.S. permanent establishment or fixed base of the Non-U.S. Holder);
(2)	the Non-U.S. Holder is an individual who is present in the United States for 183 days or more in the taxable year of disposition and certain other conditions are met; or
(3)	we are or have been a "United States real property holding corporation" for U.S. federal income tax purposes at any time during the shorter of the five-year period ending on the date of disposition or the period that the

Non-U.S. Holder held the common stock, and, in the case where shares of our common stock are regularly traded on an established securities market, the Non-U.S. Holder owns, or is treated as owning, more than 5% of our common stock at any time during the foregoing period.

Net gain realized by a Non-U.S. Holder described in clause (1) above generally will be subject to U.S. federal income tax in the same manner as if the Non-U.S. Holder were a resident of the United States. Any gains of a corporate Non-U.S. Holder described in clause (1) above may also be subject to an additional "branch profits tax" at a 30% rate, or such lower rate as may be specified by an applicable income tax treaty.

Gain realized by an individual Non-U.S. Holder described in clause (2) above will be subject to a flat 30% tax, or such lower rate specified in an applicable income tax treaty, which gain may be offset by U.S. source capital losses, even though the individual is not considered a resident of the United States.

For purposes of clause (3) above, a corporation is a United States real property holding corporation, or USRPHC, if the fair market value of its United States real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. We believe that we are not, and we do not anticipate that we will become, a USRPHC. However, because the determination of whether we are a USRPHC depends on the fair market value of our U.S. real property interests relative to the fair market value of our worldwide real property interests and other business assets, there can be no assurance that we will not become a USRPHC in the future. Even if we became a USRPHC, a Non-U.S. Holder would not be subject to U.S. federal income tax on a sale, exchange or other taxable disposition of our common stock by reason of our status as a USRPHC so long as our common stock is regularly traded on an established securities market (within the meaning of the applicable regulations) and such Non-U.S. Holder does not own and is not deemed to own (directly, indirectly or constructively) more than 5% of our outstanding common stock at any time during the shorter of the five-year period ending on the date of disposition and such holder's holding period. However, no assurance can be provided that our common stock will be regularly traded on an established securities market for purposes of the rules described above. If we are a USRPHC and either our common stock is not regularly traded on an established securities market or a Non-U.S. Holder holds or is deemed to hold (directly, indirectly or constructively) more than 5% of our outstanding common stock during the applicable testing period, a Non-U.S. Holder will generally be taxed on its net

gain derived from the disposition of our common stock at the graduated U.S. federal income tax rates applicable to U.S. persons (as defined in the Code). Prospective investors are encouraged to consult their own tax advisors regarding the possible consequences to them if we are, or were to become, a USRPHC.

Information Reporting and Backup Withholding

Generally, we must report annually to the IRS and to each Non-U.S. Holder the amount of dividends paid, the name and address of the recipient, and the amount, if any, of tax withheld. These information reporting requirements apply even if withholding was not required because the dividends were effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States or withholding was reduced by an applicable income tax treaty. Under applicable income tax treaties or other agreements, the IRS may make its reports available to the tax authorities in the Non-U.S. Holder's country of residence or the country in which the Non-U.S. Holder was established.

Dividends paid to a Non-U.S. Holder that is not an exempt recipient generally will be subject to backup withholding, currently at a rate of 24%, unless the Non-U.S. Holder certifies to the payor as to its foreign status, which certification may generally be made on an applicable IRS Form W-8.

Proceeds from the sale or other disposition of common stock by a Non-U.S. Holder effected by or through a U.S. office of a broker will generally be subject to information reporting and backup withholding, currently at a rate of 24%, unless the Non-U.S. Holder certifies to the withholding agent under penalties of perjury as to, among other things, its name, address and status as a Non-U.S. Holder or otherwise establishes an exemption. Payment of disposition proceeds effected outside the United States by or through a non-U.S. office of a non-U.S. broker generally will not be subject to information reporting or backup withholding if the payment is not received in the United States. Information reporting, but generally not backup withholding, will apply to such a payment if the broker has certain connections with the United States unless the broker has documentary evidence in its records that the beneficial owner thereof is a Non-U.S. Holder and specified conditions are met or an exemption is otherwise established.

Backup withholding is not an additional tax. Any amount withheld under the backup withholding rules from a payment to a Non-U.S. Holder that results in an overpayment of taxes generally will be refunded or credited against the holder's U.S. federal income tax liability, if any, provided that the required information is timely furnished to the IRS.

Foreign Accounts

The Foreign Account Tax Compliance Act (FATCA) generally imposes a 30% withholding tax on dividends on, and, subject to the discussion below regarding proposed regulations recently issued by the U.S. Treasury Department, gross proceeds from the sale or disposition of, our common stock if paid to a foreign entity unless (1) if the foreign entity is a "foreign financial institution," the foreign entity undertakes certain due diligence, reporting, withholding, and certification obligations, (2) if the foreign entity is a "non-financial foreign entity," the foreign entity identifies certain direct and indirect U.S. holders of debt or equity interests in such foreign entity or certifies that there are none or (3) the foreign entity is otherwise exempt from FATCA.

Withholding under FATCA generally (1) applies to payments of dividends on our common stock and (2) will, subject to the discussion below regarding proposed regulations recently issued by the U.S. Treasury Department, apply to payments of gross proceeds from a sale or other disposition of our common stock made after December 31, 2018. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this section. Under certain circumstances, a Non-U.S. Holder may be eligible for refunds or credits of the tax.

The U.S. Treasury recently released proposed regulations which, if finalized in their present form, would eliminate the federal withholding tax of 30% applicable to the gross proceeds of a sale or other disposition of our common stock. In its preamble to such proposed regulations, the U.S. Treasury stated that taxpayers may generally rely on the proposed regulations until final regulations are issued. Prospective investors should consult their own tax advisors regarding the possible impact of these FATCA rules on their investment in our common stock, and the possible impact of FATCA and the proposed regulations on the entities through which they hold our common stock, including, without limitation, the process and deadlines for meeting the applicable requirements to prevent the imposition of this 30% withholding tax.

Underwrit

Underwriting

We and the underwriters named below have entered into an underwriting agreement with respect to the shares being offered. Subject to certain conditions, each underwriter has severally agreed to purchase the number of shares indicated in the following table. Goldman Sachs & Co. LLC and J.P. Morgan Securities LLC are the representatives of the underwriters.

Underwriters	Number of Shares
Goldman Sachs & Co. LLC	
J.P. Morgan Securities LLC	
William Blair & Co., L.L.C.	
Piper Jaffray & Co.	
Evercore Group L.L.C.	
SVB Leerink LLC	
SunTrust Robinson Humphrey, Inc.	

Total

The underwriters are committed to take and pay for all of the shares being offered, if any are taken, other than the shares covered by the option described below unless and until this option is exercised.

The underwriters have an option to buy up to an additional shares from us to cover sales by the underwriters of a greater number of shares than the total number set forth in the table above. They may exercise that option for 30 days. If any shares are purchased pursuant to this option, the underwriters will severally purchase shares in approximately the same proportion as set forth in the table above.

The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters by us. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase up to additional shares from us.

	No Exercise	Full Exercise
Per Share	$	$
Total	$	$

Shares sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to $ per share from the initial public offering price. After the initial offering of the shares, the representatives may change the offering price and the other selling terms. The offering of the shares by the underwriters is subject to receipt and acceptance and subject to the underwriters' right to reject any order in whole or in part.

We and our executive officers, directors, and holders of all of our common stock and securities convertible into or exchangeable for our common stock have agreed or will substantially agree with the underwriters, subject to certain exceptions, not to dispose of or hedge any of our or their common stock or securities convertible into or exchangeable for shares of common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus, except with the prior written consent of Goldman Sachs & Co. LLC and J.P. Morgan Securities LLC. This agreement does not apply to any existing employee benefit plans. See "Shares Eligible for Future Sale" for a discussion of certain transfer restrictions.

In connection with the offering, the underwriters may purchase and sell shares of our common stock in the open market. These transactions may include short sales, stabilizing transactions, and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering, and a short position represents the amount of such sales that have not been covered by subsequent purchases. A "covered short position" is a short position that is not greater than the amount of additional shares for which the underwriters' option described above may be exercised. The underwriters may cover any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to cover the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase additional shares pursuant to the option described above. "Naked" short sales are any short sales that create a short position greater than the amount of additional shares for which the option described above may be exercised. The underwriters must cover any such naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Purchases to cover a short position and stabilizing transactions, as well as other purchases by the underwriters for their own accounts, may have the effect of preventing or retarding a decline in the market price of our stock, and together with the imposition of the penalty bid, may stabilize, maintain or otherwise affect the market price of the common stock. As a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. The underwriters are not required to engage in these activities and may end any of these activities at any time. These transactions may be effected on The Nasdaq Global Select Market, in the over-the-counter market or otherwise.

We estimate that our share of the total expenses of the offering, excluding underwriting discounts and commissions, will be approximately $ million. We have agreed to reimburse the underwriters for certain of their expenses in an amount up to $40,000.

We have agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act.

The underwriters and their respective affiliates are full-service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage, and other financial and non-financial activities and services. Certain of the underwriters and their respective affiliates have provided, and may in the future provide, a variety of these services to the issuer and to persons and entities with relationships with the issuer, for which they received or will receive customary fees and expenses. In addition, affiliates of SVB Leerink LLC are lenders under the SVB Debt Agreements.

In the ordinary course of their various business activities, the underwriters and their respective affiliates, officers, directors, and employees may purchase, sell, or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps, and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities, or instruments of the issuer (directly, as collateral securing other obligations or otherwise) or persons and entities with relationships with the

issuer. The underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas or publish or express independent research views in respect of such assets, securities, or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities, and instruments.

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a Relevant Member State) an offer to the public of our common stock may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of our common stock may be made at any time under the following exemptions under the Prospectus Directive:

- To any legal entity which is a qualified investor as defined in the Prospectus Directive;
- To fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive), subject to obtaining the prior consent of the Representatives for any such offer; or
- In any other circumstances falling within Article 3(2) of the Prospectus Directive;

provided that no such offer or shares of our common stock shall require us or any underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to public" in relation to our common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and our common stock to be offered so as to enable an investor to decide to purchase our common stock, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, and the expression "Prospectus Directive" means Directive 2003/71/EC (as amended), including by Directive 2010/73/EU and includes any relevant implementing measure in the Relevant Member State.

This European Economic Area selling restriction is in addition to any other selling restrictions set out below.

United Kingdom

In the United Kingdom, this prospectus is only addressed to and directed at qualified investors who are (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the Order); or (ii) high net worth entities and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as relevant persons). Any investment or investment activity to which this prospectus relates is available only to relevant persons and will only be engaged in with relevant persons. Any person who is not a relevant person should not act or rely on this prospectus or any of its contents.

Canada

The securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions, and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption form, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Hong Kong

The securities may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong) (Companies (Winding Up and Miscellaneous Provisions) Ordinance) or which do not constitute an invitation to the public within the meaning of the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) (Securities and Futures Ordinance), or (ii) to professional investors as defined in the Securities and Futures Ordinance and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a prospectus as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance, and no advertisement, invitation or document relating to the securities may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to professional investors in Hong Kong as defined in the Securities and Futures Ordinance and any rules made thereunder.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, the shares of common stock were not offered or sold or caused to be made the subject of an invitation for subscription or purchase and will not be offered or sold or caused to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this prospectus or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares of common stock, whether directly or indirectly, to

any person in Singapore other than (i) to an institutional investor (as defined in Section 4A of the Securities and Futures Act (Chapter 289) of Singapore, as modified or amended from time to time (the SFA)) pursuant to Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares of common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(i)	a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
(ii)	a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares of common stock pursuant to an offer made under Section 275 of the SFA except:

(i)	to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
(ii)	where no consideration is or will be given for the transfer;
(iii)	where the transfer is by operation of law; or
(iv)	as specified in Section 276(7) of the SFA.

In connection with Section 309B of the SFA and the Capital Markets Products (the CMP) Regulations 2018, the shares of common stock are prescribed capital markets products (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in Monetary Authority of Singapore Notice SFA 04-N12: Notice on the Sale of Investment Products and Monetary Authority of Singapore Notice FAA-N16: Notice on Recommendations on Investment Products).

Japan

The securities have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended), or the FIEA. The securities may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, directly or indirectly, in Japan or to or for the benefit of any resident of Japan, except pursuant to an exemption from the registration requirements of the FIEA and otherwise in compliance with any relevant laws and regulations of Japan.

Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission (ASIC), in relation to the offering. This offering document does not constitute a prospectus, product disclosure statement, or other disclosure document under the Corporations Act 2001 (the Corporations Act), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons (the Exempt Investors) who are sophisticated investors (within the meaning of section 708(8) of the Corporations Act), professional investors (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This offering document contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this offering document is appropriate to their needs, objectives, and circumstances, and, if necessary, seek expert advice on those matters.

Dubai International Financial Centre

This offering document relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority (DFSA). This offering document is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth in this prospectus and has no responsibility for the offering document. The

securities to which this offering document relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the securities offered should conduct their own due diligence on the securities. If you do not understand the contents of this offering document you should consult an authorized financial advisor.

Switzerland

We have not and will not register with the Swiss Financial Market Supervisory Authority (FINMA) as a foreign collective investment scheme pursuant to Article 119 of the Federal Act on Collective Investment Scheme of 23 June 2006, as amended (CISA), and accordingly the securities being offered pursuant to this prospectus have not and will not be approved, and may not be licensable, with FINMA. Therefore, the securities have not been authorized for distribution by FINMA as a foreign collective investment scheme pursuant to Article 119 CISA and the securities offered hereby may not be offered to the public (as this term is defined in Article 3 CISA) in or from Switzerland. The securities may solely be offered to qualified investors, as this term is defined in Article 10 CISA, and in the circumstances set out in Article 3 of the Ordinance on Collective Investment Scheme of 22 November 2006, as amended (CISO), such that there is no public offer. Investors, however, do not benefit from protection under CISA or CISO or supervision by FINMA. This prospectus and any other materials relating to the securities are strictly personal and confidential to each offeree and do not constitute an offer to any other person. This prospectus may only be used by those qualified investors to whom it has been handed out in connection with the offer described in this prospectus and may neither directly or indirectly be distributed or made available to any person or entity other than its recipients. It may not be used in connection with any other offer and shall in particular not be copied and/or distributed to the public in Switzerland or from Switzerland. This prospectus does not constitute an issue prospectus as that term is understood pursuant to Article 652a and/or 1156 of the Swiss Federal Code of Obligations. We have not applied for a listing of the securities on the SIX Swiss Exchange or any other regulated securities market in Switzerland, and consequently, the information presented in this prospectus does not necessarily comply with the information standards set out in the listing rules of the SIX Swiss Exchange and corresponding prospectus schemes annexed to the listing rules of the SIX Swiss Exchange.

Legal Matters

The validity of the shares of common stock being offered by this prospectus will be passed upon for us by Goodwin Procter LLP, Redwood City, California. Cooley LLP, San Francisco, California, is representing the underwriters in connection with this offering.

Experts

The consolidated financial statements of Health Catalyst, Inc. at December 31, 2017 and 2018, and for each of the two years in the period ended December 31, 2018, appearing in this Prospectus and Registration Statement have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

The consolidated financial statements of Medicity LLC at June 29, 2018 and for the period from January 1, 2018 through June 29, 2018, appearing in this Prospectus and Registration Statement have been audited by Ernst & Young LLP, independent auditors, as set forth in their report thereon appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

Where You Can Find Additional Information

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of common stock being offered by this prospectus, which constitutes a part of the registration statement. This prospectus does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at www.sec.gov. Upon completion of this offering, we will be subject to the information reporting requirements of the Exchange Act, and we will file reports, proxy statements and other information with the SEC. These reports, proxy statements, and other information will be available via the SEC's website at www.sec.gov. We also maintain a website at www.healthcatalyst.com, at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. However, the information contained in or accessible through our website is not part of this prospectus or the registration statement of which this prospectus forms a part, and investors should not rely on such information in making a decision to purchase our common stock in this offering.

Index to Consolidated Financial Statements

HEALTH CATALYST, INC.

Index to Consolidated Financial Statements

Health Catalyst, Inc.
Report of Independent Registered Public Accounting Firm

Health Catalyst, Inc. Consolidated Balance Sheets
Health Catalyst, Inc. Consolidated Statements of Operations
Health Catalyst, Inc. Consolidated Statements of Comprehensive Loss
Health Catalyst, Inc. Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' Deficit
Health Catalyst, Inc. Consolidated Statements of Cash Flows
Health Catalyst, Inc. Notes to the Consolidated Financial Statements
Medicity LLC
Report of Independent Auditors
Medicity LLC Consolidated Balance Sheet
Medicity LLC Consolidated Statement of Operations
Medicity LLC Consolidated Statement of Member's Equity (Deficit)
Medicity LLC Consolidated Statement of Cash Flows
Medicity LLC Notes to the Consolidated Financial Statements
Unaudited Pro Forma Condensed Combined Financial Information
Health Catalyst, Inc. Unaudited Pro Forma Condensed Combined Statement of Operations
Health Catalyst, Inc. Notes to the Unaudited Pro Forma Condensed Combined Statement of Operations

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Health Catalyst, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Health Catalyst, Inc. (the Company) as of December 31, 2017 and 2018, the related consolidated statements of operations, comprehensive loss, redeemable convertible preferred stock and stockholders' deficit and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2017 and 2018, and the results of its operations and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP We have served as the Company's auditor since 2012.

Salt Lake City, Utah April 9, 2019

Health Catalyst, Inc. Consolidated Balance Sheets

HEALTH CATALYST, INC.

Consolidated Balance Sheets

(in thousands, except share and per share data)

	As of December 31,		As of March 31,	
	2017	2018	2019	Pro Forma Stockholders' Equity as of March 31, 2019
Assets			(unaudited)	
Current assets:				(Note 1)
Cash and cash equivalents	$ 22,978	$ 28,431	$ 32,208	
Short-term investments	28,484	4,761	32,426	
Accounts receivable, net	17,053	27,696	28,253	
Deferred costs				
Prepaid expenses and other assets	2,108	5,321	5,665	
Total current assets	71,385	66,858	99,310	
Property and equipment, net	2,979	4,676	4,486	
Intangible assets, net	29,565	28,304	28,320	
Operating lease right-of-use assets	2,402	6,344	6,214	
Other assets		1,099	2,188	
Goodwill	3,694	3,694	3,694	
Total assets	$ 110,268	$ 110,975	$ 144,212	
Liabilities, redeemable convertible preferred stock, and stockholders' (deficit) equity				
Current liabilities:				
Accounts payable	$	$ 1,812	$ 2,519	
Accrued liabilities	2,342	9,203	9,837	
Acquisition-related consideration payable to related party	—	2,172	2,655	
Acquisition-related consideration payable	14,739	—	—	
Deferred revenue	10,718	24,755	29,058	
Operating lease liabilities	2,134	2,577	2,725	
Current portion of long-term debt	—	1,287	—	
Total current liabilities	30,766	41,806	46,794	
Long-term debt, net of current portion	9,618	18,814	47,263	
Acquisition-related consideration payable to related party, net of current portion	—	1,110	—	
Acquisition-related consideration payable, net of current portion	6,459	2,660	2,891	
Deferred revenue, net of current portion	—	7,280	6,989	
Operating lease liabilities, net of current portion		4,228	3,979	
Other liabilities		—		
Total liabilities	48,174	75,898	108,315	
Commitments and contingencies (notes 9 and 18)				
Redeemable convertible preferred stock, $0.001 par value; 42,611,852, 45,427,441, and 46,505,028 shares authorized as of December 31, 2017 and 2018 and March 31, 2019 (unaudited), respectively; 42,219,593, 45,427,441, and 46,303,026 shares issued and outstanding as of December 31, 2017 and 2018 and March 31, 2019 (unaudited), respectively; aggregated liquidation preference of $272,192, $306,192, and $318,381 as of December 31, 2017 and 2018 and March 31, 2019 (unaudited), respectively; no shares issued and outstanding pro forma as of March 31, 2019 (unaudited)	321,569	409,845	485,933	

Stockholders' (deficit) equity:				
Common stock, $0.001 par value; 63,184,193, 72,565,312, and 73,642,899 shares authorized as of December 31, 2017 and 2018 and March 31, 2019 (unaudited), respectively; 9,707,718, 9,558,769, and 9,747,901 shares issued and outstanding as of December 31, 2017 and 2018 and March 31, 2019 (unaudited), respectively; and 56,050,927 shares issued and outstanding, pro forma as of March 31, 2019 (unaudited)				
Additional paid-in capital	—	—	—	489,685
Accumulated deficit	(259,473)	(374,777)	(450,048)	(453,846)
Accumulated other comprehensive (loss) income	(12)	(1)		
Total stockholders' (deficit) equity	(259,475)	(374,768)	(450,036)	$ 35,897
Total liabilities, redeemable convertible preferred stock, and stockholders' deficit	$ 110,268	$ 110,975	$ 144,212	

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(1) Includes amounts attributable to related party transactions. See note 20 for further details.

