



**Department
of Health**

Exchange Between IIS and Vaccine Preventable Disease Unit, a Public Health Use Case

New York State Immunization Information System (NYSIIS)
2015 AIRA National Meeting
April 21, 2015

Overview

- A 'unique' public health use case for HL7 query functionality
- Use of existing IIS functionality

Background

- NYSIIS (New York State Immunization Information System)
 - Mandated for persons <19 year old
 - Adult Consent required
- CDESS (Communicable Disease Electronic Surveillance System)
 - Vaccine Preventable Diseases (VPD) reportable by law
 - Local Health Dept. (LHD) investigate cases
 - Immunization histories – component of case reports

Current Process in NYSIIS

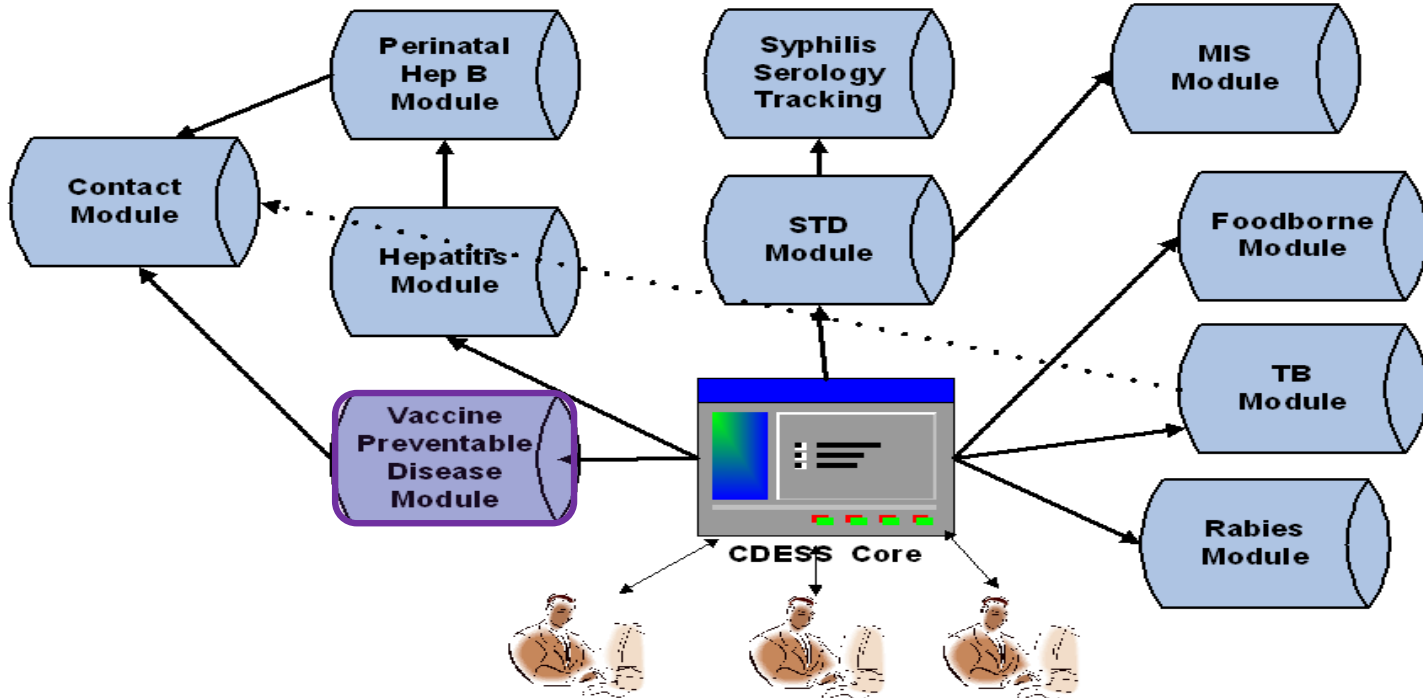
- Direct Data Entry
 - Direct Data Query via the User Interface
- HL7 batch load submissions
 - Manual upload
 - Automated - via Universal Public Health Node (UPHN)
Bidirectional update files
- HL7 Query
 - Functionality available but not in widespread use
 - Provide full immunization history

