



State of Wisconsin Medicaid Health Information Technology Plan: As-Is Landscape Assessment



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1. INTRODUCTION

1.1 Background

The eHealth team, a section of the Division of Medicaid Services (DMS) within the Wisconsin Department of Health Services (DHS), conducted an As-Is Health Information Technology (IT) Landscape Assessment to provide a review of the State of Wisconsin's health IT and health information exchange (HIE) activities currently underway in the Medicaid enterprise. This As-Is Assessment captures the State's progress as of June 2021.

The Health IT Landscape Assessment is conducted to evaluate and analyze the State's 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 findings of the assessment serve to inform future strategies of the Wisconsin Medicaid Agency (DMS), in its pursuit of advancing health IT maturity and objectives including:

- Increasing member engagement in their care through a culturally inclusive approach
- Improving health of individuals and communities.
- Advancing administrative and operational efficiencies
- Improving access to comprehensive and quality data

Notably, the As-Is Assessment includes the following:

- Current governance structures that are in place to facilitate electronic health record (EHR) and health IT adoption
- An inventory of the Medicaid health IT assets
- Summary of organizational assets
- Known EHR adoption rates across the State
- External factors (stakeholders, policy, or other considerations) that are likely to inform DMS's approach in driving the adoption and use of health IT, HIE, and EHR technology in Wisconsin.

This assessment is a component of the final State Medicaid Health IT Plan (SMHP) required by the Centers for Medicare & Medicaid Services (CMS) for submission and seeks to evaluate the current health IT ecosystem within Wisconsin.

1.2 Scope

The DMS eHealth team's efforts to review the current state of health IT and HIE activities were guided by the CMS SMHP template, which included a series of questions for states to answer through their health IT landscape assessments. In addition to updated information on Wisconsin's health IT stakeholders, governance, and EHR adoption rates across provider types, the As-Is Assessment includes a comparison of initial adoption rates, as recorded in previous landscape assessments, to the current rates, gleaned from surveys, HIE participation information, and Promoting Interoperability (PI) Program data.

1.3 Approach

Establishing a baseline of the current landscape is critical in measuring the impact of future state options that will be developed by DHS for the To-Be Assessment. The As-Is Assessment represents a snapshot of Wisconsin's health IT landscape as of June 2021 and serves as the foundation for development of the To-Be and Roadmap sections of the SMHP. Through the establishment of a baseline, a gap analysis can be conducted to identify disparities between the As-Is and To-Be environments and identify priorities to support and amplify the adoption and use of health IT. The DMS eHealth team completed the following activities to produce the As-Is Assessment:

- Coordinated with key DMS staff to identify and prioritize health IT issue areas for opportunity growth and focus.
- Identified available data sources beyond eHealth developed surveys, PI Program data, and Medicaid Management Information Systems (MMIS) data to capture health IT adoption rates and practices.
- Performed research using publicly available resources to address identified issue areas and root causes. Developed and distributed survey(s) and polls to populations as defined jointly by DMS and eHealth.
- Performed interviews with key internal and external stakeholders, as defined jointly by DMS and eHealth.
- Evaluated and synthesized data inputs (for example, survey data, Medicaid claims and encounter data, data from partners, PI Program data) to inform trends and shifts within the health IT ecosystem.
- Identified key focus areas/provider populations for future Medicaid-sponsored initiatives to promote health IT maturation and advancements in interoperability.

1.4 Data Sources

To complete the As-Is Assessment, the DMS eHealth team leveraged a variety of data sources including:

- PI Program attestation data from Eligible Hospitals and Eligible Professionals
- MMIS data, including claims and encounter data
- Participation data from the Wisconsin Statewide Health Information Network (WISHIN)
- DMS-administered health IT adoption and use survey results
- Health IT maturity assessment results provided by MetaStar, a partner organization
- Qualitative data as gathered through interviews with identified Wisconsin health IT stakeholders

2. HEALTH INFORMATION TECHNOLOGY ECOSYSTEM AND BACKGROUND

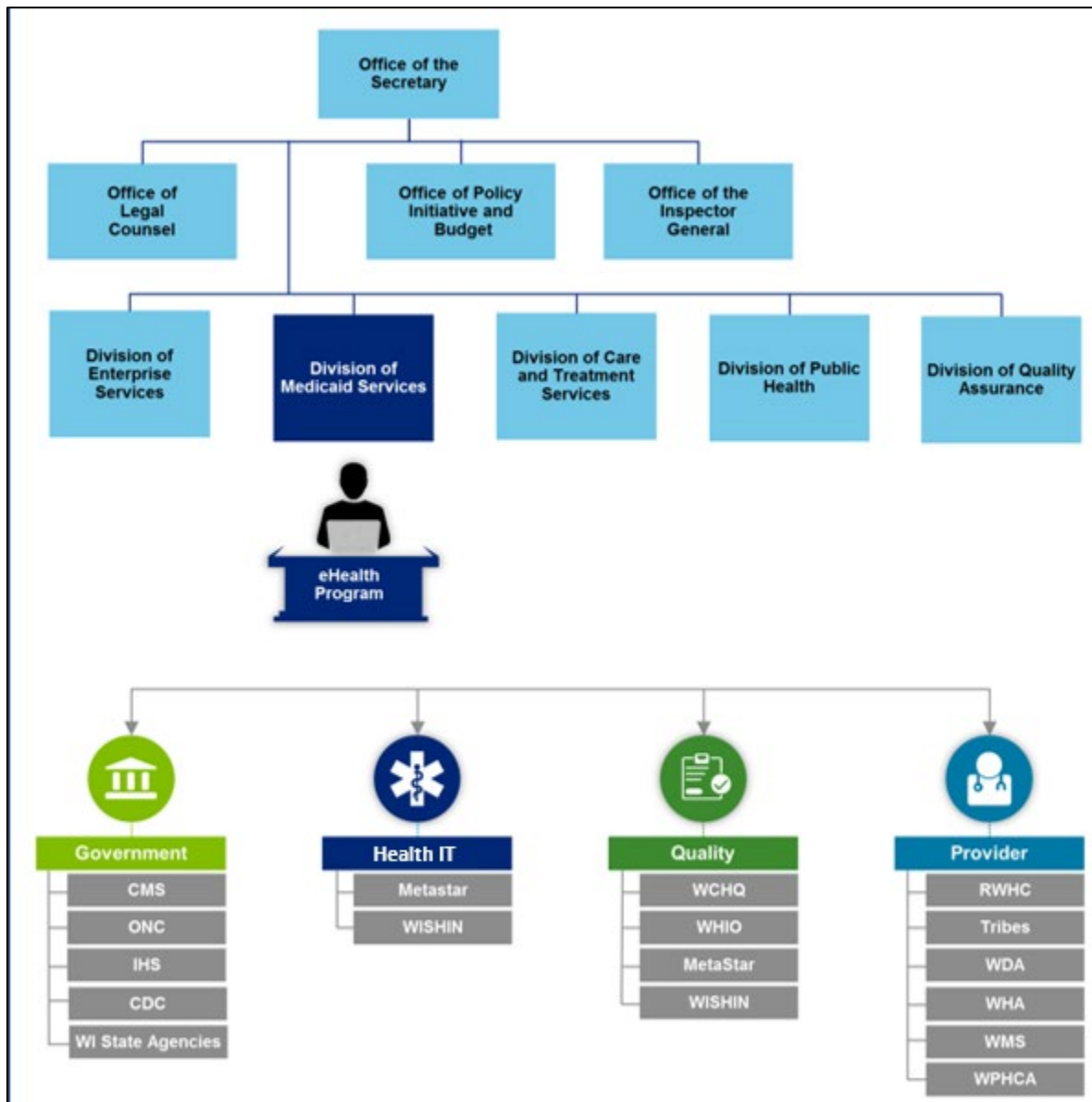


Figure 2.0: State of Wisconsin Organizational Overview

2.1 Organizational Background and Division of Medicaid Services Governance

DHS is one of the largest departments in Wisconsin with over 6,100 employees and an estimated annual budget of \$11.5 billion. DHS works with its community partners and health care providers to promote the health and safety of people in Wisconsin and ensure that greater member care is a continued priority.

DHS oversees Medicaid, the single largest program in the State's budget, in addition to other health and social service programs. DHS provides health care coverage and services to more than a million Wisconsin residents. Additionally, DHS oversees seven 24/7 institutions: three centers for the developmentally disabled, a facility for mentally ill inmates, two psychiatric hospitals, and a facility for treating sexually violent persons.¹

The following section details Wisconsin's organizational assets impacting the construction and execution of the SMHP, focusing on the areas within DHS that most closely interface with DMS and the eHealth team.

2.1.1 Office of the Secretary

The Office of the Secretary is responsible for the management of the communications team, area administration, tribal affairs, legislative affairs, and opioid initiatives. The Office of the Secretary serves as the primary link for DHS to develop internal and external communications, organize the broad range of program areas within 72 local county human service agencies, and maintain effective relationships with 11 Wisconsin tribal governments. The Office of the Secretary also includes the Director of Opioid Initiatives and the Legislative Advisor. Recent State-level statutory changes relevant to the eHealth Program are further explained in [Section 2.4](#) below.

2.1.2 Division of Medicaid Services

DMS is responsible for administering Wisconsin's Medicaid programs for more than 1 million Wisconsinites who are elderly, have a disability, or have low income. These programs include BadgerCare Plus benefits for individuals with chronic disease, Family Care, Family Care Partnership, IRIS (Include, Respect, I Self-Direct), children's long-term care (LTC) services, and reimbursement for nursing homes. DMS also administers other programs including FoodShare, SeniorCare, and state-funded Supplemental Security Income (SSI). DMS is responsible for the administration and oversight of the Medicaid PI Program staffed by the eHealth team.

The Wisconsin Medicaid PI Program is a critical arm of the State's broader health IT infrastructure to reform and improve health care. Program integrity services for the PI Program are an ongoing shared responsibility between program staff in DMS and the Office of the Inspector General (OIG).

2.1.2.1 State Health Information Technology Coordinator

Since 2010, the eHealth Program Director (Wisconsin's equivalent to the State Health IT Coordinator role) was responsible for formulating and leading the development of, advocating for, and overseeing the implementation of policy initiatives that foster adoption of certified electronic health record technology (CEHRT). The eHealth Program Director also worked to secure HIE and related initiatives at a state and national level and to achieve Wisconsin's health care delivery transformation goals. The Director was also responsible for leading, formulating, determining, and coordinating health IT and HIE policy, planning, budgeting, and implementation activities across DHS; with federal and other state and

¹ Services, Wisconsin Department of Health. 2020. *About the Department of Health Services (DHS)*. September 29. Accessed 2021. <https://www.dhs.wisconsin.gov/aboutdhs/index.htm>.

local government agencies; and with private sector providers and institutions to achieve statewide adoption and impactful use of EHR technology and HIE in Wisconsin. The eHealth Program Director also oversaw the administration of the Medicaid PI Program. After a DMS reorganization in 2020, the eHealth Program Director responsibilities have been divided across DMS staff who are best positioned to fulfill the duties while integrating them into their existing workflows to further DMS's health IT strategic goals and objectives. The To-Be Assessment will further discuss Wisconsin's approach to the Health IT Coordinator function to allow for continued health IT and HIE expansion efforts after the sunset of the PI Program and accompanying enhanced federal funding.

2.1.3 Division of Care and Treatment Services

The Division of Care and Treatment Services (DCTS) manages programs that provide community mental health and substance abuse services. It also administers DHS's institutional programs for people whose mental needs or developmental disabilities cannot be met in a community setting. DCTS operates two psychiatric hospitals and three secure treatment facilities that provide care and treatment for persons with mental illness and/or sexually violent behavior. DCTS is also responsible for client rights reviews and investigations at the institutions and in the community and for the Community Forensics program. DCTS and DMS interface frequently on existing and new initiatives, programs, and benefits aimed at addressing behavioral and mental health issues for Wisconsinites. DCTS policy staff have noted that a large barrier to health IT adoption for many behavioral health providers has been the initial and ongoing costs.

2.1.4 Division of Public Health

The Division of Public Health (DPH) works with local and tribal public health partners, and community groups statewide, on a wide variety of programs and services that protect the health of Wisconsin residents. A few of these programs include communicable and chronic diseases; health promotion; environmental, occupational, and family and community health; emergency medical services; and injury prevention. There are eight bureaus and offices within DPH; those described below coordinate directly with the eHealth Program staff on projects and Public Health Meaningful Use reporting.²

2.1.4.1 Office of Health Informatics

The Office of Health Informatics (OHI) has a primary responsibility to collect, maintain, and provide vital records for the citizens of Wisconsin; to collect, protect, disseminate, and analyze health care and population-based health data necessary to conduct critical state business; and to integrate and manage major public health-related information systems. OHI assists DMS by delivering data, data sets, analysis, and technical assistance services that support the administration of Wisconsin Medicaid.³

2.1.4.2 Bureau of Communicable Disease

The Bureau of Communicable Diseases (BCD) is responsible for the prevention and control of communicable diseases in Wisconsin. BCD provides surveillance and epidemiological follow-up of more than 70 reportable communicable diseases. It is also responsible for monitoring scientific

² Services, Wisconsin Department of Health. 2021. *Department of Public Health (DPH)*. November 29. Accessed 2021. <https://www.dhs.wisconsin.gov/dph/index.htm>.

³ Services, Wisconsin Department of Health. 2021. *Division of Public Health, Office of Health Informatics (OHI)*. November 11. Accessed 2021. <https://www.dhs.wisconsin.gov/dph/ohi.htm>.

advances in the field of communicable disease prevention and control research and for incorporating appropriate advances into public health practice. BCD's responsibilities are allocated into four sections: Communicable Disease Epidemiology, HIV, Immunizations, and Sexually Transmitted Diseases. The Immunization Section of BCD is responsible for operating the Wisconsin Immunization Registry (WIR).⁴

2.1.4.3 Office of Preparedness and Emergency Health Care

The Office of Preparedness and Emergency Health Care (OPEHC) is responsible for public health and hospital preparedness, classification of Level 3 and Level 4 trauma centers, and the licensing of emergency medical services in Wisconsin. This office collaborates on syndromic surveillance efforts in Wisconsin by participating in the BioSense Platform, operated by the Centers for Disease Control and Prevention (CDC) National Syndromic Surveillance Program.⁵

2.1.5 Office of Policy Initiatives and Budget

The Office of Policy Initiatives and Budget (OPIB) provides policy and research services and department-wide budgeting. OPIB is responsible for monitoring federal policy developments, supporting strategic policy initiatives, and developing grants. OPIB is also responsible for the development of budget proposals and related analyses. DMS and the eHealth team provide subject matter expertise and inputs to OPIB as they develop budget proposals for initiatives to enhance statewide health IT adoption and maturation.

2.2 Health Information Exchange Background and Governance

WISHIN is the state-designated entity (SDE) for HIE. It is an independent not-for-profit organization dedicated to bringing the benefits of widespread, secure, and interoperable health IT to caregivers throughout Wisconsin. In this capacity, WISHIN is responsible for governing HIE at the state level and overseeing the implementation of a statewide health information network and HIE services in Wisconsin.

2.2.1 Wisconsin Statewide Health Information Network History and Development

In 2010, Wisconsin Governor Jim Doyle signed Wisconsin Act 274, authorizing the State to select a qualified non-profit corporation to serve as the SDE to govern the statewide HIE. Following a competitive application process, the WIRED for Health Board recommended to the DHS Secretary that WISHIN be appointed the SDE to oversee implementation of the WIRED Board's Strategic and Operational Plan. On October 25, 2010, the State officially announced its intent to designate WISHIN as the SDE and then it was formed by the Wisconsin Hospital Association, Wisconsin Medical Society, Wisconsin Collaborative for Healthcare Quality, and Wisconsin Health Information Organization. WISHIN assumed the responsibilities of the former WIRED for Health Board, as well as the program responsibilities of the State Health Information Exchange Cooperative Agreement Program under the direction of DHS.

⁴ Services, Wisconsin Department of Health. 2021. *Division of Public Health, Bureau of Communicable Diseases (BCD)*. January 12. Accessed 2021. <https://www.dhs.wisconsin.gov/dph/bcd.htm>.

⁵ Services, Wisconsin Department of Health. 2021. *Division of Public Health, Office of Preparedness and Emergency Health Care (OPEHC)*. August 2. Accessed 2021. <https://www.dhs.wisconsin.gov/dph/opec.htm>.

Since its inception, WISHIN has focused on increasing their participation and utilization of services across the state. That work continues today in collaboration with its founders and other leaders in the health care field to meet the organization's mission, vision, and goals. In June 2020, WISHIN released a Request for Proposal to improve and/or replace its current HIE platform and core services. The outcome, referred to as "WISHIN 2.0," includes transitioning the current technical platform from Health Catalyst Interoperability/Medicity to a hybrid solution provided by Velatura Public Benefit Corporation (Velatura) and KPI Ninja. The benefits of the new hybrid solution are further discussed in [Section 2.2.4](#).

