# The State of North Dakota



**Title:** North Dakota Health Information Network

**Category:** Cross Boundary Collaboration and Partnerships

**Project Initiation:** January 2012

**Project Completion:** June 2014

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# Executive Summary

In 2009, North Dakota was in a similar position as other states, a low electronic health records (EHR) adoption rate, cumbersome and inefficient method of sharing information among medical providers, government, and consumers, and new meaningful use requirements all posed problems to providing quality healthcare to citizens.

The solution was the North Dakota Health Information Network (NDHIN). The NDHIN is a fully functioning, sustainable health information network that securely connects disparate Electronic Health Record (EHR) systems and is accessible by providers, physicians, hospitals, other health care organizations, and consumers.

Implementing the NDHIN required two things to happen. First, providers needed to acquire, install, and utilize EHR systems. Second, a system was needed that would allow providers to exchange information securely and electronically.

The project was launched in 2011 and by March 5, 2014 the system was live. As of April 2015, the NDHIN system had 694,000 unique patient records or about 94 percent of North Dakota's population. And according to the National Center for Health Statistics (NCHS), North Dakota was reported to have the highest percentage of office-based physicians in 2013 that met the criteria for a basic EHR system (84%). At the time, the national average was 48%.

This project required a monumental statewide collaboration of state agencies, healthcare providers, plans, vendor partners and many healthcare associations and organizations. It has also benefited a wide range stakeholders. For example, provides can reduce patient intake time and meet a meaningful use requirement. Patients can access information through a patient portal and experience smoother transitions among healthcare facilities and through the continuum of care. And, state government can make informed decisions because North Dakota Department of Health registries are updated simultaneously with updates in EHR systems. These are some of benefits yielded from the project and demonstrate why this project was significant.

The NDHIN truly demonstrates that "States Run on IT," as was acknowledged by North Dakota Governor Jack Dalrymple's statement that EHRs and the NDHIN are an important part of "strengthening the quality and accessibility of healthcare in our state."

## Business Problem and Solution

### Problem

Before this project, North Dakota, like other states, had providers in various stages of electronic healthcare records (EHR) adoption with many still using paper processes. And even for those providers that were utilizing some form of an EHR system, other than for some lab reporting, systems were not interoperable. As a result, information was essentially in silos that were inaccessible by other providers. The exchange of information required staff to physically copy and mail or fax files among medical facilities. Unless requested in advance, the information was not available at the time of treatment.

These limitations created many problems within North Dakota's healthcare system. For example, if a patient was in a car accident and taken to the emergency room of a hospital they had not previously been to, the treating provider would have no medical record for the patient. The provider may be missing critical patient information, such as allergies, previous surgeries, or other pre-existing conditions that could dramatically affect care.

Beyond emergency situations, incomplete information could cause duplicate treatments if providers weren't aware a patient had already received certain care. In other instances, it may result in a trip back to the provider once the information is obtained. In a rural state like North Dakota, this could be a lengthy trip.

These few examples demonstrate the immense affects a low EHR adoption rate and lack of connectedness among EHR systems caused in North Dakota. North Dakota healthcare providers needed faster and easier sharing of medical records to improve coordination of patient care, reduce duplicate treatments, and avoid mistakes.

In addition to the above mentioned problems, the Health Information Technology for Economic and Clinical Health Act of 2009 required medical providers to meet new Meaningful Use requirements, which includes the capability to view, download, and transmit health care data, and report electronically to the Health Department.

### Solution

To address the problems North Dakota was facing, the Health Information Technology Advisory Committee (HITAC) and the ND Information Technology Department (ITD), designed and implemented the ND Health Information Network (NDHIN), a fully functioning, sustainable health information network to securely connect the disparate EHR systems and provide access by qualified organizations representing providers, physicians, hospitals, other health care organizations, and consumers.

The primary business requirement for the project was to securely connect the EHR systems of North Dakota healthcare providers, healthcare plans, and other participants to improve healthcare quality, patient safety, and overall efficiency of healthcare and public health services in North Dakota. This concept is epitomized in the NDHIN's vision "Quality Healthcare for all North Dakotan's anywhere, anytime."