The accompanying notes are an integral part of these consolidated financial statements

Health Catalyst, Inc. Consolidated Statements of Operations

HEALTH CATALYST, INC.

Consolidated Statements of Operations

(in thousands, except per share data)

	Year Ended December 31,		Three Months Ended March 31,	
	2017	**2018**	**2018**	**2019**
			(unaudited)	
Revenue[(1)]:				
Technology	$ 31,693	$ 57,224	$ 9,451	$ 20,148
Professional services	41,388	55,350	11,181	15,065
Total revenue	73,081	112,574	20,632	35,213
Cost of revenue, excluding depreciation and amortization[(1)]:				
Technology	11,610	19,429	3,359	6,752
Professional services	32,032	40,423	8,251	10,574
Total cost of revenue, excluding depreciation and amortization	43,642	59,852	11,610	17,326
Operating expenses[(1)]:				
Sales and marketing	25,920	44,123	6,721	10,473
Research and development	28,470	38,592	8,705	10,022
General and administrative	14,697	22,690	3,902	6,174
Depreciation and amortization	5,892	7,412	1,550	2,312
Total operating expenses	74,979	112,817	20,878	28,981
Loss from operations	(45,540)	(60,095)	(11,856)	(11,094)
Loss on extinguishment of debt	—	—	—	(1,670)
Interest and other expense, net	(1,469)	(2,024)	(509)	(945)
Loss before income taxes	(47,009)	(62,119)	(12,365)	(13,709)

Income tax provision (benefit)		(135)	(156)	
Net loss	$ (47,035)	$ (61,984)	$ (12,209)	$ (13,720)
Less: accretion (reversal of accretion) of redeemable convertible preferred stock	11,745	52,037	(10,481)	64,015
Net loss attributable to common stockholders	$ (58,780)	$ (114,021)	$ (1,728)	$ (77,735)
Net loss per share attributable to common stockholders, basic and diluted	$ (6.06)	$ (11.88)	$ (0.18)	$ (8.11)
Weighted-average shares outstanding used in calculating net loss per share attributable to common stockholders, basic and diluted	9,693	9,597	9,734	9,590
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)		$ (1.15)		$ (0.25)
Pro forma weighted-average number of shares outstanding used in calculating pro forma net loss per share, basic and diluted (unaudited)		53,705		55,533

(1) Includes amounts attributable to related party transactions. See note 20 for further details.

The accompanying notes are an integral part of these consolidated financial statements

Health Catalyst, Inc. Consolidated Statements of Comprehensive Loss

HEALTH CATALYST, INC.

Consolidated Statements of Comprehensive Loss

(in thousands)

	Year Ended December 31,		Three Months Ended March 31,	
	2017	**2018**	**2018**	**2019**
			(unaudited)	
Net Loss	$ (47,035)	$ (61,984)	$ (12,209)	$ (13,720)
Other comprehensive loss				
Unrealized gain (loss) on investments			(15)	
Comprehensive loss	$ (47,018)	$ (61,973)	$ (12,224)	$ (13,717)

The accompanying notes are an integral part of these consolidated financial statements

Health Catalyst, Inc. Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' Deficit

HEALTH CATALYST, INC.

Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' Deficit

(in thousands, except share data)

	Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount				
Balance as of December 31, 2016	39,970,315	$ 286,037	9,681,641	$	$ —	$ (206,388)	$ (29)	$ (206,407)
Issuance of Series E redeemable convertible preferred stock, net of issuance costs of $53	2,249,278	23,787	—	—	—	—	—	—
Exercise of stock options	—	—	26,077	—		—	—	
Stock-based compensation	—	—	—	—	4,223	—	—	4,223
Common stock warrants	—	—	—	—	1,396	—	—	1,396
Net loss	—	—	—	—	—	(47,035)	—	(47,035)
Other comprehensive gain	—	—	—	—	—	—		
Accretion of redeemable convertible preferred stock	—	11,745	—	—	(5,695)	(6,050)	—	(11,745)
Balance as of December 31, 2017	42,219,593	$ 321,569	9,707,718	$	$ —	$ (259,473)	$ (12)	$ (259,475)
Issuance of Series E redeemable convertible preferred stock, net of issuance costs of $13	3,207,848	36,239	—	—	—	—	—	—
Repurchase of common stock	—	—	(1,596,843)	(1)	(8,711)	—	—	(8,712)
Exercise of stock option	—	—	1,447,894		3,044	—	—	3,045
Stock-based compensation	—	—	—	—	4,198	—	—	4,198
Common stock warrants	—	—	—	—		—	—	
Net loss	—	—	—	—	—	(61,984)	—	(61,984)
Other comprehensive gain	—	—	—	—	—	—		
Accretion of redeemable convertible preferred stock	—	52,037	—	—	1,283	(53,320)	—	(52,037)
Balance as of December 31, 2018	45,427,441	$ 409,845	9,558,769	$	$ —	$ (374,777)	$ (1)	$ (374,768)

The accompanying notes are an integral part of these consolidated financial statements HEALTH CATALYST, INC.

Interim Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' Deficit

(in thousands, except share data)(unaudited)

	Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount				
Balance as of December 31, 2017	42,219,593	$ 321,569	9,707,718	$	$ —	$ (259,473)	$ (12)	$ (259,475)

Issuance of Series E redeemable convertible preferred stock, net of issuance costs of $3	377,394	3,997	—	—	—	—	—	—
Exercise of stock options	—	—	38,510	—		—	—	
Stock-based compensation	—	—	—	—	1,038	—	—	1,038
Net loss	—	—	—	—	—	(12,209)	—	(12,209)
Other comprehensive loss	—	—	—	—	—	—	(15)	(15)
Reversal of accretion of redeemable convertible preferred stock	—	(10,481)	—	—	10,481	—	—	10,481
Balance as of March 31, 2018	42,596,987	$ 315,085	9,746,228	$	$ 11,609	$ (271,682)	$ (27)	$ (260,090)

	Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive (Loss) Income	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount				
Balance as of December 31, 2018	45,427,441	$ 409,845	9,558,769	$	$ —	$ (374,777)	$ (1)	$ (374,768)
Issuance of Series F redeemable convertible preferred stock, net of issuance costs of $115	875,585	12,073	—	—	—	—	—	—
Exercise of stock options	—	—	189,132	—		—	—	
Stock-based compensation	—	—	—	—	1,656	—	—	1,656
Net loss	—	—	—	—	—	(13,720)	—	(13,720)
Other comprehensive gain	—	—	—	—	—	—		
Accretion of redeemable convertible preferred stock	—	64,015	—	—	(2,464)	(61,551)	—	(64,015)
Balance as of March 31, 2019	46,303,026	$ 485,933	9,747,901	$	$ —	$ (450,048)	$	$ (450,036)

See the accompanying notes to the consolidated financial statements

Health Catalyst, Inc. Consolidated Statements of Cash Flows

HEALTH CATALYST, INC.

Consolidated Statements of Cash Flows

(in thousands)

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
			(unaudited)	
Cash flows from operating activities				
Net loss	$ (47,035)	$ (61,984)	$ (12,209)	$ (13,720)

Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization	5,892	7,412	1,550	2,312
Loss on extinguishment of debt	—	—	—	1,670
Amortization of debt discount and issuance costs				
Investment discount and premium amortization		(143)	(32)	(83)
Change in fair value of warrant liability		(34)	(27)	—
Gain on sale of property and equipment	(47)	(29)	(11)	(11)
Stock-based compensation expense	4,241	4,198	1,040	1,656
Change in operating assets and liabilities:				
Accounts receivable	4,442	(3,627)	(3,760)	(557)
Deferred costs				(109)
Prepaid expenses and other assets	(815)	(1,334)	(125)	(185)
Operating lease right-of-use assets	1,650	(3,942)		
Accounts payable, accrued liabilities, and other liabilities	(6,275)	4,425	2,514	(382)
Deferred revenue	2,126	10,317	3,425	4,012
Operating lease liabilities	(1,741)	3,799	(555)	(101)
Net cash used in operating activities	(36,829)	(40,296)	(7,387)	(5,224)
Cash flows from investing activities				
Purchases of property and equipment	(2,466)	(2,275)	(352)	(689)
Proceeds from the sale of property and equipment				
Purchase of short-term investments	(46,422)	(13,993)	—	(30,726)
Proceeds from the sale and maturity of short-term investments	72,127	37,870	9,150	3,147
Purchase of intangible assets	(878)	(228)	—	(402)
Net cash provided by (used in) investing activities	22,408	21,403	8,809	(28,656)
Cash flows from financing activities				
Proceeds from the issuance of redeemable convertible preferred stock, net of issuance costs	23,787	33,987	4,000	12,073
Proceeds from exercise of stock options		3,045		
Repurchase of common stock	—	(8,712)	—	—
Payment of SVB line of credit and mezzanine loan		—	—	—	(21,821)
Proceeds from credit facilities, net of debt issuance costs		9,787	9,950	—	47,169
Payments of acquisition-related consideration to related party		—	(3,268)	(837)	(390)
Payments of acquisition-related consideration		(8,779)	(10,656)	(9,477)	—
Payments of deferred offering costs		—	—	—	(182)
Net cash provided by (used in) financing activities		24,871	24,346	(6,226)	37,657

Net increase (decrease) in cash and cash equivalents	10,450	5,453	(4,804)	3,777
Cash and cash equivalents at beginning of period	12,528	22,978	22,978	28,431
Cash and cash equivalents at end of period	$ 22,978	$ 28,431	$ 18,174	$ 32,208
Supplemental disclosures of cash flow information				
Cash paid for income taxes	$	$	$ —	$ —
Cash paid for interest	1,032	3,937	1,972	1,276
Supplemental disclosures of non-cash investing and financing information				
Redeemable convertible preferred stock accretion (reversal of accretion)	$ 11,745	$ 52,037	$ (10,481)	$ 64,015
Deferred offering costs included in accounts payable and accrued liabilities	—		—	1,066
Series E redeemable convertible preferred stock allocated to business combination	—	2,252	—	—
Purchase of intangible assets included in accounts payable and accrued liabilities		—	—	1,114
Purchase of property and equipment included in accounts payable and accrued liabilities			—	
Supplemental disclosures of cash flow information related to leases				
Cash paid for operating lease liabilities in operating cash flows	$ 1,891	$ 3,146	$	$
Operating lease right-of-use assets obtained in exchange for operating lease obligations	—	6,641	—	

The accompanying notes are an integral part of these consolidated financial statements

Health Catalyst, Inc. Notes to the Consolidated Financial Statements

HEALTH CATALYST, INC.

Notes to the Consolidated Financial Statements

1. Description of Business and Summary of Significant Accounting Policies

Nature of operations

Health Catalyst, Inc. (Health Catalyst) was incorporated under the laws of Delaware in September 2011. We were formerly known as HQC Holdings, Inc. In March 2017, we changed our name to Health Catalyst, Inc.

We are a leading provider of data and analytics technology and services to healthcare organizations. Our Solution comprises a cloud-based data platform, analytics software, and professional services expertise. Our customers, which are primarily healthcare providers, use our Solution to manage their data, derive analytical insights to operate their organization, and produce measurable clinical, financial, and operational improvements.

Basis of presentation

The accompanying consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles (GAAP).

Principles of consolidation

The consolidated financial statements include the accounts of Health Catalyst and its wholly-owned subsidiaries. Intercompany balances and transactions have been eliminated.

Use of estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an on-going basis, we evaluate our estimates, including those related to revenue recognition, provisions for doubtful accounts, useful lives of property and equipment, capitalization and estimated useful life of internal-use software and other intangible assets, fair value of financial instruments, deferred tax assets, common stock warrants, redeemable convertible preferred stock accretion, stock-based compensation, and tax uncertainties. Actual results could differ from those estimates.

Segment reporting

Operating segments are identified as components of an enterprise about which separate discrete financial information is evaluated by the chief operating decision maker (the CODM) in assessing performance and making decisions regarding resource allocation. We operate our business in two operating segments that also represent our reportable segments. Our segments are (1) technology and (2) professional services.

The CODM, the Chief Executive Officer, uses Adjusted Gross Profit (defined as revenue less cost of revenue that excludes depreciation, amortization, stock-based compensation expense, and certain other operating expenses) as the measure of our profit.

Net loss per share

We compute basic and diluted net loss per share in conformity with the two-class method required for participating securities. Redeemable convertible preferred stock and common stock are considered participating securities for purposes of this calculation. The two-class method is an earnings allocation formula that treats a participating security as having rights to earnings that otherwise would have been available to holders of common stock. However, the two-class method does not impact the net loss per share, as we are in a loss position for each of the periods presented and shares of redeemable convertible preferred stock do not participate in losses.

Basic net loss per share is calculated by dividing net loss attributable to common stockholders by the weighted average number of shares of common stock outstanding. Net loss attributable to common stockholders is computed as net loss less accretion (reversal of accretion) of redeemable convertible preferred stock. Diluted net loss per share attributable to common stockholders is calculated by giving effect to all potentially dilutive common stock equivalents outstanding for the period. For purposes of this calculation, stock options and warrants to purchase common stock are considered to be common stock equivalents but have been excluded from the calculation of diluted net loss per share attributable to common stockholders as the effect is antidilutive.

Unaudited pro forma stockholders' equity and pro forma net loss per share

Upon the completion of the contemplated initial public offering (IPO), we anticipate that all of the 46,303,026 shares of redeemable convertible preferred stock will convert into an equivalent number of shares of common stock. The accompanying pro forma stockholders' equity information as of March 31, 2019 (unaudited) has been prepared assuming the automatic conversion of all outstanding shares of redeemable convertible preferred stock into 46,303,026 shares of common stock, based on the number of shares of redeemable convertible preferred stock outstanding as of March 31, 2019. Unaudited pro forma stockholders' equity as of March 31, 2019 (unaudited) has been computed to give effect to the conversion of the redeemable convertible preferred stock into common stock as though the conversion had occurred as of March 31, 2019.

The pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited) has been computed to give effect to the conversion of the shares of redeemable convertible preferred stock into common stock as if such conversion had occurred at the later of the beginning of the period or the date the shares of redeemable convertible preferred stock were issued. The pro forma net loss per share also excludes accretion of redeemable convertible preferred stock as no accretion would have been recorded upon conversion. The shares of common stock issuable and the proceeds expected to be received in an IPO are excluded from such pro forma information.

As described in detail in note 16, we have granted two-tier employee stock options that vest upon the satisfaction of both a service-based vesting condition and a liquidity event-related performance vesting condition. The service-based condition for these awards is satisfied over four years with a cliff vesting period of one year and monthly vesting thereafter. The liquidity event-related performance vesting condition is defined as the earlier of (i) an acquisition or change in control of the company or (ii) upon the occurrence of an initial public offering by the company. A change in control event and effective registration event are not deemed probable until consummated. At the time the performance vesting condition becomes probable, we will recognize the cumulative stock-based compensation expense for the two-tier employee stock options that have met their service-based vesting condition using the accelerated attribution method. Accordingly, the unaudited pro forma stockholder's equity information as of March 31, 2019, gives effect to stock-based compensation expense of approximately $3.8 million associated with these awards using the accelerated attribution method. This pro forma adjustment related to stock-based compensation expense of approximately $3.8 million has been reflected as an increase to additional paid-in capital and accumulated deficit. The net loss used in computing pro forma net loss per share does not give effect to the stock-based compensation expense associated with these two-tier employee stock options.

Revenue recognition

We recognize revenue in accordance with Accounting Standards Codification Topic 606, Revenue from Contracts with Customers (Topic 606), which we adopted with an initial application date of January 1, 2016. Accordingly, the consolidated financial statements for the years ended December 31, 2017 and 2018 and the three months ended March 31, 2018 and March 31, 2019 are presented under Topic 606.

We derive our revenues primarily from technology subscriptions and professional services. We determine revenue recognition by applying the following steps:

- Identification of the contract, or contracts, with a customer;

- Identification of the performance obligations in the contract;

- Determination of the transaction price;
- Allocation of the transaction price to the performance obligations in the contract; and
- Recognition of revenue when, or as, we satisfy the performance obligation.

We recognize revenue net of any taxes collected from customers and subsequently remitted to governmental authorities.

Technology revenue

Technology revenue primarily consists of subscription fees charged to customers for access to use our technology. We provide customers access to our technology through either an all-access or limited-access, modular subscription. The majority of our subscription arrangements are cloud-based and do not provide customers the right to take possession of the technology or contain a significant penalty if the customer were to take possession of the technology. Revenue from cloud-based subscriptions is recognized ratably over the contract term beginning on the date that the service is made available to the customer. Most of our subscription contracts have up to a three-year term, of which the vast majority are terminable after one year upon 90 days notice.

Subscriptions that allow the customer to take software on-premise without significant penalty are treated as time-based licenses. These arrangements generally include access to technology, access to unspecified future products and maintenance and support. Revenue for upfront access to our technology library is recognized at a point in time when the technology is made available to the customer. Revenue for access to unspecified future products included in time-based license subscriptions is recognized ratably over the contract term beginning on the date that the access is made available to the customer.

We also have certain perpetual license arrangements. Revenue from these arrangements is recognized at a point in time upon delivery of the software.

Technology revenue also includes maintenance and support revenue which generally includes bug fixes, updates, and support services. Revenue related to maintenance and support is recognized over the contract term beginning on the date that the service is made available to the customer.

Professional services revenue

Professional services revenue primarily includes analytics services, implementation services, strategic advisory services, and improvement services. Professional services arrangements typically include a fee for making full-time equivalent (FTE) services available to our customers on a monthly basis. FTE services generally consist of a blend of analytic engineers, analysts, and data scientists based on the domain expertise needed to best serve our customer. Professional services are typically considered distinct from the technology offerings and revenue is generally recognized as the service is provided using the “right to invoice” practical expedient.

Contracts with multiple performance obligations

Many of our contracts include multiple performance obligations. We account for performance obligations separately if they are capable of being distinct within the context of the contract. In these circumstances, the transaction price is allocated to separate performance obligations on a relative standalone selling price basis.

We determine standalone selling prices based on the observable price a good or service is sold for separately when available. In cases where standalone selling prices are not directly observable, based on information available, we utilize the expected cost plus a margin, adjusted market assessment, or residual estimation method. We consider all information available including our overall pricing objectives, market conditions, and other factors, which may include customer demographics and the types of users.

Standalone selling prices are not directly observable for our all-access and limited-access technology arrangements, which are composed of cloud-based subscriptions, time-based licenses, and perpetual licenses. For these technology arrangements, we use the residual estimation method due to a limited number of standalone transactions and/or prices that are highly variable.

Variable consideration

We have also entered into at-risk and shared savings arrangements with certain customers whereby we receive variable consideration based on the achievement of measurable improvements which may include cost savings or performance against metrics. For these arrangements, we estimate revenue using the most likely amount that we will receive. Estimates are based on our historical experience and best judgment at the time to the extent it is probable that a significant reversal of revenue recognized will not occur. Due to the nature of our arrangements, certain estimates may be constrained until the uncertainty is further resolved.

Contract balances

Contract assets resulting from services performed prior to invoicing customers are recorded as unbilled accounts receivable and are presented on the consolidated balance sheets in aggregate with accounts receivable. Unbilled accounts receivable generally become billable at contractually specified dates or upon the attainment of contractually defined milestones. As of December 31, 2016, 2017 and 2018, the unbilled accounts receivable included in accounts receivable on our consolidated balance sheets was $1.8 million, $2.8 million and $3.4 million, respectively. As of March 31, 2018 and 2019 (unaudited), the unbilled accounts receivable included in accounts receivable on our consolidated balance sheets was $0.5 million and $3.5 million, respectively.

We record contract liabilities as deferred revenue when cash payments are received or due in advance of performance. Deferred revenue primarily relates to the advance consideration received from the customer. As of December 31, 2016, 2017, and 2018, the total of current and non-current deferred revenue on our consolidated balance sheets was $8.6 million, $10.7 million, and $32.0 million, respectively. As of March 31, 2018 and 2019 (unaudited), the total of current and non-current deferred revenue on our consolidated balance sheets was $14.1 million and $36.0 million, respectively.

Cost of revenue, excluding depreciation and amortization

Cost of technology revenue primarily consists of costs associated with hosting and supporting our technology, including third-party cloud computing and hosting costs, contractor costs, and salary and related personnel costs for our cloud services and support teams. Cost of professional services revenue primarily consists of salary and related personnel costs, travel-related costs, and independent contractor costs. Cost of revenue excludes costs related to depreciation and amortization.

We defer certain costs to fulfill a contract when the costs are expected to be recovered, are directly related to in-process contracts and enhance resources that will be used in satisfying performance obligations in the future. These deferred fulfillment costs primarily consist of employee compensation incurred as part of the implementation of new contracts. As of December 31, 2017 and 2018, and March 31, 2019 (unaudited), we had deferred contract fulfillment costs of $0.8 million, $0.6 million, and $0.8 million, respectively.

