

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2018

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE TRANSITION PERIOD FROM TO

Commission File Number 000-27701

HEALTHSTREAM, INC.

(Exact name of registrant as specified in its charter)

Tennessee

*(State or other jurisdiction of
incorporation or organization)*

62-1443555

(I.R.S. Employer Identification No.)

209 10th Avenue South, Suite 450

Nashville, Tennessee

(Address of principal executive offices)

37203

(Zip Code)

(615) 301-3100

(Registrant's telephone number, including area code)

Securities Registered Pursuant To Section 12(b) Of The Act:

Title of each class
Common Stock, No Par Value

Name of each Exchange on which registered
Nasdaq Global Select Market

Securities Registered Pursuant To Section 12(g) Of The Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15 (d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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 Smaller reporting company

Emerging growth company

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 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

The aggregate market value of the Common Stock issued and outstanding and held by non-affiliates of the Registrant, based upon the closing sales price for the Common Stock on the Nasdaq Global Select Market on June 30, 2018 was approximately \$703.7 million. All executive officers and directors of the registrant have been deemed, solely for the purpose of the foregoing calculation, to be "affiliates" of the registrant.

As of February 21, 2019, there were 32,329,409 shares of the Registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive Proxy Statement for its 2019 Annual Meeting of Shareholders are incorporated by reference into Part III hereof.

HEALTHSTREAM, INC.

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PART I

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934. Such forward-looking statements include, among others, those statements including the words “expects,” “anticipates,” “intends,” “believes,” “may,” “will,” “should,” “continue,” and similar language or the negative of such terms or other comparable terminology. Forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause our actual results, performance, or achievements to be materially different from future results, performance, or achievements expressed or implied by the forward-looking statements included herein. Factors that might cause or contribute to such differences include, but are not limited to, those discussed in the section “Risk Factors” in Item 1A of this Annual Report on Form 10-K and elsewhere in this document. In addition, factors that we are not currently aware of could harm our future operating results. You should carefully review the risks described in other documents HealthStream files from time to time with the Securities and Exchange Commission. You are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date of this Annual Report on Form 10-K. HealthStream undertakes no obligation to publicly release any revisions to the forward-looking statements or reflect events or circumstances after the date of this document.

Item 1. Business

OVERVIEW AND HISTORY

HealthStream, Inc. (HealthStream or the Company) provides workforce and provider solutions for healthcare organizations—all designed to support the people that deliver patient care, which in turn, supports the improvement of business and clinical outcomes. Delivered primarily as Software-as-a-Service (SaaS), our solutions focus on some of the most significant challenges facing the healthcare workforce and healthcare organizations today, including the need to effectively manage, retain, engage, and develop healthcare workforce talent; meet rigorous compliance requirements; and efficiently manage ongoing medical staff credentialing and privileging processes.

On February 12, 2018, the Company divested its Patient Experience (PX) business to Press Ganey Associates (Press Ganey) for \$65.2 million in cash (after giving effect to the post-closing working capital adjustment). This sale of the PX business resulted in the divestiture of the Company’s patient experience solutions business segment.

With 29 years of experience, HealthStream is recognized as a leading innovator and thought leader in the healthcare industry for its healthcare workforce solutions. Using technology to enhance learning and productivity, HealthStream pioneered the delivery of online learning for hospitals’ required regulatory training as Internet-based training was first introduced. Stemming from that early success, demand for expanded learning solutions led the Company to build what is now a full ecosystem of diverse workforce and clinical-focused applications, courseware, assessments, and talent management programs. At year-end 2018, with approximately 4.93 million healthcare professionals subscribing to HealthStream’s platform through their respective organizations, HealthStream is a leading provider in workforce development in the healthcare industry.

HealthStream believes that the key to quality patient care is—and always has been—the people who deliver care. To that end, the Company’s solutions support the recruiting, retaining, engaging, assessing, and developing of the healthcare workforce, including medical staff who provide patient care in our customers’ organizations.

Headquartered in Nashville, Tennessee, the Company was incorporated in 1990 and began providing its SaaS-based workforce solutions in 1999 and its provider solutions in 2012. Including additional offices in Nashville, Tennessee; Jericho, New York; Brentwood, Tennessee; San Diego, California; Chicago, Illinois; and Boulder, Colorado, HealthStream had 757 full-time and 33 part-time employees as of December 31, 2018.

INDUSTRY BACKGROUND

According to the Centers for Medicare & Medicaid Services (CMS), spending in the healthcare industry reached approximately \$3.5 trillion in 2017, or 17.9% of the U.S. gross domestic product. Hospital care expenditures accounted for approximately 30.6% of the \$3.5 trillion industry. According to the Bureau of Labor Statistics, approximately 20.1 million professionals are employed in the healthcare segment of the domestic economy, with approximately 5.2 million employed in acute-care hospitals and, according to CMS, approximately 5.3 million employed in healthcare organizations throughout the continuum of care, our primary target markets for our products. (Organizations in the continuum of care include approximately 1.5 million employees in ambulatory centers, approximately 3.5 million employees in post-acute care facilities, and approximately 300,000 employees in health & human services facilities.) As of December 31, 2018, approximately 4.93 million healthcare professionals were subscribers to our SaaS-based solutions, which include 4.82 million subscribers already implemented and 110,000 subscribers in the process of implementation.

All of the approximately 5.2 million hospital-based healthcare professionals that work in the nation's approximately 5,000 acute-care hospitals are required by federal and state mandates and accrediting bodies to complete training in a number of areas. This training includes safety training mandated by both the Occupational Safety and Health Administration (OSHA) and The Joint Commission (an independent, not-for-profit organization that accredits and certifies healthcare organizations and programs in the United States), as well as training on patient information confidentiality required under the Health Insurance Portability and Accountability Act (HIPAA).

In hospitals, staffing issues and personnel shortages have also contributed to the need for facility-based workforce development as well as additional assessment and competency-based training. An ongoing nursing shortage, for example, is resulting in skill gaps and rising costs. The U.S. Bureau of Labor Statistics projects the need for 525,000 replacement nurses over the next several years, bringing the total number of openings for nurses due to growth and replacements to 1.05 million by 2022. We believe that offering training and education for hospital personnel is increasingly being utilized as a retention and recruitment incentive.

Many healthcare professionals use continuing education to keep abreast of the latest developments and meet licensing and certification requirements. Continuing education is required for nurses, emergency medical services personnel, first responder personnel, radiologic personnel, and physicians. Pharmaceutical and medical device companies must also provide their medical industry sales representatives with training mandated for the healthcare industry and training for new products. Such companies also provide support and content for education and training of audiences that use their products in healthcare organizations.

The healthcare education and training industry is highly fragmented, varies significantly in delivery methods (i.e., online products, live events, written materials, and manikins for simulation-based training), and is composed of a wide variety of entities competing for customers. The sheer volume of healthcare information available to satisfy continuing education needs, rapid advances in medical developments, and the time constraints that healthcare professionals face make it difficult to quickly and efficiently access the continuing education content most relevant to an individual's practice or profession. Historically, healthcare professionals have received continuing education and training through offline publications, such as medical journals or by attending conferences and seminars. In addition, other healthcare workers and pharmaceutical and medical device manufacturers' sales and internal regulatory personnel usually fulfill their training from external vendors or internal training departments. While these approaches satisfy the ongoing education and training requirements, they are typically costly and inconvenient. In addition, live courses are often limited in the breadth of offerings and do not provide a method for tracking training completion. The results of these traditional methods, both from a business and compliance standpoint, are difficult to track and measure.

Provider data management has become more complex and arduous for healthcare organizations. Spurred by The Joint Commission Medical Staff standards and other regulatory requirements, credentialing and privileging has been transformed from a periodic review to continuous, evidence-driven analysis of professional competency and provider performance. This transformation requires ongoing, automatic monitoring of licenses, sanctions, and exclusions, as well as expanding the scope of review at initial credentialing and re-credentialing. In addition, provider enrollment processes have compounded in difficulty. For example, a single provider may need to enroll annually with some 30 to 40 payers, with each payer application often taking two to four hours to complete.

Finally, the hospital industry continues to operate under intense pressure to reduce costs as a result of reductions in government reimbursement rates and increased focus on cost containment consistent with participation of patients in managed care programs. In addition, hospitals, as well as pharmaceutical and medical device companies, continue to experience rising operating costs, coupled with increased pressure to measure and report on the outcomes of the dollars spent on training. Our products and services are designed to meet these needs by reducing healthcare organizations' costs of training while improving learning outcomes, enhancing reporting capabilities, and supporting customers' business objectives.

HEALTHSTREAM'S SOLUTIONS

During the year ended December 31, 2018, HealthStream's products, services, and operations were organized into two business segments—Workforce Solutions and Provider Solutions—that collectively help healthcare organizations meet their ongoing clinical development, talent management, training, education, assessment, competency management, compliance, provider credentialing & privileging management, and provider enrollment needs. HealthStream's solutions are provided to a wide range of customers within the healthcare industry across the spectrum of care.

On February 12, 2018, the Company divested its PX business to Press Ganey for \$65.2 million in cash (after giving effect to the post-closing working capital adjustment). This sale of the PX business resulted in the divestiture of the Company's patient experience solutions segment.

HealthStream Workforce Solutions — Our workforce development solutions, which are comprised primarily of SaaS, subscription-based products, are used by healthcare organizations to meet a broad range of their clinical development, talent management, training, certification, competency assessment, performance appraisal, and additional needs. Our numerous content libraries allow customers to subscribe to a wide array of courseware, which includes content from leading healthcare and nursing associations, medical and healthcare publishers, and other content providers. Additionally, medical device companies and other industry partners offer online training support through HealthStream's platform for their products, and they sponsor continuing education directly to healthcare workers.

At December 31, 2018, HealthStream had approximately 4.93 million "total subscribers" to its subscription-based solutions. Each individual end-user who utilizes at least one HealthStream subscription-based solution is counted as one subscriber, regardless of the number of subscriptions contracted by or for that end-user. Our subscription-based solutions include any one or a combination of our many platform applications, plus courseware, or content. For example, we deliver courseware to our customers primarily through our learning application, the HealthStream Learning Center™ (HLC), while we deliver competency management and performance appraisal tools through our applications known as the HealthStream Competency Center (HCC) and HealthStream Performance Center (HPC), respectively, which are all on our SaaS-based platform, along with a series of other applications. Not included in this "total subscriber count" are subscribers to our Provider Solutions products.

We are retiring the metrics of "implemented and total subscribers" after December 31, 2018 as these metrics do not span our entire business. Effective as of December 31, 2018, we are introducing a new measure of our progress in growing the value of our customer base, "hStream subscriptions." As of December 31, 2018, we had approximately 1.51 million hStream subscriptions under contract. Our new hStream technologies represent the beginning of our "platform-as-a-service" capabilities, which will, over time, span our entire business.

Pricing for the HLC, HCC, HPC, and hStream is subscription-based, with fees based on the number of subscribers, courseware provided, and other factors. We offer training, implementation, and account management services to facilitate adoption of our subscription-based solutions. Fees for training are based on the time and efforts of the personnel involved. Implementation fees vary based on the size, scope, and complexity of the project. Our SaaS-based platform and subscription-based solutions are hosted in a central data center that allows authorized subscribers access to our services through the Internet, thereby eliminating the need for onsite local implementations of installed workforce development products.

Other Applications on our Platform — HealthStream offers an array of other applications on our platform, each serving a unique function for hospitals and health systems. Each application on our platform has its own value. Examples of individual applications that are offered on our platform include applications for recruiting and applicant tracking; learning; performance appraisal; compensation management; succession planning; competency management; disclosure management; clinical development; simulation-based education; and industry-sponsored training.

HealthStream Provider Solutions — Our provider solutions are offered through our business segment that is branded in the marketplace as "Verity, a HealthStream Company." Verity, a HealthStream Company, delivers enterprise-class solutions to transform the healthcare provider experience for healthcare organizations and providers. We currently serve approximately 2,400 hospitals and 1,000 clinics, medical groups, and surgery centers in the United States. Verity, a HealthStream Company, resulted from the combination of Echo, Inc. and Morrisey Associates, Inc. (MAI), representing over 75 years of industry experience, to become a leading company delivering solutions for credentialing, enrollment, privileging, onboarding, and performance evaluation for providers. As of December 31, 2018, Verity, a HealthStream Company, had 235 employees spanning headquarters in Boulder, Colorado with satellite offices in San Diego, California, Brentwood, Tennessee, and Chicago, Illinois.

Our legacy products include EchoCredentialing™ and MSOW™, comprehensive platforms that manage medical staff credentialing and privileging processes for hospitals; EchoOneApp™, a provider enrollment platform for medical groups, which includes automatic form population directly from a continuously updated library of more than 5,000 preformatted payer form templates as well as online form integration with Council for Affordable Quality Healthcare (CAQH), CMS' Provider Enrollment, Chain and Ownership System (PECOS); and EchoAccess™, our enterprise class platform to support hospital call centers with physician referral and provider directories functionalities.

In January 2018, we announced the launch of our SaaS-based provider credentialing, privileging, and enrollment solution, Verity. Verity includes an intuitive, modern user experience; embedded, validated provider data; and evidence-based and best practice content. Further, Verity provides a single infrastructure supporting the entire provider lifecycle, from recruiting, application submission, validation tasks, privileging, appointments by credentialing committees, enrollment, contracting, onboarding, and performance management. As of December 31, 2018, more than two dozen healthcare organizations have contracted for Verity.

BUSINESS ACQUISITIONS

We acquired Performance Management Services, Inc. in June 2016, acquired the remaining ownership interest in Nursing Registry Consultants Corporation in July 2016, acquired MAI in August 2016, and acquired Providigm, LLC in January 2019. For additional information regarding acquisitions, please see Note 18 of the Consolidated Financial Statements and Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," included elsewhere in this report.

CUSTOMERS

We provide our solutions to customers across a broad range of entities within the healthcare industry, including private, not-for-profit, and government entities, as well as pharmaceutical and medical device companies. We derive a substantial portion of our revenues from a relatively small number of customers, although no single customer represented more than 10 percent of our revenues during 2018, 2017, or 2016. Customers that have purchased or contracted for products and services from HealthStream include: CHRISTUS Health; Saint Luke's Health System; HCA Holdings, Inc.; Community Health Systems, Inc.; McLaren Health Care Corporation; and Sutter Health.

SALES AND MARKETING

We market our products and services primarily through our direct sales teams, which are based out of our various office locations as well as remote home office locations. As of December 31, 2018, our HealthStream Workforce Solutions sales personnel consisted of 119 employees who carried sales quotas, and our Provider Solutions sales personnel consisted of 33 employees who carried sales quotas.

We conduct a variety of marketing programs to promote our products and services, including product catalogs, user groups, trade shows, internet promotion and demonstrations, telemarketing campaigns, public relations, distribution of product-specific literature, direct mail, and advertising. We have marketing teams that are responsible for these initiatives and for working with and supporting our product management and sales teams. At December 31, 2018, our marketing personnel consisted of 38 employees.

OPERATIONS AND TECHNOLOGY

We believe our ability to establish and maintain long-term customer relationships, obtain recurring sales, and develop and maintain new and existing products are dependent on the strength of our operations, customer service, product development and maintenance, training, and other support teams. As of December 31, 2018, our Workforce Solutions operations team consisted of 319 employees associated with customer support, implementation services, product development and quality assurance, training, and project management; and our Provider Solutions operations team consisted of 194 employees associated with implementation services, data integration, product development and quality assurance, credentials verification, consulting, and other functions.

Our services are designed to be reliable, secure, and scalable. Our software is a combination of proprietary and commercially available software and operating systems. Our software solutions support hosting and management of content, publication of our websites, execution of courseware, registration and tracking of users, tracking and reporting of physician credentialing and provider enrollment information, and reporting of information for both internal and external use. We designed the platforms that provide our services to allow each component to be independently scaled by adding commercially available hardware and a combination of commercially available and proprietary software components.

Our software applications, servers, and network infrastructure that deliver our services are hosted by a combination of third-party data center providers, HealthStream-owned data centers, and cloud-based infrastructure. We maintain fully redundant disaster recovery data centers which are located in geographically separate locations. Our technology equipment is maintained in secure, limited access environments, supported by redundant power, environmental conditioning, and network connectivity, and we follow industry best practices for backup and disaster recovery. Company personnel monitor all servers, networks, and systems on a continuous basis, and we employ enterprise firewall systems and data abstraction to protect our databases, customer information, and courseware library from unauthorized access.

COMPETITION

In addition to the competing healthcare education delivery methods in the industry, we also have direct competitors. In our Workforce Solutions business segment, a number of companies offer competitive learning management products and talent management modules to the healthcare industry. We compete with companies such as Cornerstone OnDemand, Healthcare Source, SABA, Oracle, SAP, and Workday that provide their services to multiple industries, including healthcare. We also compete with large medical publishers that have operating units that focus on healthcare, such as Wolters Kluwer and Relias Learning, which is owned by Bertelsmann. In our Provider Solutions business segment, we have competition primarily from several large companies, such as Symplr and MD-Staff.

We believe our Workforce Solutions, which include both products and services that facilitate training, assessment, and development for healthcare professionals, offer a wide assortment of courseware, functionality, and applications provided on a single platform over the Internet and provide us with a competitive advantage. In our Provider Solutions business segment, we believe the scope and quality of our products, capability to connect medical staff credentialing with provider enrollment, and innovative new predictive analytics, provide us with a competitive advantage. We believe that the principal competitive factors affecting the marketing of our Workforce and Provider Solutions to the healthcare industry include:

- features of our SaaS-based platform and applications, including reporting, management functionality, ability to manage a variety of events or modalities, courseware assignment, curriculum management, documenting competency assessments and performance appraisals, scalability, and the ability to track utilization and results;
- scope and variety of Internet-based learning courseware available, including mandated content for OSHA, The Joint Commission, patient safety, and HIPAA requirements; competency-based content; courseware scenarios that drive simulators; courseware that provides CPR certification; and the ability of our customers to create and host their own web-enabled courseware;
- our singular focus on the healthcare industry and our deep healthcare expertise;
- scope and quality of professional services offered, including implementation, benchmarking, and training;
- competitive pricing, which supports a return on investment to customers when compared to other alternative delivery methods;
- customer service and support;
- effectiveness of sales and marketing efforts; and
- company reputation.

We believe these capabilities provide us with the ability to improve the quality of healthcare by assessing and developing the people who deliver care.

GOVERNMENT REGULATION OF THE INTERNET AND THE HEALTHCARE INDUSTRY

Regulation of the Internet and the Privacy and Security of Personal Information

The laws and regulations that govern our business may change rapidly. The following are some of the evolving areas of law that are relevant to our business:

- *Privacy and Security Laws.* Federal, state, and foreign privacy and security laws and regulations restricting the collection, use, security, and disclosure of personal information limit our ability to collect information or use and disclose the information in our databases or derived from other sources to generate revenues. It may be costly to implement security or other measures designed to comply with new legislation or changes to existing laws.
- *Content Regulation.* Both foreign and domestic governments have adopted and proposed laws governing content and materials transmitted over the Internet. These include laws relating to obscenity, indecency, libel and defamation. We could be liable if content created, stored, or delivered by us is determined to be in violation of these regulations.
- *Information Security Accountability Regulation.* As a business associate of certain of our customers, we are required to report certain breaches of protected health information to our customers, which must in turn notify affected individuals, the U.S. Department of Health and Human Services (HHS) and/or other governmental agencies, and, in certain situations, the media. In addition, we are subject to certain state laws that relate to privacy or the reporting of security breaches. For example, California law requires notification of security

breaches involving personal information and medical information. We may incur costs to comply with these privacy and security requirements. Because there is little guidance related to many of these laws, it is difficult to estimate the cost of our compliance with these laws. Further, Congress has considered bills that would require companies to engage independent third parties to audit the companies' computer information security. If the Company is required to report a breach of security or if one of the Company's customers is required to report a breach of security by the Company, the Company's business could be negatively impacted.

- *Sales and Use Tax.* Through December 31, 2018, we collected sales, use, or other taxes on taxable transactions in states in which we have employees or have a significant level of sales activity. While HealthStream believes that this approach is appropriate, other states or foreign jurisdictions may seek to impose tax collection obligations on companies like us that engage in online commerce. If they do, these obligations could limit the growth of electronic commerce in general and limit our ability to realize profit from the sale of our services over the Internet.

Laws and regulations directly applicable to content regulation, e-commerce, Internet communications, and the privacy and security of personal information are becoming more prevalent. Congress continues to consider laws regarding Internet taxation. The dynamic nature of this regulatory environment increases the uncertainty regarding the marketplace impact of such regulation. The enactment of any additional laws or regulations may increase our cost of conducting business or otherwise harm our business, financial condition, and operating results.

Regulation of Education, Training, and Other Services for Healthcare Professionals

Occupational Safety and Health Administration. OSHA regulations require employers to provide training to employees to minimize the risk of injury from various potential workplace hazards. Employers in the healthcare industry are required to provide training with respect to various topics, including blood borne pathogens exposure control, laboratory safety, and tuberculosis infection control. OSHA regulations require employers to keep records of their employees' completion of training with respect to these workplace hazards.

The Joint Commission. The Joint Commission accreditation and certification standards require employers in the healthcare industry to provide certain workplace safety and patient interaction training to employees. Training required by The Joint Commission may include programs on infection control, patient bill of rights, radiation safety, and incident reporting. Healthcare organizations are required to provide and document training on these topics to receive accreditation from The Joint Commission. In addition, The Joint Commission imposes continuing education requirements on physicians that relate to each physician's specific staff appointments.

Health Insurance Portability and Accountability Act. HIPAA regulations require certain organizations (known as Covered Entities), including most healthcare providers and health plans, to adopt safeguards regarding the use and disclosure of certain health-related information. HIPAA regulations also require these organizations to provide reasonable and appropriate safeguards to protect the privacy, integrity and confidentiality of individually identifiable healthcare information. Covered Entities are required to establish, maintain, and provide training with regard to their policies and procedures for protecting the integrity and confidentiality of individually identifiable healthcare information and must document training on these topics to support their compliance. Certain HIPAA privacy and security requirements apply to entities (known as Business Associates) that handle individually identifiable healthcare information on behalf of Covered Entities or other Business Associates. Covered Entities, Business Associates, and their subcontractors may be directly subject to criminal and civil sanctions for violations of HIPAA privacy and security standards.

The American Nurses Credentialing Center (ANCC). ANCC, a subsidiary of the American Nurses Association (ANA), provides individuals and organizations throughout the nursing profession with the resources they need to achieve practice excellence. ANCC's internationally renowned credentialing programs certify nurses in specialty practice areas; recognize healthcare organizations for promoting safe, positive work environments through the Magnet Recognition Program® and the Pathway to Excellence® Program; and accredit providers of continuing nursing education. In addition, ANCC's Institute for Credentialing Innovation® offers an array of informational and educational services and products to support its core credentialing programs. ANCC certification exams validate nurses' skills, knowledge, and abilities. More than a quarter million nurses have been certified by ANCC since 1990. More than 80,000 advanced practice nurses are currently certified by ANCC. The ANCC Magnet Recognition Program® recognizes healthcare organizations that provide the very best in nursing care and professionalism in nursing practice. The program also provides a vehicle for disseminating best practices and strategies among nursing systems. The ANCC Magnet Recognition Program is a highly regarded standard for nursing excellence. The Pathway to Excellence® Program recognizes the essential elements of a high standard nursing practice environment. The designation is earned by healthcare organizations that create work environments where nurses can develop professionally. The award substantiates the professional satisfaction of nurses and identifies best places to work.

Continuing Nursing Education (CNE). State nurse practice laws authorize a state’s board of nursing to establish CNE requirements for professional nurses to maintain valid licensure. CNE credits are provided through accredited providers that have been approved by the ANCC Commission on Accreditation and/or the state board of nursing. We are an accredited provider of CNE by the ANCC. CNE requirements vary widely from state to state, with reporting generally on a bi-annual basis. In some states, the CNE requirement only applies to re-licensure of advance practice nurses, while in other states, additional CNEs may be required of this category of nurses. Board certifications (e.g., Certified Nurse Operating Room (CNOR) – certification of perioperative nursing) also require CNE credits, with certain percentages required in specific categories based on the certification type.

Continuing Medical Education (CME). State licensing boards, professional organizations, and employers require physicians to certify that they have accumulated a minimum number of CME hours to maintain their licenses. Generally, each state’s medical practice laws authorize the state’s board of medicine to establish and track CME requirements. Forty-eight state medical licensing boards currently have CME requirements, as well as Puerto Rico, Guam, and the U.S. Virgin Islands. The number of CME hours required by each state ranges from 15 to 50 hours per year. Other sources of CME requirements are state medical societies and practice specialty boards. The failure to obtain the requisite amount and type of CME could result in non-renewal of the physician’s license to practice medicine and/or membership in a medical or practice specialty society. The American Medical Association (AMA) classifies CME activities as either Category 1, which includes formal CME activities, or Category 2, which includes self-designated credit for informal activities that meet certain requirements. CME providers that sponsor educational activities can only designate those activities for *AMA PRA Category 1 Credit™*. Most boards of medical examiners nationwide that require CME participation specify *AMA PRA Category 1 Credit™*. Only institutions and organizations accredited to provide CME can designate an activity for *AMA PRA Category 1 Credit™*. The Accreditation Council for Continuing Medical Education (ACCME) is responsible for awarding accreditation status to state medical societies, medical schools, and other institutions and organizations that provide CME activities for a national audience of physicians. State medical societies, operating under the aegis of the ACCME, accredit institutions and organizations that provide CME activities primarily for physicians within the state or bordering states. We are recognized as an accredited provider of CME by the ACCME.

Centers for Medicare & Medicaid Services (CMS). CMS has articulated three broad aims of its quality strategy: “Better Care. Healthier People, Healthier Communities. Smarter Spending.” To achieve this vision, CMS is committed to care that is safe, effective, timely, patient-centered, efficient, and equitable. Value-based purchasing (VBP), which links payment more directly to the quality of care provided, is a strategy that can help to transform the current payment system by rewarding providers for delivering high quality, efficient clinical care. Through a number of public reporting programs, demonstration projects, pilot programs, and other initiatives, some voluntary and some mandatory, CMS has launched VBP initiatives in hospitals, physician offices, nursing homes, home health services, and dialysis facilities. In 2017, CMS launched a comprehensive deregulatory initiative, “Meaningful Measures,” which identifies priorities for quality measurement and improvement. The framework is intended to improve patient outcomes while also reducing burdens on providers.

Promoting Interoperability Programs (formerly the Medicare and Medicaid Electronic Health Records (EHR) Incentive Programs). CMS renamed the Medicare and Medicaid EHR Incentive Programs to the Promoting Interoperability Programs (The Interoperability Programs) to increase focus on the interoperability of and improving patient access to health information. The Interoperability Programs encourage eligible professionals, eligible hospitals, and critical access hospitals (CAHs) to adopt EHR technology. Eligible hospitals can receive Medicare or Medicaid incentive payments if they adopt and demonstrate meaningful use of certified EHR technology; those that fail to demonstrate meaningful use are subject to reduced reimbursement from Medicare. In addition to requiring EHR technology, The Interoperability Programs include measures that require the exchange of information between providers and patients to improve the quality of care. By putting into action and meaningfully using an EHR system, providers may reap benefits beyond financial incentives—such as reduction in errors, availability of records and data, reminders and alerts, clinical decision support, and e-prescribing/refill automation.

Allied Disciplines. Various allied health professionals are required to obtain continuing education to maintain their licenses. For example, emergency medical services personnel may be required to attain up to 20 continuing education hours per year, all or a portion of which can be fulfilled online. These requirements vary by state and depend on the professional classification of the individual.