2.2.2 Wisconsin Statewide Health Information Network Offered Services

As of February 2021, nearly 1,990 sites of care are connected through WISHIN. It is also certified to operate as a Health Data Intermediary in Minnesota, enabling connectivity and interoperability for health care professionals managing cross-border patients. Furthermore, WISHIN Pulse is connected to the federal Department of Veterans Affairs (VA) through an eHealth Exchange connection, allowing WISHIN participants to exchange care summaries with VA facilities nationwide.

WISHIN aims to act as a "one-stop shop" for its users and offers a suite of services, including Direct Trust certified secure clinical messaging (WISHIN Direct+), a community health record (WISHIN Pulse), a hospital admission, discharge, and transfer (ADT) encounter notification service (PatientPing notifications), single sign on to both WIR and the Prescription Drug Monitoring Program, and automated public health reporting services. These offerings allow for timely access to the right information, which can lead to better clinical decisions, more effective transitions of care, better outcomes, and reduced administrative costs for providers. PatientPing ADT event notifications allow providers to track their patients' progress in real time and the single sign on functionality creates seamless integration into provider workflows.

2.2.3 Wisconsin Statewide Health Information Network Governance and Coordination Process

There are two primary governing bodies within WISHIN: the WISHIN Team and the WISHIN Board. The WISHIN Team is responsible for the organization's operations including developing and implementing strategic initiatives, managing customer and vendor contracts, creating marketing and sales initiatives, and managing customer implementation and customization projects.

The WISHIN Board is comprised of a broad and diverse membership, including representatives from health plans, clinical settings, higher education, and insurance plans. The group is responsible for providing a robust clinical knowledge base, coordinating strategic execution, and leading efforts to enhance care models and the network's population health infrastructure through electronic medical records. Additionally, DHS holds three statutory seats on the [WISHIN Board](#), which is filled by the Medicaid Director or designee, the State Health Officer or designee, and a Governor's appointee. The Board houses several Standing Committees that oversee the operations, finances, and market opportunities of WISHIN. Furthermore, several Advisory Committees are regularly convened to provide expertise around clinical, policy, and technology matters. By implementing a committee structure, WISHIN seeks to bring a holistic understanding of the health IT landscape and better deliver on its services.

2.2.4 Wisconsin Statewide Health Information Network Strategic Goals and Future Plans

WISHIN's primary mission is to improve upon patient-centered care, support clinical decision-making and care coordination, and promote population health through the use and exchange of electronic health information. The WISHIN Board has further identified strategic goals and priorities to "position WISHIN as a uniquely valuable and sustainable vendor-neutral interoperability partner (for diverse client types) regardless of their size or technical sophistication."⁶ As of June 2021, these goals include:

- Grow WISHIN's network of participating organizations.
- Establish strong and effective third-party vendor relationships.
- Establish a governance framework that is flexible and enduring.
- Develop a path to financial sustainability for ongoing statewide HIE.
- Inform and raise awareness about the benefits of health IT and HIE.⁷

At the writing of this report, WISHIN is working on their strategic road map, which is slated for release by fall of 2021.

Following these priorities, WISHIN announced a contract with vendors Velatura and KPI Ninja in early 2021 to replace WISHIN's current health information platform and expand services for its participants. This transformation to WISHIN 2.0 includes an updated infrastructure as well as an improved user interface for WISHIN Pulse, analytics reports, patient activity reports, and the infrastructure to support National Committee for Quality Assurance Healthcare Effectiveness Data and Information Set (HEDIS) reporting for payers. This transformation will allow WISHIN to provide expansive services and support new standards including Fast Healthcare Interoperability Resources and Application Programming Interfaces (API). WISHIN 2.0 will be delivered in a Health Information Trust Alliance certified cloud platform that will allow WISHIN additional flexibility and scalability to respond to emerging trends with the ability to increase valuable service offerings for health care delivery organizations, payers, and publicly funded health programs.

2.3 Stakeholder Map and Strategic Partnerships

DMS works in collaboration with several organizations to encourage the adoption and meaningful use of CEHRT and health IT. Organizational assets that support the Wisconsin Medicaid enterprise are an important component of the As-Is Assessment. Figure 2.1 provides an outline of some of the internal partners DMS engaged to inform the As-Is-Assessment and who provided key insight on health IT adoption and use practices within the State. Additional partners are listed in following sections.

Internal Stakeholders		
Partner Organization	Description	Roles, Responsibilities, Areas of Collaboration

⁶ Network, Wisconsin Statewide Health Information. January 2020. "WISHIN Progress Report."

⁷ WISHIN. n.d. Mission, Vision and Goals. Accessed 2021. <https://www.wishin.org/AboutWISHIN/MissionandVision.aspx>

Internal Stakeholders		
Department of Corrections (DOC)	DOC offers treatment and health care to incarcerated individuals, some of whom are Medicaid members before or after incarceration.	DOC was engaged to gather information on what medical data is currently being shared between agencies.
DPH	DPH safeguards the health of Wisconsinites.	DPH collaborates with other agencies around medical data sharing.
DMS	DMS oversees Wisconsin's Medicaid programs for more than 1 million Wisconsinites	DMS tracks inter-agency medical data sharing needs and practices.

Figure 2.1: Wisconsin Health Information Technology Stakeholders

2.3.1 Other State Agencies

Inter-agency partners were critical in illustrating how DHS can better leverage its coordinative functionalities to ensure health IT initiatives are parallel tracking across agencies.

2.3.1.1 Wisconsin Department of Safety and Professional Services

The Department of Safety and Professional Services (DSPS) is responsible for ensuring the safe and competent practice of licensed professionals in Wisconsin. DSPS also administers and enforces laws to assure safe and sanitary conditions in public and private buildings. It provides administrative services to the State Occupational Regulatory Authorities responsible for regulation of occupations and offers policy assistance in areas including evaluating and establishing new professional licensing programs, creating routine procedures for legal proceedings, and adjusting policies in response to public needs. DSPS administers the Prescription Drug Monitoring Program (PDMP) and collaborates with DPH, DMS, and OIG by sharing PDMP data with these divisions.⁸

2.3.1.2 Wisconsin State Lab of Hygiene

The Wisconsin State Laboratory of Hygiene (WSLH) is the State's public, environmental, and occupational health laboratory. WSLH coordinates the Wisconsin Clinical Laboratory Network (WCLN), a network of approximately 135 clinics and laboratories throughout the State for disease surveillance, reporting, and responding to emerging infectious diseases, terrorism threats, or other public health threats or emergencies. The WCLN is part of the CDC's national Laboratory Response Network.⁹ WCLN also sends test results via a secure system to the Wisconsin Electronic Disease Surveillance System (WEDSS) where staff at local health departments and DPH can view the results and respond

⁸ State of Wisconsin, Department of Safety and Professional Services. n.d. Divisions. Accessed 2021. <https://dsps.wi.gov/Pages/AboutDSPS/Divisions.aspx>.

⁹ Wisconsin State Laboratory of Hygiene, University of Wisconsin—Madison. n.d. Wisconsin Clinical Laboratory Network (WCLN). Accessed 2021. <http://www.slh.wisc.edu/wcln-surveillance/wcln/>.

as needed to prevent further disease spread. Additionally, WSLH electronically reports results from tests it performs to the CDC for a variety of infectious disease pathogens.¹⁰

2.3.1.3 Wisconsin Department of Veterans Affairs

The Wisconsin Department of Veterans Affairs (WDVA) administers various programs and services for eligible Wisconsin veterans and their families. One of WDVA's primary responsibilities is providing 24-hour skilled nursing care to veterans by operating three homes—in Chippewa Falls, King, and Union Grove—which collectively serve nearly 1,000 veterans and their spouses.¹¹ All homes use PointClickCare for medical and financial management. Though PointClickCare provides an electronic record for all services performed in the veterans' homes, information sharing, and integration challenges require most orders and transitions of care documentation to be shared on paper, then manually entered into PointClickCare. WISHIN maintains a connection with the federal VA through the eHealth Exchange. This connection allows WISHIN participants to exchange care summaries with VA facilities nationwide. The eHealth team attempted to interview the WDVA for this report, but the department declined to participate. Due to this inability to confirm information regarding the WDVA's use of EHRs, the eHealth team is unable to verify if this information is still correct.

2.3.1.4 University of Wisconsin Extension Broadband and E-Commerce Education Center

The University of Wisconsin Extension Broadband and E-Commerce Education Center assists local stakeholders in implementing strategies to attract broadband investments by providing education and training.¹²

2.3.2 External Stakeholders

DMS works in collaboration with several organizations to encourage the adoption and meaningful use of CEHRT and health IT. The table below provides a summary of the roles and responsibilities of DMS partner organizations.

¹⁰ Services, Wisconsin Department of Health. 2021. *Wisconsin Electronic Disease Surveillance System (WEDSS)*. October 8. Accessed 2021. <https://www.dhs.wisconsin.gov/wiphin/wedss.htm>.

¹¹ State of Wisconsin, Department of Veterans Affairs. n.d. *About WDVA*. Accessed 2021. <https://dva.wi.gov/Pages/aboutWdva/AboutWDVA.aspx>.

¹² Wisconsin—Madison, University of. n.d. Community Economic Development, Division of Extension, *About*. Accessed 2021. <https://economicdevelopment.extension.wisc.edu/about/>.

External Stakeholders		
Tribal Health Centers	There are 12 tribal health centers in Wisconsin that serve tribal communities through support from both the Indian Health Services (IHS) and DHS through Wisconsin Medicaid.	• Tribal health centers provide health care services for members of tribal communities. • DMS facilitates outreach to tribal health centers.
Wisconsin Dental Association (WDA)	The WDA includes a majority of Wisconsin's licensed dentists and a number of dental hygienists.	DMS has used the WDA as a mechanism to learn more about dentists in Wisconsin, their key issues, and their proclivity to adopt CEHRT to inform DMS efforts to promote adoption of CEHRT and to encourage participation in the Medicaid PI Program.
Wisconsin Hospital Association (WHA)	The WHA is a nonprofit membership group that advocates for the ability of its members to lead in the provision of high-quality, affordable, and accessible health care services.	WHA supported outreach and communication activities for the Medicaid PI Program.
Wisconsin Medical Society (WMS)	The WMS is the largest physician advocacy organization in Wisconsin and works as a health policy leader and professional development resource.	WMS supported outreach and communication activities for the Medicaid PI Program.

Figure 2.2: External Stakeholder List With Descriptions of Each Organization and Their Roles and Responsibilities

2.3.3 Federal Partners

2.3.3.1 Centers for Medicare & Medicaid Services

CMS is a federal agency within the U.S. Department of Health and Human Services (HHS) that administers the Medicare program and works in partnership with state governments to administer Medicaid, the Children's Health Insurance Program (CHIP), and health insurance portability standards.¹³ CMS is a partner in the administration and oversight of the Medicaid PI Program and provides oversight of federal regulations that govern the program. Additionally, CMS also provides technical assistance and support to DMS through the administration of community of practice calls and regional office staff resources.

2.3.3.2 Office of the National Coordinator for Health Information Technology

The Office of the National Coordinator for Health Information Technology (ONC) is a staff division of the Office of the Secretary within HHS. It supports the adoption of health IT and the promotion of nationwide electronic exchange of health information and coordinates efforts across the nation's health

¹³ CMS. n.d. Newsroom, Press Kit. Accessed 2021. <https://www.cms.gov/newsroom/press-kit>

care spectrum. ONC defines the certification criteria for CEHRT and works closely with CMS to align these criteria with the Meaningful Use requirements.¹⁴

2.3.3.3 Indian Health Service

IHS is an operating division within HHS. IHS administers a comprehensive health service delivery system for approximately 2.6 million members of federally recognized American Indian and Alaska Native tribes.¹⁵ IHS is the principal federal health care provider and health advocate for tribal members and its goal is to closely partner with the tribes to raise their health status to the highest possible level. IHS collaborates with DMS to support the efforts of the tribal health centers in Wisconsin; resources include the provision of Meaningful Use consultants to the tribal health centers to encourage CEHRT adoption efforts.¹⁶

2.3.3.4 Centers for Disease Control and Prevention

The CDC is a federal agency within HHS. The CDC collaborates with its federal partners (CMS and ONC) on health IT policy development and in defining criteria for meaningful use measures within the PI Program. Additionally, the CDC works with other national partners to develop policies, guidelines, and methods to promote a shared vision for how public health interacts with the health care community. The CDC works with Health Level 7, Integrating the Healthcare Enterprise, and other standard development organizations on the development and implementation of interoperable messaging, vocabulary standards, and implementation guides.¹⁷ The CDC's National Syndromic Surveillance Program (NSSP) promotes and advances the development of a syndromic surveillance system for the timely exchange of syndromic data. The data is used to improve nationwide situational awareness and enhance responsiveness to hazardous events and disease outbreaks in an effort to protect America's health, safety, and security. NSSP functions through collaboration among individuals and organizations at local, state, and federal levels of public health; federal agencies including the U.S. Department of Defense and the U.S. VA; public health partner organizations; and hospitals and health departments.

2.3.4 Health IT Partnerships

Health Information Technology Partners		
Partner Organization	Description	Roles, Responsibilities, Areas of Collaboration
MetaStar	MetaStar is a quality improvement organization that works to improve the quality of care for patients through health care improvement and consulting services to address the need for system-wide innovation.	- MetaStar provided health IT technical assistance to Medicaid-enrolled providers to help them select an EHR and participate in the PI Programs. - MetaStar participated in DMS's Health IT Coordination Group Meeting.

¹⁴ HealthIT.gov. 2021. *About ONC*. March 21. Accessed 2021. <https://www.healthit.gov/topic/about-onc>.

¹⁵ Services, Indian Health. 2020. *IHS Profile*. August. Accessed 2021. <https://www.ihs.gov/newsroom/factsheets/ihsprofile/>.

¹⁶ Services, Indian Health. 2017. *Quick Look*. April. Accessed 2021. <https://www.ihs.gov/newsroom/factsheets/quicklook/>.

¹⁷ Centers for Disease Control and Prevention. 2021. The National Institute for Occupational Safety and Health (NIOSH)—*Current Projects: EHRs*. March 3. Accessed 2021. <https://www.cdc.gov/niosh/topics/ehr/currentprojects.html>.

Health Information Technology Partners		
WISHIN	WISHIN is the state-designated entity for HIE.	- WISHIN has partnered with DMS to integrate the immunization registry data, Medicaid prescription fill data, and care plans and create an event notification report for health plans and clinicians. - DMS holds three statutory seats on the WISHIN Board of Directors. - WISHIN participated in DMS's Health IT Coordination Group Meeting.
Wisconsin Primary Health Care Association (WPHCA)	WPHCA is a member organization that supports and advances the work of Wisconsin's 17 Community Health Centers (CHCs). CHCs provide access to comprehensive, integrated, patient-centric, and community-oriented care services through medical, behavioral health, dental, and enabling services regardless of a patient's ability to pay. WPHCA supports CHCs through training and technical assistance, government relations and advocacy work, and by providing information and public education on CHCs to the general public.	- Through the Health Resources and Services Administration's Health Center Controlled Network funding award, WPHCA provides specialized training and technical assistance to health centers to advance their use of health IT as a measure to improve the centers' clinical and operational quality. - WPHCA supported outreach and communication activities for the Medicaid PI Program. - WPHCA participated in DMS's Health IT Coordination Group Meeting.
Wisconsin Collaborative for Healthcare Quality (WCHQ)	WCHQ is a voluntary, statewide collaboration that strives to assist in the improvement of the quality and affordability of health care through collaboration and public reporting. Their goal is to make health care more affordable and to improve the health of individuals and communities.	WCHQ participated in DMS's Health IT Coordination Group Meeting.
Wisconsin Health Information Organization (WHIO)	WHIO is a statewide information organization that includes commercial, Medicare Advantage, and Medicaid data submitted by health plans, self-funded employers, and Medicaid.	- DMS and WHIO are exploring ways each organization can fully utilize their own unique sets of data. - WHIO participated in DMS's Health IT Coordination Group Meeting.

Health Information Technology Partners		
Rural Wisconsin Health Cooperative (RWHC)	RWHC is owned and operated by 42 rural, acute, general medical-surgical hospitals. RWHC works to advocate for rural health at the federal and state levels and offers its members a wide range of shared services that meet local community health needs including consulting, management, networking, and education.	• RWHC is a key stakeholder of the Wisconsin Medicaid PI Program. • RWHC participated in DMS's Health IT Coordination Group Meeting.

Figure 2.3: Health Information Technology Partner Organizations

2.4 Wisconsin Law and Regulatory Landscape

The As-Is Assessment of the regulatory landscape consists of two key components:

1. A review of current state law and the accompanying regulations in development
2. An assessment of emerging state legislation or activities

2.4.1 State Law and Regulations

In late 2019 and early 2020, the Wisconsin State Legislature passed two laws, Wisconsin Act 56 and Wisconsin Act 185, related to health IT and its regulatory impact for the State.

