Wisconsin Medicaid eHealth Project: Health Information Technology Landscape Assessment

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1 SUMMARY

Health information technology (health IT) is transforming the health care industry and enabling improvements in coordinated care, patient engagement, quality of care, and enhanced outcomes in the delivery of health care. This is accomplished through the meaningful use of technologies, such as electronic health records (EHRs) and community health records; health information exchange (HIE); the ability to electronically prescribe; the ability to calculate and report quality measures for practice improvement; the use of online portals to interact with patients; and the delivery of services through telemedicine and telehealth.

The Health IT Landscape Assessment is conducted by the Wisconsin Department of Health Services (DHS) eHealth team to evaluate and analyze health IT maturity by examining the extent to which these capabilities are actively being used and integrated into health care organizations' daily workflows, including the sharing of data across organizations. The results of the assessment are used to define strategies the Wisconsin Medicaid Agency (Agency) can pursue to advance health IT maturity and the Agency's objectives, including: (1) increasing member engagement in his or her care using a culturally competent approach; (2) improving health of individuals and communities; (3) advancing administrative and operational efficiencies; and (4) improving access to comprehensive and quality data.

On the whole, this assessment finds Wisconsin Medicaid providers and participants across the state's health care continuum have made significant investments in and are actively engaging with health IT. However, while Wisconsin exceeds the national average for state rates of physician EHR adoption, HIE and interoperability, and patient engagement[1], there still appears to be limited cohesion and coordination, leading to duplication in efforts, inefficiency, and a lack of overall interoperability. Barriers to increasing health IT maturity and use of HIE span aspects of governance, technology, stakeholder engagement, and resources, highlighting the need for solutions and incentives to address the current state, as well as long-term sustainability. Proposed health IT strategies support standardization and addressing privacy and security concerns in order to support data exchange, expanding assistance to engage a broader range of providers and health care entities, and integrating health IT solutions outside of EHR technology to create comprehensive, patient-centric data.

The Agency is well positioned for health IT initiatives that further incentivize and improve the value proposition for health IT adoption. By leveraging Wisconsin's strong foundation and industry momentum, increased health IT maturity will accelerate readiness for transformed health care delivery and payment reform.

1.1 Methodology

The Health IT Landscape Assessment is organized into the following areas of analysis:

- Examining how health IT is being integrated into the workflows of Wisconsin health care providers through EHR technology adoption rates. Analysis encompasses: (1) EHR Incentive Program participation and retention; (2) Health IT maturity assessment determined through the application of Meaningful Use objectives and clinical quality measures; and (3) the EHR vendor landscape.
- Determining the extent to which health information data is currently being exchanged, including the mechanisms, vendors, and organizations engaging in data exchange, as well as which data is being used and provides the most value. Analysis is comprised of: (1) EHR vendor interoperability; (2) HIE organization participation; (3) health information sharing; (4) managed care organization engagement; (5) pharmacy engagement; and (6) barriers to HIE.
- Understanding the current landscape, challenges, and opportunities for health IT initiatives and how they encourage the use of health IT and contribute to overall maturity, including: (1) telemedicine and telehealth; (2) electronic prescribing; (3) the Prescription Drug Monitoring Program; and (4) electronic patient engagement.

The following sections provide an overview of the data sources and identified provider populations. Please contact the eHealth team (ehealth@wisconsin.gov) for additional detail regarding this analysis' methodology and source data.

1.1.1 Data Sources

Analysis data was collected and consolidated from the sources below.

1.1.1.1 Medicare and Medicaid EHR Incentive Program

The Medicare and Medicaid EHR Incentive Programs were established in 2011 to provide incentive payments to Eligible Hospitals and Eligible Professionals that adopt, implement, upgrade, and meaningfully use certified EHR technology (CEHRT). The data used for the Health IT Landscape Assessment on Eligible Hospitals and Eligible Professionals was obtained from a variety of sources, including the Centers for Medicare and Medicaid Services (CMS) public use files and the Agency's data warehouse. Data was collected and analyzed for Program Years 2011-2015, which occurred between August 2011 and December 2016.

Hospital Eligibility: The EHR Incentive Programs extend to several hospital classes, including acute care and critical access hospitals, which are dually eligible, meaning they are able to receive incentive payments from both the Medicare and Medicaid EHR Incentive Programs and children's hospitals[2], which are only eligible for the Medicaid program. As of January 2017, there are a total of 125 hospitals in Wisconsin that are eligible to participate in one or both of the programs.

In this document, the Eligible Hospital data presented generally represents both Medicare and Medicaid EHR Incentive Programs unless otherwise specified.

Professional Eligibility: Medicaid Eligible Professionals[3] include: physicians (primarily doctors of medicine and doctors of osteopathy); nurse practitioners and certified nurse-midwives, including mental health and substance abuse advanced practice nurse prescribers; dentists; and physician assistants who furnish services in a Federally Qualified Health Center or Rural Health Clinic that is led by a physician assistant. The Medicare category is slightly different, adding podiatrists, optometrists, and chiropractors and excluding nurse practitioners, certified nurse-midwives, and physician assistants.

Eligible Professionals are not dually eligible, meaning they must designate if they are participating in the Medicare or Medicaid EHR Incentive Program. As of January 2017, approximately 19,730 Wisconsin Medicaid providers were estimated to be eligible for either the Medicare or Medicaid EHR Incentive Program.

In this document, while the data presented covers both Medicare and Medicaid EHR Incentive Programs, the dataset focuses on the Eligible Professionals that meet the provider type and specialty requirements of the Wisconsin Medicaid EHR Incentive Program.

Certified EHR Technology (CEHRT) Vendors: As part of the Medicare and Medicaid EHR Incentive Programs, CMS and the Office of the National Coordinator for Health Information Technology (ONC) established standards and other criteria for structured data that EHRs must meet in order to qualify for use, ensuring minimum standards for technological capability, functionality, and security.

In order to attest to the Medicare and Medicaid EHR Incentive Programs, providers must reference a CMS EHR certification ID, which is created by the provider or their organization and is comprised of one or more CEHRT vendor products used to meet program requirements. This process is facilitated by ONC and is validated as part of prepayment verification for Wisconsin Medicaid EHR Incentive Program attestations.

This analysis included all CEHRT vendor products associated to CMS EHR certification IDs used in attestations through Program Year 2015.

In this document, source data extends to all EHR vendors as well as the subset of CEHRT vendors authorized for use with the EHR Incentive Programs. When data analysis extends past the EHR Incentive Programs, the more general "EHR" term will be utilized.

1.1.1.2 Statewide Health Innovation Plan (SHIP) Health IT Landscape Assessment Survey: Behavioral Health and Long-Term Care Providers

Recognizing most mental health and substance abuse provider specialties and long-term care (LTC) provider specialties are not eligible for either EHR Incentive Program and, subsequently, the lack of Medicaid data available for analysis, the eHealth team conducted a survey in June 2015 on behalf of the SHIP Health IT Workgroup. The survey was sent to behavioral health and LTC providers who provide care and services to individuals with both public and private insurance coverage in Wisconsin to understand their current health IT capabilities. Specifically, the survey sought to understand providers' ability to

capture and share health information electronically and learn what health care information providers think they need to improve the quality and value of care delivery. Survey respondents included 201 behavioral health and 408 LTC providers.

1.1.1.3 2016 Health IT Landscape Assessment Survey: Health IT Capabilities

As part of refreshing the prior Health IT Landscape Assessment, the eHealth team conducted a survey in September and October 2016 to enhance the analysis by contextualizing the EHR Incentive Program with additional data from participating Eligible Professionals and Eligible Hospitals and expanding the scope by including Wisconsin Medicaid health maintenance organizations (HMOs) and pharmacies. The survey sought to understand how health IT in Wisconsin can contribute to statewide health care delivery system transformation and payment reform, while also helping identify new policies and initiatives the Agency can pursue. Survey questions were organized across themes identified as critical components of health IT capabilities: (1) health information sharing; (2) telemedicine and telehealth; (3) the Prescription Drug Monitoring Program use; and (4) electronic patient engagement. Survey respondents included professionals answering on behalf of 68 Eligible Professionals and 12 Eligible Hospitals, 80 pharmacies, and all 19 Wisconsin Medicaid HMOs[a].

1.1.1.4 External Stakeholder Feedback

The Agency works in collaboration with a number of organizations to encourage the adoption and meaningful use of CEHRT and health IT. While the eHealth team works with many external stakeholders, the organizations below provided direct feedback resulting from their work with the EHR Incentive Programs.

MetaStar: MetaStar is a quality improvement organization providing health care improvement and consulting services working with communities, providers, and insurers to transform care. MetaStar operates as an independent nonprofit organization with funding from federal and state government contracts.

Through the Wisconsin Health Information Technology Extension Program (HIT Extension Program), MetaStar supports health care providers in Wisconsin to adopt, implement, upgrade, and meaningfully use CEHRT. This assistance is funded by DHS and is available to any Wisconsin Medicaid-enrolled providers eligible for the Medicare or Medicaid EHR Incentive Program.

Wisconsin Primary Health Care Association (WPHCA): WPHCA was established to advance the efforts of the 18 community health centers (CHCs) in Wisconsin in providing access to comprehensive community-oriented primary health care services. WPHCA supports the CHCs in Wisconsin through information and

[a] Two pairs of HMOs are managed through a single contract administrator who answered on behalf of both organizations, resulting in 17 total responses. Paired responses included Group Health Cooperative of Eau Claire with Compcare and MHS Health Wisconsin with Network Health Plan.

public education resources, government relations and advocacy work, and training and technical support. WPHCA has been instrumental in its work partnering with MetaStar to support the CHCs in their adoption and meaningful use of CEHRT.

WPHCAs work has helped to identify issues facing CHCs in the state in the adoption and use of health IT and they have worked closely with the Wisconsin Medicaid EHR Incentive Program to collect feedback from providers, as well as distribute ongoing information about the program.

1.1.2 Prioritized Medicaid Provider Populations

Throughout the analysis, several Medicaid priority provider populations have been identified and are examined in order to understand current health IT engagement, identify barriers that may be unique to these providers, and identify opportunities for targeted outreach or technical assistance to facilitate health IT maturity.

Federally Qualified Health Centers (FQHCs) and Tribal Health Centers: FQHCs, including tribal health centers, provide much needed health care services to low-income populations in underserved areas with low access to care, and the majority of providers working in these clinics are eligible to participate in the EHR Incentive Program. In Wisconsin, these organizations are located in 68% (49 of 72) of counties, serving just under 953,000 Medicaid members[4]. The Agency works closely with WPHCA, Indian Health Services (IHS), and clinics to move the adoption and use of CEHRT along the Meaningful Use continuum for these organizations.

Dentists: Oral health is an essential component of general health, and coordination of dental care with medical care can result in early detection of conditions, including infectious diseases, immune disorders, nutritional deficiencies, and cancer, as well as increased risk for heart disease and premature delivery in pregnant women[5]. Dentists have been identified as a target for recruitment under the EHR Incentive Program by the Agency and are eligible for technical assistance from MetaStar through the HIT Extension Program, as well as outreach from WPHCA to assist FQHC dentists in attestation.

Primary Care Providers (PCPs): PCPs provide coordinated care to patients, serving as both the first point of contact and as the connection point across the spectrum of a patient's care and overall health. Researchers at the Journal of Health Affairs found patients with a PCP have better management of chronic diseases, lower overall health care costs, and a higher level of satisfaction with their care. Engaging PCP providers in health IT improves their ability to deliver coordinated care by allowing PCPs to receive additional information to improve their comprehensive understanding of a patient's health and also allowing them to share data with other providers treating the patient.

Behavioral Health: Behavioral health conditions encompass a range of illnesses, including anxiety, mood, impulse-control, and substance use disorders, affecting a considerable share of the United States population. State Medicaid programs play a significant role financially, covering one quarter of the total expenditures in 2014[6], as well as play a large role in delivering behavioral health services. Addressing behavioral health conditions is a priority for DHS as it relates to the opioid epidemic, supporting an

increase in mental health referrals from the criminal justice system and generally providing a preventative and cost-mitigating approach to member health.

Long-Term Care (LTC): LTC encompasses the wide range of medical and personal care needs associated with difficulty completing self-care tasks as a result of aging, chronic illness, or disability. The population most likely to need long-term services and supports, those 65 and older, is expected to more than double by 2050[7], and Medicaid is the primary source of payment for these services. Managing the care of Medicaid members in LTC settings is critical to overall cost management.

1.2 Key Findings

The Wisconsin health IT landscape has both a solid foundation and industry momentum to continue increasing health IT adoption and maturity. The summary below highlights areas of achievement and opportunity for further advancement.

Wisconsin Medicaid Eligible Hospitals and Eligible Professionals are actively progressing in the EHR Incentive Program.

Wisconsin Eligible Hospitals are fully participating in the program; almost all hospitals have completed Medicaid program participation, achieving the highest stage of Meaningful Use available through Program Year 2015. The few remaining Eligible Hospitals will complete their Medicaid participation in the next few program years.

Wisconsin Eligible Professionals are engaging in the program at about half the rate of Eligible Hospitals; 56% of estimated Eligible Professionals have participated. Those participating are achieving a high rate of progression, with 88% meeting Meaningful Use. Participation and program retention peaked in Program Year 2013 and has declined slightly since then. Participation is anticipated to additionally decrease due to the Medicare EHR Incentive Program concluding after Program Year 2016 and as Eligible Professionals complete their six years of participation in the Medicaid program.

Rates of EHR technology adoption vary by provider type.

Within the EHR Incentive Program, physicians have made excellent progress in adopting EHR technology and achieving Meaningful Use, with 93% of participants attesting to Stage 1 or Stage 2 Meaningful Use as of their most recent attestation, followed by physician assistants (63%), nurse practitioners and nurse service (61%), and dentists (30%).

Wisconsin tribal health centers and FQHCs have a higher participation rate (93% and 74%, respectively) compared to the average of participating providers (56% overall), but they have a lower proportion of Meaningful Users (67% and 60%, respectively).

Despite not being part of the EHR Incentive Program, both behavioral health and LTC survey populations had approximately 50% EHR adoption with community mental health centers, county human service divisions, and hospitals or health systems. These organizations reported having been using EHRs for more

than three years. On the opposite end of the spectrum, the majority of behavioral health and LTC community-based providers and individual practitioners are not using EHR technology.

Dentists are not being successfully incentivized through the EHR Incentive Program.

Dentists reflect the lowest overall participation and progression in the EHR Incentive Program. Feedback from organizations working with dentists have indicated many dentists feel the Meaningful Use objectives and measures are primarily medically-focused and do not accommodate the services dentists provide, further noting their vendor offerings are ineffectual, particular for HIE. In addition, many feel the effort and added expense for Meaningful Use functionality is not offset by the individual reimbursement.

Health IT maturity is increasing through Meaningful Use of CEHRT.

Wisconsin Medicaid providers are demonstrating substantial progress in data capture and sharing (Stage 1), as well as advanced clinical processes (Stage 2) through Meaningful Use of CEHRT. Overall, Program Year 2015 reflected high performance and relatively low exclusion rates. This is expected to increase through Program Year 2017. Wisconsin Medicaid providers are demonstrating moderate readiness for improved outcomes (Stage 3) and should begin active planning for attestation in Program Year 2018.

It is still too premature to gain much insight from clinical quality measure (CQM) reporting at this stage. Program Year 2015 was the first year the 2014 edition CEHRT was required, which improved the quality and accuracy of CQM data and required the capability to electronically report. However, despite wide flexibility in CQM selection, Eligible Professionals attested to a narrow set of measures regardless of their specialty, which may suggest most Eligible Professionals are using their CEHRT system default selections and may not have all CQMs available through their vendor.

Usage of CEHRT for HIE lags behind expected capabilities.

Despite a high EHR adoption rate, the measures within the EHR Incentive Program that speak to HIE provide limited evidence suggesting HIE is actively occurring; they had some of the highest exclusions rates and lowest performance. The primary HIE measure, Summary of Care Records, encompasses electronically creating and transmitting a summary of care record for patient transitions or referrals. This measure was excluded by 97% of Eligible Professionals in Program Year 2015, and while only 3% of Eligible Hospitals excluded this measure, their performance rate was 55%, the second lowest for Eligible Hospital reporting.

When surveyed, providers indicated they were better able to use their EHR systems to send data than to receive and integrate it, and all capabilities were more likely when using the same EHR vendor systems than different ones. When exchanging with providers across the same EHR technology, Eligible Professionals and Eligible Hospitals report between 78 and 92% capability, but only between 50 and 80% usage. Across different EHR technology, capability decreased to 60-85% and usage to 29-60%. Data sharing capability and use increased slightly when exchanging via HIE organization networks or health

information service providers (HISPs) as opposed to direct interfaces or messaging between provider organizations.

In addition to EHR vendor interoperability, providers highlighted adoption as an obstacle both within their own organizations as well as with external providers who were not sending or providing electronic health information to them. Barriers to adoption included complaints about the efficiency of using EHR technology as opposed to manual workflows, as well as concerns or policies about privacy and security preventing the sharing of data.

Collaborative EHR vendor interoperability efforts toward common standards are underway.

Within the Wisconsin EHR landscape, there is a dense market of vendors utilized both as part of the EHR Incentive Program as well as outside of it. This concentration is mirrored when examining the landscape across additional dimensions, for example, by provider type, or geographically. While this might indicate market readiness for HIE, there are still barriers preventing providers from regularly exchanging health information, including provider unwillingness to exchange data, needed improvements in data standards, and technical advancements that are needed to facilitate data integration.

Coordinated nationwide efforts are engaging with vendors to further efforts toward a unified set of standards, including technical specifications and guidance on legal and privacy agreements. With respect to the primary EHR vendors operating in Wisconsin, all are participating in collaboratives aligned with the Carequality framework[8]. Carequality is a community that seeks to overcome the interoperability challenge by providing a national level, consensus-built, common interoperability framework to enable exchange between and among health data sharing networks. While there is not necessarily a timeline for when these efforts will be in effect, participation in this collaboration bodes well for achieving an interoperability solution both within the state and nationwide.

Wisconsin Medicaid HMOs encourage, but do not require, provider use of health IT and information sharing.

While the majority of Wisconsin Medicaid HMOs encouraged the use of health IT and information sharing across stakeholders, very few reported they require their providers to do so. Only two HMOs require their participating providers use health IT, through specific vendor software, but half of HMOs encourage its use through training, technical assistance, and informational materials. None of them financially incentivize health IT.

Most HMOs noted they make use of the medical, social determinant, and supplemental patient information they receive from their providers, but they do not stipulate any data format or mechanism. The majority of HMOs also directly engaged with their members through an online portal.

Supplemental health information is being shared and used to improve the view of the patient and care coordination.

Outside of clinical data, health care entities are showing interest in sharing and making use of supplemental health information, including social determinant and patient demographics, although there does not yet appear to be much consistency in the mechanism or format of the data being shared. While access to this type of additional data represents an increased level of health IT maturity, the variable nature of its delivery likely contributes to inefficiencies and limitations in its ability to be used meaningfully. Steps to conform data to standard layouts and transfer mechanisms, along with coordination for the privacy and security aspects of sharing this data, would likely increase its impact in care coordination efforts.

There is interest in increasing the use of telemedicine and telehealth services, especially for behavioral health.

Survey results indicated while there is a relatively low usage rate for telemedicine and telehealth services, about 50% of Eligible Hospitals, 20% of Eligible Professionals, and only 7% of pharmacies, there is a considerable appetite for expanding the use of these services, particularly for behavioral health care.

Health IT engagement supports efforts in preventing the misuse and abuse of opioids.

Just under half of surveyed Wisconsin Medicaid providers within the EHR Incentive Program are using electronic prescribing technology for controlled substances, with surveyed pharmacies suggesting slightly higher use, with 62% receiving electronic prescriptions for all or most controlled substances, including controlled substance schedules II or III-V. The majority of Eligible Hospitals, Eligible Professionals, and pharmacies demonstrated an awareness of Wisconsin's Prescription Drug Monitoring Program, with close to half using it with at least "often" frequency. The use of these capabilities can only be expected to expand in response to recent legislation requiring provider use of the Prescription Drug Monitoring Program, as well as initiatives resulting from Governor Walker's Task Force on Opioid Abuse.

1.3 Recommended Health IT Strategies

This assessment finds the Wisconsin health IT landscape has both a solid foundation and industry momentum to continue increasing health IT adoption and maturity. The following strategies are proposed to further increase health IT maturity as an enabler to achieving transformed health care delivery and the Agency's objectives in engaging members, improving health outcomes, advancing efficiencies in the delivery of health care, and increasing access to comprehensive data. The Agency should review these strategies to determine if they can be integrated into priority initiatives, upcoming projects, and or the 2018 State Medicaid Health IT Plan (SMHP) update.

1. Encourage or require the use of HIE networks and services to exchange patient health data and support Medicaid initiatives.
2. Address privacy and security concerns as a barrier to HIE.
3. Expand technical assistance and HIE onboarding support to behavioral health and LTC providers in Wisconsin.
4. Leverage the Master Client Index to facilitate sharing of health and social determinant data across public programs.
5. Empower patients to engage in managing their health and health care.
6. Expand telehealth services to include more sites and reimbursement, particularly for behavioral health.
7. Explore current EHR Incentive Program CQM reporting to potentially align and leverage CQMs across broader Wisconsin Medicaid quality strategy priorities.
8. Conduct an analysis to understand the causes preventing Eligible Professionals from returning to achieve Meaningful Use, and continue participation in the Medicaid EHR Incentive Program.
9. Identify options to engage dentists in health IT efforts outside of the EHR Incentive Program.
10. Identify other sources of data to more fully assess the Wisconsin health IT landscape.

Suggested next steps and further detail regarding these strategies can be found in the *Conclusion* of this document.

2 EHR Technology Adoption Analysis

Currently, the most widely used measure of health IT maturity is the EHR adoption rate, or the percentage of a defined provider group actively using an EHR. According to ONC, Wisconsin surpasses the national averages for both physicians and hospitals in adopting EHR technology[9]:

- Ninety-three percent of all physicians have adopted an EHR, with 83% adopting a CEHRT.
- Ninety-seven percent of non-federal acute care hospitals have adopted a CEHRT.

Examining how health IT is being integrated into the workflows of Wisconsin health care providers through EHR technology adoption rates uncovers insights into provider readiness for future IT initiatives. Analysis encompasses: (1) EHR Incentive Program participation and retention; (2) health IT maturity through Meaningful Use objectives and clinical quality measures; and (3) the EHR vendor landscape.

This section provides an analysis of known CEHRT adoption rates for Wisconsin's Eligible Hospitals and Eligible Professionals relative to participation in the Medicare and Medicaid EHR Incentive Programs for Program Years 2011-2015. This population represents a targeted subset of the overall Wisconsin health professional landscape, as described in the *Methodology*, and as such, reflects different EHR adoption rates than the broader provider population to which ONC data speaks.

Analysis is supplemented with survey data from the SHIP Health IT Landscape Assessment Survey of behavioral health and LTC providers and the 2016 Health IT Landscape Assessment Survey of EHR Incentive Program Eligible Hospitals and Eligible Professionals, Wisconsin Medicaid HMOs, and pharmacies.

2.1 EHR Incentive Program Statistics

The success of the Medicare and Medicaid EHR Incentive Programs is dependent on providers participating in and progressing through the stages of Meaningful Use. Wisconsin Medicaid Eligible Hospitals and Eligible Professionals continue to actively participate in the EHR Incentive Program and achieve increasing stages of Meaningful Use. Through Program Year 2015, more than $860 million in incentive payments[10] have been made to almost 11,000 Wisconsin Eligible Professionals and all 125 Eligible Hospitals.

2.1.1 Eligible Hospitals

Eligible Hospitals lead the way in cumulative statistics, with 100% of Wisconsin Eligible Hospitals[11] having adopted CEHRT as of Program Year 2013 and 99% having achieved Meaningful Use.

For the Medicaid EHR Incentive Program, 117 out of 123 hospitals completed their third (final) year of participation, yielding a Medicaid program completion rate of 95%.

Eligible Hospitals achieved their highest and full participation in Program Year 2013, with hospitals maintaining a near 100% retention rate as they continue to attest to the Medicare program in order to demonstrate Meaningful Use. They also continue to attest to the Medicaid program to complete their 3-year incentive payment participation.

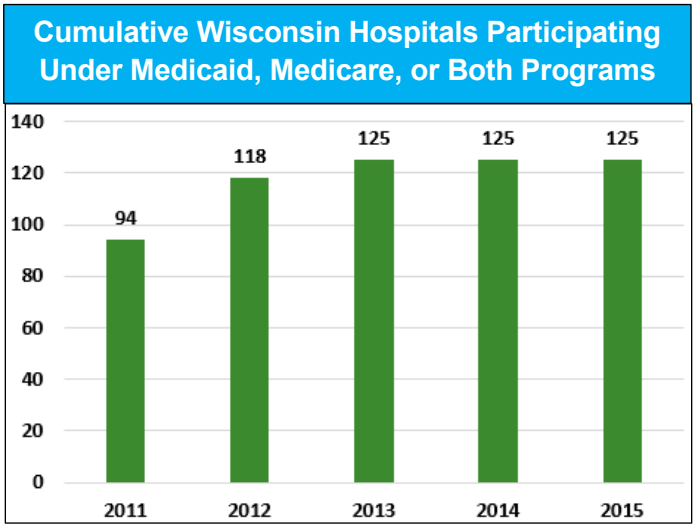


Figure 2.01: Cumulative Eligible Hospital Participation in EHR Incentive Programs

2.1.2 Eligible Professional

Eligible Professionals encompass a much broader population than Eligible Hospitals; as of January 2017, approximately 19,730 Wisconsin Medicaid providers were estimated to be eligible for either the Medicare or Medicaid EHR Incentive Program.

