

Success Story: Delaware Health Information Network Transitions of Care

Started in 2007, the [Delaware Health Information Network](#) (DHIN) was the first live, statewide health information network in the nation. Today it serves all of Delaware’s acute care hospitals and almost 100 percent of the State’s medical providers. The DHIN delivers more than 14,000,000 clinical results and reports each year. More than 2.1 million unique patients, including patients from all 50 states, are represented in the system.ⁱ The DHIN was able to achieve this level of success by constantly focusing on its customers’ needs and smart growth.

The Challenge: As with many early start-ups, the DHIN needed to find ways to grow its participant base and identify services that would provide value to its stakeholders. The DHIN team sought to expand its services with the goal of becoming sustainable.

The Strategy: The DHIN’s successes are unique and started long before the [Health Information Technology for Economic and Clinical Health Act \(HITECH\)](#) and the [meaningful use incentive programs](#) were enacted. In 1997, prior to HITECH legislation, a forward-looking group of health care stakeholders convened, and subsequently, a Delaware state statute for a technical Health Information Exchange (HIE) framework was passed. The state of Delaware committed 5 years of funding for this effort, while also requiring a private-funding match to create a public/private collaboration. In 2002, after 5 years of support and capitalization, the DHIN became a self-sustaining, non-profit entity under the [Delaware Health Care Commission](#); in 2007, the DHIN “went live” to become the first statewide HIE in the nation.

In 2009, the DHIN introduced a query-based health care electronic repository for viewing results with 2 years of data already available. To create a valuable resource, data providers (i.e., hospitals, labs) needed to contribute patient information to the HIE. Ambulatory providers realized the benefit of having this information in a centralized location, which led to the number of hospitals using the DHIN increasing from three to six to provide data to their important referral base. Additionally, a number of commercial laboratories and imaging groups also contributed patient data to the DHIN. A few years later, smaller hospitals joined the network, citing the need to provide and access pertinent patient health information. Some of the smaller hospitals and physician practice groups realized that it would be a competitive disadvantage if they did not join the DHIN and could potentially result in a loss of business.

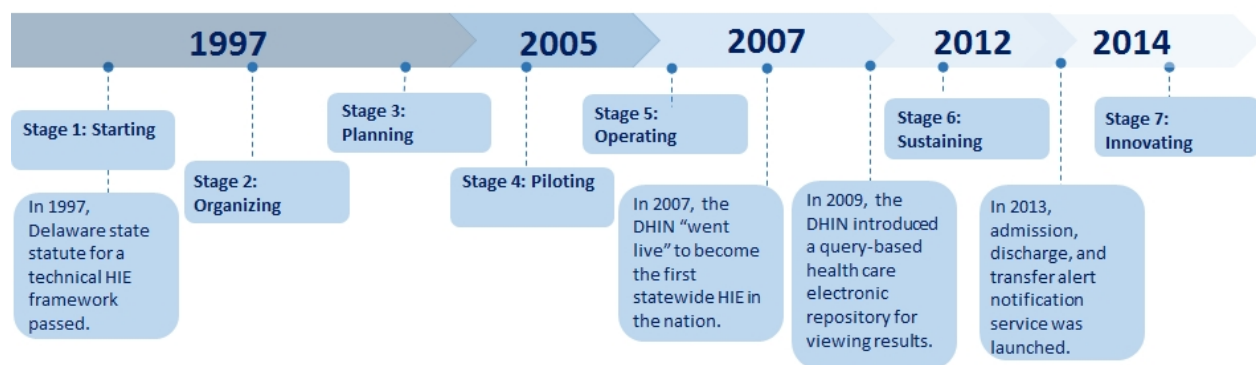
In 2010, to further understand the needs of the Delaware health care community, the DHIN performed a thorough market survey to assess the values and needs of its consumers. The results showed that the community wanted easier delivery of electronic lab results, which led the DHIN to develop a business model to sustain that service. Since many of the early HIE organizations relied primarily on grants to get started,

successful HIEs like the DHIN planned for the future, which included a sustainable business plan. This business model included charging data senders (i.e., hospitals, labs) for every result they delivered to an end point. Provider practices who “signed-off” agreed to use the DHIN as their exclusive source of results delivery.

The DHIN started small and focused on electronic results delivery for ambulatory visits, working with the three largest hospitals in the area that shared the same vision as the DHIN—to deliver electronic results to ambulatory practices. Before launching into other service offerings, the DHIN wanted to attain an 80 percent participation rate among regional hospitals for their results reporting service (lab, pathology, radiology and transcribed reports), which happened circa 2012. Subsequently in 2013, the DHIN launched the admission, discharge, and transfer (ADT) alert notification service called the Encounter Notification System (ENS), allowing practices to identify if their patients received emergency or in-patient care anywhere in Delaware or the neighboring parts of Maryland. This service has proved to be valuable and well received by the DHIN’s participants. The DHIN has also expanded ENS services, offering it to managed care health plans and plans for state employees.

The strategy for the DHIN was to build a comprehensive, longitudinal patient record for every patient in the state of Delaware. To support a transition of care, all patient information needed to be available in the DHIN for a provider to locate during a visit or stay. DHIN CEO Jan Lee states, “The community record and transitions of care are linked. Because of our history, end users in Delaware are used to going to the repository to get all the data they need.” Over the course of its history, the DHIN built its services following the eHealth Initiative HIE Maturity modelⁱⁱ (see Image 1).

Image 1: eHealth Initiative HIE Maturity Model



Lessons Learned: The DHIN’s success can be attributed to their focus on their customers’ needs and limiting their initial service offering to meet those needs. The DHIN was able to grow and expand by demonstrating value to stakeholders for that initial service, and by using their customer base to guide their next service offering. The DHIN’s key lesson learned was to focus on customers’ needs and expand in a measured way to avoid growing beyond their capacity. They created services that had a return on investment for all participants and have built a community record that is the

single source for patient information for providers in Delaware. As a result, the DHIN remains sustainable and has received no state funding since 2012.

Next Steps: Looking to the future, the DHIN plans the following:

- Implement the long-term and post-acute care (LTPAC) [translation tool](#) to share continuity-of-care documents with the DHIN. State regulations require a completed form to transition data in and out of LTPACs, and the DHIN is taking steps to reduce the burden of documentation at the time of transfer. While this process may present challenges, it will enable the DHIN to bring LTPAC data into the community health record.
- Assist the Behavioral Health community in utilizing Direct Messaging as a means of communication.
- Provide the infrastructure to allow practices to share consolidated clinical document architecture summary-of-care records with the DHIN, continuing to add additional patient information to the community health record.

ⁱ <http://dhin.org/news-releases/prmc-and-dhin-work-together-to-remove-state-line-barriers-to-medical-records/>

ⁱⁱ Source for table: Staying Alive: Determinants of HIE Sustainability A Special eHealth Initiative Report ehealth initiative, May 2, 2011.