## How NDHIN Works
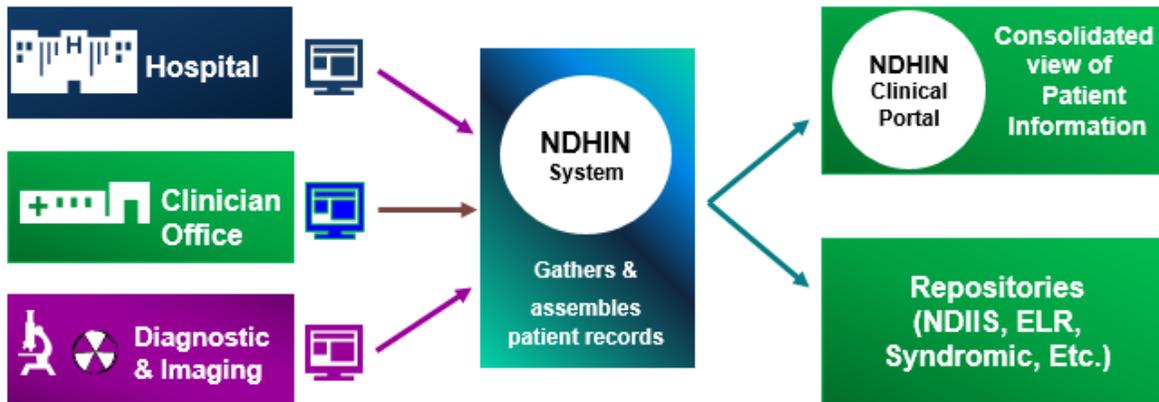
The NDHIN works by connecting hospital and provider electronic health record systems through secure interfaces. These interfaces include: admission, discharge and transfer; laboratory and radiology results; medical document management; immunization and continuity of care document feeds. These feeds are consolidated from all data sources and are then displayed in a Patient Summary when a patient is queried by an authorized user, or are submitted to the Department of Health automatically.

## Governance and Project Management

North Dakota established a Health Information Technology Advisory Committee (HITAC) in 2009 to facilitate the adoption and use of health information technology and exchange to improve healthcare quality, patient safety and overall efficiency of healthcare and public health services in North Dakota. This committee provided oversight and guidance for the NDHIN project.

This project followed the Project Management Institute's PMBOK project management methods and comprehensive project management and procurement standards established by the State of North Dakota.

Additionally, a statewide communication plan was implemented, which included provider and consumer education material, training programs, newsletters, project updates, user group meetings, and tradeshows participation.

## Request for Proposal and Project Timeline

In late 2010, the HITAC released a request for proposal (RFP). After a comprehensive procurement process, a contract was signed with Axolotl/OptumInsight in late 2011. The implementation of the NDHIN began with deploying Direct secure messaging

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functionality in 2012. However, in February 2013, before the query-based services were implemented, the contract with Axolotl/OptumInsight was mutually terminated.

Despite this setback, the team persisted. An informal RFP for the implementation of Direct and Query-based services was then released to the top two remaining vendors from the original procurement process. In March 2013, the contract was awarded to Orion Health and negotiations were completed. In May 2013, a major kickoff event was held for all stakeholders in Bismarck. Over the next 9 months, an astounding amount of work was accomplished by the small NDHIN/ Orion Health team and healthcare organizations across North Dakota.

By March 5, 2014 the system was live. 140 organizations had signed agreements with the NDHIN, 35 of which were connected or in the process of connecting to the NDHIN, and 680 authorized clinical users were set up for NDHIN Direct Secure Messaging. The actual cost of the project was $5,129,561.85, which was 5.6% under the baseline budget of $5,437,277.41.

## Significance

### Gubernatorial alignment

North Dakota Governor Jack Dalrymple stated the following in a March 2014 press release, "By strengthening the quality and accessibility of healthcare in our state, we enhance the livability of our communities and the quality of life of our people. Sharing electronic health records is an important part of those efforts, enhancing patient care while reducing healthcare costs."

These goals also align with NASCIO's State CIO Priorities for 2014, specifically in the field of healthcare.

