

The ever-growing U.S. population currently exceeds
328 million people¹



In addition, the HITECH Act was passed to further expand data breach notifications and the protection of electronic protected health information (ePHI). So why was the passage of the HITECH Act so important? It stimulated EHR adoption in the U.S.²



HEALTHCARE

As the cost of healthcare continues to rise, healthcare stakeholders must find ways to be more cost efficient in the delivery of healthcare to meet the demands of a large and growing population. In an attempt to meet this challenge, value-based healthcare, which gives incentives to both patients and providers to utilize efficiencies by containing healthcare costs while improving quality, has been slowly replacing fee-for-service models. The use of electronic health records (EHRs) is one step in the right direction. Enter the HITECH (Health Information Technology for Economic and Clinical Health) Act of 2009 as a stimulus to adopt the use of EHRs and supporting technology.²

Actively E-prescribing³



E-PRESCRIBING

OFFICE-BASED
PHYSICIANS



**Using EHR systems
with certain advanced
functionalities³**



HOSPITALS

ELECTRONIC PHYSICIAN
NOTES & IMAGING RESULTS

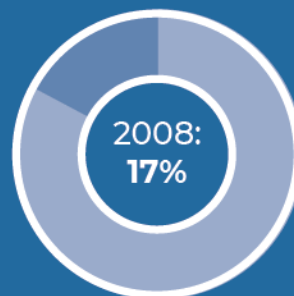


**Adoption of EHR systems
with the same advanced
functionalities³**



DOCTORS

ADOPTION OF
EHR SYSTEMS



What encompasses HIT?

HIT refers to the electronic systems healthcare professionals and patients utilize to store, share, and analyze health information. HIT includes⁴:

- Electronic health records (EHRs)
- Personal health records (PHRs)
- Electronic prescribing (E-prescribing)
- Encrypted electronic information for privacy and security

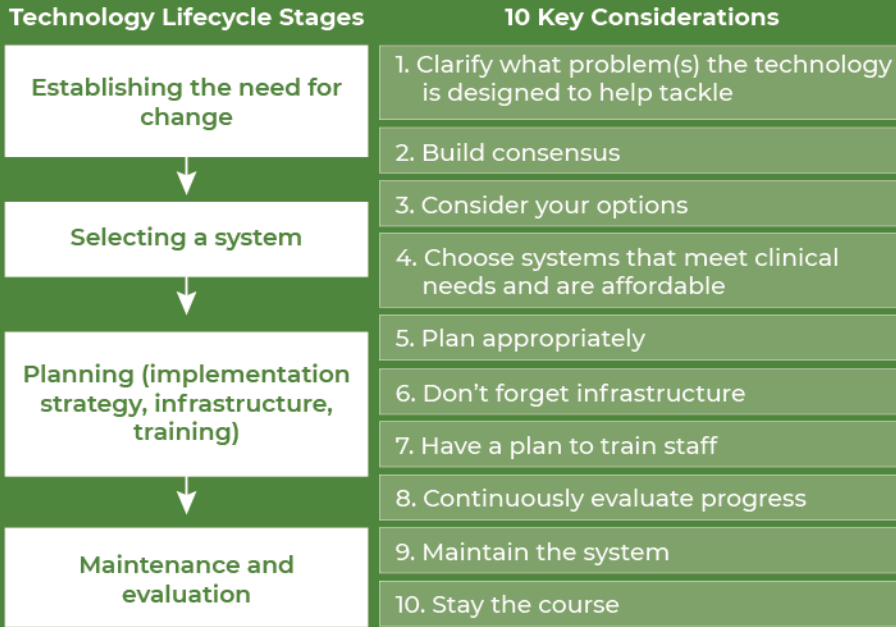
Benefits of HIT⁴

- Faster, more accurate prescriptions
- Rapid information sharing
- Reduced paperwork
- Reduced unnecessary tests
- Better follow-up, better follow-through
- Secure access to information

Today, it would be hard to imagine a health system, provider, or pharmacy that has not engaged in HIT. Due to the size of data storage needed, most HIT systems store the data in the cloud.



