Challenges implementing a Bi-Directional Immunization Interface for MU2

Add a Pictures of Affinity Corporate or Hosptial

Presenters:

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Desired Outcomes:

- Difficulties of Implementing a Bi-Directional Interface in Wisconsin and other state registries
- Difference in the HL7 approved format from MU1 (HL7 2.3/2.4) and MU2 (MH7 2.5.1)
- Understand how an ACIP compliant immunization forecaster can improve your immunization coverage rates

ImmsLink Product

- What is ImmsLink?
  - Software program that is integrating into the clinical workflow that allows for bi-directional communication with a state registry and provides the ability to view the patients ACIP Immunization schedule from within visit
- What are the benefits of an ImmsLink Interface:
  - Eliminate double entries
  - Real time Uploads
  - Download Vaccine hx from Outside Clinic, Hospitals, Health Departments, Schools or Pharmacies
  - View your patients ACIP schedule with a single click

Multi Specialty "22 Locations"

- Approximate ? active patients?
- Provide 5,256 of vaccines/month
- 120 Full Time Nursing Staff

EMR/Centricity Experience

- Went Live on Centricity EMR in 2011
- Currently in the Early Adopter Program for Centricity EMR 9.8
- We have been using the CHUG and PPD encounter form to record Immunization consent. Switching to the MDEMR Immunization MG form

Nursing Workflow:

- Use WIIS to review immunizations (State Registry)
- Vaccine administration:
  - Directly in the WIIS Registry and Download the results back into the EMR flowsheet.

Meaningful Use:

- Menu Set Measure 9:
- Stage 1:Menu measure. Capability to submit electronic data to immunization registries or immunization information systems and actual submission according to applicable law and practice. Only one test was required to submit to electronic immunization registry.
  - DATE COMPLETED
- Stage 2: Now a Core Measure. Successful ongoing submission of electronic immunization data from a Certified EHR technology to a immunization registry or an immunization information system for the entire EHR reporting period.
  - Upgrading Now (Expect to be moved to production in 2 weeks)

Why Connect to your State Immunization Registry

- Required for MU2 attestation
- They save money by ensuring patients get only the immunizations they need
- They provide a secure site of a single record storage for school, day care, camp, hospitals and other requirements
- They identify at-risk patients in the event of disease outbreaks, natural disasters or recalls

Deployment started in 2011 with MD EMR Systems and Lost Creek Consulting. Went live on Registry Downloads in 2012. Currently upgrading to MU2 certified release and on-boarding for Uploads to the Registry.

Mike Duckworth
Director of ImmsLink Product and Sales
www.stchome.com

STC and ImmsLink History

- We are a national immunization registry company that has been in business over 25 years
- We are the State IIS vendor in 9 states
- When Katrina hit New Orleans in 2005 we where able to connect all 50 states bi-directionally with the state of Louisiana in less than 48 hours
- Purchased the ImmsLink Program from MDEMR Systems in Feb 2013
- Certified the ImmsLink Tool for MU2 in May 2013
- Integrated the STC Forecaster into ImmsLink in July 2013

STC Background

We are immunization experts.

We focus on:

- Providing vaccine intelligence for information sharing and decision support at the point of care
- Reporting vaccine coverage rates and providing tools to monitor and improve rates
- Creating seamless bi-directional electronic exchanges between private and public providers
- Supporting outcomes and population health stewardship for the organization and their patients

What is Happening Now

Meaningful Use requirements	• Mandated data exchange with state IIS • State requirements may exceed Meaningful Use guidelines • Stage 3 requires bi-directionality

Demonstrate improved clinical outcomes	• Immunization Coverage rates quality goals for multiple groups
	  ○ MU Quality goals – must use
	  ○ Insurance plan – cash incentives
	• Clinical outcomes should follow ACIP recommendations
	• Documentation standards are regulated

Single point of entry	• De-duplication is a massive undertaking • Universal application for immunization history • Single source for patient recommendations using ACIP schedule • Provider preferences for data entry point with the state IIS • Inventory management Deduction
Constant change	• New requirements • Complicated CDC, ACIP vaccination schedule (state schools) • Quality control

