

Summary of Findings: Health IT Environmental Scan

2020 Health Information Technology (HIT) Survey of Healthcare Providers

The Pennsylvania Department of Human Services (DHS) Office of Medical Assistance Programs (OMAP) conducted a statewide survey in October and November of 2020 to determine the extent of Health Information Technology and Health Information Exchange (HIT/E) adoption and usage among Pennsylvania’s healthcare providers, to evaluate the degree of progress made since OMAP’s 2010 (baseline) HIT survey, and to identify the most common barriers to greater HIT/E use. By combining the results of this survey of office-based practices with those of the most recent (2018) American Hospital Association HIT survey of hospitals, OMAP has completed an HIT “environmental scan” that was requested by the Centers for Medicare and Medicaid Services (CMS) as a component of the State Medicaid Health Information Technology Plan.

Although OMAP is responsible for the administration of the Commonwealth’s Medicaid programs, the survey was open to all office-based practices in order to measure HIT usage for the entire ambulatory healthcare provider “universe.” Healthcare professionals representing a wide variety of solo and group practice types were invited to participate (one survey per practice) via three channels:

1. Various healthcare provider associations representing more than 39,000 individual providers and 1,900 multi-provider organizations in Pennsylvania;
2. PA Medicaid Promoting Interoperability Program participants (~8,000) and interested parties (~1,300); and
3. Healthcare provider licensee lists supplied by the Pennsylvania Department of State’s Bureau of Professional and Occupational Affairs. (More than 153,000 licensed providers were invited to take the survey through this channel.)

Hospitals Leading in HIT and HIE

The single most important measure of HIT advancement is the Electronic Health Record (EHR) adoption rate, or the percentage of a defined provider group that is actively utilizing an EHR. Pennsylvania’s inpatient hospitals have led the way, increasing from 89% using EHRs in 2010 to 98% by 2016. In recent years, hospitals have been using their EHR systems more extensively – increasing electronic documentation and order entry and succeeding in making dramatic increases in telehealth, medication tracking, and patient monitoring. Hospitals have also succeeded in expanding their electronic exchange of patient information. However, challenges remain. Hospitals say their top challenge with health information exchange (HIE) is lack of an EHR in practices with which they want to exchange information.

Office-based Practices Advancing

Office-based healthcare practices have lagged behind hospitals in EHR adoption, but there has been significant progress in the last ten years. These practices were the focal point of OMAP’s 2020 HIT environmental scan which was conducted via an in-depth survey. The practices surveyed were not limited to physical health physician practices. Instead, OMAP cast a wide net – including practices of dentists, psychologists, psychiatrists, chiropractors, therapists (physical, occupational, and respiratory), and optometrists, as well as facilities like labs, imaging centers, pharmacies, and nursing homes. To reach the goal of a complete medical record for each patient, treatment information from the full spectrum of providers needs to be shared.

Office-Based Practice Survey Response

OMAP received valid survey responses from 2,370 unique practices representing (employing) 23,185 individual practitioners. These responses included 31 from nursing home organizations representing a total of 199 campuses. Although 60% of the responses came from solo practitioners, the 40% that were from group practices account for 94% of all individual practitioners represented.

Each healthcare practice was assigned to one of eleven high-level “Care Areas” based on its provider type. (See Table 1.) Traditional medical physical health categories (primary, pediatric, and specialty combined) accounted for about a third (34.5%) of the survey responses and two-thirds (65.7%) of the practitioners represented. Behavioral health (20.5%), dental (15.3%), rehabilitation (9.0%) and chiropractic care (8.9%) accounted for over half the responses (53.7%) but less than a third (30.2%) of practitioners.