Of those, approximately 60%, or 3,480 of 5,794 providers estimated to be eligible, have participated in the Medicaid EHR Incentive Program (53%, or 7,499 of 13,938 providers estimated to be eligible, are participating in the Medicare program).[b]

Meaningful Use has been achieved by 88% of Eligible Professionals participating in either EHR Incentive Program, with over two-thirds attesting to Stage 2 Meaningful Use through Program Year 2015, the highest stage currently available in the program.

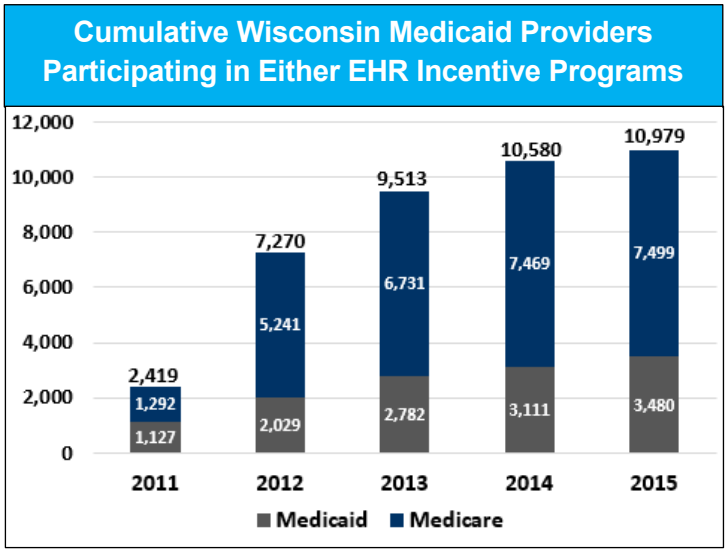


Figure 2.02: Cumulative Eligible Professional Participation in EHR Incentive Programs

In reviewing EHR Incentive Program statistics, both the program year participation rate (percentage of estimated eligible participants who participated in a given program year) and retention rates (percentage of program participants who have participated in more than one program year) provide insight into whether providers are maturing their EHR capabilities and finding value in continuing in the EHR Incentive

[b] This estimate of the adoption rate does not account for professionals who use CEHRT but are not participating or eligible to participate in the EHR Incentive Programs, such as hospital-based physicians or those who use EHR technology that might not be certified; thus, overall EHR adoption rates are expected to be higher.

Program. This is especially the case for Eligible Professionals, as their participation in the EHR Incentive Program does not need to be through consecutive years.

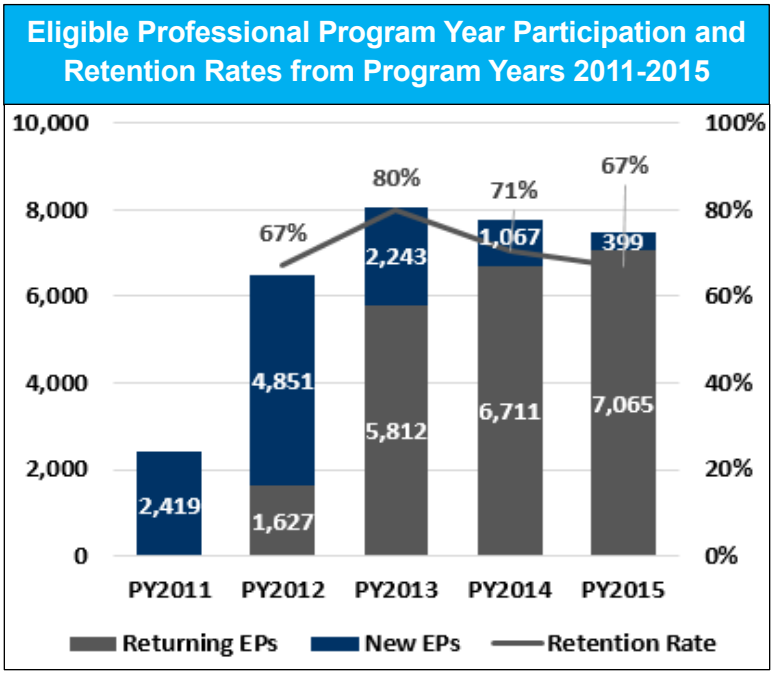


Figure 2.03: Eligible Professional EHR Incentive Program Year Participation and Retention. *Retention rates are calculated for all program years prior. For example, the Program Year 2015 retention rate reflects Eligible Professionals that participated in Program Year 2015 and any combination of program years between 2011 and 2014.*

In reviewing the participation and retention by program year, the number of Eligible Professional attestations per program year peaked in 2013 but has declined slightly since then. While the number of returning providers has continued to increase throughout the program, the overall retention rate reflects the general participation decline. In Program Year 2015, 7,464 Eligible Professionals participated in the Medicare and Medicaid EHR Incentive Programs, 399 of which were new to the program (284 Eligible Professionals attested to AIU and 115 to Meaningful Use).

The Medicaid EHR Incentive Program has the opportunity to **recruit 2,314 more providers** who are estimated to be eligible for the Medicaid program in Program Year 2016, the last year an Eligible Professional can initiate participation in the EHR Incentive Programs.

There are a number of internal and external factors that may be influencing the EHR Incentive Program participation and retention rates:

- As Meaningful Use requirements have increased, Eligible Professionals may not be able to meet them or may not be realizing the value of CEHRT adoption, thus lowering the incentive to participate.
- In particular, continued progression in the program requires upgrading CEHRT technology, which may be cost prohibitive, or require longer lead times than annual participation affords.
- Eligible Professionals may choose to skip participation due to other organizational priorities, including other programmatic or technology projects, given the resources needed to support those efforts.
- Eligible Professional participation may also have been influenced by the timing of CMS rule publications relative to a given program year's attestation window. One such example is the CMS 2014 CEHRT Flexibility Rule. While the rule allowed providers additional flexibility in CEHRT editions, provider uncertainty regarding versions and qualifications may have caused some to skip Program Year 2014 so as not to risk an audit or recoupment of funds.

Looking forward, overall EHR Incentive Program participation is expected to decrease beginning in Program Year 2017 – first and most substantially, due to the Medicare EHR Incentive Program concluding

after Program Year 2016, which will reduce the EHR Incentive Program population by almost 70%; and second and more gradually, due to Eligible Professionals completing the Medicaid EHR Incentive Program, which allows for a maximum of six program year payments.

DID YOU KNOW?

In Program Years 2013-2016, participation in the EHR Incentive Programs enabled Medicaid-enrolled Eligible Professionals who also treated Medicare patients to avoid future Medicare reimbursement adjustments of 1 to 5% for not demonstrating Meaningful Use in the EHR Incentive Program. For example, providers who did not meet Meaningful Use requirements in Program Year 2015 and were eligible for both the Medicare and Medicaid EHR Incentive Programs received a 3% reduction to their Medicare claims in January 2017.

Starting in Program Year 2017, Medicare providers will be required to participate in the Quality Payment Program (QPP), removing the additional financial incentive for participating in the Medicaid EHR Incentive Program. This shift is anticipated to further lower Wisconsin Medicaid Eligible Professional participation in the Medicaid EHR Incentive Program.

2.1.2.1 Eligible Professional Provider Type Participation Rates

Almost 90% of Eligible Professionals fall under the physician provider type (primarily doctors of medicine and doctors of osteopathy). Therefore, the overall Eligible Professional program year participation and retention rates primarily reflect that of physicians. In looking across the remaining provider types within the Eligible Professional population, however, there is a range of EHR Incentive Program involvement.

Provider Type	Medicare EHR Incentive Program	Medicaid EHR Incentive Program	Total Participants	% of Total EHR Program Participants	EHR Participation Rate
Dentist	8	305	313	3%	20%
Nurse	Not Applicable	1,012	1,012	9%	24%
Physician	7,491	2,133	9,624	88%	69%
Physician Assistant	Not Applicable	30	30	0.3%	Not Applicable[c]
Total	**7,499**	**3,106**	**10,979**		

Figure 2.04: Summary Statistics for Cumulative Eligible Professionals in the Medicare vs. Medicaid EHR Incentive Program through Program Year 2015. *EHR participation rate calculated as the number of participating professionals over the estimated Eligible Professionals. Nurse includes nurse practitioner and nurse service, including mental health practitioners.*

[c] Due to the restriction on physician assistant eligibility, only those participating in the Medicaid EHR Incentive Program are considered eligible for the program.

Progress to achieve Meaningful Use differs among provider types as well. Physicians have made excellent progress, with 93% of participants attesting to Stage 1 or Stage 2 Meaningful Use as of their most recent attestation, followed by physician assistants (63%), nurse practitioners and nurse service (61%), and dentists (30%). Retention rates mirror program year participation rates and Meaningful Use achievement by provider type.

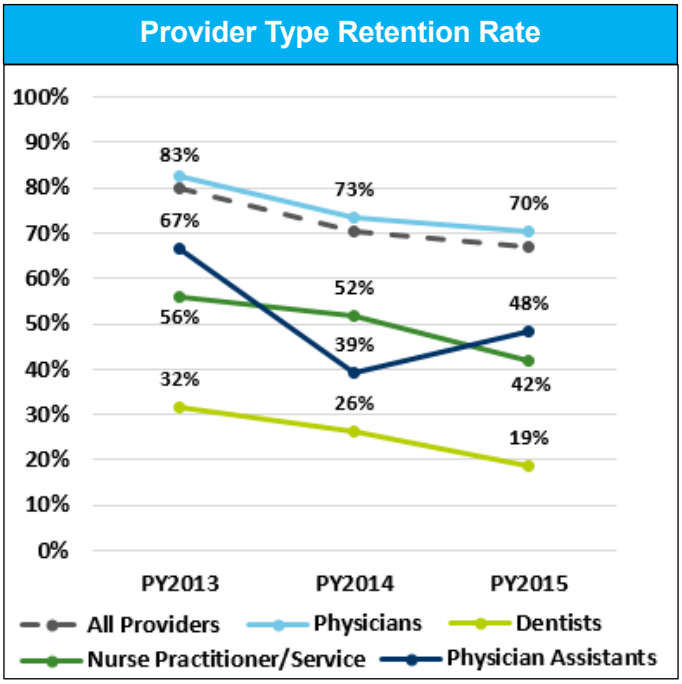


Figure 2.05: Eligible Professional EHR Incentive Program Retention Rates

In general, retention rates reflect a similar decrease to program year participation rates between Program Year 2013 and 2015, with an average decrease of 12-13%.

The outlier to this statistic is physician assistants, whose retention rate dropped almost 30% between Program Year 2013 and 2014, rebounding in 2015 to a 19% decrease overall. This provider type is least represented, with only 30 participants, resulting in data shifts that can be more volatile.

2.1.2.2 Dental Provider EHR Adoption

Nationally, and in Wisconsin, there is more work that can be done to support dental CEHRT adoption and use. Dentists remain the least engaged of all provider types, with the lowest overall participation and retention rates, as well as progression to Meaningful Use[12].

In Wisconsin, Medicaid dentists are eligible for technical assistance from MetaStar through the Medicaid HIT Extension Program, as well as outreach from WPHCA to assist FQHC dentists in attestation. These organizations are working with approximately 60% of the dentists that have participated in the EHR Incentive Programs, and each is working with a number of dentists that have yet to participate.

Outreach Organization	% of Total EHR Program Participants	EHR Participation Rate	% Achieving Meaningful Use
MetaStar	9%	48%	11%
WPHCA	40%	65%	38%
Overall EHR Program	3%	20%	30%

Figure 2.06: Organization Breakdown of Dentist Summary EHR Incentive Program Statistics Through Program Year 2015

When compared to the overall program, both organizations are working with a higher percentage of dentists and are yielding much higher participation rates than the EHR Incentive Programs.

WPHCA-assisted dentists are also exceeding the average percentage achieving Meaningful Use. MetaStar only began providing technical assistance in 2015 to Eligible Professionals, making Program Year 2015 the first year they would have assisted in program attestations, which may speak to the lower rate of Meaningful Users. Of the dentists that MetaStar is currently working with, 87% are planning to continue participation in the EHR Incentive Program, and 29% of those attested to adopt, implement, or upgrade (AIU) through Program Year 2015.

While these organizations are improving dentists' EHR adoption, it is not without difficulties. WPHCA's latest projections show that CHCs are often disengaging on Meaningful Use for dental providers, estimating in February 2017 that at least two have expressed their dentists will not participate beyond AIU. Feedback WPHCA has received indicates many dentists feel Meaningful Use is primarily a medically focused program that does not well accommodate the services dentists provide. In addition, many feel the effort and added expense for Meaningful Use functionality is not offset by the individual reimbursement.

Of the organizations that declined technical assistance from MetaStar, 25% were dental practices, accounting for another 114 potentially eligible dentists. The reasons that dental practices declined assistance consisted of the following:

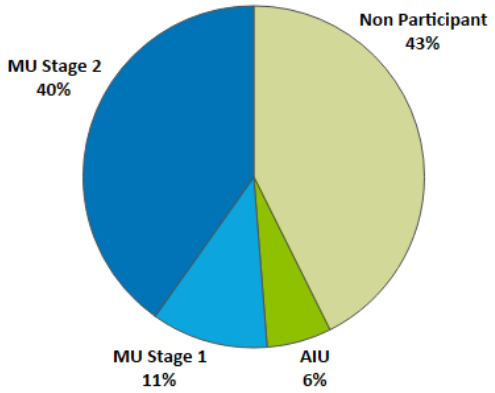
- About 10% of organizations and dental Eligible Professionals were already participating in the EHR Incentive Program or planning to and declined assistance. Half of these indicated they only planned to attest to AIU.
- Another 14% of organizations and 17% of dental Eligible Professionals indicated they had no interest in the EHR Incentive Program.
- The majority of organizations were simply unresponsive to outreach (50%) or determined their dentists were ineligible or the practices were close to retirement (25%).

While the EHR Incentive Programs has stimulated moderate adoption of CEHRT in dental providers, this program has not provided enough of a cost benefit to engage dentists to date. Given the increased Meaningful Use and CEHRT requirements for later stages of the EHR Incentive Programs, dentist participation is not expected to improve, barring additional incentives.

SECTION HIGHLIGHTS

There are approximately 10,000 PCPs[d] eligible to participate in either the Medicare or Medicaid EHR Incentive Program.

Through Program Year 2015, 57% of PCP Eligible Professionals have participated in the EHR Incentive Program, and of those, 89% have achieved Meaningful Use.



2.1.2.3 Behavioral Health EHR Adoption

Data from the EHR Incentive Program only speaks to a portion of behavioral health care providers, as only two behavioral health provider specialties are eligible for the programs.

Provider Type	Provider Specialty	Eligible Program
Physician	Psychiatry	Medicare, Medicaid
Mental Health and Substance Abuse	Advanced Practice Nurse Prescriber	Medicaid

Figure 2.07: Behavioral Health Providers Eligible for EHR Incentive Programs

Within the EHR Incentive Program, CEHRT adoption and Meaningful Use rates are very low among these specialties when compared to the program participation rate by all Wisconsin Eligible Professionals – 56%. Only 38% of psychiatrists and 23% of advanced practice nurse prescribers have participated as of Program Year 2015.

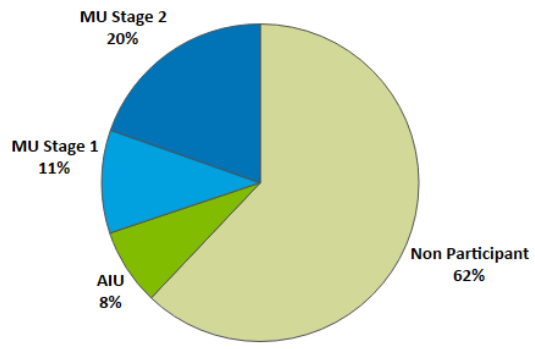
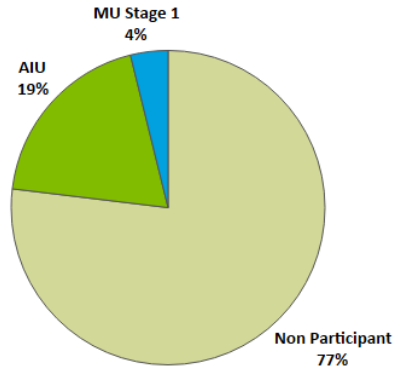
Psychiatry	Advanced Practice Nurse Prescriber
	

Figure 2.08: Behavioral Health EHR Incentive Program Participation Rates

[d] Provider specialties that are considered as PCPs eligible for the EHR Incentive Programs include certified family nurse practitioner, certified pediatric nurse practitioner, family practice, internal medicine, nurse midwife, nurse practitioner, obstetrics and gynecology, pediatrician, and physician assistant who works in a FQHC or RHC led by a physician assistant.

While the EHR Incentive Program data only provides insight into a few specialties within the behavioral health provider space, the SHIP Health IT Landscape Assessment survey expanded the population, and 51% (105 of 205) of behavioral health survey respondents reported using an EHR. This rate is much closer to the participation seen on average within the EHR Incentive Program, although nearly 60% of behavioral health respondents reported using paper-based charts, including 39% of the self-reported EHR users.

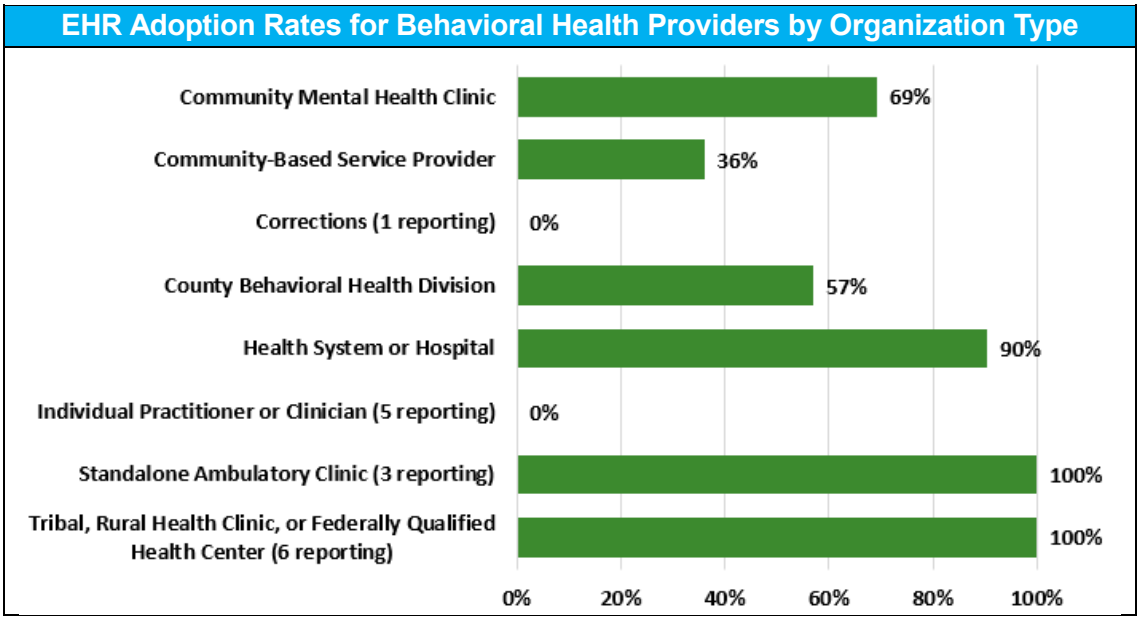


Figure 2.09: Behavioral Health Provider Survey Respondents EHR Adoption Rate

EHR adoption rates and reported benefits and challenges varied depending upon the provider organization type. Behavioral health providers reported the adoption of EHR led to improved staff coordination, safety, and the ability to remotely monitor patient needs. Specifically, community-based service providers reported improved safety ranked highest, followed by improved health outcomes as top benefits. Meanwhile, initial cost, staff education and training, and limited technical resources were among the most highly rated challenges reported.

2.1.2.4 LTC Provider EHR Adoption

While the provider types and specialties eligible for the EHR Incentive Programs include those providing LTC services, there is no direct mechanism to assess which portion of services and use of EHR technology ties to LTC care. Further, there is a broad range of professionals providing care within the LTC space, and many are not part of traditional health care settings, such as community-based services.

When LTC organizations were surveyed, 57% (224 of 395) of respondents reported using an EHR, effectively matching the overall Eligible Professional participation rate within the EHR Incentive Program (56%).

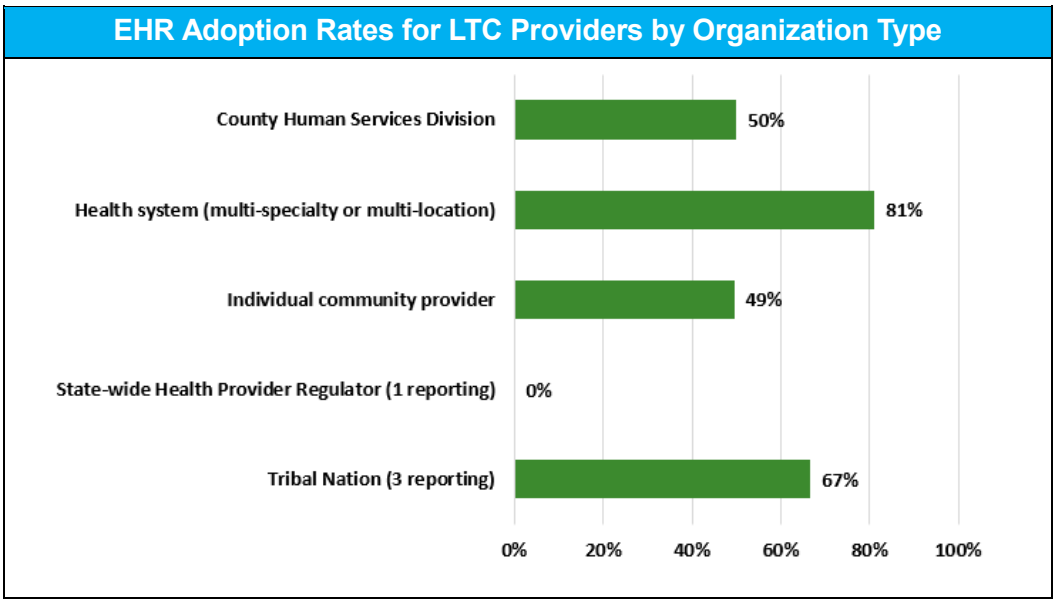


Figure 2.10: Long-Term Care Provider Survey Respondents EHR Adoption Rate

Similar to behavioral health providers, the rate of adoption and reported benefits and challenges varied depending upon the provider organization type. LTC providers reported the adoption of EHRs led to reduced staff time, improvement in safety, and greater ability to remotely monitor patient needs. Specifically, county human service divisions reported cost savings and improved patient outcomes as top benefits. The highest reported EHR challenges matched behavioral health providers, including initial cost, staff education and training, and maintenance costs.

2.1.3 FQHCs and Tribal Health Centers

Eligible Professionals at Wisconsin tribal health centers and FQHCs have a higher participation rate (93% and 74%, respectively) compared to the average of participating providers (56% overall), but they have a lower proportion of Meaningful Users.

On average, 44% of Wisconsin tribal health center Eligible Professionals and 52% of FQHC Eligible Professionals have achieved Meaningful Use; however, there are two factors to consider in reviewing the provider population and vendor landscape:

- In looking at the breakdown by provider type, dentists at FQHCs and tribal health centers account for 36% of participating providers, over 10 times higher than the overall percentage of dentists (3%). As noted previously, dentists are the least likely provider type to attest to Meaningful Use, at a rate of only 30%.

- In addition, challenges with the IHS CEHRT, the Resources and Patient Management System (RPMS), are a potential contributing factor to lower Meaningful Use attestations for tribal health centers in particular. Excluding dentists, since December 16, 2015, 22% (25 of 111) of Eligible Professionals have been unable to complete the onboarding of their data to the RPMS Network Master Patient Index and the RPMS Network Health Information Exchange and were therefore unable to attest for Meaningful

Use for Program Year 2015 and receive EHR incentive payments. IHS has been working with CMS to document a Medicare hardship exception process, which may minimize the impact to the providers[13].

After removing the attestations associated to the above factors, Meaningful Use achievement increases to 67% for Wisconsin tribal health center providers and 60% for FQHC providers.