Wisconsin Act 56, which was passed in November 2019, directed DHS to significantly expand Medicaid coverage for services delivered via telehealth. After significant stakeholder engagement, DMS is now in the process of implementing a robust expansion policy related to coverage of currently reimbursable services when delivered via telehealth. Under this policy, providers may deliver services to members if the service is functionally equivalent to the in-person service; telehealth may include real-time interactive audio-only communication. Additionally, DMS is developing policy to expand the originating sites eligible for reimbursement and an out of state provider enrollment policy for telehealth providers. More information on implementation of telehealth policy expansion is available in the Section 2 of the SMHP To-Be Assessment.

Governor Evers signed Wisconsin Act 185 into law in April 2020 in response to the COVID-19 pandemic. The bill outlines several provisions that would affect health care regulatory matters in the State, with a notable impact on Wisconsin Medicaid. Under the Medical Assistance program, DHS is required to develop a payment system based on performance to incentivize provider participation in health information data sharing in an endeavor to facilitate better patient care, reduce costs, and ease access to patient information. The pay for performance module encourages providers to adopt a value-based model because it integrates reimbursements with metric driven outcomes. This shift reflects the State's grander investment in HIE by aligning payment with value and quality, and further reinforces HIE as an integral pillar in ensuring quality of care.

Additionally, the pay for performance metrics sets minimum standards and requirements for DHS and providers around HIE and, more specifically, around patient record access. The pay for performance system requires that payments to providers increase as providers' HIE participation level increases. For

the payment system, DHS is required to seek federal funding, as outlined in the Coronavirus Aid, Relief, and Economic Security Act, to assist small rural providers with the implementation costs of participating in the HIE.

To increase WISHIN participation, DMS has earmarked up to \$8 million in financial incentives for hospitals that currently participate in WISHIN and those that contract with WISHIN. The program incentivizes hospitals to contribute data to WISHIN in three categories:

1. ADT messages
2. Electronic Care Summaries in the format of Consolidated Clinical Document Architecture (CCDA)
3. Laboratory results, pathology results, and radiology results

Incentive payments range from a minimum of \$15,000 to a maximum of \$40,000 per category, per hospital, based on each hospital's Medicaid claims volume (fee-for-service plus managed care). Hospitals will receive funding for each of the three categories of data for which they are participating in WISHIN or are contracted to participate in WISHIN as of December 31, 2021. Hospitals that are at least contracted to participate in all three data categories by December 31, 2021, will receive incentive payments totaling between \$45,000 to \$120,000.

2.4.2 Emerging State Legislation

As of February 2021, Governor Tony Evers allocated in his State budget the largest General-Purpose Revenue (GPR) public health investment Wisconsin has seen in the last 20 years. Of the recommended \$53 million GPR investment in public health activities, \$8 million was allocated to grant funding to include HIE activities. The last year has stressed the importance of a robust health care industry and the systems employed to keep the sector at the forefront of response. Unfortunately, many of these recommendations did not end up in the final budget act.

A critical aspect of the stated response system is an effective health IT landscape, specifically around EHRs, to aid in infection tracking and vaccination registration. The Governor's office recognizes the impacts of the COVID-19 pandemic and has prioritized public health as a policy priority. Additionally, the Governor also recommended providing funding to incentivize behavioral health providers to adopt EHR systems and utilize HIE services. These fiscal designations are a bid to expand health IT within Medicaid and reflect the State's motivation and understanding to invest in future planning and account for models of sustainability.

Additionally, in May of 2021, Governor Evers announced a special session to expand BadgerCare Plus and to discuss how \$1 billion from the American Rescue Plan Act (ARPA) would be invested among projects and development initiatives across the State.¹⁸ In July 2021, DHS submitted a plan to CMS that outlined how they plan to utilize ARPA funds to increase access to home and community-based

¹⁸ Office of the Governor, State of Wisconsin. 2021. "Gov. Evers Calls Special Session to Expand Access to Healthcare, Invest \$1 Billion Into State's Economic Recovery." Middleton, WI: Office of the Governor, Tony Evers, May 19. <https://content.govdelivery.com/accounts/WIGOV/bulletins/2d9f903>.

services for Medicaid members.¹⁹ There is a potential here for Wisconsin to support LTC services through expanded health IT initiatives.

2.5 Funding Analysis

2.5.1 Relevant Grants Received by DHS

DHS has not received any recent grants relevant to the SMHP.

¹⁹ Services, Wisconsin Department of. 2021. Wisconsin Submits Plan to Enhance and Improve Medicaid Home and Community-Based Services. July 14. Accessed 2021. <https://www.dhs.wisconsin.gov/news/releases/071421a.htm>.

3. TECHNOLOGY ASSESSMENT

Technology assets that support the Wisconsin Medicaid Enterprise are a significant component of the As-Is Assessment. Understanding of the assets is essential to assess each system's potential relevance to future health IT and HIE functions. This Technology Assessment represents a point in time for DMS's assets as of June 2021.

3.1 Medicaid Health Information Technology and Health Information Exchange Technology Assets

The portfolio of health IT assets consists of internal and external technology assets:

- Internal technology assets are used throughout DMS to support the administration and operations of the Medicaid program.
- External technology assets are systems or applications that are peripheral to DMS. These assets may interface with internal technology assets but are not primary to the administration and operations of the Medicaid program.

The following diagram provides a high-level representation of the internal and external technology assets utilized by DMS.

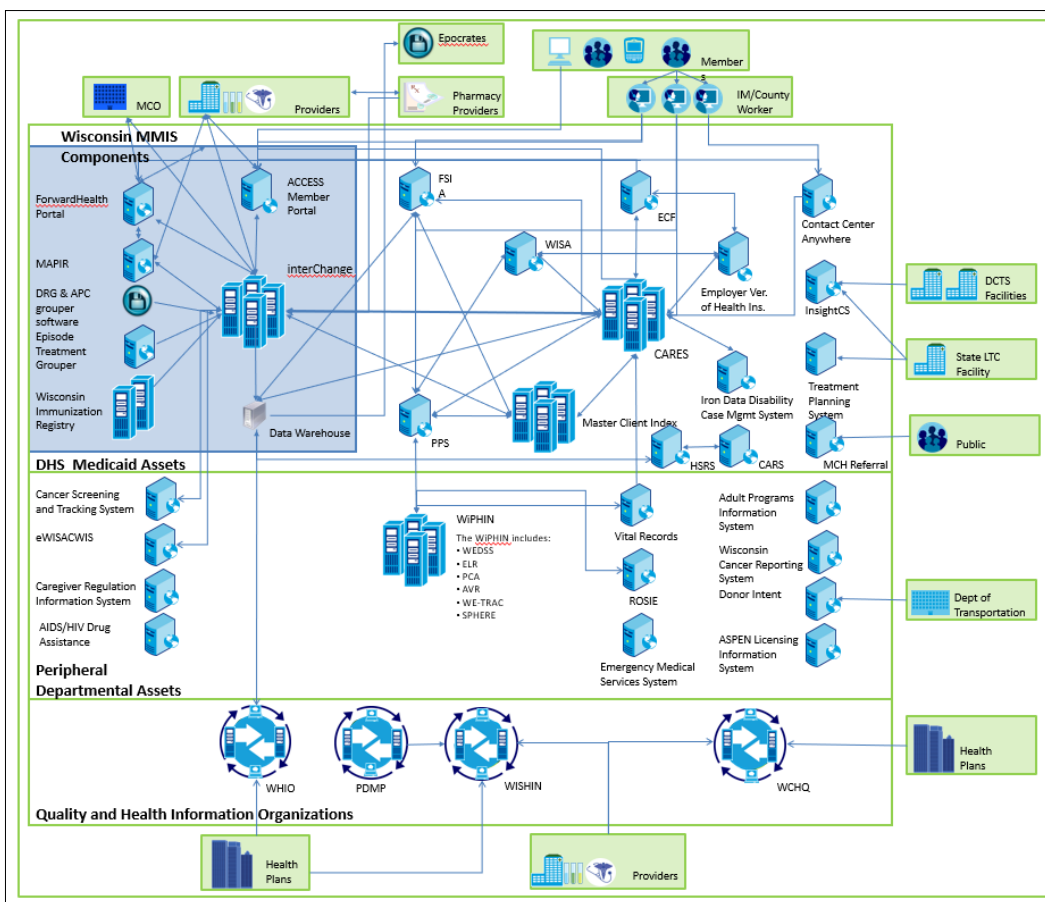


Figure 3.0: Wisconsin Health IT Assets

3.1.1 Internal Technology Assets

The following table summarizes the primary technology assets utilized throughout DMS to support the administration and operations of the Medicaid program.

Internal Technology Assets		
Asset	Description	Key Business Processes Enabled
ForwardHealth interChange	ForwardHealth interChange (iC2) is Wisconsin's multi-payer, web-based MMIS. iC2 provides claims processing, payment and reporting, provider enrollment, coordination of benefits (COB), and other administrative and operational system support to Wisconsin's health care programs, including Wisconsin Medicaid, BadgerCare Plus, Family Care, SeniorCare, WIR, Wisconsin Well Woman Program (WWWP), and Wisconsin Chronic Disease Program. iC2 was developed using a business model that aligns with the Medicaid Information Technology Architecture framework. MMIS uses web-based technology. DMS upgraded iC2 in October 2015. This upgrade streamlined the user interface of the MMIS system but retained its core functions and business logic.	• Processes claim payments • Entry and tracking of provider information and enrollment • COB for Medicaid members • Operational system support for other Wisconsin health care programs • Issuance of payments to Medicaid providers • Issuance of Medicaid PI Program incentives to Eligible Professionals and Hospitals in Wisconsin

Internal Technology Assets		
Asset	Description	Key Business Processes Enabled
ForwardHealth Portal	The ForwardHealth Portal uses secure web portal technology to serve providers, managed care organizations (MCOs), trading partners, and other partners. It provides access to iC2 depending on the type of user and the user's specific role. The secure Portal allows users to securely conduct business with ForwardHealth as listed below for each user type. The primary areas covered under the secure Provider Portal include Wisconsin Medicaid PI Program, Portal Messaging, Claims, Electronic Funds Transfer, Prior Authorizations, Remittance Advices, Enrollment Verification, Designation of an 835 Receiver, Provider Demographic Maintenance, Hospice Election, and Express Enrollment for Children. The primary areas covered under the secure MCO Portal include Portal Messaging, Enrollment Verification, iC Functionality, Remittance Advices, Electronic Funds Transfer, Designate an 834/820 Receiver, and Trade Files and Reports. The primary areas covered under the secure Trading Partner Portal include Portal Messaging, upload and download Electronic Data Interchange (EDI) files, view designations, and create or update profile. The primary areas covered under the secure Partner Portal include Portal Messaging, Enrollment Verification, and iC Functionality.	Provides access to key business functions for authorized users, such as Portal Messaging, Member Enrollment Verification, Medicaid PI Program, Electronic Funds Transfer, Prior Authorizations, Remittance Advices, Provider Demographic Maintenance, Express Enrollment, iC Functionality, Upload and Download of EDI
Surveillance Utilization Review System (SURS)	SURS is an extension of iC2 and used by the OIG to track audit cases, upload supporting documentation, document audit findings, and generate all official audit-related letters and reports. OIG staff use this system to track fraud, waste, and abuse inquiries across DHS and it serves as a central repository for audit documentation. OIG staff use SURS to track their progress and complete their audit documentation for audits, including those for the Wisconsin Medicaid PI Program. The OIG also uses SURS to store Affordable Care Act-related provider enrollment information and post-payment compliance audits for a variety of Medicaid benefits. The system is also used to generate referrals, informational letters, and initiate payment suspensions.	• Provides a central location for OIG staff to access audit information • Provides specialized audit tracking panels to complete audit workflows • Provides mechanism to generate official letters and reports containing provider-specific audit details

Internal Technology Assets		
Asset	Description	Key Business Processes Enabled
Health IT Risk Profiler	The Health IT Risk Profilers are tools developed to analyze data from the PI Program applications and MMIS to identify anomalies in provider behavior that indicate potential fraud or noncompliance. Separate Health IT Risk Profilers have been developed for each phase of the PI Program (adopt, implement, or upgrade; Stage 1; Stage 2; Modified Stage 2; and Stage 3). Each Health IT Risk Profiler is designed using a combination of eligibility and Meaningful Use risk factors as applicable for each phase. The tools produce reports wherein each paid provider for a given program year has been assigned an overall risk score. The reports also identify the risk factors that contributed to the overall score and further detail why the risk factors were flagged for the provider.	Provides an objective process by which OIG can determine post-payment audit targets
ACCESS	ACCESS to Eligibility Support Services (ACCESS) is a self-service internet-based application designed to assist the public with enrolling in public assistance programs, including Wisconsin Medicaid, BadgerCare Plus, FoodShare, Child Care, and W-2. ACCESS includes functionality that allows members to screen for benefit eligibility, apply for benefits, check the status of benefits, report a change, renew benefits, and submit documentation. In addition, certain Modified Adjusted Gross Income (MAGI) Medicaid populations can receive a real-time eligibility decision for BadgerCare Plus benefits within ACCESS. ACCESS is available to the citizens of Wisconsin via the internet, 24 hours per day, seven days per week. Technologies used to develop ACCESS are Java 2 Platform, Enterprise Edition on IBM WebSphere Application Server, BMC Control-M, OpenText xPression, IBM Content Manager, Salesforce, IBM Websphere MQ, and IBM Db2. DMS is currently modernizing ACCESS to a cloud-based platform for a better member experience and improved delivery of services. This includes implementing new self-service capabilities, such as comparing Medicaid Managed Care Plans, selecting a plan to enroll in and paying premiums.	• Provides access to key business functions to assist the public with enrolling in public assistance programs, including Wisconsin Medicaid, BadgerCare Plus, FoodShare, Child Care, and W-2 • Allows Medicaid members to manage their benefits, report a change, and submit information as a part of their eligibility screening • Allows qualified hospitals to provide presumptive Medicaid eligibility to individuals based on preliminary declared information

Internal Technology Assets		
Asset	Description	Key Business Processes Enabled
ACCESS Mobile	The MyACCESS app provides members with access to information about their benefits anywhere, anytime. Within the app, members can create an account, recover their credentials, view the status of their benefits, upload verification documents, view needed documents, and view documents that have previously been submitted. The app also supports members to use biometric verification to login. During document upload, members are asked a series of questions to help index the document, reducing agency workload. Phase 2, released in February 2020, allows childless adult members to take a voluntary Health Survey to indicate healthy behaviors that could help them reduce their premium amount, answer a treatment needs question that could help them receive substance abuse treatment through their HMO or MCO and gives them the ability to pay their premiums using the app. Push notifications alert members when they have an action or document coming due, reducing the likelihood of missing important due dates that could negatively impact their eligibility. Technologies used to develop the MyACCESS app are Titanium Appcelerator, KOFAX, ArrowDB, Google Analytics, F5 IAM, IBM Content Manager, CWW Custom Java Logic, REST JSON Objects ACCESS/CWW Reusable Services.	Account Management: Log In, Create Account, Upgrade Account, User ID Recovery, Password Reset, Check Benefits, Documents Upload, Alerts, Increased Operational Efficiency, Improved Citizen Experience
Medical Assistance Provider Incentive Repository (MAPIR)	MAPIR is the solution that supports the administration and oversight of the Medicaid PI Program. MAPIR was developed using XML interfaces, an Oracle Database, and Java application technology. It interfaces with the CMS PI Program Registration System and ForwardHealth iC2 to allow providers to complete applications and, if approved, generate PI Program incentive payments. The core MAPIR solution was developed as part of a 14-state collaborative. MAPIR's implementation also aligns with the Seven Standards and Conditions as set forth by 42 C.F.R. Part 433. Further details on the implementation of the Seven Standards and Conditions can be found in the previous iteration of the SMHP (SMHP v.10.0, Section 3 Program Administration).	• Submission of application for information to qualify for a Medicaid PI incentive payment • Tracking of application processing and payment • Initiates Medicaid PI Program incentive payments via an interface with iC2

Internal Technology Assets		
Asset	Description	Key Business Processes Enabled
Pharmacy Point of Sale (POS)	Pharmacy POS supports electronic submission and processing of pharmacy claims for immediate adjudication and eligibility verification. It allows pharmacies to submit claims and receive notification of coverage before drugs are dispensed. The real-time claims submission verifies member eligibility, including other health insurance coverage, monitors Medicaid drug policies, and performs prospective drug utilization review (DUR). Prospective DUR involves screening claims against a member's medical and prescription history within the Medicaid system. Once these processes are complete, the pharmacy provider receives an electronic response indicating payment or denial or prospective DUR alerts within seconds of submitting the real-time claim.	Processes pharmacy claims in real-time by verifying member eligibility, monitoring Medicaid drug policies, and performing prospective DUR