Regulation of Educational Program Sponsorship and Support

There are a variety of laws and regulations that affect the relationships between our medical device and pharmaceutical customers and the users of our products and services, including the sponsorship and support of educational programs. For example, the Physician Payment Sunshine Act (Sunshine Act) requires manufacturers of drugs, biological devices, and medical devices covered by Medicare, Medicaid, or the Children’s Health Insurance Program to report annually to CMS

payments and other transfers of value, including educational programs, given by such manufacturers to physicians and teaching hospitals, with limited exceptions. CMS regulations require manufacturers to report the physician's name, business address, and national provider identifier as well as other information including the value, date, form, and nature of what is offered. CMS publishes the information on its website. Manufacturers that do not meet the reporting obligations are subject to significant monetary penalties.

Further, the Office of Inspector General (OIG) has issued Compliance Program Guidance for Pharmaceutical Manufacturers and for the Durable Medical Equipment, Prosthetics, Orthotics, and Supply Industry (collectively, the Guidelines). The Guidelines address compliance risks raised by the support of continuing educational activities by pharmaceutical and medical device companies. The Guidelines have affected and may continue to affect the type and extent of commercial support we receive for our continuing education activities. The trade associations for the pharmaceutical and medical device industries (PhRMA and AdvaMed, respectively) have also promulgated their own codes of ethics that further restrict the interactions between industry and health care professionals. In addition, the AMA has established its own code of ethics regarding Gifts to Physicians from Industry to provide standards of conduct for the medical profession. We follow the rules and guidelines provided by ACCME, ANCC, and other continuing education accrediting bodies to ensure that our continuing education programming is free from commercial bias and consistent with the Guidelines.

The U.S. Food and Drug Administration (FDA) and the Federal Trade Commission (FTC)

Current FDA and FTC rules and enforcement actions and regulatory policies, or those that the FDA or the FTC may develop in the future, could have a material adverse effect on our ability to provide existing or future applications or services to our end users or obtain the necessary corporate sponsorship to do so. The FDA and the FTC regulate the form, content, and dissemination of labeling, advertising, and promotional materials, including direct-to-consumer prescription drug and medical device advertising, prepared by, or for, pharmaceutical, biotechnology, or medical device companies. The FTC regulates over-the-counter drug advertising and, in some cases, medical device advertising. Generally, regulated companies must limit their advertising and promotional materials to discussions of the FDA-approved indications. Therefore, any truthful or untruthful information that promotes the use of pharmaceutical or medical device products that is presented with our services is subject to the FDA and FTC requirements and regulatory oversight including criminal, civil and administrative actions. We believe that banner advertisements, sponsorship links, and any educational programs that lack independent editorial control that we may present with our services could be subject to FDA or FTC regulation. While the FDA and the FTC place the principal burden of compliance with advertising and promotional regulations on the advertiser, if the FDA or FTC finds that any regulated information presented with our services violates FDA or FTC regulations, they may take regulatory action against us or the advertiser or sponsor of that information. In addition, the FDA may adopt new regulatory policies that more tightly regulate the format and content of promotional information on the Internet.

INTELLECTUAL PROPERTY AND OTHER PROPRIETARY RIGHTS

To protect our proprietary rights, we rely generally on copyright, trademark, and trade secret laws; confidentiality agreements, contracts, and procedures with employees, consultants and other third parties; contractual provisions in license agreements with consultants, vendors, and customers; and use measures designed to control access to our software, documentation, and other proprietary information. We own federal trademark and service mark registrations for several marks, including, without limitation "HEALTHSTREAM", "HEALTHSTREAM LEARNING CENTER", "HEALTHSTREAM EPORTFOLIO", "VERITY", "KNOWLEDGEQ", and "ONESOURCE." We also have obtained registration of the "HEALTHSTREAM" mark in certain other countries. Applications for several trademarks are currently pending. However, there can be no assurance that we will be successful in obtaining registration of other trademarks for which we have applied.

The courseware we license to our customers is developed through a combination of license agreements with publishers and authors, assignments and work-for-hire arrangements with third parties, and development by employees. We require publishers, authors, and other third parties to represent and warrant that their content does not infringe on or misappropriate any third-party intellectual property rights and that they have the right to provide their content and have obtained all third-party consents necessary to do so. Our publishers, authors, and other third parties also agree to indemnify us against certain liability we might sustain due to the content they provide.

If a third party asserts a claim that we have infringed its patents or other intellectual property right, we may be required to redesign our products or enter into royalty or licensing agreements. In addition, we license technologies from third parties for incorporation into our services. Royalty and licensing agreements with these third parties may not be available on terms acceptable to us, if at all. Additionally, despite the steps we have taken to protect our intellectual property and proprietary rights, our efforts may not be adequate. Third parties may infringe or misappropriate our intellectual property, and such violations of our intellectual property are difficult to detect and police. Competitors may also independently develop technologies that are substantially equivalent or superior to the technologies we employ in our products or services. If we

are unable to safeguard our proprietary rights adequately, our competitors could offer similar services, potentially significantly harming our competitive position and decreasing our revenues.

We hold inbound licenses for certain intellectual property that is used internally, and in some cases, utilized in HealthStream's products or services. While it may be necessary in the future to seek or renew licenses relating to various aspects of our products and services, we believe, based upon past experience and industry practice, such licenses generally can be obtained on commercially reasonable terms. We believe our operations and products and services are not materially dependent on any single license or other agreement with any third party.

AVAILABLE INFORMATION

The Company files reports with the SEC, including annual reports on Form 10-K, quarterly reports on Form 10-Q, and other reports from time to time. The SEC maintains an Internet site at <http://www.sec.gov> that contains the reports, proxy, and other filings made by us electronically. Our website address is www.healthstream.com. Please note that our website address is provided as an inactive textual reference only. We make available, free of charge through our website, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, all amendments to those reports, and other filings made by us with the SEC, as soon as reasonably practicable after such material is electronically filed with or furnished to the SEC. The information provided on our website is not part of this report, and is therefore not incorporated by reference unless such information is otherwise specifically referenced elsewhere in this report.

OUR EMPLOYEES

As of December 31, 2018, we employed 757 full-time and 33 part-time persons. Our success will depend in large part upon our ability to attract and retain qualified employees. We face competition in this regard from other companies, but we believe that we maintain good relations with our employees. We are not subject to any collective bargaining agreements.

EXECUTIVE OFFICERS OF THE REGISTRANT

The following is a brief summary of the business experience of each of the executive officers of the Company. Executive Officers of the Company are elected by the Board of Directors and serve at the pleasure of the Board of Directors. The following table sets forth certain information regarding the executive officers of the Company:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Robert A. Frist, Jr.	51	Chief Executive Officer and Chairman of the Board of Directors
J. Edward Pearson	56	President, Senior Vice President and Chief Operating Officer
Michael Sousa	50	Senior Vice President and President, Verity, Inc., a HealthStream Company
Gerard M. Hayden, Jr.	64	Senior Vice President and Chief Financial Officer
Jeffrey D. Cunningham	52	Senior Vice President and Chief Technology Officer
Michael M. Collier	43	Senior Vice President, Business Development and General Counsel
Trisha L. Coady	43	Senior Vice President and General Manager, Clinical Solutions
M. Scott McQuigg	51	Senior Vice President, hStream Solutions

Robert A. Frist, Jr., one of our co-founders, has served as our chief executive officer and chairman of the board of directors since 1990 and served as our president since 2001. On May 15, 2018, following the appointment of Mr. Pearson as the president of the Company, Mr. Frist no longer served in such position. Mr. Frist is the company's chief operating decision maker. He graduated with a Bachelor of Science in Business with concentrations in Finance, Economics, and Marketing from Trinity University.

J. Edward Pearson joined the Company in June 2006 as senior vice president and was promoted to chief operating officer in 2011 and to president on May 15, 2018. He earned a Bachelor of Business Administration in Accounting from Middle Tennessee State University.

Michael Sousa joined the Company in October 2004 and served as senior vice president of sales from January 2010 to June 2014. In June 2014, he was promoted to senior vice president of business development. In September 2015, he was named president of Echo, Inc. (now known as Verity, Inc., a HealthStream Company), HealthStream's Provider Solutions business segment, while continuing to serve as a senior vice president of the Company. He earned a Bachelor of Science degree from Boston College and a Master of Business Administration from Boston University.

Gerard M. Hayden, Jr. joined the Company as senior vice president and chief financial officer in May 2008. He earned a Bachelor of Arts from the University of Notre Dame and a Master of Science from Northeastern University. As previously

disclosed on the Current Report on Form 8-K filed by us on October 22, 2018, Mr. Hayden intends to resign as an officer of the Company following the filing of this Annual Report on Form 10-K.

Jeffrey D. Cunningham joined the Company in July 2017 as senior vice president and chief technology officer. Prior to joining the Company, he founded and served as chief technology officer and chief strategy officer for Informatics Corporation of America for twelve years. He earned a Bachelor of Science in Computer Science from University of North Texas.

Michael M. Collier joined the Company in August 2011 as vice president and general counsel, began serving as the vice president of business development and general counsel shortly thereafter, and was promoted to senior vice president of business development and general counsel in July 2017. Mr. Collier also serves as the Company's Corporate Secretary. He graduated with bachelors and masters degrees in Philosophy and Religion from University of Tennessee-Knoxville and earned a Juris Doctorate (J.D.) from University of California, Berkeley – School of Law.

Trisha L. Coady joined the Company in January 2014 and served as associate vice president and subsequently vice president and general manager of clinical development solutions from June 2015 to November 2018. In November 2018, she was promoted to senior vice president and general manager of clinical solutions. She earned a Science in Nursing degree from Université de Moncton.

M. Scott McQuigg joined the Company in January 2019 as senior vice president of hStream solutions. Prior to joining the Company, he co-founded and served as chief executive officer for GoNoodle for thirteen years. Before this role, he co-founded and served as chief executive officer of HealthLeaders.

Item 1A. Risk Factors

We believe that the risks and uncertainties described below are the principal material risks facing the Company as of the date of this Annual Report on Form 10-K. In the future, we may become subject to additional risks that are not currently known to us. Our business, financial condition, results of operations, and/or prospects could be materially and adversely affected by the occurrence of any of the following risks and uncertainties. Additional risks or uncertainties not presently known to us, or that we currently deem immaterial, also may adversely affect our business, financial condition, results of operations, and prospects. The trading price of our common stock could also decline due to the occurrence of any of the following risks, as well as risks and uncertainties not presently known to us, or that we currently deem immaterial.

Risks Related to Our Business Model

We may be unable to effectively execute our growth strategy which could have an adverse effect on our business and competitive position in the industry.

Our business strategy includes increasing our market share and presence through sales to new customers, additional sales to existing customers, introductions of new products and services, and maintaining strong relationships with our existing customers. Some of the risks that we may encounter in executing our growth strategy include:

- expenses, delays, and difficulties in identifying and developing new products or services and integrating such new products or services into our existing organization;
- inability to leverage or evolve our customer and partner facing technology platform;
- inability to leverage our operational and financial systems and processes sufficiently to support our growth;
- inability to generate sufficient revenue from our products to offset investment costs;
- inability to effectively identify, manage, and exploit existing and emerging market opportunities;
- inability to maintain our existing customer relationships;
- increased competition from new and existing competitors;
- lengthy sales cycles, or customers delaying purchasing decisions or payments due to economic conditions;
- reduced spending by customers within our target markets;
- failure of the market for our products and services to grow to a sufficient size or at a sufficient rate; and

- inability to hire sufficient number of qualified employees to execute and support the growth of the Company.

If any of these risks are realized, our business, and our competitive position in the industry, could suffer.

We may be unable to effectively identify, complete or integrate the operations of acquisitions, joint ventures, collaborative arrangements or other strategic investments, which would inhibit our ability to execute upon our growth strategy.

As part of our growth strategy, we actively review possible acquisitions, joint ventures, collaborative arrangements, or strategic investments that complement or enhance our business. However, we may be unable to source or complete future acquisitions, joint ventures, collaborative arrangements, or other strategic investments on acceptable terms, or at all. In addition, if we finance acquisitions, joint ventures, collaborative arrangements, or other strategic initiatives by issuing equity securities, our existing shareholders may be diluted, which could affect the market price of our stock. As a result, if we fail to properly evaluate and execute acquisitions and investments, our performance or prospects may be seriously harmed. Some of the risks that we may encounter in implementing our acquisition, joint venture, collaborative arrangement, or strategic investment strategies include:

- expenses, delays, or difficulties in identifying and integrating acquired companies or joint venture operations, collaborative arrangements, or other strategic investments into our organization and to otherwise realize expected synergies in connection therewith;
- inability to retain personnel associated with acquired companies, joint ventures, collaborative arrangements or other strategic investments;
- loss of material customers and other key business relations associated with acquired companies, joint ventures, collaborative arrangements, or other strategic investments;
- diversion of management's attention from other initiatives and/or day-to-day operations to effectively execute our growth strategy;
- the incorporation of products associated with acquired companies, joint ventures, collaborative arrangements, or other strategic investments into our product lines;
- the increasing demands on our operational and informational technology systems which may arise from any such acquired companies or joint venture operations, collaborative arrangements, or other strategic investments;
- potentially insufficient internal controls over financial activities or financial reporting at any such acquired company that could impact us on a consolidated basis;
- in the case of joint ventures and strategic investments, the financial performance of those entities may have a negative impact on our financial performance; and
- an inability to generate sufficient revenue, profit, and cash flow from acquisitions, joint ventures, collaborative arrangements, or other strategic investments to offset our investment costs.

Moreover, although we conduct what we believe to be a prudent level of investigation regarding the operating and financial condition of acquired companies, joint ventures, collaborative arrangements, or other strategic investments, an unavoidable level of risk remains regarding the operating performance, financial condition, and potential liabilities of these businesses, and we may not be able to fully assess these risks until a transaction has been completed.

Our ability to accurately forecast our financial performance for certain products and services may be hindered by customer scheduling.

While the revenue we receive from particular products and services in our subscription business may be predictable during the term of the applicable contract, the performance of our subscription business may become more subject to fluctuations between quarterly periods as our solution offerings diversify and become more sophisticated. Certain project-based products, such as consulting, content development, and professional services, are subject to the customers' involvement in the provision of the product or service. The timing and magnitude of these project-based product and service contracts may vary widely from quarter to quarter and year to year, and thus may affect our ability to accurately forecast our financial performance. In addition, some products, including those in our Workforce Development and Provider Solutions segments, can require significant implementation lead times and resources, and may require a level of change management efforts from our clients, which may also impact our ability to accurately forecast our financial performance. Additionally, as we expand our revenue generating model such that third-parties may pay network connection fees based on sales they make, our ability to forecast revenue from such arrangements may not be predictable.

Our ability to accurately forecast our financial performance may be affected by lengthy and widely varying sales cycles.

The period from our initial contact with a potential customer and their first purchase of our solution typically ranges from three to nine months, and in some cases has extended much further. The range in the sales cycle can be impacted by multiple factors, including an increasing trend towards more formal request for proposal processes and more competition within our industry, as well as formal budget timelines which impact timing of purchases by target customers. New products, including those that may compete with or replace our former product offerings, tend to have a longer and more unpredictable revenue ramp period because of varying customer adoption rates. As a result of these factors, we have only limited ability to forecast the timing and type of initial sales. This, in turn, makes it more difficult to forecast our financial performance. Additionally, as we expand our revenue generating model such that third-parties may pay network connection fees based on sales they make, our ability to forecast revenue from such arrangements may not be predictable.

We may not be able to maintain our competitive position against current and potential competitors, especially those with significantly greater financial, technical, marketing, or other resources.

Several of our competitors and many potential competitors have longer operating histories and significantly greater financial, technical, marketing, or other resources than we do. We encounter direct competition from both large and small companies focused on providing workforce and provider solutions to the healthcare industry. Given the profile and growth of the healthcare industry and the ongoing need for training, simulation, credentialing, and other information products and services, it is likely that additional competitors will emerge. We believe we maintain a competitive advantage against our competitors by offering a comprehensive array of products and services; however, our lack of market diversification resulting from our concentration on the healthcare industry may make us susceptible to losing market share to our competitors who also offer solutions, and in some cases a more robust suite of solutions, to a cross-section of industries. These companies may be able to respond more quickly than we can to new or changing opportunities, technologies, standards or customer requirements. Further, most of our customer agreements are for terms ranging from one to three years, with no obligation to renew. The terms of these agreements may enable customers to more easily shift to one of our competitors.

The failure to maintain and strengthen our relationships with strategic partners or significant changes in the terms of the agreements we have with them may have an adverse impact on our ability to successfully market our products and services.

We have entered into contracts with strategic partners, including content, technology, and retail channel vendors. Our ability to increase the sales of our products and services depends in part upon maintaining and strengthening relationships with these current and future strategic partners. Most of these contracts are on a non-exclusive basis. Certain strategic partners may offer products and services from multiple distinct companies, including, in some instances, products or services which may compete with our products and services. Moreover, under contracts with some of our strategic partners, we may be bound by provisions that restrict our ability to market and sell our products and services to certain potential customers. The success of these contractual arrangements will depend in part upon the strategic partners' own competitive, marketing, and strategic considerations, including the relative advantages for such strategic partners in using alternative products being developed and marketed by them or our competitors, rather than our products and services.

We cannot guarantee that we will be able to maintain and strengthen our relationships with strategic partners, that we will be successful in effectively integrating such partners' products and technology into our own, or that such relationships will be successful in generating additional revenue. If any of these strategic partners have negative experiences with our products and services, or seek to amend or terminate the financial or other terms of the contracts or arrangements we have with them, we may need to increase our organizational focus on the types of services and solutions they sell and alter our development, integration, and/or distribution strategies, which may divert our planned efforts and resources from other projects.

Lastly, we could be subject to claims and liability, as a result of the activities, products, or services of these strategic partners, and/or our acts or omissions with regard to these strategic partners. Even if these claims do not result in liability to us, investigating and defending these claims could be expensive, time-consuming and result in suspension of or interference with certain offerings to our clients and/or adverse publicity that could harm our business.

We may not be able to retain distribution rights from our content and technology partners, which could adversely affect our business and results of operations.

Most of our agreements with content and technology providers are for initial terms of three or more years. These partners may choose not to renew their agreements with us or may terminate their agreements early if we do not fulfill our contractual obligations. If our partners terminate or fail to renew their agreements with us on as favorable terms, such as a reduction in our revenue share arrangement, it could result in a reduction in the number of courses and solutions we are able to distribute, declines in the number of subscribers to our platforms, and decreased revenues. Most of our agreements with our content partners are non-exclusive, and our competitors offer, or could offer, content or solutions that are similar to or the same as ours. If our current partners offer or otherwise make available their products and services to users or our competitors on

more favorable terms than those offered to us, or increase our license fees, our competitive position, revenue, and our profit margins and prospects could be harmed. In addition, the failure by our partners to deliver high-quality content and technology, and to revise their content and technology, in response to user demand and evolving healthcare advances and trends could result in customer dissatisfaction and inhibit our ability to attract and retain subscribers.

We may not be able to develop new products and services, or enhancements to our existing products and services, or be able to achieve widespread acceptance of new products, services or features, or keep pace with technological developments.

Our growth strategy depends in part on our ability to generate revenue growth through sales to new customers as well as increasing sales of additional subscriptions and other products and services to existing customers. Our identification of additional features, content, products and services may not result in timely development of complementary products. In addition, the success of certain new products and services may be dependent on continued growth in our customer base. Furthermore, we are not able to accurately predict the volume or speed with which existing and new customers may adopt such new products and services. Because healthcare technology continues to change and evolve, we may be unable to accurately predict and develop new products, features, content and other products to address the needs of the healthcare industry. Further, the new products, services and enhancements we develop may introduce significant defects into or otherwise negatively impact our technology platform. While all new products and services are subject to testing and quality control, all software and software-based services are subject to errors and malfunctions. If we release new products, services and/or enhancements with bugs, defects or errors or that cause bugs, defects or errors in existing products, it could result in lost revenues and/or reduced ability to meet contractual obligations and would be detrimental to our business and reputation. If new products, features, or content are not accepted or integrated by new or existing customers, we may not be able to recover the cost of this development and our financial performance will be harmed. Continued growth of our customer population is dependent on our ability to continue to provide relevant products and services in a timely manner. The success of our business will depend on our ability to continue providing our products and services as well as enhancing our content, product and service offerings that address the needs of healthcare organizations.

We may be unable to continue to license our third party software, on which a portion of our product and service offerings rely, or we may experience errors in this software, which could increase our costs and decrease our revenue.

We use technology components in some of our products that have been licensed from third parties. Future licenses to these technologies may not be available to us on commercially reasonable terms, or at all. The loss of or inability to obtain or maintain any of these licenses could result in delays in the introduction of new products and services or could force us to discontinue offering portions of solutions until equivalent technology, if available, is identified, licensed and integrated. The operation of our products would be impaired if errors occur in third party technology or content that we incorporate, and we may incur additional costs to repair or replace the defective technology or content. It may be difficult for us to correct any errors in third party products because the products are not within our control. Accordingly, our revenue could decrease and our costs could increase in the event of any errors in this technology. Furthermore, we may become subject to legal claims related to licensed technology based on product liability, infringement of intellectual property or other legal theories. Even if these claims do not result in liability to us, investigating and defending these claims could be expensive and time-consuming, and could result in suspension of or interference with certain offerings to our clients and/or adverse publicity that could harm our business.

Financial Risks

A significant portion of our revenue is generated from a relatively small number of customers.

We derive a substantial portion of our revenues from a relatively small number of customers. A termination or material modification of our agreements with any of our significant customers or a failure of these customers to renew their contracts on favorable terms, or at all, could have an adverse effect on our business.

A significant portion of our business is subject to renewal each year. Therefore, renewals have a significant impact on our revenue and operating results.

For the year ended December 31, 2018, approximately 95% of our net revenue was derived from SaaS-based subscriptions and software licensing agreements. Our product and service contracts typically range from one to five years in length, and customers are not obligated to renew their contract with us after their contract term expires; in fact, some customers have elected not to renew their contract. In addition, our customers may renew at a lower pricing or activity level. Our customers' renewals may decline or fluctuate as a result of a number of factors, including but not limited to their dissatisfaction with our service, a dissipation or cessation of their need for one or more of our products or services, pricing, or competitive

product offerings. If we are unable to renew a substantial portion of the contracts that are up for renewal or maintain our pricing, our results of operations and financial condition could be adversely affected.

We may be unable to accurately predict the timing of revenue recognition from sales activity as it is often dependent on achieving certain events or performance milestones, and this inability could impact our operating results.

Our ability to recognize revenue is dependent upon several factors in order for us to implement customers on our subscription-based platform and platform applications. If customers do not provide us with the information required to complete implementations in a timely manner, our ability to recognize revenue may be delayed, which could adversely impact our operating results. Some products, including several in our Provider Solutions segment, can require significant implementation lead times and the rate at which customer orders move from backlog to revenue generation in connection with these products may significantly affect the timing of revenue recognition.

Because we recognize revenue from subscriptions for our products and services over the term of the subscription period, downturns or upturns in sales may not be immediately reflected in our operating results.

During the year ended December 31, 2018, we recognized approximately 95% of our revenue from customers monthly over the terms of their subscription or licensing agreements, which have initial contract terms ranging from one to five years. As a result, much of the revenue we report in each quarter is related to subscription or licensing agreements entered into during previous quarters. Consequently, a decline in new or renewed subscription or licensing agreements in any one quarter will not necessarily be fully reflected in the revenue in that quarter and will negatively affect our revenue in future quarters. In addition, we may be unable to adjust our cost structure to reflect this reduced revenue. Accordingly, the effect of significant downturns in sales and market acceptance of our products and services may not be fully reflected in our results of operations until future periods. Finally, our subscription model also makes it difficult for us to rapidly increase our revenue through additional sales in any period, as revenue from new customers must be recognized over the applicable subscription term.

We may not be able to meet our strategic business objectives unless we obtain additional financing, which may not be available to us on favorable terms, or at all.

We believe that our existing cash and cash equivalents, marketable securities, cash generated from operations, and available borrowings under our revolving credit facility will be sufficient to meet anticipated working capital needs, new product development and capital expenditures for at least the next 12 months. However, we may need to raise additional funds in order to:

- develop new, or enhance existing, products, services, and technology;
- respond to competitive pressures;
- finance working capital requirements;
- acquire or invest in complementary businesses, technologies, content or products; or
- otherwise effectively execute our growth strategy.

At December 31, 2018, we had approximately \$168.8 million in cash, cash equivalents, and marketable securities. We also have up to \$50.0 million of availability under our Revolving Credit Facility, subject to certain covenants, which expires in November 2020. We expect to incur approximately \$35 million of capital expenditures, software development and content purchases during 2019, which includes approximately \$15 million associated with our office consolidation and relocation to a new central location in Nashville, Tennessee.

We actively review possible business acquisitions to complement or enhance our products and services, and we completed the acquisition of Providigm, LLC in January 2019. We may not have adequate cash and investments or availability under our Revolving Credit Facility to consummate one or more of these acquisitions. We cannot assure you that if we need additional financing that it will be available on terms favorable to us, or at all. If adequate funds are not available or are not available on acceptable terms, our ability to fund expansion, take advantage of available opportunities, develop or enhance services or products, or otherwise respond to competitive pressures would be significantly limited. If we raise additional funds by issuing equity or convertible debt securities, the percentage ownership of our existing shareholders may be reduced.

We have significant goodwill, identifiable intangible assets, and long-lived assets recorded on our balance sheet that may be subject to impairment losses that would reduce our reported assets and earnings.

There are inherent uncertainties in the estimates, judgments and assumptions used in assessing recoverability of goodwill, intangible assets, and long-lived assets. Economic, legal, regulatory, competitive, reputational, contractual, and other factors could result in future declines in the operating results of our business units or market values that do not support the carrying value of goodwill, identifiable intangible assets, and long-lived assets. If the value of our goodwill, intangible assets, or long-lived assets is impaired, accounting rules require us to reduce their carrying value and report an impairment charge, which would reduce our reported assets and earnings for the period in which an impairment is recognized.

We may be affected by healthcare reform efforts and other changes in the healthcare industry that impact our clients.

Our clients are concentrated in the healthcare industry, which is subject to changing regulatory, economic, and political conditions. In the past two years, we have experienced an increase in bankruptcies among our customers. This decrease in creditworthiness among certain of our customers along with other economic challenges facing the healthcare sector caused us to record bad debt expense of \$1.0 million and \$1.6 million in 2018 and 2017, respectively. Continuance or escalation of this development could result in our inability to collect amounts owed from existing clients and decrease our ability to gain new clients, which could adversely impact our revenue, results of operations, and ability to execute on our growth strategy.

The U.S. Congress and certain state legislatures have passed or are considering laws and regulations intended to result in major changes to the U.S. healthcare system. The most prominent of these reform efforts, the Patient Protection and Affordable Care Act, as amended by the Healthcare and Education Reconciliation Act of 2010 (collectively, Affordable Care Act), was designed to increase access to affordable health insurance for U.S. citizens and improve quality of care, but it also has reduced government program spending and imposed operating costs and changes on many of our clients.

However, efforts by the presidential administration and certain members of Congress to repeal or make significant changes to the Affordable Care Act, its implementation and/or its interpretation have cast considerable uncertainty on the future of the law. For example, effective January 1, 2019, Congress eliminated the financial penalty associated with the individual mandate. In addition, final rules issued in 2018 expand the availability of association health plans and allow the sale of short-term, limited-duration health plans, neither of which are required to cover all of the essential health benefits mandated by the Affordable Care Act. These changes may impact the number of individuals that elect to purchase health insurance or the scope of such coverage, if purchased. Because the penalty associated with the individual mandate was eliminated, a federal judge in Texas ruled in December 2018 that the entire law was unconstitutional. However, the law remains in place pending appeal. There is uncertainty regarding whether, when, and how the Affordable Care Act will be further changed, the ultimate impact of court challenges, and what alternative provisions, if any, will be enacted, the timing of enactment and implementation of alternative provisions, the impact of alternative provisions on providers as well as other healthcare industry participants, and how the law will be interpreted and implemented. Changes by Congress or government agencies could eliminate or alter provisions beneficial to us while leaving in place provisions reducing our reimbursement. Some of the recent changes in the healthcare industry have driven consolidation, particularly among health insurance providers. Other industry participants, such as large employer groups and their affiliates, may intensify competitive pressures. Efforts to repeal or change the Affordable Care Act or implement other initiatives intended to reform healthcare delivery, coverage, and/or financial systems may have an adverse effect on our clients. For example, some members of Congress have proposed significantly expanding the coverage of government-funded programs. Any such regulatory developments, as well as other healthcare-related or other developments that adversely impact the business or financial condition of our clients, could reduce the amount of business we receive from such clients and thus have an adverse effect on our results of operations.