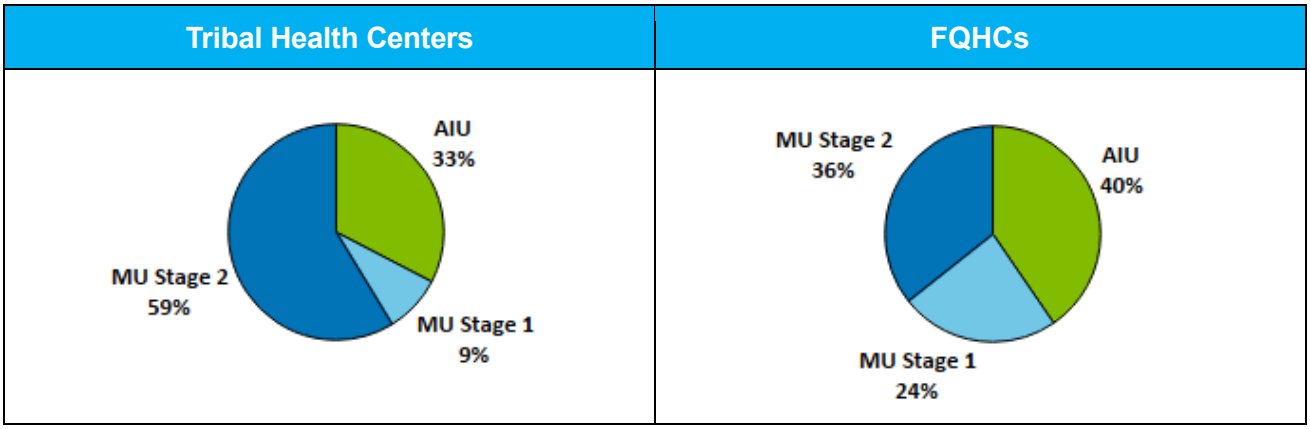


Figure 2.11: Tribal Center and FQHC Eligible Professional Highest Level of Attestation Through EHR Incentive Program Year 2015. *Attestations made by dentists and those associated with IHS have been removed.*

2.2 Health IT Maturity

The EHR Incentive Programs facilitate and encourage providers' ability to deliver high-quality care and move toward value-based purchasing through "meaningful use" of EHR technology. Meaningful Use is reported against two criteria:

- **Meaningful Use Objectives** define quantifiable actions, workflow integrations, and measures that demonstrate EHR adoption. These objectives set thresholds and increased progression from data capture and sharing (Stage 1), advanced clinical processes (Stage 2), and improved outcomes (Stage 3).
- **Clinical Quality Measures (CQMs)** are tools that help measure and track the quality of health care services provided within the health care system.

Analyzing how providers are reporting on Meaningful Use can speak to the impact health IT is having on how care is coordinated and delivered. It also provides an indication of readiness for the next stage of the EHR Incentive Program, as Stage 3 becomes available in Program Year 2017. Overall, Eligible Hospitals and Eligible Professionals reflected high performance across Modified Stage 2 Meaningful Use objectives and measure sets[e] and relatively low exclusion rates. This is expected to continue or improve through Program Years 2016 and 2017.

[e] CMS final rule (80 FR 62788) specified changes to the Meaningful Use reporting structure and criteria for the EHR Incentive Program for Program Years 2015-2017, including a modified set of criteria for attestation known as "Modified Stage 2," which consolidates criteria from the previous stages of Stage 1 and Stage 2 Meaningful Use.

The progression to Stage 3 reporting includes several increased measure thresholds, as well as some measure reorganization, a full-year reporting period, and most notably, the addition of application program interfaces (APIs)[f] for use with patient engagement and access to health information. On top of the Meaningful Use objective and measure adjustments, attestations require the use of 2015 edition CEHRT[g].

As is detailed in this section, Program Year 2015 performance rates demonstrate a readiness for Stage 3 for those Meaningful Use objective measures continuing in the program with increased thresholds. There is also evidence Eligible Hospitals and Eligible Professionals have begun to upgrade to 2015 CEHRT. Early estimates from Program Year 2016 show 13% of Eligible Professional and 15% of Eligible Hospital attestations have made this transition. However, the majority of organizations have not yet upgraded their CEHRT and would need to do so prior to September 30, 2017, in order to use for a Program Year 2017 attestation. In addition, the requirement for new API capabilities will certainly require development and integration work across vendors and provider organizations. Thus, while Stage 3 attestation becomes available in Program Year 2017, it is not anticipated that many Eligible Hospitals and Eligible Professionals will be ready to transition until Program Year 2018.

DID YOU KNOW?

In Program Year 2015, all attestations required Modified Stage 2 criteria; however, those Eligible Hospitals and Eligible Professionals that had previously been scheduled for Stage 1 Meaningful Use were provided alternate measures that either afforded lower measure thresholds or additional exclusion criteria. While there was some variation in how these options were presented for Medicare and Medicaid attestations, the overall majority of Program Year 2015 attestations made use of the regular Modified Stage 2 specifications.

- All but two Eligible Hospital attestations were performed through Medicare's system, with an overall 92% Stage 2 attestation rate.
- The majority of Eligible Professional attestations were performed through Medicare's system, with an overall 87% Stage 2 attestation rate.

2.2.1 Meaningful Use Objectives

As the EHR Incentive Program and Meaningful Use stages have progressed, specific Meaningful Use objectives and measures have been revised, making comparison across stages and program years difficult. Starting in Program Year 2015, Modified Stage 2 measures replaced the core and menu structure

[f] APIs are a set of programming protocols established for multiple purposes, including interaction between software systems. For example, APIs may be enabled by a provider or provider organization to provide patients with access to their health information through a third-party application with more flexibility than is often found in many current "patient portals."

[g] A Notice of Proposed Rulemaking (NPRM) was issued on April, 28, 2017, for a CMS proposed rule (82 FR 19796), which included changes with the potential to impact both the reporting period and CEHRT edition required for Stage 3 in Program Year 2017.

of Stages 1 and 2 with a single set of objectives and measures, allowing for consistent comparison for Program Year 2015 attestations as well as future program years. As such, the data contained in this analysis is limited to Program Year 2015 attestations.

Please note in this section abbreviated language is utilized for Meaningful Use objectives, measures, and thresholds. Full specification sheets for Program Year 2015 can be viewed in CMS' Requirements for Previous Years[14].

In reviewing Meaningful Use attestations, both the exclusion rate (percentage of providers that "skipped" the measure set) and performance rates (extent to which providers met or exceeded the measure set threshold) can speak to the maturity of EHR adoption, the integration of new processes into provider workflows, and data exchange capabilities.

Across all Meaningful Use objectives and measure sets, performance rates were high, exceeding 75% for eight of 11 Eligible Hospital Meaningful Use objectives, and nine of 11 Eligible Professional Meaningful Use objectives, suggesting readiness for Stage 3 thresholds, where applicable.

Those measures with lower performance rates can be categorized as data exchange between health care entities and patients via EHR technology. These were also the measures with the highest exclusion rates[h]. These measures may speak to the difficulty in interacting electronically across organizations.

2015 Lowest Performance Rates

- Health Information Exchange
  - 55% Eligible Hospital and 60% Eligible Professional
- Electronic Prescribing
  - 66% for Eligible Hospital (data from Stage 2 and Stage 2 Alternates combined)
- Patient Electronic Access Measure 2 – View, Download, Transmit (VDT)
  - 22% Eligible Hospital and 38% Eligible Professional

Exclusion rates were also higher for measures with exclusions based on volume. Given there was a 90-day reporting period, these exclusions most likely speak to actual number of incidences as opposed to providers not having the capability or not meeting the performance thresholds. Those measures included the Computerized Provider Order Entry (CPOE), Medication Reconciliation, and Patient Specific Eduction objectives.

[h] While there is overlap between Eligible Professional and Eligible Hospital exclusions, it is important to keep in mind that exclusions were available to Eligible Professionals on all but one Meaningful Use objective, whereas Eligible Hospitals had minimal exclusions available, especially for regular Modified Stage 2 attestations.

- Health Information Exchange was excluded by over 97% of Eligible Professionals
- Patient Electronic Access Measure 2 – VDT was excluded by 33% of Eligible Hospital and 54% of Eligible Professional Stage 2 Alternates
- Electronic Prescribing was excluded 35% by Eligible Hospitals (data for both Stage 2 and Stage 2 Alternates is combined) and 19% for Eligible Professionals
- Secure Electronic Messaging was excluded by 54% of Eligible Professional Stage 2 Alternates. This measure had a 100% performance rate when attested to.

2015 Highest Exclusion Rates

Despite higher exclusion rates, Program Year 2015 performance looks relatively well positioned for continuing to meet increased thresholds, especially when taking into consideration the limited increases occurring in Modified Stage 2 specifications through Program Year 20 17. There are minimal changes in Program Year 2016; there are still alternate exclusions for Eligible Hospitals and Eligible Professionals scheduled for Stage 1 and for Eligible Professionals the objective for Secure Electronic Messaging increases to using CEHRT to send (or reply to) at least one message to a patient[15]. In Program Year 2017, there are no longer any alternate exclusions, but there are only two threshold increases[16]. Both increase use of the measure from a single patient to more than 5% of unique patients and are tied to Secure Electronic Messaging and VDT activity tied to Patient Electronic Access Measure 2.

When looking ahead to Stage 3 specifications, Eligible Hospitals and Eligible Professionals will need to expand on their EHR technology capabilities in accepting and incorporating summary of care records, encouraging reconciliation of health information for the patient, providing more timely access to health records and patient specific education, and using technologies to engage with patients about their health care.

2.2.1.1 Public Health Reporting

Despite several of the data exchange-related Meaningful Use objectives showing lower performance, both Eligible Hospitals and Eligible Professionals showed high engagement with public health reporting, which extends to immunization, syndromic surveillance, specialized registry, and electronic reportable laboratory results (Eligible Hospital only) reporting to public health agencies.

Per Program Year 2015 specifications, Modified Stage 2 Eligible Hospitals and Eligible Professionals are required to attest to two categories of public health data (one category for Modified Stage 2 Alternate attestation). Across Eligible Hospitals and Eligible Professionals, the most selected category was immunization, although the least selected varied between specialized registry for Eligible Hospitals and syndromic surveillance for Eligible Professionals.

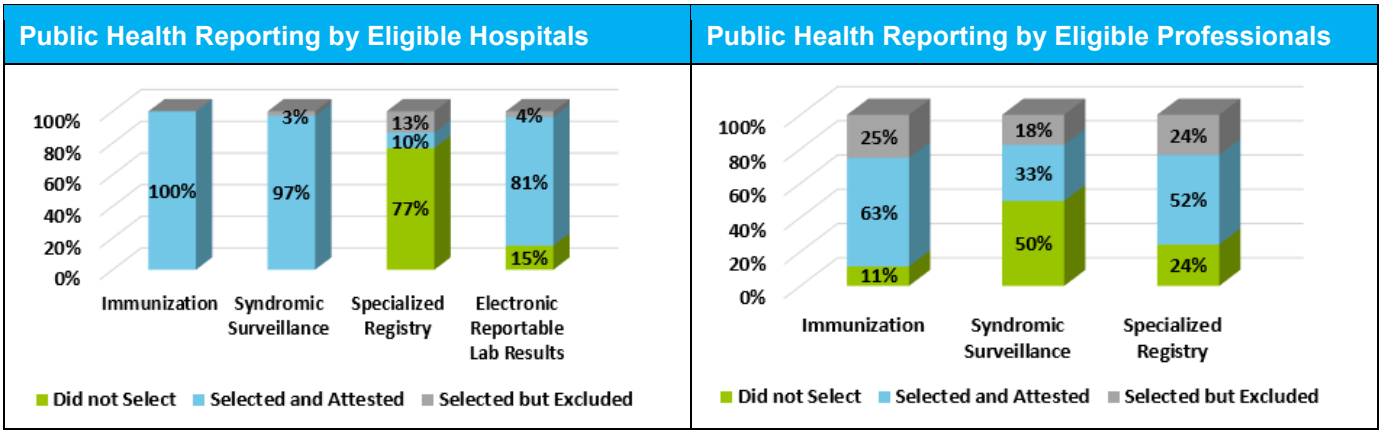


Figure 2.12: EHR Incentive Program Year 2015 Attestation Selections for Meaningful Use Objective Public Health Reporting

Within this objective, several exclusions are available related to whether the Eligible Hospital and Eligible Professional operate in a jurisdiction whose public health agency is able to receive the data electronically, as well as exclusions tied to not administering, diagnosing, or treating any disease or condition associated with collecting relevant data.

Wisconsin's Division of Public Health (DPH) has removed many of the barriers that would have resulted in Eligible Professionals and Eligible Hospitals taking exclusions for this objective. DPH is capable, through several registries and partnerships, to receive electronic data according to the standards required and declared its readiness prior to the start of the EHR reporting period (per CMS requirements). Public health data is collected through the following means:

- Syndromic surveillance[17] data is submitted directly to BioSense 2.0 or through the Wisconsin Statewide Health Information Network (WISHIN) to BioSense 2.0.
- Immunization data is submitted directly to DPH's Wisconsin Immunization Registry (WIR) or through WISHIN to WIR.
- Cancer (specialized registry) data is submitted through DPH's Wisconsin Cancer Reporting System (WCRS).
- Electronic reportable laboratory results are submitted directly to the Wisconsin State Laboratory of Hygiene (WSLH) who acts on behalf of DPH.

Thus, exclusion rates speak most to practices that do not provide the services associated with data collected for public health purposes, as opposed to lacking the capability to electronically report.

In January 2014, DPH launched the Public Health Registration for Electronic Data Submission System (PHREDS), a single SharePoint site for any party to register their intent to submit data electronically for public health reporting. PHREDS supports:

- Streamlining the registration process for all providers wanting to submit data through an EHR to Wisconsin's public health registries.
- Tracking providers' public health registry participation in a centralized system.
- Facilitating DPH's processes for distributing Meaningful Use Acknowledgements.

2.2.2 Clinical Quality Measures

When selecting CQMs for EHR Incentive Program attestation, there is a great deal of flexibility available. Outside of the number of CQMs to select, beginning in Program Year 2014, the only requirement from CMS is the CQMs must fall across at least three of the six National Quality Strategy (NQS) domains[18]. The NQS domains represent the Department of Health and Human Services' NQS priorities for health care quality improvement and include:

1. Patient and Family Engagement
2. Patient Safety
3. Care Coordination
4. Population/Public Health
5. Efficient Use of Healthcare Resources
6. Clinical Process/Effectiveness

There is some additional guidance regarding attestations, CMS has identified two core sets of CQMs – one for adults and one for children – focusing on high-priority health conditions and best practices for care delivery. In addition, the Agency recommends Eligible Professionals report on 35 priority CQMs that align with either current Medicaid initiatives and priorities or potential future areas of interest[19].

For this assessment, CQMs selected as part of attestations to the Medicaid EHR Incentive Program for Program Year 2015 were analyzed, which include 1,411 of 7,206 total Eligible Professionals for Medicare and Medicaid programs[i]. Program Year 2015 was selected as CEHRT capability increased with the 2014 certification level, improving the quality and accuracy of CQM data and requiring the capability to electronically report. In Program Year 2015, 2014 Edition CEHRT was required.

Please note in this section the graphics can contain abbreviated language for the CQM names. Full specifications beginning with the 2015 reporting period can be viewed in the eCQI Resource Center (https://ecqi.healthit.gov/ecqms).

[F]The majority of Eligible Hospitals attest to the Medicare EHR Incentive Program however this data is not made available for public distribution, thus was not included in this analysis.

2.2.2.1 Eligible Professional 2015 CQM Reporting

Eligible Professionals report on nine out of 64 available CQMs. Thus, there is a wide range of attestation rates; only 14 CQMs have at least a 30% attestation rate overall. When considering CQM selection by Eligible Professionals, attestation rates are broken out by provider type in order to allow for the variation in the types of care and services performed by these different providers.

The top Eligible Professional attestation rates for Program Year 2015 of the EHR Incentive Medicaid program include seven CQMs recommended by Wisconsin Medicaid and five of CMS' recommended Adult set. Of the three represented NQS domains, Population/Public Health is most prominently represented, despite Clinical Process/Effectiveness having 63% (40 of 64) of the CQMs.

Clinical Quality Measure	NQS Domain	Wisconsin Medicaid Indicator	CMS Set	2015 Attestation Rate			
				Phys	Nurse	PA	Dent
CMS138: Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention	Population / Public Health	Highly Recommend	Adult	78%	67%	100%	16%
CMS69: Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up		Future Use	Adult	47%	68%	93%	75%
CMS147: Preventive Care and Screening: Influenza Immunization				75%	73%	7%	14%
CMS68: Documentation of Current Medications in the Medical Record	Patient Safety	Highly Recommend	Adult	72%	48%	86%	33%
CMS139: Falls: Screening for Future Fall Risk				21%	27%	21%	88%
CMS165: Controlling High Blood Pressure	Clinical Process / Effectiveness	Highly Recommend	Adult	49%	75%	93%	75%
CMS122: Diabetes: Hemoglobin A1c Poor Control				23%	43%	7%	76%
CMS130: Colorectal Cancer Screening				35%	61%	7%	88%
CMS166: Use of Imaging Studies for Low Back Pain	Efficient Use of Health Care	Future Use	Adult	12%	14%	93%	

Figure 2.13: Top Five CQM Attestation Rates across Eligible Professional provider types in EHR Incentive Program Year 2015. *Abbreviated provider types include physician, nurse practitioner, physician assistant, and dentist.*

Given the limited restrictions on CQM selections and keeping in mind the distribution of CQMs across the NQS domains is not even, CQM attestation rates may provide insight into the following:

- Which CQMs are most applicable to Eligible Hospital and Eligible Professional organization or services provided
- Which CQMs reflect areas of high performance
- Which CQMs may be available, preselected, or defaulted, within CEHRT technology
- Which CQMs Eligible Hospitals and Eligible Professionals have implemented into their EHR for clinical decision support. As mentioned previously, this Meaningful Use measure specifies clinical decision support interventions related to CQMs at a relevant point in patient care, either tied to the Eligible Hospital or Eligible Professional's scope of practice or patient population or related to high-priority health conditions.

In reviewing the top selected CQMs, there is relatively high correlation across all provider types. While this might be expected to some extent due to overlap in services provided by physicians and nurse practitioners, and to a lesser extent, physician assistants, one would not expect a correlation with dentists. It would also be expected to see wider variation within the physician provider type resulting from the range of specialties and associated health care services.

The selected CQMs look to align with high-priority health conditions, and given the consistency, it is speculated these selections are predetermined through EHR systems. When considering dentists in particular, it is surprising the default CQMs do not include the very few that are relevant to the type of services dentists perform. Attestation rates for these dentist-relevant CQMs are quite low:

- CMS74: Primary Caries Prevention Intervention as Offered by Primary Care Providers, including Dentists (10%)
- CMS75: Children Who Have Dental Decay or Cavities (6%)
- CMS138: Preventive Care/Screening: Tobacco Use: Screening and Cessation Intervention (16%)
- CMS156: Use of High-Risk Medications in the Elderly (4%)
- CMS50: Closing the Referral Loop: Receipt of Specialist Report (2%)
- CMS68: Documentation of Current Medications in the Medical Record (33%)

While the top selected Eligible Professional CQMs have attestation rates over 50%, over half of the CQMs (41 of 64) have less than a 10% attestation rate, including seven Eligible Professional CQMs that were not selected at all in Program Year 2015.

In reviewing the least selected Eligible Professional CQMs by physicians and nurse practitioners, all NQS domains are covered; however, most are within the Clinical Process/Effectiveness domain. Perhaps this indicates these measures are less applicable to the Eligible Professional Medicaid provider population, harder to integrate through EHR systems, or could be areas for performance improvement.

2.2.2.2 Electronically Reporting CQMs

To participate in the EHR Incentive Programs and receive an incentive payment, providers are required to submit CQM data generated from CEHRT[20]. For the Medicare program, CQMs may be reported electronically or via the applicable registration and attestation system.

The ability to electronically report CQMs is a building block in transitioning to value-based purchasing and the use of alternative payment methods, as this will necessitate the availability and submission of data from providers to the Agency.

While Wisconsin is not currently able to accept electronically submitted CQMs, evidence suggests that Wisconsin health entities are ready.

- CEHRT capability increased with the 2014 certification level, improving the quality and accuracy of CQM data and requiring the capability to electronically report. Through Program Year 2015, 81% of Eligible Professionals were using 2014 Edition CEHRT.
- Almost all Wisconsin Medicaid HMOs surveyed (82%) indicated readiness to accept electronically submitted CQMs, but only 65% required CQMs be submitted by their providers via mechanisms, including electronic, fax, onsite reviews, and paper copies of medical records. Of those that require submission, only 27% require them to be sent electronically.

The Agency may want to consider developing a mechanism to receive electronically reported CQMs so they are able to more easily access and use this data for future quality initiatives. Within the EHR Incentive Program, electronic reporting would reduce provider attestation time while eliminating any manual entry errors. By establishing the ability to receive electronically reported CQMs, the Agency will be able to engage with wider range of providers to obtain important data for quality improvement efforts, laying the groundwork for future initiatives.

2.3 EHR Vendor Landscape

At its most basic, EHR technology is an electronic version of a patient's paper chart. In practice, EHR systems have expanded to cover a myriad of functions from clinical decision support and provider workflow automation to aggregation of clinical data for use in population health analytics. EHR technology can be all encompassing or modular, with specialized functions designed to integrate across technologies. While the market may not yet be saturated, it has already become a large industry. As of 2014, there were roughly 1,100 vendors that offered an EHR – twice the number of vendors as four years prior[21]. As of July 2016, 632 vendors supplied CEHRT associated with the EHR Incentive Program[22].

Throughout the Medicare and Medicaid EHR Incentive Programs a large number of CEHRT vendors have been used, but the overwhelming majority of provider and hospital attestations have been with a few select vendors; both overall and within each program year. While there is some variation in vendors across Eligible Hospital and Eligible Professional attestation years, each has had several vendors consistently in the top five:

- For Eligible Professionals: Epic Systems, with over 50% market share overall, Cerner Corporation, and Marshfield Clinics (Cattails software)
- For Eligible Hospitals: Epic Systems, also with over 50% market share overall, Cerner Corporation, MEDHOST, and MEDITECH

This dense market is mirrored when examining the EHR vendor landscape across additional dimensions, by Eligible Professional provider type, for example, as well as providers outside of the EHR Incentive Program, although the principal vendors change.

Given the concentrated market share, providers using common vendors should be able to access a significant proportion of member data through vendor-HIEs within their EHR (like Epic's Care Everywhere); approximately 82% of Wisconsin Medicaid members' data is likely within the top five Eligible Professional vendor systems[j]. However, while the overlap in vendor systems provides for HIE within each system, there is still a need for data governance and interoperability standards in order to facilitate exchange across the different vendor systems. This need is magnified when examining data exchange capabilities across different types of health care providers, such as dentists and physicians, but also when considering the full landscape of Wisconsin Medicaid providers, especially in those geographic areas where the market share may be less dense. For further analysis into HIE across vendor systems, please see the *Health Information Exchange Analysis* section.

2.3.1 Eligible Hospital CEHRT Vendor Landscape

Wisconsin Eligible Hospitals attesting to the EHR Incentive Programs have used 25 different CEHRT vendors throughout Program Years 2011-2015. The market share is relatively diverse across a number of vendors, although almost three-fourths of vendors have less than 5% market share.

Eligible Hospitals attesting to the EHR Incentive Programs have used the top five vendors in 82% of their most recent attestations.

In Figure 2.14, market share reflects vendor used for the most recent EHR attestation. The top five market share includes two vendors tied for third and three tied for fourth.

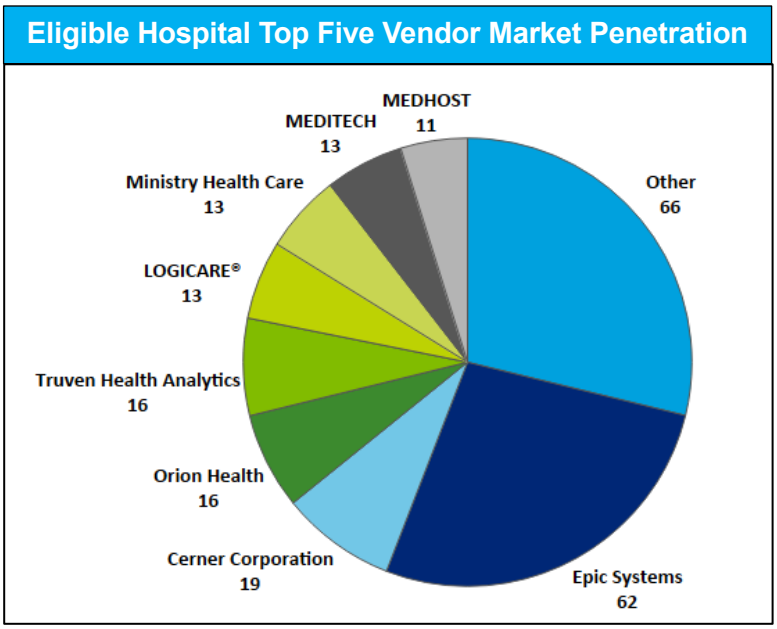


Figure 2.14: Eligible Hospital Market Penetration by Top Five Vendors for Most Recent Attestation via EHR Incentive Program

[j] Estimated Medicaid population within a top five vendor system calculated using two extrapolations: (1) the Wisconsin Medicaid population residing within an EHR system was estimated to align with ONC reported EHR adoption rates for Wisconsin physicians (93%) and (2) the subset of the Wisconsin Medicaid population in (1) that was residing within a top five EHR vendor system was inferred to match with the percentage of most recent attestations in the EHR Incentive Program making use of a top five vendor (89%).