Cash and cash equivalents

We consider all highly liquid investments purchased with a remaining maturity of three months or less at the time of acquisition to be cash equivalents.

Short-term investments

Our investment policy limits investments to highly-rated instruments that mature in less than 12 months. We classify our short-term investments as available for sale.

HEALTH CATALYST, INC.

Notes to the Consolidated Financial Statements

Accounts receivable

Accounts receivable are non-interest bearing and are recorded at the original invoiced amount less an allowance for doubtful accounts based on the probability of future collections. When we become aware of circumstances that may decrease the likelihood of collections, we record a specific allowance against amounts due, which reduces the receivable amount to the amount reasonably believed to be collected. For all other customers, we determine and periodically adjust the allowance based on historical loss patterns and current receivables aging. As of December 31, 2017 and 2018, and March 31, 2019 (unaudited), we had an allowance for doubtful accounts of $0.1 million, $0.5 million, and $0.5 million, respectively.

Property and equipment

Property and equipment are stated at historical cost less accumulated depreciation. Repairs and maintenance costs that do not extend the useful life or improve the related assets are expensed as incurred. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. The estimated useful life of each asset category is as follows:

Computer equipment	2-3 years
Furniture and fixtures	3 years
Leasehold improvements	Lesser of lease term or estimated useful life
Computer software	2-3 years
Capitalized internal-use software costs	3 years

When there are indicators of potential impairment, we evaluate the recoverability of the carrying values by comparing the carrying amount of the applicable asset group to the estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of the asset group exceeds its estimated undiscounted future net cash flows, an impairment charge is recognized based on the amount by which the carrying value of the long-lived assets exceeds the fair value of the assets. We did not incur any long-lived impairment charges for the years ended December 31, 2017 and 2018 and for the three months ended March 31, 2019 (unaudited).

Intangible assets

Intangible assets include developed technologies, customer relationships, customer contracts, and trademarks that were acquired in business combinations and asset acquisitions. Intangible assets also include the purchase of third-party computer software. The intangible assets are amortized using the straight-line method over the assets' estimated useful lives. The estimated useful life of each asset category is as follows:

Developed technologies	2-10 years
Customer relationships and contracts	6 years
Computer software licenses	2-5 years
Trademarks	2 years

Goodwill

We record goodwill as the difference between the aggregate consideration paid for a business combination and the fair value of the identifiable net tangible and intangible assets acquired. Goodwill is assessed for impairment annually or more frequently if indicators of impairment are present or circumstances suggest that impairment may exist. The first step of the goodwill impairment test compares the fair value of the reporting unit with its carrying amount, including goodwill. If the fair value of the reporting unit exceeds its carrying amount, the goodwill of the reporting unit is not considered impaired. If the carrying amount of the reporting unit exceeds its fair value, the second step of the goodwill HEALTH CATALYST, INC.

impairment test is performed to measure the amount of impairment loss, if any. The second step of the goodwill impairment test compares the implied fair value of the affected reporting unit's goodwill with the carrying value of that goodwill. There was no impairment of goodwill for the years ended December 31, 2017 and 2018 and for the three months ended March 31, 2018 and 2019 (unaudited).

Deferred offering costs

Deferred offering costs, which consist of legal, consulting, banking, and accounting fees directly attributable to the IPO, are capitalized and will be offset against proceeds upon the consummation of the IPO. In the event the IPO is terminated, deferred offering costs will be expensed in the period terminated. As of December 31, 2018 and March 31, 2019 (unaudited), our capitalized deferred offering costs of $0.1 million and $1.2 million, respectively, were included in other assets within the consolidated balance sheets. No amounts were capitalized as of December 31, 2017.

Common stock warrants

We account for freestanding warrants to purchase shares of our common stock that are not considered indexed to our own stock as warrant liabilities on our consolidated balance sheets until the point in time that they qualify for equity classification. We record liability-classified common stock warrants at their estimated fair value because they are free standing and the number of shares exercisable increases as we make advances on our credit facility.

At the end of each reporting period, we record the change in the estimated fair value of the warrants to purchase common stock as a change in fair value of warrant liability within interest and other expense, net in our consolidated statements of operations. We reclassify the warrants from liability-classified to equity-classified as exercise contingencies related to the warrants become resolved.

Business combinations

We account for an acquisition as a business combination if we obtain control of a business. Assets and liabilities acquired in a business combination generally are recorded at fair value and any associated acquisition costs are expensed as incurred in general and administrative expenses.

Advertising costs

All advertising costs are expensed as incurred. For the years ended December 31, 2017 and 2018 and the three months ended March 31, 2018 and 2019 (unaudited), we incurred $5.9 million, $5.0 million, $0.5 million, and $0.6 million in advertising costs, respectively.

Development costs and internal-use software

Our technology products are generally developed to be sold externally. We determined that technological feasibility for our technology products to be sold externally is reached shortly before the products are ready for general release. Any costs associated with software development between the time technological feasibility is reached and general release are inconsequential.

We capitalize certain development costs incurred in connection with our internal-use software. These capitalized costs are primarily related to the software platforms that are hosted by us and accessed by our customers on a subscription basis. Costs incurred in the preliminary stages of development are expensed as incurred as research and development costs. Once an application has reached the development stage, internal and external costs, if direct and incremental, are capitalized until the software is substantially complete and ready for its intended use. We also capitalize costs related to specific upgrades and enhancements when it is probable the expenditures will result in additional functionality. Capitalized costs are recorded as part of property and equipment. Maintenance and training costs are expensed as incurred. Internal-use software is amortized on a straight-line basis over its estimated useful life of three years.

Stock-based compensation

Stock-based awards are measured and recognized in the consolidated financial statements based on the fair value of the award on the grant date. For awards subject to performance conditions, we will record expense when the performance condition becomes probable. We record forfeitures of stock-based awards as the actual forfeitures occur.

We estimate the fair value of stock option awards on the grant date using the Black-Scholes option pricing model. We have issued two types of employee stock options, standard and two-tier. Our standard stock options vest solely on a service-based condition. For these awards, we recognize stock-based compensation expense on a straight-line basis over the vesting period. Two-tier employee stock options contain both a service-based condition and performance condition, defined as the earlier of (i) an acquisition or change in control of the company or (ii) upon the occurrence of an initial public offering by the Company. A change in control event and effective registration event are not deemed probable until consummated; accordingly, no expense is

recorded related to two-tier stock options until the performance condition becomes probable of occurring. Awards which contain both service-based and performance conditions are recognized using the accelerated attribution method once the performance condition is probable of occurring. The service-based condition is generally a service period of four years.

Prior to the adoption of ASU No. 2018-07, Compensation — Stock Compensation (ASU 2018-17), which simplifies the accounting for non-employee share-based payment transactions and is discussed below under "Accounting pronouncements adopted," the fair value measurement date for non-employee awards was the date the performance of services was completed. Upon adoption of ASU 2018-07 on January 1, 2019, the measurement date for non-employee awards is the date of grant. The compensation expense for non-employees is recognized, without changes in the fair value of the award, in the same period and in the same manner as though we had paid cash for the services, which is typically the vesting period of the respective award. The impact on our consolidated financial statements was immaterial.

Concentrations of credit risk

Financial instruments that potentially subject us to a concentration of credit risk consist principally of cash and cash equivalents, short-term investments, and accounts receivable. We deposit cash with high credit quality financial institutions which at times may exceed federally insured amounts. We have not experienced any losses on our deposits.

We perform ongoing credit evaluations of our customers' financial condition and require no collateral from customers. We review the expected collectability of accounts receivable and record an allowance for doubtful accounts for amounts that we determine are not collectible.

The following table depicts the largest customers' outstanding net accounts receivable balance as a percentage of the total outstanding net accounts receivable balance:

	As of December 31,		As of March 31,
	2017	**2018**	**2019**
			(unaudited)
Customer A	%	%	less than 10%
Customer B	%	less than 10%	less than 10%

There were no other customers with outstanding net accounts receivable balances as a percentage of total outstanding net accounts receivable balance greater than 10% as of December 31, 2017 and 2018 and March 31, 2018 and 2019 (unaudited).

The following table depicts customers with revenue as a percentage of total revenue exceeding 10%:

	Year Ended December 31,		Three Months Ended March 31,	
	2017	**2018**	**2018**	**2019**
			(unaudited)	
Customer A	%	less than 10%	less than 10%	less than 10%

There were no other customers with revenue as a percentage of total revenue greater than 10% for the years ended December 31, 2017 and 2018 and the three months ended March 31, 2018 and 2019 (unaudited).

Income taxes

Deferred income tax balances are accounted for using the liability method and reflect the effects of temporary differences between the financial reporting and tax bases of our assets and liabilities using enacted tax rates expected to apply when taxes are actually paid or recovered. In addition, deferred tax assets and liabilities are recorded for net operating loss (NOL) and credit carryforwards.

On December 22, 2017, the 2017 Tax Cuts and Jobs Act (Tax Act) was enacted into law and the new legislation contains several key tax provisions that affect us, including the reduction of the corporate income tax rate to 21%, effective January 1, 2018. We were required to recognize the effect of the tax law changes in the period of enactment. As such, we remeasured our consolidated deferred tax assets and liabilities as of December 31, 2017 to reflect the lower rate and also reassessed the net realizability of those deferred tax assets and liabilities.

A valuation allowance is provided against deferred tax assets unless it is more likely than not that they will be realized based on all available positive and negative evidence. Such evidence includes, but is not limited to, recent cumulative earnings or losses, expectations of future taxable income by taxing jurisdiction, and the carry-forward periods available for the utilization of deferred tax assets.

We use a two-step approach to recognize and measure uncertain income tax positions. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates it is more likely than not that the position will be sustained upon audit. The second step is to measure the tax benefit as the largest amount, which is more than 50% likely of being realized upon ultimate settlement. We do not accrue interest and

penalties related to unrecognized tax benefits within the provision for income taxes because we have net operating loss carryforwards. Significant judgment is required to evaluate uncertain tax positions.

Although we believe that we have adequately reserved for our uncertain tax positions, we can provide no assurance that the final tax outcome of these matters will not be materially different. We evaluate our uncertain tax positions on a regular basis and evaluations are based on a number of factors, including changes in facts and circumstances, changes in tax law, such as the Tax Act, correspondence with tax authorities during the course of an audit, and effective settlement of audit issues.

To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences will affect the provision for income taxes in the period in which such determination is made and could have a material impact on our financial condition and results of operations.

Fair value of financial instruments

The carrying amounts reported in the consolidated balance sheets for cash, receivables, accounts payable, and current accrued expenses approximate fair values because of the immediate or short-term maturity of these financial instruments. The carrying value of acquisition-related consideration payable, operating lease liabilities, and long-term debt approximate fair value based on interest rates available for debt with similar terms at December 31, 2017 and 2018 HEALTH CATALYST, INC.

and March 31, 2019 (unaudited). Money market funds and short-term investments are measured at fair value on a recurring basis.

Fair value is estimated by applying the following hierarchy, which prioritizes the inputs used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement:

- Level 1- Quoted prices in active markets for identical assets or liabilities.

- Level 2- Observable inputs other than quoted prices in active markets for identical assets and liabilities, quoted prices for identical or similar assets or liabilities in inactive markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

- Level 3- Inputs that are generally unobservable and typically reflect management's estimate of assumptions that market participants would use in pricing the asset or liability.

Leases

We determine if an arrangement is a lease at inception. Operating leases are included in operating lease right-of-use (ROU) assets, operating lease liabilities, and operating lease liabilities, net of current portion in our consolidated balance sheets. We have adopted the short-term lease recognition exemption policy. All of our leasing commitments are classified either as operating leases or otherwise qualify as short-term leases with lease terms of 12 months or less.

ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As our lease contracts do not provide an implicit rate, we use our incremental borrowing rate based on the information available at commencement date to determine the present value of lease payments. The operating lease ROU asset also includes any lease payments made and excludes lease executory costs. Our lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise the applicable option. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

We do not have lease agreements that contain non-lease components, which generally would be accounted for separately.

Accounting pronouncements adopted

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606). Topic 606 establishes a principle for recognizing revenue upon the transfer of promised goods or services to customers in an amount that reflects the considerations to which the entity expects to be entitled to in exchange for those goods or services. We elected to early adopt the requirements of Topic 606 as of January 1, 2017 with an initial application date of January 1, 2016, utilizing the full retrospective method of transition.

In January 2016, the FASB issued ASU 2016-01, Financial Instruments-Overall (Subtopic 825-10), Recognition and Measurement of Financial Assets and Financial Liabilities. ASU 2016-01 requires entities to measure equity investments at fair value and recognize any changes in fair value within the consolidated statement of operations. We elected to early adopt Subtopic 825-10 as of January 1, 2018. Adoption of Subtopic 825-10 had no material impact on the amounts presented in our consolidated financial statements.

In February 2016, FASB issued ASU 2016-02, Leases (Topic 842), a new standard related to leases to increase transparency and comparability among organizations by requiring the recognition of ROU assets and lease liabilities on the balance sheet. Topic 842 requires recognition of ROU assets and lease liabilities by lessees, including those leases classified as operating leases. The new standard also requires disclosures to assist users of financial statements to understand the amount, timing, and uncertainty of cash flows resulting from leases.

HEALTH CATALYST, INC.

We elected to early adopt Topic 842, including certain of its practical expedients, as of January 1, 2018, with an initial application date of January 1, 2017, utilizing the modified retrospective method of transition. In transition to the new standard, we elected to recognize and measure leases existing at, or entered into after, January 1, 2017, which is the beginning of the earliest comparative period presented with certain practical expedients available. Topic

842 had a material impact on our consolidated balance sheets, had a de minimis impact on our consolidated statements of operations, and no net impact on our consolidated statements of cash flows. The major impact was the recognition of ROU assets and lease liabilities for operating leases.

In August 2016, FASB issued ASU 2016-15, Statement of Cash Flows (Topic 230), Classification of Certain Cash Receipts and Cash Payments, that clarifies how companies should classify certain cash receipts and cash payments in the statement of cash flows. We adopted the amended Topic 230 as of January 1, 2018. Adoption of Topic 230 had no material impact on the amounts presented in our consolidated financial statements.

In June 2018, the FASB issued ASU 2018-07, Improvements to Nonemployee Share-Based Payment Accounting (ASU 2018-07). ASU 2018-07 simplifies the accounting for share-based payments to nonemployees by aligning it with the accounting for share-based payments to employees, with certain exceptions. The new standard is effective for fiscal years beginning after December 15, 2018, and interim periods within those annual periods. We adopted ASU 2018-07 as of January 1, 2019 and applied the standard prospectively. The adoption of this standard did not have a material impact on the consolidated financial statements.

Recent accounting pronouncements

In June 2016, FASB issued ASU 2016-13, Financial Instruments - Credit Losses (Topic 326), that changes how companies will measure credit losses for most financial assets and certain other instruments that aren't measured at fair value through net income. For available-for-sale debt securities, we will be required to record allowances rather than reduce the carrying amount. Public business entities are required to adopt ASU 2016-13 for annual and interim reporting periods beginning after December 15, 2019. We are currently evaluating the impact the ASU will have on our consolidated financial statements.

In January 2017, FASB issued ASU 2017-04, Intangibles-Goodwill and Other - Simplifying the Test for Goodwill Impairment (Topic 350), that simplifies how an entity is required to test goodwill for impairment by modifying the second step of the impairment test. The second step measures a goodwill impairment loss by comparing the fair value of a reporting unit. If the carrying amount of the reporting unit exceeds its fair value, the carrying amount of goodwill is reduced by the excess reporting unit carrying amount up to the carrying amount of the goodwill. Public business entities must adopt ASU 2017-04 for annual or interim goodwill impairment tests in reporting periods beginning after December 15, 2019. We are currently evaluating the impact the ASU will have on our consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, Fair Value Measurement (Topic 820), Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement, which eliminates certain disclosure requirements for fair value measurements for all entities, requires public entities to disclose certain new information and modifies some disclosure requirements. The new guidance is effective for all entities for fiscal years beginning after December 15, 2019 and for interim periods within those fiscal years. An entity is permitted to early adopt either the entire standard or only the provisions that eliminate or modify requirements. Entities can elect to early adopt in interim periods, including periods for which they have not yet issued financial statements or made their financial statements available for issuance. We are currently evaluating the impact the ASU will have on our consolidated financial statements.

2. Business Combinations

On June 29, 2018, we completed the purchase of Medicity LLC (Medicity) for consideration in the form of shares of Series E redeemable convertible preferred stock with an estimated fair value of $2.3 million from Aetna, Inc. The purchase of Medicity was consummated as part of an integrated transaction that included two components: (1) a $15 million Series E redeemable convertible preferred stock capital raise and (2) a business combination where we acquired 100% of the membership interests in Medicity. The acquisition was accounted for as a business combination as specified under ASC 805, Business Combinations. In the integrated transaction, the consideration transferred was allocated HEALTH CATALYST, INC.

between the business combination and the capital raise based on relative values as of June 29, 2018 of the $15 million cash received in the capital raise and the fair value of net identifiable assets received in the business combination.

The fair values of Medicity's assets and liabilities were determined based on estimates and assumptions that are judgmental in nature, including the timing and amount of projected future cash flows and market-participant discount rates reflecting risks inherent in the future cash flows.

The following table summarizes the acquisition-date fair value of consideration transferred and the assets received and liabilities assumed as part of our acquisition of Medicity (in thousands):

Assets acquired:	
Accounts receivable	$ 7,016
Prepaid expenses	2,735
Property and equipment	1,613
Computer software licenses	2,358
Developed technologies	
Customer relationships and contracts	
Trademarks	
Total assets acquired	15,222
Less liabilities assumed:	

Accounts payable and other current liabilities	1,970
Deferred revenue	11,000
Total liabilities assumed	12,970
Total assets acquired, net	$ 2,252

The intangibles assets acquired were valued utilizing the income approach and include customer relationships, developed technology, and trademarks with estimated useful lives of six years, five years, and two years, respectively. The estimated useful life remaining on software licenses and property and equipment acquired is one to five years.

The following unaudited pro forma information presents our consolidated information as if the acquisition of Medicity had occurred on January 1, 2017 (in thousands):

	Year Ended December 31,	
	2017	**2018**
Total pro forma revenues	$ 109,739	$ 128,992
Pro forma net loss	(63,986)	(72,931)
Pro forma net loss per share attributable to common stockholders, basic and diluted	(6.60)	(7.59)

The unaudited pro forma information is not intended to present actual results that would have been attained had the acquisition been completed as of January 1, 2017 or to project potential results as of any future date or for any future periods. The nature and amount of material, nonrecurring pro forma adjustments directly attributable to our acquisition of Medicity which are included in the pro forma revenues or net loss, as applicable, are attributable to fair value adjustments to deferred revenues, amortization of acquired intangible assets and acquisition-related income tax considerations totaling $11.0 million and $0.5 million in 2017 and 2018, respectively.

The amount of revenue attributable to the acquired business of Medicity that has been included in the consolidated statement of operations subsequent to the June 29, 2018 acquisition date through December 31, 2018 is $12.5 million.

Loss information for Medicity after the acquisition date through December 31, 2018 is not presented as the Medicity business was integrated into our operations subsequent to the acquisition and is impracticable to quantify. The acquisition provides us with the opportunity to cross-sell to several top health systems and the ability to leverage the Medicity acquired technology to drive change via analytics at the point of care.

3. Revenue

Disaggregation of revenue

The following table represents Health Catalyst's revenue disaggregated by type of arrangement (in thousands):

	Year Ended December 31,		Three Months Ended March 31,	
	2017	**2018**	**2018**	**2019**
			(unaudited)	
Recurring technology	$ 28,003	$ 55,266	9,113	20,148
One-time technology (i.e., perpetual license)	3,690	1,958		—
Professional services	41,388	55,350	11,181	15,065
Total revenue	$ 73,081	$ 112,574	20,632	35,213

For the years ended December 31, 2017 and 2018 and the three months ended March 31, 2018 and 2019 (unaudited), 99.5%, 99.4%, 97.5%, and 100% of revenue was related to contracts with customers located in the United States.

4. Goodwill and Intangible Assets

We operate our business in two operating segments that also represent our reporting units. Our reporting units are organized based on our technology and professional services. We have not incurred any goodwill impairment charges.