WIR	WIR is a statewide, population-based immunization information system (IIS) used to record and track immunization histories for Wisconsin residents of all ages. Established in 2000 by the Wisconsin DPH and DMS, WIR is populated from the DPH OHI with client demographic information (including names and birth dates) for all Wisconsin births and includes all Wisconsin births since 1995. WIR receives new client (including for Wisconsin residents born in another state or before 1995) and immunization information through direct data entry and electronic data exchange with local public health and private health care providers; tribes, HMOs; Wisconsin Medicaid; the Special Supplemental Program for Women, Infants and Children (WIC); school; and pharmacies. With quality improvement efforts and Meaningful Use incentives that provide funding to health care providers who establish electronic interfaces with IISs, the number of providers transmitting immunization information to WIR has increased, and more immunization data are being submitted with timely, standardized messaging. As of 2020, 99 percent of all children between 4 months old and 5 years old have at least two immunizations recorded in WIR. Additionally, 91 percent of administered immunizations are received within one day of administration. As of 2020, there are 3,794 health care provider organizations participating in WIR. WIR is an important tool to help ensure children and adults receive their immunizations according to recommended schedules. Use of WIR prevents the over-immunizing that may occur when health care providers are unaware of immunizations other providers have given. In addition to the ability to edit and view a patient's immunization record, providers are able to run reports that provide immunization rates and missed vaccination opportunities found in their clinics. Along with provider access to WIR, parents and legal guardians can look up their own or their child's immunization record using the WIR Public Immunization Record Access. This capability can decrease the number of patient requests to providers for immunization records. Whether through HIE, vendor hub or direct connection, WIR facilitates the following functions for Wisconsin providers:	• Entry and tracking of provider vaccination administration and vaccine inventories • Reporting on immunization needs, rates of immunizations, and missed vaccination opportunities
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Internal Technology Assets		
Asset	Description	Key Business Processes Enabled
	- Establish bidirectional interfaces between the WIR and WISHIN or vendor hub for the submission and exchange of immunization data - Allow providers to use 2015 CEHRT to submit immunization data to DPH - Allow treating providers to view immunization histories and schedules as part of a patient's community health record	
Decision Support System/Data Warehouse (DSS/DW)	DSS/DW was developed using System Analysis Program Development (SAP) Business Objects and Oracle Database. It collects and maintains data from ForwardHealth iC2, MAPIR, Managed Care Encounter, and other systems. Data is extracted, transformed into analytical structures, and loaded into DW. DW lets users create queries and reports through a Business Objects interface to an Oracle Database. DW includes approximately 60 universes to facilitate analytical queries. The collection of encounter data is of specific note. Separate HMO and LTC encounter universes collect and store data received through monthly file submissions in a predefined format. The HMO encounter universes of DW allow a process for submitting medical record or chart reviews to supplement HEDIS measures. These encounter records may be built for services provided where no claims were received but for which the HMO wished to augment its encounter data. In addition to Medicaid data, DW holds data from other sources that often provide services to the same population of people. Other data sources include public health, LTC, mental health and substance abuse, and quality assurance. DSS also contains Risk Profiler reports, which are used by OIG to support their program integrity operations. The health IT Risk Profiler, which is specific to the Medicaid PI Program, identifies providers who will be audited based on a series of program-specific risk factors. The report then ranks providers who have participated in the Medicaid PI Program by the level of risk for fraud associated with their application. DHS upgraded the Business Objects software to version 4.2.x in 2018.	- Storage of data from ForwardHealth iC2, MAPIR, Managed Care Encounter, and other systems - Reporting for business analysis and quality programs - Reporting for prepayment verification and post-payment auditing - Program integrity reporting for OIG and the Estate Recovery Program

Internal Technology Assets		
Asset	Description	Key Business Processes Enabled
Master Customer Index (MCI)	The MCI is a web-based application that uses a web-based database to generate and store unique identifiers, allowing multiple systems to link data using a single identifier. The system stores the primary demographics for an individual and validates that information with the Social Security Administration (SSA). The application features a series of web services that allow other state systems to integrate with MCI to send information collected and process updates made in MCI. MCI is currently leveraged by multiple programs, and DHS is continuously expanding its use in other systems. Participating systems include Client Assistance for Re-employment and Economic Support (CARES), ASSET (Job Search), Functional Screen Information Access (FSIA), iC2 (MMIS), Program Participation System (PPS), and eWiSACWIS (Child Welfare). Technologies used to develop the MCI application are Java Enterprise Edition 8 on IBM WebSphere Application Server—8.5, Enterprise Service Bus (ESB), and IBM DB2.	• Stores primary demographic information for an individual and assigns a unique identifier • Facilitates linking of data from multiple systems using a unique identifier
CARES and CARES Worker Web (CWW)	CARES is a highly integrated system that uniquely identifies individuals and efficiently shares data across multiple eligibility programs and work programs. CARES provides workers in all Wisconsin counties and tribes the ability to perform automated eligibility determination, benefit calculation, and case management for applicants applying for Medicaid (including LTC and SeniorCare prescription drug program), BadgerCare Plus, FoodShare, Child Care Assistance, Temporary Assistance to Needy Families, and Caretaker Supplement programs. CARES is also used to manage the FoodShare Employment and Training Program. Technologies used to create CARES are J2EE on IBM Websphere Application Server, BMC Control-M, Melissa Data Geocoding, Pitney Bowes Finalist, OpenText xPression, Kofax Capture, Kofax TotalAgility, RightFax, Progress Corticon Business Rules Engine, IBM WebSphere MQ, Oracle, and IBM Db2 (Primary), and Oracle.	Automated determination of eligibility, benefit calculation, and case management for applicants applying for Medicaid (including LTC and SeniorCare prescription drug program), BadgerCare Plus, FoodShare, Child Care Assistance, Temporary Assistance for Needy Families, and Caretaker Supplement programs

Internal Technology Assets		
Asset	Description	Key Business Processes Enabled
PPS	PPS is an application developed using web-based technology. The system provides an integration point of LTC information across functionally different systems (Functional Screen Information and MCI). PPS was developed to provide program-specific functions and tasks. In addition, the Department of Public Instruction and DHS developed an electronic referral and reporting system to ensure children participating in county Birth to 3 programs experience a smooth and effective transition to early childhood programs. PPS also has modules and functions to track the waitlist for adult LTC and children's programs, track and record alcohol and other drug abuse (AODA) services, track core services, track mental health services, track referrals from nursing homes to aging and disability resource centers (ADRCs), report expenses and revenues, etc. Technologies used to develop the PPS application are Java Enterprise Edition 8 on IBM Websphere Application Server 8.5, BMC Control-M, Oracle, and Crystal Reports.	• Electronic referral and reporting for the Birth to 3 programs • Waitlist for the Adult LTC and Children Long-Term Support (CLTS) programs • Report expenses and revenues • Individual's participation in Mental Health programs • Recording and processing of nursing home referrals to ADRCs • Tracking of AODA services and mental health and core services
FSIA	Wisconsin's FSIA system is a web-based application used to collect information about an individual's functional status, health, and need for assistance for various programs that serve the frail, elderly, and people with intellectual/developmental or physical disabilities. The screen is used to determine functional eligibility for certain mental health services, adult LTC programs, and CLTS programs. Experienced professionals, usually social workers or registered nurses, who have taken an online training course and passed a certification exam are able to access and administer the screen. Technologies used are Java Enterprise Edition 8 on IBM Websphere Application Server 8.5, BMC Control-M, Oracle database, Crystal Reports, HTML5, JQuery, Font Awesome, Bootstrap, and React.	• One system solution for functional information across different program areas • LTCFS detail sent to LTC Data Warehouse • Data collected on the LTCFS is used to inform rate setting for LTC managed care program capitation payments and for research purposes • MMIS utilizes a web-service and daily batch between FSIA to obtain children and adult LTC level of care eligibility and Target Group information

Internal Technology Assets		
Asset	Description	Key Business Processes Enabled
Public Health Registration for Electronic Data Submission System (PHREDS)	In January 2014, DHS launched PHREDS. Providers must register with PHREDS to submit electronic data to the public health registries. PHREDS registration data is shared with DPH for public health purposes and with auditors for compliance with Medicare and Medicaid PI Program requirements. PHREDS is also used to help the state manage the Public Health (PH) PI Program, but its primary purpose is to manage the onboarding and data submission process for DPH programs. DPH has five public health registries to which providers can register to meet PH PI measures, including the Wisconsin Cancer Reporting System, WIR, Syndromic Surveillance through the CDC BioSense Platform, Laboratory Results for reportable conditions through the Wisconsin State Lab of Hygiene's (WSLH) Electronic Lab Reporting Hub, and electronic case reporting through WEDSS.	• Allows providers to register their intent to submit data to the Wisconsin public health registries • Allows registry personnel to manage onboarding and data submission process for DPH programs • Provides automated registration confirmation emails • Provides documentation for each active engagement option
LTC Incident Management	Currently, DMS uses multiple systems to administer its LTC programs; these systems do not interact with one another. Current systems rely heavily on manual data entry and do not connect with other potential sources of information such as health care records. The system does not provide a user interface to other partners that may have information on a reportable condition (such as a provider). In the fourth quarter of Federal Fiscal Year 2020, DMS conducted an analysis of their LTC incident management systems to identify opportunities for alignment across programs and automation of processes. DMS is currently reviewing their options for system replacement or enhancement.	Collects information on incidents occurring within the LTC programs

Figure 3.1: Wisconsin Medicaid Agency Internal Technology Assets

3.1.2 External Technology Assets

The following table summarizes external technology assets that are peripheral to DMS. These assets may interface with internal technology assets but are not primary to the administration or oversight of the Medicaid program.

External Technology Assets		
Asset	Description	Key Business Processes Enabled
Adult Programs Information System (APIS)	APIS provides certifications and licensing documents for adult program providers, including community-based residential facilities, adult family homes, residential care apartment complexes, and adult daycare providers. The system was developed using a SQL Server Websphere and is used by the Division of Quality Assurance (DQA). The system contains demographic, licensing, program, and compliance history of these complexes in Wisconsin. Additional certification is required to provide services to Medicaid members through MMIS. Provider information is not transferred between these systems.	Entry and tracking of licensure, survey, complaint, and enforcement information for Wisconsin assisted living facilities
AIDS/HIV Drug Assistance Program (ADAP)	The ADAP and Insurance Assistance Program app is a SQL Server 2012 app hosted by the NIC Wisconsin using a browser-based front-end application developed by NIC Wisconsin. The app is used to store information on prescriptions and insurance information received from ForwardHealth iC2 via a monthly ADAP claims data extract from Gainwell Technologies for people living with HIV (PLWH) infection who are enrolled in ADAP and for whom a pharmacy submitted claims. It is also used to store information on health insurance premium payments made by the program on behalf of eligible PLWH. Because of the sensitivity of confidential health and personal information maintained in the app, it is only accessible to a small number of DPH staff.	Storage of prescription and insurance information received from pharmacies for individuals enrolled in ADAP

External Technology Assets		
Asset	Description	Key Business Processes Enabled
ASPEN Licensing Information System (ALIS)	ALIS, developed using Oracle WebSphere technology, is a companion database that complements the federal survey ASPEN database. DQA is required to use the app for the purpose of documenting surveys of federally certified providers. DQA has also elected to use ASPEN for state licensure and certification surveys. Since ALIS complements the ASPEN system, it works in conjunction with ASPEN and eliminates the need for duplicate data entry. Additional certification is required to provide services to Medicaid members through MMIS. Provider information is not transferred between these systems.	Entry and tracking of licensure and enforcement information, services, and related data for DQA-regulated facilities (not including assisted living facilities)
Cancer Screening and Tracking System (CaST)	CaST allows the WWWP to collect and maintain enrollment, demographic, and clinical information on women enrolled in the program. The WWWP provides breast and cervical cancer screening services to women with little or no health insurance coverage. WWWP also provides multiple sclerosis testing for women with high-risk signs of the condition. The CaST system is provided by the CDC through a contract with Information Management Services, Inc. for programs in the National Breast and Cervical Cancer Early Detection Program. Technology is built on a network linked within WWWP.	Tracks all women screened through the WWWP
Customer Hub	The Customer Hub utilizes demographic data from various data systems to generate unique identifiers allowing multiple DHS systems to link data using a single identifier. The Customer Hub is a foundational element for the creation of a client health profile in support of public health business needs.	Supports case management and population health functions

External Technology Assets		
Asset	Description	Key Business Processes Enabled
Electronic Laboratory Reporting (ELR)	WSLH's primary responsibility is to collect, translate, and transmit laboratory data to DPH. The ELR hub for communicable diseases, cancer, and lead provides results delivery, result lists (historical), and mandated public health disease and condition reporting. Through the WSLH ELR system, information can be imported directly into the Wisconsin Electronic Disease Surveillance System, the Wisconsin Cancer Reporting System, and Healthy Homes and Lead Poisoning Surveillance without reentering the data. Laboratories that do not report ELR may enter positive test results manually using the Wisconsin Laboratory Reporting portal. For providers that use ELR, this supports the PI Program public health objectives of cancer data and laboratory results for reportable conditions.	Transmission of cancer, lead, and reportable communicable disease-related lab reports to appropriate public health data systems
Emergency Medical Services (EMS) System—E-Licensing	The EMS system is a Java-based WebSphere application used to manage emergency medical technician licensing, application, training, and renewals by DPH. The system facilitates the online issuance of licenses, or E-Licensing, by DHS for EMS practitioners through online applications and enables electronic update communications from the State through email.	Entry and tracking of emergency medical technician licensing, application, training, and renewals
EMS System—WARDS Elite	The WARDS Elite system is a centralized, web-based system that offers prehospital emergency data collection, analysis, and reporting in one enterprise solution. It supports the identification of evolving problems or successes in emergency health care while simultaneously providing secure access of that information to authorized personnel from anywhere, at any time. The information can be used to set priorities, make plans, and ultimately assure safe and effective delivery of EMS to the public. This database replaces the previously used WARDS database that was supported by similar technologies.	Prehospital emergency data collection, analysis, and reporting

External Technology Assets		
Asset	Description	Key Business Processes Enabled
Misconduct Incident Reporting system (MIR)	Wisconsin's Caregiver Law requires background and criminal history checks of certain personnel who are responsible for the care, safety, and security of children and adults. MIR, operated by DQA, maintains information used in background checks for potential and current providers. The system replaced the Caregiver Regulation Information System in June 2018. It is a .NET app, including the functionality of the Caregiver Regulation Information System and a public-facing component that allows regulated entities to submit mandated reports of caregiver misconduct online.	Entry and tracking of information regarding alleged incidents of caregiver misconduct
Partner Communications and Alerting (PCA)	PCA is one of the core Public Health Information Network (PHIN) functional areas defined by the CDC. In Wisconsin, PCA functions for state and public health partners are provided through a pair of secure web-based apps: SharePoint 2013 and Rave Alert. SharePoint provides document management (health alerts, advisories, updates, etc.) and mapping. Rave provides high-speed, multimodal communications capability (voice to cell and landline, short message service [SMS], email, and fax).	• PCA Portal—secure partner communications • Rave Alert—secure partner communications
Public Health Analysis, Visualization, and Reporting (PHAVR)	PHAVR is the business intelligence platform of the Wisconsin PHIN that provides the ability to integrate, analyze, display, report, and map data as well as share data and technologies for analysis and visualization with other public health partners. PHAVR provides a web portal through which public health partners can conduct statistical and geospatial analysis of public health data that allows them to visualize the data through graphs, charts, and maps. The software components facilitate dataset integration and validation and provide a uniform method of accessing and analyzing the data.	• Business intelligence and decision support • Sharing of information between public health partners • Statistical and geospatial analysis

External Technology Assets		
Asset	Description	Key Business Processes Enabled
Real-Time Online Statewide Information Environment (ROSIE)	ROSIE is a web-based app that supports WIC. The system provides a method for WIC staff at the implementing clinics to record and update client information for approximately 105,000 WIC clients served each month in Wisconsin. ROSIE is administered by DPH, which contracted with an external vendor for support and hosting. Aside from individual client information, the ROSIE website contains several online reports. Standard reports that run at intervals with predetermined filter and sort criteria are available in the Reports module of the ROSIE website. The reports are generated as PDFs for easy viewing and printing. ROSIE also provides ad hoc reporting through a Microsoft Access database that contains a filtered set of ROSIE data. Users who need to create customized reports will have an ad hoc database where they can save their own queries and access reports. ROSIE has vendor management modules that allow DHS to record and manage Wisconsin grocery stores and pharmacies that provide WIC-approved foods to their clients.	• Entry and tracking of client information for WIC clinics • Reporting, including prepopulated or ad hoc reports, for WIC clinics and other authorized users
Secure Public Health Electronic Record Environment (SPHERE)	SPHERE is available for documenting public health activities and interventions at the individual and household level. It is not a required reporting tool.	• Limited data entry and reporting • Transmits birth report data
Vital Records—Statewide Vital Records Information System (SVRIS)	The State Vital Records Office is responsible for infrastructure support of the SVRIS. SVRIS is an automated, secure, web-based software app designed to process vital records from point of initial entry through registration, certificate issuance, and amendments connected with Active Directory security. The primary objective of SVRIS is to improve timeliness, quality, and sustainability of the prior decentralized vital records system. SVRIS currently supports more than 2,300 users and, when fully implemented, will house all Wisconsin vital records. SVRIS is hosted by the Department of Administration Division of Enterprise Technology. Technologies used to develop SVRIS are SQL Server, Delphi, Citrix, and .Net Framework.	• Filing, preserving, protecting, changing, and issuing copies of vital records • Registration, preservation, protection, amendments, and issuance of vital records

