

Project Startup Report

Submitted to the IT Committee January 2011

Project Name: ND Immunization Information System (NDIIS) Interoperability

Agency: ND Department of Health

Business Unit/Program Area: Disease Control

Project Sponsor: Kirby Kruger

Project Manager: Mark Molesworth

Project Description

The North Dakota Immunization Information System (NDIIS) is a confidential, population-based, computerized information system that attempts to collect vaccination data about all North Dakotans. The NDIIS is an important tool to increase and sustain high vaccination coverage by consolidating vaccination records of children from multiple health care providers, providing immunization coverage rate reports for providers, and providing official immunization forms. Forecasting and reminder/recall is currently being added to the NDIIS. North Dakota state law requires that providers enter all childhood immunizations into the NDIIS. Children are entered into the NDIIS at birth, through a linkage with electronic birth records. The electronic birth certificate contains hepatitis B birth dose data including date of administration and vaccine lot number. An NDIIS vaccination record can also be initiated by a health care provider at the time of a child's first immunization. The NDIIS has the capability of collecting vaccination data on adult patients, as well as children.

The NDIIS was established in 1988. The original system required users to dial in via a modem to connect and search for patients' vaccination records. The North Dakota Immunization Program contracted with Blue Cross Blue Shield of North Dakota (BCBSND) in 1996 to develop upgrades from the original system. In November 2001, the existing registry was converted into a web-based application. BCBSND continues to perform maintenance and upgrades on the NDIIS today.

The NDIIS has high provider participation with over 95% of public and private childhood (< 6 years of age) immunization sites enrolled and entering data into NDIIS. However, due to the lack of integration between individual Electronic Health Record (EHR) systems and the NDIIS, most providers are required to enter immunization data twice.

The North Dakota Department of Health (NDDoH) has been awarded a grant to increase interoperability between the NDIIS and various EHRs throughout the state. Interoperability between the NDIIS and EHRs at provider practices will improve the completeness of immunization histories available to clinicians and public health by ensuring that all vaccine doses administered are in the NDIIS. Interoperability will also ensure that doses are entered in the NDIIS in a timely manner. Health care provider practices will benefit from interoperability because duplicate data entry into the NDIIS and their own private EHRs will no longer be necessary. Other activities of this project include participating on a federal interoperability panel of experts, selecting which provider practices and EHRs to connect to, developing implementation and sustainability plans for interoperability, implementing interoperability specifications in the NDIIS and selected EHRs, and evaluating the success of this activity. Funding was granted for contracts with BCBSND, who maintains the NDIIS, Information Technology Department (ITD) for project management services, and various provider practices and their EHR vendors.

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Business Needs and Problems

The business needs and/or problems required by the Federal grant that are preventing the Department of Health from fully realizing their organizational mission and have thereby led the agency to research potential solutions include:

- To comply with the grant requirements, NDDOH must increase the number of bi-directional, EHR-NDIIS practice-based connections available
- To comply with the grant requirements, NDDOH must increase the number of real time, practice-based electronic immunization transactions reported to the NDIIS each week.
- To comply with the grant requirements, NDDOH must maintain the percent of immunization data received by the NDIIS in a timely manner (i.e. 7 days).

Key Metrics

Project Start Date	Project End Date	Original Baseline Budget
11/01/2010	04/13/2012	Original Baseline - \$569,634 Management Reserve - \$50,387 Grant Award - \$620,021

Objectives

Project Objectives	Measurement Description
This section will have both External (E) and Internal (I) objectives. External will be defined as those objectives necessary to meet the stipulations of the federal grant funding source and internal will be those objectives that are specifically defined by NDDoH.	
<u>Business Need/Problem #1:</u> To comply with the grant requirements, NDDoH must increase the number of bi-directional, EHR-NDIIS practice-based connections available (no interfaces exist at this time).	
<u>Objective 1 (E):</u> By August 31, 2012, increase the number of enhanced EHR-NDIIS practice-based interfaces available by 100%.	<u>Baseline:</u> 0% <u>Measurement:</u> Progress towards achievement of the objective will be determined by the number of enhanced immunization practices divided by the total number of immunization practices.
<u>Objective 2 (I):</u> By August 31, 2012, create interfaces between the four primary Electronic Health Record (EHR) vendors including their highest volume North Dakota customers (Cerner, Centricity, Epic, Indian Health Services Resource and Patient Management System (RPMS)).	<u>Baseline:</u> 0 <u>Measurement:</u> 4

