

PAPER III

FIVE EXAMPLE
STATES THAT
PROMOTE HEALTH
INFORMATION
EXCHANGE

Introduction

The exchange of health records happens in many ways, in support of clinical, public health, and payment processes, generally enabled through robust standards such as those propagated by HL7¹. Although nationwide commercial networks exist, policy and health care leaders in nearly every state have taken steps to promote health information exchange (HIE) infrastructure that specifically serves their state or a subregion. These HIEs are nearly all based on a nonprofit business model or housed within a department of state government. They receive some government funding, and while their capabilities may overlap with national and commercial networks, the HIEs also serve purposes that are not otherwise well supported in the normal course of health care delivery.

We interviewed leaders from every state to learn about the methods of enabling and governing HIE. The breadth and success of the resulting services vary significantly. However, it is difficult to quantify apples-to-apples the outcomes in each state. As a means of identifying a few example states that are seeing positive results, we surveyed a dozen leaders in the HIE industry — HIE executive directors, technology vendor executives, and HIE consultants — asking them to name five states that they consider leaders. Our suggested criteria were states that have broad connectivity, in which clinicians, payers, and public health agencies are receiving strong interoperability services, and that are innovative.

Our surveyed group named a total of 16 states that they admired for their interoperability efforts. Five states were named by at least half the respondents. These were: Arizona, Indiana, Maryland, Michigan, and Nebraska. It is important to note that this method of reputational ranking had significant limitations, including the subjectivity of criteria each respondent used and potential for bias based on whom we as researchers asked to participate. And a reputation for robust services may say little about the cost effectiveness of the services. We would not contend this methodology identified the “best” performing states. Still, with these limitations in mind, the description of approaches taken in these states should be of interest, and we have profiled each one below.

Arizona

Arizona has taken a pragmatic approach to promoting health data interoperability, and the strategy has produced a partner health information organization (HIO), which is an important asset to Medicaid and public health agencies. Rather than a deliberative legislative effort or regulatory regime, Arizona policy leaders chose to deepen the state’s engagement with the private sector efforts that were already gaining traction. In practice, the state’s primary and statewide HIE partner is Health Current, a multi-stakeholder nonprofit connected to virtually all Arizona hospitals and more than 1,000 participating organizations. State statute requires the Arizona Department of Health Services (ADHS) to designate a qualifying HIE organization for certain purposes, including to operate a health care directives registry. This unique designation is held by Health Current, which is allowed to engage state agencies in its designated capacity. Although it is a private nonprofit, Health Current has served as a public-private partnership since its creation and, as such, includes leaders from state government on its board of directors.

¹ Health Level Seven International (HL7) is a not-for-profit standard developing organization for the interoperability of health data. <https://www.hl7.org/about/index.cfm?ref=nav>

While these directors are not formally appointed by political leaders, their presence tends to bind the organization to the state agencies, creating an extra avenue for accountability.

State law does restrict how HIOs may operate to protect patient privacy, and while the law does not single out a designated HIE, the restrictions do serve as an additional governmental check on Health Current. The overall arrangement between Arizona and the HIE gives the state confidence to depend on the organization for functions it might otherwise need to build within government or that might be difficult to otherwise accomplish. With these protections in place, ADHS and Health Current have partnered to ease the process of public health reporting, communicate public health submissions back to clinicians in the field, operate additional health registries, supply real-time bed capacity data for pandemic triage activities, and enhance data for contact tracing by combining it with prior health care encounters. State Medicaid's contracts with managed care organizations require that Medicaid payment policies for health care providers incentivize participation with the HIE, thus bringing near ubiquitous connectivity to the infrastructure. State Medicaid and public health agencies proactively identify opportunities to direct a variety of funds to the designated HIE that are used to operate services the state deems important for Medicaid and public health purposes.

During the COVID-19 response, the governor issued executive orders that leveraged the capabilities of Arizona's de facto state HIE, further deepening ties. Reflecting on the growing partnership between the HIE and the state, Health Current/Contexture CEO Melissa Kotrasy noted, "The pandemic placed a spotlight on the HIE and demonstrated its value to the Arizona health care community." In a move that aims to further improve services to Arizona, Health Current has joined with Colorado's CORHIO in a multistate affiliation called Contexture.