Table 1: Surveys by Care Area

Care Area	Examples of Included Provider Types	Number Surveys	Percent of Total	Number Practitioners	Percent of Total
Behavioral Health Care	Psychiatrists, Psychologists, BH/MH Therapists/Counselors	486	20.5%	3,288	14.2%
Specialty Medical Care	Physicians (Specialists, like Cardiologists, Urologists, etc.)	432	18.2%	12,613	54.4%
Dental Care	Dentists, Oral Surgeons, Orthodontists	362	15.3%	613	2.6%
Primary Medical Care	Physicians (Family/General/Internal Medicine), Physician Assistants, Nurse Practitioners, Nurse Midwives, Gynecologists, OB/GYN, FQHCs and look-alikes, RHCs, Urgent Care Centers, Free clinics, Veterans Affairs Clinics	312	13.2%	2,119	9.1%
Rehabilitation Care	Therapists (Physical, Occupational, Respiratory), Acupuncturists), Physical Medicine, Rehabilitation Hospital	214	9.0%	2,812	12.1%
Chiropractic Care	Chiropractors	211	8.9%	290	1.3%
Routine Eye Care	Optometrists	101	4.3%	157	0.7%
Pharmaceutical Care	Pharmacists	99	4.2%	359	1.5%
Pediatric Care	Pediatricians	74	3.1%	514	2.2%
Long-Term Care	Nursing Homes, Long Term Care practitioners (i.e. Home Health)	49	2.1%	244	1.1%
Unknown	(Usually solo physicians who did not specify their specialty)	25	1.1%	106	0.5%
Medical Diagnostic Services	Medical Laboratories, Imaging Facilities	5	0.2%	72	0.3%
Grand Total		2,370	100.0%	23,187	100.0%

EHR Adoption Varies Considerably

The 2020 survey, like the last one conducted by OMAP (2016), reveals very different EHR and HIE rates depending on the type of practice. Group practices have a higher EHR adoption rate than solo practices. Among group practices, the ones with the most practitioners, as well as those owned by a hospital or healthcare system, have a higher adoption rate than small practices and those independently owned. Physical health physician practices have a high adoption rate while behavioral health practices have a much lower rate. Practices of provider types included in the Medicaid Promoting Interoperability (PI) Program’s definition of “Eligible Professionals” (EP) have a higher EHR adoption rate than others, due (at least in part) to the federal grants that have been awarded through the PI program over the last decade to qualifying EPs to help them acquire and implement EHR systems. (“Eligible Professionals” include physicians, nurse practitioners, certified nurse-midwives, dentists, and physician assistants.)

Progress Over Ten Years

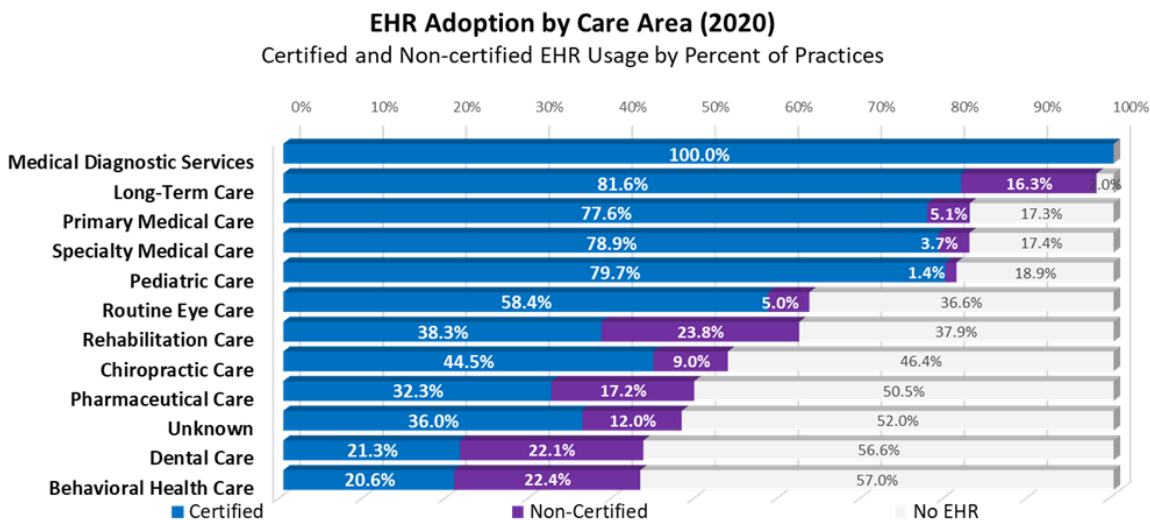
The 2020 provider survey indicates that EHR adoption for office-based EP-type practices (a mix of group and solo practices) was 68%, up from 58% in 2010. (The true increase is likely greater because the 2010 survey sample was very small and composed of a much different provider type mix, leading to an adoption rate that might be overstated.) However, this average practice adoption rate of 68% is somewhat misleading. Those practices that use EHRs employ 96% of all practitioners represented by the EP-type practices that answered the survey.

