WHIO: A Unique and Essential Public Utility in Wisconsin Health Care
December 2020

EXECUTIVE SUMMARY

- The Wisconsin Health Information Organization (WHIO) maintains Wisconsin’s All-Payer Claims Database (APCD) that helps Wisconsin improve health care affordability, efficiency, and transparency by enabling key insights for value-based care
- WHIO data files span the continuum of care and include all acute, sub-acute, chronic, and preventive care delivered by all provider organizations in the state
- WHIO data are used to benchmark variation in medical care, including the use of prescription drugs, to understand real-world costs, to identify gaps in care and services, to evaluate the health of populations, to predict workforce needs, and to identify opportunities to make care safer and more cost effective
- WHIO uses standardized costs which eliminate variations in reimbursement ($1 of medical care provided in La Crosse = $1 of medical care provided in Milwaukee). This is a unique perspective among statewide APCDs. This metric enables comparisons of efficiency based on utilization, a driver of cost.
- “Episodes of care” serve as the unit of analysis to tease out practice pattern variations which allows for more credible comparisons of the diagnostic tests and treatments patients receive (resource utilization). This in turn serves as the basis for practice improvement initiatives.
- The data and information are used in strategic and operation planning, performance improvement and monitoring, program evaluation, contracting and public reporting.

HISTORY OF WHIO

In 2007, the State of Wisconsin established a new requirement in Chapter 153 of the Wisconsin Statutes, obligating the Wisconsin Department of Health Services (DHS) to maintain a health care claims data repository (now known as an All-Payer Claims Database or APCD), and provide information to the public on the quality and cost efficiency of health care in Wisconsin. The WHIO was established as a 501(c)(3), public-private partnership to fulfill this role on behalf of the DHS. Until 2016, the DHS provided significant funding to the WHIO. However, since that time, the WHIO has been solely funded by the private sector.

The WHIO’s mission is to improve the quality and cost efficiency of health care in Wisconsin. The WHIO data are voluntarily submitted by 12 insurance companies, the Wisconsin Department of Employee Trust Funds, self-funded employers, and the State of Wisconsin Department of Health Services (DHS). Data contributors participate in the WHIO to demonstrate their commitment to improving the health of all Wisconsinites as well as the health care delivery system through information-driven decision making. Consistent with this purpose, the WHIO data and information are used by many of Wisconsin’s health care stakeholders – policy makers, government agencies, associations, provider organizations, insurance companies, employers, researchers – to augment their strategic planning, improvement projects, operational monitoring and business decisions.

WHAT WOULD HAPPEN IF THERE WAS NO WHIO?

The DHS is responsible for maintaining the state’s APCD, a public utility requirement that would remain in force with or without the WHIO. There currently is no substitute data system for Wisconsin’s APCD and an APCD takes several years to establish, all at a time when many other states are working to bring an APCD to their state.

While WHIO has obtained the breadth of data needed to provide statistically valid information under our voluntary data submission model, it is unlikely that this could be reproduced in the future due to ongoing
provider system mergers and acquisitions, and the increasing market clout of national insurance companies. As a result, large health systems and national insurance plans are able to own and manage their own business intelligence systems, while regional providers and health plans who have been the backbone of Wisconsin’s health care system are not. In addition, the Health Insurance Portability and Accountability Act (HIPAA) prohibits sharing of patient level data with a provider organization or health plan who does not have a current relationship with the patient/member. As a data aggregator, WHIO’s HIPAA requirements are slightly different making transparency, organizational comparisons and benchmarking possible so long as patient de-identification is maintained.

The WHIO is the only statewide source of information that spans the continuum of care and includes data on providers in every community of the state. The WHIO is the only data system that includes urgent/outpatient care, rehabilitation, prescriptions, and professional/clinician charges. It is also the only source of information to quantify the outcomes of care that result from different care models and the resources used to provide that care. This functionality is made possible through the addition of unique analytical data elements (i.e., episodes of care, risk adjustment, normalized price, groupers). Finally, without the WHIO data, health care stakeholders would lose their ability to augment analyses based on their own data or cross check the accuracy of other data sources, a function that is indispensable to many.

**WHIO’s UNIQUE VALUE**
The WHIO collects, manages, and distributes data and information on approximately 4.5 million Wisconsinites. Wisconsin’s Medicare Fee-for-Service data will be added in the fall of 2020. The WHIO information provides Wisconsin-specific transparency, with regional nuances, regarding the performance of each health care organization by name. The information represents the care provided in every geographic area of the state and for every service that is covered by insurance. Alternative databases, such as national proprietary databases, often include Medicaid and Medicare data, but very little commercial data and no self-funded employer data. Having this array of payer data allows WHIO’s users to assess the impact of payer models and benefit plan design. The WHIO information can be evaluated from multiple perspectives including:

- Service locations – hospitals, ambulatory surgery centers, emergency rooms, urgent care, ambulatory surgery centers, long-term acute care hospitals, clinics, skilled nursing facilities, emergency transportation;
- Services rendered – inpatient, professional services, radiology, laboratory, pharmacy, rehabilitation, home health, durable medical equipment, and hospice; and
- Professional services/practitioners – physicians, nurse practitioners, physicians’ assistants, therapists, and pharmacists.