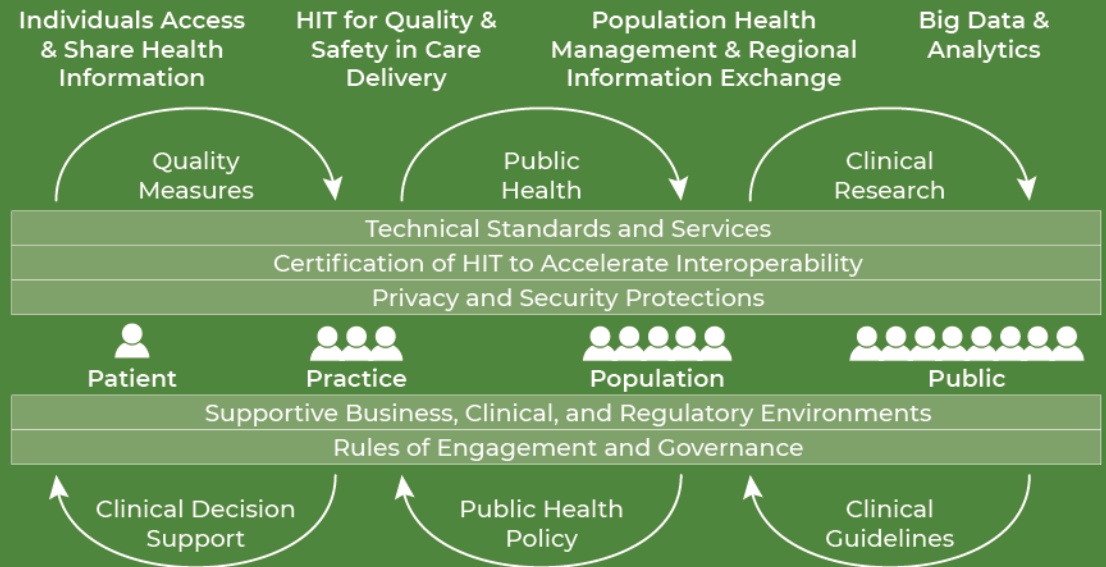
There are four technology lifecycle stages coupled with ten key considerations when developing and implementing a HIT platform.⁵



The ultimate goal of HIT is to provide accurate, standardized, accessible, and exchangeable health information from all sources that accompanies patients every step of their patient journey. In technical terms, healthcare delivery seeks interoperability, which refers to the capacity to send and receive a patient's health information from multiple sources between different systems and locations with its integrity intact.⁶

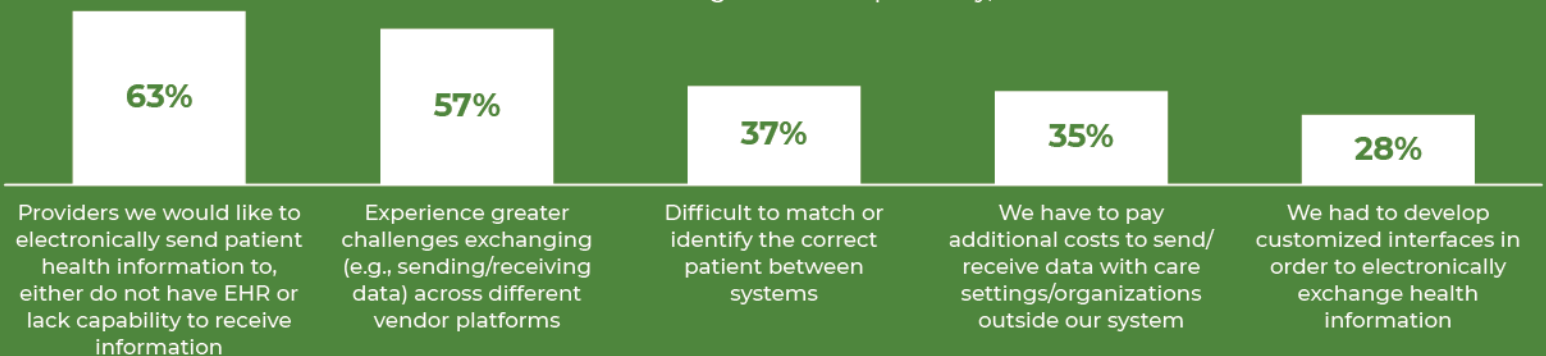


By 2024, the HIT goal is to have interoperability transform our health system from a static one to a learning health system which will allow the healthcare system to continuously learn and advance the goal of improved healthcare. This "learning health system" should reduce the time from evidence to practice, which will enable ubiquitous connectivity, lower healthcare costs, improve population health, empower consumers, and drive innovation.⁷