In reviewing the vendor distribution across the duration of the EHR Incentive Program, the following circumstances should be taken into account:

- The number of attestations per vendor and number of vendors used decreases after Program Year 2013. Both Medicare and Medicaid distribute incentive payments over a three-year period to Eligible Hospitals, meaning that once hospitals have successfully been paid for adopting or meaningfully using CEHRT for three program years, they effectively complete participation. As a result, the number of hospitals that participate as the EHR Incentive Program continues has decreased after Program Year 2013, and this is reflected both in the vendor counts as well as the number of vendors being used in the later program years.
- Since Program Year 2013, 25% of vendor software is no longer being utilized; besides vendor consolidations, this may also be attributable to hospitals undergoing software migrations during the EHR Incentive Program. For example, Aurora Health Care transitioned to a single vendor from a combination of three vendor systems between Program Years 2013 and 2015.
- The market share of any one vendor could be conflated, as approximately 30% of CEHRTs used by hospitals include multiple vendor software packages. For example, CEHRTs including Truven Health Analytics, LOGICARE® Corporation, Orion Health, and Ministry Health Care technology were used in 49 attestations by 13 hospitals across Program Years 2011-2015. Several of these technologies were also available in other vendor combinations, resulting in very similar, but not exact, attestation totals.

The following heat map depicts the top five vendors for each program year and the number of participating Eligible Hospitals using the vendor's CEHRT product. Four of the top five vendors are consistent throughout all program years – Epic Systems Corporation, Cerner Corporation, MEDHOST[k], and MEDITECH – with the remaining positions varying across a number of vendors.

Vendor	Program Year 2011	Program Year 2012	Program Year 2013	Program Year 2014	Program Year 2015	Most Recent Attestation
Epic Systems Corporation	42	62	91	82	70	62
Cerner Corporation	31	19	41	30	21	19
MEDHOST	7	18	26	14	9	11
MEDITECH	7	17	25	19	13	13
Truven Health Analytics			24	15	6	16
Orion Health	3	12	23	15	6	16

[k] MEDHOST encompasses the solutions provided by Healthcare Management Systems and MEDHOST. These organizations are owned by HealthTech holdings and were rebranded to MEDHOST in December 2013.

Vendor	Program Year 2011	Program Year 2012	Program Year 2013	Program Year 2014	Program Year 2015	Most Recent Attestation
LOGICARE® Corporation	3	12	23	11	3	13
Ministry Health Care	4	12	21	9	3	13
EHR Doctors, Inc.	3	14	17			7
CPSI (Computer Programs and Systems, Inc.)	7	12	15	9	2	4
Distinct Vendors	16	21	25	23	24	25

Figure 2.15: Eligible Hospital Top Five Vendor Attestation and Count of Distinct Vendors by EHR Incentive Program Year and Most Recent Attestation. *The vendor market share from 1-5 is represented by darkest (green) to lightest (gray) shading.*

2.3.2 Eligible Professional CEHRT Vendor Landscape

Eligible Professionals attesting to the Medicare and Medicaid EHR Incentive Programs have used 120 different CEHRT vendors throughout Program Years 2011-2015.

Despite the high number of CEHRT vendors, the market share is dominated by a handful of vendors; providers have attested with the top five vendors in 89% of their most recent attestation. The market share is also primarily made up of CEHRTs containing a single vendor; less than 10% of attestations use CEHRT technology with a combination of different vendor products.

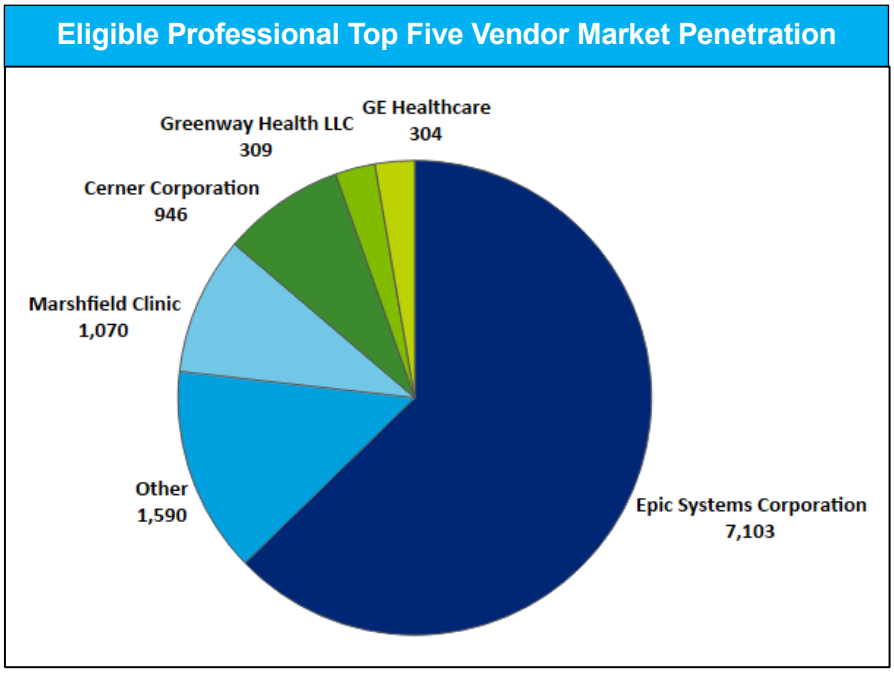


Figure 2.16: Eligible Professional Market Penetration by Top Five Vendor for Most Recent Attestation via EHR Incentive Program

In Figure 2.16, market share reflects vendor used for the most recent attestation.

The following heat map depicts the top five vendors for each program year and the number of participating Eligible Professionals using the vendor's CEHRT product. The three most prevalent vendors have been consistent throughout all program years, with the fourth

and fifth spots varying across three vendors: GE Healthcare, NextGen Healthcare, and Greenway Health LLC[I].

Vendor	Program Year 2011	Program Year 2012	Program Year 2013	Program Year 2014	Program Year 2015	Most Recent Attestation
Epic Systems Corporation	1,704	4,064	5,925	5,163	5,032	7,103
Cerner Corporation	80	613	779	757	750	946
Marshfield Clinic	221	772	717	773	700	1,070
GE Healthcare	63	132	197	240	167	304
NextGen Healthcare	94	152	244	153	133	239
Greenway Health LLC	102	141	179	138	129	309
Distinct Vendors	39	75	93	78	71	120

Figure 2.17: Eligible Professional Top Five Vendor Attestation and Count of Distinct Vendors by EHR Incentive Program Year and Most Recent Attestation. *The vendor market share from 1-5 is represented by darkest (green) to lightest (gray) shading.*

The number of CEHRT vendors used by participating Eligible Professionals increased through Program Year 2013, followed by a drop in both Program Year 2014 and 2015; over 25% of vendors have not been used since Program Year 2013. This mirrors the overall attestation participation and retention rates. Additional influences on the number of CEHRT vendors could be the consolidation of the smaller CEHRT vendors, as well as the high percentage of Eligible Professionals making use of a single vendor CEHRT.

2.3.3 EHR Vendor Analysis by Provider Types

An examination of the EHR vendor landscape by provider type reveals additional variation in top selected EHR vendors, although there are a handful of vendors consistently comprising between half and three-quarters of the overall market share. This underscores the need for interoperability across EHR vendors in order to coordinate care across health care providers.

Within the EHR Incentive Program, each provider type attests with at least three of the overall top five CEHRT vendors: Epic, NextGen Healthcare, and Greenway Health LLC. Dentists and physician assistants chose different CEHRT vendors when compared to physicians and nurse practitioners. Within the EHR Incentive Program, dentists and physician assistants tend to come from smaller organizations, including FQHCs, tribal health clinics, and Rural Health Clinics, which may speak to the infeasibility of the top five vendors for these types of organizations.

[I] Greenway Health, LLC encompasses the solutions provided by Vitera Healthcare Solutions (including Sage), SuccessEHS, and Greenway Medical Technologies. These organizations were consolidated in 2013 by Vista Equity Partners.

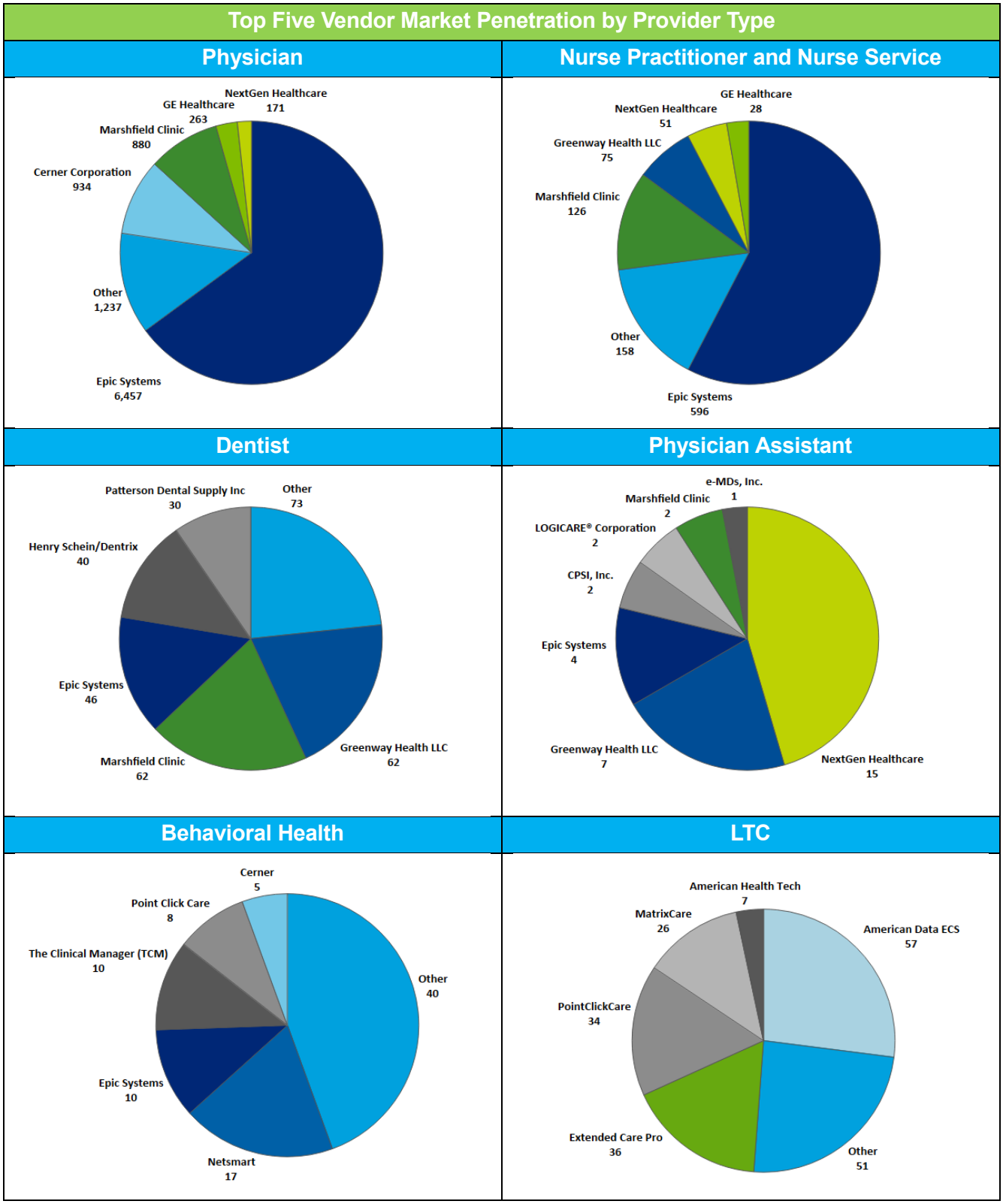


Figure 2.18: Top Five Vendor Market Penetration by Provider Type. *Vendor market share for physicians, nurse practitioner and nurse service, dentists, and physician assistants tie to CEHRT and are sourced through the EHR Incentive Programs. Vendor market share for behavioral health and LTC providers are sourced through the SHIP Health IT Landscape Assessment survey.*

Outside of the EHR Incentive Program, both behavioral health and LTC providers introduced a largely different set of EHR vendors than those used for CEHRT. There was some intersection with the top five CEHRT vendors, as both Epic and Cerner were in the top five for behavioral health providers. LTC providers had the least commonality with CEHRT vendors. However, LTC vendors American Data ECS, Point Click Care, and Extended Care Pro overlapped with the behavioral health providers.

2.3.4 EHR Vendor FQHCs and Tribal Health Centers

The vendor landscape for tribal health centers and FQHCs shows a wider distribution, as well as additional vendors in the top five market share. As mentioned previously, dentists in the EHR Incentive Program tend to come from tribal health centers and FQHCs, as reflected in the similar vendor and market share breakdown.

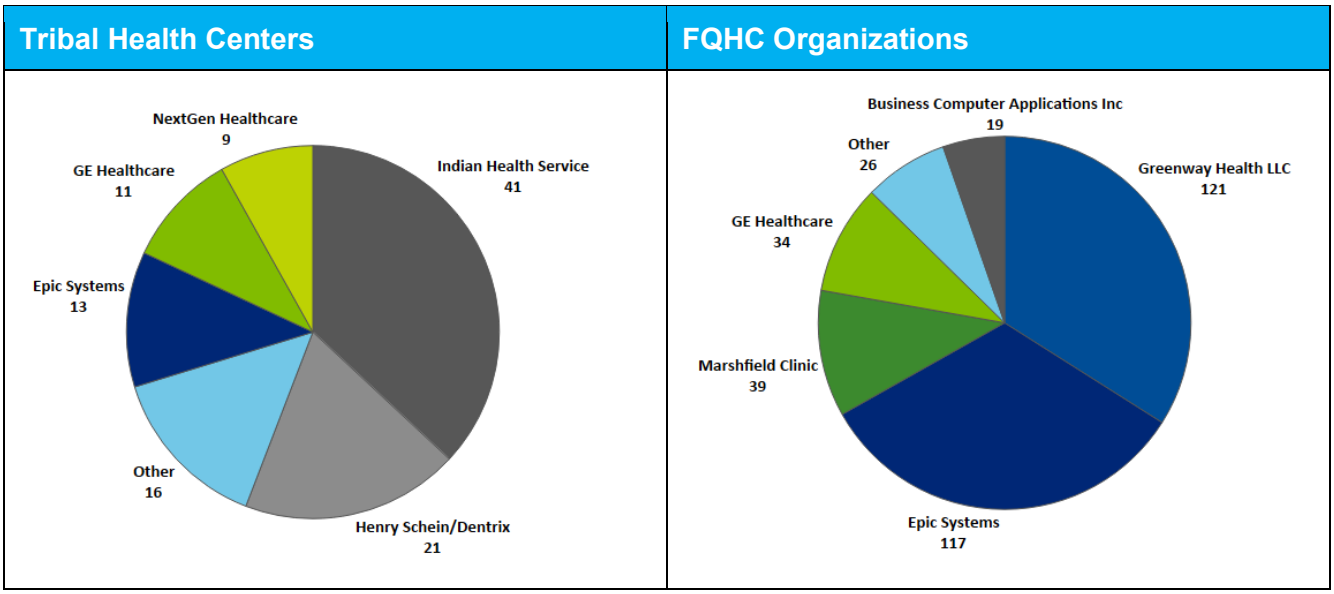


Figure 2.19: Tribal Health Centers and FQHC Organizations Eligible Professional Top Five Vendor Market Penetration for Most Recent Attestation via EHR Incentive Program

2.3.5 Geographic Distribution of CEHRT Vendor Landscape

In order to better understand availability for interoperability and information exchange, the following graphics display the geographic concentration of the top five vendors used in the latest EHR Incentive Program attestations. Examination at the regional level provides an increased granularity from the state level, while accounting to some extent for health care systems and patients that cross county borders.

2.3.5.1 Eligible Hospital CEHRT Vendors by Region

An examination of Eligible Hospital vendors at the regional level shows, with the exception of the Southeastern region, no region is dominated by any one vendor. This underscores the need for HIE across vendor systems.

As noted previously, 10% of hospitals made use of CEHRT containing technology from LOGICARE®, Ministry Health Care, Orion Health, and Truven Health Analytics. These hospitals are located in the Northern and Western regions, where this combination maintains 83% and 15% of market share, respectively.

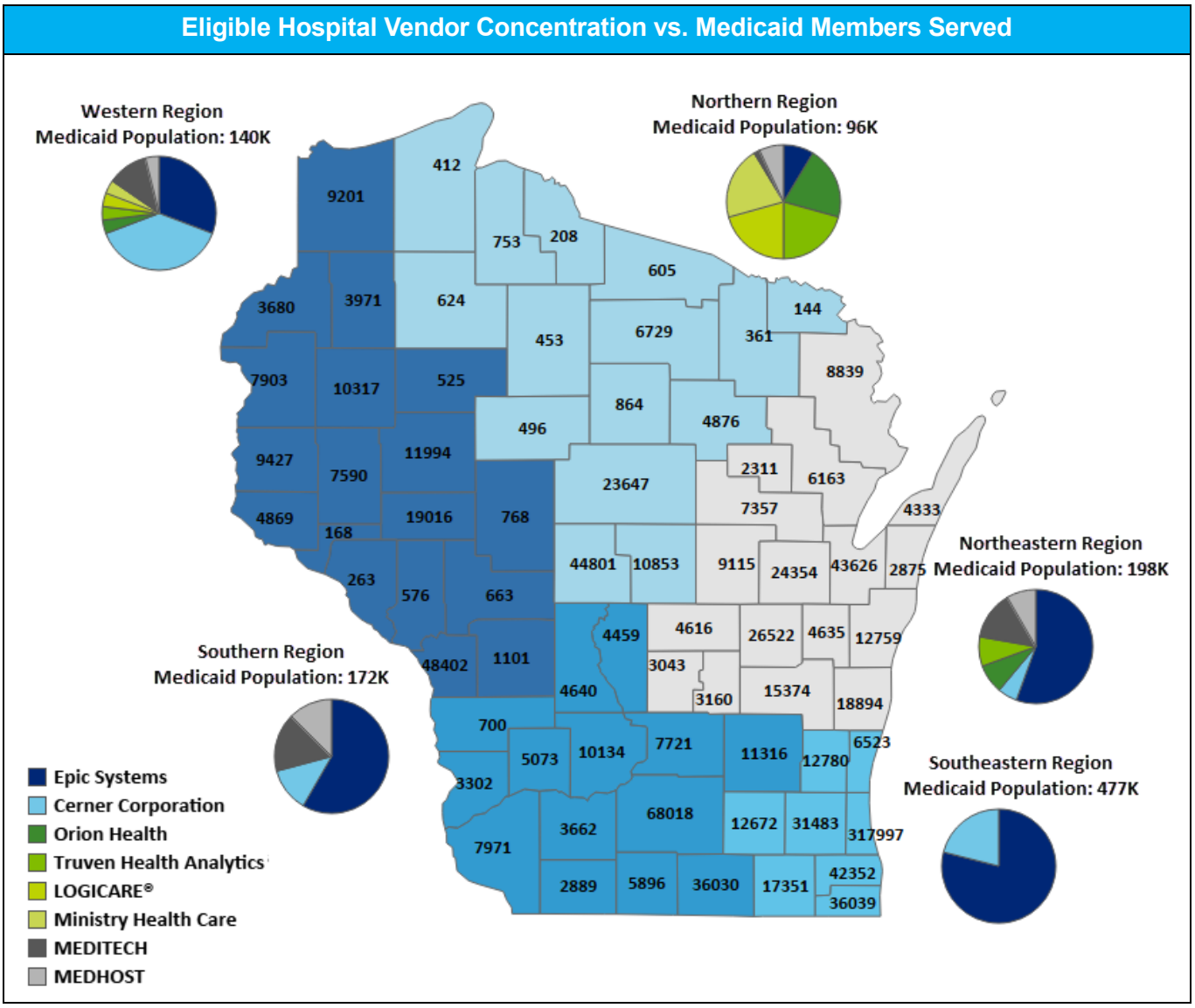


Figure 2.20: Eligible Hospital Vendor Concentration by Region for Most Recent Attestation through Program Year 2015.
Medicaid members served reflects average of all months in calendar year 2015.

2.3.5.2 Eligible Professional CEHRT Vendors by Region

An examination of Eligible Professional vendors at the regional level shows only the Western region does not have a single vendor dominating the EHR market, although the region is almost exclusively made up of the top three vendors: Cerner, Epic Systems, and Marshfield Clinics. For future health care service delivery and payment reform initiatives, it will be important for the Agency to understand interoperability capabilities across these top vendors, especially when they are used in an area that makes use of each or when looking at more granular geographies where market penetration may be more diluted.

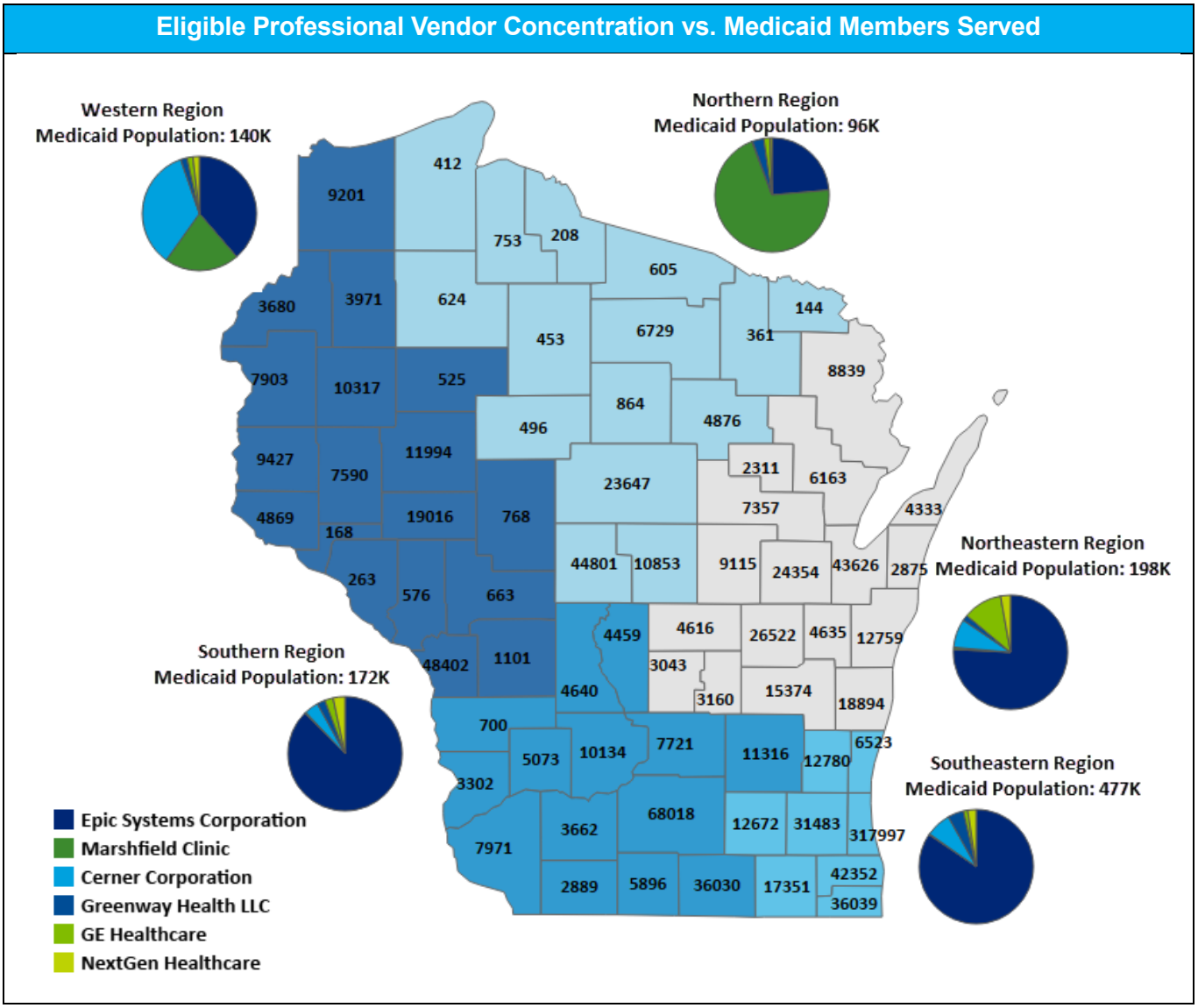


Figure 2.21: Eligible Professional Most Recent Attestation Vendor Concentration by Region. *Medicaid members served reflects average of all months in calendar year 2015.*

3 Health Information Exchange Analysis

The ability to exchange health information across entities is perhaps the most fundamental building block in expanding capabilities in coordinating care, increasing transparency, and engaging patients. It is also one of the most complex. Currently, HIE occurs in various ways across health care entities using a wide array of EHR technology and other vendor systems, HIE organizations, and health information service providers (HISPs). Data may be exchanged across multiple applications within a given organization; between different organizations using the same system, such as a specific vendor EHR; or across different organizations and different systems. Each type of data transmission requires interoperability in order to send, receive, and integrate data successfully and securely.

This section seeks to assess the extent to which health information data is currently being exchanged, including the mechanisms, vendors, and organizations engaging in data exchange, as well as which HIE data is being used and provides the most value to providers. Analysis is comprised of: (1) EHR vendor interoperability; (2) HIE organization participation; (3) health information sharing; (4) HMO engagement; (5) pharmacy engagement; and (5) barriers to HIE.