Many – but not all – EHRs are ONC-certified, meaning that they meet the Office of the National Coordinator for Health Information Technology’s “meaningful use” standards. Nearly 58% of surveyed EP-type practices, representing 94.3% of individual practitioners, use ONC-certified EHRs. An additional 10% (representing 1.7% of providers) use a non-certified EHR, for a total of 67.6% of practices and 96% of practitioners using an EHR of some sort.

When non-EP-type practices are included, overall EHR usage by practitioners employed is still very high. In fact, 85.8% of the 23,187 individual practitioners represented by the 2,370 valid surveys received in 2020 are employed by practices using certified EHRs, and another 6.7% of them are using non-certified EHRs, for a total of 92.5% of office-based practitioners using EHRs.

EHR Adoption by Care Area

Certified EHR adoption varies significantly among different categories of office-based practices, with medical diagnostic services reporting the highest rate (100%), followed by long-term care facilities (82%), pediatric care (80%), specialty medical care (79%), and primary medical care (78%). The provider categories least likely to have adopted certified EHRs are behavioral health (21%), dental care (21%), pharmacies (32%), rehabilitation care (physical therapists, etc.) (38%), and chiropractic care (45%). However, almost 24% of rehabilitation care practices, 22% of behavioral health care practices, 22% of dental practices, 17% of pharmacies, 16% of long-term care facilities, and 9% of chiropractors are using non-certified EHRs.



Physicians’ EHR Usage

Based on its 2020 survey, OMAP estimates that 78% of office-based physician practices in Pennsylvania are using EHRs. These practices account for 98% of the individual practitioners represented by all office-based physician

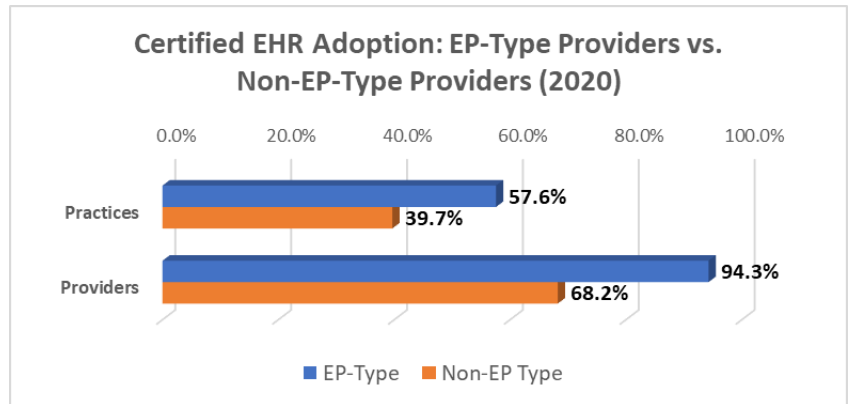
surveys, which compares favorably to the national rate of 86% reported by the ONC (based on 2017 data – the most recent available).

EHR Adoption in EP-type Practices vs. Others

Most of the provider types eligible for the Medicaid and/or Medicare PI programs are, as suspected, those with the highest rates of EHR adoption, while those with the lowest rates – notably behavioral health and long-term care – have not had the opportunity for federal incentive funds through these programs.

As seen in the graph below, about 58% of Medicaid EP-type practices are using certified EHRs, while only about 40% of other surveyed types of practices are doing so.

However, for both groups, the practices using certified EHRs are larger, and account for a much larger percentage of individual practitioners – 68% of non-EP type and 94% of EP-type practitioners.



Barriers to Adopting EHRs

For practices that have not adopted an EHR system, cost (“lack of capital resources to invest in EHR”) is the biggest concern by far.

The next-biggest reason is from practitioners who plan to retire soon and believe they will not see return on their investment. Many others are not convinced that EHR usage will result in benefits to them or their patients, and a number cite concerns that EHR implementation will overtax their staff, disrupt their business processes, or compromise patient privacy and/or security.

Growing EHR Satisfaction

As EHR systems have become more refined, evidence suggests greater user satisfaction. Practices that have been using an EHR were asked to indicate the top 3 barriers to maximizing EHR usage and optimization in their organization, but more practices (31%) responded that they are not experiencing any such barriers than those citing a particular barrier. Additionally, only 7% of practices (employing just 3% of practitioners) plan to switch EHR systems within the next 18 months, and the top reason provided was that the practice was merging with another. In 2016, 11% of practices, employing 12% of practitioners, planned to switch EHR systems.