ImmsLink Product Line

- **Full Product Suite**
  - Integrated Connector Tool
  - Immunization Forecaster
- **Bi-directional interface**
  - Query state registry for patient history
  - Support for single and multiple patient matches
- **IIS Data Submissions**
  - Meaningful Use Stage 2 Certified
- **Integrated vaccine recommendations**
  - Fully compliant with ACIP guidelines
  - Automatically receive all updates

Issues Connecting to the Wisconsin Registry

- Troubleshooting the State IIS transport options
- Constant Changes to the registry
- Trade name must match each CVX code
- Difficult On-Boarding Procedure
- State does NOT follow all of the MU2 requirements

Issues Connecting to other Immunization Registries

- Long waiting time to get in the Registry Queue
- States do NOT allow exemptions
- Strict QA process (95% accuracy with all submissions)
- SSL setup and expirations
- Each state not following the same HL7 format
- No Resources at the State
- Not Understanding the State IIS on-boarding procedures

ImmsLink Deployment Issues

Critical Decision Points are:

1. Determining what immunization data is currently entered into the EMR and in what format
2. Determining what encounter form was being used and if site wants to continue to use the same form or the MDEMR Immunization approved form.
3. Determine if we need to migrate the historical observation to a new encounter form
4. Does the state allow for bi-directional
5. Has the site entered all vaccines in both the EMR and registry

MU1 vs MU2 HL7 formats

Meaningful Use 1 (HL7 2.3/2.4)

Required Fields

1. Race, Address, Guarantor, Next of Ken and Facility ID
2. Correct CVX/CPT code
3. VFC Eligibility at the Patient Level (PV1 segment) – VFC Clinics
4. Manufacture and Dose

Optional Fields

1. Route, Site, Expiration Date

2.3 / 2.4 HL7 Message

2.5.1 / 2.4 HL7 Message

MU1 vs MU2 HL7 formats

Meaningful Use 2 (HL7 2.51 v1.4)

Required Fields

1. Race, Ethnicity, Address, PH#, Guarantor, Next of Ken and Facility ID
2. Correct CVX/CPT/Trade name code
3. VFC Eligibility at the Dose Level (OBX segment)
4. Funding Source (Required for Inventory Management)
5. VIS (No Multi VAC sheet allowed)
6. Refusals (With unique CVX code)
7. Manufacture, Route, Site, Expiration Date, Dose
8. Ordering Provider (every new vaccine)
9. Vaccinator (every new vaccine)
10. Protected Data, Mothers First and Maiden Name
11. Chicken Pox Exposure

Optional Fields

1. Varies State to State

ImmsLink DEMO

Why is an Immunization Forecaster Important

- Public Health Benefits
  - Assists patients and providers with following and complying with complicated vaccine schedules
  - May reduce occurrence of adverse events
  - Increase patient protection from disease
  - Outbreak management
- Financial Benefits
  - Eliminates repeating of vaccine doses
  - Improve accuracy of missing vaccines

Complicated Immunization Schedules

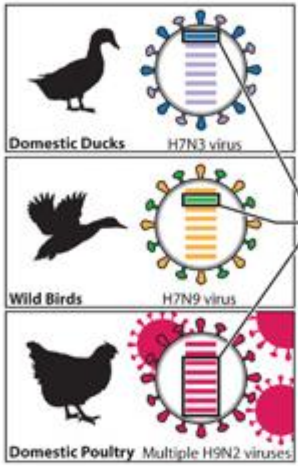
Gary Wheeler, Hewlett Packard (HP)

tter Expert

Lead

H7N9 Virus Origin Diagram

Genetic Evolution of H7N9 Virus in China, 2013



The eight genes of the H7N9 virus are closely related
Asia. The virus likely emerged from "reassortment," a
This can result in the creation of a new influenza viru
events may have occurred in habitats shared by wild
bought and sold for food. As the above diagram show
(neuraminidase) gene from wild birds, and its six rem

Centers for Disease
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National Center for Im
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On This Page

Reporting Variant Influenza Viruses

Domestically, CDC reports these cases in its weekly national influenza surveillance report, FluView. CDC also is required to report all cases of human infection with novel influenza viruses (which would include variant viruses) to the World Health Organization (WHO) as part of the International Health Regulations (IHR). The IHR is an international legal instrument entered into force in 2007 with the goal of helping the international community prevent and respond to public health risks with potential global impact. The IHR requires countries to report certain disease outbreaks and public health events, including any confirmed case of human infection with a "novel" (non-human) influenza virus.