Analysis makes use of all source data, as outlined in the *Methodology*, including data from the Medicare and Medicaid EHR Incentive Programs, the SHIP Health IT Landscape Assessment Survey of Behavioral Health and LTC providers, and the 2016 Health IT Landscape Assessment Survey of EHR Incentive Program Eligible Hospitals and Professionals, Wisconsin Medicaid HMOs, and pharmacies.

3.1 EHR Vendor Interoperability

EHR technology provides a number of functions that seek to improve health outcomes and reduce workflow inefficiencies. One of the most useful aspects of the technology is that data is digital and therefore capable of being shared across health care entities.

As detailed previously, there are over 1,000 different EHR vendors in the marketplace, but along provider and organizational dimensions, EHR adoption is highly concentrated, with a small set of vendors. EHR vendors may provide exchange services for their customers within their systems. For example, users of Epic's products often use its Care Everywhere functionality to exchange information with other Epic users. This feature certainly expands the amount of patient data that a given organization can access, but it does not embrace exchange of data across all organizations involved in the care continuum. Rather, it suggests the need for a majority of organizations to use the same vendor product.

Exchange of data also can occur through point-to-point connections, such as interfaces that enable orders and results sharing between a hospital and a community practice or between organizations making use of different EHR vendor systems. While these interfaces do facilitate data exchange, evidence would suggest they are not yet penetrating the landscape and can also be cost prohibitive for smaller organizations.

Increasingly, EHR vendors are working together through collaborative initiatives to facilitate data sharing and nationwide interoperability by making use of common standards and specifications, as well as simplified privacy and data sharing agreements. These initiatives have the potential to connect providers with almost all of Wisconsin Medicaid member data, as all top Wisconsin EHR vendors are engaged in overlapping efforts:

- In early 2016, the Carequality Interoperability Framework devised by The Sequoia Project had signed up several of Wisconsin's primary vendors as initial implementers, including eClinicalWorks, Epic, NextGen Healthcare, and SureScripts[23], as well as WISHIN's technology vendor, Medicity. This framework describes a set of elements, including legal terms, policy requirements, technical specifications, and governance processes, meant to set the stage for better data sharing[24].
- Several of Wisconsin's primary vendors are engaged with the CommonWell Health Alliance, including Cerner, MEDHOST, and MEDITECH. In late 2016, it was announced that CommonWell will become a Carequality implementer, enabling their subscribers to engage in health information exchange through directed queries with any Carequality participant[25]. Completion of the technical aspects of the Carequality specifications and CommonWell gateway are expected in the first half of 2017.

While it may be too soon to see the impact these collaborative efforts will have, it is encouraging that vendors are initiating efforts to align around a common set of standards and moving toward connectivity that stems from vendor infrastructure instead of requiring provider organizations to engage in additional point-to-point connections.

3.1.1.1 HIE Capabilities and Usage

Data from the EHR Incentive Program for HIE capabilities and associated usage of HIE through CEHRT is limited. As identified in the *Health IT Maturity: Meaningful Use Objectives* analysis, the Modified Stage 2 Meaningful Use objectives most aligned with data exchange had some of the highest exclusion rates, as well as the lowest performance. The measure that best addresses HIE amongst providers, Summary of Care Records, encompasses electronically creating and transmitting a summary of care record for patient transitions or referrals. In its Modified Stage 2 specification, this measure speaks to the sending of data, excluding both the receipt and integration, which would provide a much greater indication of health IT maturity. In Program Year 2015, 97 percent of Eligible Professionals excluded the measure (only 3% of Eligible Hospitals excluded).

The high exclusion rate may not necessarily indicate a lack of capability, though, as there were several exclusion options available in Program Year 2015 that could have applied. Eligible Professionals were able to exclude from the measure if they had not transitioned and/or referred patients to other care settings at least 100 times in the reporting period, which would be even likelier given the 90-day reporting period. In addition, there was an exclusion for those Eligible Hospitals and Eligible Professionals scheduled for Stage 1 (which accounts for 16% of Eligible Professionals).

In looking at the Summary of Care Records performance rate, 60% for Eligible Professionals and 55% for Eligible Hospitals, we see the second lowest performance across all Meaningful Use objectives, though, indicating this is an area where more work is needed to enable HIE.

Survey data for Eligible Hospital and Eligible Professional entities show while HIE capabilities are fairly strong, both with EHR and HIE organizations, the actual use of the technology to exchange data has room to grow.

When exchanging with providers across the same EHR technology, Eligible Professionals and Eligible Hospitals report between 78 and 92% capability in **sending**, **receiving,** and **integrating** priority data domains with other providers but only between 50 and 80% usage. Across different EHRs, capabilities decrease slightly to 60-85% and usage to 29-60%.

Both **capability and use increased** when exchanging via HIE organization networks or HISPs.

Outside of EHR technology, HIE organizations and HISPs facilitate data exchange across health care entities, including providers, hospitals, EHR systems, immunization registries, and the Prescription Drug Monitoring Program.

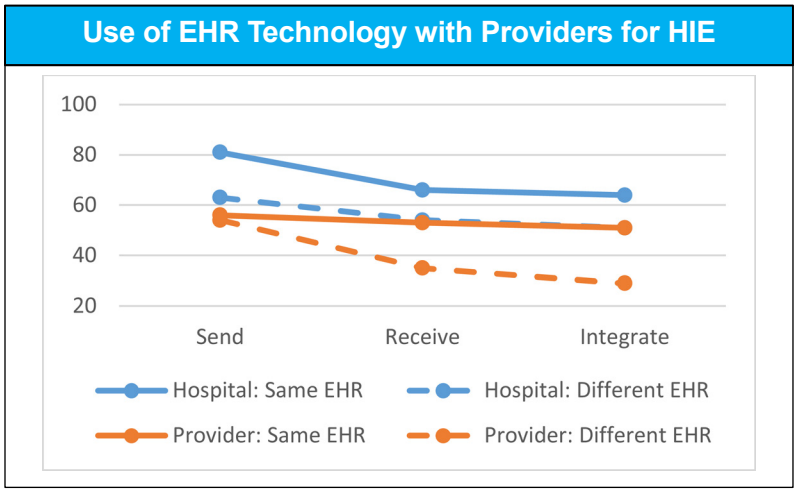


Figure 3.01: Percentage of Providers Using EHR Technology with Providers to Send, Receive, or Integrate Primary Data Domains

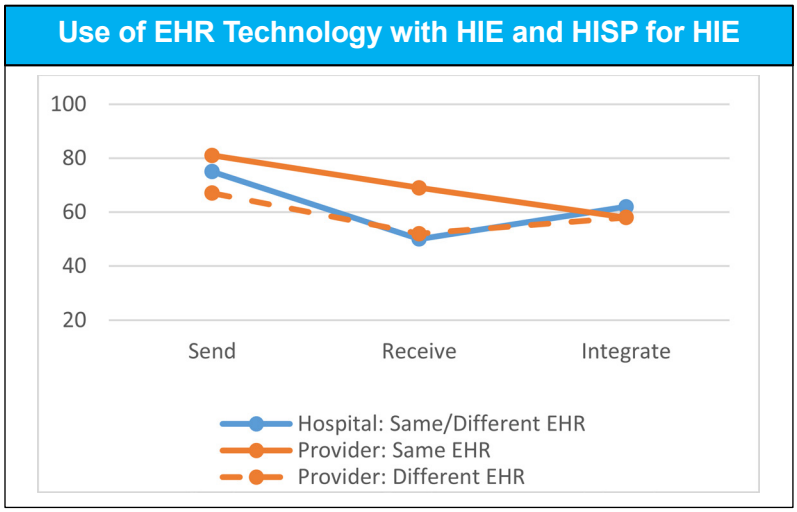


Figure 3.02: Percentage of Providers Using EHR Technology with HIEs and HISPs to Send, Receive, or Integrate Primary Data Domains

When asked about challenges exchanging and integrating priority data elements, survey responses categorized as engagement and technology barriers were prominent. Eligible Hospitals and Eligible Professionals reported the top issues were external providers not sending or providing electronic health information and the clinical information received from external providers was not sufficiently standardized to integrate into their EHR technology. Both Eligible Hospitals and Eligible Professionals reported technical challenges sending and receiving primary data domains (25% and 38%, respectively).

Eligible Professionals also indicated a lack of adoption within their organizations, with 38% reporting their clinicians usually gathered the priority data domains from the patients directly.

Behavioral health and LTC providers reported lower capabilities, with just 18% of respondents with EHR technology indicating HIE is integrated into their workflow. For those behavioral health and LTC providers without EHR technology, HIE use dropped to only 6% of LTC providers, and no HIE was reported by behavioral health providers. In addition to technology and usefulness of exchanged information, concerns surrounding privacy and security were the primary barriers identified.

Through the EHR Incentive Programs and other initiatives, Wisconsin providers have established a high rate of EHR adoption with a highly concentrated set of vendor systems. While this indicates market readiness for electronic exchange of health information, there are still considerable barriers preventing providers from regularly doing so, including provider willingness to exchange data and needed improvements in data standards and technical advancements to facilitate data integration.

3.2 HIE Organization Engagement

There are a number of vendor offerings in the HIE organization and HISP space in Wisconsin; however, there are two supported in part by federal and state funds:

- **WISHIN**, the state-designated entity for HIE, responsible for governing HIE at a state level and overseeing the implementation of a statewide health information network and HIE services in Wisconsin to connect physicians, clinics, hospitals, pharmacies, and clinical labs across Wisconsin. As of February 2017, over 1,400 facilities were registered with WISHIN. WISHIN offers multiple services, including secure clinical messaging using Direct through WISHIN Direct+, a community health record through WISHIN Pulse, a notification service for emergency department or hospital visits through the Patient Activity Report for Payers (PAR-P), and automated public health reporting.
- **eHealth Exchange**, currently the largest health sharing data network in the US, developed as a collaboration of federal agencies and non-federal organizations with The Sequoia Project. Both CMS and WISHIN are connected to the eHealth Exchange.

The type of engagement activities and participation with HIE organizations varies across health entities. Eligible Hospitals are the most engaged, with a 73% participation rate, followed by Wisconsin Medicaid HMOs (47%), Eligible Professionals (39%), pharmacies (6%), LTC providers (4%), and behavioral health providers (only 1%). Within each health entity, WISHIN is the primary HIE organization (with 50% plus share), followed by the eHealth Exchange, and then vendors such as SureScripts, Epic, and MaxMD.

Health Care Entity	HIE Use and HIE Organization
Eligible Hospitals	• 73% of Eligible Hospitals indicated they use an HIE network or services, or HISP, to electronically exchange, find, or use patient health information[m]. • HIE organizations include: WISHIN (71%), eHealth Exchange (57%), MaxMD (14%), and SureScripts (14%).
Eligible Professionals	• 39% of Eligible Professionals indicated they use an HIE network or services, or HISP, to electronically exchange, find, or use patient health information. • HIE organizations include: WISHIN (50%), eHealth Exchange (18%), Epic (14%), and MaxMD (4.5%).
Behavioral Health and LTC	• 1% of behavioral health providers indicated they use WISHIN to send or receive data. • 4% of LTC providers indicated they use WISHIN to send or receive data.
Wisconsin Medicaid HMOs	• Just under half of HMOs are participating in WISHIN for Direct+ secure messaging or Patient Activity Reports for Payers. • Similarly, just over half of responding HMOs reported their providers were participating in HIEs. Of those HMOs, 100% reported their providers were using WISHIN, and 11% were using eHealth Exchange, SureScripts, and Epic.
Pharmacies	Only 6% of pharmacies engage with HIE or HISPs for exchanging, finding, or using patient health information through WISHIN (75%) and SureScripts (50%).

Figure 3.03: Summary of HIE Organization Participation Rates

While health care entities are engaging with HIE organizations, critical mass may not yet have been reached such that participation is seen as a benefit for all organizations. These types of networks can facilitate efficient data exchange from multiple sources through a single connection point, so as their health IT maturity increases and more providers share data through the network, it would be expected to result in expanded capabilities and increased participation.

3.3 Health Information Sharing

Information impacting an individual's overall health and creating a comprehensive picture of their care must encompass care episodes and medical history, as well as other determinants of health, including the range of personal, social, economic, and environmental factors influencing health status[26]. This information might come from EHR technology, but also from other health services systems, state agencies, public health agencies, and even the patient themselves. Often, this type of data has yet to align with standardized formats and transfer mechanisms.

Understanding the availability, type, and format of data being exchanged among health care entities is necessary to gauge the impact to care coordination and, eventually, improve health care outcomes. Overall, health care entities are showing interest in sharing and making use of supplemental health information, although there does not yet appear to be much consistency in the mechanism or format of the data being shared. While access to this type of additional data does represent a level of health IT

[m] Less than 10% of Eligible Professionals and Eligible Hospitals indicated they also used Cerner, DataMotion, DirectTrust, eClinicalWorks, and Secure Exchange Solutions HIE networks or services, and/or HISP.

maturity, the variable nature of its delivery likely contributes to inefficiencies and limitations in the ability to use this data meaningfully. Steps to conform data to standard layouts and transfer mechanisms, along with coordination for the privacy and security aspects of sharing this data, would greatly increase its impact on care coordination efforts.

3.3.1 Social Determinants

Research suggests up to 50% of health care outcomes are determined by the social and economic factors and physical conditions of the environment in which people are born, live, learn, work, and age[27], yet less than half of Eligible Hospital and Eligible Professional survey respondents indicated they are receiving this type of social determinant data.

There are a number of electronic and manual methods being used both within and across different organizations to exchange social determinant data. As shown in Figure 3.04, Eligible Hospitals and Eligible Professionals were requested to select all methods used for receiving social determinant data. Electronic methods are shaded in blues, with manual methods in greens, demonstrating a relatively even split between electronic and manual exchange.

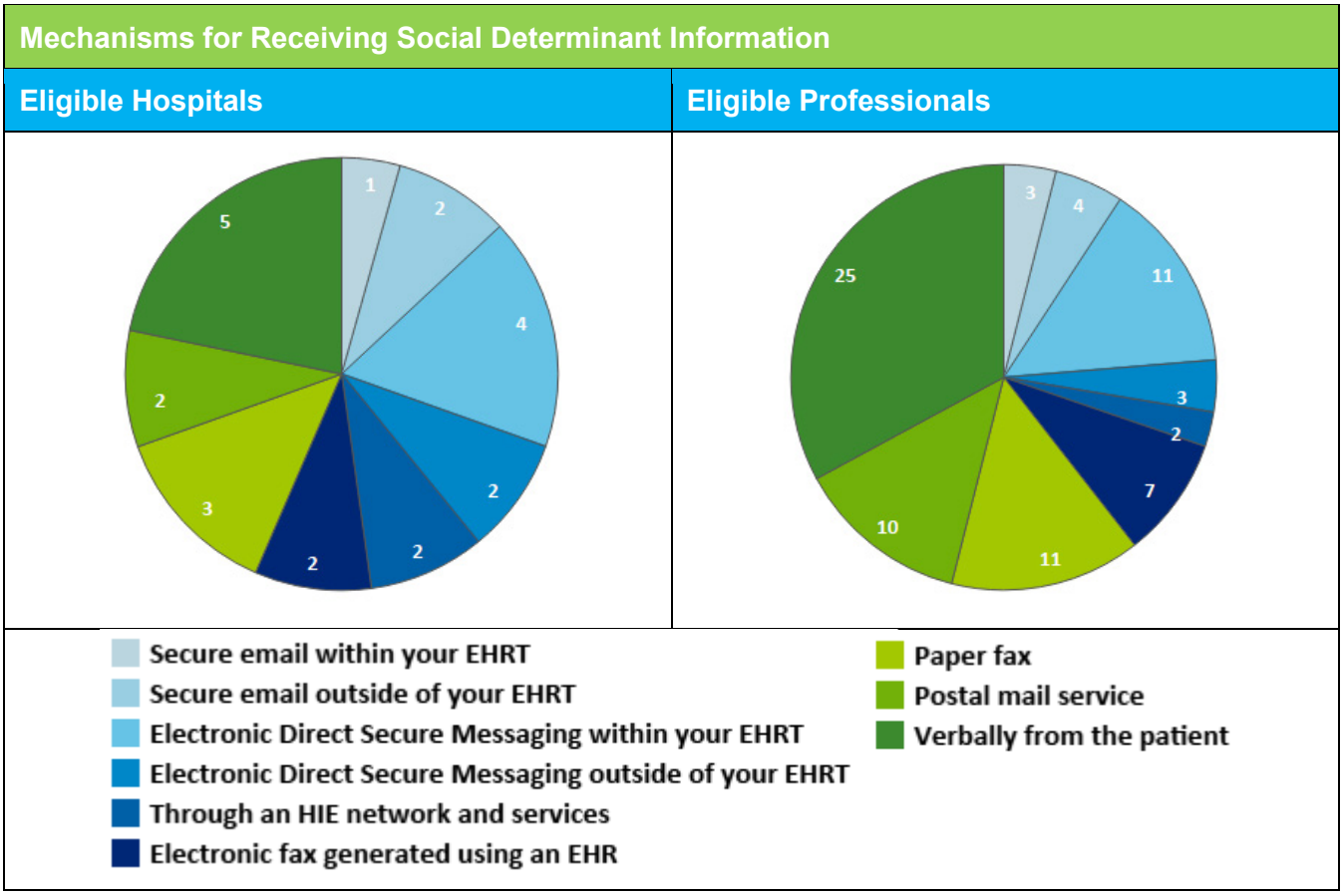


Figure 3.04: Distribution of Provider Mechanisms for Receiving Social Determinant Information

3.3.2 Patient Health, Demographic, and Contact Information

In addition to data received in the context of instances of care and billing, supplemental patient health[n], demographic, and contact information provide additional context and enables better care coordination.

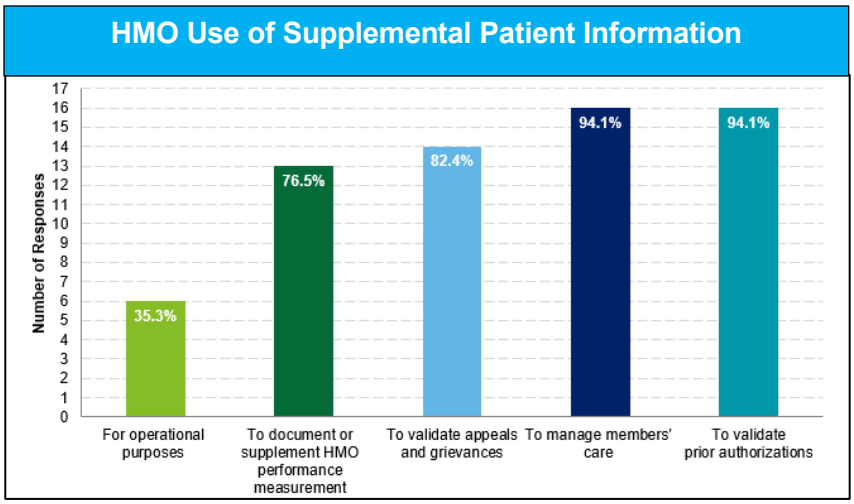


Figure 3.05: Wisconsin Medicaid HMO Usage of Supplemental Patient Information

The 2016 Health IT Landscape Assessment Survey provides some insight into how Wisconsin Medicaid HMOs make use of supplemental patient information, as well as how their participating providers send the data to them.

All HMOs reported using patient health information in multiple ways, with the majority using the data for managing members' care and validating prior authorizations.

In addition to the data they are currently receiving, over half of HMOs surveyed indicated there are additional data elements from providers that would improve their care coordination efforts, including full access to provider EHRs and complete WISHIN data. Many of the specific data elements identified are aspects of the types of data being shared to some extent by their providers, including:

- Clinical records, admission data and discharge instructions, x-ray reports, and lab results.
- Patient health information, including visit summaries, care plans, active diagnoses and medication lists, body mass index (BMI) results, and blood pressure results.
- Patient demographics.
- Member-level information on state quality measures for Medicaid.

DID YOU KNOW?

Sixty-five percent of LTC providers reported wanting behavioral health provider notes. Home environment information and social data are top elements these providers would like to access in order to improve care.

Despite the high use of, and desire for, patient data, only two HMOs currently require their providers to exchange supplemental patient data. Similar to health IT use, most HMOs encourage their providers to share information across stakeholders. For example, sharing occurs through use of the e-portal for authorizing requests, sharing information with PCPs, and sharing Protected Health Information for quality and Healthcare Effectiveness Data and Information Set (HEDIS) purposes.

[n] Patient health information includes medications, problems, health concerns, treatment plans, and goals.

As was the case with receiving social determinant data, providers send supplemental patient data across a multitude of electronic and manual methods, split evenly between electric and manual exchange.

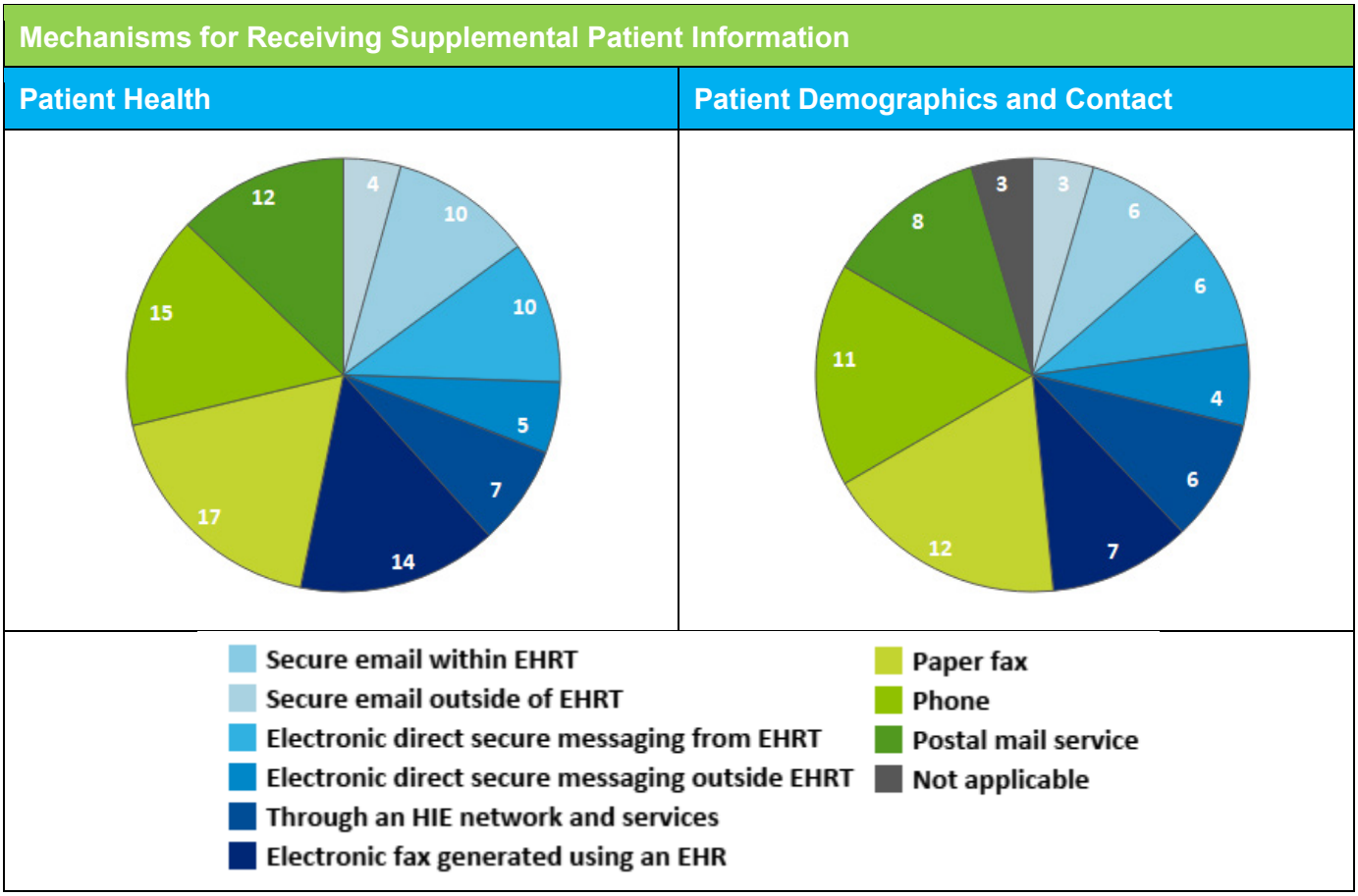


Figure 3.06: Distribution of Wisconsin Medicaid HMO Mechanisms for Receiving Patient Health and Patient Demographic Information

3.4 HMO Engagement

Within the Wisconsin Medicaid population, 74% of members are enrolled in HMOs[28], with services being provided by 19 Medicaid HMOs. Outside of the public system, managed care organizations play a significant role as private insurers and their health IT and data sharing activities can provide insight into the broader role health care insurers are playing in health IT engagement.

Over the past 10 years, the Agency has worked to increase awareness and understanding of how their HMOs are operating and managing their populations. With the emergence of health IT, this is a key component to continuing that understanding, both to inform contract management and ensure HMOs have access to the information they need to manage their populations.

While the majority of Wisconsin Medicaid HMOs encouraged the use of health IT and information sharing across stakeholders, very few reported requiring their providers to do so.

Only two HMOs indicated they require their providers to use health IT through specific vendor software. Half of HMOs encouraged health IT use, although none made use of financial incentives.