EHR Features and Usage

Practices report that the features built into EHRs have not changed much between 2010 and 2020, but more practices have access to public health reporting from within their EHRs (27% vs. 12% in 2010). And, practices are using that functionality more. In 2010, only 11% said they used the public health reporting function most or all of the time. In 2020, the number almost quintupled to 52%. More practices are also using their EHR to view imaging results. Eighty percent are doing so most or all of the time in 2020, compared to 47% in 2010.

Usage of prescription features in general increased significantly between 2016 and 2020. In particular, E-prescribing of controlled substances has increased dramatically since 2016. Nearly half (46%) of EP-type practices (employing 72% of EP-type practitioners) said they e-prescribed these drugs in “all or most” cases in 2020, as compared to just

7% four years prior. Virtually all (98%) of the practitioners employed by these practices are using a certified product to e-prescribe controlled substances.

Health Information Exchange (HIE)

Overall, electronic exchange of patient information for office-based practices still takes second-place to the use of traditional (manual) methods, but most practitioners are employed by group practices that are using HIE most of the time.

Electronic methods for sending, receiving, or querying patient data (usually via EHR) ranges from a low of 22% for radiology images to a high of 39% for medication history. Faxing remains the single most dominant method, ranging from 31% to 48%, with its greatest use related to summaries of care, radiology reports, and lab results.

Pennsylvania's Health Information Organizations (HIOs) were used by 2.2% to 3.1% for these functions, representing a slight increase from 2016.

EP-type practices are much more likely to send patient data electronically to facilities outside of their organizations, especially to pharmacies and labs.

The percentage of EP-type practices with the capability to send patient data electronically to other facilities has increased dramatically since the 2010 provider HIT survey was conducted. The percentage able to send data to a hospital emergency department or radiology/imaging center has tripled, and roughly twice as many can send data to a pharmacy, other outpatient practice, or hospital emergency department. The portion that is able to send data to a lab has increased from about a third to about half.

More than 40% of practices have the capability to receive patient data from labs and pharmacies, but less than a quarter of them receive it electronically most or all the time. Only about a third of practices can receive data electronically from long-term and post-acute providers and behavioral health practices, with just 4% and 3% receiving such data always or nearly always, respectively. About 12% to 15% receive data electronically most of the time from radiology/imaging centers, physical health outpatient practices, and hospitals.

EP-type practices report more capability (40% to 60%) than non-EP types (27% to 34%) to receive patient data electronically from the specified source types, and more usage (up to 35% receiving data this way most or all the time, vs. up to 10%).

Among the respondents that use electronic methods to send information to other providers or health organizations, the most popular method is to use Direct secure messaging from within their EHR. HIOs are rarely used. For others, the most-used methods are fax, mail, and email. Among hospitals, nearly 59% reported in 2015 that their primary inpatient EHR is used to exchange patient health information, and in 2018, 54% of Pennsylvania hospitals indicated that the exchange of information across different vendor platforms was their most difficult challenge.

Both the 2016 and 2020 surveys reveal that practices most frequently receive patient data electronically from labs, pharmacies, radiology/imaging centers, and hospitals (other than the emergency department), and least frequently from long-term care/post-acute care providers and behavioral health practices. The percentage of practices receiving data electronically "always or nearly always" did not increase in 2020 vs. 2016.

Hospitals report a higher degree of HIE than office-based practices. As of 2015, depending on the type of data (patient demographics, lab results, medication history, radiology reports, and clinical care record), 74% to 77% of hospitals could exchange it electronically with other hospitals inside their health system, and 58% to 69% could exchange it electronically with hospitals outside their health system. More hospitals (82% to 89%) were able to

exchange patient data electronically with ambulatory providers in their own health system and outside (70% to 82%). (More recent data for PA hospitals is not available.)

Health Information Organizations

Most office-based practices (87%) are not participating with any HIO, but the 13% that do account for 63% of the practitioners represented, indicating that large practices are more likely to use an HIO. Over half (56%) of practices indicate that they are using their EHR vendor's HIE rather than an HIO. Among those which are using a state-certified HIO, HealthShare Exchange and Keystone Health Information Exchange are the most common.