External Technology Assets		
Asset	Description	Key Business Processes Enabled
Wisconsin Cancer Reporting System (WCRS)	WCRS is the state's population-based cancer registry. WCRS is mandated by statute to collect, manage, and analyze cancer incidence data on Wisconsin residents. The registry's data are stored in a SQL Server database. Data are submitted using the registry's secure website using a CDC application called Web Plus. WCRS uses the entire suite of CDC-provided cancer software application modules called Registry Plus (with Wisconsin-specific modifications made in-house) to abstract, edit, import, link, consolidate, and update cancer registry data per state and national standards. Data must be submitted electronically so the abstracting and submission components of the software are used by hospitals and other health care facilities to help them meet the mandated reporting requirements. WCRS produces reports that include incidence and mortality data by cancer site, diagnosis year and demographic categories, stage of disease at diagnosis, and other trend data. WCRS also provides data (aggregate and confidential as allowed per statute) and analysis to researchers, health care organizations, advocacy groups, government agencies (local, state, and federal), and the general public.	Collects, manages, and analyzes cancer incidence data on Wisconsin residents

External Technology Assets		
Asset	Description	Key Business Processes Enabled
Wisconsin Collaborative for Healthcare Quality (WCHQ)	The WCHQ is a voluntary, statewide collaboration with a mission to “help health care professionals improve the quality and affordability of health care through collaboration and public reporting which, in turn, makes health care more affordable and improves health of individuals and communities.” The Collaborative is a membership organization with 35 health system members, 325 medical clinics, and 109 dentists. The membership comprises integrated health systems with hospitals and clinics; small, rural hospitals; a staff model health plan; federally qualified health centers (FQHCs); a statewide network of free and charitable clinics; and independent physician groups. WCHQ’s members represent more than 65 percent of Wisconsin’s primary care physicians, which is more than 5,000 primary care physicians, along with advanced practice providers and physician assistants. WCHQ maintains a clinical data repository that accepts information collected by member health system EHR and billing systems on an “all-payer” basis. Data can be submitted utilizing either standardized files or a direct interface with the member’s EHR. This repository contains centrally programmed measure definitions, and WCHQ members can upload data and generate measure results on an ad-hoc basis. Measure results are provided back to members using a business intelligence interface that allows data to be visualized in a variety of different ways. WCHQ also utilizes the clinical data repository in initiatives with research partners and health plans. Technologies used to create and support the platform used by WCHQ are the SymphonyCare WellstackTM platform, Tableau, MS SQL, and a public reporting website created by Tesch Global.	- Publicly reports comparative performance information on over 45 metrics twice a year to facilitate quality improvement activities across the WCHQ membership - Uses the data submitted by WCHQ members to support grant-funded research initiatives

External Technology Assets		
Asset	Description	Key Business Processes Enabled
Wisconsin Donor Registry and Donor Intent Query System	DPH hosts and maintains the Wisconsin Donor Registry and Donor Intent Query System to record, register, identify, and report on potential organ and tissue donors. When applicants for a Wisconsin driver's license or state ID card come into a Department of Transportation (DOT) Service Center or visit the DHS Donor Registry website, they are asked if they wish to register as potential organ, eye, and/or tissue donors. This web application imports data from DOT into an Oracle database on donor decisions throughout the state and provides statewide and regional reports and maps. These reports steer outreach by DHS for public education and awareness efforts aimed at increasing the number of donors, ultimately saving the lives of people waiting for transplants.	Allows individuals to be recorded as organ and tissue donors, informs recovery organizations of an individual's donor status, and imports data from DOT into an Oracle database of donor decisions statewide

External Technology Assets		
Asset	Description	Key Business Processes Enabled
Wisconsin Early Hearing Detection and Intervention Tracking Referral and Coordination (WE-TRAC)	The WE-TRAC system is a web-based system developed in an Oracle environment. It was created as a data collection, tracking, reporting, and case management tool that facilitates DHS's objective that infants receive newborn hearing and critical congenital health disease (CCHD) screening, also known as point-of-care newborn screening. The WE-TRAC system contains newborn hearing and CCHD screening status, and where relevant, information on follow-up and diagnosis. For children identified as deaf or hard of hearing, WE-TRAC also contains referrals to Part C Early Intervention, Early Intervention enrollment status, and parent and Early Intervention support services. The system receives demographic and point-of-care screening results data from the State Laboratory of Hygiene; birth record data matched via the Customer Hub from the State Vital Records Office and referral information from the DHS Birth to 3 Program. It allows midwives, birth hospital staff, audiologists, cardiologists, and hearing screening outreach specialists to enter screening results, diagnosis, referrals, and notes on individual infants. Following updates in 2021, primary care providers will also be able to search the system and view screening and diagnosis information for infants under their care.	• Data collection, tracking, and reporting of point-of-care newborn screening and diagnostic information • Additional case management follow-up, early intervention, and parent support information related to infants and children from birth to three years of age identified as deaf or hard of hearing • Provides quarterly CCHD screening reports to health systems and out-of-hospital birth attendants to support CCHD screening improvement efforts • Reports hearing data on an annual basis to CDC and on an ad hoc basis to partners • Utilizes WE-TRAC data to inform programmatic planning for both CCHD and hearing screening programs

External Technology Assets		
Asset	Description	Key Business Processes Enabled
WEDSS	WEDSS facilitates reporting, investigation, surveillance, and case notification of communicable diseases in Wisconsin. It is designed for use by public health staff, infection control practitioners, providers (including Medicaid providers), clinical laboratories, clinics, LTC facilities, and other disease reporters. WEDSS is a vendor-developed and customized product of Sunquest Information Systems, Inc. Through WEDSS, demographic information, treatment, and lab test results on all notifiable communicable diseases are collected and transmitted to the CDC. This system collects data from ELR transmissions, that is, Laboratory Results for Reportable Conditions, and in the future for case reporting in support of the PI Program.	• Entry and tracking of demographic information, treatment, and lab test results on all notifiable communicable diseases • Transmits nationally notifiable communicable diseases/conditions to the CDC
WHIO	WHIO fulfills the DHS statutory requirement to maintain a voluntary All-Payer Claims Database. In Wisconsin it is used by providers, payers, purchasers, researchers, and state agencies (DHS and Wisconsin Department of Employee Trust Funds). In this capacity, the WHIO maintains a central repository of health care claims data that provides for tracking, analysis, and measurement of health care provided in Wisconsin. The data is used to generate provider and health plan key performance indicators compared to benchmarks, to evaluate access to care, the health of populations, and to compare the quality and cost of care. WHIO collects data from health plans, self-funded employers, and Wisconsin Medicaid. Technologies used to create the WHIO information are Symmetry Episode Treatment Groups, Episode Risk Group, Normalized Pricing, CMS Groupers, Tableau, SQL Microsoft Azure, and a secure web portal.	Data analysis and reporting to provide information on provider organization evaluation and benchmarking, process improvement, utilization of health care services, public health evaluation, public program evaluation, access to care, work force evaluation, population health management, cost containment, value-based payment incentives, and health care delivery initiatives

External Technology Assets		
Asset	Description	Key Business Processes Enabled
Wisconsin Interactive Statistics on Health (WISH)	The WISH system provides information about health indicators (measures of health) in Wisconsin. WISH allows policy makers, health professionals, and the public to submit questions (requests for data) and receive answers (tables) over the internet. To construct answers to questions, WISH uses protected databases containing Wisconsin data from a variety of sources. Most modules contain data for multiple years and geographic areas.	Vital records, population, hospitalization, and chronic disease indicators
Wisconsin Public Health Information Network (WiPHIN)	WiPHIN is a secure, online network from DHS that transforms public health by coordinating its functions and organizations with information systems that enable real-time data flow, computer assisted analysis, decision support, professional collaboration, and rapid dissemination of information. WiPHIN is part of a national initiative from the CDC to improve the capacity of public health to use and exchange information electronically. WiPHIN allows public health practitioners to securely contribute, retrieve, and analyze data. Components of WiPHIN include the following systems, which are further explained above in this table: • WEDSS • ELR • PCA • PHAVR • WE-TRAC • SPHERE	Coordinates functions and organizations with information systems to enable real-time data flow, analysis, decision support, collaboration, and rapid dissemination of information
WISHIN Direct+	WISHIN Direct+ enables secure clinical messaging, reducing manual handling of paper records. It allows providers to share a patient's clinical information with other providers who have seen the patient—even if those providers are not part of the same practice or health system. WISHIN Direct+ is a DirectTrust accredited solution. WISHIN Direct+ used Secure Messaging Portal or EMR integration and HCI/Medicity HISP technology to develop this service.	Sharing of patient's clinical information for treatment and care management

External Technology Assets		
Asset	Description	Key Business Processes Enabled
WISHIN Pulse	WISHIN Pulse is a vendor agnostic web-based longitudinal community health record that provides an aggregated summary view of a patient's health information. WISHIN Pulse can accept and display a range of standard and non-standard clinical data, including admission, discharge, and transfer (ADT) information; laboratory and radiology results, radiology reports, transcribed notes, and continuity of care documents (CCDAs). Except for ADT data, which is required to ensure accurate patient matching, participants can choose the data they are capable of and ready to share in the order that best fits their resource availability and timeline. WISHIN Pulse is available to health care providers, care managers, health plans, and other authorized users in accordance with its Data Sharing Participation Agreement. WISHIN Pulse is connected to the eHealth Exchange, which enables sharing of care summaries (CCDAs) with in-state and/or out-of-state HIEs and federal agencies such as VA and SSA. WISHIN Pulse used Velatura HIE technology and KPI Ninja user interface and analytics technology to develop this service.	Sharing of patient's clinical information for treatment and care management
WISHIN Patient Activity Report (PAR)	WISHIN PAR, powered by HCI/Medicity technology, is a daily notification report of patient Emergency Department (ED) or inpatient encounters that occurred anywhere in the WISHIN network the previous day. Having access to this information empowers care managers/care coordinators in the provider and payer spaces with the daily notifications of patient encounters that may have a significant cost or quality impact. Typically, access to this information would have only been available upon receipt of a claim, which could be 30 days after the event. The report is provided electronically so that it may be parsed and incorporated into a care management or other system as part of staff's daily workflow, and includes patient demographics (name, address, gender, contact information), encounter information (admit date/time, registration date/time, etc.), and high-level clinical data (chief complaint and diagnosis).	Sharing of patient's clinical information for care management, reduction of cost, increased quality, and Transitional Care Management/ Chronic Care Management billing opportunities

External Technology Assets		
Asset	Description	Key Business Processes Enabled
WISHIN Notifications	WISHIN Notifications, powered by PatientPing technology, is an intuitive Event Notification Service that provides real-time notifications of ED, inpatient, observation, and other encounters, also known as “Pings.” Users can receive and consume notifications, secure text, secure email, portal, etc. Through the portal there are native analytic capabilities that enable users to manage individual patients and cohorts. This service leverages not only WISHIN’s broad network, but also PatientPing’s growing national network. As of June 2021, PatientPing’s presence exists in all 50 states with active hospitals from 30 states. Having access to this information empowers care and case managers in the provider and payer space with the awareness of patient encounters that have a significant cost or quality impact. Typically, access to this information would be available upon receipt of a claim, which could be 30 days after the event. Through the partnership with PatientPing, WISHIN can provide payers and providers a community- and nation-wide care management solution not limited only to Pings but to all services PatientPing has to offer.	Sharing of patient’s clinical information for care management, reduction of cost, increased quality, and Transitional Care Management/Chronic Care Management (TCM/CCM) billing opportunities

External Technology Assets		
Asset	Description	Key Business Processes Enabled
Wisconsin Prescription Drug Monitoring Program (PDMP)	The Wisconsin PDMP is a tool to improve patient care and safety and reduce the abuse and diversion of prescription drugs. It contains information submitted to it by pharmacies and practitioners, including physicians, dentists, and advanced practice nurse prescribers, about monitored prescription drugs dispensed to patients in Wisconsin. The PDMP is administered by the Wisconsin Department of Safety and Professional Services (DSPS). DHS maintains an active Data Use Agreement (DUA) with DSPS that allows PDMP data to be shared with DPH, DMS, the Division of Care and Treatment Services, and OIG. These agencies then use the data to facilitate different programmatic and operational tasks directed at reducing opioid misuse, abuse, and overdose-related deaths in the state long term, such as DUR and the Pharmacy Lock-in Program in DMS and fraud, waste, and abuse operations in OIG. DHS and DSPS have amended the DUA for the period of June 1, 2021, through May 31, 2023.	• Tracks prescription drug dispensing data for controlled substances in Schedule II, III, IV, or V that require a prescription order to be lawfully dispensed • Informs decisions about prescribing and dispensing monitored prescription drugs to patients or potential patients • Enhanced analytics and system-generated alerts based on prescriber or member prescription transaction data • Field collection of suspected prescription opioid overdoses by law enforcement • Interface capabilities with EHRs and WISHIN to display PDMP data in provider workflows

Figure 3.2: Wisconsin Medicaid Agency External Technology Assets

4. HEALTH INFORMATION TECHNOLOGY ADOPTION AND USE

4.1 Background

The Health IT Landscape Assessment serves as Wisconsin's environmental scan and includes information on evolving EHR adoption rates, HIE, and health IT initiatives occurring throughout the State. Wisconsin has experienced an ongoing increase in health IT adoption since 2008 among all Wisconsin Medicaid providers including physicians and hospitals. Growth is specifically prominent in large, integrated delivery networks or health systems that are more likely to possess the financial resources necessary to implement upgrades and to adopt advanced technology:

- In 2008, an estimated 60 percent of Wisconsin physicians had an operational EHR that increased to 98 percent in 2017.
- As of 2017, the majority (98 percent) of all physicians had adopted an EHR, and 91 percent of physicians have adopted a CEHRT.

The following section represents a point-in-time view of Wisconsin's EHR adoption rates as of June 2021.

4.2 Neighboring States and Crossing Borders for Medical Care

The eHealth team conducted an analysis of Wisconsin Medicaid members who receive care from cross border care providers. This data, collected by DHS, includes information on the volume and types of Medicaid services delivered by providers in border states, which include Illinois, Minnesota, Iowa, and Michigan. This analysis reviews the types of services, including inpatient, professional, outpatient, and LTC that were provided by various types of cross border providers (for example, Ambulatory Surgical Center, Family Planning Clinic, Hospital, Nursing Facility). The data includes only active and paid claims and compares cross border claims to medical claims from Wisconsin-based providers.

In 2019, the number of Wisconsin Medicaid members (86,613) who received health care services from cross border state providers accounts for a minor portion (3.37 percent) of the total number of health care services provided to Wisconsin Medicaid members. A health care service is defined as a unique rendering of health care by a provider on a specific date. The top percentages of cross border providers who rendered services to Wisconsin Medicaid members include anesthetists (6.9 percent), physicians (5.2 percent), and audiologists (3.5 percent). Additionally, approximately a quarter (26.5 percent) of total providers that cared for Wisconsin Medicaid members were cross border providers.

Unsurprisingly, the majority of services provided to Medicaid members were rendered within Wisconsin, with only 2.4 percent of services rendered in a border state.

This data demonstrates that while the number of Medicaid members receiving care in neighboring states are a minority of the total member population, this community cannot be overlooked. Wisconsin Medicaid members receiving care from neighboring states should be taken into consideration when evaluating the status of interoperability between Wisconsin providers and its neighboring states.

4.3 Promoting Interoperability Program: Current State

DMS is responsible for the administration and oversight of the Medicaid PI Program. The goal of the PI Program is to improve the quality, safety, and efficiency of health care through patient and provider access to structured health information. The following sections provide an overview of the current state of the PI Program participation in Wisconsin.

4.4 Current Electronic Health Record Adoption Rates and Comparison to 2010 Baseline

The following sections discuss the progress of adoption rates of hospitals and professionals now as compared to the 2010 baseline. The baseline for this comparison is drawn from the surveys collected in 2008, which were used to complete the 2010 SMHP. The current state is gleaned from the PI Program attestation data through Program Year 2021.

4.4.1 Eligible Hospital EHR Adoption

According to the ONC, Wisconsin surpassed the national averages for both physicians and hospitals in adopting EHR technology in 2017.²⁰ Ninety-seven percent of non-federal acute care hospitals have adopted a CEHRT. This progress can be attributed to the PI Program incentives for providers to adopt and then upgrade their EHR systems. All Wisconsin Eligible Hospitals have participated in the Medicare and Medicaid PI Programs.