When looking at data exchange between providers, 65% of HMOs require or facilitate information sharing after member inpatient hospital stays, including:

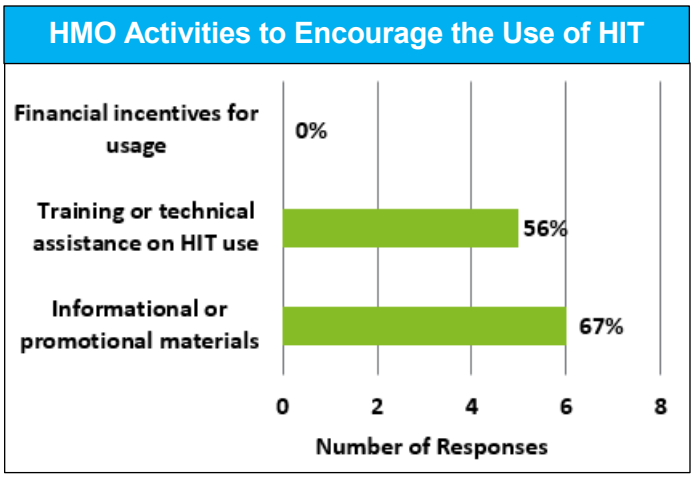


Figure 3.07: Provider Health IT Usage Engagement Initiatives

- Providing a post-discharge transition program.
- Encouraging (and participating in) information sharing between hospitals and PCPs.
- Getting a copy of discharge summary information to providers for all discharges.
- Ensuring post-discharge services are provided in an efficient manner.
- Working with providers to encourage better outcomes upon discharge.
- Providing information on a case-by-case basis via phone and fax from case managers.

For their own purposes, 70% of HMOs receive data electronically from hospitals and other providers about inpatient admissions, emergency room visits, and discharges (i.e. ADT messages). The majority receive this information from WISHIN PAR or via other electronic methods, including EHRs, email, or automated faxes.

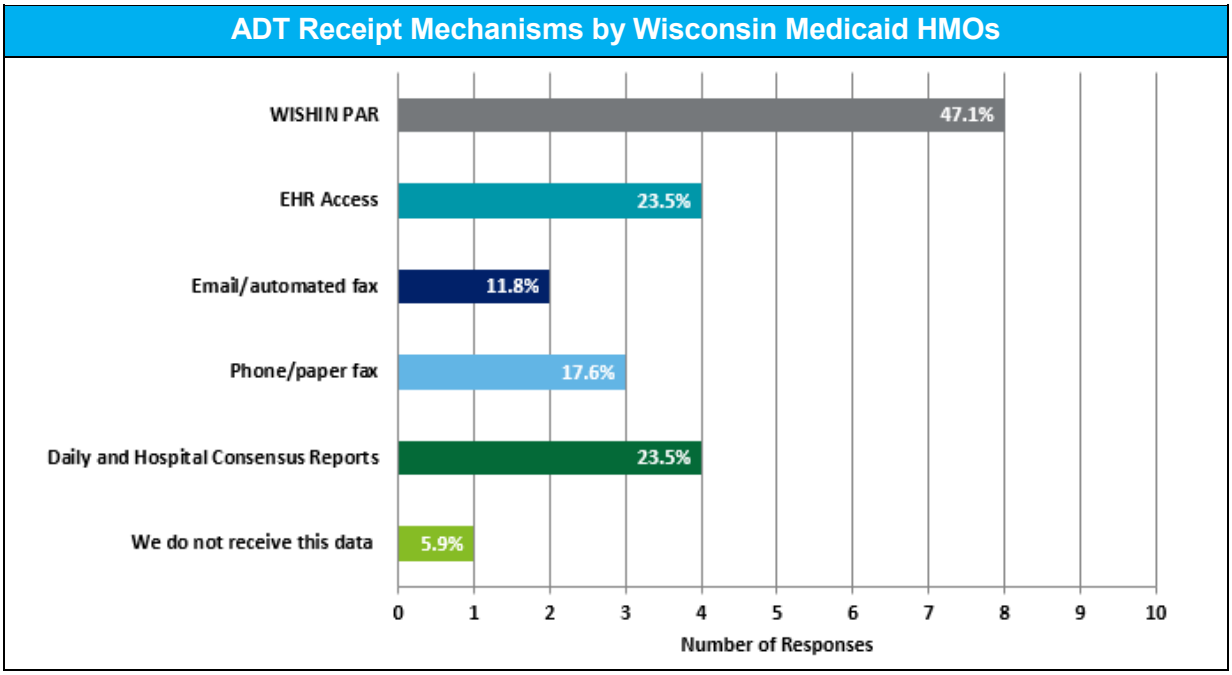


Figure 3.08: Mechanisms for Receipt of Admission, Emergency Room Visits, and Discharge by Wisconsin Medicaid HMOs

HMOs indicated a strong interest in HIE with their providers and members, with most encouraging their providers to share data with the HMOs and other providers, as well as making use of the data they are currently receiving for operational and care coordination activities. At this time, very few are requiring any data transfers, nor have they introduced financial incentives to do so. This may be an area where HMOs look to exert more influence as the state moves toward value-based purchasing contracts.

3.5 Pharmacy Engagement

In Wisconsin Fiscal Year 2016, the Wisconsin Medicaid program provided pharmacy benefits to over 1 million members, totaling just under $1 billion and comprising 11.3% of total program expenditures[29]. Working directly with pharmacies and other health care entities, Wisconsin Medicaid was able to recuperate just under $600 million in drug rebates and keep per-member per-month costs relatively stable despite continued increases in overall drug costs and a rise in specialty drug market share[30].

As is the case in the provider space, health IT is playing a central role in transforming the way pharmacies dispense and administer medications through tools improving prescription accuracy, drug management, and patient adherence. Given their interactions with health care providers, public and private insurers, and patients, understanding which health IT tools are providing value to pharmacies can uncover opportunities to leverage this aspect of the health care continuum and further information sharing.

While pharmacies are demonstrating moderate percentages of health IT adoption, with software supporting their pharmaceutical operations, they currently have a low level of HIE both within their organizations and with other health care participants. Pharmacy systems have their own subset of vendors, which have little overlap with those providing EHR technology solutions, as well as custom developed systems, adding to the complexity of HIE between pharmacy systems and other health care

entities. This is especially evident as pharmacy software supports different workflows and contains different data than EHR technology.

3.5.1 Pharmacy Software Adoption

Overall, pharmacy adoption of electronic systems varied based on the function. Almost all pharmacies (90%) surveyed use pharmacy management software[o]; in contrast, only one-fifth of pharmacies made use of case management software to provide medication therapy management (MTM) services[p]. Just under one-fifth (12 of 70) of pharmacies had adopted an EHR technology in-house, although more than half looked to have direct access to at least some aspects of their patients' EHR records.

For those pharmacies making use of pharmacy management or case management software, use ranged across a variety of operational, care management, and administrative services.

Usage Percentage	Pharmacy Management Functions	Case Management Functions
Over 80%	• Accessing, updating, and recording medication allergies (99%) • Collecting patient demographic and insurance information (97%) • Medication electronic prescribing (96%) • Updating medication history across locations if the organization is part of a chain of pharmacies (93%) • Dispensing medications (93%) • Medication inventory management (91%) • Creating patient-specific electronic notes (86%) • Billing (84%) • Accessing, updating, and recording adverse drug reactions (84%) • Medication purchase management (84%) • Controlled substance electronic prescribing (83%)	• Enhance medication adherence (100%) • Monitor efficacy and safety of medication therapy (93%) • Document MTM services during the pharmacist-patient encounter (87%) • Perform a three-month supply intervention (87%) • Perform patient assessment and comprehensive medication review and reconciliation (87%)

[o] The 2016 HIT Landscape Assessment Survey defined Pharmacy Management Software as a system that manages data in a pharmacy setting, including functions such as: inpatient and outpatient order entry, dispensing, inventory and purchase management, billing of claims, and exchanging information and communicating with other health care professionals.

[p] Of the pharmacies offering MTM services, 84 percent of are at pharmacies accredited by Wisconsin Pharmacy Quality Collaborative (WPQC) to perform MTM comprehensive medication review and assessment (CMR/A) services for Medicaid-enrollees.

Usage Percentage	Pharmacy Management Functions	Case Management Functions
40-80%	• In- and outpatient medication order entry (74%) • Billing for Medicare Part B services (67%) • Storing scanned documentation of services provided (e.g., MTM) (67%) • Medication synchronization services (64%) • Immunization administration activities (62%) • Accessing, updating, and recording medication history for customers filling prescriptions at your individual location (46%)	• Perform a dose, dosage form, or duration change intervention (80%) • Perform a focused-adherence or cost-effectiveness intervention (80%) • Formulate a medication treatment plan or medication action plan (67%) • Confirm MTM services electronically with prescribers (53%)
Less than 10%	• Accessing laboratory tests and results (10%) • Accessing assessment and plan for treatment or patient care summaries (7%) • Accessing care team members (4%) • Accessing discharge summaries (4%)	None

Figure 3.09: Pharmacy Usage of Pharmacy Management and Case Management Software Functionality. *Please note: there were no functions used by 10-40% of survey respondents.*

In examining the pharmacy software vendor landscape, there is almost no overlap with EHR vendors, although there is alignment between pharmacy management and case management vendors. J M Smith Corporation, PioneerRx, and McKesson are in the top five vendors for both. Given the different types of services pharmacies provide, the pharmacy vendor market share aligns with prior findings, suggesting EHR vendor market share is differentiated by provider type. Interestingly, 14% of pharmacies indicated they are making use of self-developed outpatient pharmacy systems, something not as prevalent in the current EHR vendor landscape.

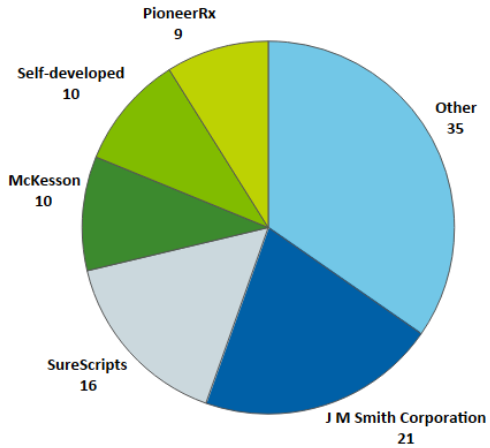
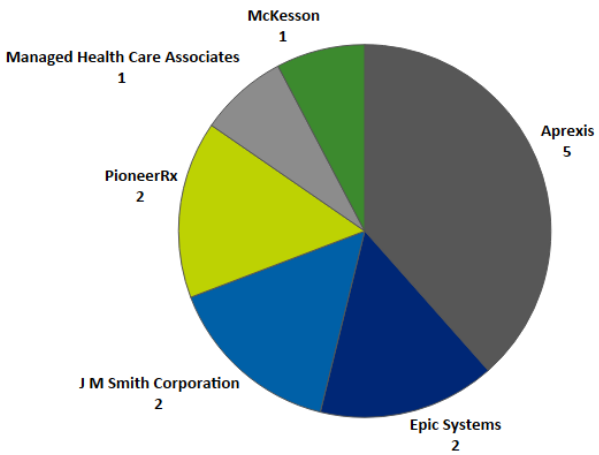
Pharmacy Management Vendors	Case Management Vendors
	

Figure 3.10: Top Five Vendor Market Penetration for Pharmacy Management and Case Management Software

Just under one-fourth of pharmacies surveyed either provided primary care services on-site or were colocated with an organization that did (e.g., retail clinic, convenient care clinic, pharmacy located within a hospital). All but three of these pharmacies had EHR vendors for their primary care services, and the vendor landscape aligned with Eligible Hospital and Eligible Professional selections (see *EHR Technology Adoption Analysis: EHR Vendor Landscape*). Overwhelmingly, these pharmacies indicate no integration across their pharmacy management, case management, and primary care EHR technology.

3.5.2 Pharmacy HIE

Despite the high percentage of pharmacies using electronic systems, very few have integrated their electronic health information across their own systems or externally with provider EHR technology. One-third of survey respondents specifically identified integration as their biggest challenge related to health IT.

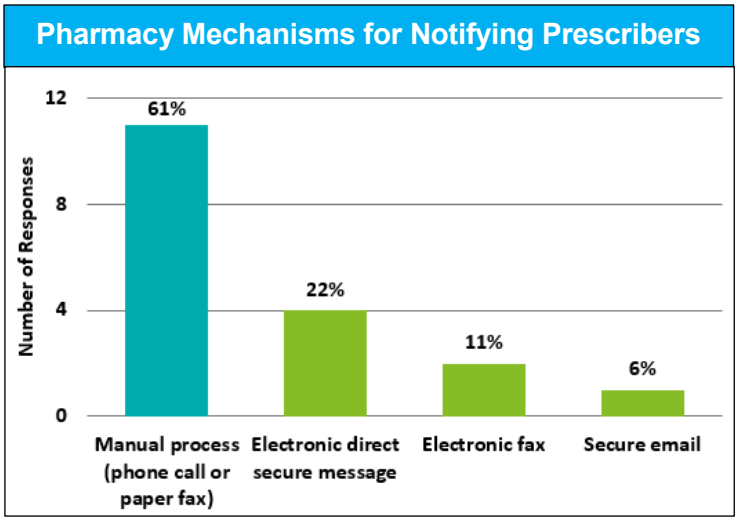


Figure 3.11: Mechanisms for Pharmacy Notification to Prescribers for Prescriptions Not Filled or Refilled

Based on survey results, only 8% of pharmacy management software has the capability to update patient EHR records within provider systems when prescriptions have been filled and/or refilled. Of those, two-thirds do so via direct connection or integration with the EHR. Slightly more pharmacies (25%) have the capability to notify prescribers when prescriptions have **not** been filled and/or refilled. The majority do so manually, as evidenced by Figure 3.11.

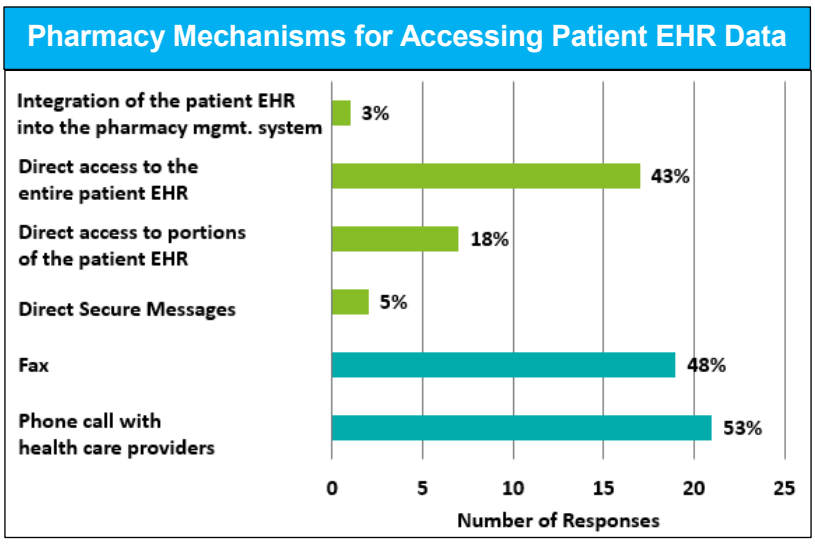


Figure 3.12: Mechanisms for Pharmacy Access to Patient EHR Information

Half of pharmacies made use of clinical data via the patient EHR for pharmacy-related services, such as filling prescriptions and providing MTM, with the other half indicating they only use EHR information in their retail clinics colocated in chain pharmacies. As shown in Figure 3.12, for those pharmacies using patient EHR data to deliver services, pharmacies are using a similar range of mechanisms as Eligible Hospitals and Eligible Professionals to facilitate health information sharing.

When reviewing the level of HIE using EHR technology, pharmacies followed the same capability patterns as Eligible Hospitals and Eligible Professionals (see Figure 3.01). Pharmacies reported their ability to use EHR technology to send data was greater than their ability to receive and integrate the data. All HIE capabilities were more likely to be used when using the same EHR vendor technology to connect than different ones. However, different from Eligible Hospitals and Eligible Professionals, the capabilities across different EHRs was substantially lower.

- When exchanging data with providers across the **same** EHR technology, Eligible Hospitals and Eligible Professionals reported between 78 and 92% percent capability to send, receive, and integrate with other providers; pharmacies reported between 67 and 75% capability across these actions.
- Across **different** EHRs, Eligible Hospital and Eligible Professional capabilities decreased to between 60 and 85%; however, pharmacy capabilities decreased to 42% (send), 33% (receive), and 8% (integrate).

Similar challenges were reported by pharmacies in exchanging electronic health information with other patient care providers, primarily engagement and technology barriers. These top two issues mirror each other: external providers were not sending or providing electronic health information to pharmacies, and they were unable to use their EHR technology to send and or receive data with different vendor systems. Pharmacies also reported that the clinical information received from external providers was not sufficiently standardized to integrate into their EHR technology (21%) and that there was a lack of adoption within their organizations, with 18% gathering the information directly from patients.

This lower capability for pharmacies to exchange data via EHR technology may stem from the different types of services pharmacies have historically provided and the functionality built into EHR systems, which primarily supports medical providers. Given the role pharmacies are playing in MTM, as well as the monitoring of controlled substance prescriptions, EHR vendors may need to consider expanding their functionality to better support broader usage across provider types and expediting the overall interoperability across EHR technology.

3.6 Barriers to HIE

Within the 2016 Health IT Landscape Assessment Survey all respondents were asked to respond generally to the top challenges they faced in regard to health information exchange. Responses were categorized across four themes: engagement, governance, resources, and technology. Following are direct free-text responses within each theme.

Engagement challenges were identified by 60% of Eligible Hospitals and Eligible Professionals, 21% of HMOs, and 23% of pharmacies.

- Getting large HMOs and providers to participate in the exchange of information with us since we are relatively small
- Encouraging patients to participate
- Effective partnerships with state and local hospital and specialty clinics
- Getting other facilities to continue sending information electronically instead of just sending via regular mail or via paper fax

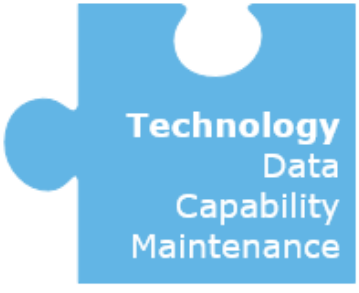
Governance challenges were identified by 45% of Eligible Hospitals and Eligible Professionals, 92% of HMOs, and 26% of pharmacies.

- Provider reluctance due to how they interpret HIPAA
- We do not have a true coordinated approach for our entire provider network. Some of our provider systems are more coordinated within each other, but then unrelated providers might be doing something else. We do not have a plan-sponsored effort with this.
- The challenges in the EHR to be able to set it up between different EHR vendors while protecting patient information

Resource challenges were identified by 59% of Eligible Hospitals and Eligible Professionals, 42% of HMOs, and 38% of pharmacies.

- Not having the time and resources to understand and implement the technology
- Resources to dedicate to learning, developing and implementing workflows
- The added cost of staff helping patients and the loss of production due to the system use and staff training

Technology challenges were identified by 24% of Eligible Hospitals and Eligible Professionals, 29% of HMOs, and 46% of pharmacies.



- Completeness of data for use across initiatives; the lack of pertinent and or accurate member demographic data
- Different technology used across providers systems. There is not a common technology platform across payers or shared data across payers for patient specific information
- Technology implementation, training, and integrating functionality

4 Additional Health IT Initiatives

While a great deal of focus and federal funding is directed toward the advancement of health IT infrastructure and maturity through the use of EHR technology and HIE, there are several other areas that are using technology to enhance access to care, improve quality and efficiency while reducing errors, and contribute to promoting evidence-based medicine.

The following section seeks to understand the current landscape, challenges, and opportunities for health IT initiatives and how they encourage the use of health IT and contribute to overall maturity, including: (1) telemedicine and telehealth; (2) electronic prescribing; (3) the Prescription Drug Monitoring Program; and (4) electronic patient engagement.

Analysis primarily makes use of data from the 2016 Health IT Landscape Assessment Survey of EHR Incentive Program Eligible Hospitals and Professionals, Wisconsin Medicaid HMOs, and pharmacies, and is supplemented with data from the Medicare and Medicaid EHR Incentive Programs.

4.1 Telemedicine and Telehealth

Though telemedicine and telehealth are often used interchangeably, telemedicine is the use of medical information exchanged from one site to another via electronic communications to improve patient health status. Telehealth is often used to encompass a broader definition of remote health care that does not always involve clinical services[q]. For the purposes of the 2016 Health IT Landscape Assessment Survey, telemedicine and telehealth services were defined to include: live video visits (synchronous), storing and forwarding patient records to specialists for evaluation and treatment (asynchronous), remote patient monitoring, and mobile health. The term telehealth is used to refer to all these services in the remainder of this section.

Generally, the use of telehealth services has been increasing; the American Telemedicine Association estimates that more than 15 million Americans received some kind of medical care remotely in 2015, with a 30% increase expected in 2016. Current Wisconsin Medicaid telehealth policy (ForwardHealth Topic 510) permits reimbursement only for select synchronous telehealth services. Wisconsin Medicaid HMOs can allow coverage above ForwardHealth Policy; however, HMOs may not be reimbursed for their entire cost in providing enhanced coverage.

[q] There are many definitions of telehealth, including Wis. Stat. § 45.49(29w)(b)1.b.: "Telehealth is a service provided from a remote location using a combination of interactive video, audio, and externally acquired images through a networking environment between an individual at an originating site and a provider at a remote location with the service being of sufficient audio and visual fidelity an clarity a to be functionally equivalent to face-to-face contact. Telehealth does not include telephone conversations or Internet-based communications between providers or between providers and individuals."

Telehealth services make use of health IT to facilitate improved care coordination and access to care, both in the case of low health service areas as well as increasing a patient's ability to interact with physicians more conveniently. They also increase efficiency in the delivery of care, enabling real-time consultations between providers and patient monitoring without the need for in-person visits. While current Wisconsin Medicaid provider use of telehealth is average, survey responses suggest it is likely providers would take advantage of this health IT capability as broader reimbursement is made available.

4.1.1 Telehealth Usage

Based on the 2016 Health IT Landscape Assessment Survey, provider use and Wisconsin Medicaid HMO reimbursement for telehealth services in Wisconsin ranged from 50% of Eligible Hospitals to 21% of Eligible Professionals using the services, with 70% of Wisconsin Medicaid HMOs reimbursing providers for them. The majority of those making use of telehealth services did not do so through contracted vendors, such as American Well and Teladoc. Only 30% of Eligible Professionals and 40% of both Eligible Hospitals and Wisconsin Medicaid HMOs used contracted telehealth vendors.

For entities making use of telehealth services, Figure 4.01 depicts the provider rates of use, as compared to Wisconsin Medicaid HMO, reported provider reimbursement rates. While (not shown in the figure) less than 10% of pharmacies reported providing telehealth services exclusively via live video, matching the most prevalent form for telehealth service delivery overall.

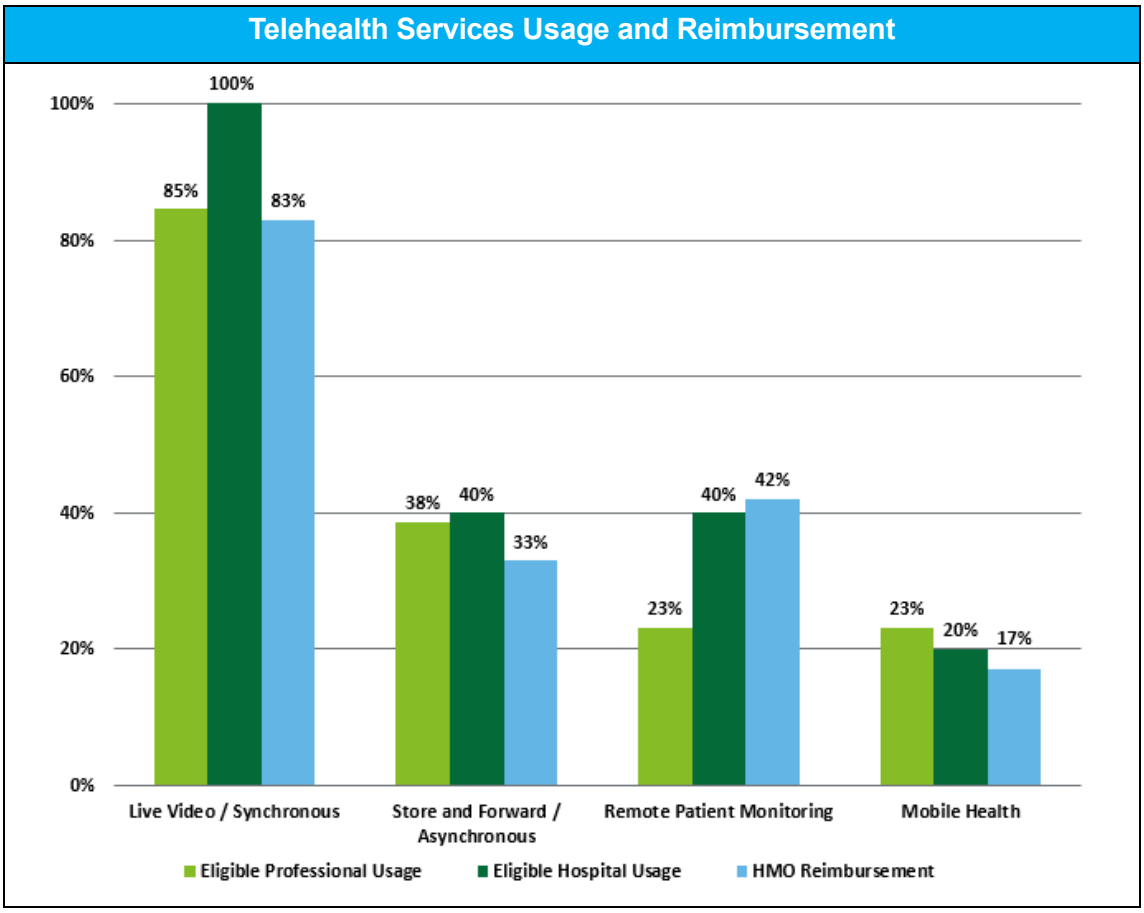


Figure 4.01: Telehealth Service Mechanism Rates by Survey Respondent

Wisconsin Medicaid HMO reimbursement of their contracted providers closely matches the use by Eligible Hospitals and Eligible Professionals, but there is a desire to use these services more. Over half of Eligible Hospitals and Eligible Professionals that reported using these services indicated reimbursement was a challenge. When asked to identify their top telehealth service areas they were not receiving reimbursement for but would like to, Eligible Hospitals and Eligible Professionals included all of the previously identified mechanisms for delivering these services, as shown in Figure 4.01, as well as behavioral health and expanded reimbursable sites and provider types.