Indiana

Indiana is often cited as among the earliest and most influential HIE states in the country. While the state's Indiana Health Information Exchange (IHIE) was organized as a not-for-profit legal entity in 2004, the HIE's roots go back to 1993 and the creation by the Regenstrief Institute of a clinical data-sharing cooperative called the Indiana Network for Patient Care (INPC). Today, IHIE operates the INPC, which has grown to be a statewide clinical and claims data repository and the basis for various value-added services. As the Regenstrief Institute is an independent research institute, from the very beginning, the INPC was conceived to support health research and to meet informational needs of hospitals and clinicians. Indiana's early HIE sustainability model was based on reducing the cost of transactions for participants, such as by eliminating paper mail and creating a single portal for lab and radiology results delivery. Over time, the HIE added new services with associated fees, and the approach made the organization sustainable with minimal government funding. Today the IHIE team is proud of their continued self-sufficiency, and an ethos of needing to create business value permeates current decisions.

It is worth noting that in the 2010 timeframe as the HITECH funding was coming to states, many attempted to replicate the Indiana value proposition. But Indiana was a pioneer when paper was more prevalent, and for those who came later to the game, delivery of lab results was already being solved in other ways. For Indiana, establishing and expanding the results delivery service early (2004) was key. Today, nearly all Indiana health care providers have chosen to connect to the HIE. The organization's largely self-developed technology stack, which provides flexibility with low licensing costs, also enhances its sustainability.

Unlike many others, Indiana state government has taken a hands-off approach to enabling interoperability of health information. Neither IHIE nor any other organization is designated with a special role. The state does not mandate or incentivize participation in HIE by health care organizations, and it devotes little in public funds to such services. Yet, IHIE has become an asset for public health. Public health agency employees access clinical records through IHIE to support case investigations, and IHIE assists many health care organizations to meet their public health reporting requirements.

As part of the state's COVID response, the public health sector began relying on the HIE in new ways. IHIE can use data from prior clinical encounters to enhance COVID case reports with more accurate patient demographics, as these are not always captured at the time of testing. And the IHIE infrastructure combined with the researchers at Regenstrief proved an effective pairing for analysis and reporting on the progress and impact of the disease in Indiana. For clinicians in the field, IHIE has long been a means of receiving data that is relevant to their patients, but increasingly that information also includes data from public health agencies such as their patient's COVID immunization status.

Reflecting on Indiana's success, John Kansky CEO of IHIE said, *"I've asked myself if IHIE's approach could be replicated in other states. There was a time when that was certainly possible. Today, I think we learn a lot from other HIEs that lean into their state relationship, but I still believe strongly in the ability of HIEs to produce value the market will pay for."* Laissez faire policy has, in this instance where private actors moved early, produced a positive health data interoperability outcome and given Indiana an important infrastructure for public health support.

Maryland

The Maryland Health Care Commission (MHCC) is the state agency charged with oversight and regulation of HIE, having led a planning process in 2008 to get the ball rolling on a statewide infrastructure. A dozen HIEs are recognized and regulated by MHCC, but the multistakeholder nonprofit called CRISP is the focus of attention and the state's officially designated HIE. All acute-care hospitals connect to CRISP, and most health care providers use its services. The state is particularly noteworthy for the ways the Maryland Department of Health (MDH) is leveraging the HIE in support of Medicaid and public health purposes.

Maryland's general approach to interoperability has been to designate a single nonprofit HIE to serve the entire state, to invest state resources into its development, and to hold the organization to a high standard through regulation and requirements placed into a designation agreement. CRISP's multistakeholder board includes several appointees of the secretary of health, the annual budgeting process provides an opportunity for state leaders to influence CRISP's priorities, and stipulations in CRISP's designation agreement give the state additional recourse if the organization were ever failing to meet its mission. The designation itself is revisited by MHCC every three years.

