Pennsylvania Patient and Provider Network (P3N)

Cross-Boundary Collaboration and Partnerships

Commonwealth of Pennsylvania

David Grinberg, Deputy Executive Director
717-214-2273
dgrinberg@pa.gov

Project Initiated: June 2011
Go Live Date: September 1, 2014

Executive Summary

Health information exchange (HIE) is the secure exchange of healthcare information to support reductions in healthcare costs while improving the quality of care. The Commonwealth of Pennsylvania, working through the Pennsylvania eHealth Partnership Authority, has implemented the Pennsylvania Patient and Provider Network, or P3N to enable a network-of-networks, federated model for health information exchange. P3N went live in September 2014.

In developing and implementing P3N, the Authority faced many challenges not only related to technology, but also related to legal and policy considerations. The Commonwealth's many interest groups have different attitudes towards HIE and different interpretations of the many healthcare related laws and regulations. There were also many private-sector initiatives prior to P3N that had started to address the challenges of HIE. Not only did those initiatives have different interpretations of laws and regulations, they had selected different technical standards and options.

In order to overcome these challenges and in order to respect HIE efforts that were already underway in the private sector, the Authority employed a massive stakeholder engagement approach. Over 500 individuals have participated as Authority stakeholders, including healthcare providers and various industry advocacy groups, insurers, academics, healthcare legal experts, healthcare technology experts, state and federal government employees, consumer/patient advocacy groups, and even volunteer citizens. The Authority engaged these groups via in-person conferences, surveys, and workgroups.

The broad range of stakeholders participated in the formulation of strategic and operational plans, development of system requirements, determination of policies, and has supported the Authority's efforts to develop and deliver outreach materials to an even broader audience. Their participation not only helped to co-opt potential opponents, but allowed the Authority to capture in-kind donations of time to help meet match requirements on federal grants, and thus control state expenditures. Good governance over the P3N is ensured by a public-private Board of Directors which has embraced transparency and application of best practices for program management.

To incentivize participation, the Authority has provided over $7.4 million in grants to private sector organizations. To date six HIOs have joined P3N. Among them, they support over a quarter of Pennsylvania hospitals as well as other providers and insurers, and momentum for P3N participation continues to grow in support of improved care for Pennsylvania's citizens. The P3N has positioned the Commonwealth well to take the next steps on the journey towards HIE, as well as to support public and private sector game-changing healthcare reform efforts.

Concept

Healthcare represents over 17% of the United States Gross Domestic Product, and over a quarter of the federal government's budget, yet the United States ranks below other industrialized nations on many measures of quality. With a population that is older and has a higher incidence of chronic disease than the national average, Pennsylvania has higher than average Medicaid spending. State costs for Medicaid are projected to rise from over a quarter of the budget to almost half by 2025. One proposed method for controlling growing costs while improving quality of healthcare outcomes is the application of modern information technology.

In 2009, under the Health Information Technology for Economic and Clinical Health Act (HITECH Act), the Department of Health and Human Services launched an ambitious effort to transform the use of technology in healthcare. Two major components of the effort included a nationwide incentive program led by the Centers for Medicaid and Medicare Services (CMS) for doctors and hospitals to adopt electronic health records (EHR) and an incentive program led by the Office of the National Coordinator for Health Information Technology (ONC) for states to establish health information exchange (HIE).

HIE allows information stored in EHRs to be securely shared among healthcare providers. The resulting improved information allows doctors to make quicker and improved diagnoses. For example, HIE reduces the chances of a doctor prescribing a medication that the patient is allergic to, or that will adversely interact with another medication the patient is taking. It also allows doctors to decrease duplicative testing. When coupled with care reform efforts to improve coordination of care, HIE helps reduce complications, especially those that result in repeated and expensive emergency room visits and readmissions to hospitals. From the patient perspective, it makes healthcare less complicated since they do not have to worry about transferring information between their providers or being subjected to unnecessary testing.

Pennsylvania's current journey toward HIE started in July 2011 with an Executive Order establishing the Pennsylvania eHealth Collaborative. The Collaborative was charged with leveraging $17.1 million provided under ONC's State HIE Cooperative program to establish statewide HIE in PA. At the time, there were numerous local and regional HIE efforts already underway in the private sector. The Collaborative engaged with and leveraged these and many other stakeholders in determining Pennsylvania's HIE roadmap.

Pennsylvania Act 121 of 2012, the Pennsylvania eHealth Information Technology Act, subsequently transformed the Collaborative into the Pennsylvania eHealth Partnership Authority. The Authority is an independent state agency governed by a public-private Board that includes representatives of various private sector stakeholders as well as the Secretary of Health and the Secretary of Human Services. Under the Board's leadership, the Authority went on to develop and implement the Pennsylvania Patient and Provider Network, or P3N.