In examining which specific types of services Wisconsin Medicaid HMOs currently reimburse for, two categories emerged:

1. Behavioral health, including outpatient mental health services (with 90% reimbursing), health and behavior assessment or intervention (60%), and outpatient substance abuse services (40%).

2. Office or other outpatient services and consultations (both at 70% reimbursing).

The prevalence of HMOs indicating reimbursement for behavioral health services and this same type of service being identified by Eligible Hospitals and Eligible Professionals as an area they were looking to receive reimbursements highlights an area where Wisconsin Medicaid HMOs can look to expand or better align their scope for reimbursable telehealth services. This may already be occurring, as one HMO reported that they have several behavioral health providers using Telepsych and that they are looking to move quickly to supporting live video and mobile health with a vendor.

The majority of providers using telehealth services are physicians, followed by Eligible Professional nurse practitioners and Eligible Hospital physician assistants. Notably, 17% of Eligible Professionals identified psychologists made use of telehealth services.

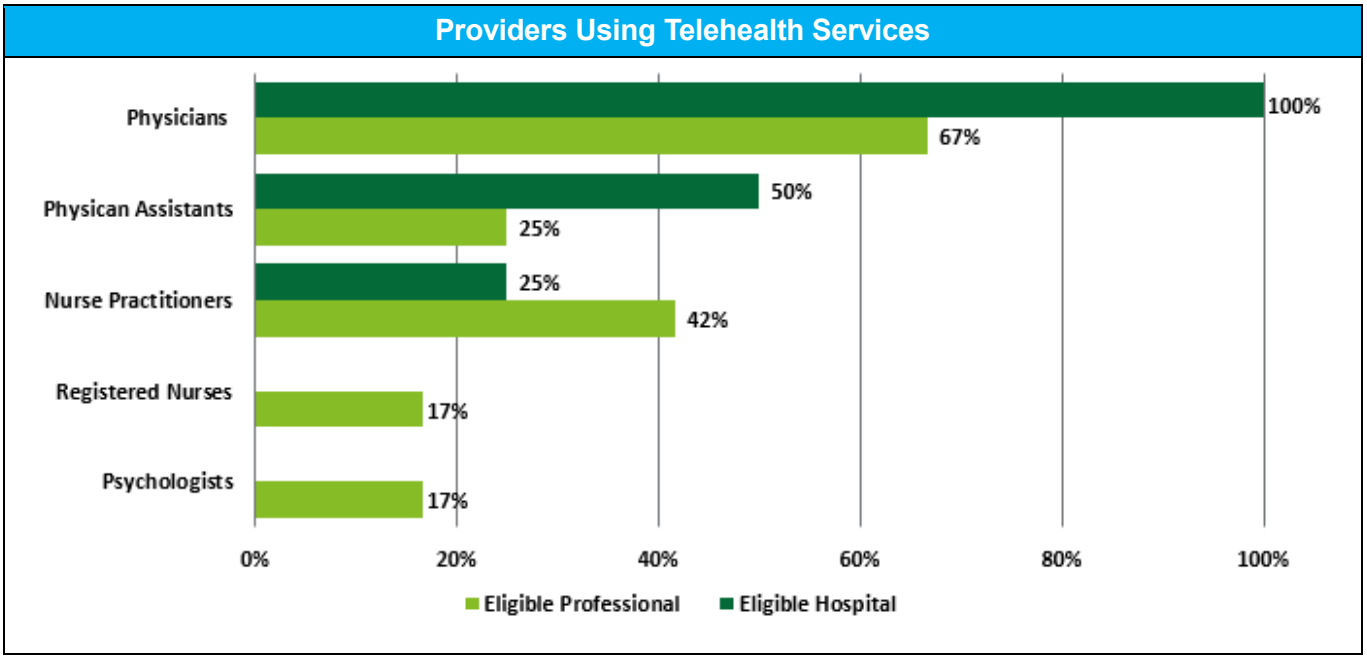


Figure 4.02: Telehealth Service Usage Rates by Provider Type

In addition to the above, over 25% of Eligible Professionals and Eligible Hospitals identified additional specialties making use of telehealth, including clinical nurse specialists and licensed partial nurses, dentists and dental hygienists, nutritionists, social workers, and navigators.

Although there was very limited telehealth use by the pharmacies surveyed (less than 10%), their use varied as well. Just over half (57%) of pharmacies using telehealth services use it for MTM and 22% for primary care services.

4.1.2 Target Populations and Health Conditions

The use of telehealth services did not appear to be exclusively targeted at any specific patient population or health condition; however, there was relatively consistent use of these services to assist patients in health care shortage areas and those consulting with specialties, which might also constitute improving a patient's access to care.

Overall, 40% of Eligible Hospitals and 77% of Eligible Professionals indicated they targeted specific patient populations, but no Wisconsin Medicaid HMOs encouraged targeting specific populations for telehealth services, noting telehealth is available to all their members.

Both Eligible Hospitals and Eligible Professionals identified targeting patients in areas that would be expected to have lower access to in-person health care facilities as well as specialty providers.

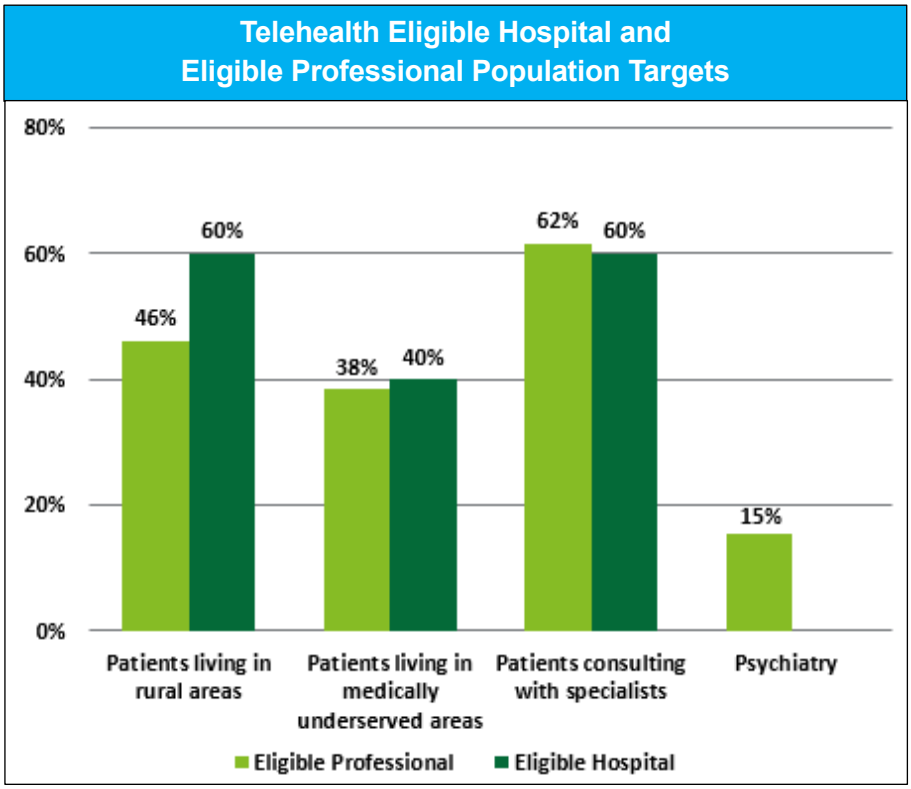


Figure 4.03: Targeted Populations for Telehealth Services

When looking at both usage and target populations, behavioral health services continue to be a focal point, with 15% of Eligible Professionals also indicating they specifically target psychiatry for telehealth services.

Of the 12 Wisconsin Medicaid HMOs using telehealth services, less than half do so to increase provider participation in their network. Most use focuses on improving care for their members through the additional access, convenience, and efficiency telehealth services provide.

When given the opportunity to provide additional information, several HMOs described future telehealth pilot programs, including:

- Behavioral health telehealth pilot.
- Pediatric dermatology store and forward pilot.
- Diabetic vision exam pilot.

One quarter of Eligible Hospitals and Eligible Professionals indicated they generally focused on using telehealth services for reimbursable disease states. The most targeted areas included:

- Behavioral health, including psychiatry and/or mental health (over 60% of Eligible Hospitals and Eligible Professionals).
- Dermatology (40% of Eligible Hospitals and 33% of Eligible Professionals).
- Chronic care, including diabetes, hypertension, and stroke (25% of Eligible Professionals and 60% of Eligible Hospitals).

4.2 Electronic Prescribing

The ability to electronically prescribe (e-prescribe) is an important part of health IT maturity, improving the safety and quality of prescribing, cost savings, improved patient medication adherence, and less need for clarification between pharmacies and prescribers. In addition, this capability lends itself toward efforts regarding the misuse and abuse of opioids, recently declared as a public health crisis in Wisconsin[31].

As noted within the *EHR Technology Adoption Analysis*, the EHR Incentive Program Meaningful Use objective related directly to e-prescribing was one of those identified with higher exclusion rates and lower performance rates for those attesting to the measure. There are other Meaningful Use measures that relate to e-prescribing capabilities, including verification for drug-drug and drug-allergy interactions and performing medication reconciliation. While these measures speak to electronic capabilities across all prescriptions, one specific area of interest for the Agency involves the activities surrounding controlled substances.

In this context, just under half of Eligible Hospitals and Eligible Professionals surveyed are prescribing controlled substances electronically, although there is a marked difference between capability and interest. Approximately one-quarter is able to prescribe electronically or on paper, depending on the technical capability of the participating pharmacy or network. The remaining quarter is split between being able to e-prescribe in all or most cases and being able to e-prescribe but preferring to use paper.

These capabilities were improved upon from the pharmacist viewpoint, almost all of which reported receiving e-prescriptions, with 62% e-prescribing all or most controlled substances, including controlled substance schedules II or III-V. Only 1% reported receiving e-prescriptions for controlled substance schedules II-V but not II, and 37% reported their providers could not or did not e-prescribe controlled substances in most cases.

From a technology standpoint, SureScripts dominated the market for e-prescribing, with 50% of Eligible Hospitals and 80% of Eligible Professionals using SureScripts. The remainder of top vendors identified included Epic Systems, Dr. First, and CPSI.

Despite some inconsistencies in e-prescribing capabilities and use, the majority of Wisconsin Eligible Hospitals and Eligible Professionals have the technology to e-prescribe controlled substances. Outside of technical capability, barriers to e-prescribing might include provider willingness to adopt and organizational policies surrounding controlled substances. Health IT maturity in this area would only be expected to increase as Eligible Hospitals and Eligible Professionals continue to progress to Stage 3 Meaningful Use within the EHR Incentive Program and engage in initiatives resulting from Governor Walker's Task Force on Opioid Abuse[32].

4.3 Prescription Drug Monitoring Program

Another tool seeking to address prescription drug abuse is the Prescription Drug Monitoring Program (PDMP). The PDMP supports access to legitimate medical use of controlled substances while allowing for improved capabilities in identification of potential drug abuse. This is intended to result in determent or prevention, as well as facilitating and encouraging intervention and treatment for individuals who may be addicted to prescription drugs. PDMPs also foster collaboration between pharmacies, health care professionals, law enforcement agencies, and public health officials working together to reduce the misuse, abuse, and diversion of prescribed controlled substance medications.

Wisconsin's PDMP has been operational since 2013, with the enhanced Prescription Drug Monitoring Program (ePDMP) launching in January 2017. Starting April 1, 2017, legislation went into effect requiring prescribers to review patient records in the ePDMP prior to issuing most controlled substance prescription orders to their patients.

The 2016 Health IT Landscape Assessment Survey assessed PDMP familiarity and usage in the fall of 2016, prior to both the legislation and the new ePDMP. As a result, it is anticipated familiarity and use will have increased since then, although the technologies used and their integration capabilities may not have changed.

Overall, survey respondent familiarity with the PDMP was varied, suggesting educational opportunities could exist to better engage resources across the health care spectrum.

- Over half of Eligible Hospitals and Eligible Professionals were aware of and using PDMP data, with another quarter aware of but not actively using or engaging with the PDMP. Eligible Hospitals were slightly more engaged than Eligible Professionals with the PDMP, with less than 10% being unfamiliar with the PDMP (as compared to 15% of Eligible Professionals).
- Almost half of HMOs said they were moderately or extremely familiar, another 40% said they were somewhat or slightly familiar, and 12% indicated they were not at all familiar.

In terms of which Eligible Hospital and Eligible Professional resources had access to the PDMP, there was little correlation between access for prescribers versus non-prescribing delegates, as well as a substantial range of organizations not aware of what access had been made available to organization resources.

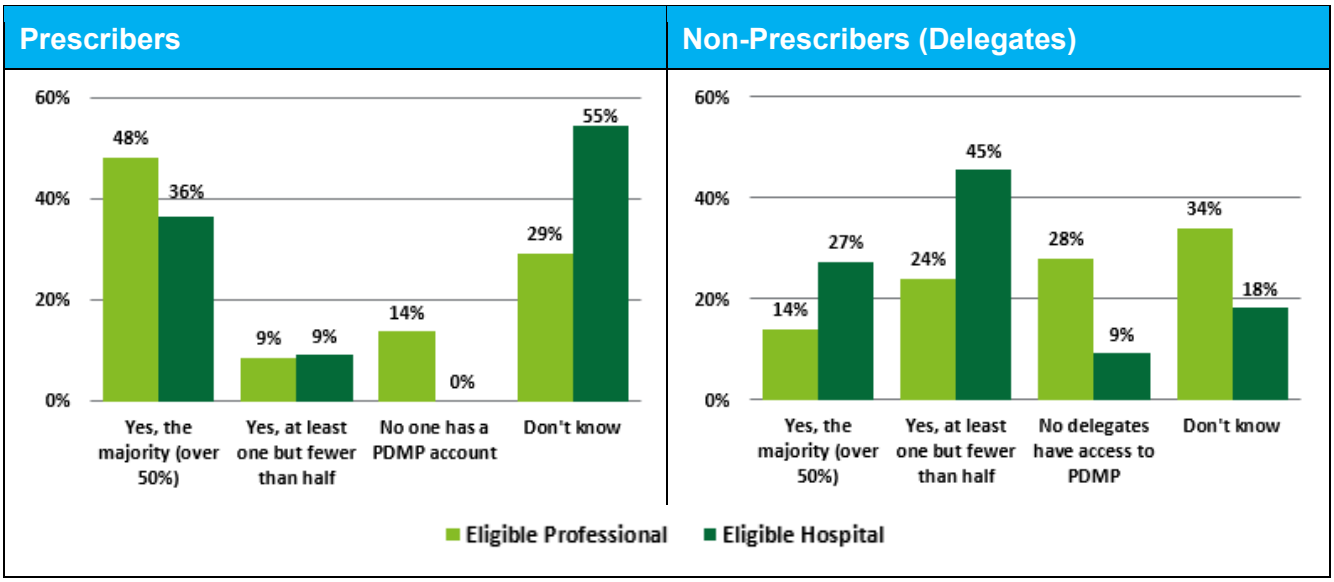


Figure 4.04: PDMP Access Rates for Prescribers vs. Non-Prescribers

Policy requirements surrounding use of the PDMP were limited. Only 20% of Eligible Professionals and 10% of Eligible Hospitals have a policy mandating prescribers look up patients in the PDMP system when prescribing controlled substances, with slightly lower percentages having a similar policy related to delegates – 14% and 9%, respectively. Similarly, only 22% of pharmacies have a policy mandating pharmacy staff look up patients in the PDMP before dispensing controlled substances.

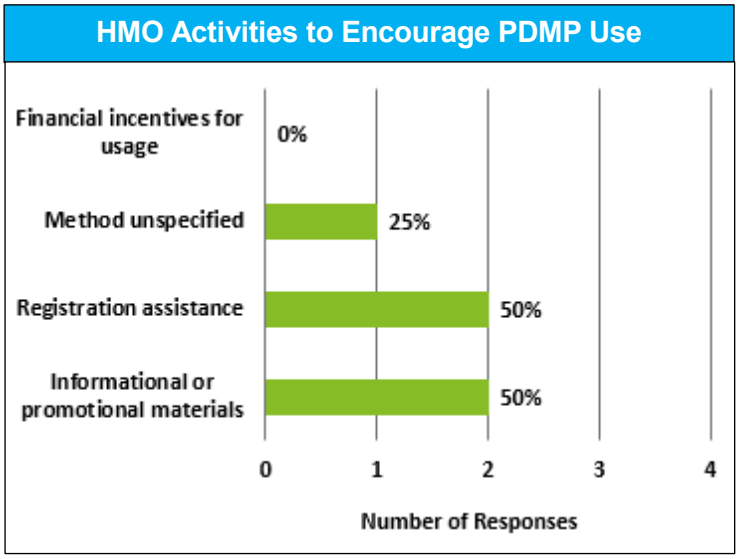


Figure 4.05: Provider PDMP Usage Engagement Initiatives

No Wisconsin Medicaid HMOs required their providers register with the PDMP, but 25% encouraged use. Similar to activities encouraging health IT use, no HMOs made use of financial incentives.

Given recent legislation, it would be expected at least Eligible Hospital and Eligible Professional policies may shift to include this language requiring use.

In the meantime, however, as can be expected from a lack of policy requiring it, the regularity of looking up patients in the PDMP system before controlled substances

are prescribed or dispensed was varied. Of note, with the exception of pharmacies using out-of-state PDMPs, close to half of Eligible Hospitals, Eligible Professionals, and pharmacies used the PDMP with at least "often" frequency.

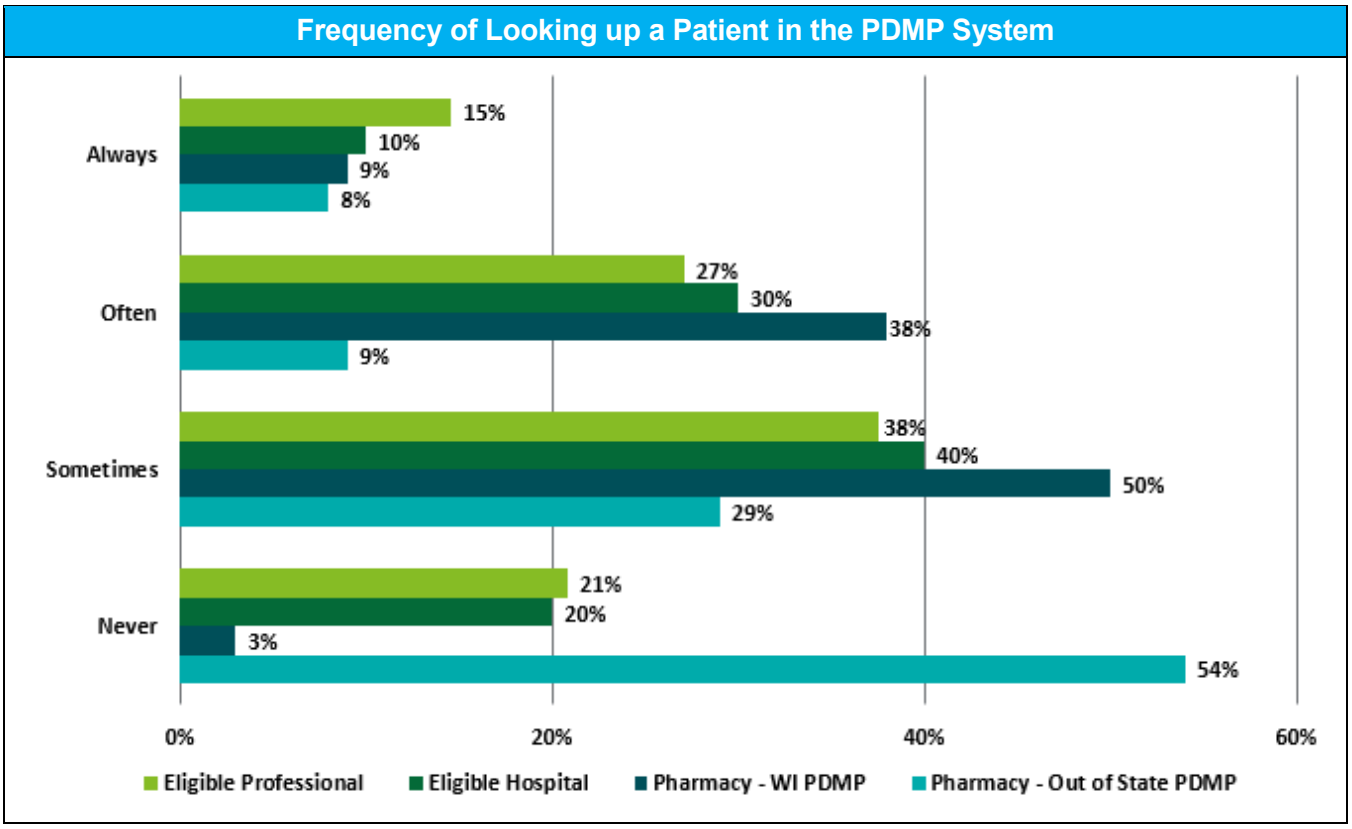


Figure 4.06: PDMP Usage Rates When Looking up Patients by User Types

There is room to grow in integrating organizational technologies with the PDMP. Both Eligible Hospital and Eligible Professional organizations and pharmacies reported similar breakdowns in terms of integrating the PDMP with their workflows and EHRs, with the majority having no integration.

- One-fourth of pharmacies reported having some level of integration between PDMP data and their primary care and dispensing workflows, but not their EHRs. The remaining three-fourths have no integration.
- While three providers (5%) did indicate seamless integration between the PDMP, their clinical workflows, and their EHRs, the remaining were similar to pharmacies. Approximately 30% of Eligible Hospitals and Eligible Professionals reported having some level of integration, with the remaining 65% having none.

There was also a gap in understanding how pharmacies submitted data to the PDMP; just over half of survey respondents knew their organization's data submission method. The top two methods were Secure Shell File Transfer Protocol (SFTP) (66%) and using Secure Sockets Layer (SSL) websites (20%) for the submission.

All surveyed Eligible Hospitals and Eligible Professionals and 85% of pharmacies indicated there were barriers to integrating access to the PDMP into their workflows and technologies, ranging from resources to governance to technology.