These protections have made it more palatable for the state to rely on the HIE. CRISP operates the prescription drug monitoring program (PDMP), serves as a reporting hub for the state's "All-Payer Model" hospital financing system, is the mechanism for patients to access their own Medicaid records, has become the key platform for capturing and reporting COVID-related statistics, and generates real-time ED utilization data for the Maryland Institute for Emergency Medical Services Systems (MIEMSS).

CRISP has broad support among hospitals, receives some information directly from MDH, and benefits from mandated connectivity for certain purposes. The more complete the information it holds, the more useful the HIE is proving for clinicians and for public health. CRISP receives more than 25,000 information queries a day and pushes information to those with an existing patient relationship even more frequently.

In Maryland, the combination of health system governance and state oversight, with the execution flexibility of a private nonprofit, has resulted in an HIE with broad connectivity and a wide range of services. Reflecting on Maryland's model, David Sharp, the Director of MHCC's Center for Health Information Technology and Innovative Care Delivery said, "*CRISP has made significant progress in advancing health information exchange through its collaboration with stakeholders and policymakers.*" In recent years CRISP has affiliated with four other nonprofit state-designated HIEs to share a single technology stack and collaborate on innovations.

Michigan

Michigan's approach to enabling HIE aims to create space for entrepreneurship and innovation. The state promoted the early growth of HIEs by encouraging local organizations to form throughout the state. Nine HIEs operated in various medical trading areas, with an assumption that competition would lead to innovation and consolidation. Michigan subsequently formalized MiHIN, a nonprofit organization, as the state-designated HIE to coordinate among these medical trading areas. MiHIN certified the regional HIEs to implement the state's Conduit to Care plan with ONC HITECH funding and began to operate selected statewide services directly. Year by year, the economies of scale that came from consolidation drove the state toward one primary HIE. Having started by orchestrating small, regional HIEs, Michigan today engages with MiHIN as a consolidated, statewide, public-private partnership.

To set priorities for the state and to provide for a degree of oversight, Michigan legislators created a Health IT Commission with members appointed by the governor. The Commission's recommendation led the Department of Health and Human Services (MDHHS) to select MiHIN as the designee. The model seeks a careful balance between state government input and private enterprise, and the Health IT Commission's recommendations are not binding. In return for designation, MiHIN appoints a board member from each of Medicaid, the department of public health, and the Health IT Commission. The approach relies on governance rather than regulation to ensure patient privacy is protected and that the HIE is operating in a trustworthy manner.

Michigan's entrepreneurial thread continues to the means it uses to encourage participation in the designated HIE. Health care providers are financially incentivized by health plans to contribute data on a use case by use case basis. MiHIN calls the innovative approach the "Use Case Factory." Certain MDHHS services are operated by means of MiHIN use cases, such as interacting with the immunization registry, while commercial health plans provided incentives for ADT transitions of care or medication reconciliation. MDHHS requires Medicaid Contract Organizations to participate with the MiHIN model. Rather than making technology the starting point, Michigan focuses on the purposes for which data will be exchanged, creating policy and incentives on a case-by-case basis. This has led to extremely high participation rates for those purposes, which are prioritized, and growing trust in the HIE with each incremental success.

An enterprising spirit extends to the team at MiHIN, which prides itself on approaches that are creative and unique. Through affiliations and related companies, MiHIN is part of a growing

multistate HIE model. The team also offers consulting to out-of-state HIEs and prepares scores of interns every year for work in the health IT field post-graduation. Reflecting on Michigan's model, Tim Pletcher, CEO of MiHIN, said, *"Our efforts target high value areas of exchange with the goal to first get the data moving at critical threshold levels of adoption and then focus on improving the data quality and useability."* For Michigan, a careful balance of state engagement and private enterprise, starting with many small HIEs and evolving to one, has produced an infrastructure that is capable and innovative.

Nebraska

Nebraska is noteworthy within the health data interoperability industry for the significant capabilities it has built in the statewide exchange and especially for the ways prescription medication records are captured and used for both clinical care and public health purposes. The state has one primary HIE, CyncHealth (formerly known as the Nebraska Health Information Initiative), which has roots in a collaborative effort started within the hospital sector. Early connectivity was robust in the Omaha metro area but less so in certain other regions.