We may not be able to demonstrate compliance with Sarbanes-Oxley Section 404 in a timely manner, and the correction of any deficiencies identified during annual audits may be costly and could harm our business.

Sarbanes-Oxley Section 404 requires our management to report on, and requires our independent public accounting firm to attest to, the effectiveness of our internal controls over financial reporting. The rules governing the standards to be met are complex and may require significant process review, documentation and testing, as well as remediation efforts for any identified deficiencies. This process of review, documentation, testing and remediation may result in increased expenses and require significant attention from management and other internal and external resources. These requirements may also extend to acquired entities and our efforts to integrate those operations into our system of internal controls. Any material weaknesses identified during this process may preclude us from asserting the effectiveness of our internal controls. This may negatively affect our stock price if we cannot effectively remediate the issues identified in a timely manner.

Changes in accounting standards issued by the Financial Accounting Standards Board, or FASB, could adversely affect our balance sheet, revenue, and results of operations, and could require a significant expenditure of time, attention and resources, especially by senior management.

Our accounting and financial reporting policies conform to GAAP, which are periodically revised and/or expanded. The application of accounting principles is also subject to varying interpretations over time. Accordingly, we are required to adopt new or revised accounting standards or comply with revised interpretations that are issued from time to time by various parties, including accounting standard setters and those who interpret the standards, such as the FASB and the SEC and our independent registered public accounting firm. Changes to regulations concerning revenue recognition could require us to alter our current revenue accounting practices and cause us to either defer revenue into a future period, or to recognize lower revenue in a current period. Likewise, changes to regulations concerning expense recognition could require us to alter our current expense accounting practices and cause us to defer recognition of expense into a future period, or to recognize increased expenses in a current period. Such changes could also cause us to alter the manner in which we contract for, sell, and incentivize sales of products and services. Changes to either revenue recognition or expense recognition accounting practices could affect our financial results.

Risks Related to Sales, Marketing and Competition

Our operating margins could be affected if our ongoing refinement to pricing models for our products and services is not accepted by our customers and the market.

We continue to make changes in the pricing of our product and service offerings so as to increase revenue and meet the needs of our customers. We cannot predict whether the current pricing of our products and services, or any ongoing refinements we make will be accepted by our existing customer base or by prospective customers. If our customers and potential customers decide not to accept our current or future pricing or product and service offerings, it could have an adverse effect on our business and results of operations.

Risks Related to Operations

We may be unable to adequately develop our systems, processes and support in a manner that will enable us to meet the demand for our services.

We have provided our online products and services for over 19 years and continue to expand our ability to provide our solutions on both a subscription and transactional basis over the Internet or otherwise. Our future success will depend on our ability to effectively develop and maintain our infrastructure, including procurement of additional hardware and software, and to implement the services, including customer support, necessary to meet the demand for our products and services. Our inability from time to time to successfully develop the necessary systems and implement the necessary services on a timely basis may result in our customers experiencing delays, interruptions and/or errors in their service. Such delays or interruptions may cause customers to become dissatisfied with our service and move to competing providers of workforce development and provider solutions services. If this happens, our reputation, results of operations, and financial condition could be adversely affected.

Our business operations could be significantly disrupted if we lose members of, or fail to attract and integrate new members to, our management team.

Our future performance is substantially dependent on the continued services of our management team and our ability to attract, retain and motivate them. The loss of the services of any of our officers or senior managers, or the inability to attract additional officers or senior managers as appropriate, could harm our business, as we may not be able to find suitable replacements. We do not have employment agreements with any of our key personnel, other than our chief executive officer, and we do not maintain any “key person” life insurance policies.

We may not be able to attract, hire and retain a sufficient number of qualified employees and, as a result, we may not be able to effectively execute our growth strategy or maintain the quality of our services.

Our future success will depend on our ability to attract, train, motivate, and retain other highly skilled technical, managerial, marketing, sales, and customer support personnel. Competition for certain personnel is intense, especially for software developers, web designers, user experience and interaction designers, and sales personnel, and we may be unable to successfully attract sufficiently qualified personnel. We have experienced in the past, and continue to experience, difficulty hiring qualified personnel in a timely manner for these positions. The pool of qualified technical personnel, in particular, is limited in Nashville, Tennessee, where our headquarters are located. Similar challenges exist within our Provider Solutions segment in our locations in San Diego, California, and Boulder, Colorado. We anticipate needing to continue to maintain or

increase the size of our staff to support our anticipated growth, without compromising the quality of our offerings or customer service. Our inability to locate, attract, hire, integrate and retain qualified personnel in sufficient numbers may reduce the quality of our services and impair our ability to grow and adversely impact our financial performance.

We may not be able to upgrade our hardware and software technology infrastructure quickly enough to effectively meet demand for our services or our operational needs.

We must continue to obtain reasonably priced, commercially available hardware, operating software, and hosting services, as well as continue to enhance our software and systems to accommodate the increased use of our platform, the increased content in our library, the expanding amount and type of data we store on behalf of our customers, and the resulting increase in operational demands on our business. Decisions about hardware and software enhancements are based in part on estimated forecasts of the growth in demand for our services. This growth in demand for our services is difficult to forecast and the potential audience for our services is widespread and dynamic. If we are unable to increase the data storage and processing capacity of our systems at least as fast as the growth in demand, our customers may encounter delays or disruptions in their service. Unscheduled downtime or reduced response time of our platforms could harm our business and also could discourage current and potential customers from using or continuing to use our services and reduce future revenue. If we are unable to acquire, update, or enhance our technology infrastructure and systems quickly enough to effectively meet increased operational demands on our business, that may also have an adverse effect on our results of operations or financial condition. Further, as we develop our platforms and rely on ever changing and improving technologies, we may be impeded by our customers' inability to adopt new technologies, such as web browsers, upon which new platform enhancements may be based.

Our network infrastructure and computer systems and software may fail.

An unexpected event (including but not limited to a cyber-security incident, telecommunications failure, fire, earthquake, or other catastrophic loss) at our Internet service providers' facilities or at our on-site data center facilities could cause the loss of critical data and prevent us from offering our products and services for an unknown period of time. System downtime could negatively affect our reputation and ability to sell our products and services and may expose us to significant third-party claims. Our cyber liability and business interruption insurance may not adequately compensate us for losses that may occur. In addition, we rely on third parties to securely store our archived data, house our web server and network systems and connect us to the Internet. While our service providers have planned for certain contingencies, the failure by any of these third parties to provide these services satisfactorily and our inability to find suitable replacements would impair our ability to access archives and operate our systems and software, and our customers may encounter delays. Such disruptions could harm our reputation and cause customers to become dissatisfied and possibly take their business to a competing provider, which would adversely affect our financial performance.

We may lose users and lose revenue if our security measures fail.

If the security measures that we use to protect customer or personal information are ineffective, we may lose users of our services, which could reduce our revenue, tarnish our reputation, and subject us to significant liability. We rely on security and authentication technology licensed from third parties. With this technology, we perform real-time credit card authorization and verification, as well as the encryption of other selected secure customer data. We cannot predict whether these security measures could be circumvented by new technological developments. Further, the audit processes, penetration and vulnerability testing, and controls used within our production platforms, may not be sufficient to identify and prevent errors or deliberate misuse. In addition, our software, databases and servers may be vulnerable to computer viruses, physical or electronic attacks, and similar disruptions. We may need to spend significant resources to protect against security breaches or to alleviate problems caused by any breaches. We cannot assure that we can prevent all security breaches.

A data breach or security incident could result in a loss of confidential data, give rise to remediation and other expenses, expose us to liability under HIPAA, the Health Information Technology for Economic and Clinical Health Act (HITECH), foreign data privacy regulations, federal and state privacy laws, consumer protection laws, common law theories or other laws, subject us to litigation and federal and state governmental inquiries, damage our reputation, and otherwise be disruptive to our business.

We collect and store sensitive information, including intellectual property, individually identifiable health information, provider credentialing and privileging data, and other personally identifiable information, on our networks. The secure maintenance of this information is critical to our business operations. As a result, the continued development and enhancement of controls, processes, and practices designed to protect our information systems from attack, damage, or unauthorized access remain a priority for us. We have implemented multiple layers of security measures to protect this confidential data through technology, processes, and our people, and our defenses are monitored and routinely tested internally and by external parties. Despite these efforts, a data breach or security incident could result from a variety of circumstances and events, including third-party action, system errors, employee negligence or error, malfeasance, computer

viruses, failures during the process of upgrading or replacing software, databases, or components thereof, power outages, hardware failures, telecommunication failures, user errors, catastrophic events, or threats from malicious persons and groups, new vulnerabilities, and advanced new attacks against information systems. In addition, third party IT vendors may not provide us with fixes or updates to hardware or software in a manner as to avoid an unauthorized loss or disclosure or to address a known vulnerability, which may subject us to known threats or downtime as a result of those delays.

There can be no assurance that we will not be subject to data incidents that bypass our security measures, result in loss of confidential information, or disrupt our information systems or business. Data incidents could result in interruptions, delays, loss, access, misappropriation, and disclosure or corruption of data and could damage our reputation. In addition, data incidents could expose us and our customers to liability under privacy, security, and consumer protection laws, such as HIPAA, or litigation under these or other laws, including common law theories, and subject us to federal and state governmental inquiries or enforcement, especially if a large number of individuals are affected or if the compromised information is highly sensitive. Like many other organizations, we have experienced data incidents from time to time in the course of our business and handled these incidents in accordance with our internal policies and understanding of the applicable laws.

As cyber and other threats to confidential information continue to evolve, we may be required to expend significant additional resources to continue to modify or enhance our protective measures or to investigate and remediate any security vulnerabilities. The occurrence of a data incident and the resulting potential costs and liabilities could have an adverse effect on our financial position and results of operations and harm our business reputation.

We may experience errors or omissions in our software products or processes, including those that deliver provider credentialing, privileging and payer enrollment services for our hospitals and medical practice customers, and those that administer and report on hospital performance, and these errors could result in action taken against us that could harm our business.

Hospitals and medical practices use our credentialing, privileging, and payer enrollment software to manage, validate, and maintain their providers' credentials and authorization to practice in a particular facility, and to maintain authorization to perform care covered by insurance providers. In some instances, we rely on sources outside the Company for information that we use in our credentialing and privileging products. If errors or omissions occur that inaccurately validate or invalidate the credentials of a provider, or improperly deny or authorize a provider to practice in a hospital or medical practice, these errors or omissions could result in litigation brought against us either by our customers, the provider, or other interested parties. For example, an important element in a malpractice case brought against a hospital or other provider could be the validation of proper credentialing for the provider, and any errors or omissions in our products that provide these services could subject us to claims. Further, a list of providers' privileges may be made available to the general public by hospitals and medical practices, and errors in credentialing and privileging may result in damage to the hospital, medical practice, or provider.

We may be required to indemnify against such claims, and defending against any such claims could be costly, and time-consuming and could negatively affect our business.

The expiration of our legacy agreements with Laerdal could adversely affect our business and future results of operations.

Our legacy agreements with Laerdal (Legacy Agreements) for the HeartCode and Resuscitation Quality Improvement (RQI) products expired pursuant to their terms on December 31, 2018 and will not be renewed. Revenues associated with sales of HeartCode and RQI products pursuant to the Legacy Agreements have been significant in recent years, although margins on such products have been lower than HealthStream's average margin. Revenues from HeartCode and RQI pursuant to the Legacy Agreements will run out to zero dollars in the first quarter of 2021, and will decline prior thereto as we conclude the fulfillment of HeartCode and RQI purchases made prior to December 31, 2018.

While we have entered into agreements to market, sell, and deliver new resuscitation programs to our customers (i.e., other than HeartCode and RQI), including through our collaboration with the American Red Cross, there is no assurance that we will be successful in efforts to market, sell, or deliver such products. To the extent we are not successful in these efforts and new resuscitation programs do not generate revenue and/or earnings in a manner that supplants the impact of the Legacy Agreements, our revenue and results of operations will be adversely affected.

There are certain risks associated with the sale of our Patient Experience business which was completed in February 2018.

In February 2018, we completed the sale of our PX business to Press Ganey. As a result of this transaction, we are now highly dependent on the success of our two remaining business segments, our workforce solutions segment and provider solutions segment. In addition, in connection with the sale of our PX business to Press Ganey, we agreed to indemnify Press Ganey with respect to certain matters, including the breach of our representations, warranties, and covenants contained in the agreements related to this transaction as well as in connection with the performance of certain transition services provided for a period of time following the closing. A material breach or inaccuracy of these representations, warranties, and covenants in any of the agreements related to those transactions could lead to a claim against us, which could require us to pay substantial sums and incur related costs and expenses.

In addition, many of the customer contracts associated with the PX business were shared contracts (Shared Contracts) under which we have provided services in connection with our existing businesses and under which we previously (prior to the closing of the sale of our Patient Experience business) provided services in connection with the Patient Experience business. Under the terms of our agreement with Press Ganey, these Shared Contracts were retained by us; however, following the completion of such disposition, Press Ganey has provided services to our customers under these Shared Contracts to the extent related to the Patient Experience business (and is entitled to receive the benefit of payments made by our customers in connection therewith) until such time that Press Ganey has obtained a replacement contract and/or an assignment with respect to the portion of the Shared Contract that relates to the Patient Experience business. As a result, if Press Ganey is unable to satisfy its obligations under the Shared Contracts or if other issues arise in connection this arrangement, we could incur operational or reputational losses that may adversely affect our results of operations or business.

Risks Related to Government Regulation, Content and Intellectual Property

Government regulation may subject us to investigation, litigation, or liability or require us to change the way we do business.

The laws and regulations that govern our business change rapidly. Evolving areas of law that are relevant to our business include privacy and security laws, proposed encryption laws, content regulation, information security accountability regulation, sales and use tax laws, and regulations and attempts to regulate activities on the Internet. For example, we are directly subject to certain requirements of the HIPAA privacy and security regulations. In addition, we are required through contracts with our customers known as “business associate agreements” to protect the privacy and security of certain personal and health related information. Further, government laws and regulations, such as the Affordable Care Act, that directly affect our customers, can have an indirect impact on our business.

The rapidly evolving and uncertain regulatory and technology environment could require us to change how we do business or incur additional costs. It may be difficult to predict how changes to these laws and regulations might affect our business. Our current and past privacy and security practices, including any breaches of protected health information or other data, could be subject to review or other investigation by various state and federal regulatory authorities or could become the subject of future litigation.

Failure to comply with applicable laws and regulations, including those governing privacy and security, could subject us to civil and criminal penalties, subject us to contractual penalties (including termination of our customer agreements), adversely affect our ability to retain clients and attract new clients, damage our reputation, or otherwise have a detrimental impact on our business.

Any reduction or change in the regulation of continuing education and training in the healthcare industry may adversely affect our business.

A portion of our business model is dependent in part on required training and continuing education for healthcare professionals and other healthcare workers resulting from regulations of state and federal agencies, state licensing boards and professional organizations. Any change in these regulations that reduce the requirements for continuing education and training for the healthcare industry could harm our business. In addition, a portion of our business with pharmaceutical and medical device manufacturers and hospitals is predicated on our ability to maintain accreditation status with organizations such as the ACCME and ANCC. The failure to maintain status as an accredited provider could have a detrimental effect on our business.

We may be liable to third parties for content that is sold or made available by us.

We may be liable to third parties for the content sold or made available by us if the text, graphics, software, or other content therein violates copyright, trademark, or other intellectual property rights, if our content partners violate their contractual obligations to others by providing content that we sell or make available, or if the content is inaccurate, incomplete, or does not conform to accepted standards of care in the healthcare profession. Further, we may be liable to these content partners if we allow access or release and lose control of their content stored on our platform either due to security issues or through improper release to customers who have not paid for access to this content. We attempt to minimize these types of liabilities by requiring representations and warranties relating to our content partners' ownership of the rights to distribute as well as the accuracy of their content. We also take necessary measures to review this content ourselves. Although our agreements with our content partners in most instances contain provisions providing for indemnification by the content providers in the event of inaccurate content, our content partners may not have the financial resources to meet these indemnification obligations. Alleged liability could harm our business by damaging our reputation, requiring us to incur legal costs in defense, exposing us to awards of damages and costs, and diverting management's attention away from our business.

Protection of certain intellectual property may be difficult and costly, and our inability to protect our intellectual property could reduce the value of our products and services.

Despite our efforts to protect our intellectual property rights, as well as the intellectual property rights of our strategic partners, a third party could, without authorization, copy or otherwise misappropriate our content, information from our databases, or other intellectual property, including that of our third party strategic partners. Our agreements with employees, consultants and others who participate in development activities could be breached and result in our trade secrets becoming known. Alternatively, competitors and other third parties may independently develop or create content or systems that do not infringe our intellectual property rights. We may not have adequate remedies for such breaches or protections against such competitor developments. In addition, the laws of some foreign countries do not protect our proprietary rights to the same extent as the laws of the United States, and effective intellectual property protection may not be available in those jurisdictions.

Our business could be harmed if unauthorized parties infringe upon or misappropriate our intellectual property, proprietary systems, content, platform, services or other information, or the intellectual property of our strategic partners. Our efforts to protect our intellectual property through copyright, trademarks, and other controls, as well as our efforts to protect the intellectual property of our strategic partners, may not be adequate. For instance, we may not be able to secure trademark or service mark registrations for marks in the United States or in foreign countries, or to secure patents for our proprietary products and services, and even if we are successful in obtaining patent and/or trademark registrations, these registrations may be opposed or invalidated by a third party. We also have certain contractual obligations to protect the intellectual property of our strategic partners, and could be required to indemnify such strategic partners if we do not adequately provide such protections.

There has been substantial litigation in the software services and healthcare technology industries regarding intellectual property assets, particularly patents. Third parties may claim infringement by us with respect to current and future products, trademarks or other proprietary rights, and we may counterclaim against such third parties in such actions. Any such claims or counterclaims could be time-consuming, result in costly litigation, divert management's attention, cause product release delays, require us to redesign our products, restrict our use of the intellectual property subject to such claim, or require us to enter into royalty or licensing agreements, any of which could have an adverse effect upon our business, financial condition, and operating results. Such royalty and licensing agreements may not be available on terms acceptable to us, if at all.

We may be liable for infringing the intellectual property rights of others.

Our competitors may develop similar intellectual property, duplicate our products and/or services, or design around any patents or other intellectual property rights we hold. Litigation may be necessary to enforce our intellectual property rights or to determine the validity and scope of the patents, intellectual property or other proprietary rights of third parties, which could be time consuming and costly and have an adverse effect on our business and financial condition. Intellectual property infringement claims could be made against us, especially as the number of our competitors grows. These claims, even if not meritorious, could be expensive and divert our attention from operating our company and result in a temporary inability to use the intellectual property subject to such claim. In addition, if we and/or our affiliates and customers become liable to third parties for infringing their intellectual property rights, we could be required to pay a substantial damage award and develop comparable non-infringing intellectual property, to obtain a license, or to cease providing the content or services that contain the infringing intellectual property. We may be unable to develop non-infringing intellectual property or obtain a license on commercially reasonable terms, if at all.

A variety of other state, national, foreign, and international laws and regulations apply to the collection, use, retention, protection, security, disclosure, transfer, and other processing of personal data. California has passed the California Consumer Privacy Act of 2018 (CCPA), which takes effect January 1, 2020. The CCPA applies broadly to information that identifies or is associated with any California household or individual, and compliance with the CCPA requires that we implement several operational changes, including processes to respond to individuals' data access and deletion requests. In addition, many foreign data privacy regulations (including the General Data Protection Regulation (GDPR), which became effective in the European Union on May 25, 2018, and China's Cybersecurity Law which became effective in 2017) can be more stringent than those in the United States. These laws and regulations are rapidly evolving and changing, and could have an adverse effect on our operations. Companies' obligations and requirements under these laws and regulations are subject to uncertainty in how they may be interpreted by government authorities and regulators. The costs of compliance with, and the other burdens imposed by, these and other laws or regulatory actions may increase our operational costs, prevent us from selling our products or services, and/or affect our ability to invest in or jointly develop products. We may also face audits or investigations by one or more domestic or foreign government agencies relating to our compliance with these regulations.

We may be adversely affected by changes in U.S. tax laws and regulations.

The Tax Cuts and Jobs Act of 2017 (Tax Act), which was signed into law on December 22, 2017, made significant changes to the taxation of U.S. business entities. These changes included a permanent reduction to the federal corporate income tax rate to 21 percent from 35 percent, among other changes. The Company has accounted for the effects of the Tax Act using reasonable estimates based on currently available information and interpretations thereof. This accounting may change due to, among other things, changes in interpretations we have made and the issuance of new tax or accounting guidance.

It is possible that governmental authorities in the United States could further amend tax laws in a manner that would adversely impact us.

Item 1B. *Unresolved Staff Comments*

None.

Item 2. *Properties*

Our principal office is located in Nashville, Tennessee, which is primarily used to support our workforce solutions operations and corporate functions. Our lease for approximately 73,000 square feet at this location expires in April 2019, at or near which time we expect to relocate and consolidate our corporate headquarters to nearby space with approximately 92,000 square feet in Nashville, the lease for which we entered into in April 2017 and will also replace our Brentwood, Tennessee office. As of December 31, 2018, we leased other facilities in Nashville, Tennessee; Jericho, New York; Brentwood, Tennessee; San Diego, California; Chicago, Illinois; and Boulder, Colorado.

Item 3. *Legal Proceedings*

None.

Item 4. *Mine Safety Disclosures*

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock is traded on the Nasdaq Global Select Market under the symbol "HSTM". Our common stock began trading on the Nasdaq National Market on April 14, 2000.

As of February 7, 2019, the Company had a total of 9,875 shareholders, including 517 registered holders and 9,358 beneficial holders.

DIVIDEND POLICY

We declared a \$1.00 per common share special cash dividend with the proceeds from the divestiture of the Patient Experience business segment, paid on April 3, 2018 to shareholders of record on March 6, 2018. We do not anticipate paying normal cash dividends in the future as we intend to retain earnings for use in the operation of our business.

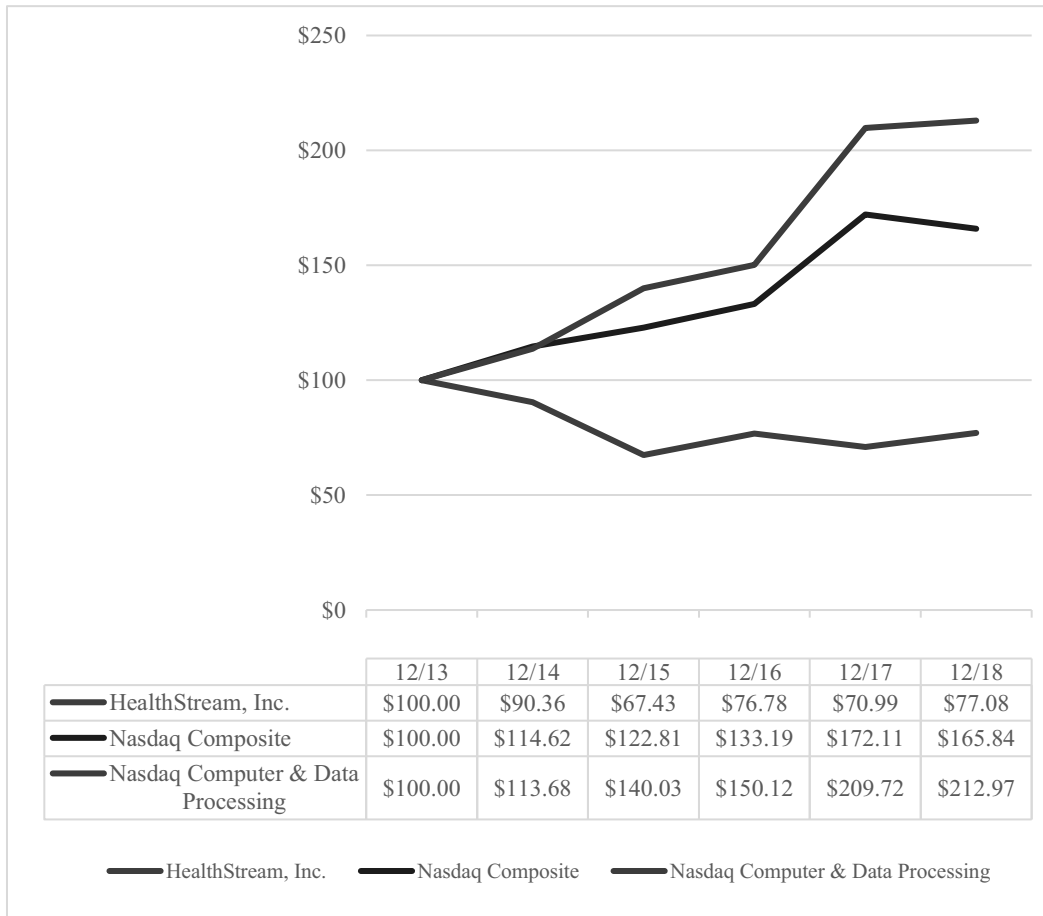
See the table labeled "Securities Authorized for Issuance Under Equity Compensation Plans" to be contained in our 2019 Proxy Statement, incorporated by reference in Part III, Item 12 of this Annual Report on Form 10-K.

STOCK PERFORMANCE GRAPH

The graph below compares HealthStream, Inc.’s cumulative total shareholder return on common stock with the cumulative total returns of companies on the Nasdaq Composite Index and the Nasdaq Computer & Data Processing Index for each of the last five fiscal years ended December 31, 2018, assuming an initial investment of \$100. Data for the Nasdaq Composite Index and the Nasdaq Computer & Data Processing Index assume the reinvestment of dividends.

The comparisons in the graph below are based on historical data and are not necessarily indicative of future performance of our common stock.

**COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN (1)
Among HealthStream, Inc., the Nasdaq Composite Index
And the Nasdaq Computer & Data Processing Index**



(1) \$100 invested on 12/31/13 in stock or index, including reinvestment of dividends; fiscal year ending December 31.

RECENT SALES OF UNREGISTERED SECURITIES

None.

ISSUER PURCHASES OF EQUITY SECURITIES

None.

Item 6. Selected Financial Data

The selected statement of income and balance sheet data for the five years prior to December 31, 2018 is derived from our audited consolidated financial statements. You should read the following selected financial data in conjunction with our consolidated financial statements and the notes to those statements and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included elsewhere in this report.

In February 2018, HealthStream divested its PX business to Press Ganey. The results of operations for the PX are presented as discontinued operations within the consolidated statement of income data set forth below. Additionally, on January 1, 2018, HealthStream adopted Accounting Standards Update (ASU) 2014-09, *Revenue from Contracts with Customers (Topic 606)* and all the related amendments and guidance (collectively, ASC 606), using the modified retrospective method with the cumulative effect of initially applying the guidance recognized upon adoption. The financial information below for the periods 2014 – 2017 has not been restated and continues to be reported under the revenue recognition standard which was in effect for those periods (ASC 605). See Note 1 of the Notes to the Consolidated Financial Statements, included elsewhere in this report, for further information.