Goodwill by reporting unit is as follows (in thousands):

	As of December 31,		As of March 31,
	2017	2018	2019
			(unaudited)
Technology	$ 2,912	$ 2,912	$ 2,912
Professional services			
Total goodwill	$ 3,694	$ 3,694	$ 3,694

As of December 31, 2017, intangible assets consisted of the following (in thousands):

	Gross	Accumulated Amortization	Net
Developed technologies	$ 35,647	$ (9,290)	$ 26,357
Customer relationships and contracts	3,565	(1,436)	2,129
Computer software licenses	1,178	(99)	1,079
Total intangible assets	$ 40,390	$ (10,825)	$ 29,565

As of December 31, 2018, intangible assets consisted of the following (in thousands):

	Gross	Accumulated Amortization	Net
Developed technologies	$ 36,129	$ (12,720)	$ 23,409
Customer relationships and contracts	4,164	(2,080)	2,084
Computer software licenses	3,554	(818)	2,736
Trademarks		(25)	
Total intangible assets	$ 43,947	$ (15,643)	$ 28,304

As of March 31, 2019 (unaudited), intangible assets consisted of the following (in thousands):

	Gross	Accumulated Amortization	Net
Developed technologies	$ 36,129	$ (13,677)	$ 22,452
Customer relationships and contracts	4,164	(2,253)	1,911
Computer software licenses	5,071	(1,176)	3,895
Trademarks		(38)	
Total intangible assets	$ 45,464	$ (17,144)	$ 28,320

Amortization expense for intangible assets for the years ended December 31, 2017 and 2018 and the three months ended March 31, 2018 and 2019 (unaudited) was $4.5 million, $5.1 million, $1.1 million, and $1.5 million, respectively. Amortization expense for intangible assets is included in depreciation and amortization in the consolidated statements of operations.

The weighted-average remaining amortization period by type of intangible assets as of December 31, 2018 is as follows:

	Weighted-Average Remaining Amortization Period (years)
Developed technologies	6.3
Customer relationships and contracts	3.4
Computer software licenses	3.1
Trademarks	1.5

As of December 31, 2018, future amortization expense for finite-lived intangible assets is estimated to be as follows (in thousands):

Year Ending December 31,	
2019	$ 5,595
2020	5,432
2021	4,758
2022	4,273
2023	3,171
Thereafter	5,075
Total future amortization expense	$ 28,304

5. Property and Equipment

Property and equipment consisted of the following (in thousands):

	As of December 31,		As of March 31,
	2017	2018	2019
			(unaudited)
Computer equipment	$ 4,003	$ 6,769	$ 6,920
Leasehold improvements	1,118	1,704	1,945
Furniture and fixtures	1,097	1,406	1,553
Capitalized internal-use software costs	1,285	1,482	1,520
Computer software			
Capital lease equipment			
Total property and equipment	8,512	12,370	12,947
Less: accumulated depreciation	(5,533)	(7,694)	(8,461)
Property and equipment, net	$ 2,979	$ 4,676	$ 4,486

Our long-lived assets are located in the United States. Depreciation expense for the years ended December 31, 2017 and 2018 and the three months ended March 31, 2018 and 2019 (unaudited) was $1.4 million, $2.3 million, $0.4 million, and $0.8 million, respectively. Depreciation expense includes amortization of assets recorded under a capital lease and the amortization of capitalized internal-use software costs.

We capitalized $1.3 million, $0.2 million, $0.2 million, and $0.1 million of internal-use software costs for the years ended December 31, 2017 and 2018 and the three months ended March 31, 2018 and 2019 (unaudited), respectively. We incurred $0.1 million, $0.4 million, $0.1 million, and $0.1 million of capitalized internal-use software cost amortization expense for the years ended December 31, 2017 and 2018 and the three months ended March 31, 2018 and 2019 (unaudited), respectively.

6. Short-term Investments

Our investment policy limits investments to highly-rated instruments that mature in less than 12 months. We classify our short-term investments as available for sale. Available-for-sale securities are recorded on our consolidated balance sheets at fair market value and any unrealized gains or losses are reported as part of other comprehensive loss on the consolidated statements of comprehensive loss. We determine realized gains or losses on the sales of investments through the specific identification method and record such gains or losses as part of interest and other expense, net on the consolidated statements of operations. We did not have realized gains or losses on investments during the years HEALTH CATALYST, INC.

ended December 31, 2017 and 2018 and the three months ended March 31, 2019. We measure the fair value of investments on a recurring basis.

The following table summarizes, by major security type, our cash, cash equivalents, and short-term investments (in thousands) as of December 31, 2017:

	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and cash equivalents	Short-term Investments
Cash	$ 1,263	$ —	$ —	$ 1,263	$ 1,263	$ —
Money market funds	20,518	—	—	20,518	20,518	—
Commercial paper	14,749	—	—	14,749	1,197	13,552
Corporate bonds	11,478	—	(10)	11,468	—	11,468
Asset-backed securities	3,466	—	(2)	3,464	—	3,464
Total	$ 51,474	$ —	$ (12)	$ 51,462	$ 22,978	$ 28,484

The following table summarizes, by major security type, our cash, cash equivalents, and short-term investments (in thousands) as of December 31, 2018:

	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and cash equivalents	Short-term Investments
Cash	$	$ —	$ —	$	$	$ —
Money market funds	23,085	—	—	23,085	23,085	—
US treasury notes	4,175	—	(1)	4,174	1,396	2,778
Commercial paper	3,976	—	—	3,976	1,993	1,983
Corporate bonds		—	—			—
Total	$ 33,193	$ —	$ (1)	$ 33,192	$ 28,431	$ 4,761

As we do not intend to sell investments that are in an unrealized loss position and it is not likely that we will be required to sell any investments before recovery of their amortized cost basis, we do not consider the investments with an unrealized loss to be other-than-temporarily impaired as of December 31, 2018.

The following table summarizes, by major security type, our cash, cash equivalents, and short-term investments (in thousands) as of March 31, 2019 (unaudited):

	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and cash equivalents	Short-term Investments
Cash	$	$ —	$ —	$	$	$ —
Money market funds	29,128	—	—	29,128	29,128	—
US treasury notes	4,168		—	4,169	—	4,169
Commercial paper	18,609	—	—	18,609	2,988	15,620
Corporate bonds	5,986		—	5,987	—	5,987
Asset-backed securities	6,650	—	—	6,650	—	6,650
Total	$ 64,632	$	$ —	$ 64,634	$ 32,207	$ 32,426

7. Fair Value of Financial Instruments

Assets and liabilities measured at fair value on a recurring basis as of December 31, 2017 were as follows (in thousands):

	December 31, 2017			
	Level 1	Level 2	Level 3	Total
Assets:				
Money market funds	$ 20,518	$ —	$ —	$ 20,518
Commercial paper	—	14,749	—	14,749
Corporate bonds	—	11,468	—	11,468
Asset-backed securities	—	3,464	—	3,464
Total assets measured at fair value on a recurring basis	$ 20,518	$ 29,681	$ —	$ 50,199
Liabilities:				
Common stock warrant liability	$ —	$ —	$	$
Total liabilities measured at fair value on a recurring basis	$ —	$ —	$	$

In October 2017, we issued common stock warrants which required fair value measurements. The fair value of the warrants was measured using an option pricing model. Inputs used to determine the estimated fair value of the warrants include the estimated value of the underlying common stock at the valuation measurement date, the term of the warrants, risk-free interest rates, and estimated volatility. Estimated volatility is based on the volatility of a peer group. In addition to the above, significant inputs include the likelihood of the exercise contingencies being met. In October 2018 all remaining contingencies were resolved and the remaining common stock warrant liability balance was marked to market and recorded in stockholders' deficit. See note 12. Stockholders' Deficit for further information regarding the fair value of the warrants.

The following table sets forth a summary of the changes in the estimated fair value of the warrant liabilities, which are measured at fair value on a recurring basis using significant unobservable inputs (Level 3) (in thousands):

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)
Balance at January 1, 2017	$ —
Common stock warrant issuance	1,569
Loss related to change in fair value of warrant liability	
Reclassification of warrant liability to equity	(1,396)
Balance at December 31, 2017	$
Gain related to change in fair value of warrant liability	(34)
Reclassification of warrant liability to equity	(186)
Balance at December 31, 2018	$ —

Assets and liabilities measured at fair value on a recurring basis as of December 31, 2018 were as follows (in thousands):

	December 31, 2018			
	Level 1	Level 2	Level 3	Total
Assets:				
Money market funds	$ 23,085	$ —	$ —	$ 23,085
U.S. Treasury notes	4,174	—	—	4,174
Commercial paper	—	3,976	—	3,976
Corporate bonds	—		—	
Total assets measured at fair value on a recurring basis	$ 27,259	$ 4,974	$ —	$ 32,233

There were no transfers between Level 1 and Level 2 of the fair value measurement hierarchy during the years ended December 31, 2017 and 2018.

Assets and liabilities measured at fair value on a recurring basis as of March 31, 2019 (unaudited) were as follows (in thousands):

	March 31, 2019			
	Level 1	Level 2	Level 3	Total
Assets:				
Money market funds	$ 29,128	$ —	$ —	$ 29,128
U.S. Treasury notes	4,169	—	—	4,169
Commercial paper	—	18,609	—	18,609
Corporate bonds	—	5,987	—	5,987
Asset-backed securities	—	6,650	—	6,650
Total assets measured at fair value on a recurring basis	$ 33,297	$ 31,246	$ —	$ 64,543

8. Accrued liabilities

As of December 31, 2017 and 2018 and March 31, 2019 (unaudited), accrued liabilities consisted of the following (in thousands):

	As of December 31,		As of March 31,
	2017	2018	2019
			(unaudited)
Accrued compensation and benefit expenses	$	$ 5,888	$ 5,634
Other accrued expenses	1,531	3,315	4,203
Total accrued liabilities	$ 2,342	$ 9,203	$ 9,837

9. Leases

Operating leases

We lease office space and certain equipment under operating leases that expire between 2019 and 2024. The terms of the leases provide for rental payments on a graduated scale, options to renew the leases (one to five years), landlord incentives or allowances, and periods of free rent.

Our operating lease expense for the years ended December 31, 2017 and 2018, and the three months ended March 31, 2018 and 2019 (unaudited), was $1.8 million, $2.2 million, $0.5 million, and $0.8 million, respectively. In addition to those amounts, lease expense attributable to short-term leases with terms of 12 months or less for the years ended December 31, 2017 and 2018 and the three months ended March 31, 2018 and 2019 (unaudited) was $0.6 million, $0.5 million, $0.1 million, and $0.1 million, respectively.

Maturities of lease liabilities under operating leases at December 31, 2018 are as follows (in thousands):

Year ending December 31:	
2019	$ 2,882
2020	3,147
2021	
2022	
2023	
Thereafter	
Total lease payments	7,342
Less: Imputed interest	(537)
Total lease liability	$ 6,805

As of December 31, 2018, we had additional commitments of $0.7 million under an operating lease for office space, that has not commenced. This operating lease commenced in the first quarter of 2019 and has a lease term of five years.

Supplemental balance sheet information related to leases as of December 31, 2017 and 2018 and March 31, 2019 (unaudited) is as follows (in thousands other than weighted average amounts):

	As of December 31,		As of March 31,
	2017	**2018**	**2019**
			(unaudited)
Operating lease right-of-use assets	$ 2,402	$ 6,344	$ 6,214
Operating lease liabilities, current	2,134	2,577	2,725
Operating lease liabilities, noncurrent		4,228	3,979
Total operating lease liabilities	$ 3,006	$ 6,805	$ 6,704
Weighted-average remaining operating lease term (years)	1.6	2.6	2.7
Weighted-average operating lease discount rate	4.3 %	5.5 %	5.6 %

Notes to the Consolidated Financial Statements

10. Acquisition-related consideration payable

Future minimum cash commitments as part of prior year asset acquisitions and business combinations as of December 31, 2018 are as follows (in thousands):

Year ending December 31:	
2019	$ 2,250
2020	2,250
2021	2,000
Total cash commitments as part of acquisitions	6,500
Less: Imputed interest	(558)
Total acquisition-related consideration payable	$ 5,942

The remaining obligations from the acquisition-related consideration payable, net of imputed interest, are recorded as liabilities on our consolidated balance sheets.

11. Credit Facilities

As of December 31, 2017, our term credit facilities consisted of the following, excluding debt discount and issue costs of $1.7 million (in thousands):

	Balance	Remaining Capacity	Interest Rate	Basis Rate
Term loan	$ 10,000	$ 10,000	10.75 %	Prime plus 6.25%
Revolving line of credit	1,321	13,085	5.00 %	Prime plus 0.50%
Total credit facilities	11,321	$ 23,085		
Less: Current portion of credit facilities	—			
Credit facilities, less current portion	$ 11,321			

As of December 31, 2018, our term credit facilities consisted of the following, excluding debt discount and issue costs of $1.2 million (in thousands):

	Balance	Remaining Capacity	Interest Rate	Basis Rate
Term loan	$ 20,000	$ —	11.75%	Prime plus 6.25%
Revolving line of credit	1,321	18,679	6.00%	Prime plus 0.50%
Total credit facilities	21,321	$ 18,679		
Less: Current portion of credit facilities	(1,321)			
Credit facilities, less current portion	$ 20,000			

As of March 31, 2019 (unaudited), our term credit facilities consisted of the following, excluding debt discount and issue costs of $2.7 million (in thousands):

	Balance	Remaining Capacity	Interest Rate	Basis Rate
Term loan	$ 50,000	$ 10,000	10.00%	Higher of LIBOR plus 7.5% and 10.0%
Revolving line of credit	—	5,000	6.00%	Prime plus 0.50%
Total credit facilities	50,000	$ 15,000		
Less: Current portion of credit facilities	—			
Credit facilities, less current portion	$ 50,000			

In June 2016, we signed a Loan and Security Agreement with Silicon Valley Bank (SVB) which established a revolving line of credit based on a formula amount. The formula amount is calculated as 85% of eligible account balances, which includes certain accounts receivable amounts. The revolving line of credit's capacity is up to $20.0 million, subject to the limitation set by the formula amount. The line may be increased by $5.0 million upon request and approval by the bank. In October 2017, we entered into the Amended and Restated Loan and Security Agreement, which amends the Loan and Security Agreement. As of December 31, 2018, the amended revolving line of credit was scheduled to mature in December 2019. We paid $0.1 million in fees related to the establishment of the revolving line of credit and secured $1.3 million in advances from the revolving line of credit.

Amounts borrowed under the SVB Loan and Security Agreement are secured by a first priority security interest in substantially all of our assets other than intellectual property. In the event of default, SVB may accelerate amounts outstanding, terminate the credit facility, and foreclose on the collateral. The agreement also includes a financial covenant requiring the achievement of minimum annual recurring revenue amounts. Failure to meet this financial covenant may constitute an event of default. We were in compliance with this covenant under the terms of the credit facility as of December 31, 2018.

In October 2017, we signed a Mezzanine Loan and Security Agreement with SVB which allows access to borrowings of up to $20.0 million and drew $10.0 million at closing. As of December 31, 2018, the maturity date of any borrowings under the agreement was April 2021. We paid $0.2 million in fees related to the establishment of the term loan and are required to pay an additional commitment fee each time we draw funds based on a formula and the amount of funds borrowed. In October 2018, we drew an additional $10.0 million under the Mezzanine Loan and Security Agreement.

Amounts borrowed under the SVB Mezzanine Loan and Security Agreement are secured by a first priority security interest in substantially all of our assets other than intellectual property. In the event of default, SVB may accelerate amounts outstanding, terminate the credit facility, and foreclose on the collateral. The agreement also includes a financial covenant requiring the achievement of minimum annual recurring revenue amounts in order to draw upon the remaining available credit. We were in compliance with this covenant under the terms of the credit facility as of December 31, 2018.

OrbiMed debt financing transaction On February 6, 2019, we entered into a debt financing agreement with OrbiMed Royalty Opportunities II, LP (OrbiMed) where we obtained an $80.0 million senior term loan commitment, with $50.0 million available and up to an additional $30.0 million contingently available on or prior to March 31, 2020 (the Delayed Draw Commitment). We paid $2.4 million in fees related to the establishment of the OrbiMed term loan and incurred $0.3 million in debt issuance costs. The Delayed Draw Commitment is contingent upon our achievement of minimum levels of technology revenues ranging from technology revenues for the latest 12 months of at least $60.0 million to borrow up to $10.0 million, to a minimum of $80.0 million in technology revenues to borrow between $25.0 million and $30.0 million.

The contractual interest rate of the OrbiMed term loan is the higher of LIBOR plus 7.5% and 10.0%. Interest payments are required at the end of each month and monthly installment payments on principal begin in February 2023 and will be based on the then outstanding principal balance divided by 12. The maturity date of the OrbiMed term loan is February 6, 2024. Upon the payment of all or any portion of the principal amount on the OrbiMed term loan, we are required to pay an exit fee of 5% of the principal amount paid. This exit fee is being accreted as interest expense over the contractual term of the loan. If we elect to prepay portions of the principal balance prior to the 48-month anniversary of the closing date we would be required to pay a repayment premium ranging from 1% to 12% of the principal balance prepaid depending on the period in which the prepayment is made.

Amounts borrowed under the OrbiMed term loan are secured by a first priority security interest in substantially all of our assets other than intellectual property. In the event of default, OrbiMed may accelerate amounts outstanding, terminate the credit facility, and foreclose on the collateral. The agreement also includes a financial covenant requiring the achievement of minimum trailing twelve-month revenue amounts as well as certain other financial and non-financial covenants. We were in compliance with these covenants under the terms of the OrbiMed term loan as of March 31, 2019 (unaudited).

The use of proceeds from the senior term loan included an immediate repayment of our $20.0 million term loan from SVB that required a prepayment premium of $0.5 million and the write-off of deferred debt issuance costs of $1.2 million, resulting in a $1.7 million loss on extinguishment of debt. In addition, we repaid in full the outstanding balance of $1.3 million under the SVB revolving line of credit.

On February 6, 2019, we amended the Loan and Security Agreement with SVB which reduced the revolving line of credit to a current maximum of $5.0 million with an obligation to maintain a minimum of $5.0 million cash or cash equivalents on deposit with SVB to maintain the assurance of future credit availability. The line may be increased to $10.0 million upon request and approval by SVB. The maturity date of the revolving line of credit was amended to be February 6, 2021.

12. Stockholders' Deficit

Common stock

We had 72,565,312 and 73,642,899 shares of $0.001 par value common stock authorized, of which 9,664,326 and 9,853,458 shares were legally issued and outstanding as of December 31, 2018 and March 31, 2019 (unaudited), respectively. The shares legally issued and outstanding include 105,557 shares issued to former employees with notes determined to be substantively nonrecourse and, as such, for accounting purposes are not considered to be outstanding common stock shares. Each share of common stock has the right to one vote on all matters submitted to a vote of stockholders. The holders of common stock are also entitled to receive dividends whenever funds are legally available and when declared by the Board of Directors, subject to prior rights of holders of all classes of stock outstanding having priority rights as to dividends. No dividends have been declared or paid on our common stock through March 31, 2019.

Shares of common stock reserved for future issuance were as follows:

	As of December 31, 2018	As of March 31, 2019
		(unaudited)
Shares of redeemable convertible preferred stock	45,427,441	46,303,026
Stock options outstanding	14,474,841	16,371,932
Warrants to purchase shares of common stock	510,674	510,674
Shares reserved for future awards under Health Catalyst Stock Plan	2,593,587	507,364
Total	63,006,543	63,692,996

During 2018, as part of a tender offer we repurchased 1,596,843 shares of common stock from team members, which shares were received by the exercise of stock options or contractual arrangements, for cash consideration of $16.9 million. The estimated fair value of the repurchased common stock of $8.6 million and offering costs of $0.1 million were recorded as a reduction to common stock and additional paid-in capital. The excess of the repurchase price over the estimated fair value of the common stock redeemed from team members of $8.3 million was accounted for as compensation expense on the consolidated statement of operations.

The effects of the excess of the tender offer repurchase price over the estimated fair value of the common stock redeemed from team members on the statement of operations for the year ended December 31, 2018 are summarized in the following table (in thousands):

	2018
Cost of revenue	$
Sales and marketing	3,967
Research and development	
General and administrative	3,133
Total compensation expense from repurchase	$ 8,318

Common stock warrants

In October 2017, we issued warrants in connection with the Mezzanine Loan and Security Agreement for up to 510,674 shares of common stock with a ten-year term at an exercise price of $5.33 per share. The fair value of the warrants on the date of grant was $1.6 million and recorded as deferred financing costs. The deferred financing costs are reclassified to a discount on debt in proportion to the advances made on the credit facility. The deferred financing costs and the debt discount are recognized as interest expense over the term of the credit facility.

The common stock warrants that are exercisable without contingency are classified as part of stockholders' deficit on the consolidated balance sheets. The common stock warrants subject to contingency were classified as a liability on the balance sheet with changes in fair value being recorded each reporting period through the changes in fair value of warrant liability account within interest and other expense, net on the consolidated statements of operations. Once a contingency is resolved, the respective liability-classified warrants are marked to market and recorded in stockholders' deficit on the consolidated balance sheets. The contingent common stock warrants had an estimated common stock warrant liability balance of $0.2 million as of December 31, 2017. In October 2018 all remaining contingencies were resolved and the remaining common stock warrant liability balance was marked to market and recorded in stockholders' deficit.