State government began to partner with the HIE in 2015, using executive orders and contracts to tie CyncHealth closer to the Department of Health and Human Services (DHHS). In 2016 CyncHealth was named in statute as operator of the PDMP, a step that created a foundation for additional engagement, including significant investments in capabilities that supported the state's response to the opioid use disorder epidemic. HIE leadership began concentrating on new ways the infrastructure could be beneficial to public health agencies and the Medicaid program.

In 2020, the Nebraska Legislature officially designated CyncHealth as the statewide HIE, cementing its role as a public-private partnership. In addition to solidifying a statutory designation for the statewide HIE, the Nebraska Legislature created a 17-member, multistakeholder Health IT Advisory Board (HIT Board), appointed by the governor, which advises DHHS and CyncHealth regarding the use and application of health information and PDMP data across community priorities. The HIT Board has authority to establish criteria for data collection and disbursement of data to improve the quality of information provided to clinicians. Permitted PDMP data use purposes include informing policy, addressing quality measures as approved by state or federal agencies, patient quality improvement or research initiatives, and statistical or educational purposes. The HIT Board is comprised of clinicians, a hospital CEO, two senators, a payer, DHHS, a CyncHealth representative, and a representative from each congressional district, all subject to Nebraska's Open Meetings Act. CyncHealth has taken a posture of transparency in all its dealings with the state as a means of building community trust, and the creation of the HIT Board is an example of that transparency. Two CyncHealth board seats are reserved for DHHS-appointed members to further bind the organization to the community.

Mandates and incentives are used in Nebraska to achieve broad connectivity to the designated HIE. DHHS requires managed care organizations to connect, and all payers must submit claims data to the HIE. CyncHealth provides the state capabilities that might typically be found in an all-payer claims database (APCD), linking these records with clinical information and social factors data. By combining data in partnership with the HIE, the state enhances the datasets available to clinicians and public health agencies. DHHS leverages CyncHealth to help it capture data from the field for purposes including reportable lab results and syndromic surveillance. And

DHHS uses CyncHealth to communicate public health data back to clinicians, such as reportable conditions and EMS records. Since the start of the pandemic, CyncHealth has significantly expanded its reporting and analytics services.

The CyncHealth team prides itself in actively engaging Nebraska policy makers to develop solutions. They work closely with state policy leaders, legislators, and health system leadership. And their efforts at federal advocacy have helped Nebraska secure significant funding. Jaime Bland, President & CEO of CyncHealth, said, *"We enjoy bipartisan support because we've done a really good job of taking what could have been a government program, operationalizing it, listening to providers regarding workflow and utility, and showing that public/private partnerships can be very effective."*

Conclusions

There are notable similarities among the five states we profiled. Each has promoted a single primary nonprofit HIE to serve the needs of the entire state. All five HIEs exist in a state of moderate size by population, ranking from #10 (Michigan at 10 million) to #38 (Nebraska at 2 million). It may be no coincidence that Michigan as the largest of the five did begin with a multi-HIE strategy. Four of the five (Indiana excluded) designate their HIE in some way, through a combination of enabling legislation and executive orders. In these four cases, state government can more easily procure services from the designated HIE than from another commercial company.

Four of the five profiled states (again Indiana excluded) are prominent in the HIE industry for their leadership of multistate affiliations. One might be tempted to conclude that launching multistate work produces positive outcomes, but it is just as likely that it simply adds to one's reputation and chances of being included in this analysis. All five states are leveraging their HIE infrastructure to support public health agencies. They use it to receive data from the field, to deliver information back to clinicians, and to combine data to enhance the resulting datasets. Importantly, all five states were able to quickly adapt their HIE to support their COVID response.

Recognizing the limitations of our methodology to identify five states to profile and the high likelihood that compelling and successful work in other states will be overlooked in this paper, these profiles nonetheless should provide useful examples for policy makers, public health leaders, and HIE executives.