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Objectives	
Project Objectives	Measurement Description
<u>Business Need/Problem #2:</u> To comply with the grant requirements, NDDOH must increase the number of real time, practice-based electronic immunization transactions reported to the NDIIS each week.	
<u>Objective 1 (E):</u> By August 31, 2012, increase the number of practice-based electronic immunization transactions reported to the NDIIS each week by 10%.	<u>Baseline:</u> 0% <u>Measurement:</u> Progress towards achievement of the objective will be determined by the number of electronic transactions each week before enhancement divided by the baseline number of electronic enhancements.
<u>Objective 2 (I):</u> By August 31, 2012, the number of practice-based electronic immunization transactions reported to the NDIIS will be 50% of all reported transactions.	<u>Baseline:</u> The baseline for electronic submissions is 0%. A baseline of submissions by the target providers shows they account for 54% of all reported transactions. <u>Measurement:</u> Progress towards achievement of the objective will be determined by the number of electronic transactions each week before enhancement divided by the total transactions each week after enhancement.
<u>Business Need/Problem #3:</u> To comply with the grant requirements, NDDOH must maintain the percent of immunization data received by the NDIIS in a timely manner.	
<u>Objective 1 (E):</u> By August 31, 2012, maintain the percent of immunization data received by the NDIIS within 30 days of administration at a minimum of 90%.	<u>Baseline:</u> 93% <u>Measurement:</u> Progress towards achievement of the objective will be determined by querying NDIIS data and determining the percent of immunization data received by the NDIIS within 30 days of administration.
<u>Objective 2 (I):</u> By August 31, 2012, increase the percent of immunization data received by the NDIIS within 7 days of administration to a minimum of 90%.	<u>Baseline:</u> 76% <u>Measurement:</u> Progress towards achievement of the objective will be determined by querying NDIIS data and determining the percent of immunization data received by the NDIIS within 7 days of administration.

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Cost/Benefit Analysis

Anticipated Benefits of Resolving Business Need/Problems #1 and #2: This will reduce duplicate data entry for the providers, provide more complete immunization records (especially for adult records), and increase provider participation.

Anticipated Benefits of Resolving Business Need/Problem #3: Increases the accuracy and timeliness of each patient's immunization record. Providers will have access within their individual EHR systems and will not be required to log into the NDIIS system to access immunization records.

Key Constraints

- The project is grant funded with a total budget not to exceed \$620,021
- Based on the nature of the grant, all funds must be expended by August 31, 2012
- BCBSND hosts the registry and must provide the technical expertise for interoperability
- The top seven high volume providers must be integrated with the NDIIS
- All integrations must be HL7 compliant
- This project must comply with Large Project Oversight and EA Standard STD009-05
- This project must comply with all grant specifications and ARRA reporting requirements
- The priority of constraints is as follows:
 1. Budget
 2. Schedule
 3. Quality
 4. Scope

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Risks

Risks of Performing the Project:

Risk: This project may set a precedent for future enhancements wherein the providers or vendors have an expectation that the State will provide funding to support the effort.

Impact: This could negatively impact relationships between providers/vendors and the NDDoH.

Response: (Mitigate) Communicate with all prospective providers/vendors early in the planning phase to set expectations for those who may not be selected for this project.

Risk: Due to the automation of the entry, there is a reduction in manual data quality control. This results in a risk of reduced data quality which could cause users to lose confidence in the registry.

Impact: This could result in less provider buy-in for using the registry.

Impact: This would impact the State by providing less accurate data for analysis.

Response: (Mitigate) The scope of this project will required bi-directional, real time transactions. In addition, quality will be planned into the project to include the automation of field and data validation.

Risk: Limited resources at BCBSND will be allocated to this project and will result in a reduction of effort allocated to other NDDoH related ARRA projects.

Impact: All ARRA projects are grant funded and have schedule deadlines for completion. Lack of resources may impact the successful completion or quality of one or more projects.

Response: (Mitigate) BCBSND has committed to contracting with an HL7 consultant to support their limited resource pool.

Risk: There is a risk that not all selected providers will agree to participate in the project.

Impact: This would directly impact the success of the objectives defined above in relation to the volume of data that could be impacted via this effort.

Response: (Accept) The project team has a general confidence that providers will want to engage in this project as early adopters to take advantage of the funding while reducing duplicate data entry.

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Risks - Continued

Risks of not Performing the Project:

Risk: Ongoing duplicate entry would potentially result in a loss of providers as they acquire their own EHRs.

Risk: The need to upgrade to HL7 version 2.5.1 remains and there would be a need to identify funds to provide for that service.

Risk: Lost opportunity for compliance with HL7 for larger HIT effort.

Risk: The business need for interoperability would remain and the responsibility for achieving it would be transferred to individual health care providers.

Risk: As this Federal grant was competitive in nature, and NDDOH made a commitment to the effort in the grant application, subsequently being awarded the funds, it would be detrimental to the relationship with the grantor(s) to return the funds at this time.