Office-based practices that are not using the services of an HIO indicate that the number one reason is that they are not familiar with HIO services. Cost concerns and lack of staff expertise using health IT are the number two and three obstacles, respectively. Meanwhile, HIO usage among hospitals is much more common, with 54% actively exchanging data in at least one HIO/HIE (as of 2015). Fourteen percent indicate that there is no HIO operational in their area.

Internet service availability and adequacy

When the first EHR systems were being implemented, the availability and quality (sufficient bandwidth) of internet service was an issue for some areas of Pennsylvania, particularly in rural counties. Now, virtually every practice has access to internet service, though a few still think they do not need it, and some would like to have more bandwidth ("speed") or better reliability.

Most practices (84%) indicated their offices' internet bandwidth is sufficient for their needs, compared to just 44% in 2010. Three percent of practices have no internet connection in their offices. Of these practices, 58% said they have no need for the internet; 7% (down from 16% in 2016) felt the cost of internet service is too high; and two practices said there is no internet supplier at their location.

Among the 214 practices (representing 1,377 practitioners) that reported why their offices' internet services are slow, 40% said faster service is not available at their locations and 37% indicated it is because the cost for faster service is too high.

Telemedicine

Since the 2016 environmental scan, there has been a huge increase in the percentage of practices offering telemedicine. The COVID-19 pandemic is believed to be a major driver of the growth. In 2016, only 7% of EP-type provider practices (representing 49% of practitioners in surveyed EP-type practices) had adopted HIT for telemedicine. By 2020, this increased seven-fold to 50% of EP-type practices, representing 93% of practitioners. Non-EP-type practices also experienced seven-fold growth over 2016, and these practices represent 75% of the non-EP-type practitioners.

Eight percent of the practices not offering telemedicine plan to add it within a year. This is twice the rate noted in 2016. Of the practices not offering telemedicine, 45% do not see a need to provide it, 30% are unsure of the value/benefit, and 22% have cost concerns. Additionally, 22% have concerns about reimbursement for telemedicine services. (It should be noted that some of the surveyed provider types, such as chiropractors and acupuncturists, are not suitable for providing treatment via telemedicine, and their responses are included in the results shown above.)

Patient Engagement via HIT

In the 2010 survey, only 22% of (EP-type) practices provided information to patients electronically. The 2020 survey indicates that rate has almost doubled in ten years to 41% – and 74% of EP-type practitioners are employed by those practices. More EP-type practices (59%, employing 26% of practitioners) still use a manual process. Still, EP-type practices are far more likely than non-EP types to use certified HIT to share data with patients (38% vs. 16%). Most (78%) non-EP-type practices employ a manual process, and only a fifth use HIT (16% certified and 6% non-certified).

Overall, about 39% of all surveyed practices offer an online patient portal, and 73% of individual providers work at these practices. However, there is a stark difference between EP-type and non-EP-type practices. Seventy-three percent of EP-type practices (up from 58% in 2016) offer a patient portal (representing 95% of providers in surveyed EP-type practices), but only a quarter of the non-EP-type practices offer a portal.

Of the practices that offer an online patient portal, 88% indicated their portal is integrated into their EHR system. Three-quarters of practices offering a patient portal also offer an “app” that enables patients to access their online patient portal via a mobile device (smartphone, tablet, etc.) to access the portal. This is up from 59% in 2016 – an increase of 16 percentage points in four years – perhaps aided by the standardization of FHIR 4 for APIs.

More than a quarter of practices are using certified HIT to send patient reminders, to provide patients access to their medical information, and for secure messaging capability. But overall, most patient engagement activities are still performed most often by means of a manual process.

Conclusion

Adoption of HIT/E by Pennsylvania’s healthcare providers has increased significantly since 2010, with inpatient hospitals leading the way. Among office-based providers, physical health physicians are the leaders in EHR usage and HIE, while other categories of care, especially non-EP-types, are trailing. Legacy modes of communication between providers (particularly faxing) continue to have a stronghold among many office-based providers, but electronic exchange is increasing as compatibility issues are addressed and as more providers become comfortable with it.

Examples of other issues addressed by the survey and included in the full report

- Transitions of Care (how often sent/received; what methods used for sending/receiving)
- Patient Population Analytics (use of HIT to identify high-risk patients, generate clinical quality measures, perform ad hoc analytics and reporting)
- Number of providers participating in various incentive programs or planning to participate
- Vendors of most popular certified and non-certified EHRs
- Providers’ HIT/E plans regarding adopting or changing EHR, joining an HIO, etc.