In addition, HealthStream has completed several acquisitions during the five years prior to December 31, 2018, including the acquisitions of Health Care Compliance Strategies, Inc. on March 3, 2014, HealthLine Systems, Inc. on March 16, 2015, Performance Management Services, Inc. on June 30, 2016, Nursing Registry Consultants Corporation on July 25, 2016, and Morrisey Associates, Inc. on August 8, 2016. The results of operations for these acquired companies are included within our consolidated statement of income data effective from the respective dates of acquisition. As a result of these factors, the annual results presented below are not comparable. The operating results for any single year are not necessarily indicative of the results to be expected in the future.

	Year Ended December 31, (in thousands, except per share data)				
	2018	2017	2016	2015	2014
STATEMENT OF INCOME DATA:					
Revenues, net	\$ 231,616	\$ 214,899	\$ 192,124	\$ 174,809	\$ 138,789
Total operating costs and expenses	216,125	205,492	184,953	161,641	122,384
Operating income	15,491	9,407	7,171	13,168	16,405
Income from continuing operations	13,251	8,838	4,791	8,273	10,367
Income from discontinued operations	18,966	1,166	(1,036)	348	27
Net income	32,217	10,004	3,755	8,621	10,394
PER SHARE DATA (DILUTED):					
Net income from continuing operations	\$ 0.41	\$ 0.27	\$ 0.15	\$ 0.27	\$ 0.37
Net income (loss) from discontinued operations	0.59	0.04	(0.03)	0.01	—
Net income	1.00	0.31	0.12	0.28	0.37
Weighted average shares of common stock outstanding	32,335	32,196	32,068	30,436	28,023
Dividends declared	1.00	—	—	—	—
BALANCE SHEET DATA:					
Cash and cash equivalents	\$ 134,321	\$ 84,768	\$ 49,634	\$ 82,010	\$ 81,995
Marketable securities	34,497	46,350	53,540	66,976	38,973
Accounts receivable, net	38,124	36,691	40,340	29,654	27,978
Goodwill and intangible assets	145,522	154,641	163,321	113,895	31,212
Working capital	134,581	98,662	82,467	120,459	96,999
Total assets	441,948	411,119	396,000	379,569	256,908
Deferred revenue – current and noncurrent	68,929	71,225	72,115	63,034	53,924
Shareholders’ equity	318,947	300,170	286,108	280,320	167,859

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following discussion of the financial condition and results of operations of HealthStream should be read in conjunction with “Selected Financial Data” and HealthStream’s Consolidated Financial Statements and related notes thereto included elsewhere in this report. This discussion contains forward-looking statements that involve risks and uncertainties. HealthStream’s actual results may differ significantly from the results discussed and those anticipated in these forward-looking statements as a result of many factors, including but not limited to the risks described under “Risk Factors” and

elsewhere in this report, as well as additional risks or uncertainties not presently known to us, or that we currently deem immaterial.

OVERVIEW

HealthStream provides workforce development and provider solutions for healthcare organizations—all designed to assess and develop the people that deliver patient care, which, in turn, supports the improvement of business and clinical outcomes. Workforce Solutions products are used by healthcare organizations to meet a broad range of their clinical development, talent management, training, certification, competency assessment, and performance appraisal needs. Provider Solutions products are used by healthcare organizations for provider credentialing, privileging, and enrollment needs. HealthStream's customers include healthcare organizations, pharmaceutical and medical device companies, and other participants in the healthcare industry.

On February 12, 2018, the Company divested its PX business to Press Ganey for \$65.2 million in cash (after giving effect to the post-closing working capital adjustment), of which \$6.5 million is being held in escrow for a period of time following the disposition as a source of recovery for indemnification claims by Press Ganey. The sale of the PX business was effected by (i) the contribution by the Company of specified assets and certain liabilities used in the PX business to a newly-formed wholly-owned subsidiary of the Company, and (ii) immediately thereafter, the sale by the Company to Press Ganey of all of the outstanding equity interests of such wholly-owned subsidiary. In connection with such contribution, the Company retained certain liabilities related to the PX business.

Prior to the disposition of the PX business, our Patient Experience Solutions products provided our customers information about patients' experiences and how to improve them, workforce engagement, physician relations, and community perceptions of their services. The historical financial results of the PX business for periods prior to the closing of the disposition of the PX business on February 12, 2018 are reflected in the Company's consolidated financial statements as discontinued operations. This sale of the PX business resulted in the Company's divestiture of the patient experience solutions business segment.

Revenues for the year ended December 31, 2018 were \$231.6 million, compared to \$214.9 million for the year ended December 31, 2017, an increase of 8%. Operating income increased by 65% to \$15.5 million for 2018, compared to \$9.4 million for 2017. Income from continuing operations increased by 50% to \$13.3 million for 2018, compared to \$8.8 million for 2017. Earnings per share (EPS) from continuing operations were \$0.41 per share (diluted) for 2018, compared to \$0.27 per share (diluted) for 2017. Net income increased to \$32.2 million for 2018, compared to \$10.0 million for 2017, which increase was primarily driven by the \$19.0 million gain, net of tax, on the sale of the PX business. Earnings per share were \$1.00 per share (diluted) for 2018 compared to \$0.31 per share (diluted) for 2017. Revenues from HealthStream Workforce Solutions grew by 7%, or \$12.1 million, and revenues from HealthStream Provider Solutions grew by 13%, or \$4.6 million. As of December 31, 2018, the Company had approximately 4.93 million total subscribers, of which approximately 4.82 million were fully implemented subscribers on its SaaS-based platform. As of December 31, 2018, cash and investment balances approximated \$168.8 million, and the Company maintained full availability under its \$50.0 million revolving credit facility.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Revenue Recognition

Revenues are recognized when control of the promised goods or services is transferred to the customer in an amount that reflects the consideration the Company expects to be entitled in exchange for transferring those goods or services.

Revenue is recognized based on the following five step model:

- Identification of the contract 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, the Company satisfies a performance obligation

Subscription/SaaS services revenues primarily consist of fees in consideration of providing customers access to one or more of our SaaS-based solutions and/or courseware subscriptions, as well as fees related to licensing agreements, all of which include routine customer support and technology enhancements. Revenue is generally recognized over time during the contract term beginning when the service is made available to the customer. Subscription/SaaS contracts are generally non-cancelable, one to five years in length, and billed annually, semi-annually, quarterly, or monthly in advance.

Professional services revenues primarily consist of fees for implementation services, consulting, custom courseware development, and training. The majority of our professional services contracts are billed in advance based on a fixed price basis, and revenue is recognized over time as the services are performed. For both subscription/SaaS services and professional services, the time between billing the customer and when performance obligations are satisfied is generally not significant.

Our contracts with customers often contain multiple performance obligations. For these contracts, the Company accounts for individual performance obligations separately if they are distinct. The contract price, which represents transaction price, is allocated to the separate performance obligations on a relative standalone selling price basis. We generally determine standalone selling prices based on the standard list price for each product, taking into consideration certain factors, including contract length and the number of subscribers within the contract.

We receive payments from customers based on billing schedules established in our contracts. Accounts receivable - unbilled represent contract assets related to our conditional right to consideration where performance has occurred under the contract. Accounts receivable are primarily comprised of trade receivables that are recorded at the invoice amount, net of an allowance for doubtful accounts, when the right to consideration becomes unconditional. Other receivables, which are included within Accounts Receivable, include receivables from certain content partners and are not material.

Deferred revenue represents contract liabilities that are recorded when cash payments are received or are due in advance of our satisfaction of performance obligations.

Accounting for Income Taxes

The Company accounts for income taxes using the asset and liability method, whereby deferred tax assets and liabilities are determined based on the temporary differences between the financial statement and tax bases of assets and liabilities measured at tax rates that will be in effect for the year in which the differences are expected to affect taxable income. Management periodically assesses the realizability of its deferred tax assets, and to the extent that we believe a recovery is not likely, we establish a valuation allowance to reduce the deferred tax asset to the amount we estimate will be recoverable. The Company maintains a valuation allowance of approximately \$311,000 for the portion of its deferred tax assets that are not more likely than not expected to be realized.

Software Development Costs

Capitalized software development includes costs to develop and maintain our products and applications, including our SaaS-based workforce development and provider solutions platform products, which are accounted for as internal use software. For internal use software development, once planning is completed and the software development process begins, internal costs and payments to third parties associated with the software development efforts are capitalized when the life expectancy is greater than one year and the anticipated cash flows are expected to exceed the cost of the related asset. During 2018 and 2017, we capitalized approximately \$11.9 million and \$10.2 million, respectively, for software development. Such amounts are included in the accompanying consolidated balance sheets under the caption “capitalized software development.” The Company amortizes capitalized software development costs over their expected life of generally three years using the straight-line method. Capitalized software development costs are subject to a periodic impairment review in accordance with our impairment review policy. In connection with capitalized software development, significant estimates involve the assessment of the development period for new products and feature enhancements, as well as the expected useful life of underlying software, feature enhancements, or product created. Once capitalized, software development costs are subject to the policies and estimates described below regarding goodwill, intangibles, and other long-lived assets.

Goodwill, Intangibles, and Other Long-lived Assets

The Company evaluates goodwill for impairment at the reporting unit level by assessing whether it is more likely than not that the fair value of a reporting unit exceeds its carrying value. If this assessment concludes that it is more likely than not that the fair value of a reporting unit exceeds its carrying value, then goodwill is not considered impaired and no further impairment testing is required. Conversely, if the assessment concludes that it is more likely than not that the fair value of a reporting unit is less than its carrying value, a goodwill impairment test is performed to compare the fair value of the reporting unit to its carrying value. The Company determines fair value of the reporting units using both income and market based models. Our models contain significant assumptions and accounting estimates about discount rates, future cash flows, and terminal values that could materially affect our operating results or financial position if they were to change significantly in the future and could result in an impairment. We perform our goodwill impairment assessment whenever events or changes in facts or circumstances indicate that impairment may exist and also during the fourth quarter each year. Intangible assets and other long-lived assets are also reviewed for events or changes in facts and circumstances, both internally and externally, which may indicate an impairment is present. We measure any impairment using observable market values or discounted future cash flows from the related long-lived assets. The cash flow estimates and discount rates incorporate management’s best estimates, using appropriate and customary assumptions and projections at the date of evaluation.

Allowance for Doubtful Accounts

The Company estimates its allowance for doubtful accounts to include accounts that may become uncollectible in the future, along with using a specific identification method in which management considers the facts and circumstances surrounding each potentially uncollectible receivable. Uncollectible receivables are written-off in the period management believes it has exhausted its ability to collect payment from the customer. Bad debt expense is recorded when events or circumstances indicate an additional allowance is required. Our allowance for doubtful accounts totaled approximately \$1.2 million as of December 31, 2018.

RESULTS OF OPERATIONS

Revenues and Expense Components

The following descriptions of the components of revenues and expenses apply to the comparison of results of operations.

Revenues, net. Revenues for our HealthStream Workforce Solutions business segment primarily consist of the following products and services: provision of services through our SaaS-based platform, authoring tools, a variety of content subscriptions, competency and performance appraisal tools, implementation and consulting services, content development, training, and a variety of other educational activities to serve professionals that work within healthcare organizations. Revenues for our HealthStream Provider Solutions business segment consist of proprietary software applications to help facilitate provider credentialing, privileging, call center, and enrollment administration for healthcare organizations.

Cost of Revenues (excluding depreciation and amortization). Cost of revenues (excluding depreciation and amortization) consists primarily of salaries and employee benefits, stock based compensation, employee travel and lodging, materials, contract labor, hosting costs, and other direct expenses associated with revenues, as well as royalties paid by us to content providers based on a percentage of revenues. Personnel costs within cost of revenues are associated with individuals that facilitate product delivery; provide services; handle customer support calls or inquiries; manage the technology infrastructure for our applications; manage content; and provide training or implementation services.

Product Development. Product development consists primarily of salaries and employee benefits, contract labor, stock based compensation, costs associated with the development of new software feature enhancements, new products, and costs associated with maintaining and developing our products. Personnel costs within product development include our systems, application development, quality assurance teams, product managers, and other personnel associated with software and product development.

Sales and Marketing. Sales and marketing consists primarily of salaries and employee benefits, commissions, stock based compensation, employee travel and lodging, advertising, trade shows, customer conferences, promotions, and related marketing costs. Personnel costs within sales and marketing include our sales teams and marketing personnel.

Other General and Administrative Expenses. Other general and administrative expenses consist primarily of salaries and employee benefits, stock based compensation, employee travel and lodging, facility costs, office expenses, fees for professional services, business development and acquisition related costs, 3rd party software licensing for internal use, and other operational expenses. Personnel costs within general and administrative expenses include individuals associated with normal corporate functions (accounting, legal, business development, human resources, administrative, internal information systems, and executive management).

Depreciation and Amortization. Depreciation and amortization consist of fixed asset depreciation, amortization of intangibles considered to have definite lives, and amortization of capitalized software development.

Other Income (Expense), Net. The primary component of other income is interest income related to interest earned on cash, cash equivalents, and investments in marketable securities. The primary component of other expense is interest expense related to our revolving credit facility. In addition, the income or loss attributed to equity method investments and fair value adjustments related to cost method investments is included in this category.

2018 Compared to 2017

Revenues, net. Revenues increased approximately \$16.7 million, or 8%, to \$231.6 million for 2018 from \$214.9 million for 2017. A comparison of revenues by business segment is as follows (in thousands):

Revenues by Business Segment:	Year Ended December 31,		Percentage Change
	2018	2017	
Workforce Solutions	\$ 190,139	\$ 178,061	7%
Provider Solutions	41,477	36,838	13%
Total revenues, net	\$ 231,616	\$ 214,899	8%

% of Revenues		
Workforce Solutions	82%	83%
Provider Solutions	18%	17%

Revenues for HealthStream Workforce Solutions, which are primarily subscription-based, increased approximately \$12.1 million, or 7%, to \$190.1 million for 2018 from \$178.1 million for 2017. Revenues in 2018 were positively influenced by growth in subscriptions for courseware and our enterprise applications. Implemented subscribers increased by 4% during 2018 to 4.82 million subscribers at the end of 2018 compared to 4.65 million subscribers at the end of 2017. Additionally, total subscribers increased by 3%, with 4.93 million total subscribers at December 31, 2018 compared to 4.77 million total subscribers at December 31, 2017.

Revenues for HealthStream Provider Solutions increased approximately \$4.6 million, or 13%, to \$41.5 million for 2018 from \$36.8 million for 2017. Revenue growth resulted from higher sales of our provider solutions products and lower deferred revenue write-downs compared to the prior year.

Cost of Revenues (excluding depreciation and amortization). Cost of revenues increased approximately \$8.8 million, or 10%, to \$96.0 million for 2018 from \$87.2 million for 2017. Cost of revenues as a percentage of revenues was approximately 41% of revenues for both 2018 and 2017.

Cost of revenues for HealthStream Workforce Solutions increased approximately \$7.1 million to \$82.4 million and approximated 43% and 42% of revenues for HealthStream Workforce Solutions for 2018 and 2017, respectively. The

increase primarily resulted from increased royalties paid by us resulting from growth in courseware subscription revenues. Cost of revenues for HealthStream Provider Solutions increased approximately \$1.7 million to \$13.6 million and approximated 33% and 32% of HealthStream Provider Solutions revenues for 2018 and 2017, respectively. The increase is primarily associated with additions to personnel and increased hosting costs.

Product Development. Product development expenses increased approximately \$1.6 million, or 7%, to \$25.7 million for 2018 from \$24.1 million for 2017. Product development expenses as a percentage of revenues were approximately 11% of revenues for both 2018 and 2017.

Product development expenses for HealthStream Workforce Solutions increased approximately \$1.3 million to \$20.9 million and approximated 11% of revenues for HealthStream Workforce Solutions for both 2018 and 2017. The increase is primarily due to additions to personnel during 2018. Product development expenses for HealthStream Provider Solutions increased approximately \$286,000 to \$4.8 million and approximated 12% of revenues for HealthStream Provider Solutions for both 2018 and 2017. The increase is primarily due to additions to personnel during 2018.

Sales and Marketing. Sales and marketing expenses, including personnel costs, decreased approximately \$2.9 million, or 8%, to \$35.7 million for 2018 from \$38.6 million for 2017. Sales and marketing expenses were approximately 15% and 18% of revenues for 2018 and 2017, respectively.

Sales and marketing expenses for HealthStream Workforce Solutions decreased approximately \$2.9 million to \$28.5 million and approximated 15% and 18% of revenues for HealthStream Workforce Solutions for 2018 and 2017, respectively. The decrease is primarily due to lower sales commissions expense in 2018 compared to 2017 due to the adoption of ASC 606, under which costs to acquire contracts with customers, such as sales commissions, are capitalized. Sales and marketing expenses for HealthStream Provider Solutions increased approximately \$162,000 to \$6.1 million and approximated 15% and 16% of revenues for HealthStream Provider Solutions for 2018 and 2017, respectively. The increase is primarily due to additions to personnel during 2018, offset by a reduction of sales commissions expense due to ASC 606. The unallocated corporate portion of sales and marketing expenses decreased by \$139,000 to \$1.1 million over 2017 primarily due to reductions to personnel costs.

Other General and Administrative Expenses. Other general and administrative expenses increased approximately \$3.0 million, or 9%, to \$34.4 million for 2018 from \$31.5 million for 2017. Other general and administrative expenses as a percentage of revenues were approximately 15% of revenues for both 2018 and 2017.

Other general and administrative expenses for HealthStream Workforce Solutions increased approximately \$1.6 million to \$9.7 million and approximated 5% of revenues for HealthStream Workforce Solutions for both 2018 and 2017. The increase is primarily due to higher administrative costs and higher bad debt expense. Other general and administrative expenses for HealthStream Provider Solutions decreased approximately \$888,000 to \$4.6 million and approximated 11% and 15% of revenues for HealthStream Provider Solutions for 2018 and 2017, respectively. The decrease is primarily due to a reduction in bad debt expense, which resulted from improved collections and fewer bad debts from customers compared to the prior year. The unallocated corporate portion of other general and administrative expenses increased approximately \$2.3 million to \$20.1 million over 2017, primarily due to increases to personnel, contract labor, software expense, professional services, acquisition due diligence, and other administrative costs.

Depreciation and Amortization. Depreciation and amortization increased approximately \$184,000, or 0.8%, to \$24.2 million for 2018 from \$24.0 million for 2017. The increase resulted from amortization of capitalized software development, partially offset by lower depreciation of property and equipment.

Other Income (Expense), Net. Other income (expense), net was income of approximately \$1.1 million for 2018 compared to \$733,000 for 2017. The increase is due higher interest income from cash and investments in marketable securities, partially offset by a \$1.3 million decline in the fair value of a minority equity investment accounted for under the cost method of accounting.

Income Tax Provision. The Company recorded a provision for income taxes of approximately \$3.3 million for 2018 compared to \$1.3 million for 2017. The Company's effective tax rate was approximately 20% for 2018 compared to 13% for 2017. The increase in income tax expense during 2018 is primarily attributable to the enactment of the Tax Cuts and Jobs Act on December 22, 2017, which reduced the corporate federal income tax rate from 35% to 21%. This change in tax law resulted in an income tax benefit of approximately \$1.7 million during the fourth quarter of 2017 through the revaluation of our net deferred tax liabilities.

Income (Loss) from Discontinued Operations. On February 12, 2018, the Company divested its PX business to Press Ganey for \$65.2 million in cash (after giving effect to the post-closing working capital adjustment), resulting in a gain, net of tax, of \$19.0 million in 2018.

Net Income. Net income increased approximately \$22.2 million, or 222%, to \$32.2 million for 2018 compared to \$10.0 million for 2017. The increase resulted from the factors mentioned above. Earnings per diluted share were \$1.00 per share for 2018 compared to \$0.31 per share for 2017.

Adjusted EBITDA (a non-GAAP financial measure which we define as net income before interest, income taxes, stock based compensation, depreciation and amortization, and changes in fair value of cost method investments) increased approximately 87% to approximately \$71.1 million for 2018 compared to \$37.9 million for 2017. The increase resulted from the factors mentioned above. See Reconciliation of Non-GAAP Financial Measures below for our reconciliation of this calculation to measures under US GAAP.

2017 Compared to 2016

Revenues, net. Revenues increased approximately \$22.8 million, or 12%, to \$214.9 million for 2017 from \$192.1 million for 2016. A comparison of revenues by business segment is as follows (in thousands):

Revenues by Business Segment:	Year Ended December 31,		Percentage Change
	2017	2016	
Workforce Solutions	\$ 178,061	\$ 168,040	6%
Provider Solutions	36,838	24,084	53%
Total revenues, net	<u>\$ 214,899</u>	<u>\$ 192,124</u>	12%

% of Revenues		
Workforce Solutions	83%	87%
Provider Solutions	17%	13%

Revenues for HealthStream Workforce Solutions, which are primarily subscription-based, increased approximately \$10.0 million, or 6%, to \$178.1 million for 2017 from \$168.0 million for 2016. Revenues in 2017 were positively influenced by growth in subscriptions for courseware and our enterprise applications, but were partially offset by an expected decline in ICD-10 readiness revenues. Revenues from ICD-10 readiness products declined by \$7.6 million to \$909,000 in 2017 compared to \$8.5 million in 2016. The requirement mandated by CMS for healthcare organizations to transition to the ICD-10 coding system was effective in October 2015, and generated significant demand for our ICD-10 readiness training courseware from 2012 through 2015. Implemented subscribers increased by 4% during 2017 to 4.65 million subscribers at the end of 2017 compared to 4.47 million subscribers at the end of 2016. Additionally, total subscribers increased by 5%, with 4.77 million total subscribers at December 31, 2017 compared to 4.55 million total subscribers at December 31, 2016.

Revenues for HealthStream Provider Solutions increased approximately \$12.8 million, or 53%, to \$36.8 million for 2017 from \$24.1 million for 2016. Revenues from the MAI acquisition, which was consummated on August 8, 2016, were approximately \$10.7 million during 2017, and represented the majority of the increase.

Cost of Revenues (excluding depreciation and amortization). Cost of revenues increased approximately \$12.2 million, or 16%, to \$87.2 million for 2017 from \$75.0 million for 2016. Cost of revenues as a percentage of revenues was approximately 41% and 39% of revenues for 2017 and 2016, respectively.

Cost of revenues for HealthStream Workforce Solutions increased approximately \$7.9 million to \$75.3 million and approximated 42% and 40% of revenues for HealthStream Workforce Solutions for 2017 and 2016, respectively. The increase is primarily associated with increased royalties paid by us resulting from growth in courseware subscription revenues and increased personnel costs. Cost of revenues for HealthStream Provider Solutions increased approximately \$4.3 million to \$11.9 million and approximated 32% of HealthStream Provider Solutions revenues for both 2017 and 2016. The increase is primarily the result of the MAI acquisition and additions to personnel and increased hosting costs.

Product Development. Product development expenses decreased approximately \$86,000, or 0.4%, to \$24.1 million for 2017 from \$24.2 million for 2016. Product development expenses as a percentage of revenues were approximately 11% and 13% of revenues for 2017 and 2016, respectively.

Product development expenses for HealthStream Workforce Solutions decreased approximately \$799,000 to \$19.6 million and approximated 11% and 12% of revenues for HealthStream Workforce Solutions for 2017 and 2016, respectively. The decrease is primarily due to lower outsourced labor expenses, partially offset by an increase in personnel costs. Product development expenses for HealthStream Provider Solutions increased approximately \$714,000 to \$4.5 million and approximated 12% and 16% of revenues for HealthStream Provider Solutions for 2017 and 2016, respectively. The increase in amount is primarily associated with the MAI acquisition and additions to personnel, partially offset by higher labor capitalization for internal software development.

Sales and Marketing. Sales and marketing expenses, including personnel costs, increased approximately \$3.7 million, or 11%, to \$38.6 million for 2017 from \$34.9 million for 2016. Sales and marketing expenses were approximately 18% of revenues for both 2017 and 2016.

Sales and marketing expenses for HealthStream Workforce Solutions increased approximately \$2.8 million to \$31.4 million and approximated 18% and 17% of revenues for HealthStream Workforce Solutions for 2017 and 2016, respectively. The increase is mainly due to additional personnel and higher sales commissions. Sales and marketing expenses for HealthStream Provider Solutions increased approximately \$674,000 to \$5.9 million and approximated 16% and 22% of revenues for HealthStream Provider Solutions for 2017 and 2016, respectively. The increase is primarily the result of higher sales commissions resulting from growth in sales. The unallocated corporate portion of sales and marketing expenses increased by \$165,000 to \$1.3 million primarily due to higher personnel costs and increased marketing spending.

Other General and Administrative Expenses. Other general and administrative expenses increased approximately \$1.0 million, or 3%, to \$31.5 million for 2017 from \$30.5 million for 2016. Other general and administrative expenses as a percentage of revenues were approximately 15% and 16% of revenues for 2017 and 2016, respectively.

Other general and administrative expenses for HealthStream Workforce Solutions increased approximately \$2.1 million to \$8.1 million over 2016 primarily associated with higher facility costs and increased technology infrastructure investments. Other general and administrative expenses for HealthStream Provider Solutions increased approximately \$1.7 million to \$5.5 million over 2016 primarily associated with increased facility costs, contract labor, and higher bad debt expense. The unallocated corporate portion of other general and administrative expenses decreased approximately \$2.7 million to \$17.9 million over 2016, primarily due to lower professional service expenses as a result of the implementation of a new financial systems platform and the MAI transaction during the prior year period, reductions to contract labor, and reductions of other general administrative expenses, partially offset by implementation costs for compliance with ASC 606.

Depreciation and Amortization. Depreciation and amortization increased approximately \$3.7 million, or 18%, to \$24.0 million for 2017 from \$20.4 million for 2016. The increase primarily resulted from amortization of capitalized software development, amortization of intangible assets from recent acquisitions (including amortization of software acquired for resale), and depreciation expense associated with capital expenditures.

Other Income (Expense), Net. Other income (expense), net was income of approximately \$733,000 for 2017 compared to \$581,000 for 2016. The increase is primarily due to an increase in interest income from cash and investments in marketable securities.

Income Tax Provision. The Company recorded a provision for income taxes of approximately \$1.3 million for 2017 compared to \$3.0 million for 2016. The Company's effective tax rate was approximately 13% for 2017 compared to approximately 38% for 2016. The decrease in income tax expense during 2017 is primarily attributable to the enactment of the Tax Cuts and Jobs Act on December 22, 2017, which reduced the corporate federal income tax rate from 35% to 21%. This change in tax law resulted in an income tax benefit of approximately \$1.7 million during the fourth quarter of 2017 through the revaluation of our net deferred tax liabilities.

Income (Loss) from Discontinued Operations. Income from discontinued operations increased in 2017 over 2016 primarily due to an increase in operating income related to the PX business included in discontinued operations coupled with an income tax benefit of \$1.0 million during the fourth quarter of 2017 through the revaluation of net deferred tax liabilities due to changes in the corporate federal income tax rate.

Net Income. Net income increased approximately \$6.2 million, or 166%, to \$10.0 million for 2017 compared to \$3.8 million for 2016. The increase resulted from the factors mentioned above. Earnings per diluted share were \$0.31 per share for 2017 compared to \$0.12 per diluted share for 2016.

Adjusted EBITDA increased approximately 27% to approximately \$37.9 million for 2017 compared to \$29.9 million for 2016. The increase resulted from the factors mentioned above. See Reconciliation of Non-GAAP Financial Measures below for our reconciliation of this calculation to measures under US GAAP.