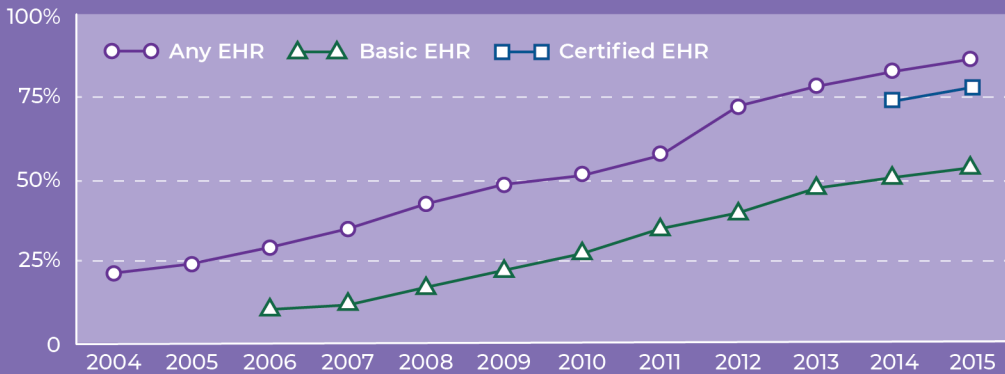


There are still challenges to comprehensive interoperability.

Barriers to Exchange and Interoperability, 2017⁶



Percentage of EHR system type adopted by ambulatory providers⁸



Office-based EHR adoption rates have been steadily increasing since its inception. With EHRs being integrated into daily activities for healthcare professionals, it is no wonder that the burnout rate attributed to HIT continues to rise across the office staff.



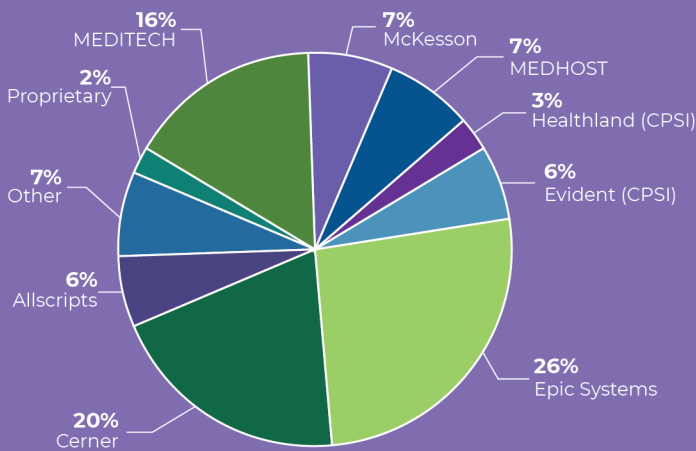
For physicians specifically, the top three reasons for burnout were⁹:

- EHR added frustration to the day
- Insufficient time for documentation
- Inordinate amount of time performing “work after work” at home

EHRs heavily contribute to physician burnout because of challenges in efficiently navigating the user interface and using multiple HIT platforms.⁹

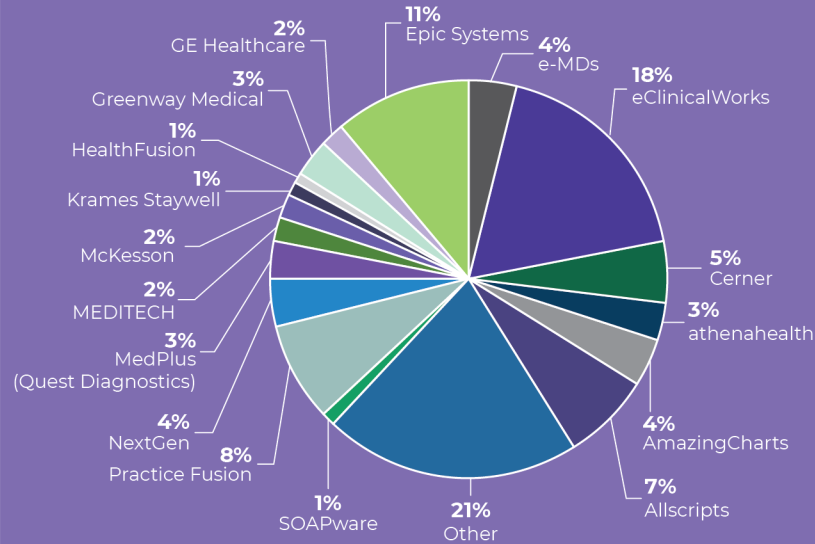
- 70%** Physicians⁹
- 50%** Nurse Care Managers¹⁰
- 36%** Front Office Staff¹⁰