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- Although HPV vaccination is not specifically re... recommended (see above).

Forecasting

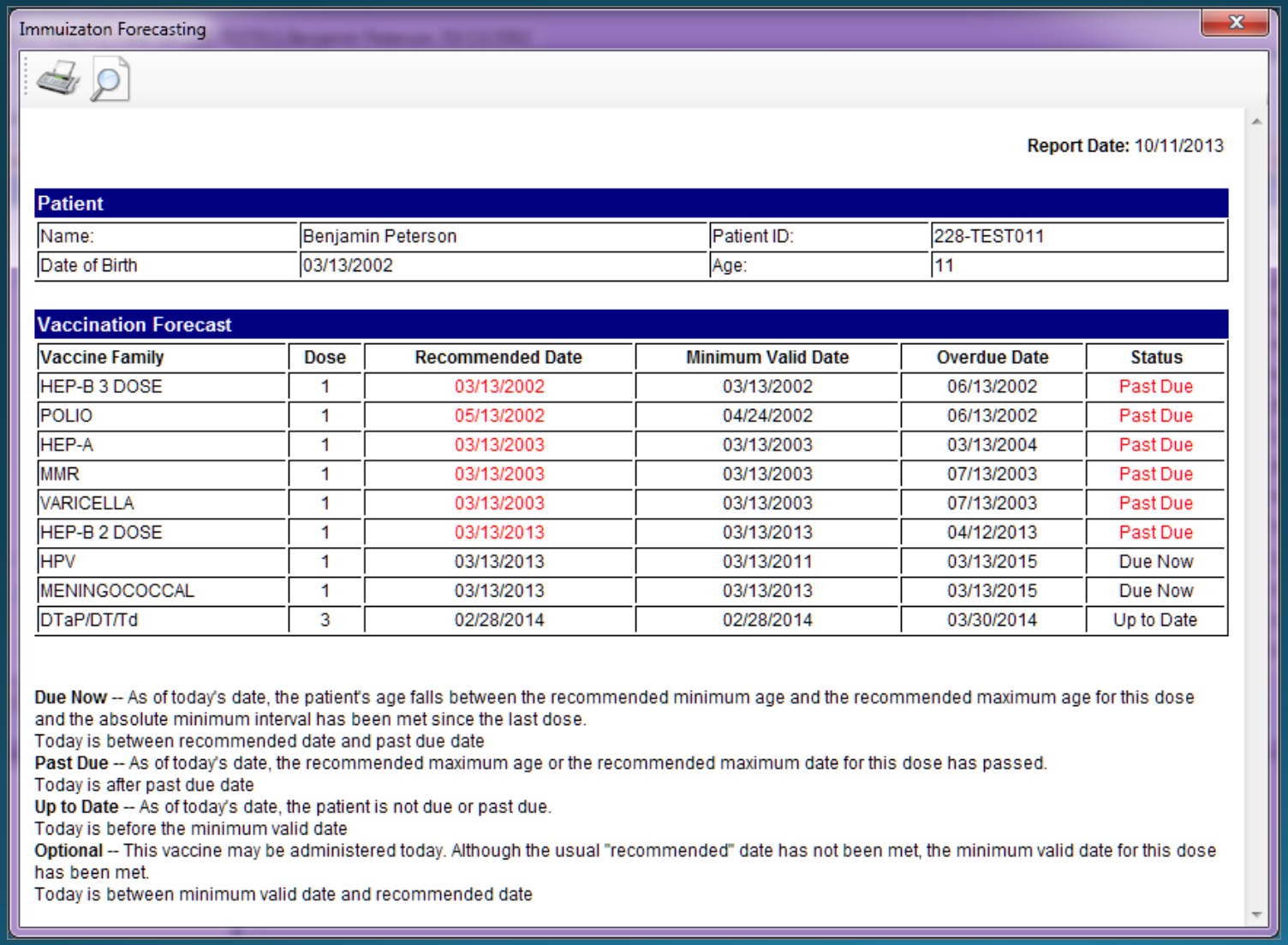
Vaccination Forecast

The forecast automatically switches to the accelerated schedule when a patient is behind schedule.

Vaccine Family	Dose	Recommended Date	Minimum Valid Date	Overdue Date	Status
Tdap	1	06/02/2007	06/02/2007	07/02/2007	Past Due
HEP-B 2 DOSE	1	06/02/2011	06/02/2011	07/02/2011	Past Due
MENINGOCOCCAL	1	06/02/2011	06/02/2011	06/02/2013	Past Due
HEP-B 3 DOSE	2	06/30/2011	06/30/2011	07/30/2011	Past Due
FLU	2	10/01/2013	10/01/2013	10/31/2013	Up to Date

- Follows Advisory Council on Immunization Practices (ACIP) national guidelines
- Automatically calculates forecasted vaccinations in 4 categories
  - *Recommended Date*
  - *Minimum Valid Date*
  - *Past Due Date*
  - *Maximum Date (Maximum age a patient is eligible)*
- Vaccination logic and forecasting updated whenever ACIP recommendation changes
- Supports state-specific changes to meet law or policy requirements that vary from the ACIP guidelines

ImmsLink ACIP Forecaster



Report Date: 10/11/2013

Patient

Name:	Benjamin Peterson	Patient ID:	228-TEST011
Date of Birth	03/13/2002	Age:	11

Vaccination Forecast

Vaccine Family	Dose	Recommended Date	Minimum Valid Date	Overdue Date	Status
HEP-B 3 DOSE	1	03/13/2002	03/13/2002	06/13/2002	Past Due
POLIO	1	05/13/2002	04/24/2002	06/13/2002	Past Due
HEP-A	1	03/13/2003	03/13/2003	03/13/2004	Past Due