### Collaboration among Stakeholders

Unprecedented collaboration was achieved amongst a wide range of stakeholders. By building consensus, trust was established between the stakeholders and a common statewide plan was developed, agreed upon, and implemented. Below is a table showing many of the organizations that worked together to complete this project.

| Government | Private Sector | |
|---|---|---|
| ND Health IT Advisory Committee | ND Association of Home Care | ND Chiropractic Association |
| ND Department of Health | ND Medical Association | ND Board of Pharmacy |
| ND Department of Human Services | Regional Extension Assistance Center for Health IT | ND State Association of County and City Health Officials |
| ND Division of Emergency Medical Services and Trauma | ND Long Term Care Association | Hospital and Provider Representation |
| ND Legislature | ND Hospital Association | AARP |

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| ND Health Information Network participants | ND Optometric Association | Quality Health Associates of ND |
|---|---|---|
| ND Governor's Office | ND Dental Association | |
| ND Pharmacists Association | | |
| NDHIN Team | | |

## Benefit of the Project

Many individual and organizations have benefited from this project, namely healthcare providers, patients, and government.

### Primary Benefits to Healthcare Providers

- EHR Adoption reduces patient intake time and allows patient information to be readily available
- Direct secure messaging enables providers to securely exchange protected health information in formats that can be easily incorporated into EHRs, which previously was not possible. It also allows providers to meet a meaningful use requirement
- Clinical Portals improve patient care by making accessible the most recent updates to medical records
- Integration with the Department of Health's Immunization Registry and Public Health Reporting for ELR and Syndromic Surveillance allows simultaneously registry updates and eliminate dual data entry
- A loan program established by the State has allowed 25 providers to acquire EHR systems that otherwise may not have afforded an EHR system or participate in the NDHIN. To date, over $12.5 million dollars have been loaned to providers
- The ND Prescription Drug Monitoring Program was connected to the NDHIN, allowing providers quick access to vital treatment information
- The NDHIN became a Health Information Service Provider (HISP), which allows providers access to XDR and web based services to exchange information securely and efficiently

### Primary Benefits to Patients and Citizens of North Dakota

- Faster and easier coordination of patient information among medical facilities, which has many benefits, such as: minimizing test duplication, smoother transitions among healthcare facilities and through the continuum of care, better emergency room preparedness, and complete information available during the time of treatment
- Empowers a patient's doctor to make more informed decisions
- Avoids loss of key pieces of patient health records during unexpected events and disasters
- The Patient Portal includes a process for patients to include their Advance Care Directives. This is subsequently available to providers participating in the NDHIN

### Primary Benefits to local, state, and federal government

- Registries are updated simultaneously with updates in EHR systems improving information for decision making and disease management

- Reducing duplicate testing reduces costs to payers, such as Medicare, Medicaid and government provided employee healthcare
- Timely and more complete information is available for syndromic surveillance
- Direct secure messaging has allowed Medicaid payers to efficiently provide claims payment information to providers using a secure email process

## Measurements

As of June 2014, the NDHIN system had 383,000 unique patient records, or about 52 percent of North Dakota's population. By April 2015, it had 694,000 records or about 94 percent of North Dakota's population.

According to the National Center for Health Statistics (NCHS), North Dakota was reported to have the highest percentage of office-based physicians in 2013 that met the criteria for a basic EHR system (84%). The national average is 48%.

The following section outlines the defined Project Objectives that were met:
OBJECTIVE: Increase the number of community pharmacies e-prescribing to 95% and the physicians electronically routing prescriptions to 50% by December 31, 2013.
RESULT:  For the month of December 2013, 168 of 177 (95%) community pharmacies were activated with Surescripts and 167 (94%) received e-prescribing transactions. Based upon Surescripts latest report available, North Dakota had 98% of physicians routing prescriptions electronically as of December 2012.

OBJECTIVE: Develop the capability of the reference labs that handle 95% of the reference lab work to exchange bi-directional data by March 14, 2014.
RESULT:  As of March 14, 2014, reference labs can exchange lab requests and results using Direct and query based services using health language 7 transactions.

OBJECTIVE: Increase the exchange of Patient Care Summaries by ensure providers have at least one method to securely, electronically exchange patient care summaries
RESULT:  Providers can share patient care summaries securely using Direct.

OBJECTIVE: Increase the number of practice-based electronic immunization transactions reported to the North Dakota Immunization Information System (NDIIS) to at least 50% of all reported transactions.
RESULT: From September 1 through December 31, 2013, the average number of practice-based electronic immunization transactions reported to the NDIIS represented 56.5 percent of all transactions.

OBJECTIVE: Within six months (of Phase 1 completion), identify a process to refer smokers to the ND Tobacco Quitline using an automated approach and identify process for Quitline to be able to respond back to providers with progress reports on referred smokers.
RESULT: Direct is set up to be used by the Quitline for referrals.

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