Inpatient EHR vendors by health system/IDN (n=357)⁸



While the majority of IDNs, health systems, and large hospitals prefer on-premises, server-based platform solutions working with one or two main HIT vendors, close to 40% are managing between 4 and 6 vendors across their inpatient care sites. This vendor fragmentation contributes to the patchy data exchange and interoperability landscape that plagues even the largest and most technically savvy organizations not to mention physician burnout.

EHR vendors in primary care (n=16,032)⁸



Physicians are somewhat more likely to seek out cloud-based options that require less upfront investment from smaller EHR companies.



While it is relatively easy to spot the reasons for physician burnout with EHR technology, the solutions may not be transparent. Here are 5 strategies to potentially prevent physician burnout, boost physician satisfaction, and foster an aligned work environment between physicians and EHR technology¹¹:

- Incorporate medical scribes into office visits
- Simplify federal documentation and billing requirements
- Invest in EHR-integrated voice recognition software
- Encourage physicians to participate in EHR training
- Specialize EHR interfaces and clinical workflows



MEANINGFUL USE¹²

Within the context of HIT, meaningful use is a term defined as minimum government standards for EHRs. Meaningful use outlines how clinical patient data should be exchanged between healthcare providers, between providers and insurers, and between providers and patients.

3 Stages of Meaningful Use:

STAGE 1

Focused on promoting the adoption of certified EHR technologies (CEHRT)

STAGE 2

Expanded upon Stage 1 criteria by encouraging the meaningful use of CEHRT

STAGE 3

Focused on using CEHRT to improve health outcomes

While the meaningful use program was a catalyst for successful implementation of EHRs, the requirements to prove meaningful use became too cumbersome. The program was overhauled in 2018 and renamed from the EHR Incentive Program to the Medicare and Medicaid Promoting Interoperability Program with the intent of reflecting a focus on improving interoperability, flexibility, and patient access to health information.¹²

Merit-based Incentive Payment System (MIPS)

MIPS performance category weights in 2020¹⁴:

QUALITY



45% of MIPS Score

COST



15% of MIPS Score

**IMPROVEMENT
ACTIVITIES**



15% of MIPS Score

**PROMOTING
INTEROPERABILITY**

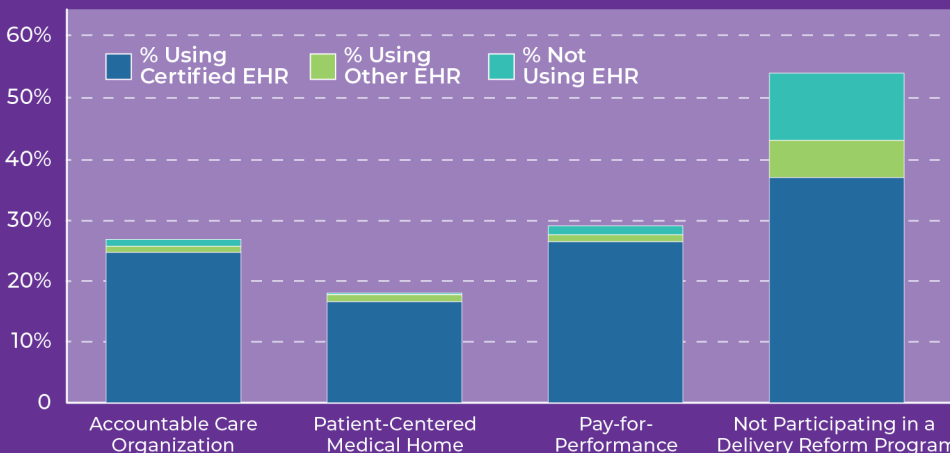


25% of MIPS Score

There are 6 collection types for quality measures under MIPS¹⁵:

- Electronic Clinical Quality Measures (eCQMs)
- MIPS Clinical Quality Measures (CQMs)
- Qualified Clinical Data Registry (QCDR) Measures
- Medicare Part B claims measures
- CMS Web Interface measures
- The Consumer Assessment of Healthcare Providers and Systems (CAHPS) for MIPS survey