MMR	1	03/13/2003	03/13/2003	07/13/2003	Past Due
VARICELLA	1	03/13/2003	03/13/2003	07/13/2003	Past Due
HEP-B 2 DOSE	1	03/13/2013	03/13/2013	04/12/2013	Past Due
HPV	1	03/13/2013	03/13/2011	03/13/2015	Due Now
MENINGOCOCCAL	1	03/13/2013	03/13/2013	03/13/2015	Due Now
DTaP/DT/Td	3	02/28/2014	02/28/2014	03/30/2014	Up to Date

Due Now -- As of today's date, the patient's age falls between the recommended minimum age and the recommended maximum age for this dose and the absolute minimum interval has been met since the last dose.
Today is between recommended date and past due date
Past Due -- As of today's date, the recommended maximum age or the recommended maximum date for this dose has passed.
Today is after past due date
Up to Date -- As of today's date, the patient is not due or past due.
Today is before the minimum valid date
Optional -- This vaccine may be administered today. Although the usual "recommended" date has not been met, the minimum valid date for this dose has been met.
Today is between minimum valid date and recommended date

CDC – Important Sites

CDC Code Sets
http://www.cdc.gov/vaccines/programs/iis/code-sets.html
CDC – State IIS Contacts
http://www.cdc.gov/vaccines/programs/iis/contacts-registry-staff.html
CDC – VIS sheets
http://www.immunize.org/vis/
CDC – Schedules
http://www.cdc.gov/vaccines/schedules/index.html
CDC – US Vaccine Names
http://www.cdc.gov/vaccines/about/terms/USvaccines.html
CDC – HL7 Guide
http://www.cdc.gov/vaccines/programs/iis/technical-guidance/hl7.html

Questions?