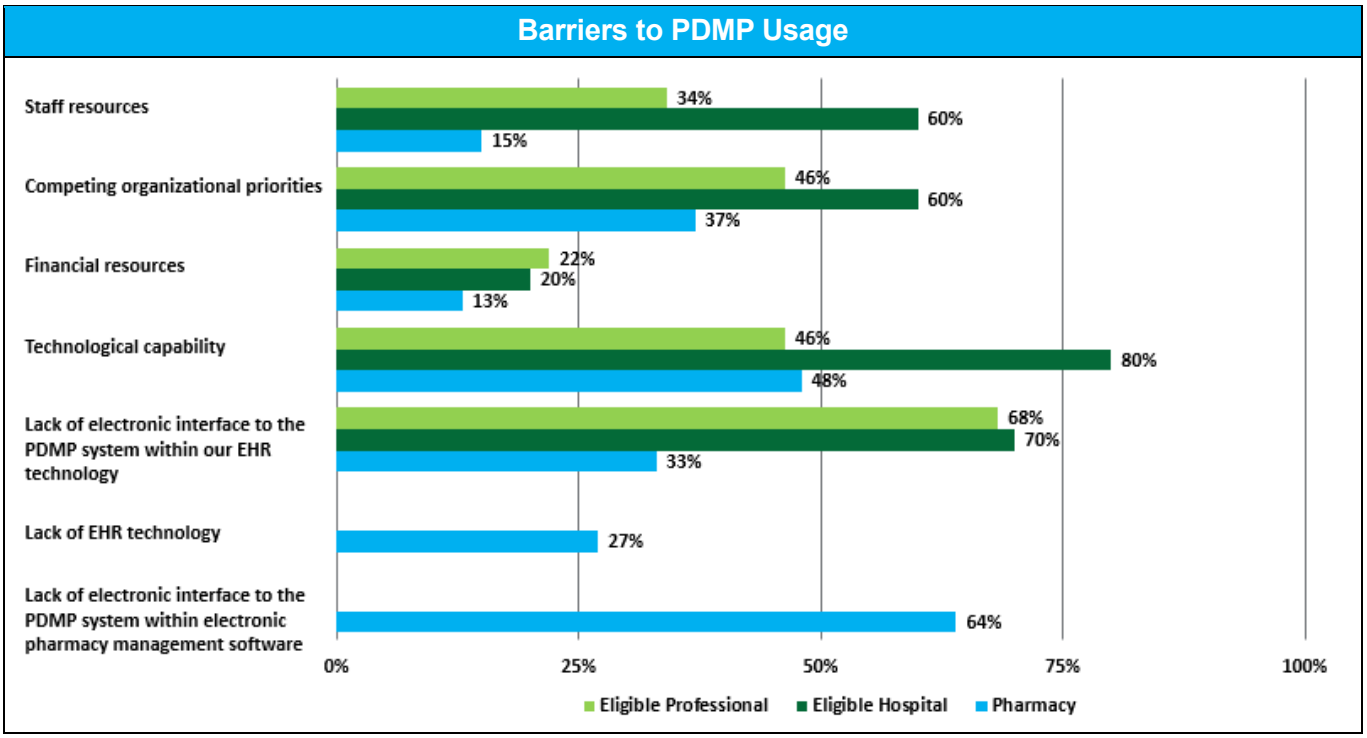


Figure 4.07: PDMP Usage Barriers by User Type

As mentioned previously, given the recent introduction of the enhanced ePDMP as well as policy mandating its use, overall awareness and regularity of use should increase substantially. One specific area to note regarding increasing the health IT maturity of this technology will be how well organizations advance in ePDMP integration, both into workflows and vendor systems. Seamless integration of the ePDMP and its data will increase the efficiency and ease of use but, more importantly, the ability for health care professionals to make informed decisions based on the data.

4.4 Electronic Patient Engagement

Increasingly, the health care community has realized the positive impact patient engagement in their own health care can have on care coordination, outcomes, and overall experience. Facilitating this engagement electronically can lead to improved access and lower costs.

Research demonstrates that providing patients with access to their clinical information empowers them to increase patient engagement and improve health outcomes. The ONC Interoperability Roadmap calls on health care providers to enable patients to electronically view, download, and transmit their health information to a destination of the patient's choice, and the Federal Health IT Strategic Plan encourages the advancement of patients' ability to access, amend, and make choices regarding the disclosure of their electronic health information[33].

Within the EHR Incentive Program there are several Modified Stage 2 Meaningful Use objectives that speak to patient engagement, specifically Measure 8: Patient Electronic Access, which measures the capability for and patient use of electronically viewing, downloading, and sending or transmitting their medical record to a third party. When compared to the national percentage of hospitals and physicians providing electronic capabilities as calculated by ONC, Wisconsin Eligible Hospitals and Eligible Professionals reporting through the EHR Incentive Program exceeds or is on par with ONC national averages.

Source	Hospitals	Physicians
Percentage of Providers who Provide Capability for Secure Electronic Messaging		
ONC	82% of Wisconsin hospitals (as compared to 63% of US hospitals)	83% of Wisconsin physicians (as compared to 64% of US physicians)
EHR Incentive Program	N/A	100% of Wisconsin Eligible Professionals are providing this capability per Meaningful Use objective 9
Percentage of Providers who Provide Capability to View, Download, and Transmit Medical Records to a Third Party		
ONC	64% of Wisconsin hospitals (as compared to 69% of US hospitals)	Only 11% Wisconsin physicians (as compared to 16% of US physicians)
EHR Incentive Program	93% of Wisconsin Eligible Hospitals provide this capability per Meaningful Use objective 8 measure set 1	95% of Wisconsin Eligible Professionals provide this capability per Meaningful Use objective 8 measure set 1
Percentage of Patients who Were Reported to Have Viewed, Downloaded, or Transmitted Medical Records to a Third Party		
EHR Incentive Program	22% of Wisconsin Eligible Hospital patients used VDT per Meaningful Use objective 8 measure set 2	38% of Wisconsin Eligible Professional patients used VDT per Meaningful Use objective 8 measure set 2

Figure 4.08: Summary of Electronic Patient Engagement by Hospitals and Providers. *ONC data sourced as of 2015[34]; Medicare and Medicaid EHR Incentive Program data sourced from Program Year 2015 attestations.*

One main way health care entities look to enable patient engagement electronically is through online patient portals. Data from the 2016 Health IT Landscape Assessment Survey shows almost all Eligible Professionals (88%) and all Eligible Hospitals provide patient portals, and 70% of Wisconsin Medicaid HMOs provide member portals. Pharmacy portals were less prevalent, with 20% of pharmacies providing them.

The need to engage in multiple interfaces to access data can be seen as a deterrent to usage. This may certainly be the case for online portals, given the presence of provider, insurer, and pharmacy portals, as well as encouragement from multiple organizations to make use of portals as shown in Figure 4.09. Eligible Hospitals, Eligible Professionals, and HMOs encourage patient engagement through a wide array of techniques, with most HMOs encouraging patients to participate in both the patient (clinical) and member (HMO) portal. In addition, about one-third of Eligible Hospitals and Eligible Professionals also

encouraged patient portal engagement by alerting patients to new information through email or text messages.

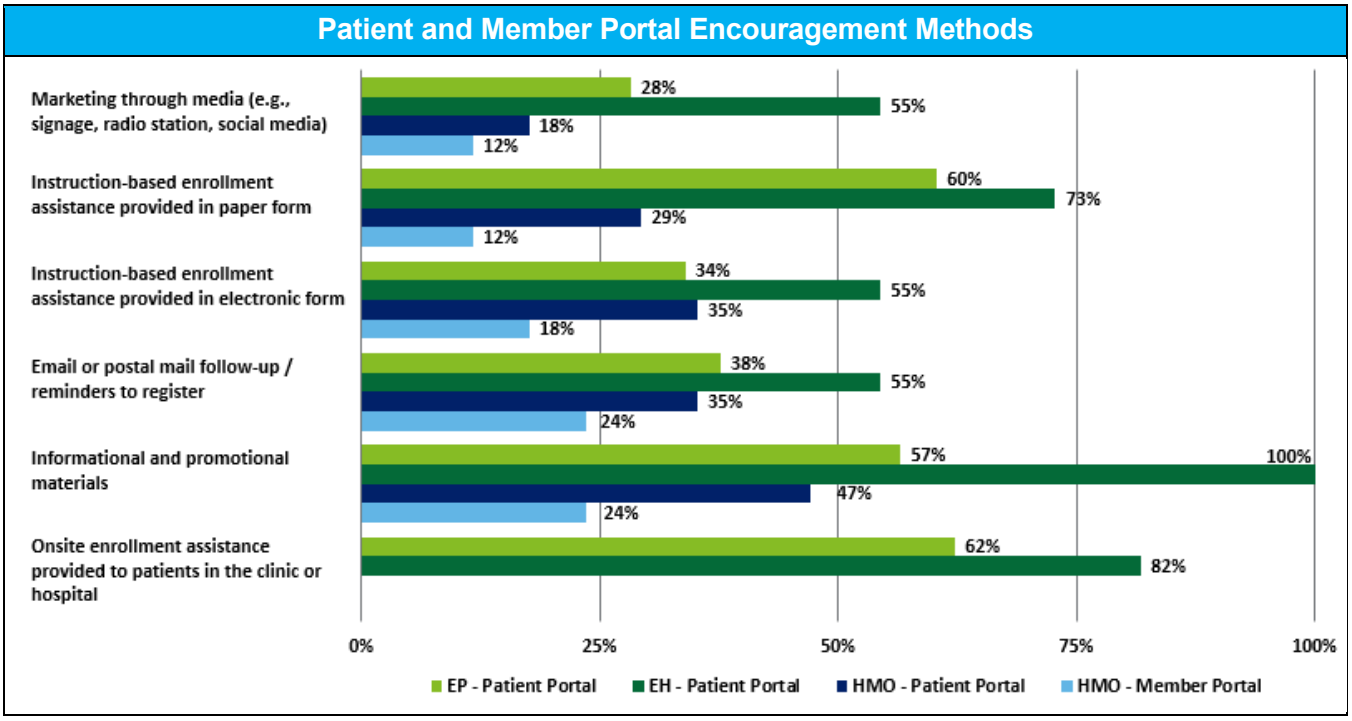


Figure 4.09: Portal Encouragement Methods by Encouraging Party

There are also technical and physical barriers to consider when assessing patient and member adoption of portal usage. In addition to Eligible Hospitals and Eligible Professionals showing and educating patients and/or their caregivers on how to access and use the portal when they are in the clinic or hospital, they also performed the following activities to combat challenges in patient adoption:

- Just under half of Eligible Hospitals and Eligible Professionals provide patients that do not have readily available internet access information on locations where they can access the portal.
- About half of patient portals also have mobile applications that can be accessed via mobile devices.
- One-quarter provide interpreter services for limited English proficient individuals and/or low vision or legally blind individuals that want to access the patient portal but cannot because of their language or vision limitations.

While the need to interact with multiple portals can be off-putting, provider-, HMO-, and pharmacy-sponsored portals do provide different functionality to patients and members.

The top features of HMO member portals are non-interactive, informational materials, including provider directories, claims summaries, and explanation of benefits. Care coordination functions, including care management and health care alerts, appear to be less prevalent, offered by one-third of HMO member portals.

The Eligible Hospital and Eligible Professional patient portals almost all provided access to medical records and clinical information, followed by messaging and communication capabilities and information about visits. About half of providers also provided administrative features, including billing and the ability to update patient information.

Over 80% of pharmacy patient portals allow for the refilling of prescriptions. Pharmacies also engage with patients across a number of technologies for refill reminders, including phone calls (66%), text messages (51%), emails (46%), notifications to their mobile application (31%), and automatic voicemails (29%).

KEY BENEFITS

One feature of interest to multiple parties across health care is provider directories. All Wisconsin Medicaid HMOs maintain electronic provider directories for their own use, and all but one make that directory available to their members, even if not through a patient portal. The usefulness of this information is dependent on its accuracy, and almost half of HMOs maintain theirs real time, with over 85% updated at least weekly.

As may be expected, surveyed providers indicated all patient portals are integrated with their EHR technology. Vendor distribution follows the same pattern as EHRs; a handful of vendors maintain the majority of the market share. There is some variation, notably the introduction of Allscripts and Intelichart, but the remainder are also top five CEHRT vendors.

- For Eligible Professionals: Epic Systems, with 30% market share overall, Cerner Corporation, and Greenway Health
- For Eligible Hospitals: Epic Systems, with 58% market share overall, Cerner Corporation, and MEDITECH

On the pharmacy side, integration with EHRs was split almost evenly between integrated (29%), not integrated (35%), and pharmacies that did not have an EHR (35%). From the vendor perspective, Epic Systems and Cerner Corporation made up 38% of the market share, with the remaining pharmacies each using a different vendor. Notably, pharmacies did not use the other top portal vendors Eligible Hospitals and Eligible Professionals used, perhaps indicating a specialization in portal functionality related to the source organization.

With increasing efforts to engage patients, use of electronic portals or applications can only be expected to increase. One area where health IT maturity has room to grow is the interoperability of these systems with other IT systems being used by organizations in the health care arena. Integrating clinical, social determinant, and patient generated data, such as community health records or data from fitness applications, is a key factor necessary to creating a comprehensive view of the patient. Once this level of maturity is reached, online portals would provide increased value, not only to the patient, but to health care organizations as well.

5 CONCLUSION

This assessment finds the Wisconsin health IT landscape has both a solid foundation and industry momentum to continue increasing adoption and maturity. Each of the health care participant groups included in the analysis is actively engaging in health IT adoption and aspects of HIE.

- The majority of Wisconsin Medicaid providers have adopted EHRs, and for those participating in the EHR Incentive Programs, Meaningful Use has been achieved and continues to advance.
- Wisconsin Medicaid HMOs are participating in HIE with their providers, making use of clinical and social determinant patient data to improve care coordination.
- Pharmacies are making use of health IT for pharmacy management and MTM case management, as well as to receive electronic prescriptions.
- Adoption of health IT technologies outside of EHRs is occurring, including use of telehealth, the PDMP, and patient engagement through online portals, which is encouraged by Eligible Hospitals, Eligible Professionals, and Wisconsin Medicaid HMOs.

These efforts and health care participant involvement lay the groundwork for an HIE infrastructure and data sharing. However, despite this progress, health IT maturity lags behind expectations with fragmented systems and limited HIE, suggesting a lack of overall coordination across health care participants and technologies. The EHR Incentive Programs facilitate increased HIE as providers move toward Stage 3; however, not all Wisconsin Medicaid providers are eligible for or have participated in this program. Though health care entities are participating in HIE organizations, the widespread engagement needed for HIE organizations to provide their full value to participants has not yet been realized. Within the EHR vendor space, the market share is dominated by a handful of vendors, yet HIE across EHR systems is not fully functional and often underutilized. Outside of the technical arena, health care participant willingness to adopt, use, and exchange data can be deterred by organizational policies, concerns about privacy and security, and a general lack of resources needed to support long-term sustainability for HIE.

Several efforts are underway nationwide to reduce the barriers to HIE. In 2016, CMS and ONC partnered to promote the use of Medicaid Health Information Technology for Economic and Clinical Health (HITECH) funds to support all Medicaid providers participating in HIE in order to facilitate coordination of care with Eligible Professionals[35]. HITECH funds were expanded to include HIE onboarding and systems for behavioral health providers, LTC providers, substance abuse treatment providers, home health providers, correctional health providers, social workers, laboratory, pharmacy, and public health providers. The National Governor's Association (NGA) report, "Getting the Right Information to the Right Health Care Providers at the Right Time: A Road Map for States to Improve Health Information Flow Between Providers," details steps and strategies for addressing legal and market barriers to increase the information flow between health care providers.

Within Wisconsin, top EHR vendors are engaging in interoperability efforts through collectives working toward a common framework for data sharing. Surveyed health care participants demonstrated interest in furthering their use of health IT and information sharing, providing an opportunity to capitalize on current momentum. Well-positioned Agency initiatives seeking to reduce the barriers to electronically exchanging and using health care information can accelerate health IT adoption and maturity within Wisconsin, as well as the value realized by health care entities using these technologies.

The following strategies are therefore proposed to further increase health IT maturity as an enabler to achieving transformed health care delivery and the Agency's objectives in engaging members, improving health outcomes, advancing efficiencies in the delivery of health care, and increasing access to comprehensive data.

1. **Encourage or require the use of HIE networks and services to exchange patient health data and support Medicaid initiatives.**

As industry alignment on interoperability standards moves forward through collaborative alliances across vendors, state HIEs, provider organizations, and health care organizations, one aspect of HIE that can be leveraged in the near term is participation in and use of data available through HIE organizations.

By their nature, these types of networks facilitate efficient data exchange from multiple sources through a single connection point; that capability will only improve as the industry increases its capability to exchange standardized transactions and additional organizations participate. In its current state, however, HIE organizations provide an underutilized capacity for information sharing and consolidated clinical data.

HIE organization participation across survey respondents showed room for improvement, particularly for Eligible Professionals (39% participation), pharmacies (6%), LTC providers (4%), and behavioral health providers (1%). The Agency could encourage HIE network engagement across the health care continuum by supporting onboarding efforts and requiring the use of HIE through HMO provider contracts. Half of Wisconsin Medicaid HMOs are participating in HIE organizations, and the majority of Wisconsin Medicaid HMOs responded that they encouraged their providers to engage and share data electronically. There could be an opportunity for HMOs to play a larger role in using HIE data for care coordination and management by contractually requiring use of HIE.

Additionally the Agency could harness HIE networks as a Medicaid data source for quality improvement and quality assurances purposes. HIE networks could provide valuable data for HMOs to meet Health Needs Assessment requirements in current HMO contracts and further requirements in the proposed Childless Adult Waiver[36].

2. **Address privacy and security concerns as a barrier to HIE.**

While there are technical limitations in the current health IT landscape, survey respondents also indicated a primary challenge to HIE was a general lack of provider willingness to share patient information across organizations, as well as concerns surrounding the privacy and security implications of doing so.

These sentiments are echoed in the NGA's "Getting the Right Information to the Right Health Care Providers at the Right Time" report, which identified primary barriers to HIE, including legal and perceived restrictions on information exchange, burdensome patient consent requirements, state variability, and information blocking (p. 22-23).

One specific area of concern surrounds the sharing of behavioral health data. In 2014, Wisconsin enacted the HIPAA Harmonization for Mental Health Care Coordination Bill (Wis. Stat. § 146.816), which removed barriers in Wisconsin law to the coordination of care for persons with a mental health diagnosis by aligning Wisconsin law with federal HIPAA law for disclosures made for treatment, payment, and health care operations.

While this alignment addressed one large legal barrier, there may still be organizational policies in place that continue to restrict information sharing at the provider level. More broadly, there may also be perceived restrictions to information exchange and an organizational unwillingness to share data to protect their patient volumes and what is considered proprietary information. To counter concerns with the legal implications of HIE, the Agency could consider issuing guidance and education designed at identifying best practices, as well demystifying misconceptions held by health care entities. On the operational side, the creation of a standardized consent form might provide clarity and consistency to providers in regard to the process for obtaining patient consent. One additional benefit of a single form could be improved patient understanding of what their consent means and how their information will be used in coordinating their care.

3. Leverage the Master Client Index to facilitate sharing of health and social determinant data across public programs.

Survey analysis shows that health care participants are actively seeking out additional data in order to create a more comprehensive view of their patients. Given the importance that social and economic factors play in patient health outcomes, the ability to source and integrate this information will be a critical component to improving the way care is managed. Similarly, the Agency is not currently able to access or efficiently use data across departments that could be used to create a more complete view of a given Medicaid member.

One option could be to leverage and expand the existing Master Client Index, which enables enterprise data exchange across several programs within DHS, the Department of Children and Families (DCF), and the Department of Administration (DOA)[r]. The Master Client Index functions as a data hub, sharing demographic information across several systems that support Wisconsin's public programs and agencies and providing the ability to share customer data proactively, share updates when information changes, identify fraud waste and abuse, and streamline customer processes.

[r] Current programs utilizing the Master Client Index include DHS: Medicaid, FoodShare, and FoodShare Employment and Training (FEST); DCF: Child Welfare, Child Care, and Wisconsin Works; and DOA: Energy Assistance.

Person-centric data aligned to services across agencies drives enhanced service delivery and improved outcomes. Data could be annexed from other departments providing social services to Wisconsin residents, such as the Wisconsin Housing and Economic Development Authority for housing assistance or the Department of Workforce Development for unemployment insurance and worker's compensation. Additionally, data from the PDMP could be integrated to better facilitate support and care in combatting the opioid epidemic.

4. Expand technical assistance and HIE onboarding support to behavioral health and LTC providers in Wisconsin.

Despite not being eligible for the EHR Incentive Program, these providers show similar EHR adoption rates to Wisconsin Medicaid providers. They make use of different vendors, though, which will limit the built-in capability to share data across a similar vendor system and could present potentially increased interoperability challenges since the type of medical information they maintain could differ (especially given the lack of standards). These are Medicaid priority populations, especially as they relate to cost and utilization of services, which could benefit from health information sharing efficiencies.

There is an opportunity to leverage HITECH funds for HIE onboarding of these provider types. WISHIN can facilitate information sharing, which would enable behavioral health and LTC providers' access to community health records, giving them greater insight into the acute medical needs of their patients. Additionally, Eligible Hospitals, Eligible Professionals, and HMOs will be better able to engage in care coordination and care management with the additional behavioral health and LTC provider data. The enhanced focus on substance abuse and treatment, including through recent opioid policy initiatives and the proposed BadgerCare Reform Childless Adults Waiver, will benefit from clinical data sharing from behavioral health care providers, in particular.

5. Empower patients to engage in managing their health and health care.

Increasingly, the health care community has come to realize that improved patient engagement in health care contributes to improved health outcomes. Well-informed patients are a critical component to engaging the patient population in their own health care management and resource consumption.

This assessment identified several mechanisms by which health care entities were actively seeking to inform and engage patients. Providers are interested in and using different tools to engage with patients and become more accessible to patients, such as by using telehealth to deliver services. Meaningful Use through CEHRT has increased electronic patient engagement capabilities, although this ability remains in the early stages of widespread availability and patient use. All surveyed participants offer and encourage use of online portals, providing assistance to reduce barriers, including technical ability and internet access.

The Agency should seek to understand how Medicaid members are currently interacting with their care, what tools they are making use of, and what the challenges are. Once identified, strategies to improve member engagement, health literacy, outreach, and education can be pursued.

6. Expand telehealth services to include more sites and reimbursement, particularly for behavioral health.

Wisconsin Medicaid providers indicated a desire to use telehealth services more, especially if reimbursement followed. Surveyed providers expressed interest in delivering care through synchronous, asynchronous, remote patient monitoring, and mobile health mechanisms. Currently, Wisconsin Medicaid only supports synchronous delivery. The Agency should identify appropriate services and additional delivery mechanisms to expand access to care through telehealth.

7. Explore current EHR Incentive Program CQM reporting to potentially align and leverage CQMs across broader Wisconsin Medicaid quality strategy priorities.

Currently there is wide flexibility in CQM selection, and Program Year 2015 attestation data showed a high percentage of a handful of CQMs being selected. In order to potentially use CQM data to assess current quality, measure selection should better align with the services providers are providing. This could include measures selected as part of their clinical decision support within the EHR, and Agency-recommended Eligible Professional measures (31 CQMs identified in total) because these measures closely align with Medicaid's initiatives, and priorities or have been identified as potential future areas of interest for the Agency. Analysis indicated almost half of these measures have less than 10% attestation rates by participating Eligible Professionals in the Medicaid EHR Incentive Program.

To best capitalize upon CQM capabilities, the Agency needs to understand what is driving current CQM selection (e.g., functionality of CEHRT, applicability of the provider specialty). Analysis into root causes of CQM selection could be facilitated through technical assistance provided through the HIT Extension Program. Additionally, before moving forward with building the capability to accept electronically reported CQMs, the Agency should seek more information on the current landscape and existing barriers. While most Eligible Hospitals and Eligible Professionals are using CEHRT with the capability to electronically report, to date, only a handful of states have built the capability to receive eCQMs, and very few, if any, are receiving them.

As the Agency updates their quality strategy, they can use this insight to best leverage CQMs to ease provider reporting burden and gather more accurate clinical quality data for performance improvement initiatives.

8. Conduct an analysis to understand the causes preventing Eligible Professionals from returning to achieve Meaningful Use and continue participation in the Medicaid EHR Incentive Program.

In analyzing the population of Eligible Professionals who participated in the Medicaid EHR Incentive Program between Program Years 2011-2013, 43% (1156 of 2720) have not returned to participate in either Program Year 2014 or 2015. Since Eligible Professionals are allowed to participate in nonconsecutive years, understanding the root cause of this participation gap and potential challenges that they face in achieving or continuing to increase health IT maturity through Meaningful Use progress can be used to determine whether technical assistance can help them overcome these

barriers and or what types of issues need to be taken into account when considering EHR adoption and subsequent use outside of the EHR Incentive Programs.

The HIT Extension Program could be used to facilitate the assessment of non-returning providers and, if applicable, to potentially design targeted outreach technical assistance strategies for re-engaging those providers in the Medicaid EHR Incentive Program.

9. Identify options to engage dentists in health IT efforts outside of the EHR Incentive Program.

The 2011 Quality Oral Health Care in Medicaid Through Health IT report states that:

> There is a fundamental lack of integration between dental and medical systems. This lack of interoperability represents a major barrier to the adoption and implementation of health IT, which is particularly important for the care of low income children enrolled in CHIP and Medicaid. Since oral health diagnoses and treatments are often closely associated with underlying medical issues in these populations, the absence of integration and interoperability between dental and medical systems impede dentists' and physicians' ability to appropriately coordinate care for their patients[37].

It is further noted that while the lack of integration between dental and medical systems is not necessarily a primary barrier to acquiring health IT, it is cited as a disincentive to adoption by dentists. As the EHR Incentive Program statistics have shown, despite program eligibility and focused recruiting and technical assistance efforts from MetaStar and WPHCA, the majority of dentists are not finding value in the program. One specific area for further research would be vendor offerings in the dental space, as these have reportedly been lacking in functionality, including their capability to integrate with medical system offerings. This is a feature of great interest to dentists and providers, as well as one that facilitates improved care.

There may be additional ways to support dentists in health IT adoption and quality care improvements, including collaborating directly with the Wisconsin Dental Association, the Wisconsin Oral Health program, and other stakeholders.

10. Identify other sources of data to more fully assess the Wisconsin health IT landscape.

The primary data source for the Health IT Landscape Assessment has been the EHR Incentive Programs, with the majority of data coming from the Medicare attestations (68%). Beginning in Program Year 2017, Medicare providers will transition to the Quality Payment Program, per the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA). At the time of this assessment, it remains undetermined whether access to data would be accessible to the Agency; however, data from these providers is critical to assembling an accurate view of the Wisconsin health IT landscape. In addition, Medicaid providers will start completing their program participation as early as Program Year 2016, further reducing updated data to analyze. The Agency should consider investigating other means for source data that speak to health IT adoption and use.

6 End Notes

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