Other Developments

Our legacy agreements with Laerdal (Legacy Agreements) for the HeartCode and Resuscitation Quality Improvement (RQI) products expired pursuant to their terms on December 31, 2018 and will not be renewed. Revenues associated with sales of HeartCode and RQI products pursuant to the Legacy Agreements have been significant in recent years, although margins on such products have been lower than HealthStream's average margin. In 2018, revenue generated by HeartCode and RQI pursuant to the Legacy Agreements was approximately \$55 million. In 2019, we expect the revenue from these products generated pursuant to the Legacy Agreements to modestly exceed the \$55 million achieved in 2018. We expect 2019 revenue from HeartCode and RQI generated pursuant to the Legacy Agreements to peak near mid-year in 2019 and decline thereafter. We expect revenue from HeartCode and RQI sold pursuant to the Legacy Agreements to be \$0 in the first quarter of 2021.

On December 6, 2018, we announced a new agreement with RQI Partners, a joint venture between Laerdal and the American Heart Association. This agreement with RQI Partners is not an extension or renewal of the expired Legacy Agreements with Laerdal and should not be construed as such. Under our agreement with RQI Partners, HealthStream will neither market nor sell HeartCode or RQI. Our RQI Partner agreement provides for continuity of service for customers that desire to purchase HeartCode or RQI from RQI Partners after December 31, 2018 and receive it via the HealthStream Learning Center. RQI Partners will remit a fee to us when new sales of HeartCode and RQI are delivered via the HealthStream Learning Center. This fee will not be sufficient to supplant the revenue runout associated with the Legacy Agreements.

We remain actively engaged in efforts to broaden the scope and utilization of our simulation-related offerings to include a range of clinical competencies that extend beyond resuscitation, and we intend to bring to market a broadened scope of simulation-based offerings, including resuscitation programs. On January 17, 2019, as part of a seven-year collaboration agreement with the American Red Cross, which spans into 2026, we announced the launch of the American Red Cross Resuscitation Suite. We have now begun efforts to market, sell, and deliver the American Cross Resuscitation Suite. We believe these efforts, along with efforts to bring additional simulation-related offerings to market, have the potential to give rise to additional and higher margin opportunities than those that existed under the Legacy Agreements. However, there is no assurance that we will be successful in these efforts, and to the extent that new simulation-based or other solutions do not generate revenue and/or earnings in a manner that supplants the impact of the Legacy Agreements, our revenue and results of operations may be adversely affected.

Reconciliation of Non-GAAP Financial Measures

This report contains certain non-GAAP financial measures, including non-GAAP net income, non-GAAP operating income, adjusted EBITDA from continuing operations, and adjusted EBITDA, which are used by management in analyzing our financial results and ongoing operational performance.

In order to better assess the Company's financial results, management believes that net income before interest, income taxes, share-based compensation, depreciation and amortization, and changes in fair value of cost method investments (adjusted EBITDA) is a useful measure for evaluating the operating performance of the Company because adjusted EBITDA reflects net income adjusted for certain non-cash and non-operating items. Effective January 1, 2018, the Company adopted ASU 2016-01, which (among other things) requires equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income. During the three months ended September 30, 2018, the Company recorded a reduction to net income and net income from continuing operations from a change in the fair value of a minority equity investment accounted for under the cost method of accounting. The Company has included this adjustment in the calculation of adjusted EBITDA, and intends to continue to include any positive or negative changes in fair value of cost method investments in the calculation of adjusted EBITDA on a prospective basis, because management believes that such changes do not represent the ongoing operational performance of the Company. Management also believes that adjusted EBITDA from continuing operations is a useful measure for evaluating the operating performance of the Company because such measure excludes the results of operations of the PX business that we sold in February 2018 and thus reflects the Company's ongoing business operations

and assists in comparing the Company's results of operations between periods. We also believe that adjusted EBITDA and adjusted EBITDA from continuing operations are useful to many investors to assess the Company's ongoing results from current operations. Adjusted EBITDA and adjusted EBITDA from continuing operations are non-GAAP financial measures and should not be considered as measures of financial performance under GAAP. Because adjusted EBITDA and adjusted EBITDA from continuing operations are not measurements determined in accordance with GAAP, such non-GAAP financial measures are susceptible to varying calculations. Accordingly, adjusted EBITDA and adjusted EBITDA from continuing operations, as presented, may not be comparable to other similarly titled measures of other companies, have limitations as analytical tools, and should not be considered in isolation or as substitutes for an analysis of the Company's results as reported under US GAAP.

In recent years, including in connection with the August 2016 acquisition of MAI, the Company has acquired businesses whose net tangible assets include deferred revenue. In accordance with GAAP reporting requirements, following the completion of any such acquisition, the Company must record the acquired deferred revenue at fair value as defined in US GAAP, which may result in a write-down of deferred revenue. If the Company is required to record a write-down of deferred revenue, it may result in lower recognized revenue, operating income, and net income in subsequent periods.

In connection therewith, this report presents below non-GAAP operating income and non-GAAP net income, which in each case reflects the corresponding GAAP figures adjusted to exclude the impact of the deferred revenue write-down associated with fair value accounting for acquired businesses as referenced above. Management believes that the presentation of these non-GAAP financial measures assists investors in understanding the Company's performance between periods by excluding the impact of this deferred revenue write-down and provides a useful measure of the ongoing performance of the Company. Revenue for any such acquired business is deferred and typically recognized over a one-to-two year period following the completion of any particular acquisition, so our GAAP revenues (and, thus, our GAAP operating income and net income) for this one-to-two year period will not reflect the full amount of revenues that would have been reported if the acquired deferred revenue was not written down to fair value. A reconciliation of these non-GAAP financial measures to the corresponding GAAP measures is set forth below.

	2018	2017	2016
GAAP income from continuing operations	\$ 13,251	\$ 8,838	\$ 4,791
Interest income	(2,444)	(870)	(574)
Interest expense	130	132	102
Income tax provision	3,324	1,302	2,961
Stock based compensation expense	1,777	1,736	1,895
Depreciation and amortization	24,231	24,047	20,366
Change in fair value of cost method investments	1,271	—	—
Adjusted EBITDA from continuing operations	<u>\$ 41,540</u>	<u>\$ 35,185</u>	<u>\$ 29,541</u>
GAAP net income	\$ 32,217	\$ 10,004	\$ 3,755
Interest income	(2,444)	(870)	(574)
Interest expense	130	131	102
Income tax provision	13,783	529	2,393
Stock based compensation expense	1,686	1,852	1,968
Depreciation and amortization	24,412	26,283	22,207
Change in fair value of cost method investments	1,271	—	—
Adjusted EBITDA	<u>\$ 71,055</u>	<u>\$ 37,929</u>	<u>\$ 29,851</u>
GAAP operating income	\$ 15,491	\$ 9,407	\$ 7,171
Adjustment for deferred revenue write-down	887	1,621	3,838
Non-GAAP operating income	<u>\$ 16,378</u>	<u>\$ 11,028</u>	<u>\$ 11,009</u>
GAAP net income	\$ 32,217	\$ 10,004	\$ 3,755
Adjustment for deferred revenue write-down, net of tax	709	1,413	2,371
Non-GAAP net income	<u>\$ 32,926</u>	<u>\$ 11,417</u>	<u>\$ 6,126</u>

FINANCIAL OUTLOOK FOR 2019

The Company provides projections and other forward-looking information in this “Financial Outlook for 2019” section within “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” This section contains many forward-looking statements, particularly relating to the Company’s future financial performance. These forward-looking statements are estimates based on information currently available to the Company, are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, and are subject to the precautionary statements set forth in the introduction in Part I of this Annual Report on Form 10-K and the risks and uncertainties described in Item 1A, Risk Factors and elsewhere in this report, as well as additional risks or uncertainties not presently known by us, or that we currently deem immaterial. Actual results are likely to differ, and in the past have differed, materially from those forecast by the Company, depending on the outcome of various factors, including, but not limited to, those set forth in Item 1A, Risk Factors.

We are providing 2019 financial guidance as set forth below:

	Full-Year 2019 Guidance	
Revenue:		
Workforce Solutions	\$ 207	- \$ 213 million
Provider Solutions	\$ 44	- \$ 45 million
Consolidated	\$ 251	- \$ 258 million
Operating Income	\$ 10.0	- \$ 12.4 million
Capital Expenditures		\$ 35 million
Annual Effective Income Tax Rate	26	- 28 percent

The above guidance includes the acquisition of Providigm, LLC, which was consummated on January 10, 2019 and is included in our Workforce Solutions segment.

During 2019, we anticipate higher operating expenses associated with our expanded, new corporate office—which consolidates our middle Tennessee operations, and investments in product development and sales of our new resuscitation products, as well as investments to support the growth and expanded market positioning of solutions attained through the acquisition of Providigm, LLC.

We anticipate that capital expenditures associated with our office consolidation to a central location in Nashville, Tennessee will approximate \$15 million of the \$35 million total estimate during 2019.

This consolidated guidance does not include the impact of any other acquisitions that we may complete during 2019.

SELECTED QUARTERLY OPERATING RESULTS

The following tables set forth selected statements of income data for each of the four quarters in the periods ended December 31, 2018 and December 31, 2017, respectively. The information for each quarter has been prepared on the same basis as the audited statements included in other parts of this report and, in our opinion, includes all adjustments, consisting of only normal recurring adjustments, necessary for a fair presentation of the results of operations for these periods. You should read this information in conjunction with HealthStream’s Consolidated Financial Statements and related notes thereto included elsewhere in this report. The operating results for any quarter are not necessarily indicative of the results to be expected in the future. Revenues from our subscription-based products are recognized ratably over the subscription term.

	Quarter Ended			
	March 31, 2018	June 30, 2018	September 30, 2018	December 31, 2018
(In thousands, except per share data)				
STATEMENT OF INCOME DATA:				
Revenues, net	\$ 54,858	\$ 57,008	\$ 59,925	\$ 59,825
Total operating costs and expenses	51,128	52,744	55,264	56,988
Operating income	3,730	4,264	4,661	2,837
Income from continuing operations	3,629	3,656	3,036	2,931
Income (loss) from discontinued operations	20,217	(1,111)	—	(141)
Net income	<u>\$ 23,846</u>	<u>\$ 2,545</u>	<u>\$ 3,036</u>	<u>\$ 2,790</u>
Net income per share - diluted ⁽¹⁾ :				
Continuing operations	\$ 0.11	\$ 0.11	\$ 0.09	\$ 0.09
Discontinued operations	0.63	(0.03)	—	—
Net income per share - diluted	<u>\$ 0.74</u>	<u>\$ 0.08</u>	<u>\$ 0.09</u>	<u>\$ 0.09</u>
Weighted average shares of common stock outstanding - diluted	<u>32,132</u>	<u>32,378</u>	<u>32,415</u>	<u>32,416</u>

	Quarter Ended			
	March 31, 2017	June 30, 2017	September 30, 2017	December 31, 2017
(In thousands, except per share data)				
STATEMENT OF INCOME DATA:				
Revenues, net	\$ 51,967	\$ 52,920	\$ 54,743	\$ 55,269
Total operating costs and expenses	49,602	50,119	52,012	53,758
Operating income	2,365	2,801	2,731	1,511
Income from continuing operations	1,709	2,225	1,735	3,170
(Loss) income from discontinued operations	(424)	41	769	778
Net income	<u>\$ 1,285</u>	<u>\$ 2,266</u>	<u>\$ 2,504</u>	<u>\$ 3,948</u>
Net income per share - diluted ⁽¹⁾ :				
Continuing operations	\$ 0.05	\$ 0.07	\$ 0.05	\$ 0.10
Discontinued operations	(0.01)	—	0.03	0.02
Net income per share - diluted	<u>\$ 0.04</u>	<u>\$ 0.07</u>	<u>\$ 0.08</u>	<u>\$ 0.12</u>
Weighted average shares of common stock outstanding - diluted	<u>32,104</u>	<u>32,229</u>	<u>32,217</u>	<u>32,236</u>

(1) – Due to the nature of interim earnings per share calculations, the sum of quarterly earnings per share amounts may not equal the reported earnings per share for the full year.

Liquidity and Capital Resources

Net cash provided by operating activities was approximately \$44.3 million during 2018 compared to \$42.6 million during 2017, an increase of 4%. The number of days sales outstanding (DSO) was 59 days for 2018 compared to 64 days for 2017. The Company calculates DSO by dividing the average accounts receivable balance (excluding unbilled and other receivables) by average daily revenues for the year. The improvement in DSO resulted from improved collections during the year primarily in our Provider Solutions segment. The Company's primary sources of cash were receipts generated from the sales of our products and services. The primary uses of cash to fund operations included personnel expenses, sales commissions, royalty payments, payments for contract labor and other direct expenses associated with delivery of our products and services, and general corporate expenses.

Net cash provided by investing activities was approximately \$36.7 million during 2018 while \$8.8 million of cash was used in investing activities during 2017. During 2018, the Company received net proceeds from the sale of the PX business of \$44.0 million and maturities of marketable securities of \$69.0 million. These sources of cash were partially offset by \$57.1 million in purchases of marketable securities, \$11.3 million spent for capitalized software development, \$7.2 million for purchases of property and equipment, and \$833,000 in minority investments. During 2017, the Company purchased \$83.3 million of marketable securities, spent \$9.6 million for capitalized software development, and purchased \$5.5 million of property and equipment. These uses of cash were partially offset by maturities of marketable securities of \$90.1 million.

Cash used in financing activities was approximately \$30.3 million during 2018 while \$1,000 was provided by financing activities during 2017. The primary uses of cash during 2018 related to \$32.4 million for payments of cash dividends, \$338,000 for payments of payroll taxes from stock based compensation arrangements, \$100,000 for payment of debt issue costs, and \$38,000 for payment of an earn-out related to a prior acquisition. During 2018, the primary source of cash from financing activities resulted from \$2.6 million from the exercise of employee stock options. During 2017, the primary source of cash from financing activities resulted from \$413,000 from the exercise of employee stock options. The primary uses of cash during 2017 related to \$412,000 for payments of payroll taxes from stock based compensation arrangements.

Our balance sheet reflects positive working capital of \$134.6 million at December 31, 2018 compared to \$98.7 million at December 31, 2017. The increase in working capital was primarily due to net cash provided by operating activities. The Company's primary source of liquidity is \$168.8 million of cash and cash equivalents and marketable securities. The Company also has a \$50.0 million revolving credit facility loan agreement, all of which was available at December 31, 2018. For additional information regarding our revolving credit facility, see Note 13 to the Company's consolidated financial statements included elsewhere in this report.

We believe that our existing cash and cash equivalents, marketable securities, cash generated from operations, and available borrowings under our revolving credit facility will be sufficient to meet anticipated working capital needs, new product development, and capital expenditures for at least the next 12 months.

The Company's growth strategy includes acquiring businesses that provide complementary product and services. It is anticipated that future acquisitions, if any, would be effected through cash consideration, stock consideration, or a combination of both. The issuance of our stock as consideration for an acquisition or to raise additional capital could have a dilutive effect on earnings per share and could adversely affect our stock price. The revolving credit facility contains financial covenants and availability calculations designed to set a maximum leverage ratio of outstanding debt to consolidated EBITDA (as defined in our credit facility) and an interest coverage ratio of consolidated EBITDA to interest expense. Therefore, the maximum borrowings against the revolving credit facility would be dependent on the covenant values at the time of borrowing. As of December 31, 2018, the Company was in compliance with all covenants. There can be no assurance that amounts available for borrowing under our revolving credit facility will be sufficient to consummate any possible acquisitions, and we cannot assure you that if we need additional financing that it will be available on terms favorable to us, or at all. Failure to generate sufficient cash flow from operations or raise additional capital when required in sufficient amounts and on terms acceptable to us could harm our business, financial condition and results of operations.

Off-Balance Sheet Arrangements and Contractual Obligations

The Company's off-balance sheet arrangements primarily consist of operating leases, contractual obligations, and our revolving credit facility, which is described further in Note 13 to the Company's consolidated financial statements included elsewhere in this report.

The following table presents a summary of future anticipated payments due by the Company under contractual obligations with firm minimum commitments as of December 31, 2018, excluding amounts already recorded in the consolidated balance sheets (in thousands):

	Payments due by period				Total
	Less than 1 year	1-3 years	3-5 years	More than 5 years	
Operating leases	\$ 2,408	\$ 7,810	\$ 7,280	\$ 26,085	\$ 43,583
Purchase obligations	438	1,921	-	-	2,359
Total	\$ 2,846	\$ 9,731	\$ 7,280	\$ 26,085	\$ 45,942

Recent Accounting Pronouncements

In February 2016, the FASB issued ASU 2016-02, *Leases (ASC 842)*, which supersedes the lease requirements in Accounting Standards Codification (ASC) 840, *Leases*. ASC 842 requires lessees to recognize assets and liabilities for most leases and provide enhanced disclosures. The Company will adopt ASC 842 effective January 1, 2019 using a modified retrospective approach. As permitted under the transition guidance, we will carry forward the assessment of whether our contracts contain or are leases, classification of our leases, and remaining lease terms. Based on our portfolio of leases as of January 1, 2019, approximately \$5.0 million of lease assets and liabilities relating to real estate will be recognized on our balance sheet upon adoption. Additionally, we anticipate recording a material lease asset and liability upon the commencement date of our new corporate headquarters of approximately \$24 million. Except as set forth above, we do not anticipate that the adoption of ASC 842 will have any significant impact on the Company's consolidated financial position and results of operations. We are substantially complete with our implementation efforts.

In June 2016, the FASB issued ASU 2016-03, *Financial Instruments—Credit Losses (ASC 326): Measurement of Credit Losses on Financial Instruments*, which amends guidance on reporting credit losses for assets held at amortized cost basis and available for sale debt securities. For assets held at amortized cost basis, ASC 326 eliminates the probable initial recognition threshold in current GAAP and, instead, requires an entity to reflect its current estimate of all expected credit losses. The standard will be effective for the first interim period within annual reporting periods beginning after December 15, 2019. The Company will adopt this ASU on January 1, 2020 and is currently evaluating the impact that adoption of this ASU will have on the Company's consolidated financial position and results of operations.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

The Company is exposed to market risk from changes in interest rates. We do not have any foreign currency exchange rate risk or commodity price risk. As of December 31, 2018, the Company had no outstanding debt. We may become subject to interest rate market risk associated with any future borrowings under our revolving credit facility. The interest rate under the revolving credit facility varies depending on the interest rate option selected by the Company plus a margin determined in accordance with a pricing grid. We are exposed to market risk with respect to our cash and investment balances, which approximated \$168.8 million at December 31, 2018. Assuming a hypothetical 10% decrease in interest rates, interest income from cash and investments would decrease on an annualized basis by approximately \$365,000.

The Company's investment policy and strategy is focused on investing in highly rated securities, with the objective of minimizing the potential risk of principal loss. The Company's policy limits the amount of credit exposure to any single issuer and sets limits on the average portfolio maturity.

The above market risk discussion and the estimated amounts presented are forward-looking statements of market risk assuming the occurrence of certain adverse market conditions. Actual results in the future may differ materially from those projected as a result of actual developments in the market.

Item 8. *Financial Statements and Supplementary Data*

**HEALTHSTREAM, INC.
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The supplementary financial information required by this Item 8 is included in Item 7 under the caption "Selected Quarterly Operating Results."

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of HealthStream, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of HealthStream, Inc. (the Company) as of December 31, 2018 and December 31, 2017, the related consolidated statements of income, comprehensive income, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2018, 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, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 25, 2019, expressed an unqualified opinion thereon.

Adoption of New Accounting Standard

As discussed in Note 1 to the consolidated financial statements, the Company changed its method for recognizing revenue in 2018 due to the adoption of Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers*, as amended.

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 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. 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 include 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 1998.
Nashville, Tennessee
February 25, 2019

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of HealthStream, Inc.

Opinion on the Internal Control Over Financial Reporting

We have audited HealthStream, Inc.'s internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, HealthStream, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of HealthStream, Inc. as of December 31, 2018 and 2017, and the related consolidated statements of income, comprehensive income, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2018, and the related notes and our report dated February 25, 2019, expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with the respect to the Company in accordance with U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Nashville, Tennessee
February 25, 2019

HEALTHSTREAM, INC.
CONSOLIDATED BALANCE SHEETS

(In thousands)

	December 31, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 134,321	\$ 84,768
Marketable securities	34,497	46,350
Accounts receivable, net of allowance for doubtful accounts of \$1,161 and \$1,979 at December 31, 2018 and December 31, 2017, respectively	38,124	36,691
Accounts receivable - unbilled	2,880	1,327
Prepaid royalties, net of amortization	13,596	16,137
Other prepaid expenses and other current assets	18,016	8,330
Current assets of discontinued operations	—	6,125
Total current assets	241,434	199,728
Property and equipment, net of accumulated depreciation of \$20,827 and \$24,392 at December 31, 2018 and December 31, 2017, respectively	15,866	8,092
Capitalized software development, net of accumulated amortization of \$46,757 and \$37,174 at December 31, 2018 and December 31, 2017, respectively	18,352	16,014
Goodwill	86,144	86,144
Customer-related intangibles, net of accumulated amortization of \$23,245 and \$17,033 at December 31, 2018 and December 31, 2017, respectively	53,469	59,681
Other intangible assets, net of accumulated amortization of \$9,663 and \$7,708 at December 31, 2018 and December 31, 2017, respectively	5,909	8,816
Deferred tax assets	145	45
Deferred commissions	16,470	—
Non-marketable equity investments	3,376	3,772
Other assets	783	754
Long-term assets of discontinued operations	—	28,073
Total assets	\$ 441,948	\$ 411,119
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 8,497	\$ 4,178
Accrued royalties	15,756	12,849
Accrued liabilities	13,458	9,567
Accrued compensation and related expenses	3,082	2,762
Deferred revenue	66,061	64,938
Current liabilities of discontinued operations	—	6,772
Total current liabilities	106,854	101,066
Deferred tax liabilities	11,068	—
Deferred revenue, noncurrent	2,868	6,287
Other long term liabilities	2,211	1,048
Long-term liabilities of discontinued operations	—	2,548
Commitments and contingencies		
Shareholders' equity:		
Common stock, no par value, 75,000 shares authorized; 32,325 and 31,908 shares issued and outstanding at December 31, 2018 and December 31, 2017, respectively	286,597	282,666
Retained earnings	32,373	17,542
Accumulated other comprehensive loss	(23)	(38)
Total shareholders' equity	318,947	300,170
Total liabilities and shareholders' equity	\$ 441,948	\$ 411,119

See accompanying notes to the consolidated financial statements.

HEALTHSTREAM, INC.
CONSOLIDATED STATEMENTS OF INCOME
(In thousands, except per share data)

	Year Ended December 31,		
	2018	2017	2016
Revenues, net	\$ 231,616	\$ 214,899	\$ 192,124
Operating costs and expenses:			
Cost of revenues (excluding depreciation and amortization)	96,014	87,208	74,966
Product development	25,735	24,148	24,234
Sales and marketing	35,698	38,606	34,929
Other general and administrative expenses	34,447	31,483	30,458
Depreciation and amortization	24,231	24,047	20,366
Total operating costs and expenses	216,125	205,492	184,953
Operating income	15,491	9,407	7,171
Other income, net	1,084	733	581
Income from continuing operations before income tax provision	16,575	10,140	7,752
Income tax provision	3,324	1,302	2,961
Income from continuing operations	13,251	8,838	4,791
Discontinued operations			
(Loss) income from discontinued operations before income tax provision	(64)	393	(1,604)
Gain on sale of discontinued operations	29,489	—	—
Income tax provision (benefit)	10,459	(773)	(568)
Income (loss) from discontinued operations	18,966	1,166	(1,036)
Net Income	<u>\$ 32,217</u>	<u>\$ 10,004</u>	<u>\$ 3,755</u>
Net income per share – basic:			
Continuing operations	\$ 0.41	\$ 0.27	\$ 0.15
Discontinued operations	0.59	0.04	(0.03)
Net income per share - basic	<u>\$ 1.00</u>	<u>\$ 0.31</u>	<u>\$ 0.12</u>
Net income per share - diluted:			
Continuing operations	\$ 0.41	\$ 0.27	\$ 0.15
Discontinued operations	0.59	0.04	(0.03)
Net income per share - diluted	<u>\$ 1.00</u>	<u>\$ 0.31</u>	<u>\$ 0.12</u>
Weighted average shares of common stock outstanding:			
Basic	<u>32,264</u>	<u>31,861</u>	<u>31,721</u>
Diluted	<u>32,335</u>	<u>32,196</u>	<u>32,068</u>
Dividends declared per share	<u>\$ 1.00</u>	<u>\$ —</u>	<u>\$ —</u>

See accompanying notes to the consolidated financial statements.

HEALTHSTREAM, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands)

	Year Ended December 31,		
	2018	2017	2016
Net income	\$ 32,217	\$ 10,004	\$ 3,755
Other comprehensive income, net of taxes:			
Unrealized gain on marketable securities	15	13	19
Total other comprehensive income	15	13	19
Comprehensive income	<u>\$ 32,232</u>	<u>\$ 10,017</u>	<u>\$ 3,774</u>

See accompanying notes to the consolidated financial statements.

HEALTHSTREAM, INC.
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(In thousands)

	Common Stock		Retained Earnings	Accumulated	Total Shareholders' Equity
	Shares	Amount		Other Comprehensive Loss	
Balance at December 31, 2015	31,647	\$ 278,799	\$ 1,591	\$ (70)	\$ 280,320
Net income	—	—	3,755	—	3,755
Comprehensive income	—	—	—	19	19
Stock based compensation	—	1,968	—	—	1,968
Tax benefit from equity awards	—	217	—	—	217
Common stock issued under stock plans, net of shares withheld for employee taxes	101	(171)	—	—	(171)
Balance at December 31, 2016	31,748	280,813	5,346	(51)	286,108
Cumulative effect of accounting change	—	—	2,192	—	2,192
Net income	—	—	10,004	—	10,004
Comprehensive income	—	—	—	13	13
Stock based compensation	—	1,852	—	—	1,852
Common stock issued under stock plans, net of shares withheld for employee taxes	160	1	—	—	1
Balance at December 31, 2017	31,908	282,666	17,542	(38)	300,170
Cumulative effect of accounting change	—	—	15,132	—	15,132
Net income	—	—	32,217	—	32,217
Comprehensive income	—	—	—	15	15
Dividends declared on common stock (\$1.00 per share)	—	—	(32,518)	—	(32,518)
Stock based compensation	—	1,686	—	—	1,686
Common stock issued under stock plans, net of shares withheld for employee taxes	417	2,245	—	—	2,245
Balance at December 31, 2018	<u>32,325</u>	<u>\$ 286,597</u>	<u>\$ 32,373</u>	<u>\$ (23)</u>	<u>\$ 318,947</u>

See accompanying notes to the consolidated financial statements.