Wisconsin Eligible Hospitals attesting to the PI Programs have utilized 28 different certified EHR vendors throughout Program Years 2011–2017, the last year any Wisconsin hospital was eligible to attest for a Medicaid PI Program payment. The Eligible Hospital market share is relatively diverse across a number of vendors, although almost three-fourths of vendors hold less than 5 percent market share. Additionally, eligible Hospitals attesting to the PI Programs have used the top five vendors in 81 percent of their most recent attestations.

²⁰ HealthIT.gov. 2021. Non-federal Acute Care Hospital Health IT Adoption and Use. August 9. Accessed 2021. <http://dashboard.healthit.gov/apps/hospital-health-it-adoption.php>.
HealthIT.gov. 2021. Office-based Physician Health IT Adoption. July 26. Accessed 2021. <https://www.healthit.gov/data/apps/office-based-physician-health-it-adoption>.

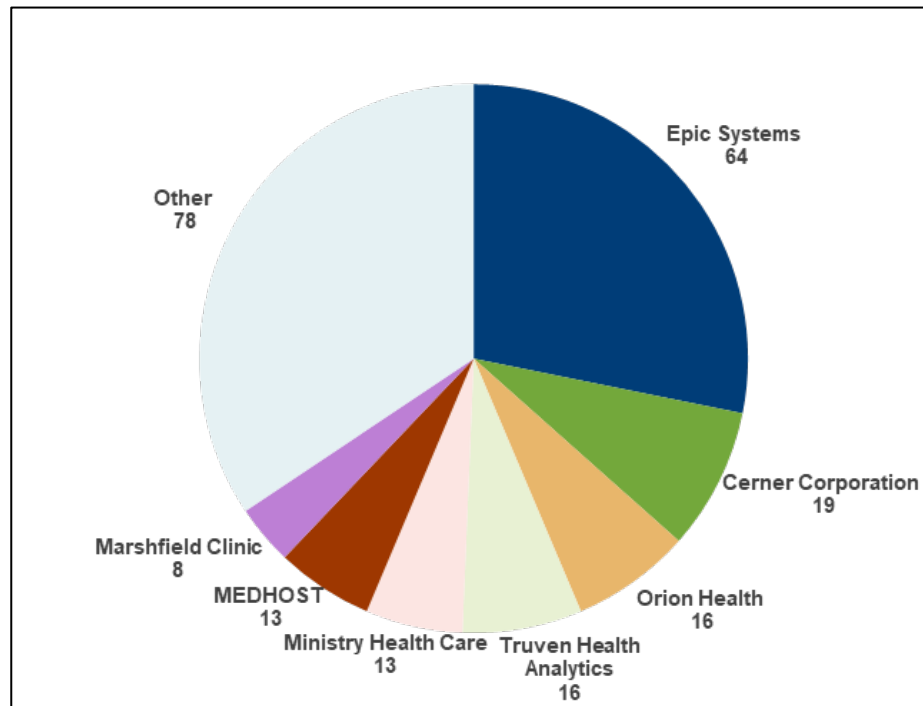


Figure 4.0: Vendor Market Share for Eligible Hospitals by Most Recent PI Program Attestation

In 2017, Epic Systems was the EHR vendor for over 58 percent of the market share overall, in addition to Cerner, MEDHOST, and MEDITECH. Other vendors included Truven Health Analytics and Orion Health. Because EHR vendors specialize in their services, there is a continued need for interoperability across vendor systems.²¹ A variation across different vendors throughout different facilities makes it more difficult to share health information between health providers. This limits the ability for providers to administer whole person-centered care because they lack the health information collected by other providers treating the same patient. Federal requirements for CEHRT to include open application programming interfaces should help to alleviate current issues with electronic data exchange.

Additional statistics include:

- One hundred and twenty out of 123 (98 percent) hospitals participated for the maximum of three years in the PI Program and completed their participation in the first three years the program was available (2013 and 2014).
- All Eligible Hospitals had participated in the PI Program and 99 percent have achieved Meaningful Use through 2015.
- Ninety-five percent of Eligible Hospitals completed their third (final) year of participation in the Medicaid PI Program.

While not included in the participation statistics, Eligible Hospitals are expected to continue attesting to the Medicare Promoting Interoperability Program through Program Year 2021 to avoid reimbursement adjustments. However, this data is not made available for public distribution and thus was not included in this analysis.

4.4.2 Clinician EHR Adoption

Eligible Professionals encompass a much broader population than Eligible Hospitals; over the life of the program, Wisconsin estimates approximately 20,313 Wisconsin Medicaid providers to be eligible for the PI Program²²:

- In 2008, 79 percent of Wisconsin physicians had adopted an EHR system with an additional 19 percent of physicians in the process of implementing EHR functionality.
- Most EHR adoption in Wisconsin occurred in large group practices or integrated health systems that tend to have greater access to financial and administrative resources and a lower required per physician investment for acquiring EHR systems²³, compared to smaller provider organizations.
- Wisconsin surpassed the national averages for both physicians and hospitals in adopting EHR technology²⁴ in 2017.

²¹ Services, Department of Medicaid. 2010. "State of Wisconsin Medicaid HIT Plan Version 1.0." Madison, WI.

²² This number represents all provider types eligible in either the Medicare or Medicaid PI Programs, including those provider types and specialties only eligible for one of the programs (for example, chiropractors, physician assistants).

²³ Services, Department of Medicaid. 2010. "State of Wisconsin Medicaid HIT Plan Version 1.0." Madison, WI.

²⁴ HealthIT.gov. 2021. Non-federal Acute Care Hospital Health IT Adoption and Use. August 9. Accessed 2021.

<http://dashboard.healthit.gov/apps/hospital-health-it-adoption.php>.

HealthIT.gov. 2021. Office-based Physician Health IT Adoption. July 26. Accessed 2021.

<https://www.healthit.gov/data/apps/office-based-physician-health-it-adoption>.

- Ninety-three percent of all physicians had adopted an EHR and 83 percent had adopted a CEHRT.

Payment Year	Program Year 2021 Attestations
2	5 (4%)
3	13 (11%)
4	20 (17%)
5	36 (30%)
6	46 (38%)
Total	120 (100%)

Figure 4.1: Program Year 2021 Eligible Professional Payment Year Breakdown

For the 120 Eligible Professionals attesting in Program Year 2021, Figure 4.1 shows the number and percentage of Eligible Professionals receiving each payment year. In 2021, more than half of participants received their fifth or sixth (final) payment year.

Overall, there has been a significant increase in EHR adoption for both physicians and hospitals and this demonstrates the progress Wisconsin physicians have made since 2008 in adopting advanced health IT. More information regarding PI Program attestation can be found in Appendix A: Promoting Interoperability Program Report.

4.4.3 Vendor Analysis

As of 2017, several vendors consistently make up over 80 percent of market share in the PI Program. Approximately 82 percent of Wisconsin Medicaid members' data is likely within the top five EHR vendor systems and should be accessible through vendor HIEs. The top vendors include:

- Epic Systems was the primary EHR in the State, serving over 50 percent of the market share overall, in addition to Cerner and Marshfield Clinics (Cattails software).
- In 2008, EpicCare was utilized by the highest (3,348) number of health care professionals surveyed.
- Cerner PowerChart was the vendor used by the second highest number (1,047) of health care professionals.²⁵ Relatedly of note as of the end of 2020, all DHS facilities began utilizing DHS Connect, a Cerner-powered EHR system, which is the first integrated EHR system for centers that serve Wisconsin residents with intellectual disabilities, psychiatric hospitals, and secure treatment centers²⁶.

Other recent top vendors include GE Healthcare, NextGen Healthcare, and Greenway Health LLC. As previously stated, the utilization of different EHR vendors can create challenges for data interoperability between systems and providers. The industry overall is moving toward the use of APIs to facilitate more

²⁵ Services, Department of Medicaid. 2010. "State of Wisconsin Medicaid HIT Plan Version 1.0." Madison, WI.

²⁶ WorkWeb, DHS. 2020. *Electronic Health Records (EHR) System—First Go-Live*. September 23. Accessed 2021. <https://dhsworkweb.wisconsin.gov/ehr/wmhi-go-live.htm>.

efficient data sharing across organizations and systems to work to overcome these challenges. This is in large part due to the CMS Interoperability and Patient Access Final Rule, the ONC 21st Century Cures Act Final Rule, and the ONC EHR Certification Program.

No shifts in the top vendors were observed when data from 2020 and 2021 were considered.

4.4.4 Tribal Health Center Electronic Health Record Adoption

There are 12 tribal health centers in Wisconsin,²⁷ all of which were surveyed alongside additional tribal health center affiliates (for example, dental clinics). In 2010, Wisconsin's tribal health centers indicated a lower utilization of EHR systems, compared to other health care providers, with 62 of 121 (51 percent) professionals operating in facilities using an EHR system. Three of the responding tribes indicated use of the Indian Health Services Resource and Patient Management System and an additional two tribes indicated use of a commercial EHR product. The following are insights gleaned from engagement with the tribal health centers in 2021.

- **Barriers to EHR Utilization:** staff resources or available bandwidth, competing priorities, and funding sources.
- **Medicaid's PI Program Participation:** Nine of these 10 tribal health clinics have participated in private or public incentives to increase health IT capabilities, such as Medicaid's PI Program or Medicare's Quality Payment Program. These funds are often not sufficient for a private EHR vendor, and the gap must often be filled by funds from the tribal council, which is often only possible in wealthier tribal nations.
- **Use of non-EHR methods:** Although 100 percent of tribal health centers report some sort of EHR usage, 50 percent of tribal health clinics continue to report that they must record their patient data on paper and upload it after to their EHR system.
 - Seventy percent of tribal health clinics continue to utilize fax 76–100 percent of the time to share patient data.
 - Only four tribal health clinics have a plan in place to reduce faxing patient information and state that the lack of priority, lack of system interoperability, and policies that prohibit electronic transfer of information are barriers to the clinic reducing the use of fax to send and receive patient information. The goal for health centers is to discontinue use of paper records as it creates additional manual steps for staff when updating patient records.
- **EHR Vendors:** Four tribal health clinics currently use Record Patient Management System (RPMS), the EHR system provided by the Indian Health Service. Tribes that have moved away from RPMS to an alternate EHR vendor have done so with tribal funds and approval from the tribal council.

²⁷ Services, Wisconsin Department of Health. 2021. Wisconsin Local Health Departments: Tribal Health Centers. November 12. Accessed 2021. <https://www.dhs.wisconsin.gov/lh-depts/tribal.htm>.

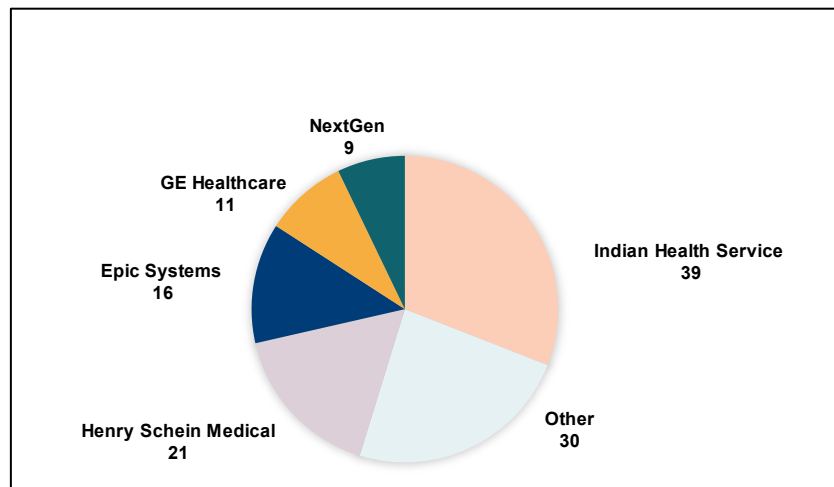


Figure 4.2: Vendor Market Share for Eligible Professionals at Tribal Health Centers by Most Recent PI Program Attestation

- **CEHRT:** Eighty percent of tribal clinics currently use 2015 CEHRT and the remaining 20 percent use 2014 CEHRT. One of the requirements for a vendor to receive their certification includes having an open API, which allows for medical information and data to pass easily between health care providers. These technical configurations require additional resources to maintain including dedicated technology professionals/instructors and changes in current processes. Tribal health centers tend to be smaller health facilities and are often less capable of paying for these additional resources due to competing priorities.
- **System Integration:** Ninety percent of the EHR systems that tribal health clinics use do not have all systems (for example, Billing, Prescription Drug Monitoring Program) fully integrated in their EHR system.
- **HIE:** Less than half of the tribal health clinics participate in an HIE, including WISHIN, Common Well, or Care Quality, and only one tribal health center's EHR currently integrates into Wisconsin's PDMP. The majority of clinics that do not participate in an HIE claim that it is due to their current vendor that does not allow them to share data with an HIE.
- **Telehealth Services:** All 10 tribal health clinics who responded to the survey currently utilize telehealth services. Some tribal clinics have only recently begun telehealth services due to the COVID-19 pandemic for primary and behavioral health care services.
 - The systems on which these telehealth appointments occur vary between Zoom, Microsoft Teams, Athena, or GoToMeetings.
 - A major barrier to telehealth appointments is the lack of proper connectivity resulting from the lack of an adequate broadband connection due to the remote location of the clinics and their surrounding communities.

4.4.5 Dentist Electronic Health Record Adoption

The eHealth team acquired PI Program attestation data from Wisconsin dental providers between 2012–2020. For a fully detailed analysis of dental provider participation in the PI Program, please refer

to Appendix A: PI Program Report. Overall, dentists remain the least engaged of all provider types, with the lowest overall participation and retention rates, as well as progression to Meaningful Use²⁸.

Through interviews conducted and feedback received from the Health IT Extension Program, it is apparent there are still many issues when trying to integrate dental and medical data for a single patient. Gathered feedback noted that dental and medical coding structures differ, which makes the integration of data more difficult and restricts providers from having a more complete picture of a patients' health. Dentist groups have also expressed difficulty in advancing through the PI Program stages given that the measures are largely geared toward medical providers, there is a lack of EHR systems available, and there are increasingly stringent technical certification requirements.

One of the most frequently utilized EHR systems by Wisconsin dentists decided not to develop and release an EHR product that could be certified to the 2015 Edition requirements, prohibiting many dentists from progressing through the PI Program. Similarly, others who did release a 2015 edition did not do so in a timely enough fashion to allow dentists to implement the upgrade and update workflows in time to meet PI Program requirements.

Given that dental provider participation in the PI Program waned in the most recent Program Years, DMS analyzed Medicaid claims and encounter data to better understand which organizations are providing the most dental services to Medicaid members. This information was then cross-referenced with historical PI Program participation information to understand whether a certified EHR is in place. Additionally, DMS reviewed the WISHIN participation list to understand if the organizations providing the most services are submitting data to the statewide HIE network. The analysis of claims and encounter data revealed a correlation between those dental organizations who have a certified EHR (as indicated by their participation in the PI Program) and those who provide the most dental services:

- The top five dental organizations who most utilized their EHR systems all had certified EHR systems and had providers achieving Meaningful Use.
- The majority of EHR systems had providers who attested to Modified Stage 2 and one to Stage 3 requirements.
- All five of these dental providers are stand-alone dental providers or part of a larger medical system that are classified as FQHCs or operate as non-profit centers that focus on providing affordable medical and dental services to medically underserved populations. Wisconsin Medicaid prioritized outreach to FQHCs when implementing the PI Program and provided technical assistance and additional incentives for health centers to participate. This is because FQHCs serve a large portion of the Wisconsin Medicaid population, especially in rural areas. FQHCs are essential health care providers to these local vulnerable populations.

The top three vendors for dental clinics include Marshfield Clinic, Henry Schein Medical Systems, and Epic Systems. There is potentially a shift in the EHR system vendor for those organizations using Marshfield Clinic as this information was gathered from PI Program participation information from Program Year 2017, and DMS had been informed previously of an intent for those clinics to change

²⁸ Program, EHR Incentive. March 2017. "Active Registrations." https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/March2017_Summary-Report.pdf.

EHR systems. Dental clinics utilizing the top three vendors continue to experience difficulties with their EHRs. These challenges include:

- Henry Schein's EHR system, Dentrix 2015 Edition CEHRT, received negative feedback from dentists, specifically around the difficulties they encountered in incorporating Stage 3 workflows.
- One dental clinic utilizing Dentrix 2014 Edition CEHRT reported an inability to exchange a CCDa with their medical department using a different EHR. Overall, dental providers reported that the Dentrix 2014 Edition CEHRT was limited in what HIE it was able to provide.

This analysis has highlighted a need for expanded capabilities around health information exchange due to continuing issues around the integration of clinical and dental data. In conclusion, while the PI Program stimulated moderate adoption of CEHRT in dental providers, this program has not provided enough of a cost benefit to engage dentists to date.