Current Process CDESS

- Data received via multiple sources
 - Laboratories
 - Hospitals
 - State, regional and local health department
- Electronic uploads as well as direct data entry
- Vaccine Preventable Disease one of several modules
- Core data elements collected
 - Demographics
 - Disease history
 - Vaccine history



CDESS



Vaccine Preventable Diseases reported to CDESS

- Diphtheria
- Haemophilus Infl, B
- Hepatitis A and B
- Influenza
- Measles
- Mumps
- Meningococcal
- Pertussis
- Pneumococcal
- Polio
- Rubella
- Tetanus

VPD Reported to CDESS

Disease	2011	2012	2013
diphtheria		1	
HIB	4	6	5
HepA	48	64	70
HepB	58	56	42
Measles	7	1	3
Mumps	10	6	6
Pertussis	931	2712	601
Rubella		1	1
s Pneumo - drug res	42	31	18
s Pneumo intermediate	39	28	24
S Pneumo Sens	900	794	601
S Pneumo Unk	199	184	112

Current Process CDESS – con't

- LHD investigate VPD cases
 - Review each reported case history
 - Gather additional information
 - NYSIIS main point of reference for Immunization data
 - Enter data into CDESS for probable and confirmed cases
- NYS DOH staff review CDESS reports
 - Completeness
- Any missing or inaccurate data is manually updated

Patient Information

Name: *Mouse *Mickey
 Last First Middle Suffix Maiden

Alias:
 Last First Middle

Guardian's Name: Mouse1 Momma
 Last First Middle

Phone No: (518) 555 - 1212 () - X () -
 Home Cell/Work Alternate Cell/Work

Email:
 Email

Physical Address:

1 Main Street
 Street No./Street 1 Street 2

* ALBANY 2 C
 Locality Zip

NEW YORK
 StateCode Census

Mailing Address (if different)

Street No./Street 1 Street 2

City Zip

NEW YORK
 StateCode

Foreign Resident: Please Pick One

Date of Birth: 01/01/2008 Age: Please Pick One
 Units Country of Birth: Please Pick One

Occupation: student/school
 Other

Setting: School PS 13
 Other

Ethnicity: HISPANIC OR LATINO

Sex: male

Pregnant: Please Pick One

Race:
 Check all that apply

- White
 Black
 American Indian/Alaskan
 Asian Please Pick One
 Native Hawaiian/Other Pacific Islander Please Pick One

Investigation Details

no		
Hospitalized	Admission Date	Discharge Date
Hospital: Please Pick One		Chart
Name		
Disease: * PERTUSSIS	Site of Infection	
Dates: 02132015	02192015	02192015
First Symptom	Diagnosis	Report
Reporting Source: 4 School Nurse	Other	
Provider: Name	Phone: () () () ()	
Last	First	Call Back Number
Alternate Call Back Number		
Provider: NPI		
Provider: Fax	Email:	
Fax	Email	
Provider Address:	NEW YORK	
Street No./Street 1	Street 2	City
State	Zip	
Reporting Individual: Ms. Smith	Phone: (518) 555-5555	
Ordering Facility: ID		
Reporting Individual Address:	NEW YORK	
12 Main Street	Albany	12207
Street No./Street 1	Street 2	City
State	Zip	
Reporting Lab:	Phone: () ()	
Dates: DOH389 Received	Report Received (by LHD)	Investigation Start Date
Investigation Status: * Confirmed	Was Patient Notified Yes	

New York State Department of Health
Communicable Diseases Confidential Case Reports