HEALTHSTREAM, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,		
	2018	2017	2016
OPERATING ACTIVITIES:			
Net income	\$ 32,217	\$ 10,004	\$ 3,755
Income (loss) from discontinued operations	(18,966)	(1,166)	1,036
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	24,231	24,047	20,366
Stock-based compensation	1,777	1,736	1,895
Amortization of deferred commissions	7,659	—	—
Excess tax benefits from equity awards	—	—	(217)
Provision for doubtful accounts	1,033	1,568	590
Deferred income taxes	3,017	(2,144)	1,447
(Gain) loss on non-marketable equity investments	(42)	5	(120)
Change in fair value of cost method investments	1,271	—	—
Other	(9)	409	1,026
Changes in operating assets and liabilities:			
Accounts and unbilled receivables	(4,050)	1,125	(7,964)
Prepaid royalties	1,639	2,046	(4,008)
Other prepaid expenses and other current assets	(3,938)	(25)	(1,176)
Deferred commissions	(11,577)	—	—
Other assets	(30)	(201)	323
Accounts payable and accrued expenses	2,008	5,784	1,674
Accrued royalties	2,907	(32)	3,675
Deferred revenue	5,103	(552)	1,586
Net cash provided by continuing operating activities	44,250	42,604	23,888
Net cash (used in) provided by discontinued operating activities	(1,004)	4,108	346
Net cash provided by operating activities	43,246	46,712	24,234
INVESTING ACTIVITIES:			
Business combinations, net of cash acquired	—	—	(55,255)
Proceeds from sale of discontinued operations, net of tax	44,049	—	—
Proceeds from maturities of marketable securities	68,992	90,073	119,395
Purchases of marketable securities	(57,085)	(83,279)	(106,965)
Payments to acquire cost method investments	(833)	(500)	—
Proceeds for sale of long-lived assets	—	—	975
Payments associated with capitalized software development	(11,284)	(9,597)	(8,979)
Purchases of property and equipment	(7,166)	(5,515)	(4,806)
Net cash provided by (used in) continuing investing activities	36,673	(8,818)	(55,635)
Net cash used in discontinued investing activities	(115)	(2,761)	(1,021)
Net cash provided by (used in) investing activities	36,558	(11,579)	(56,656)
FINANCING ACTIVITIES:			
Proceeds from exercise of stock options	2,582	413	145
Taxes paid related to net settlement of equity awards	(338)	(412)	(316)
Excess tax benefits from equity awards	—	—	217
Payment of earn-out related to prior acquisitions	(38)	—	—
Payment of debt issue costs	(100)	—	—
Payment of cash dividends	(32,357)	—	—
Net cash (used in) provided by financing activities	(30,251)	1	46
Net increase (decrease) in cash and cash equivalents	49,553	35,134	(32,376)
Cash and cash equivalents at beginning of period	84,768	49,634	82,010
Cash and cash equivalents at end of period	<u>\$ 134,321</u>	<u>\$ 84,768</u>	<u>\$ 49,634</u>
SUPPLEMENTAL CASH FLOW INFORMATION:			
Interest paid	<u>\$ 117</u>	<u>\$ 101</u>	<u>\$ 76</u>
Income taxes paid	<u>\$ 16,513</u>	<u>\$ 638</u>	<u>\$ 2,496</u>
Non-cash additions to property and equipment	<u>\$ 1,013</u>	<u>\$ —</u>	<u>\$ —</u>

See accompanying notes to the consolidated financial statements.

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting Entity and Segments

HealthStream, Inc. (the Company) was incorporated in 1990 as a Tennessee corporation and is headquartered in Nashville, Tennessee. As of December 31, 2018, the Company operated in two segments: HealthStream Workforce Solutions and HealthStream Provider Solutions. Workforce Solutions products consist of software-as-a-service (SaaS) based services and subscription-based solutions to meet the ongoing training, certification, assessment, and development needs of the healthcare community. These solutions provide, deliver, and track online education for our customers in the United States through our SaaS model. Provider Solutions products offer healthcare organizations software applications for administering and tracking provider credentialing, privileging, call center, and enrollment activities.

On February 12, 2018, the Company divested its Patient Experience (PX) business to Press Ganey Associates (Press Ganey) for \$65.2 million in cash (after giving effect to the post-closing working capital adjustment). This sale of the PX business resulted in the divestiture of the Company's patient experience solutions business segment. The results of operations for PX are presented as discontinued operations within the notes to consolidated financial statements herein.

Recently Adopted Accounting Standards

The Company adopted the Financial Accounting Standards Board (FASB) Accounting Standards Update (ASU) 2014-09, *Revenue from Contracts with Customers*, and related guidance (ASC 606), effective January 1, 2018 using the modified retrospective transition approach. ASC 606 requires entities to recognize revenues when control of the promised goods or services is transferred to the customer at an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. See Note 5 for further details.

In January 2016, the FASB issued ASU 2016-01, *Financial Instruments – Overall (Sub Topic 825-10)*, which addresses certain aspects of the recognition, measurement, presentation, and disclosure of financial instruments. The guidance, among other things, requires equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income. The Company adopted ASU 2016-01 effective January 1, 2018 on a prospective basis. See Note 17 for additional information regarding ASU 2016-01 and its impact on the Company's balance sheet and statements of income.

Recognition of Revenue

Revenues are recognized when control of the promised goods or services is transferred to the customer in an amount that reflects the consideration the Company expects to be entitled in exchange for transferring those goods or services.

Revenue is recognized based on the following five step model:

- Identification of the contract 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, the Company satisfies a performance obligation

Subscription/SaaS services revenues primarily consist of fees in consideration of providing customers access to one or more of our SaaS-based solutions and/or courseware subscriptions, as well as fees related to licensing agreements, all of which include routine customer support and technology enhancements. Revenue is generally recognized over time during the contract term beginning when the service is made available to the customer. Subscription/SaaS contracts are generally non-cancelable, one to five years in length, and billed annually, semi-annually, quarterly, or monthly in advance.

Professional services revenues primarily consist of fees for implementation services, consulting, custom courseware development, and training. The majority of our professional services contracts are billed in advance based on a fixed price basis, and revenue is recognized over time as the services are performed. For both subscription/SaaS services and professional services, the time between billing the customer and when performance obligations are satisfied is generally not significant.

Our contracts with customers often contain multiple performance obligations. For these contracts, the Company accounts for individual performance obligations separately if they are distinct. The contract price, which represents transaction price, is allocated to the separate performance obligations on a relative standalone selling price basis. We generally determine standalone selling prices based on the standard list price for each product, taking into consideration certain factors, including contract length and the number of subscribers within the contract.

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

We receive payments from customers based on billing schedules established in our contracts. Accounts receivable - unbilled represent contract assets related to our conditional right to consideration for subscription/SaaS and professional services contracts where performance has occurred under the contract. Accounts receivable are primarily comprised of trade receivables that are recorded at the invoice amount, net of an allowance for doubtful accounts, when the right to consideration becomes unconditional. Other receivables, which are included within Accounts Receivable, include receivables from certain content partners and are not material.

Deferred revenue represents contract liabilities that are recorded when cash payments are received or are due in advance of our satisfaction of performance obligations.

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates

The consolidated financial statements are prepared in accordance with U.S. generally accepted accounting principles. These accounting principles require management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates and such differences could be material to the consolidated financial statements.

Cash Equivalents

The Company considers cash equivalents to be unrestricted, highly liquid investments with initial maturities of less than three months.

Marketable Securities

Marketable securities are classified as available for sale and are stated at fair market value, with the unrealized gains and losses, net of tax, reported in other accumulated comprehensive income (loss) on the accompanying consolidated balance sheets. Realized gains and losses and declines in market value judged to be other than temporary on investments in marketable securities are included in interest and other income on the accompanying consolidated statements of income. The cost of securities sold is based on the specific identification method. Interest and dividends on securities classified as available for sale are included in other income (expense) on the accompanying consolidated statements of income. Premiums and discounts are amortized over the life of the related available for sale security as an adjustment to the yield using the effective interest method.

Deferred Commissions

Deferred commissions represent costs to acquire contracts with customers, such as the initial sales commission payment, which are capitalized and amortized consistent with the transfer of the goods or services to the customer over the expected period of benefit. The capitalized contract cost is included under the caption "deferred commissions" in the accompanying consolidated balance sheet. The expected period of benefit is the contract term, except when the capitalized commission is expected to provide economic benefit to the Company for a period longer than the contract term, such as for new customer or incremental sales where renewals are expected and renewal commissions are not commensurate with initial commissions. Non-commensurate commissions are amortized over the greater of the contract term or expected customer relationship period, limited by the technological obsolescence period of approximately three years.

Prepaid Royalties

Prepaid royalties represents advance payments associated with the sale of third party products, such as courseware subscriptions. Royalties are typically paid in advance at the commencement of the revenue cycle or periodically throughout the revenue cycle, such as quarterly, bi-annual, or annual installments. Royalty payments are amortized over the term of the underlying contracts, which generally range from 12 to 60 months, in order to match the direct royalty costs to the same period the subscription revenue is recognized. Amortization of royalties is included under the caption "cost of revenues (excluding depreciation and amortization)" in the accompanying consolidated statements of income.

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Allowance for Doubtful Accounts

The Company estimates its allowance for doubtful accounts to include accounts that may become uncollectible in the future, along with using a specific identification method in which management considers the facts and circumstances surrounding each potentially uncollectible receivable. Uncollectible receivables are written-off in the period management believes it has exhausted its ability to collect payment from the customer. Bad debt expense is recorded when events or circumstances indicate an additional allowance is required.

Changes in the allowance for doubtful accounts and the amounts charged to bad debt expense from continuing operations for the years ended December 31 were as follows (in thousands):

	Allowance Balance at Beginning of Period		Charged to Costs and Expenses		Write-offs		Allowance Balance at End of Period
2018	\$ 1,979	\$	1,033	\$	(1,851)	\$	1,161
2017	839		1,568		(428)		1,979
2016	292		590		(43)		839

Capitalized Software Development

Capitalized software development is stated on the basis of cost and is presented net of accumulated amortization. The Company capitalizes costs incurred during the software development phase for projects when such costs are material. These assets are generally amortized using the straight-line method over three years. The Company capitalized approximately \$11.9 million and \$10.2 million during 2018 and 2017, respectively. Amortization of capitalized software development from continuing operations was approximately \$9.6 million, \$8.9 million, and \$6.8 million during 2018, 2017, and 2016, respectively. Maintenance and operating costs are expensed as incurred. As of December 31, 2018 and 2017, there were no capitalized software development costs for external computer software developed for resale.

Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market in an orderly transaction between market participants at the measurement date. The fair value hierarchy prioritizes the inputs to valuation techniques used in measuring fair value. There are three levels to the fair value hierarchy based on the reliability of inputs, as follows:

Level 1 – Observable inputs that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2 – Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3 – Unobservable inputs in which little or no market data exists, therefore requiring the Company to develop its own assumptions.

The Company evaluates assets and liabilities subject to fair value measurements on a recurring basis to determine the appropriate level at which to classify them for each reporting period. This determination requires significant judgments to be made by the Company. At December 31, 2018 and 2017, our assets measured at fair value on a recurring basis consisted of marketable securities, which are classified as available for sale (see Note 4 – Marketable Securities).

Property and Equipment

Property and equipment are stated on the basis of cost. Depreciation is provided on the straight-line method over the following estimated useful lives, except for assets under capital leases and leasehold improvements, which are amortized over the shorter of the estimated useful life or their respective lease term.

	Years
Furniture and fixtures	5 - 7
Equipment	3

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Goodwill and Intangible Assets

Goodwill represents the excess of purchase price in a business combination over the fair value of the net identifiable assets acquired. The carrying amount of our goodwill is evaluated for impairment at least annually during the fourth quarter and whenever events or changes in facts or circumstances indicate that impairment may exist. In accordance with ASC 350, *Intangibles – Goodwill and Other*, companies may opt to first assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. A qualitative assessment includes factors such as financial performance, industry and market metrics, and other factors affecting the reporting unit. If this assessment concludes that it is more likely than not that the fair value of a reporting unit exceeds its carrying value, then goodwill is not considered impaired and no further impairment testing is required. Conversely, if the qualitative assessment concludes that it is more likely than not that the fair value of a reporting unit is less than its carrying value, we must then compare the fair value of the reporting unit to its carrying value. The Company determines fair value of the reporting units using both income and market based models. These models require the use of various assumptions relating to cash flow projections, growth rates, discount rates and terminal value calculations. There were no goodwill impairments identified or recorded for the years ended December 31, 2018, 2017, or 2016.

As of December 31, 2018, intangible assets include customer relationships, internally-developed technology and patents, non-competition agreements, and trade names. These intangible assets are considered to have definite useful lives and are being amortized on a straight-line basis over periods ranging between five and thirteen years. The weighted average amortization period for definite lived intangible assets as of December 31, 2018 was 11.3 years. Intangible assets are reviewed for impairment whenever events or changes in facts or circumstances indicate that the carrying amount of the assets may not be recoverable. There were no intangible asset impairments identified or recorded for the years ended December 31, 2018, 2017, or 2016.

Long-Lived Assets

Long-lived assets to be held for use are reviewed for events or changes in facts and circumstances, both internally and externally, which may indicate that an impairment of long-lived assets held for use is present. The Company measures any impairment using observable market values or discounted future cash flows from the related long-lived assets. The cash flow estimates and discount rates incorporate management's best estimates, using appropriate and customary assumptions and projections at the date of evaluation. Management periodically evaluates whether the carrying value of long-lived assets, including intangible assets, property and equipment, capitalized software development, deferred commissions, and other assets will be recoverable. There were no long-lived asset impairments identified or recorded for the years ended December 31, 2018, 2017, or 2016.

Non-Marketable Equity Investments

Non-marketable equity investments are accounted for using the equity method when the Company can exercise significant influence over the investee. Investments for which the Company is not able to exercise significant influence over the investee are accounted for under the cost method, and measured at fair value with changes in fair value recognized in net income. The proportionate share of income or loss from equity method investments and any changes in fair value of cost method investments are recorded under the caption "other income, net" in the accompanying consolidated statements of income.

Financial Instruments

The Company has various financial instruments, including cash and cash equivalents, accounts receivable, accounts receivable-unbilled, accounts payable, accrued liabilities, and deferred revenue. The carrying amounts of these financial instruments approximate fair value because of the short term maturity or short term nature of such instruments. The Company also has marketable securities, which are recorded at approximate fair value based on quoted market prices or alternative pricing sources (see Note 4 – Marketable Securities).

Advertising

The Company expenses the costs of advertising as incurred. Advertising expense for the years ended December 31, 2018, 2017, and 2016 was approximately \$721,000, \$868,000, and \$824,000, respectively, and is included under the caption "sales and marketing expense" in the accompanying consolidated statements of income.

Shipping and Handling Costs

Shipping and handling costs that are associated with our products and services are included in cost of revenues.

Income Taxes

Income taxes are accounted for using the asset and liability method, whereby deferred tax assets and liabilities are determined based on the temporary differences between the financial statement and tax bases of assets and liabilities measured at tax rates that will be in effect for the year in which the differences are expected to affect taxable income. Management evaluates all available evidence, both positive and negative, to determine whether, based on the weight of that evidence, a valuation allowance is needed. Future realization of the tax benefit of an existing deductible temporary difference or carryforward ultimately depends on the existence of sufficient taxable income of the appropriate character within the carryback or carryforward period available under the tax law. There

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

are four possible sources of taxable income that may be available under the tax law to realize a tax benefit for deductible temporary differences and carryforwards: 1) future reversals of existing taxable temporary differences, 2) future taxable income exclusive of reversing temporary differences and carryforwards, 3) taxable income in prior carryback year(s) if carryback is permitted under the tax law, and 4) tax-planning strategies that would, if necessary, be implemented to realize deductible temporary differences or carryforwards prior to their expiration. Management reviews the realizability of its deferred tax assets each reporting period to identify whether any significant changes in circumstances or assumptions have occurred that could materially affect the realizability of deferred tax assets. As of December 31, 2018, the Company had established a valuation allowance of \$311,000 for the portion of its net deferred tax assets that are not more likely than not expected to be realized. The Company accounts for income tax uncertainties using a more-likely-than-not recognition threshold based on the technical merits of the tax position taken. Tax positions that meet the more-likely-than-not recognition threshold are measured in order to determine the tax benefit to be recognized in the financial statements. The Company expenses any penalties or interest associated with tax obligations as general and administrative expenses and interest expense, respectively.

Earnings per Share

Basic earnings per share is computed by dividing the net income available to common shareholders for the period by the weighted average number of common shares outstanding during the period. Diluted earnings per share is computed by dividing the net income for the period by the weighted average number of common and common equivalent shares outstanding during the period. Common equivalent shares are composed of incremental common shares issuable upon the exercise of stock options and restricted share units subject to vesting. The dilutive effect of common equivalent shares is included in diluted earnings per share by application of the treasury stock method. Common equivalent shares that have an anti-dilutive effect on diluted net income per share were excluded from the calculation of diluted weighted average shares outstanding for the years ended December 31, 2018, 2017, and 2016.

Concentrations of Credit Risk and Significant Customers

The Company's credit risks relate primarily to cash and cash equivalents, marketable securities, and accounts receivable. The Company places its temporary excess cash investments in high quality, short-term money market instruments. At times, such investments may be in excess of the FDIC insurance limits. Marketable securities consist primarily of investment grade corporate debt securities and government sponsored enterprise debt securities.

The Company sells its products and services to various companies in the healthcare industry that are primarily located in the United States. Customer credit worthiness evaluations are performed on an ongoing basis, and the Company generally requires no collateral from customers. An allowance for doubtful accounts is maintained for potentially uncollectible accounts receivable. The Company did not have any single customer representing over 10% of net revenues or accounts receivable during 2018, 2017, or 2016.

Stock Based Compensation

As of December 31, 2018, the Company maintains two stock based compensation plans under which awards are outstanding, as described in Note 11. The Company accounts for stock based compensation using the fair-value based method for costs related to share-based payments, including stock options and restricted share units. The Company uses the Black Scholes option pricing model for calculating the fair value of option awards issued under its stock based compensation plan. The Company measures compensation cost of restricted share units based on the closing fair market value of the Company's stock on the date of grant. Stock based compensation cost is measured at the grant date, based on the fair value of the award that is ultimately expected to vest, and is recognized as an expense over the requisite service period. The Company recognizes tax benefits from stock based compensation if an excess tax benefit is realized. Excess tax benefits are reflected in the statement of income as a component of the provision for income taxes when realized.

Recently Issued Accounting Pronouncements Not Yet Adopted

In February 2016, the FASB issued ASU 2016-02, *Leases (ASC 842)*, which supersedes the lease requirements in ASC 840, *Leases*. ASC 842 requires lessees to recognize assets and liabilities for most leases and provide enhanced disclosures. The Company will adopt ASC 842 effective January 1, 2019 using a modified retrospective approach. As permitted under the transition guidance, we will carry forward the assessment of whether our contracts contain or are leases, classification of our leases, and remaining lease terms. Based on our portfolio of leases as of January 1, 2019, approximately \$5.0 million of lease assets and liabilities relating to real estate will be recognized on our balance sheet upon adoption. Additionally, we anticipate recording a material lease asset and liability upon the commencement date of our new corporate headquarters of approximately \$24 million. Except as set forth above, we do not anticipate that the adoption of ASC 842 will have any significant impact on the Company's consolidated financial position and results of operations. We are substantially complete with our implementation efforts.

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

In June 2016, the FASB issued ASU 2016-03, *Financial Instruments—Credit Losses (ASC 326): Measurement of Credit Losses on Financial Instruments*, which amends guidance on reporting credit losses for assets held at amortized cost basis and available for sale debt securities. For assets held at amortized cost basis, ASC 326 eliminates the probable initial recognition threshold in current GAAP and, instead, requires an entity to reflect its current estimate of all expected credit losses. The standard will be effective for the first interim period within annual reporting periods beginning after December 15, 2019. The Company will adopt this ASU on January 1, 2020 and is currently evaluating the impact that adoption of this ASU will have on the Company’s consolidated financial position and results of operations.

2. SHAREHOLDERS’ EQUITY

Common Stock

The Company is authorized to issue up to 75 million shares of common stock. The number of common shares issued and outstanding as of December 31, 2018 and 2017 was approximately 32.3 million and 31.9 million, respectively.

Preferred Stock

The Company is authorized to issue up to 10 million shares of preferred stock in one or more series, having the relative voting powers, designations, preferences, rights and qualifications, limitations or restrictions, and other terms as the Board of Directors may fix in providing for the issuance of such series, without any vote or action of the shareholders.

3. EARNINGS PER SHARE

The following table sets forth the computation of basic and diluted earnings per share for the three years ended December 31, 2018 (in thousands, except per share amounts):

	Year Ended December 31,		
	2018	2017	2016
Numerator:			
Income from continuing operations	\$ 13,251	\$ 8,838	\$ 4,791
Income (loss) from discontinued operations	18,966	1,166	(1,036)
Net income	<u>\$ 32,217</u>	<u>\$ 10,004</u>	<u>\$ 3,755</u>
Denominator:			
Weighted-average shares outstanding	32,264	31,861	31,721
Effect of dilutive shares	71	335	347
Weighted-average diluted shares	<u>32,335</u>	<u>32,196</u>	<u>32,068</u>
Earnings (loss) per share – basic:			
Continuing operations	\$ 0.41	\$ 0.27	\$ 0.15
Discontinued operations	0.59	0.04	(0.03)
Earnings per share - basic	<u>\$ 1.00</u>	<u>\$ 0.31</u>	<u>\$ 0.12</u>
Earnings (loss) per share – diluted:			
Continuing operations	\$ 0.41	\$ 0.27	\$ 0.15
Discontinued operations	0.59	0.04	(0.03)
Earnings per share - diluted	<u>\$ 1.00</u>	<u>\$ 0.31</u>	<u>\$ 0.12</u>

Potentially dilutive shares representing approximately 91,000, 58,000, and 38,000 shares of common stock for the years ended December 31, 2018, 2017, and 2016, respectively, were excluded from the calculation of diluted earnings per share because their effect would have been anti-dilutive.

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

4. MARKETABLE SECURITIES

At December 31, 2018 and 2017, the fair value of marketable securities, which were all classified as available for sale, included the following (in thousands):

	December 31, 2018			
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value
Level 2:				
Corporate debt securities	\$ 31,521	\$ —	\$ (23)	\$ 31,498
Government-sponsored enterprise debt securities	2,999	—	—	2,999
Total	<u>\$ 34,520</u>	<u>\$ —</u>	<u>\$ (23)</u>	<u>\$ 34,497</u>
	December 31, 2017			
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value
Level 2:				
Corporate debt securities	\$ 41,900	\$ 1	\$ (39)	\$ 41,862
Government-sponsored enterprise debt securities	4,488	1	(1)	4,488
Total	<u>\$ 46,388</u>	<u>\$ 2</u>	<u>\$ (40)</u>	<u>\$ 46,350</u>

The carrying amounts of the marketable securities reported in the consolidated balance sheets approximate fair value based on quoted market prices or alternative pricing sources and models utilizing market observable inputs. As of December 31, 2018, the Company does not consider any of its marketable securities to be other than temporarily impaired. During the years ended December 31, 2018 and 2017, the Company did not reclassify any items out of accumulated other comprehensive income to net income. All investments in marketable securities are classified as a current asset on the balance sheet because the underlying securities mature within one year from the balance sheet date.

5. REVENUE RECOGNITION AND SALES COMMISSIONS

Adoption of ASC 606, Revenue from Contracts with Customers

On January 1, 2018, the Company adopted ASC 606 using the modified retrospective approach applied to contracts not completed as of January 1, 2018. As such, results for reporting periods beginning after January 1, 2018 are presented under ASC 606, while prior period amounts continue to be reported in accordance with ASC 605.

The cumulative effect of the changes made to the Company's consolidated January 1, 2018 balance sheet in connection with the adoption of ASC 606 was as follows (in thousands):

<u>Balance Sheet</u>	Balance at December 31, 2017	ASC 606 Adjustments	Balance at January 1, 2018
<u>Assets</u>			
Unbilled receivables	\$ 1,327	\$ 31	\$ 1,358
Prepaid royalties, net	16,137	(902)	15,235
Other prepaid expenses and other current assets	8,330	(2,900)	5,430
Current assets of discontinued operations	6,125	(274)	5,851
Deferred commissions	—	12,552	12,552
Deferred tax assets	45	(45)	—
Non-current assets of discontinued operations	28,073	3,166	31,239
<u>Liabilities</u>			
Deferred revenue, current	64,938	(4,488)	60,450
Current liabilities of discontinued operations	6,772	(1,374)	5,398
Deferred tax liabilities	—	5,205	5,205
Deferred revenue, noncurrent	6,287	(2,848)	3,439
<u>Shareholders' equity</u>			
Retained earnings	17,542	15,132	32,674

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The impact of adopting ASC 606 on the Company's consolidated balance sheet as of December 31, 2018 and statements of income for the year ended December 31, 2018 was as follows (in thousands):

Balance Sheet	December 31, 2018		
	As reported	Balances without Adoption of ASC 606	Effect of Change Higher/(Lower)
<u>Assets</u>			
Prepaid royalties, net	\$ 13,596	\$ 14,801	\$ (1,205)
Other prepaid expenses and other current assets	18,016	20,167	(2,151)
Deferred commissions	16,470	—	16,470
<u>Liabilities</u>			
Deferred revenue, current	66,061	70,796	(4,735)
Deferred revenue, noncurrent	2,868	6,210	(3,342)
<u>Shareholders' equity</u>			
Retained earnings	32,373	29,382	2,991

Income Statement	Year Ended December 31, 2018		
	As reported	Balances without Adoption of ASC 606	Effect of Change Higher/(Lower)
Revenues, net	\$ 231,616	\$ 230,876	\$ 740
<u>Costs and expenses</u>			
Cost of revenues (excluding depreciation and amortization)	96,014	95,711	303
Sales and marketing	35,698	39,008	(3,310)
Operating income	15,491	11,744	3,747
Income from continuing operations before income tax provision	16,575	12,828	3,747
Income tax provision	3,324	2,568	756
Income from continuing operations	13,251	10,260	2,991
Net income	32,217	29,226	2,991

Revenue Recognition

Revenues are recognized when control of the promised goods or services is transferred to the customer in an amount that reflects the consideration the Company expects to be entitled in exchange for transferring those goods or services.

Revenue is recognized based on the following five step model:

- Identification of the contract 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, the Company satisfies a performance obligation

The following table represents revenues included in continuing operations disaggregated by revenue source for the year ended December 31, 2018 (in thousands). Sales taxes are excluded from revenues.

Business Segments	Year Ended December 31, 2018		
	Workforce Solutions	Provider Solutions	Consolidated
Subscription/SaaS services	\$ 184,926	\$ 35,542	\$ 220,468
Professional services	5,213	5,935	11,148
Total revenues, net	<u>\$ 190,139</u>	<u>\$ 41,477</u>	<u>\$ 231,616</u>

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Subscription/SaaS services revenues primarily consist of fees in consideration of providing customers access to one or more of our SaaS-based solutions and/or courseware subscriptions, as well as for license arrangements, all of which include routine customer support and technology enhancements. Revenue is generally recognized over time during the contract term beginning when the service is made available to the customer. Subscription/SaaS contracts are generally non-cancelable, one to five years in length, and billed annually, semi-annually, quarterly, or monthly in advance.

Professional services revenues primarily consist of fees for implementation services, consulting, custom courseware development, and training. The majority of our professional services contracts are billed in advance based on a fixed price basis, and revenue is recognized over time as the services are performed. For both subscription/SaaS services and professional services, the time between billing the customer and when performance obligations are satisfied is not significant.

Our contracts with customers often contain multiple performance obligations. For these contracts, the Company accounts for individual performance obligations separately if they are distinct. The contract price, which represents transaction price, is allocated to the separate performance obligations on a relative standalone selling price basis. We generally determine standalone selling prices based on the standard list price for each product, taking into consideration certain factors, including contract length and the number of subscribers within the contract.

We receive payments from customers based on billing schedules established in our contracts. Accounts receivable - unbilled represent contract assets related to our conditional right to consideration for subscription/SaaS and professional services contracts where performance has occurred under the contract. Accounts receivable are primarily comprised of trade receivables that are recorded at the invoice amount, net of an allowance for doubtful accounts, when the right to consideration becomes unconditional. Other receivables, which are included within Accounts Receivable, include receivables from certain content partners and are not material. For the years ended December 31, 2018 and 2017, the Company recognized \$1.0 million and \$1.6 million, respectively, in impairment losses on receivables and contract assets arising from the Company's contracts with customers.

Deferred revenue represents contract liabilities that are recorded when cash payments are received or are due in advance of our satisfaction of performance obligations. During the year ended December 31, 2018, we recognized revenues of approximately \$63.7 million from amounts included in deferred revenue at the beginning of the period. As of December 31, 2018, approximately \$447 million of revenue is expected to be recognized from remaining performance obligations under contracts with customers. We expect to recognize revenue on approximately 48% of these remaining performance obligations over the 12 months ending December 31, 2019, with the remaining amounts recognized thereafter.