13. Redeemable Convertible Preferred Stock

We had 45,427,441 and 46,505,028 shares of $0.001 par value redeemable convertible preferred stock authorized, of which 45,427,441 and 46,303,026 shares were issued and outstanding, as of December 31, 2018 and March 31, 2019 (unaudited), respectively. The issued and outstanding redeemable convertible preferred shares as of March 31, 2019 (unaudited) consisted of 7,175,000 designated Series A redeemable convertible preferred stock, 9,973,658 designated Series B redeemable convertible preferred stock, 9,588,022 designated Series C redeemable convertible preferred stock, 6,629,236 designated Series D redeemable convertible preferred stock, 12,061,525 designated Series E redeemable convertible preferred stock, and 875,585 designated Series F redeemable convertible preferred stock.

During the year ended December 31, 2017, we authorized an additional 2,641,537 shares of Series E redeemable convertible preferred stock and issued 2,249,278 shares of Series E redeemable convertible preferred stock for total cash consideration of $23.8 million, net of offering costs of $0.1 million.

During the year ended December 31, 2018, we authorized an additional 2,815,589 shares of Series E redeemable convertible preferred stock and issued 3,207,848 shares of Series E redeemable convertible preferred stock for total HEALTH CATALYST, INC.

cash consideration of $34.0 million, net of offering costs of less than $0.1 million. Included in the total shares issued in 2018 were 1,415,227 shares of Series E redeemable convertible preferred stock issued in June 2018 as part of an integrated business combination transaction where we acquired 100% of the LLC interests in Medicity and received $15.0 million in cash consideration.

During the three months ended March 31, 2019, we authorized 1,077,587 shares of Series F redeemable convertible preferred stock and issued 875,585 shares of Series F redeemable convertible preferred stock for total cash consideration of $12.1 million, net of offering costs of $0.1 million.

The significant rights, privileges, and preferences of all classes of redeemable convertible preferred stock are as follows:

Dividends - The holders of redeemable convertible preferred stock are entitled, when and if declared by the Board of Directors, to dividends declared to holders of common stock. The redeemable convertible preferred stockholders will receive the amount of dividends that would be paid with respect to each share of common stock assuming conversion of all of the outstanding shares of redeemable convertible preferred stock immediately prior to the record date for such dividend.

Liquidation preferences - In the event of a liquidation, dissolution, or winding up of Health Catalyst, holders of redeemable convertible preferred stock shall be entitled to be paid, before any distribution or payment is made upon any capital stock or other equity securities of Health Catalyst, except for redeemable convertible preferred stock, an amount in cash equal to the greater of (i) the aggregate liquidation value of all shares of redeemable convertible preferred stock (which value is initially $2.00 per share for Series A redeemable convertible preferred stock, $3.93 for Series B redeemable convertible preferred stock, $5.69 for Series C redeemable convertible preferred stock, $10.60 for Series D and E redeemable convertible preferred stock, and $13.92 for Series F redeemable convertible preferred stock) held by such holder and (ii) the amount which such holder would be entitled to receive upon such liquidation, dissolution or winding up if all such holder's outstanding shares of preferred stock were converted into common stock immediately prior to such event.

Liquidation preference is granted on a pari passu basis to Series A redeemable convertible preferred stock, Series B redeemable convertible preferred stock, Series C redeemable convertible preferred stock, Series D redeemable convertible preferred stock, Series E redeemable convertible preferred stock, and Series F redeemable convertible preferred stock; and then remaining proceeds are distributed to the common stock.

A change in control or a sale, transfer, or lease of all or substantially all of our assets is considered to be a liquidation event.

Voting rights - Holders of redeemable convertible preferred stock are entitled to the number of votes they would have upon conversion of their shares into common stock on the applicable record date. The holders of redeemable convertible preferred stock are entitled to elect three members to our Board of Directors and the holders of common stock (voting as a separate class) are entitled to elect the balance of our directors.

Conversion - Each share of redeemable convertible preferred stock is convertible, at any time at the option of the holder, into one share of common stock. The conversion rate is subject to adjustment in certain circumstances. Conversion is automatic upon the closing of a qualifying initial public offering of our common stock.

Redemption - At any time on or after February 5, 2024, holders of redeemable convertible preferred stock may, under certain circumstances, require that we redeem shares of the redeemable convertible preferred stock at a price per share equal to the greater of the liquidation value or the market price (determined on an as-converted basis) determined on the date on which we received the redemption notice. Accordingly, these shares are considered contingently redeemable and are classified as temporary equity on our consolidated balance sheets. We recognize changes in the redemption value as they occur and adjust the carrying amount of the applicable class of redeemable convertible preferred stock as a deemed dividend (or a reversal of accretion to reflect a reduction in fair value of the redemption value) from additional paid-in-capital or an adjustment of the accumulated deficit to equal the redemption value at the HEALTH CATALYST, INC.

end of each reporting period. This method views the end of the reporting period as if it were also the redemption date for the applicable class of redeemable convertible preferred stock. The shares of redeemable convertible preferred stock have been accreted to the estimated fair value of $321.6 million, $409.9 million, and $485.9 million as of December 31, 2017, December 31, 2018, and March 31, 2019 (unaudited), respectively.

Protective provisions - The holders of redeemable convertible preferred stock have protective provisions that require written consent of a supermajority (75% of the outstanding shares) of the redeemable convertible preferred stockholders in order for us to take certain actions including the following: (i) liquidate, dissolve, or wind up the Company; (ii) issue equity securities with rights or preferences senior to the rights or preferences of the redeemable convertible preferred stock; (iii) engage in a fundamental change in the Company's ownership; (iv) consummate an initial public offering; or (v) materially change the business activities of the Company. In addition, a majority of Series A redeemable convertible preferred stockholders must provide written consent in order for us to take certain actions including the following: (i) amend our Certificate of Incorporation; (ii) redeem equity securities; (iii) declare or pay dividends or distributions; (iv) incur indebtedness in any individual circumstance greater than $1.0 million or in an aggregate amount outstanding at any given time greater than $5.0 million; (v) engage in a fundamental change in the Company's ownership; (vi) sell, lease, license, or otherwise dispose of any material assets outside of the ordinary course of business; (vii) acquire any interest in a company or business, except to the extent such acquisitions or investments do not exceed $2.0 million per year, in the aggregate; (viii) enter into a related party transaction, except for customary employment arrangements; (ix) except as expressly contemplated by the Company's stock purchase agreement, adopt, amend, or modify any equity incentive plan, employee equity ownership plan, or similar plans.

14. Net Loss Per Share

The following table presents the calculation of basic and diluted net loss per share attributable to common stockholders (in thousands, except share and per share amounts):

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
			(unaudited)	
Numerator:				
Net loss attributable to common stockholders	$ (58,780)	$ (114,021)	$ (1,728)	$ (77,735)
Denominator:				
Weighted-average number of shares used in calculating net loss per share attributable to common stockholders, basic and diluted	9,693,050	9,596,773	9,733,637	9,590,318
Net loss per share attributable to common stockholders, basic and diluted	$ (6.06)	$ (11.88)	$ (0.18)	$ (8.11)

During the years ended December 31, 2017 and 2018, and the three months ended March 31, 2018 and 2019 (unaudited), we incurred net losses and, therefore, the effect of our common stock options, common stock warrants, and redeemable convertible preferred stock (as converted) were not included in the calculation of diluted net loss per share attributable to common stockholders as the effect would be anti-dilutive. The following table contains share

totals with a potentially dilutive impact:

	As of December 31,		As of March 31,	
	2017	2018	2018	2019
			(unaudited)	
Redeemable convertible preferred stock	42,219,593	45,427,441	42,596,987	46,303,026
Common stock options	9,410,391	14,474,841	9,546,780	16,371,932
Common stock warrants	510,674	510,674	510,674	510,674
Total potentially dilutive securities	52,140,658	60,412,956	52,654,441	63,185,632

15. Unaudited Pro Forma Net Loss Per Share

The following calculation gives effect to the automatic conversion of all outstanding shares of our redeemable convertible preferred stock (using the if-converted method) into common stock as though the conversion had occurred as of the beginning of the period or the original date of issuance, if later. In addition, the pro forma net loss per share also excludes accretion of redeemable convertible preferred stock as no accretion would have been recorded upon conversion.

The following table presents the computation of the unaudited pro forma basic and diluted net loss per share for the year ended December 31, 2018 and the three months ended March 31, 2019 (in thousands, except share and per share data):

	Year Ended December 31, 2018	Three Months Ended March 31, 2019
	(unaudited)	
Numerator:		
Net loss attributable to common stockholders	$ (114,021)	$ (77,735)
Pro forma adjustment related to accretion of redeemable convertible preferred stock	52,037	64,015
Pro forma net loss attributable to common stockholders	$ (61,984)	$ (13,720)
Denominator:		
Weighted-average number of shares used in calculating net loss per share attributable to common stockholders, basic and diluted	9,596,773	9,590,318
Weighted-average pro forma adjustment to reflect assumed conversion of redeemable convertible preferred stock to common stock	44,107,855	45,943,063
Weighted-average number of shares used in calculating pro forma net loss per share attributable to common stockholders, basic and diluted	53,704,628	55,533,381
Pro forma net loss per share attributable to common stockholders, basic and diluted	$ (1.15)	$ (0.25)

16. Stock-Based Compensation

In 2011, our Board of Directors adopted the Health Catalyst, Inc. 2011 Stock Incentive Plan (Health Catalyst Stock Plan), which provided for the direct award, sale of shares and granting of options for our common stock to our directors, team members, or consultants. At December 31, 2018, there were 17,545,757 shares authorized for grant and 2,593,587 shares available for grant under the Health Catalyst Stock Plan. At March 31, 2019 (unaudited), there were 17,545,757 shares authorized for grant and 507,364 shares available for grant under the Health Catalyst Stock Plan.

All options were granted with an exercise price determined by the board of directors that was equal to the estimated fair value of our common stock at the date of grant, based on the information known on the date of grant. Subject to certain exceptions defined in the Health Catalyst Stock Plan related to an employee's termination, options generally expire on the tenth anniversary of the applicable grant date.

We have issued two types of employee stock options, standard and two-tier. Our standard stock options vest solely on a service-based condition. For these awards, we recognize stock-based compensation based on the grant date fair value of the awards and recognize that cost using the straight-line method over the requisite service period of the award. Two-tier employee stock options contain both a service-based condition and performance condition, defined as the earlier of (i) an acquisition or change in control of the company or (ii) upon the occurrence of our initial public offering. A change in control event and effective registration event are not deemed probable until consummated; accordingly, no expense is recorded related to two-tier stock options until the performance condition becomes probable of occurring. Awards which contain both service-based and performance conditions are recognized using the accelerated attribution method once the performance condition is probable of occurring. The service-based condition is generally a service period of four years.

The fair value of options, which vest in accordance with service schedules, is estimated on the date of grant using the Black-Scholes option pricing model. The absence of an active market for our common stock requires us to estimate the fair value of our common stock for purposes of granting stock options and for determining stock-based compensation expense for the periods presented. We obtained contemporaneous third-party valuations to assist in determining the estimated fair value of our common stock. These contemporaneous third-party valuations used the methodologies, approaches, and assumptions consistent with the American Institute of Certified Public Accountants Practice Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation. Expected volatilities are based on historical volatilities of comparable companies. The expected term of the options is based on the simplified method outlined in the SEC Staff accounting guidance, under which we estimate the term as the average of the option's contractual term and the option's weighted average vesting period. The risk-free rate represents the yield on U.S. Treasury bonds with maturity equal to the expected term of the granted option. We account for forfeitures as they occur. All standard stock options outstanding at December 31, 2018 and March 31, 2019 (unaudited) are expected to vest according to their specific schedules.

Prior to the adoption of ASU 2018-17, the fair value measurement date for non-employee awards was the date the performance of services was completed. Upon adoption of ASU 2018-07 on January 1, 2019, the measurement date for non-employee awards is the date of grant. The compensation expense for non-employees is recognized, without changes in the fair value of the award, in the same period and in the same manner as though we had paid cash for the services, which is typically the vesting period of the respective award.

Total stock-based compensation expense recognized for the service-based options granted under the Health Catalyst Stock Plan was $3.5 million, $4.0 million, $0.9 million, and $1.3 million, for the years ended December 31, 2017 and 2018 and the three months ended March 31, 2018 and 2019 (unaudited), respectively.

As of December 31, 2018, all compensation expense related to two-tier employee stock options remained unrecognized because the performance condition was not satisfied. At the time the performance condition becomes probable, we will recognize the cumulative stock-based compensation expense for the two-tier employee stock options to the extent that they would have been expensed based on the service vesting condition using the accelerated attribution method. Under the Health Catalyst, Inc. Stock Incentive Plan as of December 31, 2018 and March 31, 2019 (unaudited), 3.3 million and 4.6 million, respectively, two-tier employee stock options were outstanding, of which no two-tier employee stock options would have been vested based on the service condition alone.

If the performance condition had occurred on December 31, 2018, we would have recorded $1.4 million of stock-based compensation expense on that date. If the performance condition had been satisfied on these two-tier employee stock options as of December 31, 2018, we would recognize future stock-based compensation expense of $7.3 million over a weighted-average period of approximately 2.0 years, if the requisite service is provided.

If the performance condition had occurred on March 31, 2019 (unaudited), we would have recorded $3.8 million of stock-based compensation expense on that date. If the performance condition had been satisfied on these two-tier employee stock options as of March 31, 2019 (unaudited), we would recognize future stock-based compensation expense of $10.7 million over a weighted-average period of approximately 1.9 years, if the requisite service is provided.

The following table summarizes the consolidated statements of operations effect of stock-based compensation expense (in thousands):

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
			(unaudited)	
Cost of revenue	$	$	$	$
Sales and marketing	1,192	1,514		
Research and development				
General and administrative	1,763	1,339		
Total stock-based compensation	$ 4,241	$ 4,198	$ 1,040	$ 1,656

We did not capitalize any stock-based compensation expense to deferred costs for the years ended December 31, 2017 and 2018 and the three months ended March 31, 2019 (unaudited). For the years ended December 31, 2017 and 2018, we recognized less than $0.1 million of stock-based compensation expense that was capitalized to deferred costs in prior years.

The fair value of our option grants is estimated at the grant date using the Black-Scholes option-pricing model based on the following weighted average assumptions:

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
			(unaudited)	
Expected volatility	46.5%-48.4%	43.6%-47.6%	46.4%	44.5%
Expected term (in years)	6.3	6.3	6.3	6.3
Risk-free interest rate	2.0%-2.2%	2.5%-3.0%	2.5%	2.5%
Expected dividends	—	—	—	—

A summary of the share option activity under the Health Catalyst Stock Plan for the year ended December 31, 2018 and the three months ended March 31, 2019 (unaudited), is as follows:

	Time-Based Option Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life in Years	Aggregate Intrinsic Value
Outstanding at January 1, 2018	9,410,391	$ 3.94		
Options granted	6,705,329	5.42		
Options exercised	(1,447,894)	2.10		
Options cancelled/forfeited	(192,985)	4.66		
Outstanding at December 31, 2018	14,474,841	$ 4.80	7.9	$ 45,159,058
Options granted	2,314,000	7.92		
Options exercised	(189,132)	4.27		
Options cancelled/forfeited	(227,777)	5.19		
Outstanding at March 31, 2019	16,371,932	$ 5.24	8.0	$ 82,976,260
Vested and expected to vest as of December 31, 2018	14,474,841	$ 4.80	7.9	$ 45,159,058
Vested and exercisable as of December 31, 2018	6,172,542	$ 4.02	6.1	$ 24,080,949
Vested and expected to vest as of March 31, 2019 (unaudited)	16,371,932	$ 5.24	8.0	$ 82,976,260
Vested and exercisable as of March 31, 2019 (unaudited)	6,311,949	$ 4.08	5.9	$ 39,325,216

The weighted-average grant-date fair value for stock options granted during the years ended December 31, 2017 and 2018 and the three months ended March 31, 2019 (unaudited) was $2.57, $2.65, and $4.65, respectively. The aggregate intrinsic value of stock options exercised was $0.1 million, $10.9 million, and $0.6 million for the years ended December 31, 2017 and 2018 and the three months ended March 31, 2019 (unaudited), respectively. The total grant-date fair value of stock options vested during the years ended December 31, 2017 and 2018 and the three months ended March 31, 2019 (unaudited) was $3.6 million, $3.3 million, and $0.8 million, respectively. As of December 31, 2018, approximately $11.8 million of unrecognized compensation expense related to our stock options is expected to be recognized over a weighted average period of 2.9 years. As of March 31, 2019 (unaudited), approximately $14.9 million of unrecognized compensation expense related to our stock options is expected to be recognized over a weighted average period of 3.1 years.

The options outstanding include 105,557 of shares issued to former employees with notes determined to be substantively nonrecourse and, as such, for accounting purposes are not considered to be exercised stock options.

Notes to the Consolidated Financial Statements

17. Income Taxes

For the years ended December 31, 2017 and 2018, the income tax provision (benefit) consisted of the following (in thousands):

	Year Ended December 31,	
	2017	2018
Current taxes:		
Federal	$ —	$ —
State		
Total current tax provision		
Deferred taxes:		
Federal	—	(135)
State		(28)
Total deferred provision (benefit)		(163)
Total income tax provision (benefit)	$	$ (135)

A reconciliation of the statutory U.S. federal income tax rate to our effective income tax rate is as follows:

	Year Ended December 31,	
	2017	2018
Tax at U.S. statutory rates	34.0%	21.0%
State income tax, net of federal tax effect	—	—
Federal research and development credits	1.0	0.7
Stock-based compensation	(2.0)	(0.4)
Change in valuation allowance	23.8	(20.9)
U.S. tax reform	(56.7)	—
Other, net	(0.2)	(0.2)
Effective income tax rate	(0.1)%	0.2%

The tax provision for interim periods is determined using an estimate of our annual effective tax rate, adjusted for discrete items, if any, that arise during the period. Each quarter, we update our estimate of the annual effective tax rate, and if the estimated annual effective tax rate changes, we make a cumulative adjustment in such period. The quarterly tax provision and the estimate of our annual effective tax rate are subject to variation due to several factors, including variability in our loss before income taxes, the mix of jurisdictions to which such income or loss relates, changes in how we conduct business, and tax law developments.

For the three months ended March 31, 2018 and 2019 (unaudited) our estimated annual effective tax rate was 1.3% and (0.1)%, respectively. The variations between our estimated annual effective tax rate and the U.S. statutory rate are primarily due to the impact of the Tax Act and the valuation allowance against our net deferred tax assets.

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and liabilities were as follows as of December 31, 2017 and 2018 (in thousands):

	As of December 31,	
	2017	2018
Deferred income tax assets:		
Allowance for bad debt	$	$
Accrued expenses		
Deferred revenue		1,500
Property and equipment		
Intangible assets	6,087	5,393
Net operating loss carryforwards	44,885	59,645
Stock-based compensation	1,107	1,398
Research and development credits	1,939	2,372
Interest limitation carryforward	—	
Operating lease liabilities	—	1,808
Other		
Total deferred income tax assets	54,985	73,487
Valuation allowance	(54,313)	(70,258)
Net deferred income tax assets		3,229
Deferred income tax liabilities:		
Prepaid expenses	(490)	(1,229)
Deferred contract costs	(182)	(155)
Indefinite-lived intangible assets	(164)	(227)
Operating lease right-of-use assets	—	(1,618)
Total deferred income tax liabilities	(836)	(3,229)
Net deferred income tax liabilities	$ (164)	$ —

We consider all available evidence to evaluate the recovery of deferred tax assets, including historical levels of income, legislative developments, and risks associated with estimates of future taxable income. We have provided a full valuation allowance for our deferred tax assets at December 31, 2017 and 2018, due to the uncertainty surrounding the future realization of such assets and the cumulative losses we have generated. Therefore, no benefit has been recognized in the financial statements for the net operating loss carryforwards and other deferred tax assets.

On December 22, 2017, the Tax Act was enacted into law and the new legislation contains several key tax provisions that affect our consolidated financial statements, including the reduction of the corporate income tax rate to 21%, effective January 1, 2018. We are required to recognize the effect of the tax law changes in the period of enactment. As such, we have remeasured our consolidated deferred tax assets and liabilities to reflect the lower rate and has also reassessed the realizability of those deferred tax assets and liabilities.

In December 2017, the SEC staff issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act (SAB 118), which allows us to record provisional amounts during a measurement period not to extend beyond one year of the enactment date. As of December 31, 2018, we consider the accounting of the deferred tax remeasurements and state tax conformity to be complete.

As of December 31, 2018, we had approximately $232.9 million of consolidated federal net operating loss carryforwards and $186.2 million of state net operating loss carryforwards available to offset future taxable income, HEALTH CATALYST, INC.

respectively. If unused, the federal and state net operating loss carryforwards will begin to expire in 2032 and 2022, respectively.