P3N is comprised of a technology component, a governance component, and a certification component. Rather than facilitating HIE directly between EHR users, as is the case in many states, P3N facilitates interoperable exchange among private sector health information organizations (HIO). It is important to note that there is not a single national standard for interoperable HIE. Different EHR vendors have adopted and implemented different standards

within their products. Different HIOs support different standards and different HIE models with varying degrees of data centralization. Thus the P3N "network-of-networks" approach affords greater flexibility to EHR users who can select an HIO that provides a mix of technical capabilities, services, and business practices tailored to their needs, but also requires that the P3N support more than one set of technical standards.

From a technology standpoint, P3N provides a master patient index, a provider directory, a record locator service, a consent registry, and the public health gateway. The master patient index leverages demographic information from HIOs and from government agencies to create a crosswalk of patient identity. This helps to determine whether or not healthcare records located in different places belong to the same patient. The provider directory offers a similar function for provider information. The consent registry records patient choices to opt-out of statewide HIE, as is their right under Act 121. The Authority also has processes that enable patients to opt-out (or opt-back-in) either directly through the Authority or via their care providers.

The record locator service provides HIOs with the option to register the existence of clinical documents. This supports one of the several standards-based connection models available via P3N. It is critical to note that the P3N is a purely federated model, meaning that there is no patient clinical information stored at the state level. Instead, P3N facilitates the secure movement of clinical information via an HIO at the time the clinician requests it. This means that P3N is less susceptible to cyberattack, since there is no database of clinical information that a hacker could access.

Finally, the public health gateway is a P3N service provided in cooperation with Pennsylvania's Departments of Health and Human Services that replaces multiple point-to-point connections between private sector organizations and government registries. It permits streamlined reporting via an HIO to public health registries, including immunizations, electronic lab reporting, cancer, and syndromic surveillance. It also provides for submission of clinical quality measures to the Department of Human Services.

P3N went live in September 2014.

The Authority maintained a staff of approximately 12 people over the course of this initiative, with an annual average cost of slightly under $2 million. This included a mixture of state employees and contractors, with contractors used in limited duration roles. The Authority was able to leverage $1.4 million worth of in-kind donations of time by stakeholders to both limit staffing requirements and meet federal match requirements, thus controlling state funded expenditures.

Of the initial ONC funded $17.1 million grant, the Authority provided over $7.4 million in grants to private sector organizations.

The contract for P3N core services is valued at approximately $9 million over a five-year base term. IV&V services were procured at a cost of $1.1 million over a two-year term.

Significance

HIE is a significant challenge in a state as large and geographically and culturally diverse as Pennsylvania. The Commonwealth's many interest groups have different attitudes towards HIE and different interpretations of the many healthcare related laws and regulations. In 2011, it also had many private-sector initiatives that had started to address the challenges of HIE. Not only did those initiatives have different interpretations of laws and regulations, they had selected different technical standards and options. A top-down approach by the Authority would have faced significant resistance and disrupted the private initiatives already underway if the state-level HIE solution did not align with preexisting technology and policy choices.

Thus effective stakeholder engagement was an imperative and challenge for the Authority. The Authority cast an extremely broad net in identifying and engaging stakeholders. This has included healthcare providers and various industry advocacy groups like the Pennsylvania Medical Society, the Hospital and Healthsystem Association of Pennsylvania, and the PA Pharmacists Association. It includes insurers and the Insurance Federation of Pennsylvania. It includes academics, healthcare legal experts, healthcare technology experts, state and federal government employees, consumer/patient advocacy groups, and even volunteer citizens. The Authority engaged these groups via in-person conferences, surveys, and workgroups. This broad range of stakeholders participated in the formulation of strategic and operational plans, development of system requirements, determination of policies, and has supported the Authority's efforts to develop and deliver outreach materials to an even broader audience.

To provide a specific example of how stakeholders were engaged, during formulation of the Authority's initial strategic plans, a Business and Operations Workgroup convened to identify, assess and recommend business use cases, technical solutions, and operational policy frameworks to support the goals of HIE. A Finance and Sustainability Workgroup made recommendations for a sustainable revenue model for the state-level HIE initiative, and provided ideas on how to best apply available funding. A Legal, Privacy, and Security Workgroup ensured appropriate focus on and planning for the security and confidentiality of the statewide network. A Communications and Outreach Workgroup helped to identify resources and create plans to deliver necessary education for citizens and providers on HIE. And an Evaluation and Performance Workgroup helped to identify benchmarks and measures to evaluate and report on HIE initiatives.

As the work of the Authority proceeded, stakeholder engagement became more specialized and focused. Specialized workgroups were convened to help develop the requirements for the procurement of the core P3N technology. That procurement was completed in May 2013. There have been changes required in the resulting contract as a result of the rapidly evolving business and technical environment, but it is a credit to the detailed efforts that went into creating the requirements that most of these changes have been minor.