Last Name: Mouse

First Name: Mickey

DOB: 01/01/2008

Assigned Serial Number: 201501125247

Disease: PERTUSSIS

Revised: 01/06/2014

[Home](#) >> [New Investigation Case](#) >> [Care](#) >> [PERTUSSIS Supplemental \(Go Bottom\)](#)

PERTUSSIS Supplement

Click to go the section: [Laboratory Data](#) [NYSDOH EP Follow Up](#)

Illness History and Medical Care

For this illness, does the patient know how many provider visits before diagnosis?	Yes	If yes, how many visits	1
Cough	Yes	Date of Onset of Cough	02132015
Paroxysmal cough	Yes	Whoop	Yes
Apnea	No	Post-tussive vomiting	Yes
Cough at final interview	Yes	Date of final interview	
Did cough last >= 14 days	Yes	Duration of cough at final interview	98 days
Cyanosis	No		
Did the patient have fever during his/her pertussis illness If yes, highest reported temperature (in °F)	Yes, provider report	If yes, when did fever occur in relation to cough onset	After cough onset
Was Patient <= 30 days postpartum at the time of illness onset	No		
Was the patient previously diagnosed with a pertussis infection	No	If yes, year of prior pertussis infection	
If patient is <1 year only...answer infant questions below			
Gestational age(weeks)		Weight of infant at birth	Please Pick One
Mothers age at infant birth			


**Department
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Add Row

Is it an approved PCR lab

Co-infection with Other Bordetella Species

Vaccine History [\[Go Top\]](#)[\[Go Bottom\]](#)

Vaccinated (Ever received pertussis-containing vaccine)

Number of doses of pertussis-containing vaccine prior to illness onset

Date of last pertussis-containing vaccine prior to illness onset

If case not vaccinated, what was reason

Specify, other

If unknown vaccination, what was reason

Specify, other

Vaccine

Dose Date	Vaccine Type	Manufacturer	Lot #	Hospital/Clinic/MD Name
<input type="text" value="01012009"/>	<input type="text" value="Pertussis-containing vaccine (unspecified)"/> Other: <input type="text"/>	<input type="text" value="Unknown"/> Specify, other <input type="text"/>	<input type="text"/>	<input type="text"/> <input type="button" value="Del"/>
<input type="text" value="09012009"/>	<input type="text" value="Pertussis-containing vaccine (unspecified)"/> Other: <input type="text"/>	<input type="text" value="Other"/> Specify, other <input type="text"/>	<input type="text"/>	<input type="text"/> <input type="button" value="Del"/>
<input type="text" value="09012010"/>	<input type="text" value="Pertussis Only"/> Other: <input type="text"/>	<input type="text" value="GlaxoSmithKline"/> Specify, other <input type="text"/>	<input type="text" value="1236"/>	<input type="text"/> <input type="button" value="Del"/>

Add Row

Epidemiologic Information

Epi-linked

Employed or attended

Is patient Healthcare personnel

Transmission

Transmission Setting for this case If other, specify

In which setting was there secondary spread Specify, other

Collaboration

- CDESS and NYSIIS both within the Division of Epidemiology
- Pre-existing relationship
 - Data entry
 - Data review
 - Case review
- Similar authorized users in both systems
- Public Health Law states IIS may be used for this purpose

Current Process

- CDESS creates HL7 query
- NYSIIS returns unique match
 - Full immunization records
 - Adults with consent on records
- CDESS imports vaccine information matched to disease
- LHD staff follow up on any records missing immunization data

Pilot Results

- 667 patients with confirmed or probable pertussis diagnosis
- Match returned for 589 (88.3%)
 - Unique cases
- Remaining 11.7% required follow-up
 - No match
 - Multiple match
 - Non-consented adults

Future Steps

- Automation
 - Query creation within CDESS
 - Using UPHN to submit data files
 - Populating CDESS with data returned.
- Schedule regular submissions
- Expand to include other disease incidence
- Tracking of outcomes

QUESTIONS



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