We have federal research and development credit carryforwards of $3.7 million and state research and development credit carryforwards of $1.4 million, which if not utilized will begin to expire in 2031 and 2024, respectively.

Based on an analysis under Code Sections 382 and 383, which subject the amount of pre-change NOLs and certain other pre-change tax attributes that can be utilized to annual limitations, we experienced an ownership change in January 2014. As of December 31, 2018, the annual limitation which resulted from this ownership change allows for full use of our pre-change NOLs and certain other pre-change tax attributes. To the extent we do not utilize our carryforwards within the applicable statutory carryforward periods, either because of future Section 382 limitations or the lack of sufficient taxable income, the carryforwards will expire unused.

We file federal and state income tax returns in jurisdictions with varying statutes of limitations. With few exceptions, we are no longer subject to federal or state income tax examinations by tax authorities for tax years prior to 2015.

We recognize tax benefits from uncertain tax positions when it is more likely than not, based on the technical merits, that the position will be sustained upon examination. The following table summarizes the activity related to unrecognized tax benefits for the years ended December 31, 2017 and 2018 (in thousands):

	Year Ended December 31,	
	2017	2018
Beginning balance	$ 1,305	$ 1,939
Additions for tax positions related to the current year		
Ending balance	$ 1,939	$ 2,372

We do not anticipate material changes in the total amount of our unrecognized tax benefits within 12 months of the reporting date. Our policy is to accrue interest and penalties related to unrecognized tax benefits within the provision for income taxes. However, as of December 31, 2017 and 2018, we have not accrued interest and penalties because we have net operating loss carryforwards.

18. Contingencies

Litigation

Liabilities for loss contingencies arising from claims, assessments, litigation, fines, penalties, and other sources are recorded when it is probable that a liability has been incurred and the amount can be reasonably estimated. Legal costs incurred in connection with loss contingencies are expensed as incurred.

We are involved in legal proceedings from time to time that arise in the normal course of business. As of December 31, 2018 and March 31, 2019 (unaudited), there were no significant outstanding claims against us.

19. Deferred Revenue and Performance Obligations

Deferred revenue includes advance customer payments and billings in excess of revenue recognized. For the year ended December 31, 2018, approximately 9% of the revenue recognized was included in deferred revenue at the beginning of the period. For the three months ended March 31, 2019 (unaudited), approximately 36% of the revenue recognized was included in deferred revenue at the beginning of the period.

Transaction price allocated to the remaining performance obligations

Most of our technology and professional services contracts have up to a three-year term, of which the vast majority are terminable after one year upon 90 days notice. For arrangements that do not allow the customer to cancel within one year or less, we expect to recognize $76.8 million and $72.7 million of revenue on unsatisfied performance obligations as of December 31, 2018 and March 31, 2019 (unaudited), respectively. We expect to recognize approximately 80% of the remaining performance obligations over the next 24 months, with the balance recognized thereafter.

20. Related Parties

We have entered into arrangements with customers where the customer's management is currently or was previously a member of our board of directors. An executive officer at Allina Health served on our board of directors until December 2017. The board seat vacated by the Allina Health executive officer was replaced in January 2018 by an executive of a Partners Healthcare affiliate.

For the years ended December 31, 2017 and 2018 and the three months ended March 31, 2018 and 2019 (unaudited), we recognized $8.6 million, $3.8 million, $1.0 million, and $0.7 million in revenue from related parties, respectively. We also leased building space from a related party and recognized $0.6 million in rent expense related to this lease arrangement during the year ended December 31, 2017.

As of December 31, 2017 and 2018 and March 31, 2019 (unaudited), we had receivables from related parties of $3.3 million, $0.1 million, and $0.5 million, respectively. As of December 31, 2018 and March 31, 2019, we also had acquisition-related consideration payable to a related party for a prior year asset acquisition. This asset acquisition occurred prior to this entity becoming a related party. The acquisition-related consideration payable to this related party was $3.3 million and $2.8 million as of December 31, 2018 and March 31, 2019 (unaudited), respectively.

We have also entered into revenue arrangements with customers that are also our investors. None of these customers hold a significant amount of ownership in our equity interests.

21. Employee Benefit Plans

We have a 401(k) defined contribution plan covering eligible employees. Our contributions were $3.5 million, $4.6 million, $1.0 million, and $0.7 million for the years ended December 31, 2017 and 2018 and the three months ended March 31, 2018 and 2019 (unaudited), respectively. We match 100% of the first 6% of an employees' salary deferral.

22. Segments

We operate our business in two operating segments that also represent our reportable segments. Our business is organized based on our technology offerings and professional services. Accordingly, our segments are:

- Technology - Our technology segment (Technology) includes our data platform, analytics applications and support services. Technology generates revenues primarily from contracts that are cloud-based subscription arrangements, time-based license arrangements, and maintenance and support fees; and

- Professional Services - Our professional services segment (Professional Services) is generally the combination of analytics, implementation, strategic advisory, and improvement services to deliver expertise to our customers to more fully configure and utilize the benefits of our Technology offerings.

Revenues and cost of revenues generally are directly attributed to our segments. All segment revenues are from our external customers. Asset and other balance sheet information at the segment level is not reported to our Chief Operating Decision Maker.

Segment revenue and Adjusted Gross Profit for the years ended December 31, 2017 and 2018 and the three months ended March 31, 2018 and 2019 (unaudited) were as follows (in thousands):

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
			(unaudited)	
Revenue				
Technology	$ 31,693	$ 57,224	$ 9,451	$ 20,148
Professional Services	41,388	55,350	11,181	15,065
Total	$ 73,081	$ 112,574	$ 20,632	$ 35,213

	Year Ended December 31,		Three Months Ended March 31,	
	2017	2018	2018	2019
			(unaudited)	
Adjusted Gross Profit				
Technology	$ 20,148	$ 37,901	$ 6,106	$ 13,429
Professional Services	9,870	16,028	3,030	4,747
Total reportable segments Adjusted Gross Profit	30,018	53,929	9,136	18,176
Less Adjusted Gross Profit reconciling items:				
Stock-based compensation	(579)	(558)	(114)	(181)
Tender offer payments deemed compensation[(1)]	—	(312)	—	—
Post-acquisition restructuring costs[(2)]	—	(337)	—	(108)
Less other reconciling items:				
Sales and marketing	(25,920)	(44,123)	(6,721)	(10,473)
Research and development	(28,470)	(38,592)	(8,705)	(10,022)

General and administrative	(14,697)	(22,690)	(3,902)	(6,174)
Depreciation and amortization	(5,892)	(7,412)	(1,550)	(2,312)
Debt extinguishment costs	—	—	—	(1,670)
Interest and other expense, net	(1,469)	(2,024)	(509)	(945)
Net loss before income taxes	$ (47,009)	$ (62,119)	$ (12,365)	$ (13,709)

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(1) Tender offer payments deemed compensation included in the Adjusted Gross Profit reconciliation above relate to employee compensation from repurchases of common stock at a price in excess of its estimated fair value. For additional details refer to note 12 in the consolidated financial statements.

(2) Post-acquisition restructuring costs included in the Adjusted Gross Profit reconciliation above relate to severance charges following the acquisition of Medicity. For additional details refer to note 2 in the consolidated financial statements.

23. Subsequent Events

In preparing the consolidated financial statements as of and for the years ended December 31, 2017 and 2018, we evaluated the effects of subsequent events through April 9, 2019, the date the independent auditor's report was originally issued and the consolidated financial statements were available for issuance.

HEALTH CATALYST, INC.

Notes to the Consolidated Financial Statements

23. Subsequent Events (unaudited)

We have evaluated subsequent events through May 20, 2019, which is the date the unaudited interim consolidated financial statements as of March 31, 2019 and for the three months then ended were available for issuance.

Report of Independent Auditors

To the Board of Directors and Member of Medicity LLC We have audited the accompanying consolidated financial statements of Medicity LLC, which comprise the consolidated balance sheet as of June 29, 2018 and the related consolidated statements of operations, member's equity (deficit) and cash flows for the period from January 1, 2018, through June 29, 2018 and the related notes to the consolidated financial statements.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in conformity with U.S. generally accepted accounting principles; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free of material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Medicity LLC at June 29, 2018, and the consolidated results of its operations and its cash flows for the period January 1, 2018 through June 29, 2018 in conformity with accounting principles generally accepted in the United States of America.

/s/ Ernst & Young LLP Salt Lake City, Utah April 9, 2019

Medicity LLC Consolidated Balance Sheet

Medicity Llc

Consolidated Balance Sheet

(in thousands)

	June 29, 2018
Assets	
Current assets:	
Cash and cash equivalents	$
Accounts receivable, net	6,998
Deferred costs	2,420
Prepaid expenses and other assets	1,889
Total current assets	11,326
Property and equipment, net	4,550
Intangible assets, net	2,331
Deferred costs, noncurrent	2,220
Other assets	1,017
Total assets	$ 21,444
Liabilities and member’s deficit	
Current liabilities:	
Accounts payable	$
Accrued liabilities	1,574
Related party payable	5,162
Deferred revenue	9,267
Other current liabilities	
Total current liabilities	16,056
Deferred revenue, net of current portion	5,719
Other liabilities	
Total liabilities	21,819
Member’s deficit:	
Net member’s deficit	(375)
Total member’s deficit	(375)
Total liabilities and member’s deficit	$ 21,444

See accompanying notes to the consolidated financial statements

Medicity LLC Consolidated Statement of Operations

Medicity Llc

Consolidated Statement of Operations

(in thousands)

	Period from January 1, 2018 through June 29, 2018
Revenue	$ 15,743
Operating expenses:	
Cost of revenue, excluding depreciation and amortization	9,834
Research and development	6,270
Sales and marketing	5,795
General and administrative	3,385
Depreciation and amortization	1,799
Total operating expenses	27,083
Loss from operations	(11,340)
Other income	
Loss before income taxes	(11,332)
Income tax provision	
Net loss	$ (11,393)

See accompanying notes to the consolidated financial statements

Medicity LLC Consolidated Statement of Member's Equity (Deficit)

Medicity Llc

Consolidated Statement of Member's Equity (Deficit)

(in thousands)

	Total Member's Equity (Deficit)
Balance as of January 1, 2018	$ 6,000
Net loss	(11,393)
Capital contributions made by Parent	9,338
Distributions paid to Parent	(4,320)
Balance as of June 29, 2018	$ (375)

See accompanying notes to the consolidated financial statements

Medicity LLC Consolidated Statement of Cash Flows

Medicity Llc

Consolidated Statement of Cash Flows

(in thousands)

	Period from January 1, 2018 through June 29, 2018
Operating activities	
Net loss	$ (11,393)
Adjustments to reconcile net loss to net cash used in operating activities:	
Depreciation and amortization	1,799
Stock-based compensation expense	
Changes in operating assets and liabilities:	
Accounts receivable	1,042
Deferred costs	(595)
Prepaid expenses and other assets	(320)
Accounts payable, accrued and other liabilities	(22)
Related party payable	3,347
Deferred revenue	2,301
Net cash used in operating activities	(3,503)
Investing activities	
Purchases of property and equipment	(1,236)
Proceeds from the sale and maturity of short-term investments	
Purchase of intangible assets	(1,954)
Net cash used in investing activities	(2,318)
Financing activities	
Contributions made from Parent	9,000
Distributions paid to Parent	(4,320)
Net cash provided by financing activities	4,680
Net decrease in cash and cash equivalents	(1,141)
Cash and cash equivalents at beginning of period	1,160
Cash and cash equivalents at end of period	$
Supplemental disclosure of non-cash financing information	
Non-cash contribution from Parent	$

See accompanying notes to the consolidated financial statements

Medicity LLC Notes to the Consolidated Financial Statements

Medicity Llc

Notes to the Consolidated Financial Statements

1. Description of Business and Summary of Significant Accounting Policies

Nature of operations

Medicity LLC (Medicity or the Company) provides cloud-based software solutions for health information exchange, business intelligence, provider, and patient engagement. The Company sells a range of software products, applications, and professional services that help healthcare organizations transform data into a strategic asset to empower population health. The Company's service offerings include implementation, integration, post-contract support, analytic services, and strategic advisory services.

Medicity LLC was formed on December 20, 2017 pursuant to the Delaware Limited Liability Company Act. The Company was formerly known as Medicity, Inc., which was incorporated under the laws of Delaware in 1999. In December 2017, Medicity, Inc. merged with and into Medicity LLC. These consolidated financial statements include Medicity LLC's wholly-owned subsidiaries, Novo Innovations, LLC, a Delaware limited liability company, and Allviant Corporation, a Delaware corporation (the Subsidiaries).

Medicity was acquired by Aetna, Inc. (Aetna or the Parent) in January 2011 and operated within the Aetna, Inc. consolidated group until it was acquired by Health Catalyst, Inc. on June 29, 2018.

Basis of presentation

The consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles (GAAP).

The Company has historically operated as part of Aetna and not as a standalone company. Consolidated financial statements representing the historical operations of the Company and its Subsidiaries have been derived from Aetna's historical accounting records and are presented on a carve-out basis. Revenues and costs, as well as assets and liabilities directly associated with the business activity of the Company and Subsidiaries, are included in the consolidated financial statements.

The consolidated financial statements also include allocations of certain expenses from Aetna. As such, amounts recognized by the Company are not necessarily representative of the amounts that would have been reflected in the consolidated financial statements had the Company operated independently of Aetna. Related-party allocations are discussed further in note 11.

As the Company operated as part of Aetna during the period of these consolidated financial statements, the Company was dependent upon Aetna for its working capital and financing requirements. Financial transactions relating to the Company are accounted for through the member's equity (deficit) account. Member's equity (deficit) represents Aetna's interest in the recorded net assets of the Company. Significant transactions between the Company and Aetna have been included in the accompanying consolidated financial statements. Transactions with Aetna are reflected in the accompanying consolidated statement of member's equity (deficit) as "capital contributions made by Parent" and "distributions paid to Parent" and in the accompanying consolidated balance sheet within "net member's deficit."

All significant intercompany accounts and transactions between the businesses comprising the Company and its subsidiaries have been eliminated in the accompanying consolidated financial statements.

Revenue recognition

The Company recognizes revenue in accordance with Accounting Standards Codification Topic 606, Revenue from Contracts with Customers (Topic 606), which we adopted with an initial application date of January 1, 2018. Accordingly, the consolidated financial statements for the period from January 1, 2018 through June 29, 2018 are presented under Topic 606.

Medicity Llc

Notes to the Consolidated Financial Statements

The Company derives revenues primarily from technology subscriptions and professional services. The Company determines revenue recognition by applying the following steps:

- Identification of the contract, or contracts, with a customer
- Identification of the performance obligations in the contract
- Determination of the transaction price
- Allocation of the transaction price to the performance obligations in the contract
- Recognition of revenue when, or as, we satisfy the performance obligation

The Company recognizes revenue net of any taxes collected from customers and subsequently remitted to governmental authorities.

Subscription and support revenue Subscription and support revenue primarily consists of Software-as-a-Service (SaaS) with the related cloud, maintenance, and support services. The Company recognizes revenue when services are provided.

SaaS revenue is derived from subscription fees to access Medicity technologies. The Company's SaaS arrangements do not provide customers the right to take possession of the technology or contain a significant penalty if the customer were to take possession of the technology. Generally, the Company's SaaS contracts require significant integration, configuration, and implementation services that are only performed by the Company to create a combined, fully integrated solution. As such these configuration and implementation services are generally treated as a combined performance obligation and classified as SaaS revenue.

SaaS revenue is recognized ratably over the contract term beginning on the date that formal acceptance is provided by the customer and the service is made available to the customer. The Company's SaaS arrangements typically include a term of three to five years.

Maintenance and support revenue generally includes bug fixes, updates, and support services. Revenue is recognized over the contract term beginning on the date that the service is made available to the customer.

Professional services revenue Professional services revenue includes consulting, interface connectivity, education, and training services. These services are considered distinct from the technology offerings. Revenue from standalone interface connectivity contracts is recognized at a point-in-time upon the formal customer acceptance of the delivered service. Consulting and education service revenue is typically recognized over time as the service is provided other than certain training arrangements that are recognized upon delivery.

Contracts with multiple performance obligations Many of the Company's contracts include multiple performance obligations. The Company accounts for performance obligations separately if they are capable of being distinct and are distinct within the context of the contract. The transaction price is allocated to separate performance obligations on a relative standalone selling price basis.

The Company determines standalone selling prices based on the observable price a good or service is sold for separately when available. In cases where standalone selling prices are not directly observable, based on information available, the Company utilizes the expected cost plus a margin, adjusted market assessment, or residual estimation method. The Company considers all information available including the Company's overall pricing objectives, market conditions and other factors, including the value of contracts, customer demographics, and the types of users.

Medicity Llc

Notes to the Consolidated Financial Statements

Cost of revenue

Cost of subscription and support revenue primarily consists of salary and related personnel costs, hosting maintenance costs, product costs, and independent contractor costs. The Company defers certain costs to fulfill a contract when the costs are expected to be recovered, the costs are directly related to in-process contracts, and the costs enhance resources of the Company that will be used in satisfying performance obligations in the future. These deferred fulfillment costs primarily consist of employee compensation incurred as part of the implementation and set-up of new contracts prior to the commencement of revenue recognition. As of June 29, 2018, the Company had deferred contract costs of $2.8 million.

Cost of professional services revenue primarily consists of salary and related personnel costs, travel, materials, subscriptions, and independent contractor costs.

Cash and cash equivalents

The Company considers all highly liquid investments purchased with a remaining maturity of three months or less at the time of acquisition to be cash equivalents.

Accounts receivable

Accounts receivable are non-interest bearing and are recorded at the original invoiced amount less an allowance for doubtful accounts based on the probability of future collections. When the Company becomes aware of circumstances that may decrease the likelihood of collections, it records a specific allowance against amounts due, which reduces the receivable amount to the amount reasonably believed to be collected. For all other customers, the Company determines and periodically adjusts the allowance based on historical loss patterns and current receivables aging. The Company had an allowance for doubtful accounts of $0.3 million as of June 29, 2018.

Services performed prior to invoicing customers are recorded as unbilled accounts receivable and are presented on the Company's consolidated balance sheet in aggregate with accounts receivable. Unbilled accounts receivable generally become billable at contractually specified dates or upon the attainment of contractually defined milestones. As of June 29, 2018, the unbilled accounts receivable included in accounts receivable on the Company's consolidated balance sheet was $0.5 million.

Property and equipment

Property and equipment are stated at historical cost less accumulated depreciation. Repairs and maintenance costs that do not extend the useful life or improve the related assets are expensed as incurred. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. The estimated useful life of each asset category is as follows:

Computer equipment	3 years

Furniture and fixtures	5-10 years
Leasehold improvements	Lesser of lease term or estimated useful life
Capitalized software development	3 years

When there are indicators of potential impairment, the Company evaluates the recoverability of the carrying values by comparing the carrying amount of the applicable asset group to the estimated undiscounted future cash flows expected to be generated by that asset group. If the carrying amount of the asset group exceeds its estimated undiscounted future net cash flows, an impairment charge is recognized based on the amount by which the carrying value of the long-lived assets exceeds the fair value of the assets. The Company did not incur any impairment charges for the period from January 1, 2018 through June 29, 2018.

Medicity Llc

Notes to the Consolidated Financial Statements

Intangible assets

Intangible assets include software licenses that were acquired from third parties. The intangible assets are amortized using the straight-line method over the assets estimated useful lives. The estimated useful life of the Company's software licenses ranges from two to five years.

Advertising

All advertising costs are expensed as incurred. For the period from January 1, 2018 through June 29, 2018, the Company incurred $0.3 million in advertising costs.

Deferred contract acquisition costs

Deferred contract acquisition costs for sales commissions and related payroll expenses are capitalized as part of deferred costs on the consolidated balance sheet. As of June 29, 2018, the balance of deferred contract acquisition costs was $1.9 million.

Deferred contract acquisition costs are generally amortized over an estimated period of benefit of five years unless the commissions are considered commensurate with the commissions paid for the initial contract acquisition. Deferred contract acquisition costs for commissions considered commensurate with the commissions paid for the initial contract acquisition are recognized over the contract term.

Research and development and internal-use software

Research and development costs are expensed as incurred and primarily include salary and related personnel costs, materials, subscriptions, and contractor costs associated with product development.

The Company capitalizes certain development costs incurred in connection with its internal-use software. These capitalized costs are primarily related to the software platforms that are hosted by the Company and accessed by customers on a subscription basis. Costs incurred in the preliminary stages of development are expensed as incurred as research and development costs. Once an application has reached the development stage, internal and external costs, if direct and incremental, are capitalized until the software is substantially complete and ready for its intended use. The Company also capitalizes costs related to specific upgrades and enhancements when it is probable the expenditures will result in additional functionality. Capitalized costs are recorded as part of property and equipment. Maintenance and training costs are expensed as incurred. Internal-use software is amortized on a straight-line basis over its estimated useful life of three years on the depreciation and amortization line in the consolidated statement of operations.