Other stakeholder engagement efforts also helped to frame the certification program for P3N participation. This included the creation of a legal framework that allows HIE participants to sign only a single set of agreements with their HIO, and permits the HIOs to sign one set of agreements with the Authority. This framework has vastly simplified the legal efforts associated with establishing broad HIE. The unified legal model was in turn made possible by the

development of consensus policies for P3N participants that balance sufficient specificity for robust privacy and security protections, while affording sufficient flexibility to accommodate variability in local capabilities and circumstances. Examples of the policies that emerged from these efforts include user management requirements, a privacy policy, an auditing policy, and a data and privacy breach policy. The policy framework also requires business continuity planning so that users joining an HIO have transition options if their HIO should, for any reason, terminate its HIE operations.

All in all, over 500 individuals participated as Authority stakeholders since 2011. In some cases, stakeholder engagement has brought together organizations who in other contexts have been policy adversaries or even marketplace competitors. In the context of the statewide HIE effort, they have been able to work collaboratively toward mutually beneficial HIE solutions. The practical upshot of such broad stakeholder collaboration has been to create allies in the effort to establish statewide HIE, especially among interest groups who might otherwise have felt challenged by the statewide effort and might even have actively intervened to disrupt it.

Ultimately, stakeholder involvement in the development of P3N helped to ameliorate many risks associated with the effort. While there are many incentives to engage in HIE thanks to programs like CMS's EHR Incentive Programs and related Meaningful Use requirements, participation in HIE is still largely voluntary. Attention to the diverse needs and concerns in the development of the network increases the likelihood that entities will follow-through in joining the resulting network. This is especially true for HIOs who played a prominent and visible role in the P3N development effort.

Another critical feature of the Authority's efforts is the Authority and P3N governance framework. While stakeholder involvement was critical, someone ultimately needs to be responsible for making decisions and overseeing the Authority's efforts to protect the public interest. The Board of Directors of the Authority is appointed by the Governor and the Legislature with positions dedicated to representing diverse private sector constituencies. Government interests are represented by the Secretary of Health and the Secretary of Human Services. Finally, the Board includes two non-voting ex-officio advisory positions elected by the general stakeholder advisory community.

The broad diversity of the Board helped to ensure that the Authority acted as a good steward of public funds. The Board created an Audit Committee to oversee annual financial audits and HIPAA security risk assessments and ensure appropriate follow-up for audit and assessment findings. The Board also created a Finance Committee to ensure appropriate policies and procedures for the management of Authority financial transactions, to oversee the creation of Authority budgets, and to manage the creation of Authority sustainability plans that include fees levied on HIOs.

During implementation of P3N, the Authority engaged independent verification and validation (IV&V) services. IV&V meant that the Board had experts, independent of either the P3N vendor or the staff, to ensure that the implementation was conducted in accordance with industry best practices. This dramatically reduced the probability of late identification of critical problems.

The Board has established, through adoption and maintenance of strategic plans, requirements for how the Authority staff does day-to-day business. Adoption of best practices related to project management, risk mitigation, and continuity of operations has ensured organizational reliability and responsiveness to lessons learned.

Finally, the Board has embraced a culture of transparency on Authority activities. Actions by the Board as well as in-depth information concerning all Authority programs are made available on the Authority's website, and the Authority routinely communicates with stakeholders via monthly newsletters and ad-hoc emails concerning important developments. Full information regarding the certification program, strategic and operational plans, results of Authority surveys, information about Authority grant programs, consumer and provider educational materials, and much more are all available on the Authority's website at www.paehealth.org.

Impact

Studies conducted for Pennsylvania's Department of Human Services indicate that there are more than 50,000 inpatient admissions each year in Pennsylvania that could be avoided with better coordination of care and transitions of care. These admissions cost nearly $345 million dollars. P3N is a foundational tool to enable improved care coordination.

Currently six private sector HIOs have either connected to the P3N or are in the process of certification and connection. Among them they currently provide HIE services to over a quarter of all hospital systems in the state, and over a third of the hospitals are participants in the Medicare EHR Incentive Program. HIE services are available in all 67 counties of the state. The Authority, working in coordination with the Department of Human Services, has sought and received millions of dollars in CMS grant funding that it offers to HIOs to onboard additional providers. Through the Authority's programs and the P3N, providers have meaningful choices in how they can connect in order to satisfy CMS Meaningful Use requirements.

Perhaps most importantly, thanks to the strong foundation that P3N has provided, various public and private sector initiatives focused on healthcare transformation can take widespread availability of HIE as a given, allowing them to focus their efforts on the business and policy challenges of reform, rather than on technical details. For example, the P3N supports Governor's initiatives such as Medicaid Expansion, Medicaid Managed Long-Term Services and Supports, the State Health Improvement Plan, and the Health Innovation in Pennsylvania Plan.

Because of P3N, Pennsylvania is well-positioned to be a leader in making the changes to our healthcare system that will both help to control costs and produce meaningful improvements in the quality of care that is delivered to our citizens.