Sales Commissions

Sales commissions earned by our sales organization are considered incremental and recoverable costs of obtaining a contract with a customer. The Company's sales commission plans for 2018 typically include multiple payments, including initial payments in the period a customer contract is obtained and subsequent payments either 15 or 27 months after the initial payment. Under ASC 606, costs to acquire contracts with customers, such as the initial sales commission payment, are capitalized and amortized consistent with the pattern of revenue recognition, whereas subsequent sales commission payments which require a substantive performance condition of the employee are expensed ratably through the payment date. In contrast, under ASC 605, initial sales commission payments were expensed in the period earned. Under ASC 606, the initial commission payments are capitalized in the period a customer contract is obtained and are amortized consistent with the transfer of the goods or services to the customer over the expected period of benefit. The capitalized contract cost is included under the caption "deferred commissions" in the accompanying consolidated balance sheet. The expected period of benefit is the contract term, except when the capitalized commission is expected to provide economic benefit to the Company for a period longer than the contract term, such as for new customer or incremental sales where renewals are expected and renewal commissions are not commensurate with initial commissions. Non-commensurate commissions are amortized over the greater of the contract term or expected customer relationship period, limited by the technological obsolescence period of approximately three years. The Company recorded amortization of deferred commissions of \$7.7 million for the year ended December 31, 2018, which is included in Sales and marketing expenses in the accompanying consolidated statement of income.

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

6. PROPERTY AND EQUIPMENT

Property and equipment consist of the following (in thousands):

	December 31,	
	2018	2017
Equipment	\$ 21,129	\$ 23,776
Leasehold improvements	11,572	4,951
Furniture and fixtures	3,992	3,757
Gross property and equipment	36,693	32,484
Accumulated depreciation and amortization	(20,827)	(24,392)
Property and equipment, net	<u>\$ 15,866</u>	<u>\$ 8,092</u>

Depreciation of property and equipment totaled approximately \$5.5 million, \$5.9 million, and \$6.1 million for the years ended December 31, 2018, 2017, and 2016, respectively.

7. GOODWILL AND INTANGIBLE ASSETS

The changes in the carrying amount of goodwill for the years ended December 31, 2018 and 2017 are as follows (in thousands):

	Workforce Solutions	Provider Solutions	Total
Balance at January 1, 2018	\$ 16,381	\$ 69,763	\$ 86,144
Changes in carrying amount	—	—	—
Balance at December 31, 2018	<u>\$ 16,381</u>	<u>\$ 69,763</u>	<u>\$ 86,144</u>

	Workforce Solutions	Provider Solutions	Total
Balance at January 1, 2017	\$ 16,381	\$ 69,230	\$ 85,611
Acquisition of Morrisey Associates, Inc.	—	533	533
Balance at December 31, 2017	<u>\$ 16,381</u>	<u>\$ 69,763</u>	<u>\$ 86,144</u>

During the year ended December 31, 2017, the Company recorded a measurement period adjustment of approximately \$533,000 of additional goodwill in relation to the August 2016 acquisition of Morrisey Associates, Inc.

Intangible assets other than goodwill are considered to have finite useful lives. Customer-related intangibles include customer relationships and are amortized over their estimated useful lives ranging from five to thirteen years. Other intangible assets include technology and patents and trade names and are amortized over their estimated useful lives ranging from five to nine years. Amortization of intangible assets was approximately \$9.1 million, \$9.2 million, and \$7.4 million for the years ended December 31, 2018, 2017, and 2016, respectively.

Identifiable intangible assets are comprised of the following (in thousands):

	As of December 31, 2018			As of December 31, 2017		
	Gross Amount	Accumulated Amortization	Net	Gross Amount	Accumulated Amortization	Net
Customer related	\$ 76,714	\$ (23,245)	\$ 53,469	\$ 76,714	\$ (17,033)	\$ 59,681
Other	15,572	(9,663)	5,909	16,524	(7,708)	8,816
Total	<u>\$ 92,286</u>	<u>\$ (32,908)</u>	<u>\$ 59,378</u>	<u>\$ 93,238</u>	<u>\$ (24,741)</u>	<u>\$ 68,497</u>

The expected future annual amortization expense for the years ending December 31, is as follows (in thousands):

2019	\$ 8,792
2020	8,139
2021	7,356
2022	6,277
2023	5,649
Thereafter	23,165
Total	<u>\$ 59,378</u>

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. DISCONTINUED OPERATIONS

On February 12, 2018, the Company divested its PX business to Press Ganey for \$65.2 million in cash (after giving effect to the post-closing working capital adjustment), resulting in a gain, net of tax, of \$19.0 million. Approximately \$6.55 million of the proceeds are being held in escrow for a period of time following the closing as a source of recovery for any indemnification claims by Press Ganey. The Company estimated the fair value of the contingent consideration asset based on the likelihood of receiving cash proceeds from the escrow. Such contingent consideration is remeasured at fair value based on changes in facts each period and are recorded within the “Gain on sale of discontinued operations” caption within the consolidated statements of income. The sale of the PX business was effected (i) by the contribution by the Company of specified assets and certain liabilities used in the PX business to a newly-formed wholly-owned subsidiary of the Company, and (ii) immediately thereafter, the sale by the Company to Press Ganey of all the outstanding equity interests of such wholly-owned subsidiary. In connection with such contribution, the Company retained certain liabilities related to the PX business.

This sale of the PX business resulted in the divestiture of the Company’s patient experience solutions business segment. The Company has classified the results of its PX business segment as discontinued operations in its consolidated statements of income and cash flows for all periods presented. Additionally, the related assets and liabilities are reported as assets and liabilities of discontinued operations in the Company’s consolidated balance sheet as of December 31, 2017.

The financial results of the PX business for the period prior to divestiture during the years ended December 31, 2018, 2017, and 2016 are presented in discontinued operations in the Company’s consolidated statements of income. The following table presents the financial results of the PX business (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Revenues, net	\$ 3,342	\$ 32,763	\$ 33,850
Operating costs and expenses:			
Cost of revenues (excluding depreciation and amortization)	1,982	18,792	21,668
Product development	554	3,751	4,664
Sales and marketing	460	4,310	4,074
Other general and administrative expenses	229	3,282	3,208
Depreciation and amortization	181	2,235	1,840
Total operating costs and expenses	3,406	32,370	35,454
Operating (loss) income	(64)	393	(1,604)
Other income	—	—	—
(Loss) income from discontinued operations before income tax provision	(64)	393	(1,604)
Income tax benefit	—	(773)	(568)
(Loss) income from discontinued operations, net of income taxes	\$ (64)	\$ 1,166	\$ (1,036)

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The following table presents the aggregate carrying amounts of the classes of assets and liabilities of discontinued operations as of December 31, 2017 (in thousands):

Carrying amounts of assets included as part of discontinued operations:	
Accounts receivable, net	\$ 4,158
Accounts receivable – unbilled	1,275
Prepaid royalties, net of amortization	37
Other prepaid expenses and other current assets	655
Current assets of discontinued operations	6,125
Property and equipment, net	901
Capitalized software development, net	2,683
Goodwill	24,154
Customer-related intangibles, net	276
Other intangible assets, net	42
Other assets	17
Long-term assets of discontinued operations	28,073
Total assets of discontinued operations in the consolidated balance sheet	<u>\$ 34,198</u>
Carrying amounts of liabilities included as part of discontinued operations:	
Accounts payable and accrued expenses	\$ 2,728
Accrued royalties	27
Deferred revenue	4,017
Current liabilities of discontinued operations	6,772
Deferred tax liabilities	1,971
Deferred revenue, noncurrent	15
Other long term liabilities	562
Long-term liabilities of discontinued operations	2,548
Total liabilities of discontinued operations in the consolidated balance sheet	<u>\$ 9,320</u>

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

9. BUSINESS SEGMENTS

The Company provides services to healthcare organizations and other members within the healthcare industry. The Company's services are focused on the delivery of workforce development products and services (HealthStream Workforce Solutions) and provider credentialing, privileging, call center, and enrollment products and services (HealthStream Provider Solutions).

The Company measures segment performance based on operating income before income taxes and prior to the allocation of certain corporate overhead expenses, interest income, interest expense, gains and losses from equity investments, and depreciation. The Unallocated component below includes corporate functions, such as accounting, human resources, legal, investor relations, administrative and executive personnel, depreciation, a portion of amortization, and certain other expenses, which are not currently allocated in measuring segment performance. The following is the Company's business segment information as of and for the years ended December 31, 2018, 2017, and 2016 (in thousands).

Revenues, net:	<u>2018</u>	<u>2017</u>	<u>2016</u>
Workforce Solutions	\$ 190,139	\$ 178,061	\$ 168,040
Provider Solutions	41,477	36,838	24,084
Total revenues, net	<u>\$ 231,616</u>	<u>\$ 214,899</u>	<u>\$ 192,124</u>

Operating income:	<u>2018</u>	<u>2017</u>	<u>2016</u>
Workforce Solutions	\$ 38,834	\$ 33,579	\$ 37,329
Provider Solutions	3,474	879	(2,443)
Unallocated	(26,817)	(25,051)	(27,715)
Total operating income	<u>\$ 15,491</u>	<u>\$ 9,407</u>	<u>\$ 7,171</u>

Segment assets *	<u>December 31, 2018</u>	<u>December 31, 2017</u>
Workforce Solutions	\$ 104,668	\$ 90,055
Provider Solutions	145,637	150,797
Discontinued operations	—	34,198
Unallocated	191,643	136,069
Total assets	<u>\$ 441,948</u>	<u>\$ 411,119</u>

* Segment assets include accounts and unbilled receivables, prepaid royalties, prepaid and other current assets, other assets, capitalized software development, deferred commissions, certain property and equipment, and intangible assets. Cash and cash equivalents and marketable securities are not allocated to individual segments, and are included within Unallocated. A significant portion of property and equipment assets are included within Unallocated.

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

10. INCOME TAXES

The provision (benefit) for income taxes is comprised of the following (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Current federal	\$ (79)	\$ 1,819	\$ 514
Current state	386	923	1,032
Deferred federal	2,661	(1,464)	1,176
Deferred state	356	24	239
Provision for income taxes	<u>\$ 3,324</u>	<u>\$ 1,302</u>	<u>\$ 2,961</u>

A reconciliation of income taxes at the statutory federal income tax rate to the provision for income taxes included in the accompanying consolidated statements of income is as follows (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Federal tax provision at the statutory rate	\$ 3,482	\$ 3,549	\$ 2,713
State income tax provision, net of federal benefit	658	491	757
Tax credits	(509)	(583)	(560)
Change in state valuation allowance	2	151	132
Tax Act revaluation of deferred tax balances	—	(1,680)	—
Stock compensation	(560)	(626)	(9)
Other	251	—	(72)
Provision for income taxes	<u>\$ 3,324</u>	<u>\$ 1,302</u>	<u>\$ 2,961</u>

Management periodically assesses the realizability of its deferred tax assets, and to the extent that a recovery is not likely, a valuation allowance is established to reduce the deferred tax asset to the amount estimated to be recoverable. At December 31, 2018, a valuation allowance of \$311,000 exists.

As of December 31, 2018, the Company had state net operating loss carryforwards of \$4.8 million. These loss carryforwards will expire in years 2030 through 2038. The Company is subject to income taxation at the federal and various state levels. The Company is subject to U.S. federal tax examinations for tax years 2015 through 2018. Loss carryforwards and credit carryforwards generated or utilized in years earlier than 2015 are also subject to examination and adjustment. The Company has completed examinations with the Internal Revenue Service for tax years 2013 and 2014.

On December 22, 2017, the President signed into law the Tax Cuts and Jobs Act (the Tax Act), reducing the U.S. corporate income tax rate to 21% effective January 1, 2018. Under ASC 740, the effects of new legislation are recognized in the period that includes the date of enactment.

Subsequent to the enactment of the Tax Act, the SEC staff issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act (SAB 118), which allows companies to record provisional amounts related to the effects of the Tax Act to the extent that a company's accounting for certain income tax effects of the Tax Act is incomplete but the company is able to determine a reasonable estimate during a measurement period not to extend beyond one year from the enactment date. The Company previously made provisional estimates for the impact of the Tax Act as of and for the year ended December 31, 2017 related to the remeasurement of our deferred tax liability. The impact was to remeasure our deferred tax liability by \$1.7 million as of December 31, 2017, which has been reflected in our effect tax rate reconciliation. As of December 31, 2018, we have completed our accounting and measurement analyses related to the income tax effects of the Tax Act, and no significant adjustments to the provisional amounts were recorded during the year ended December 31, 2018.

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

A reconciliation of the beginning and ending liability for gross unrecognized tax benefits at December 31, 2018 and 2017 are as follows (in thousands):

	December 31,	
	2018	2017
Balance at beginning of year	\$ 360	\$ 397
Additions for tax positions in the current year	2	10
Reductions for tax positions of prior years	(23)	(47)
Balance at end of year	<u>\$ 339</u>	<u>\$ 360</u>

The Company recognized a nominal amount for interest and penalties related to unrecognized tax benefits within the provision for income taxes during the years ended December 31, 2018 and 2017. Unrecognized tax benefits included tax positions of approximately \$339,000 and \$337,000 at December 31, 2018 and 2017, respectively, that if recognized would impact the Company's effective tax rate. The reduction for tax positions of prior years reflected in the table above as of December 31, 2018 relates to an item considered to be effectively settled due to lapse of the statute of limitations.

Deferred federal and state income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of deferred tax assets and deferred tax liabilities are as follows (in thousands):

	December 31,	
	2018	2017
Deferred tax assets:		
Allowance for doubtful accounts	\$ 297	\$ 488
Accrued liabilities	2,276	1,580
Tax credits	—	3,115
Stock based compensation	623	743
Deferred revenue	135	1,467
Depreciation	—	621
Basis difference on investments	396	327
Net operating loss carryforwards	291	215
Total deferred tax assets	4,018	8,556
Less: Valuation allowance	(311)	(310)
Deferred tax assets, net of valuation allowance	3,707	8,246
Deferred tax liabilities:		
Deductible goodwill	1,760	1,212
Nondeductible intangible assets	1,049	1,330
Prepaid assets	5,698	1,784
Capitalized software development	4,746	3,875
Depreciation	659	—
PX sale deferral	718	—
Total deferred tax liabilities	14,630	8,201
Net deferred tax liabilities (assets)	<u>\$ 10,923</u>	<u>\$ (45)</u>

The Company realized approximately \$540,000 of excess tax benefits related to stock based awards during the year ended December 31, 2018, which was reflected in the statement of income as a component of the provision for income taxes.

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

11. STOCK BASED COMPENSATION

Stock Incentive Plans

The Company has outstanding equity-based awards under its 2016 Omnibus Incentive Plan (2016 Plan) and 2010 Stock Incentive Plan (2010 Plan) (collectively, the 2016 Plan and the 2010 Plan, referred to as the Plans). In addition, the 2016 Plan authorizes the grant of options, restricted share units (RSUs), or other forms of stock based compensation to employees, officers, directors, and others, and such grants must be approved by the Compensation Committee of the Board of Directors. Options which have been granted under the Plans have terms of no more than ten years, with certain restrictions. The 2016 Plan allows the Compensation Committee of the Board of Directors to determine the vesting period and parameters of each grant. The vesting period of the options and RSUs granted has historically ranged from immediate vesting to annual vesting up to four years, generally beginning one year after the grant date. As of December 31, 2018, approximately 1.1 million shares of unissued common stock remained reserved for future stock incentive grants under the 2016 Plan. The Company issues new shares of common stock when options are exercised or when RSUs become vested.

Stock Option Activity

A summary of activity and various other information relative to stock options for the year ended December 31, 2018 is presented in the tables below (in thousands, except exercise price).

	Common Shares	Weighted- Average Exercise Price	Aggregate Intrinsic Value
Outstanding at beginning of period	376	\$ 7.44	
Granted	—	—	
Exercised	(357)	7.23	
Expired	—	—	
Forfeited	—	—	
Outstanding at end of period	<u>19</u>	<u>\$ 11.27</u>	<u>\$ 245</u>
Exercisable at end of period	<u>19</u>	<u>\$ 11.27</u>	<u>\$ 245</u>

The aggregate intrinsic value for stock options in the table above represents the total difference between the Company's closing stock price on December 31, 2018 (the last trading day of the year) of \$24.15 per share and the option exercise price, multiplied by the number of in-the-money options as of December 31, 2018. The weighted average remaining contractual term of options outstanding at December 31, 2018 was 0.3 years. Options exercisable at December 31, 2018 have a weighted average remaining contractual term of 0.3 years.

Other information relative to option activity during the three years ended December 31, 2018 is as follows (in thousands):

	2018	2017	2016
Total grant date fair value of stock options vested	\$ —	\$ —	\$ —
Total intrinsic value of stock options exercised	<u>\$ 6,130</u>	<u>\$ 1,973</u>	<u>\$ 820</u>
Cash proceeds from exercise of stock options	<u>\$ 2,582</u>	<u>\$ 413</u>	<u>\$ 145</u>

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Restricted Share Unit Activity

A summary of activity relative to RSUs for the year ended December 31, 2018 is as follows (in thousands, except weighted average grant date fair value):

	Number of RSU's	Weighted- Average Grant Date Fair Value	Aggregate Intrinsic Value
Outstanding at beginning of period	254	\$ 23.13	
Granted	163	25.65	
Vested	(73)	23.94	
Forfeited	(55)	23.28	
Outstanding at end of period	<u>289</u>	<u>\$ 24.31</u>	<u>\$ 6,975</u>

The aggregate fair value of RSUs that vested during the year ended December 31, 2018 and 2017, as of the respective vesting dates, was approximately \$1.8 million and \$1.9 million, respectively. A portion of RSUs that vested in 2018 and 2017 were net-share settled such that the Company withheld shares with value equivalent to the employees' minimum statutory obligation for the applicable income and other employment taxes, and remitted the cash to the appropriate taxing authorities. The total shares withheld for RSUs during 2018 and 2017 were 13,300 and 17,122, respectively, and were based on the value of the RSUs on their respective settlement dates as determined by the Company's closing stock price. Total payments related to RSUs for the employees' tax obligations to taxing authorities were approximately \$338,000 in 2018, \$412,000 in 2017, and \$316,000 in 2016, and are reflected as a financing activity within the consolidated statements of cash flows. These net-share settlements had the effect of share repurchases by the Company as they reduced and retired the number of shares that would have otherwise been issued as a result of the vesting and did not represent an expense to the Company.

Stock Based Compensation

Total stock based compensation expense, which is recorded in our consolidated statements of income, recorded for the years ended December 31, is as follows (in thousands):

	Years Ended December 31,		
	2018	2017	2016
Cost of revenues (excluding depreciation and amortization)	\$ 37	\$ 29	\$ 62
Product development	296	228	174
Sales and marketing	183	244	274
Other general and administrative	1,261	1,235	1,385
Total stock based compensation expense	<u>\$ 1,777</u>	<u>\$ 1,736</u>	<u>\$ 1,895</u>

The Company amortizes the fair value of all stock based awards, net of estimated forfeitures, on a straight-line basis over the requisite service period, which generally is the vesting period. As of December 31, 2018, total unrecognized compensation expense related to non-vested stock options and RSUs was approximately \$3.2 million, net of estimated forfeitures, with a weighted average expense recognition period remaining of 2.2 years. The Company realized approximately \$540,000 of excess tax benefits related to stock based awards during the year ended December 31, 2018, which was reflected in the statement of income as a component of the provision for income taxes.

Stock based compensation cost for RSUs is measured based on the closing fair market value of the Company's stock on the date of grant. Stock based compensation cost for stock options is estimated at the grant date based on the fair value calculated using the Black-Scholes method. The Company did not grant any stock options during the years ended December 31, 2018, 2017, or 2016.

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

12. EMPLOYEE BENEFIT PLAN

401(k) Plan

The Company has a defined-contribution employee benefit plan (401(k) Plan) incorporating provisions of Section 401(k) of the Internal Revenue Code. Employees must have attained the age of 21 and have completed thirty days of service to be eligible to participate in the 401(k) Plan. Under the provisions of the 401(k) Plan, a plan member may make contributions, on a tax-deferred basis, subject to IRS limitations. The Company elected to provide eligible employees with matching contributions totaling approximately \$1.3 million, \$764,000, and \$311,000 for the years ended December 31, 2018, 2017, and 2016, respectively.

13. DEBT

At December 31, 2018 and 2017, the Company had no debt outstanding.

Revolving Credit Facility

The Company entered into a Second Amendment to Revolving Credit Agreement (Revolving Credit Facility), amending the Revolving Credit Facility, dated as of December 31, 2018 with SunTrust Bank (SunTrust), extending the maturity date to November 24, 2020. Under the Revolving Credit Facility, the Company may borrow up to \$50.0 million, which includes a \$5.0 million swing line sub-facility and a \$5.0 million letter of credit sub-facility, as well as an accordion feature that allows the Company to increase the Revolving Credit Facility by a total of up to \$25.0 million, subject to securing additional commitments from existing lenders or new lending institutions. The obligations under the Revolving Credit Facility are guaranteed by each of the Company's subsidiaries. At the Company's election, the borrowings under the Revolving Credit Facility bear interest at either (1) a rate per annum equal to the highest of SunTrust's prime rate or 0.5% in excess of the Federal Funds Rate or 1.0% in excess of one-month LIBOR (the Base Rate), plus an applicable margin, or (2) the one, two, three, or six-month per annum LIBOR for deposits in the applicable currency (the Eurocurrency Rate), as selected by the Company, plus an applicable margin. The applicable margin for Eurocurrency Rate loans depends on the Company's funded debt leverage ratio and varies from 1.50% to 2.00%. The applicable margin for Base Rate loans depends on the Company's funded debt leverage ratio and varies from 0.50% to 1.50%. Commitment fees and letter of credit fees are also payable under the Revolving Credit Facility. Principal is payable in full at maturity on November 24, 2020, and there are no scheduled principal payments prior to maturity. The Company is required to pay a commitment fee ranging between 20 and 30 basis points per annum of the average daily unused portion of the Revolving Credit Facility, depending on the Company's funded debt leverage ratio.

The purpose of the Revolving Credit Facility is for general working capital needs, permitted acquisitions (as defined in the Loan Agreement), and for stock repurchase and/or redemption transactions that the Company may authorize.

The Revolving Credit Facility contains certain covenants that, among other things, restrict additional indebtedness, liens and encumbrances, changes to the character of the Company's business, acquisitions, asset dispositions, mergers and consolidations, sale or discount of receivables, creation or acquisitions of additional subsidiaries, and other matters customarily restricted in such agreements.

In addition, the Revolving Credit Facility requires the Company to meet certain financial tests, including, without limitation:

- a funded debt leverage ratio (consolidated debt/consolidated EBITDA) of not greater than 3.0 to 1.0; and
- an interest coverage ratio (consolidated EBITDA/consolidated interest expense) of not less than 3.0 to 1.0.

As of December 31, 2018, the Company was in compliance with all covenants. There were no balances outstanding on the Revolving Credit Facility as of December 31, 2018 and there were no borrowings under the Revolving Credit Facility during the year ended December 31, 2018.

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

14. LEASES

The Company has non-cancellable operating leases primarily for office space and hosting facilities. Some lease agreements contain provisions for escalating rent payments over the initial terms of the lease. The Company accounts for these leases by recognizing rent expense on a straight-line basis and adjusting the deferred rent expense liability for the difference between the straight-line rent expense and the amount of rent paid. The terms of the lease agreements generally provide the Company the option to renew. Total rent expense under all operating leases was approximately \$7.4 million, \$6.6 million, and \$4.1 million for the years ended December 31, 2018, 2017, and 2016, respectively.

Future rental payment commitments at December 31, 2018 under non-cancelable operating leases, with initial terms of one year or more, are as follows (in thousands):

2019	\$	2,156
2020		4,013
2021		3,766
2022		3,602
2023		3,678
Thereafter		26,085
Total minimum lease payments	\$	<u>43,300</u>

15. COLLABORATIVE ARRANGEMENT

The Company participated in a collaborative arrangement, SimVentures™, with Laerdal Medical A/S (Laerdal Medical), which ended effective March 1, 2018. Prior to the termination of this collaborative arrangement, the Company received 50 percent of the profits or losses generated from the collaborative arrangement. For the year ended December 31, 2018, the Company recorded \$391,000 of revenues and \$187,000 of expenses related to the collaborative arrangement. For the year ended December 31, 2017, the Company recorded \$2.2 million of revenues and \$1.2 million of expenses related to the collaborative arrangement. For the year ended December 31, 2016, the Company recorded \$2.7 million of revenues and \$1.4 million of expenses related to the collaborative arrangement.

16. LITIGATION

In connection with its business, the Company is from time to time involved in various legal actions. The litigation process is inherently uncertain and it is possible that the resolution of such matters might have a material adverse effect upon the financial condition and/or results of operations of the Company. However, in the opinion of the Company's management, matters currently pending or threatened against the Company are not expected to have a material adverse effect on the financial position or results of operations of the Company.

17. NON-MARKETABLE EQUITY INVESTMENTS

Non-marketable equity investments are accounted for using the equity method when the Company can exercise significant influence over the investee. Non-marketable equity investments where the Company is not able to exercise significant influence over the investee are accounted for under the cost method. ASU 2016-01, *Financial Instruments – Overall (Subtopic 825-10)*, became effective for the Company as of January 1, 2018 and requires equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income. For the year ended December 31, 2018, the Company recorded a \$1.3 million reduction to the carrying value of a cost method investment due to a change in fair value, based on observable prices from an orderly transaction for a similar investment made in this investee. The fair value adjustment is included in "Other (loss) income, net" in the accompanying consolidated statements of income. The aggregate carrying amount of all cost method investments was \$2.1 million and \$2.5 million as of December 31, 2018 and December 31, 2017, respectively, which carrying value the Company evaluates for impairment at each reporting period. The fair value of a cost method investment is not estimated if there are no identified events or changes in circumstances that may have a significant adverse effect on the fair value of the investment.

HEALTHSTREAM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

18. SUBSEQUENT EVENTS

On January 10, 2019, the Company acquired the outstanding equity of Providigm, LLC, a Denver-based company focused on quality assurance and performance improvement in healthcare, primarily serving skilled nursing facilities, for \$18.0 million in cash, subject to a post-closing working capital adjustment. In addition, up to an additional \$500,000 in cash may be paid contingent upon the performance of Providigm during an 18-month period following closing. The acquisition will be accounted for using the acquisition method of business combination under ASC 805, *Business Combinations*. The initial accounting for the business combination is incomplete due to the timing of the acquisition. Therefore, we are unable disclose certain information required by ASC 805. We will provide preliminary purchase price allocation information in our Quarterly Report on Form 10-Q for the quarter ending March 31, 2019.

Item 9. *Changes in and Disagreements with Accountants on Accounting and Financial Disclosure*

None.

Item 9A. *Controls and Procedures*

Evaluation of Disclosure Controls and Procedures

HealthStream's chief executive officer and principal financial officer have reviewed and evaluated the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) promulgated under the Securities Exchange Act of 1934 (the Exchange Act)) as of December 31, 2018. Based on that evaluation, the chief executive officer and principal financial officer have concluded that HealthStream's disclosure controls and procedures were effective to ensure that the information required to be disclosed by the Company in the reports the Company files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and the information required to be disclosed in the reports the Company files or submits under the Exchange Act was accumulated and communicated to the Company's management, including its principal executive and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act, and for assessing the effectiveness of internal control over financial reporting. The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. The Company's internal control over financial reporting includes those policies and procedures that: (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2018. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control-Integrated Framework (2013 Framework). Management's assessment included an evaluation of the design of our internal control over financial reporting and testing of the operational effectiveness of our internal control over financial reporting. Management believes that, as of December 31, 2018, the Company's internal control over financial reporting was effective based on those criteria. The Company's independent registered public accounting firm, Ernst & Young LLP, has issued an audit report on the Company's internal control over financial reporting, which appears in Item 8 of this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

There were no changes in HealthStream's internal control over financial reporting that occurred during the fourth quarter of 2018 that have materially affected, or that are reasonably likely to materially affect, HealthStream's internal control over financial reporting.