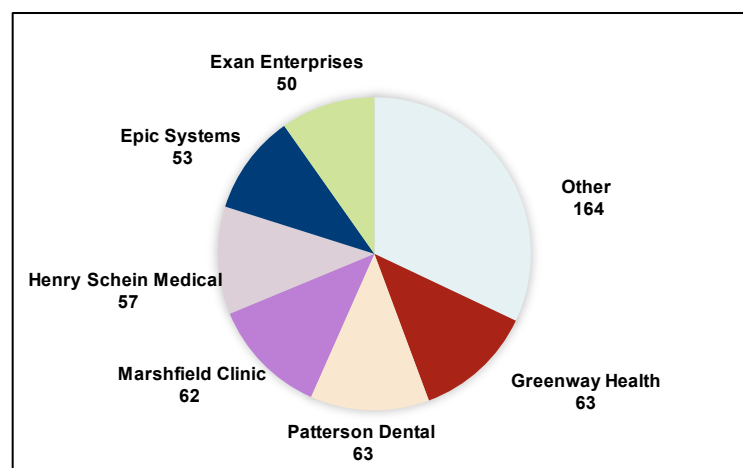


Figure 4.3: Vendor Market Share for Dentists by Most Recent PI Program Attestation

4.4.6 Long-Term Care and Behavioral Health Surveys

In May of 2021, DMS developed and conducted a survey for LTC and behavioral health providers to assess their health IT adoption practices and more specifically, their electronic HIE use. The primary purpose of the survey was to develop a baseline understanding of the following items:

- EHR utilization rates by LTC and behavioral health respondents, including demographic breakdown of respondents
- Current variations of EHR technologies in use
- Use of non-EHR methods for data transfer
- Identified health IT challenges

4.4.6.1 Approach

The survey was sent to 2,322 LTC and behavioral health organizations and facilities within Wisconsin and included rank order questions across targeted content areas including demographic data, EHR use, HIE participation, and telehealth services. Of the 2,322 LTC organizations and facilities that were sent the surveys, 829 LTC organizations participated, equating to an approximate 35 percent response rate. Similarly, of the 598 behavioral health organizations who were sent the survey, 136 participated,

averaging a 23 percent response rate. To motivate survey response and increase participation, follow-up and reminder emails were sent to health care organizations before the survey was closed.

4.4.6.2 Findings

Findings from these survey results can be found in the figures below.

Electronic Health Record Adoption Rates Comparison		
Organization Type	Electronic Health Record Adoption Rate	
	2015	2021
LTC	57%	50%
Behavioral Health	51%	87%

Figure 4.4: Comparison of EHR Adoption Rates by Organization Type Between 2015 and 2021

The 50 percent of LTC organizations and facilities who do not currently use an EHR system for information exchange utilize non-EHR methods, such as standalone fax machine, phone, U.S. mail, and other non-direct secure email technology. Of the pool surveyed, a higher percentage of behavioral health respondents reported the use of an EHR system (87 percent). The 13 percent who at the time of this writing did not have an EHR in place noted that the most common method of non-EHR data transfer included standalone fax, U.S. mail, other non-direct secure email technology, and the phone.

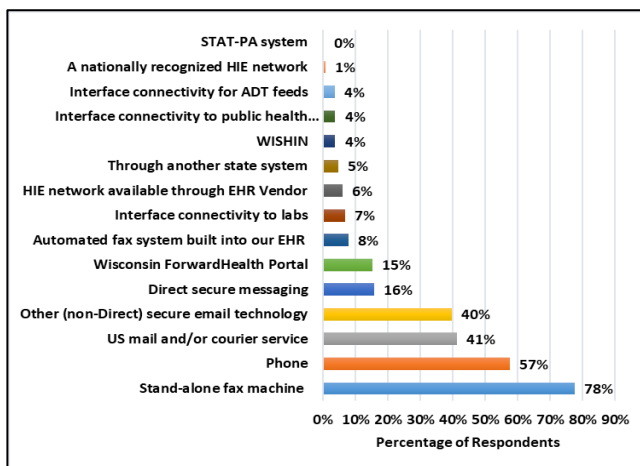


Figure 4.5: Methods LTC Respondents Utilize to Send Medical Information

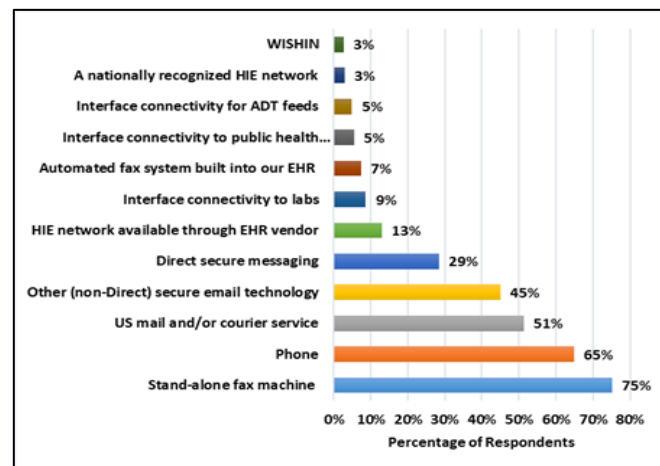


Figure 4.6: Methods LTC Respondents Utilize to Receive Medical Information

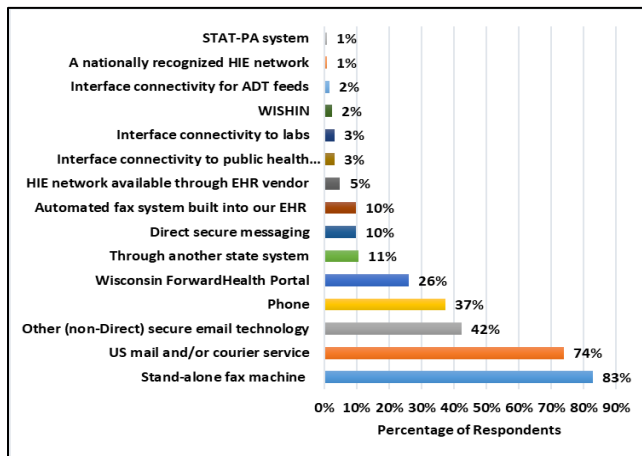


Figure 4.7: Methods Behavioral Health Respondents Utilize to Send Medical Information

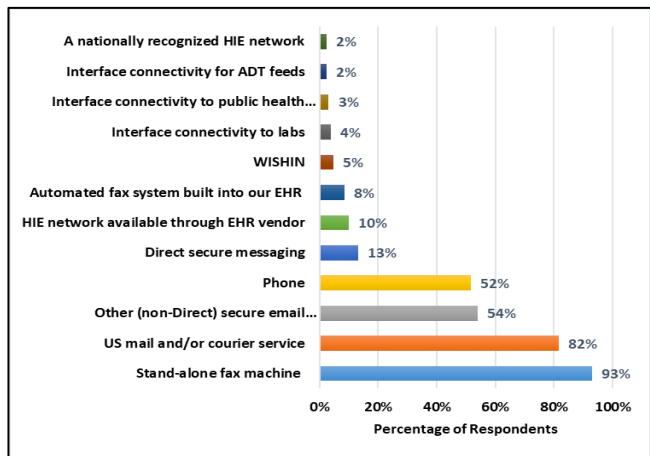


Figure 4.8: Methods Behavioral Health Respondents Utilize to Receive Medical Information

Both LTC and behavioral health organizations and facilities identified key barriers to EHR adoption:

- Implementation and maintenance cost
- Lack of internal technical resources
- Provider resistance
- Absence of management prioritization

Cost remains the driving challenge in the adoption of an EHR system amongst LTC and behavioral health organizations. Organizations and facilities noted that while the initial implementation cost is a large hurdle, the continued maintenance, workforce training, and maturation of the technology contribute to rising financial burdens. Additionally, technology workforce knowledge is a notable challenge because having to train staff around the data platform used to retrieve and input data is time consuming and costly. Hiring in-house engineers or technical experts is an additional cost by facilities who may not have the budgetary bandwidth to meet those needs. Furthermore, health IT adoption has stagnated due to technology unfamiliarity and has contributed to the hesitancy by management to implement a costly system that is under-utilized.

4.5 Health Information Exchange and Wisconsin Statewide Health Information Network Adoption Rates

As of February 2021, a total of 1,987 sites were participating in at least one of WISHIN's services. WISHIN adoption rates vary between site types. The majority of sites participating in WISHIN were clinics (70.46 percent of total participants) followed by post-acute sites (10.07 percent), hospitals (6.09 percent), and family care MCOs (5.79 percent). Community-based providers primarily include local health departments.

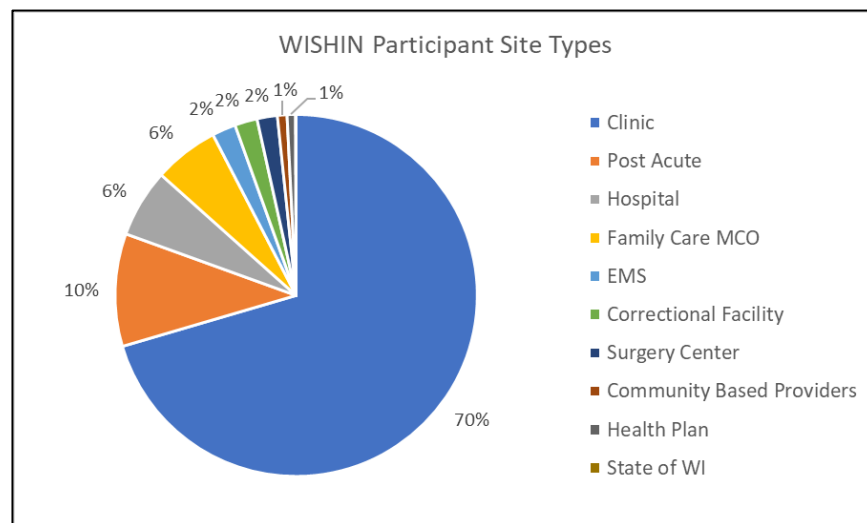


Figure 4.9: WISHIN Participation Per Site Type

The distribution of WISHIN participation sites is concentrated in Milwaukee County with 19 percent of total participants being in Milwaukee County; the next most concentrated areas of WISHIN participation are Waukesha County at 15 percent and Dane county at 9 percent of participants. These counties are the three most populous counties in the State, maximizing the impact of WISHIN participation in those areas. Participation stretched into neighboring states including 42 sites in Minnesota, 37 sites in Illinois, and 9 sites in Michigan.

The most adopted WISHIN functionality was ADT notifications (90 percent of participating sites utilizing this function) followed by CCDA (69 percent), WISHIN Pulse (64 percent), and lab reporting (63 percent).

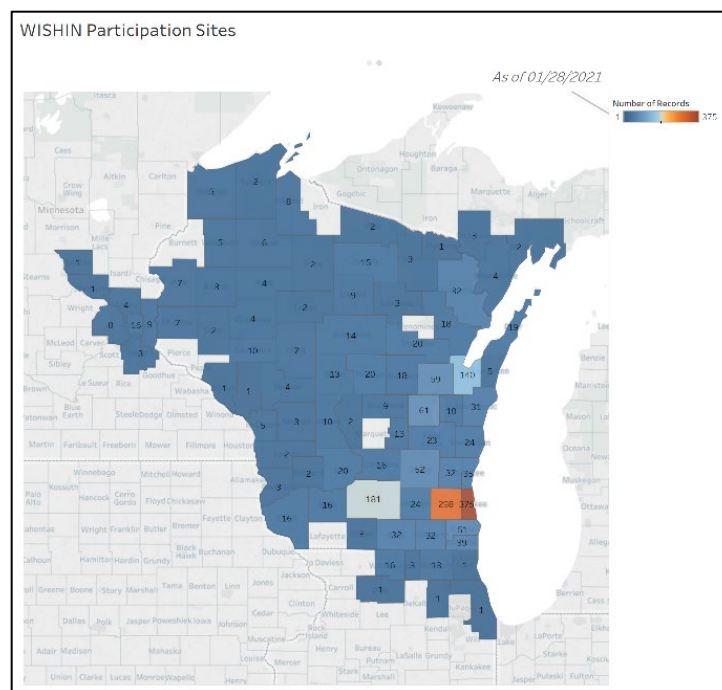


Figure 4.10: WISHIN Site Participation Per County

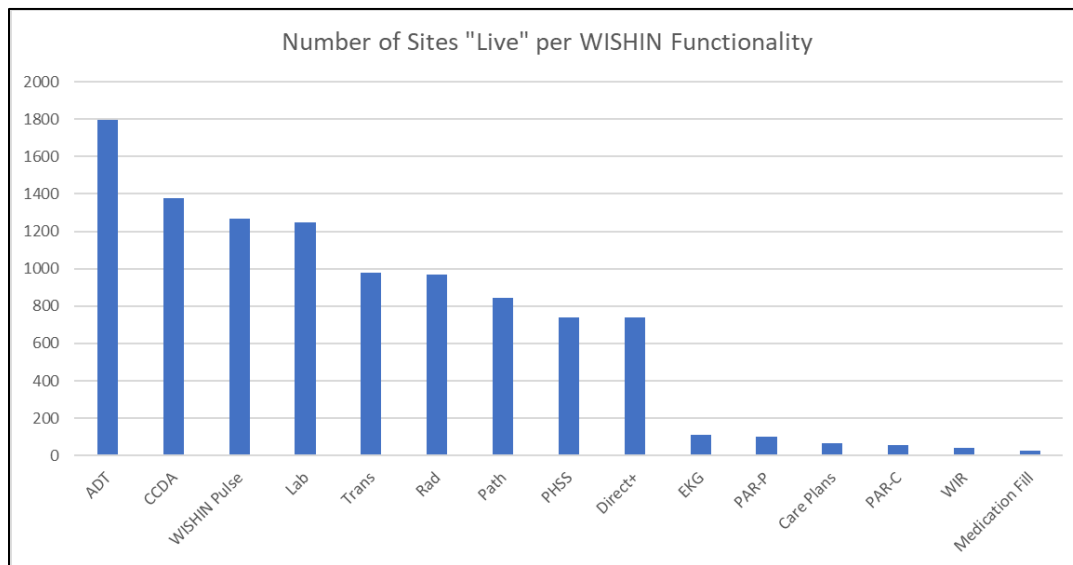


Figure 4.11: WISHIN Sites Per Functionality (Based on the data provided by WISHIN, “live” includes any sites contracted, in-work, on-hold, and awaiting pre-requisites.)

4.6 Managed Care Organizations

Within the Wisconsin Medicaid population, 74 percent of members are enrolled in managed care programs with services provided by 19 Medicaid MCOs. This section includes information regarding the acute care and LTC MCOs. While the majority of Wisconsin Medicaid MCOs encouraged the use of health IT and information sharing across stakeholders, very few reported requiring their providers to do so.

Most Wisconsin Medicaid MCOs receive supplemental data across a number of manual and electronic methods being used both within and across different organizations to exchange social determinants of health, patient health, demographic, and contact information data. The 2020 Health IT Pulse Survey found that provider engagement and use of health IT has increased dramatically since 2017.

- In 2017, half of all MCOs encouraged health IT use through training and technical assistance or informational materials, although none made use of financial incentives.
- Only two organizations indicated they required their providers to use health IT or exchange patient supplemental data.
- In 2020, 13 of the 15 MCOs now report requirements or agreements with providers to use health IT or exchange health information.
- In 2021, most MCOs reported they make use of the medical, social determinants, and supplemental patient information they receive from their providers, but they do not stipulate any data format or mechanism for receipt of the data.
- Half of the MCOs also directly engaged with their members through an online portal.
- Eight of the 16 organizations surveyed do not offer an electronic member portal, and the majority of them continue to primarily receive supplemental member information by paper and fax.
- Three organizations update their provider directories solely via a portal, while the rest update theirs via manual methods (for example, phone, fax, electronic fax, paper form).

The 2020 Health IT Pulse Survey identified internal health IT challenges listed below. Over two-thirds of MCOs reported new health IT initiatives due to gaps identified during or caused by the COVID-19 pandemic. These gaps include:

- Access to hardware and broadband access
- COVID-19 reporting capacity
- Understanding provider capacity
- Standardized data exchange with DHS

Overall, managed care health IT maturity has greatly increased over the life of the eHealth Program; however, there are still opportunities to enhance the data sharing mechanisms used by MCOs to allow for the fluid electronic transfer of data with providers, members, and DMS. To support the continued expansion of data within the state-designated HIE network, DMS has instituted requirements for acute care MCOs to participate in WISHIN. These requirements include:

- Subscribing to the community health record
- Submitting roster information to the network
- Subscribing to one of the event notification services offered through WISHIN

Additionally, organizations that provide services to Medicaid members who are enrolled in an SSI managed care program must submit the care plan data to WISHIN. LTC MCOs who do not manage SSI members are not currently required to participate in WISHIN. In the 2020 Health IT Pulse Survey, all but one plan reported regularly exchanging information with WISHIN and most commonly use WISHIN for care management purposes, varying between daily and monthly exchanges.