Since its transition to a new technology vendor in 2018-2019, the WHIO has produced new products based on market research. The de-identified data files are organized to meet different use cases and the reports provide information to organizations who do not have the capacity to complete complex analyses on their own. Current products are listed below.

- The Enhanced Data file includes detailed data for analyses, as well as episodes of care, risk adjustment and normalized price data. The clearly defined episodes of care are patient-centric, clinically framed and serve as a faithful reflection of the patient-provider relationship and experience.
- The Standard Integrated Data file allows for trending and longitudinal studies that require data that has been standardized over multiple years.
The Applied Insights reports include key performance metrics (e.g., re-admissions, pharmaceutical costs, use of radiology technology) compared to statewide benchmarks, outmigration from a PCP home, opioid prescribing patterns and market share. COVID-19 reports to monitor the impact of COVID-19 on provider organizations are under development.

In addition to the unique value of the WHIO data and information, the WHIO’s transition to a state-of-the-art technology system is a unique state asset in and of itself. The WHIO’s technology system will support the integration of multiple data types to create a one of a kind statewide integrated information system. For example, the WHIO has forged a partnership with the Wisconsin Collaborative for Healthcare Quality (WCHQ) called 360ValuCounts. The first 360ValuCounts reports will integrate the WCHQ clinical data with the WHIO claims data to support the WCHQ Value Initiative. This broader picture of the value (quality, resource use and cost) of care delivered by provider organizations will be used to drive value improvement by providers and payers alike. The WHIO is also investigating geo-coding software to facilitate the addition of socio-economic data. Finally, the WHIO, in partnership with Symphony and OnyxHealth, is poised to provide a service to assist health plans in meeting the CMS Patient Data Access mandate, which will require payer to payer data exchange and payer to provider data exchange of claims and clinical data in 2021 and 2022 respectively.

Benefits of WHIO, identified by WHIO customers, are outlined below.

**BENEFITS TO PUBLIC POLICY MAKERS**
- Understand current practice patterns and costs to determine if policies should be changed and what the impact of a policy change would be on different stakeholders
- Identify high cost, high frequency prescription drugs and monitor for cost increases; evaluate polypharmacy and its adverse effects
- COVID 19 Resources:
  - Trend reports on viral respiratory care, telehealth, and behavioral health
  - Financial Risk Simulator (in partnership with BSGA)
  - Impact of COVID-19 on the health care delivery ecosystem
  - High-Risk Medicaid Members Report; underlying health conditions that increase risk for serious complications of COVID-19

**BENEFITS TO STATE THE DEPARTMENT OF HEALTH SERVICES**
- Evaluate programs (e.g., SeniorCare, Mental Health and Substance Abuse) and report to funders and the public
- Determine if the care provided to Medicaid members is similar to or different from the care provided to commercially insured members
- Compare Medicaid and Medicare reimbursement to commercial rates
- Augment opioid reporting with medical relevance information
- Identify signals that a communicable disease may be changing to guide where resources should be used for further investigation
- Conduct epidemiological studies of new or common conditions and monitor change over time

**BENEFITS TO IMPROVEMENT ORGANIZATIONS, PROVIDERS, AND CLINICIANS**
- Transparency serves as an accountability standard across health systems in Wisconsin. WHIO enables health systems to improve health care quality, safety, affordability, and efficiency.
- WHIO enables health care providers to compare, learn and improve the cost and quality of care.
  - Timing and sequence of care helps to identify efficient treatment pathways that ensure care is being provided at the appropriate place and time to achieve the best outcomes
Migration patterns identify services that a patient who has a PCP in one system is receiving from another health system. Episodic care reveals root causes of variation that lower the cost of care for patient and members.

- WHIO information identifies variation in the care provided to support improvement within health care organizations over time.
  - Ability to drill down to service levels identifies variations in care based on the services provided and where these services are provided (IP vs. OP vs. ASC).
  - Evaluation of episodes of care that are wholly contained, mostly contained, or minimally contained within a health system can be analyzed to determine service offerings, referral patterns, and patient behaviors.
  - Risk adjustment is embedded in the data at the health care organization and individual person level such that demographic, retrospective, actuarial, and prospective analyses are fair. Risk adjustment considers the patient’s severity of illness to confirm (or refute) concerns that “my patients are sicker.”

**BENEFITS TO HEALTH CARE PURCHASERS AND PAYERS**

- Supports changes in benefit plan design to encourage use of high value providers.
- Enables modeling of value-based contracts based on provider efficiency in each geography.
- Enables simulations of the impact of draft contract terms on reimbursement to create a shared understanding of how an agreement will function for the parties involved.
- Identifies variations in the type of care provided for the treatment of chronic conditions (diabetes, heart diseases, lung diseases, chronic kidney disease, rheumatoid diseases).
- Enables cost management strategies by revealing market comparisons of the efficiency of care by type of resources used and the illness burden of patients.
- Provides a resource to validate results from other data sources, including employer and health plan claims.