Item 9B. *Other Information*

None.

PART III

Item 10. *Directors, Executive Officers and Corporate Governance*

Information as to directors of the Company and corporate governance is incorporated by reference from the information to be contained in our proxy statement for the 2019 Annual Meeting of Shareholders (2019 Proxy Statement) that we will file with the Securities and Exchange Commission within 120 days of the end of the fiscal year to which this report relates. Pursuant to General Instruction G(3), certain information concerning executive officers of the Company is included in Part I of this Form 10-K, under the caption “Executive Officers of the Registrant.”

Item 11. *Executive Compensation*

Incorporated by reference from the information to be contained in the Company’s 2019 Proxy Statement.

Item 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters*

Incorporated by reference from the information to be contained in the Company’s 2019 Proxy Statement.

Item 13. *Certain Relationships and Related Transactions, and Director Independence*

Incorporated by reference from the information to be contained in the Company’s 2019 Proxy Statement.

Item 14. *Principal Accounting Fees and Services*

Incorporated by reference from the information to be contained in the Company’s 2019 Proxy Statement.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a)(1) Financial Statements

Reference is made to the financial statements included in Item 8 to this Report on Form 10-K.

(a)(2) Financial Statement Schedules

All schedules are omitted because they are not applicable or the required information is shown in the Consolidated Financial Statements or the notes thereto.

(a)(3) Exhibits

<u>Number</u>	<u>Description</u>
2.1 (1)	<u>Membership Interest Purchase Agreement, dated as of February 12, 2015, between HealthStream, Inc., Littrell Holdings, Inc., HealthLine Systems, Inc., the Shareholders of HealthLine Systems, Inc., and Dan Littrell in his individual capacity and as the Shareholders Representative.</u>
2.2 (2)	<u>Stock Purchase Agreement, by and between Echo, Inc. and Morrisey Holdings, Inc., dated August 8, 2016.</u>
2.3 (16)	<u>Membership Interest Purchase Agreement, by and between HealthStream, Inc. and Press Ganey Associates, Inc., dated February 12, 2018.</u>
3.1*	<u>Fourth Amended and Restated Charter of HealthStream, Inc.</u>
3.2 (8)*	<u>Second Amended and Restated Bylaws of HealthStream, Inc.</u>
4.1*	<u>Form of certificate representing the common stock, no par value per share, of HealthStream, Inc.</u>
4.2*	<u>Reference is made to Exhibits 3.1 and 3.2.</u>
10.1^ (6)	<u>2010 Stock Incentive Plan, effective as of May 27, 2010</u>
10.2^*	<u>Form of Indemnification Agreement</u>
10.3^ (3)	<u>Executive Employment Agreement, dated July 21, 2005, between HealthStream, Inc. and Robert A. Frist, Jr.</u>
10.4^ (4)	<u>Form of HealthStream, Inc. Non-Qualified Stock Option Agreement (Employees) under 2010 Stock Incentive Plan</u>
10.5^ (4)	<u>Form of HealthStream, Inc. Incentive Stock Option Agreement (Employees) under 2010 Stock Incentive Plan</u>
10.6^ (4)	<u>Form of HealthStream, Inc. Non-Qualified Stock Option Agreement (Directors) under 2010 Stock Incentive Plan</u>
10.7^ (5)	<u>Form of HealthStream, Inc. Restricted Share Unit Agreement (Officers) under 2010 Stock Incentive Plan</u>
10.8^ (5)	<u>Form of HealthStream, Inc. Restricted Share Unit Agreement (Non-Employee Director) under 2010 Stock Incentive Plan</u>
10.9 (7)	<u>Revolving Credit Agreement, dated November 24, 2014, by and among HealthStream, Inc., the several banks and other financial institutions and lenders from time to time party thereto and SunTrust Bank, as administrative agent, issuing bank, and swingline lender</u>
10.10^	<u>Summary of Director and Executive Officer Compensation</u>
10.11^ (10)	<u>Letter Agreement, dated as of September 24, 2015, between HealthStream, Inc. and Michael Sousa.</u>
10.12^ (11)	<u>2016 Omnibus Incentive Plan.</u>
10.13^ (12)	<u>Form of HealthStream, Inc. Restricted Share Unit Agreement (Officers) under 2016 Omnibus Incentive Plan.</u>
10.14^ (12)	<u>Form of HealthStream, Inc. Restricted Share Unit Agreement (Non-Employee Director) under 2016 Omnibus Incentive Plan.</u>
10.15 (13)	<u>Lease Agreement, dated April 3, 2017, by and between HealthStream, Inc. and Capitol View Joint Venture.</u>
10.16 (14)	<u>First Amendment to Revolving Credit Agreement, dated November 13, 2017, by and between HealthStream, Inc. and SunTrust Bank.</u>
10.17 (15)	<u>Second Amendment to Revolving Credit Agreement, dated as of December 31, 2018, by and between HealthStream, Inc. and SunTrust Bank.</u>
10.18^	<u>HealthStream, Inc. 2018 Executive and Corporate Management Cash Incentive Bonus Plan</u>
10.19^	<u>HealthStream, Inc. 2018 Provider Solutions Cash Incentive Bonus Plan</u>
10.20^ (9)	<u>Form of HealthStream, Inc. Restricted Share Unit Agreement (Performance) under 2016 Omnibus Plan between HealthStream, Inc. and J. Edward Pearson</u>

- 10.21[^] (9) Form of HealthStream, Inc. Restricted Share Unit Agreement (Performance) under 2016 Stock Incentive Plan between HealthStream, Inc. and Michael Sousa
- 21.1 Subsidiaries of HealthStream, Inc.
- 23.1 Consent of Independent Registered Public Accounting Firm
- 31.1 Certification of the Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- 31.2 Certification of the Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- 32.1 Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
- 32.2 Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
- 101.1 INS XBRL Instance Document
- 101.1 SCH XBRL Taxonomy Extension Schema
- 101.1 CAL XBRL Taxonomy Extension Calculation Linkbase
- 101.1 DEF XBRL Taxonomy Extension Definition Linkbase
- 101.1 LAB XBRL Taxonomy Extension Label Linkbase
- 101.1 PRE XBRL Taxonomy Extension Presentation Linkbase
- * Incorporated by reference to Registrant's Registration Statement on Form S-1, as amended (Reg. No. 333-88939).
- [^] Management contract or compensatory plan or arrangement
- (1) Incorporated by reference from exhibit filed on our Current Report on Form 8-K, dated February 13, 2015.
- (2) Incorporated by reference from exhibit filed on our Current Report on Form 8-K, dated August 8, 2016.
- (3) Incorporated by reference from exhibit filed on our Current Report on Form 8-K, dated July 25, 2005.
- (4) Incorporated by reference from exhibit filed on our Current Report on Form 8-K, dated June 1, 2010.
- (5) Incorporated by reference from exhibit filed on our Quarterly Report on Form 10-Q, for the quarterly period ended March 31, 2012 filed with the SEC on April 30, 2012.
- (6) Incorporated by reference to Appendix B of the Company's Definitive Proxy Statement filed with the SEC on April 29, 2010.
- (7) Incorporated by reference from exhibit filed on our Current Report on Form 8-K, dated November 25, 2014.
- (8) Incorporated by reference from exhibit filed on our Current Report on Form 8-K, dated October 23, 2015.
- (9) Incorporated by reference from exhibit filed on our Current Report on Form 8-K, dated May 16, 2018.
- (10) Incorporated by reference from exhibit filed on our Quarterly Report on Form 10-Q, for the quarterly period ended September 30, 2015, filed with the SEC on October 30, 2015.
- (11) Incorporated by reference from exhibit filed on our Current Report on Form 8-K, dated May 31, 2016.
- (12) Incorporated by reference from exhibit filed on our Quarterly Report on Form 10-Q, for the quarterly period ended March 31, 2017, filed with the SEC on May 1, 2017.
- (13) Incorporated by reference from exhibit filed on our Quarterly Report on Form 10-Q, for the quarterly period ended June 30, 2017, filed with the SEC on July 31, 2017.
- (14) Incorporated by reference from exhibit filed on our Current Report on Form 8-K, dated November 14, 2017.
- (15) Incorporated by reference from exhibit filed on our Current Report on Form 8-K, dated January 2, 2019.
- (16) Incorporated by reference from exhibit filed on our Current Report on Form 8-K, dated February 12, 2018.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on this 25th day of February, 2019.

HEALTHSTREAM, INC.

By: /s/ ROBERT A. FRIST, JR.
Robert A. Frist, Jr.
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

<u>Signature</u>	<u>Title(s)</u>	<u>Date</u>
<u>/s/ ROBERT A. FRIST, JR.</u> Robert A. Frist, Jr.	Chief Executive Officer and Chairman (Principal Executive Officer)	February 25, 2019
<u>/s/ GERARD M. HAYDEN, JR.</u> Gerard M. Hayden, Jr.	Chief Financial Officer and Senior Vice President (Principal Financial and Accounting Officer)	February 25, 2019
<u>/s/ THOMPSON DENT</u> Thompson Dent	Director	February 25, 2019
<u>/s/ FRANK GORDON</u> Frank Gordon	Director	February 25, 2019
<u>/s/ C. MARTIN HARRIS</u> C. Martin Harris	Director	February 25, 2019
<u>/s/ JEFFREY L. MCLAREN</u> Jeffrey L. McLaren	Director	February 25, 2019
<u>/s/ DALE POLLEY</u> Dale Polley	Director	February 25, 2019
<u>/s/ LINDA REBROVICK</u> Linda Rebrovick	Director	February 25, 2019
<u>/s/ MICHAEL SHMERLING</u> Michael Shmerling	Director	February 25, 2019
<u>/s/ WILLIAM STEAD</u> William Stead	Director	February 25, 2019
<u>/s/ DEBORAH TAYLOR TATE</u> Deborah Taylor Tate	Director	February 25, 2019

HealthStream, Inc. (the Company)**Summary of Director and Executive Officer Compensation**

I. Director Compensation. Directors who are employees of the Company do not receive additional compensation for serving as directors of the Company. For fiscal year 2019, each director will receive an annual retainer of \$5,000, except for the Audit Committee Chair and Nominating and Corporate Governance Chair, who will receive an additional annual retainer of \$7,500, and the Compensation Committee Chair, who will receive an additional annual retainer of \$2,000. Non-employee directors will also receive a \$20,000 flat-fee, except for members of the Audit Committee who will receive \$22,500, for board and committee meeting attendance and participation in lieu of per meeting fees.

In addition to the cash compensation set forth above, each non-employee director is eligible to receive a nondiscretionary annual grant of restricted share units. The restricted share units are granted annually and vest ratably over a three year period.

II. Executive Officer Compensation. The following table sets forth the current base salaries and fiscal 2018 performance bonuses provided to our executive officers, including the individuals who the Company expects to be its Named Executive Officers for 2019.

Executive Officer	Current Base Salary	Fiscal 2018 Bonus Amount
Robert A. Frist, Jr.	\$335,000	\$134,000
J. Edward Pearson	\$330,000	\$132,000
Michael Sousa	\$330,000	\$77,000
Gerard M. Hayden, Jr. ¹	\$288,000	\$86,000
Jeffrey D. Cunningham	\$284,000	\$85,000
Michael M. Collier	\$265,000	\$80,000
Trisha L. Coady	\$250,000	\$40,000
M. Scott McQuigg	\$250,000	\$ -

Base salary adjustments for 2019, bonus targets for 2019 cash bonuses, and 2019 equity grants for executive officers have not yet been determined by the Compensation Committee.

III. Additional Information. The foregoing information is summary in nature. Additional information regarding Director and Named Executive Officer compensation will be contained in the Company's 2019 Proxy Statement.

¹ As previously disclosed on the Current Report on Form 8-K filed by us on October 22, 2018, Mr. Hayden intends to resign as an officer of the Company following the filing of our 2018 Annual Report on Form 10-K.

HealthStream, Inc.
Board of Directors
Compensation Committee
2018 Executive and Corporate Management Cash Incentive Bonus Plan

Overview:

Pursuant to the HealthStream, Inc. 2016 Omnibus Incentive Plan, the Compensation Committee (the “Committee”) of the Board of Directors of HealthStream, Inc. (the “Company”) hereby establishes this 2018 Executive and Corporate Management Cash Incentive Bonus Plan (the “Plan”). The Plan is the cash-based, short-term incentive portion of HealthStream's incentive compensation structure for certain executive officers, as well as the vice presidents, associate vice presidents, and directors who are assigned to a corporate function, as opposed to a business unit specific function (such individuals referred to collectively as “Management”). The purpose of the Plan is to specify appropriate opportunities to earn a cash bonus with respect to the Company’s 2018 fiscal year in order to reward Management for the Company’s financial performance during fiscal year 2018 and to further align their interests with those of the shareholders of the Company.

Definitions:

- **Actual Operating Income before bonuses** – The Company’s Operating Income achieved in fiscal 2018, excluding bonuses.
- **Annual Bonus** – The annual bonus paid to Management after the Committee determines the applicable financial measure has been achieved.
- **Incremental Operating Income** - Actual Operating Income before bonuses less Target Operating Income.
- **Operating Income** – The Company’s operating income for the 2018 fiscal year calculated in accordance with generally accepted accounting principles under ASC 606 and consistent with the Company’s past practice and presented in the Company’s audited financial statements, provided the following expenses are excluded from the calculation of Operating Income: acquisition and divestiture expenses for transactions within the calendar year and operating income (loss) from acquisitions and divestitures consummated during the calendar year (the “Excluded Expenses”). The Committee has the negative discretion to include the Excluded Expenses in the calculation of Operating Income.
- **Target Operating Income** – Operating Income for the 2018 fiscal year in an amount established by the Committee by resolution within the first 90 days of the Company’s 2018 fiscal year.

2018 Financial Measure and Plan Principles:

1. **The financial measure for 2018 is Operating Income** - Operating Income will be the financial measure for 2018.
2. **The Annual Bonus is funded by Incremental Operating Income** - The Annual Bonus will be earned from the amount of Incremental Operating Income.

The Plan*Eligibility*

Three groups are eligible for participation in the Plan:

- **Executive Team** – The maximum Annual Bonus that Executive Team members, other than the Chief Executive Officer of HealthStream and the President & Chief Operating Officer of HealthStream, shall be eligible to receive under the Plan shall be an amount equal to 30% of such member’s base salary; provided the CEO and the President & COO shall be eligible to receive an amount equal to 40% of their base salary. Unless otherwise excluded below, the Executive Team eligible for participation includes the

Chief Executive Officer, President & Chief Operating Officer, and Senior Vice Presidents of the Company.

- **Leadership Team (Vice Presidents and Associate Vice Presidents)** – The maximum Annual Bonus that Vice Presidents and Associate Vice Presidents of the Business Unit shall be eligible to receive under the Plan shall be an amount equal to 16% of such Vice President or Associate Vice President's base salary.
- **Directors** - The maximum Annual Bonus that Directors of the Business Unit shall be eligible to receive under the Plan shall be an amount equal to 4% of such Director's base salary. For purposes of clarity, Directors do not include members of the Board of Directors, but are management-level employees of the Company.
- **Employment Requirements** – Participants in the Plan who were employed with the Company through December 31, 2018 shall be eligible to receive bonus payments, if any, under the Plan regardless of whether such employees are employed on the date such payments are actually made. Notwithstanding the foregoing, in the case of death or disability, the participant's pro rata share from January 1, 2018 through the date of participant's death or disability shall be awarded.
- **Exclusions** - Members of the Executive Team with a commission based incentive compensation plan shall not be eligible to participate in the Plan. Additionally, members of the Executive Team who are eligible to participate in any one of the following shall not be eligible to participate in the Plan: (i) the 2018 Workforce Development Cash Bonus Incentive Plan, (ii) the 2018 Echo, Inc. Cash Bonus Incentive Plan, or (iii) 2018 PX Cash Bonus Incentive Plan.

Payout

Payouts under the Plan shall be determined as follows:

1. Incremental Operating Income will be determined by subtracting the Target Operating Income from Actual Operating Income before bonuses. The Incremental Operating Income will then be multiplied by 30% of base salary for each member of the Executive Team other than the Chief Executive Officer and the President & COO, 40% of base salary for the CEO and the President & COO, 16% of base salary for each member of the Leadership Team, and 4% of base salary for each Director.
2. Any Annual Bonus payouts made to the Executive Team, Leadership Team, or Directors pursuant to the Plan shall be payable at such time as bonuses are paid generally to executive officers of the Company.

HealthStream, Inc.
Board of Directors
Compensation Committee
2018 Provider Solutions Cash Incentive Bonus Plan
For Business Segment Management

Overview:

Pursuant to the HealthStream, Inc. 2016 Omnibus Incentive Plan, the Compensation Committee (the “Committee”) of the Board of Directors of HealthStream, Inc. (the “Company”) hereby establishes this 2018 Provider Solutions Cash Incentive Bonus Plan for the Company-Level Leadership Team and Directors (the “Plan”). The Plan is a cash-based, short-term incentive portion of the Company’s Provider Solutions segment (the “Business Unit”) incentive compensation structure for Company-level Vice Presidents, Associate Vice Presidents, and Directors who are assigned to the Business Unit (“Management”) of the Business Unit. The purpose of the Plan is to specify appropriate opportunities to earn a cash bonus with respect to the (i) Business Unit’s 2018 fiscal year performance and/or (ii) the Company’s overall 2018 fiscal year performance, each in order to reward Management for the Business Unit’s and/or the Company’s financial performance during fiscal year 2018 and to further align his interest with those of the shareholders of the Company.

Definitions:

- **Provider Solutions Actual Operating Income before bonuses** – The Business Unit’s Operating Income achieved in fiscal 2018, excluding bonuses.
- **Enterprise Actual Operating Income before bonuses** – The Company’s Operating Income achieved in fiscal 2018, excluding bonuses.
- **Annual Bonus** – The annual bonus paid to Management after the Committee determines the applicable financial measure has been achieved.
- **Provider Solutions Incremental Operating Income** – Provider Solutions Actual Operating Income before bonuses less Provider Solutions Target Operating Income.
- **Enterprise Incremental Operating Income** – Enterprise Actual Operating Income before bonuses less Enterprise Target Operating Income.
- **Provider Solutions Operating Income** – The Business Unit’s Operating Income for the 2018 fiscal year calculated in accordance with generally accepted accounting principles under ASC 606 and consistent with the Company’s past practice and presented in the Company’s audited financial statements, provided the following expenses are excluded from the calculation of Provider Solutions Operating Income: for acquisitions and divestitures within or directly impacting the Business Unit, acquisition and divestiture expenses for transactions within the calendar year and operating income (loss) from acquisitions and divestitures consummated during the calendar year (the “Excluded Expenses”). The Committee has the negative discretion to include the Excluded Expenses in the calculation of Provider Solutions Operating Income.
- **Enterprise Operating Income** - The Company’s Operating Income for the 2018 fiscal year calculated in accordance with generally accepted accounting principles under ASC 606 and consistent with the Company’s past practice and presented in the Company’s audited financial statements, provided the following expenses are excluded from the calculation of Operating Income: acquisition and divestiture expenses for transactions within the calendar year and operating income (loss) from acquisitions and divestitures consummated during the calendar year (the “Excluded Expenses”). The Committee has the negative discretion to include the Excluded Expenses in the calculation of Enterprise Operating Income.
- **Provider Solutions Target Operating Income** – Provider Solutions Operating Income for the 2018 fiscal year in an amount established by the Committee by resolution within the first 90 days of the Company’s 2018 fiscal year.

- **Enterprise Target Operating Income** – Enterprise Operating Income for the 2018 fiscal year in an amount established by the Committee by resolution within the first 90 days of the Company’s 2018 fiscal year.

2018 Financial Measure and Plan Principles:

1. **The financial measures for 2018 are Provider Solutions and/or Enterprise Operating Income** – Provider Solutions and/or Enterprise Operating Income will be the financial measure for 2018.
2. **The Annual Bonus is funded by Provider Solutions and/or Enterprise Incremental Operating Income** – The Annual Bonus will be earned from an amount of Provider Solutions and/or Enterprise Incremental Operating Income.

The Plan

Eligibility

Two groups are eligible for participation in the Plan:

- **Leadership Team (Vice Presidents and Associate Vice Presidents)** – The maximum Annual Bonus that Company-Level Vice Presidents and Associate Vice Presidents assigned to the Business Unit shall be eligible to receive under the Plan shall be an amount equal to 16% of such Vice President or Associate Vice President’s base salary, with that 16% being comprised as follows: 12.8% from Provider Solutions Incremental Operating Income and 3.2% from Enterprise Incremental Income. Therefore, 80% of each Vice President and Associate Vice President’s Annual Bonus is based on achieving and exceeding Provider Solutions Target Operating Income and the other 20% is based on achieving and exceeding Enterprise Target Operating Income.
- **Directors** - The maximum Annual Bonus that Company-Level Directors of the Business Unit shall be eligible to receive under the Plan shall be an amount equal to 4% of such Director’s base salary, with that 4% being comprised as follows: 3.2% from WFD Incremental Operating Income and 0.8% from Enterprise Incremental Income. Therefore, 80% of each Director’s Annual Bonus is based on achieving and exceeding WFD Target Operating Income and the other 20% is based on achieving and exceeding Enterprise Target Operating Income. For purposes of clarity, Directors do not include members of the Board of Directors, but are management-level employees of the Company.
- **Employment Requirements** – Participants in the Plan who were employed with the Company through December 31, 2018 shall be eligible to receive bonus payments, if any, under the Plan regardless of whether such employees are employed on the date such payments are actually made. Notwithstanding the foregoing, in the case of death or disability, the participant’s pro rata share from January 1, 2018 through the date of participant’s death or disability shall be awarded.
- **Exclusions** – Management with a commission based incentive compensation plan shall not be eligible to participate in the Plan. Additionally, Management who are eligible to participate in any one of the following shall not be eligible to participate: (i) the 2018 Executive & Corporate Management Cash Bonus Incentive Plan, or (ii) the 2018 Workforce Development Cash Bonus Incentive.
- **Company-level Vice Presidents, Associate Vice Presidents, and Directors.** Management includes all individuals who are considered to be Company-level (i.e., HealthStream enterprise-wide) Vice Presidents, Associate Vice Presidents, or Directors, as opposed to just vice presidents, associate vice presidents, and directors at the Business Unit-level. Given that the Business Unit is comprised of several companies from different acquisitions, the working job titles of Management may differ from the Company’s standard hierarchy and have not been fully standardized. Therefore, an individual who is considered a Director at the Company-level may have a different working job title at the Business Unit level. A list of Company-level Vice Presidents, Associate Vice Presidents, and Directors, along with their working job title at the Business Unit level is attached hereto as Exhibit A. This list is current as of March 15, 2018 and may be updated from time to time to reflect changes in employment (i.e., promotions, resignations, etc.)

Payout

Payouts under the Plan shall be determined as follows:

1. Provider Solutions Incremental Operating Income will be determined by subtracting the Provider Solutions Target Operating Income from Actual Operating Income before bonuses. The Provider Solutions Incremental Operating Income will then be multiplied by 12.8% for each Company-level Vice President and Associate Vice President and 3.2% for each Company-level Director.
2. Enterprise Incremental Operating Income will be determined by subtracting the Enterprise Target Operating Income from Enterprise Actual Operating Income before bonuses. The Enterprise Incremental Operating Income will then be multiplied by 3.2% for each Company-Level Vice President and Associate Vice President and 0.8% for each Company-level Director.
3. Any such Annual Bonus made to Management pursuant to the Plan shall be payable at such time as bonuses are paid generally to executive officers of the Company.

Exhibit A

Management entitled to participate in the Plan (current as of March 15, 2018)

Company-Level Vice Presidents:

Paul Holbel, CTO

Company-Level Associate Vice Presidents:

Roger Platt, Verity VP

Vicki Searcy, Verity VP

Company-Level Directors:

Bruce Durbin	Sr. Director, Quality & Cloud Services
Jennifer Grijalva	Director, Implementations & Upgrades
Lisa Rothmuller	Sr. Director, Client Consulting
Mark Westbrook	Sr. Director, Client Success
Purti Barve	Sr. Development Team Lead
Manshi Nawab	Data Analyst Lead
Brandi Zevenbrgem	Sr. Product Manager
Suzy Deller	AVP, Verity Customer Experience
Mark Karger	Sr. Director, Verity PMO
Sean Harvey	Sr. Manager, Data Services
Joe Deluca	Director, Verity Customer Support
Erik Vedvik	Sr. Director, Data Services
Steve Larsen	Sr. Director, Customer Support
Terry Griffith	AVP, Verity Training & Learning Solutions
Bill Locke	VP, Software Development
David Van Linge	AVP, Software Development
Sarah Moraes	Sr. Director, Verity Marketing
Scott Zoldan	VP, Software Development
Andrew Huber	Sr. Director, Professional Services
Ryan, Clay	Division Controller
Nordstrom, Tawnya	Director of Human Resources

SUBSIDIARIES OF HEALTHSTREAM, INC.

<u>Names Under Which We Do Business</u>	<u>State or Other Jurisdiction of Incorporation or Organization</u>
Decision Critical, Inc.	Texas
Verity, Inc., a HealthStream Company (f/k/a Echo, Inc.)	Tennessee
Morrisey Associates, Inc.	Illinois
Performance Management Services, Inc.	California
Nursing Registry Consultants Corporation	Delaware
Health Care Compliance Strategies, Inc.	New York
HealthStream Acquisition I, Inc.	Tennessee
HealthStream Acquisition II, Inc.	Tennessee
Providigm, LLC	Colorado

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement (Form S-8 No. 333-211725) pertaining to the 2016 Omnibus Incentive Plan of HealthStream, Inc.,
- (2) Registration Statement (Form S-8 No. 333-167241) pertaining to the 2010 Stock Incentive Plan of HealthStream, Inc.,
- (3) Registration Statement (Form S-8 No. 333-37440) pertaining to the 1994 Employee Stock Option Plan, 2000 Stock Incentive Plan and Employee Stock Purchase Plan of HealthStream, Inc., and
- (4) Registration Statement (Form S-3 No. 333-206897) of HealthStream, Inc., as amended by that Post-Effective Amendment No. 1 to Registration Statement (Form POS AM No. 333-206897);

of our reports dated February 25, 2019, with respect to the consolidated financial statements of HealthStream, Inc. and the effectiveness of internal control over financial reporting of HealthStream, Inc., included in this Annual Report (Form 10-K) of HealthStream, Inc. for the year ended December 31, 2018.

/s/ Ernst & Young LLP

Nashville, Tennessee

February 25, 2019

CERTIFICATION

I, Robert A. Frist, Jr., certify that:

1. I have reviewed this annual report on Form 10-K of HealthStream, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date : February 25, 2019

/s/ ROBERT A. FRIST, JR.
Robert A. Frist, Jr.
Chief Executive Officer

CERTIFICATION

I, Gerard M. Hayden, Jr., certify that:

1. I have reviewed this annual report on Form 10-K of HealthStream, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date : February 25, 2019

/s/ GERARD M. HAYDEN, JR.
Gerard M. Hayden, Jr.
Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of HealthStream, Inc. (the “Company”) on Form 10-K for the year ending December 31, 2018, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), Robert A. Frist, Jr., Chief Executive Officer of the Company certifies, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ ROBERT A. FRIST, JR.
Robert A. Frist, Jr.
Chief Executive Officer
February 25, 2019

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of HealthStream, Inc. (the “Company”) on Form 10-K for the year ending December 31, 2018, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), Gerard M. Hayden, Jr., Chief Financial Officer of the Company certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ GERARD M. HAYDEN, JR.

Gerard M. Hayden, Jr.
Chief Financial Officer
February 25, 2019