4.7 Patient Engagement

Within the PI 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/member use of electronically viewing, downloading, and sending or transmitting their medical record to a third party. Wisconsin Eligible Hospitals and Eligible Professionals providing electronic capabilities, which is reported through the PI Program, exceeds or is on par with ONC national averages.

Source	Hospitals	Physicians
Percentage of Providers Providing Capability for Secure Electronic Messaging		
ONC	82% of Wisconsin hospitals (as compared to 63% of U.S. hospitals)	83% of Wisconsin physicians (as compared to 64% of U.S. physicians)
PI Program	N/A	100% of Wisconsin Eligible Professionals are providing this capability per Meaningful Use objective 9
Percentage of Providers Providing Capability to View, Download, and Transmit Medical Records to a Third Party		
ONC	64% of Wisconsin hospitals (as compared to 69% of U.S. hospitals)	Only 11% Wisconsin physicians (as compared to 16% of U.S. physicians)
PI 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 Reported to Have Viewed, Downloaded, or Transmitted Medical Records to a Third Party		
PI Program	22% of Wisconsin Eligible Hospital patients viewed, downloaded, or transmitted (VDT) per Meaningful Use objective 8 measure 2	38% of Wisconsin Eligible Professional patients used VDT per Meaningful Use objective 8 measure 2

Figure 4.12: Summary of Electronic Patient Engagement by Hospitals and Providers (ONC data sourced as of 2015; Medicare and Medicaid PI 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 percent) and all Eligible Hospitals provide patient portals.
- 70 percent of Wisconsin Medicaid HMOs provide member portals.
- Only 20 percent of pharmacies provide portals.

The need to engage in multiple interfaces to access data could be perceived 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 4.12 below.

Over two-thirds of MCOs reported have explored options for member engagement platforms in 2020 due to gaps identified during or caused by the COVID-19 pandemic. Managed care plans are using the following tools to facilitate communication: online chatbots, automated calls, and advanced member/guardian web portals.

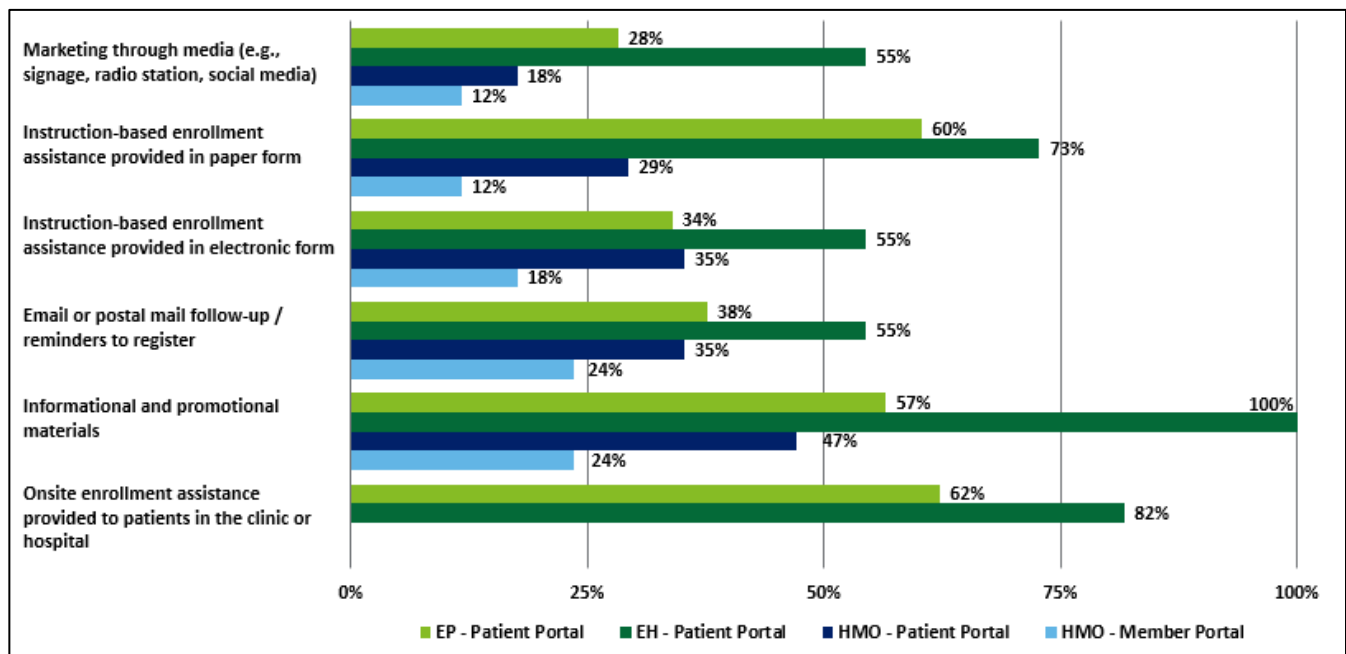


Figure 4.13: Portal Encouragement Methods by Encouraging Party as Identified in the 2016 Health IT Landscape Assessment Survey

There are also technical and physical barriers to consider when assessing patient and member adoption of portal usage. Eligible Hospitals and Eligible Professionals performed the following activities to combat challenges in patient adoption:

- For patients that do not have readily available internet access, just under half of Eligible Hospitals and Professionals provide information on locations where their patients 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.

In 2017, MCOs indicated a strong interest in HIE with their providers and members, with most encouraging their providers to share data with the MCOs 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 required any data transfers, nor had they introduced financial incentives to do so. This may be an area where MCOs look to exert more influence as Wisconsin moves toward value-based purchasing contracts.

4.8 Broadband Analysis

This section describes the status of broadband internet access in Wisconsin and its importance to the advancement of health IT maturity and exchange of health information in the State. It also details federal and state broadband initiatives that have helped the State overcome challenges to developing and sustaining a robust HIE network in Wisconsin.

4.8.1 Wisconsin Broadband Access

Health providers require broadband infrastructure to receive the benefits of electronic health care records, and it is particularly critical to health care for those living in rural areas where access to medical services can be limited. Broadband internet service, provided through cable, direct satellite, fixed wireless, and fiber, administers high-speed internet access that is necessary for the transfer of large amounts of data and is required for a meaningful exchange of health care information.

Wisconsin is a leader in access to broadband coverage and has shifted its focus to improving the quality of access (that is, increasing speed of service). However, the importance of broadband services for business, farming, school, and government services has increased over the past few decades and has been re-emphasized during the COVID-19 pandemic, which has further highlighted the gaps in broadband access for patients in rural areas.

4.8.2 Broadband Funding Sources and Initiatives

The Public Service Commission (PSC) of Wisconsin has collected and mapped broadband coverage information since 2009 because they recognize that broadband is an essential service. The Wisconsin Broadband Office, run by the PSC, administers the Broadband Expansion Grant Program offering grants to applicants across the State to expand broadband internet access to underserved areas.²⁹

On July 14, 2020, Wisconsin Governor Tony Evers signed Executive Order #80 to create the Governor's Task Force on Broadband Access. The task force's mission is to advise the Governor and State Legislature on how to expand high-speed internet access across Wisconsin. The task force recommends policies and initiatives and is made up of technology, health, and community leaders across the State.³⁰ Governor Tony Evers also pledged during his State of the State Address in January 2021 to invest \$200 million over the next two years aimed to address the unequal access to high-speed internet.³¹

Several federal initiatives have also contributed to the growth of broadband access in Wisconsin over the past decade. In 2009, the American Recovery and Reinvestment Act provided \$4.7 billion to the National Telecommunications and Information Administration (NTIA) to help deliver broadband service to areas in need within Wisconsin by:

- Supporting the deployment of broadband infrastructure
- Encouraging sustainable adoption of broadband service
- Enhancing and expand public computer centers
- Developing and maintaining a nationwide public map of broadband service capability and availability.³²

²⁹ Wisconsin, PSC of. n.d. *Wisconsin Broadband Office*. Accessed 2021. <https://psc.wi.gov/Pages/Programs/WBO.aspx>.

³⁰ Wisconsin, PSC of. n.d. *Governor's Task Force on Broadband Access*. Accessed 2021. <https://psc.wi.gov/Pages/Programs/BroadbandGovernorsTaskForce.aspx>.

³¹ Peterson, Tim. 2021. "WHYsconsin: A Look At What Is Being Done To Expand Broadband Access In Wisconsin." Wisconsin Public Radio, January 21. <https://www.wpr.org/look-what-being-done-expand-broadband-access-wisconsin>.

³² Administration, National Telecommunications and Information. n.d. *American Recovery and Reinvestment Act of 2009*. Accessed 2021. <https://www.ntia.doc.gov/legacy/recovery/index.html>.

The Federal Communications Commission (FCC) has also made several important investments including:

- **Connect America Fund** focuses on rural broadband build-out by providing funding to specific carriers in targeted areas.³³
- **Rural Health Care Program** provides support for high-capacity broadband connectivity for eligible health care providers and encourages development of regional broadband networks.³⁴

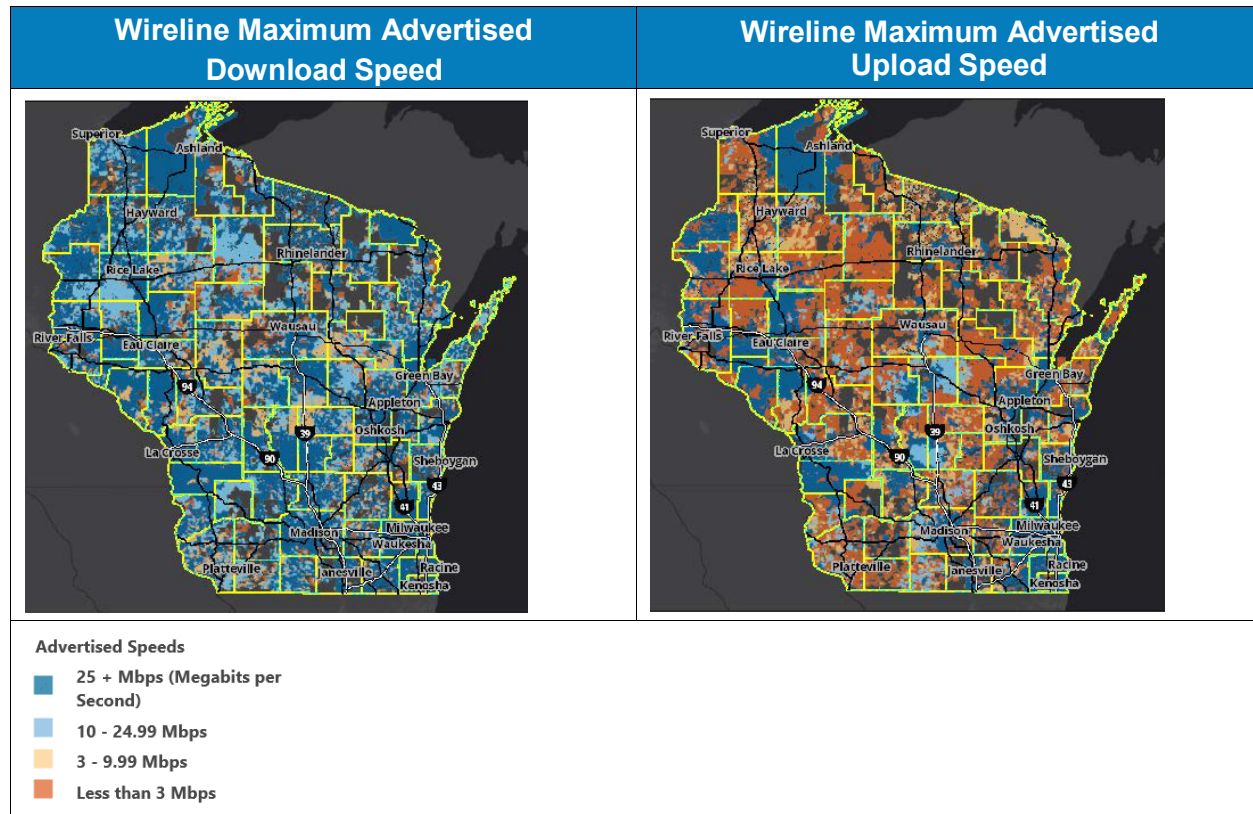


Figure 4.14: Wisconsin Broadband Maps—Wireline Maximum Advertised Speed

4.8.3 Broadband and Challenges in Rural Areas

Rural areas face major gaps in their broadband coverage; however, an estimated 94 percent of rural Wisconsin residents have internet speeds of 10 megabits per second (Mbps) or higher, which is more than the national average.³⁵ Only having 10 Mbps has proved to be inadequate when there are multiple people using the internet for work and school in one household, so there is a need for additional Mbps.

³³ Gillett, Sharon. 2012. Federal Communications Commission. *FCC Launches Connect America Fund*. April 25. Accessed 2021. <https://www.fcc.gov/news-events/blog/2012/04/25/fcc-launches-connect-america-fund>.

³⁴ Commission, Federal Communications. 2021. *Rural Health Care Program*. September 8. Accessed 2021. <https://www.fcc.gov/general/rural-health-care-program>.

³⁵ Votava, Dale Knapp and Jack. November 2020. *Broadband in Rural Wisconsin*. Forward Analytics. <https://www.forward-analytics.net/wp-content/uploads/2020/11/2020-FA-Report-Broadband-in-Rural-Wisconsin.pdf>.

According to the ONC, rural providers adopting and using health IT face complex barriers.³⁶ These barriers include:

- A lack of sufficient broadband internet access
- A lack of skilled IT personnel to implement access and navigate issues
- Insufficient financial capital necessary to install EHR systems

RWHC leadership indicates that transmission of images is a key issue and bandwidth can be overwhelmed by radiology connections and increasingly higher-quality images. While there are many funding programs and other incentives for rural hospitals to improve their broadband access, connectivity remains an issue for patients at home who may have limited access to sufficient or reliable broadband. This is especially an issue in areas with only one internet vendor, which makes maintenance of critical services challenging if the primary internet connection is lost.

DMS will continue to monitor Wisconsin's overall broadband landscape as it directly affects the robustness of research data on health systems, as well as the expected benefits of health IT use to members and providers.

³⁶ Technology, The Office of the National Coordinator for Health Information. n.d. Federal Resources to Help Rural Providers Achieve Meaningful Use. HealthIT.gov. <https://www.healthit.gov/sites/default/files/factsheets/federal-resources-to-help-rural-providers-achieve-meaningful-use.pdf>.

5. OBSERVATIONS AND CONCLUSION

Stakeholder feedback illustrated key findings around health IT adoption and use within Wisconsin. Reoccurring themes that challenge widespread health IT adoption across the State are outlined below. Noting where the shifts lie, Wisconsin has an opportunity to meet these health disparities by implementing a targeted strategic approach promoting the increased electronic exchange of key data sets such as dentistry data, LTC data, and behavioral health data to support care coordination and overall population health management.

Thematic Challenges	Observations
Person-Centered Care	Increasing the data types (for example, dental, behavioral health, LTC, social determinants of health data) made available to health plans and providers will aid in DMS's efforts to achieve person-centered care for their members.
Partnerships	- Organizations of varying operational sizes noted the need for inclusivity and representation. - Hesitancy for tribal nations to join and feed into WISHIN due to lack of knowledge around WISHIN services. - An opportunity for DMS to strengthen its partnership with WISHIN to identify and implement more collaborative efforts that will strengthen DMS service delivery and operations.
Adoption and Meaningful Use of EHR	- A wide variety of EHR systems are in use across Wisconsin, necessitating efforts to promote interoperability. - Organizations continue to be heavily reliant on manual/non-electronic information sharing methods (for example, fax, paper, and phone). - Patient portals are underutilized due to difficulties with user understanding of technological requirements and value to the patient.
Funding	- HITECH funding expires September 2021, and organizations are exploring additional funding channels to continue, improve, and expand upon their existing health IT systems. - An opportunity for DMS to provide financial incentives to encourage WISHIN participation.
Governance	An existing and growing need for a centralized body to coordinate health IT efforts across agencies and public/private organizations to achieve common goals.

Figure 5.0: Observations From Stakeholder Feedback

The impact of social determinants data on Wisconsinites' health remains at the forefront of DHS priorities. Section 2: To-Be Landscape of the SMHP outlines approaches under consideration by DHS to promote the timely completion of data collection across health systems to improve care planning and health outcomes throughout the State. Health IT and HIE infrastructure is an integral component of advancing SDoH goals. By standardizing electronic SDoH data collection and facilitating the flow of information exchange, Wisconsin could address disparities in a patient's health outcomes and more broadly capture state-wide health trends and better manage population health. Additionally, data integration is critical to support Wisconsin's larger care coordination efforts, address social determinants of health, and improve equity and health outcomes. The next section, Section 2: To-Be Landscape, outlines approaches under consideration by DHS to address thematic challenges identified in the environmental scan, improve health IT systems, and promote information exchange by care partners and deliver on greater member care goals. Additionally, the section will highlight DMS's current project portfolio and future initiatives under consideration by DHS.