Cost allocations

The historical costs and expenses reflected in the financial statements include an allocation for certain corporate and shared service functions historically provided by Aetna, including, but not limited to, executive oversight, accounting, treasury, tax, legal, human resources, occupancy, procurement, information technology, and other shared services. These expenses have been allocated to the Company on the basis of direct usage when identifiable, with the remainder allocated on a pro-rata basis of consolidated sales, headcount, tangible assets, or other measures considered to be a reasonable reflection of the historical utilization levels of these services.

Management believes the assumptions underlying the consolidated financial statements, including the assumptions regarding the allocation of general corporate expenses from Aetna, are reasonable. Nevertheless, the Company's consolidated financial statements may not include all of the actual expenses that would have been incurred had the Company operated as a standalone company during the periods presented and may not reflect the consolidated results of operations, financial position, and cash flows had the Company operated as a standalone company during the periods presented. Actual costs that would have been incurred if the Company had operated as a standalone company would depend on multiple factors, including organizational structure and strategic decisions made in various areas, including information technology and infrastructure.

Stock-based compensation

Certain employees of Medicity participate in Aetna's share-based compensation plans (the Plans), which include restricted stock units (RSUs), performance stock units (PSUs), and stock appreciation rights (SARs). Medicity accounts for compensation expense incurred by Aetna for stock-based awards over their vesting periods primarily based on the estimated fair value at the grant date. For SARs, the fair value is estimated using the Black-Scholes option-pricing model. For RSUs and PSUs, the fair value is equal to the market price of the Aetna's common stock on the date of grant. Equity-based compensation expense is recognized net of an estimated forfeiture rate on a straight-line basis over the requisite service period of the award.

Concentrations of credit risk

Financial instruments that potentially subject the Company to a concentration of credit risk consist principally of cash and cash equivalents and accounts receivable. The Company deposits cash with high credit quality financial institutions which at times may exceed federally insured amounts. The Company has not experienced any losses on its deposits. The Company performs ongoing credit evaluations of its customers' financial condition and generally requires no collateral from its customers. The Company reviews the expected collectability of accounts receivable and records an allowance for doubtful accounts for amounts that it determines are not collectible.

The following table depicts the largest customers' outstanding net accounts receivable balance as a percentage of the total outstanding net accounts receivable balance as of June 29, 2018:

Customer A	13.3%
Customer B	10.6%

There were no other customers with outstanding net accounts receivable balances as a percentage of total outstanding net accounts receivable balance greater than 10% as of June 29, 2018.

There was one customer with revenue as a percentage of total revenue of 10.1% for the period from January 1, 2018 through June 29, 2018. There were no other customers with revenue as a percentage of total revenue greater than 10% for the period from January 1, 2018 through June 29, 2018.

Use of estimates

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. On an on-going basis, the Company evaluates its estimates, including those related to revenue recognition, provisions for doubtful accounts, deferred contract acquisition costs, the period of benefit generated from deferred contract acquisition costs, useful lives of property and equipment, useful lives of intangible assets, stock-based compensation and indirect cost allocations, among others. Actual results could differ from those estimates.

Risks and uncertainties

The Company is subject to all of the risks inherent in an early stage business operating in the healthcare IT industry. These risks include, but are not limited to, a limited operating history, new and rapidly evolving markets, dependence on the development of new products and services, unfavorable economic and market conditions, changes in the level of demand for the Company's products and services, and the timing of new product introductions. Failure by the Company to anticipate or to respond adequately to technological developments in its industry, changes in customer or supplier requirements, or changes in regulatory requirements or industry standards, or any significant delays in the

Medicity Llc

Notes to the Consolidated Financial Statements

development or introduction of products and services, could have a material adverse effect on the Company's business and operating results.

Income taxes

The Company's operating results are included in the income tax returns of Aetna. The Company accounts for income taxes under the separate return method. Under this approach, the Company determines its deferred tax assets and liabilities and related tax expense as if it were filing a separate return.

In accordance with GAAP, deferred tax assets and liabilities are accounted for using the liability method and represent the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates that are expected to be in effect when these temporary differences are expected to reverse. A valuation allowance is provided when it is more likely than not that some portion of the deferred tax assets will not be realized.

Fair value of financial instruments

The carrying amounts reported in the consolidated balance sheet for cash, receivables, accounts payable, and current accrued expenses approximate fair values because of the immediate or short-term maturity of these financial instruments.

Accounting pronouncements adopted

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2014-09, Revenue from Contracts with Customers (Topic 606), to supersede existing revenue recognition guidance under U.S. GAAP. Under the new standard, revenue is recognized at the time a good or service is transferred to a customer for the amount of consideration that the Company expects to be entitled in exchange for that specific good or service. The Company adopted ASU 2014-09 as of January 1, 2018. The new standard permits two methods of adoption: retrospectively to each prior reporting period presented (full retrospective method) or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial application (modified retrospective method). The Company elected to adopt ASU 2014-09 under the full retrospective method with a cumulative-effect adjustment as of January 1, 2018.

In May 2017, the FASB issued ASU No. 2017-09, Compensation - Stock Compensation (Topic 718): Scope of Modification Accounting, which provided clarity on which changes to the terms or conditions of share-based payment awards require an entity to apply the modification accounting provisions required in Topic 718. This standard was adopted on January 1, 2018 and did not have a material impact on these consolidated financial statements.

Recent accounting pronouncements

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842), that requires lessees to recognize a right-of-use asset and a lease liability on the balance sheet for all leases that exceed a 12-month term. The balance sheet amount recorded for existing leases at the date of adoption of ASU 2016-02 must be calculated using the applicable incremental borrowing rate at the date of adoption. The new standard may be adopted using a modified retrospective transition, or may be adopted at the beginning of the period of adoption, and requires adoption for nonpublic entities for reporting periods beginning after December 15, 2019. Early adoption is permitted. The Company did not early adopt ASU 2016-02 and thus, its effects are not reflected in the consolidated financial statements. The adoption of Topic 842 will result in an increase in recognized assets and liabilities related to operating leases.

In June 2016, FASB issued ASU 2016-13, Financial Instruments - Credit Losses (Topic 326), that changes how companies will measure credit losses for most financial assets and certain other instruments that aren't measured at fair value through net income. For available-for-sale debt securities, the Company will be required to record allowances rather than reduce the carrying amount. Nonpublic entities are required to adopt ASU 2016-13 for annual reporting periods beginning after December 15, 2020. Early adoption is permitted for annual reporting periods beginning after

December 15, 2018. The Company is currently evaluating the impact the ASU will have on its consolidated financial statements.

In August 2016, FASB issued ASU 2016-15, Statement of Cash Flows (Topic 230), Classification of Certain Cash Receipts and Cash Payments, that clarifies how companies should classify certain cash receipts and cash payments in the statement of cash flows. Nonpublic entities are required to adopt ASU 2016-15 for annual reporting periods beginning after December 15, 2018. Early adoption is permitted. Companies are required to apply the guidance retrospectively unless it is impracticable to do so. The Company did not early adopt ASU 2016-15 and thus, its effects are not reflected in the consolidated financial statements. The Company is currently evaluating the impact the ASU will have on its consolidated financial statements.

2. Revenue

Disaggregation of revenue

The following table represents Medicity's revenue disaggregated by type of arrangement (in thousands) for the period from January 1, 2018 through June 29, 2018:

Subscription and support	$ 14,783
Professional services	
Total revenue	$ 15,743

For the period from January 1, 2018 through June 29, 2018, 100% of revenue was related to contracts in the United States.

3. Intangible Assets

As of June 29, 2018, intangible assets consisted of the following (in thousands):

	Gross	Accumulated Amortization	Net
Software licenses	$ 5,511	$ (3,180)	$ 2,331

Amortization expense for intangible assets for the period from January 1, 2018 through June 29, 2018 was $0.8 million. Amortization expense for software licenses is included in depreciation and amortization expense on the consolidated statement of operations.

The weighted-average amortization period of intangible assets is three years. Future amortization expense, based upon intangible assets as of June 29, 2018, is estimated to be $0.5 million for the period from June 30, 2018 through December 31, 2018 and $0.9 million, $0.5 million, $0.3 million, and $0.1 million for the years ending December 31, 2019, 2020, 2021, and 2022, respectively.

Medicity Llc

Notes to the Consolidated Financial Statements

4. Property and Equipment

Property and equipment consisted of the following (in thousands) as of June 29, 2018:

Computer equipment	$ 5,788
Capitalized software development costs	3,308
Furniture and fixtures	
Leasehold improvements	
Total property and equipment	10,612
Less: Accumulated depreciation and amortization	(6,062)
Property and equipment, net	$ 4,550

As of June 29, 2018, all of the Company's property and equipment was located in the United States.

Depreciation expense, excluding the amortization of capitalized software development costs, for the period from January 1, 2018 through June 29, 2018 was $0.7 million.

The Company capitalized $0.7 million of software development costs for the period from January 1, 2018 through June 29, 2018. The Company incurred internal-use software amortization expense of $0.3 million for the period from January 1, 2018 through June 29, 2018. As of June 29, 2018, there was $1.2 million of capitalized internal-use software development costs that had not yet been placed into service.

5. Member's Equity (Deficit)

During the period from January 1, 2018 through June 29, 2018, Aetna was the sole member and owned all limited liability company interests in Medicity LLC and was subject to the terms of the Company's Limited Liability Company Agreement. The significant terms of the Company's Limited Liability Agreement included the following:

Limited liability - Except as required by the Delaware Limited Liability Company Act ("the Act") the debts, obligations and liabilities of the Company, whether arising in contract, tort or otherwise, shall be solely the debts, obligations and liabilities of the Company, and the Parent shall not be obligated personally for any such debt, obligation or liability of the Company solely by reason of being a member of the Company.

Capital contributions - The Parent may, but is not obligated to make any capital contribution to the Company. During the period from January 1, 2018 through June 29, 2018, the Parent made $9.3 million of contributions, including $0.3 million of non-cash contributions from stock-based compensation deemed contributions, to the Company.

Allocation of profits and losses - The Company's profits and losses shall be allocated solely to the Parent. During the period from January 1, 2018 through June 29, 2018, $11.4 million of net loss was allocated to the Parent's interest in the Company.

Distributions - Subject to the limitations of Section 18-607 of the Act and any other applicable law, distributions shall be made to the Parent at the times and in the aggregate amounts determined by the Parent. During the period from January 1, 2018 through June 29, 2018, the Company made $4.3 million in distributions to the Parent.

6. Stock-Based Compensation

Medicity has no independent stock-based compensation plans; however, certain of its employees are eligible to participate in the Plans, which include SARs, RSUs, and PSUs. All current grants of stock options, RSUs and PSUs are made under the Plans. The Company records compensation expense incurred by Aetna under the Plans that is directly

Medicity Llc

Notes to the Consolidated Financial Statements

related to participating Medicity employees. Compensation expense for stock-based awards is expensed over their vesting periods primarily based on the estimated fair value at the grant date.

Executive, middle management and non-management employees may be granted SARs, RSUs, and PSUs, each of which are described below:

SARs

SARs granted will be settled in Aetna common stock, net of taxes, based on the appreciation of the Aetna stock price on the exercise date over the market price on the date of the grant. SARs generally become 100% vested three years after the grant is made, with one-third vesting each year. Vested SARs may be exercised at any time during the ten years after grant, except in certain circumstances, generally related to employment termination or retirement. At the end of the ten-year period, any unexercised SARs expire. There were no SARs granted during the period from January 1, 2018 through June 29, 2018.

A summary of the SAR transactions during the period from January 1, 2018 through June 29, 2018, is as follows:

	Number of SARs	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life in Years	Aggregate Intrinsic Value
Outstanding at January 1, 2018	4,308	$ 122.69		
Granted	—	—		
Exercised	—	—		
Cancelled/forfeited	—	—		
Outstanding at June 29, 2018	4,308	$ 122.69	7.3	$ 261,961
Vested and expected to vest as of June 29, 2018	4,308	$ 122.69	7.3	$ 261,961
Vested and exercisable as of June 29, 2018	2,125	$ 120.04		$ 134,845

The total grant-date fair value of SARs vested during the period from January 1, 2018 through June 29, 2018 was $0.1 million.

RSUs and PSUs

For each RSU granted, employees receive one share of Aetna common stock, net of taxes, at the end of the vesting period. RSUs generally become 100% vested approximately three years from the grant date, with one third vesting each December. The grant date fair value is determined based on the market price of Aetna common stock on the date of grant.

The number of vested PSUs (which could range from zero to 200% of the original number of units granted) is dependent upon the degree to which Aetna and the Company achieve performance goals, which for the most part, are set at the time of grant as determined by the Aetna Board's Committee on Compensation and Talent Management. Each vested PSU represents one share of Aetna common stock and will be paid in shares of Aetna common stock, net of taxes. The grant date fair value is determined based on the market price of Aetna's common stock on the date of grant. In 2017, 408 PSUs for Aetna common stock were granted. These PSUs have a three-year performance period that will end on December 31, 2019 and are subject to a three-year vesting period.

Medicity Llc

Notes to the Consolidated Financial Statements

A summary of the RSU and PSU transactions during the period from January 1, 2018 through June 29, 2018, is as follows:

	Number of RSUs and PSUs	Weighted Average Grant Date Fair Value
Outstanding at January 1, 2018	5,436	$ 114.64
Granted	3,865	177.53
Vested	—	—
Forfeited	—	—
Outstanding at June 29, 2018	9,301	140.78

Stock compensation expense For the period from January 1, 2018 through June 29, 2018, the Company recorded total stock-based compensation expense of $0.3 million.

The following table summarizes the consolidated statement of operations effect of stock-based compensation for the period from January 1, 2018 through June 29, 2018 (in thousands):

	Period from January 1, 2018 through June 29, 2018
Cost of revenue	$
Sales and marketing	
Research and development	

Total stock-based compensation	$

As of June 29, 2018, approximately $1.0 million of unrecognized compensation expense related to the Company's unvested SARs, RSUs and PSUs is expected to be recognized over a weighted average period of 2.0 years.

7. Income Taxes

Medicity was treated as a subsidiary of Aetna and filed as part of Aetna's consolidated income tax return for the periods leading up to December 31, 2017. Effective January 1, 2018, Aetna made a check-the-box election to treat Medicity as a disregarded entity for income tax purposes. As a result, all of the income tax attributes of Medicity were absorbed into Aetna, including the net operating loss carryforwards. These consolidated financial statements reflect income tax expense and deferred tax balances as if Medicity had filed tax returns on a standalone basis separate from Aetna. The separate return method applies the accounting guidance for income taxes to the standalone consolidated financial statements as if Medicity was a separate taxpayer and a standalone enterprise for the period presented.

Medicity Llc

Notes to the Consolidated Financial Statements

The income tax provision consisted of the following for the period from January 1, 2018 through June 29, 2018 (in thousands):

Current income tax provision:	
Federal	$ –
State	
Deferred income tax provision:	
Federal	
State	–
Provision for income taxes	$

For the period from January 1, 2018 through June 29, 2018, the total income tax provision differed from the amounts computed by applying the U.S. federal income tax rate of 21% to the loss before income tax expense as a result of the following (in thousands):

Computed tax benefit at statutory rate	$ (2,380)
State income taxes, net of federal tax effect	
Change in valuation allowance	2,365
Other, net	
Provision for income taxes	$

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and liabilities were as follows as of June 29, 2018 (in thousands):

Deferred income tax assets:	
Allowance for bad debt	$
Accrued expenses	
Deferred revenue	2,612
Intangible assets	1,062
Net operating loss carryforwards	1,693
Stock-based compensation	
Total deferred income tax assets	5,661
Valuation allowance	(2,919)
Net deferred income tax assets	2,742
Deferred income tax liabilities:	
Prepaid expenses	(653)
Deferred contract costs	(1,043)

Property and equipment	(1,090)
Total deferred income tax liabilities	(2,786)
Net deferred income tax assets (liabilities)	$ (44)

Medicity Llc

Notes to the Consolidated Financial Statements

The Company considers all available evidence to evaluate the recovery of deferred tax assets, including historical levels of income, legislative developments, and risks associated with estimates of future taxable income. The Company has provided a full valuation allowance for its deferred tax assets at June 29, 2018, due to the uncertainty surrounding the future realization of such assets and the losses generated in the current period. Therefore, no benefit has been recognized in the consolidated financial statements for the net operating loss carryforwards and other deferred tax assets.

Aetna has filed federal and state income tax returns in jurisdictions with varying statutes of limitations on behalf of the Company. The Company is no longer subject to federal or state income tax examinations by tax authorities for tax years prior to 2014.

On December 22, 2017, the 2017 Tax Cuts and Jobs Act (Tax Act) was enacted into law and the new legislation contains several key tax provisions that affect the Company, including the reduction of the corporate income tax rate to 21%, effective January 1, 2018. The Company was required to recognize the effect of the tax law changes in the period of enactment. As such, the Company remeasured its consolidated deferred tax assets and liabilities to reflect the lower rate and has also reassessed the realizability of those deferred tax assets and liabilities in the prior year and applied the reduced corporate income tax rates to the current year provision amounts.

In December 2017, the SEC staff issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act (SAB 118), which allowed the Company to record provisional amounts during a measurement period not to extend beyond one year of the enactment date. Since the Tax Act was passed late in the fourth quarter of 2017, and ongoing guidance and accounting interpretation are expected over the next 12 months, the Company considers the accounting of the deferred tax remeasurements and state tax conformity to be incomplete but has made a reasonable estimate and has included provisional amounts in the financial statements. Due to the forthcoming guidance and the Company's ongoing analysis of data and tax positions, the Company expects to complete its analysis within the measurement period provided for and in accordance with SAB 118.

As of June 29, 2018, the Company had approximately $8.1 million of consolidated federal and state net operating loss carryforwards available to offset future taxable income, respectively, if the Company were to continue as a standalone entity. If unused, the federal and state net operating loss carryforwards presented would have expired by 2038. However, as 100% of the limited liability interests in Medicity LLC, were acquired by Health Catalyst, Inc. as of June 29, 2018, Medicity's federal and state net operating loss carryforwards will not be available to reduce the future income tax liabilities of Health Catalyst, Inc. as those income tax attributes will remain with Aetna. Medicity has no unrecognized tax benefits for which the Company is legally responsible through the period ended June 29, 2018.

8. Commitments and Contingencies

Operating Leases

The Company leases office space under operating leases that expire in 2021. The terms of the leases provide for rental payments on a graduated scale and options to renew the leases by five years. The Company recognizes rent on a straight-line basis over the lease period and has accrued for rent expense incurred but not paid.

Medicity Llc

Notes to the Consolidated Financial Statements

Minimum future rental payments under the non-cancellable operating leases at June 29, 2018, are as follows (in thousands):

Six months ending December 31:	
2018	$
Year ending December 31:	
2019	
2020	
2021	
Total minimum lease payments	$ 2,069

Rent expense under operating leases for the period from January 1, 2018 through June 29, 2018 was $0.4 million.

9. Deferred Revenue

Deferred revenue includes advance customer payments and billings in excess of revenue recognized. For the period from January 1, 2018 through June 29, 2018, approximately 44% of revenue recognized was included in deferred revenue at the beginning of the period.

10. Employee Benefit Plans

The Company has a 401(k) defined contribution plan covering eligible employees that is administered and maintained by the Parent. Contributions are determined based on a percentage of compensation. The Company matches 100% of the first 6% of an employees' salary deferral. The Company's contributions, which were recognized as compensation expense, for its participating employees were $0.8 million for the period from January 1, 2018 through June 29, 2018.

11. Related Parties

Allocations of expenses

The Company has historically operated as part of Aetna and not as a stand-alone company. Accordingly, certain shared costs have been allocated to the Company and are reflected as expenses in these consolidated financial statements. Management considers the allocation methodologies used to be reasonable and appropriate reflections of the related expenses attributable to the Company for the purposes of the carved-out financial statements; however, the expenses reflected in these consolidated financial statements may not be indicative of the actual expenses that would have been incurred during the period presented if the Company had operated as a separate stand-alone entity. In addition, the expenses reflected in the consolidated financial statements may not be indicative of expenses that will be incurred in the future by the Company.

Corporate expenses

Certain corporate overhead and other shared expenses incurred by Aetna and its subsidiaries have been allocated to the Company and are reflected in the consolidated statement of operations. These amounts include, but are not limited to, items such as general management, executive oversight, information technology infrastructure support, facilities, compliance, human resources, marketing, legal, financial management, transaction processing, tax, risk management, treasury services, certain employee benefits and incentives, and stock-based compensation administration. These costs are allocated using methodologies that management believes are reasonable for the item being allocated.

Allocation methodologies include the Company's relative share of revenues, headcount, or functional spend as a percentage of the total.