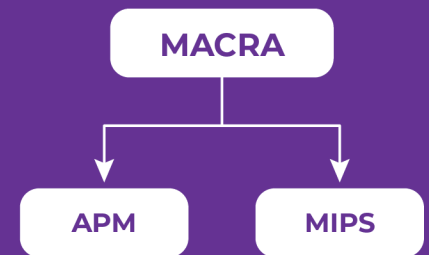
Percentage of physicians using EHR technology in value-based models⁸



The Quality Payment Program, in connection with the Promoting Interoperability Program, support high-quality, high-value care through the use of CEHRT. The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) rewards eligible clinicians who provide higher-value care through establishing the Quality Payment Program.¹³

Clinicians participate in the Quality Payment Program by one of two ways¹³:

- Merit-based Incentive Payment System (MIPS)
- Advanced Alternative Payment Models (Advanced APMs)



Advanced APMs

Advanced APMs are APMs that meet these 3 criteria¹⁶:

- 1 Require participants to use certified EHR technology;
- 2 Provide payment for covered professional services based on quality measures comparable to those used in the MIPS quality performance category; and
- 3 Either: (1) are a Medical Home Model expanded under CMS Innovation Center authority OR (2) require participants to bear a significant financial risk.

Advanced APMs offer a **5% payment** incentive for achieving certain thresholds.¹⁶

EHR adoption has surged among providers who participate in value-based care.⁸



There are many benefits and efficiencies for patients to engage in EHRs.¹⁷

1 IN 3 INDIVIDUALS

who have seen a healthcare provider in the last year experienced at least one of the following gaps in information exchange



Had to bring an x-ray, MRI, or other type of test result with them to the appointment



Had to redo a test or procedure because the earlier test results were not available



Had to tell a healthcare provider about their medical history because they had not gotten their records from another healthcare provider



Had to provide their medical history again because their chart could not be found



Had to wait for test results longer than they thought reasonable

Individuals are using their online access to address information gaps and manage their health.¹⁷



67%

used it to monitor their health



33%

Shared it with someone else



35%

Downloaded it

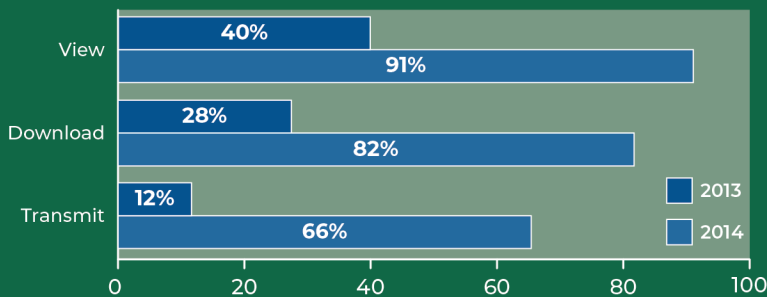


12%

Sent it to an app/PHR

Nearly all hospitals allow patients to view their health information electronically. Most hospitals also allow patients to download and transmit their information.

Percentage of hospitals providing online access, by type¹⁹



Meaningful use as a source of growth¹⁹



Over 75% of eligible providers and 90% of eligible hospitals have received incentive payments for participating in the Meaningful Use Program.



Meaningful use requires participating providers and hospitals in Stage 2 to enable patients with a way to view, download, and transmit their health information.

Many physicians support patients updating their health records¹⁹

About 80%



or more health records contain inaccuracies.

Patients can serve as a second pair of eyes on their data to improve the quality of their EHRs.

Online access boosts patient retention¹⁹



58% would stay

58% say that having online access to their medical records has had a positive effect on their decision to stay with their physicians.



41% would switch

41% would be willing to switch doctors to gain online access to their own medical records.

Patients can perform many tasks with access to their EHR.¹⁸



Check to make sure information is correct and complete



Have medical history available if changing doctors or visiting specialists



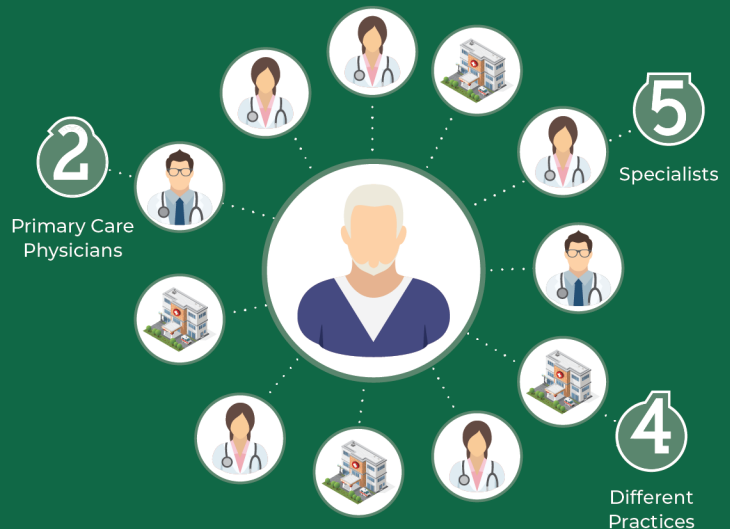
Keep track of important health information (e.g., vaccination records and test results)



Keep track of all medicines and dosages

Individuals can serve as the hub of information exchange¹⁷

In a given year, the average Medicare patient visits...



What this means for patients...¹⁸



Less paperwork



Faster, more accurate prescriptions



Easy, electronic access to their medical records



Fewer unnecessary tests and procedures



Better care coordination among healthcare providers



Greater control over their health

Examples of transferable health information being shared in venues that benefit patients, care providers, regulators, and payers⁶

HCA Healthcare

Automated a process for closing the surgical referral loop. A surgeon referring a patient to an HCA hospital for surgery sends the relevant patient records in advance of admission. Upon patient discharge, HCA automatically sends updated information back to the referring surgeon, who can provide informed follow-up care.

Nemaha County Hospital

Reduced area readmissions by sharing continuity-of-care documents that help all local care providers, affiliated with the hospital or not, stay informed with complete and up-to-date patient health records.

Tennessee Hospital Association

Launched a network that has put 88% of the state's hospitals in touch with each other, exchanging real-time admission, discharge and transfer (ADT) alerts that help providers track a patient's progress through the system and produce more informed and better coordinated care decisions. The network tool is also accessible by facilities without EHRs.

UMass Memorial Health Care partnering with Reliant Medical Group

Aggregate community organization information on a website that allows providers to connect patients to many kinds of social services by ZIP code. This initiative concentrates on identifying the social determinants of health to connect individuals to needed community organizations and providers. Website data provide a window into the primary population health needs for the community by ZIP code.

Dignity Health

Leverages open standards and a novel deployment of packaged technologies to allow providers to find, retrieve, and use clinical information from non-Dignity Health providers across the communities it serves within providers' workflow to make a positive impact on care delivery. Being an anchor participant in the eHealth Exchange since 2012 has allowed Dignity Health to accelerate connectivity with other health systems, government agencies, and national retail clinics. Utilization shows an average of 100,000 care summaries sent and received per day.

Kaiser Permanente (KP)

Exchanged medical records with other providers via HIE networks more than 100 million times in 2018, averaging more than one inbound and about one outbound exchange for every patient encounter. Individual health information is accessible through KP's online presence and mobile apps, which offer patients easy and convenient access to personal health records including clinical visits, test results, immunizations, scheduling appointments, and medication refills.

Greater Houston Healthconnect

The regional health information exchange (HIE) responded to the emergency caused by the 2017 Hurricane Harvey by assisting doctors treating evacuees in area shelters. Healthconnect's staff used their portal to look up medication, diagnosis, allergies, and other critical data to keep people's chronic conditions under control and better treat emergent issues. The death toll might have been higher without their intervention.

Ochsner Health System

Now receives 10 records and sends out another 20 for every patient it sees, building from many connection points, including the recent ability to query records through the link between Commonwell and Carequality. The technical bridge between Epic and Cerner helped Ochsner (an Epic client) exchange vital patient data with more than 209 out-of-system providers in December 2018 alone.

Boston Children's Hospital

Developed and uses a chronic and acute care management system called TriVox Health to improve patient care. The web-based platform enables Children's Hospital clinics to employ electronic surveys to gather data remotely from multiple responders including patients, parents, school personnel, and ancillary physicians, and view the responses in multiple formats.

Hospitals and health systems have identified ways to exchange patient health information in a secure and timely manner that serves the interest of both the patient and provider, as demonstrated through these salient examples. However, there is still much work to be done to achieve consistency in HIT and interoperability on a national scale.

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