Medicity Llc

Notes to the Consolidated Financial Statements

The amount of indirect related party expenses allocated to the Company from Aetna and its subsidiaries for the period from January 1, 2018 through June 29, 2018 was $2.6 million. As of June 29, 2018, the Company had a net related party liability owed to Aetna and its subsidiaries of $5.2 million.

12. Subsequent Events

On June 29, 2018, 100% of the limited liability interests of the Company were acquired by Health Catalyst, Inc.

Subsequent events have been evaluated through April 9, 2019, the date the consolidated financial statements were available to be issued.

Unaudited Pro Forma Condensed Combined Financial Information

HEALTH CATALYST, INC.

Unaudited Pro Forma Condensed Combined Statement of Operations

Introduction to Unaudited Pro Forma Condensed Combined Statement of Operations

The following unaudited pro forma condensed combined statement of operations for the year ended December 31, 2018 is presented to give effect to the acquisition of Medicity LLC (Medicity) on June 29, 2018 for consideration of $2.3 million (the Acquisition).

The pro forma information was prepared based on the historical consolidated statement of operations of Health Catalyst, Inc. (Health Catalyst or the Company) and Medicity after giving effect to the Acquisition using the acquisition method of accounting, and after applying the assumptions, reclassifications, and adjustments described in the accompanying notes. The pro forma information is presented as if the Acquisition had occurred on January 1, 2018. The acquisition of Medicity has already been reflected in the Company's historical audited consolidated balance sheet as of December 31, 2018. Therefore, no unaudited pro forma condensed combined balance sheet as of December 31, 2018 has been presented herein.

The Health Catalyst condensed statement of operations information included herein was derived from the Health Catalyst audited statement of operations for the year ended December 31, 2018 included in this prospectus. The Medicity historical statement of operations included herein was derived from the Medicity audited statement of operations from January 1, 2018 through June 29, 2018 (the acquisition date) which is also included in this prospectus.

The pro forma information has been prepared for illustrative purposes only and is not intended to represent or be indicative of the consolidated results of operations in future periods or the results that actually would have been achieved had Health Catalyst and Medicity been a combined company during the period presented. The pro forma information does not reflect any operating efficiencies, post-acquisition synergies or cost savings that Health Catalyst may

achieve with respect to the combined companies.

The pro forma information should be read together with (1) the accompanying notes to the unaudited pro forma condensed combined statement of operations, (2) the audited historical financial statements and related notes of Health Catalyst included elsewhere in this prospectus, and (3) the audited historical financial statements and related notes of Medicity included elsewhere in this prospectus.

Health Catalyst, Inc. Unaudited Pro Forma Condensed Combined Statement of Operations

HEALTH CATALYST, INC.

Unaudited Pro Forma Condensed Combined Statement of Operations

For the year ended December 31, 2018

(in thousands, except shares and per share data)

	Health Catalyst, Inc. for the year ended December 31, 2018	Medicity LLC for periods from January 1, 2018 to June 29, 2018	Pro Forma Adjustments	Notes	Pro Forma Combined
					(unaudited)
Total revenue	$ 112,574	$ 15,743	$ (1,097)	(a)	$ 127,220
Operating expenses:					
Cost of revenue, excluding depreciation and amortization	59,852	9,834	—		69,686
Research and development	38,592	6,270	—		44,862
Sales and marketing	44,123	5,795	—		49,918
General and administrative	22,690	3,385	—		26,075
Depreciation and amortization	7,412	1,799		(b)	9,366
Total operating expense	172,669	27,083			199,907
Loss from operations	(60,095)	(11,340)	(1,252)		(72,687)
Interest and other (expense) income, net	(2,024)		—		(2,016)
Loss before income taxes	(62,119)	(11,332)	(1,252)		(74,703)
Income tax (benefit) provision	(135)		—		(74)
Net loss	$ (61,984)	$ (11,393)	$ (1,252)		$ (74,629)
Less: accretion of redeemable convertible preferred stock	52,037	—	—		52,037
Net loss attributable to common stockholders	$ (114,021)	$ (11,393)	$ (1,252)		$ (126,666)
Net loss per share attributable to common stockholders, basic and diluted	$ (11.88)				$ (13.20)
Weighted-average shares attributable to common stockholders, basic and diluted	9,596,773				9,596,733

Health Catalyst, Inc. Notes to the Unaudited Pro Forma Condensed Combined Statement of Operations

HEALTH CATALYST, INC.

Notes to the Unaudited Pro Forma Condensed Combined Statement of Operations

1. Basis of presentation

The unaudited pro forma condensed combined statement of operations for the year ended December 31, 2018 is presented to give effect to the acquisition of Medicity by Health Catalyst on June 29, 2018 for $2.3 million, which consisted of shares of Health Catalyst Series E redeemable convertible preferred stock, which were issued at the completion of the transaction. The unaudited pro forma condensed combined financial information was prepared in accordance with Article 11 of Regulation S-X.

The unaudited pro forma condensed combined statement of operations reflects certain adjustments that are necessary to present fairly the Company's unaudited pro forma condensed combined statement of operations. The pro forma adjustments give effect to events that are (1) directly attributable to the acquisition, (2) factually supportable, and (3) expected to have a continuing impact on the Company and are based on assumptions that management believes are reasonable given the best information currently available.

Under the acquisition method of accounting, acquisition-related transaction costs (e.g., advisory, legal, valuation, and other professional fees) are not included as consideration transferred but are accounted for as expenses in the periods in which the costs are incurred. These costs related to Health Catalyst's acquisition of Medicity were immaterial.

In accordance with the acquisition method of accounting for business combinations under the provisions of ASC 805, the assets acquired and the liabilities assumed are recorded at their respective fair values and added to those of the Company.

2. Purchase price allocation

The Medicity acquisition was one element of an integrated transaction whereby the Company also issued 1,415,227 shares of Series E redeemable convertible preferred stock to Aetna, Inc. in exchange for $15.0 million in cash. The Company acquired Medicity for total consideration of $2.3 million, which represents the fair value of the shares of Series E redeemable convertible preferred stock allocated to the Medicity acquisition as part of the integrated transaction.

The unaudited pro forma condensed combined statement of operations includes various assumptions, including those related to the purchase price allocation of the assets acquired and liabilities assumed based on management's estimates of fair value. Accordingly, the pro forma adjustments have been made solely for illustrative purposes. The following table summarizes the acquisition-date fair value of consideration transferred and the assets received and liabilities assumed as part of our acquisition of Medicity (in thousands):

Assets acquired:	
Accounts receivable	$ 7,016
Prepaid expenses	2,735
Property and equipment	1,613
Computer software licenses	2,358
Developed technologies	
Customer relationships and contracts	
Trademarks	
Total assets acquired	15,222
Less liabilities assumed:	
Accounts payable and other current liabilities	1,970
Deferred revenue	11,000
Total liabilities assumed	12,970
Total assets acquired, net	$ 2,252

HEALTH CATALYST, INC.

Notes to the Unaudited Pro Forma Condensed Combined Statement of Operations

3. Pro forma adjustments

The accompanying unaudited pro forma condensed combined statement of operations has been prepared as if the Acquisition was completed on January 1, 2018 and reflects the following pro forma adjustments:

(a)	To record the estimated adjustment for the period from January 1, 2018 through June 29, 2018 of the fair value adjustment to the acquired Medicity deferred revenues.

The adjustment for deferred revenues acquired was calculated by comparing the pre-acquisition book value to the acquisition-date fair value of the deferred revenue acquired and recognizing the fair value adjustment over the timeline which the acquired deferred revenues are projected to be recognized as revenue, assuming the acquisition occurred on January 1, 2018.

(b)	To record the estimated amortization expense for the period from January 1, 2018 through June 29, 2018 associated with the fair value of acquired developed technology, customer relationships, and trade name.

The adjustment for the amortization of gross intangible assets acquired was calculated using the acquisition-date fair value of the intangible assets acquired amortized on a straight-line basis over the estimated useful life, assuming the acquisition occurred on January 1, 2018. This adjustment reflects amortization expense related to the acquired intangible assets composed of $0.6 million customer relationships with a useful life of six years, $0.8 million technology with a useful life of five years, and $0.1 million tradenames with a useful life of two years.

4. Restructuring charges

In September 2018, the Company recognized approximately $2.1 million in severance charges applicable to termination of certain Medicity employees.

Shares

Common Stock

Prospectus

Goldman Sachs & Co. LLC	**J.P. Morgan**	**William Blair**
Piper Jaffray	**Evercore ISI**	**SVB Leerink**
	SunTrust Robinson Humphrey	

, 2019

Part Ii

Information Not Required in Prospectus

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth all costs and expenses, other than underwriting discounts and commissions, payable by us in connection with the sale of the common stock being registered. All amounts shown are estimates except for the Securities and Exchange Commission, or SEC, registration fee, the Financial Industry Regulatory Authority, or FINRA, filing fee, and The Nasdaq Global Select Market listing fee.

	Amount Paid or to be Paid
SEC registration fee	$ 12,120
FINRA filing fee	15,500
Nasdaq Global Select Market listing fee	*
Blue sky fees and expenses	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent and registrar fees	*
Miscellaneous fees and expenses	*
Total	*

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* To be filed by amendment.

Item 14. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law authorizes a corporation's board of directors to grant, and authorizes a court to award, indemnity to officers, directors and other corporate agents.

We expect to adopt an amended and restated certificate of incorporation, which will become effective immediately prior to the completion of this offering, and which will contain provisions that limit the liability of our directors for monetary damages to the fullest extent permitted by Delaware law. Consequently, our directors will not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duties as directors,

except liability for the following:

- any breach of their duty of loyalty to our company or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- any transaction from which they derived an improper personal benefit.

Any amendment to, or repeal of, these provisions will not eliminate or reduce the effect of these provisions in respect of any act, omission, or claim that occurred or arose prior to that amendment or repeal. If the Delaware General Corporation Law is amended to provide for further limitations on the personal liability of directors of corporations, then the personal liability of our directors will be further limited to the greatest extent permitted by the Delaware General Corporation Law.

In addition, we expect to adopt amended and restated bylaws, which will become effective immediately prior to the completion of this offering, and which will provide that we will indemnify, to the fullest extent permitted by law, any person who is or was a party or is threatened to be made a party to any action, suit, or proceeding by reason of the fact that he or she is or was one of our directors or officers or is or was serving at our request as a director or officer of another corporation, partnership, joint venture, trust, or other enterprise. Our amended and restated bylaws are expected to provide that we may indemnify to the fullest extent permitted by law any person who is or was a party or is threatened to be made a party to any action, suit, or proceeding by reason of the fact that he or she is or was one of our employees or agents or is or was serving at our request as an employee or agent of another corporation, partnership, joint venture, trust, or other enterprise. Our amended and restated bylaws will also provide that we must advance expenses incurred by or on behalf of a director or officer in advance of the final disposition of any action or proceeding, subject to limited exceptions.

Further, we have entered into or will enter into indemnification agreements with each of our directors and executive officers that may be broader than the specific indemnification provisions contained in the Delaware General Corporation Law. These indemnification agreements require us, among other things, to indemnify our directors and executive officers against liabilities that may arise by reason of their status or service. These indemnification agreements also require us to advance all expenses incurred by the directors and executive officers in investigating or defending any such action, suit or proceeding. We believe that these agreements are necessary to attract and retain qualified individuals to serve as directors and executive officers.

The limitation of liability and indemnification provisions that are expected to be included in our amended and restated certificate of incorporation, amended and restated bylaws and in indemnification agreements that we have entered into or will enter into with our directors and executive officers may discourage stockholders from bringing a lawsuit against our directors and executive officers for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against our directors and executive officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and executive officers as required by these indemnification provisions. At present, we are not aware of any pending litigation or proceeding involving any person who is or was one of our directors, officers, employees, or other agents or is or was serving at our request as a director, officer, employee, or agent of another corporation, partnership, joint venture, trust, or other enterprise, for which indemnification is sought, and we are not aware of any threatened litigation that may result in claims for indemnification.

We have obtained insurance policies under which, subject to the limitations of the policies, coverage is provided to our directors and executive officers against loss arising from claims made by reason of breach of fiduciary duty or other wrongful acts as a director or executive officer, including claims relating to public securities matters, and to us with respect to payments that may be made by us to these directors and executive officers pursuant to our indemnification obligations or otherwise as a matter of law.

Certain of our non-employee directors may, through their relationships with their employers, be insured and/or indemnified against certain liabilities incurred in their capacity as members of our board of directors.

The underwriting agreement filed as Exhibit 1.1 to this registration statement will provide for indemnification by the underwriters of us and our officers and directors for certain liabilities arising under the Securities Act or otherwise.

Item 15. Recent Sales of Unregistered Securities.

The following list sets forth information regarding all unregistered securities issued by us since January 1, 2016 through the date of the prospectus that is a part of this registration statement:

Issuances of Options to Purchase Common Stock and Restricted Stock Units

From January 1, 2016 through the date of this registration statement, we granted under our 2011 Plan options to purchase an aggregate of 11,646,379 shares of our common stock, having exercise prices ranging from $5.17 to $10.31 per share, and 75,000 restricted stock units to be settled in shares of our common stock to a total of 876 team members, consultants, and directors.

The offers, sales, and issuances of the securities described in the preceding paragraph were deemed to be exempt from registration either under Rule 701 promulgated under the Securities Act, or Rule 701, in that the transactions were under compensatory benefit plans and contracts relating to compensation, or under Section 4(a)(2) of the Securities Act in that the transactions were between an issuer and members of its senior executive management and did not involve any public offering within the meaning of Section 4(a)(2). The recipients of such securities were our employees, directors, or consultants and received the securities under our equity incentive plans. Appropriate legends were affixed to the securities issued in these transactions.

Issuances of Redeemable Convertible Preferred Stock

From February 2016 to June 2018, we sold an aggregate of 12,061,525 shares of our Series E redeemable convertible preferred stock at a purchase price of $10.599 per share, for an aggregate purchase price of $127.8 million.

In February 2019, we sold an aggregate of 875,585 shares of our Series F redeemable convertible preferred stock to 22 accredited investors at a purchase price of $13.92 per share, for an aggregate purchase price of $12.2 million.

The offers, sales, and issuances of the securities described in the preceding paragraph were deemed to be exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act or Rule 506 of Regulation D promulgated thereunder as a transaction by an issuer not involving a public offering. The recipients of securities in each of these transactions acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions was either an accredited investor within the meaning of Rule 501 of Regulation D under the Securities Act or had adequate access, through employment, business, or other relationships, to information about us.

Issuances of Warrants

Since January 1, 2016, we granted to two accredited investors warrants to purchase 510,674 shares of our common stock, at an exercise price of $5.33 per share.

The offers, sales, and issuances of the securities described in the preceding paragraph were deemed to be exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act or Rule 506 of Regulation D promulgated thereunder as a transaction by an issuer not involving a public offering. The recipients of securities in each of these transactions acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions was either an accredited investor within the meaning of Rule 501 of Regulation D under the Securities Act or had adequate access, through employment, business, or other relationships, to information about us.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits

The exhibits to this registration statement are listed in the Exhibit Index immediately preceding the signature page attached hereto and incorporated by reference herein.

(b) Financial Statement Schedules

All financial statement schedules are omitted because the information required to be set forth therein is not applicable or is shown in the consolidated financial statements or the notes thereto.

Item 17. Undertakings.

The undersigned Registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification by the Registrant for liabilities arising under the Securities Act may be permitted to directors, officers, and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer, or controlling person of the Registrant in the successful defense of any action, suit, or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Exhibit Index

Exhibit Number	Description of Document
1.1*	Form of Underwriting Agreement.
3.1	Amended and Restated Certificate of Incorporation of the Registrant, as currently in effect.
3.2*	Form of Amended and Restated Certificate of Incorporation of the Registrant to be effective upon completion of this offering.

3.3	Bylaws of the Registrant, as currently in effect.
3.4*	Form of Amended and Restated Bylaws of the Registrant to be effective upon completion of this offering.
4.1*	Form of common stock certificate of the Registrant.
4.2	Fifth Amended and Restated Registration Agreement, dated February 6, 2019, by and among the Registrant and certain of its stockholders.
4.3	Fifth Amended and Restated Investor Rights Agreement, dated February 6, 2019, by and among the Registrant and certain of its stockholders.
4.4	Fifth Amended and Restated Stockholders Agreement, dated February 6, 2019, by and among the Registrant and certain of its stockholders.
5.1*	Opinion of Goodwin Procter LLP.
10.1	Lease for 3165 Millrock Drive #400 Salt Lake City, Utah 84121, dated September 1, 2016, by and between the Registrant and EOS at Millrock Park LLC.
10.2	First Amendment to Lease for 3165 Millrock Drive #400 Salt Lake City, Utah 84121, dated July 30, 2018, by and between the Registrant and EOS at Millrock Park LLC.
10.3	Mezzanine Loan and Security Agreement, dated October 6, 2017, by and between the Registrant and Silicon Valley Bank, as amended.
10.4	Amended and Restated Loan and Security Agreement, dated October 6, 2017, by and between the Registrant and Silicon Valley Bank, as amended.
10.5	Credit Agreement, dated February 6, 2019, by and between the Registrant and OrbiMed Royalty Opportunities II, LP.
10.6#	Offer Letter, dated September 26, 2011, between the Registrant and Daniel Burton.
10.7#	Offer Letter, dated October 24, 2011, between the Registrant and Dale Sanders.
10.8#	Offer Letter, dated May 20, 2013, between the Registrant and J. Patrick Nelli.
10.9#	Offer Letter, dated September 26, 2011, between the Registrant and Paul Horstmeier.
10.10#	Offer Letter, dated May 22, 2013, between the Registrant and Linda Llewelyn.
10.11#	Offer Letter, dated December 3, 2015, between the Registrant and Daniel Orenstein.
10.12#	2019 Stock Option and Incentive Plan, and forms of agreements thereunder.
10.13#	Amended and Restated 2011 Stock Incentive Plan, and forms of agreements thereunder.
10.14#	2019 Employee Stock Purchase Plan.
10.15#	Senior Executive Cash Incentive Bonus Plan.
10.16#*	Executive Severance Plan.
10.17#	Non-employee Director Compensation Program.
10.18	Form of Indemnification Agreement, between the Registrant and each of its directors.
10.19	Warrant to Purchase Common Stock issued to Silicon Valley Bank by the Registrant, dated October 6, 2017.
10.20	Warrant to Purchase Stock issued to WestRiver Mezzanine Loans - Loan Pool 5, LLC by the Registrant, dated October 6, 2017.
21.1	Subsidiaries of the Registrant.
23.1	Consent of Ernst & Young, independent registered public accounting firm, for Health Catalyst, Inc.
23.2	Consent of Ernst & Young, independent auditors, for Medicity LLC.
23.3*	Consent of Goodwin Procter LLP (included in Exhibit 5.1).
24.1	Power of Attorney. Reference is made to the signature page hereto.

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*	To be filed by amendment.
#	Indicates management contract or compensatory plan.

Power of Attorney. Reference is made to the signature page hereto.

Signatures

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Salt Lake City, Utah, on the 26th day of June, 2019.

	HEALTH CATALYST, INC.
By:	/s/ Daniel Burton

	Daniel Burton
	Chief Executive Officer and Director

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Daniel Burton, Patrick Nelli and Daniel Orenstein, and each of them, his or her true and lawful agent, proxy, and attorney-in-fact, with full power of substitution and resubstitution, for him or her and in his or her name, place, and stead, in any and all capacities, to (1) act on, sign, and file with the Securities and Exchange Commission any and all amendments (including post-effective amendments) to this registration statement together with all schedules and exhibits thereto and any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, together with all schedules and exhibits thereto, (2) act on, sign, and file such certificates, instruments, agreements, and other documents as may be necessary or appropriate in connection therewith, (3) act on and file any supplement to any prospectus included in this registration statement or any such amendment or any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and (4) take any and all actions which may be necessary or appropriate to be done, as fully for all intents and purposes as he or she might or could do in person, hereby approving, ratifying, and confirming all that such agent, proxy and attorney-in-fact or any of his substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Daniel Burton	Chief Executive Officer and Director	June 26, 2019
Daniel Burton	(Principal Executive Officer)	
/s/ J. Patrick Nelli	Chief Financial Officer	
J. Patrick Nelli	(Principal Financial Officer and Principal Accounting Officer)	June 26, 2019
/s/ Fraser Bullock	Director	
Fraser Bullock		June 25, 2019
/s/ Todd Cozzens	Director	
Todd Cozzens		June 25, 2019
/s/ Michael Dixon	Director	
Michael Dixon		June 25, 2019
/s/ Timothy G. Ferris	Director	
Timothy G. Ferris		June 25, 2019
/s/ Duncan Gallagher	Director	
Duncan Gallagher		June 26, 2019
/s/ Promod Haque	Director	
Promod Haque		June 24, 2019
/s/ John A. Kane	Director	
John A. Kane		June 25, 2019
/s/ Anita V. Pramoda	Director	
Anita V. Pramoda		June 25, 2019