

Using Immunization Registry Data to Support Medicaid Managed Care Services

The New York City Experience

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Workshop Overview

- Background
- The New York Citywide Immunization Registry (CIR)/managed care collaborations
 1. Batch Data Exchange for QA reports
 2. Recall Pilot
 3. Immunization Recall Project
- Benefits
- Discussion of key issues / strategies

Benefits of Registry/Managed Care Collaboration

- Provides access to additional data
- Saves money
- Saves time
- Improves outreach
- Improved data quality

The Problem

- Measles epidemics
 - >130 deaths nationwide
- Low immunization coverage rates nationally
- Documentation fragmented
 - health care providers unable to track immunization status for patient population
 - many parents unable to maintain a consolidated record
 - children with fragmented care, lack of “medical home”

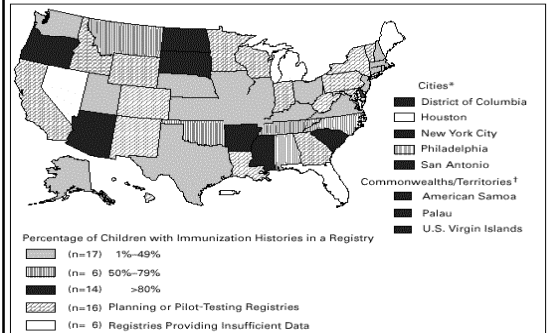
The Registry Solution

- Consolidate records by computerizing data
- Ensure that the complete immunization history is available to health professionals
- Monitor vaccination levels in populations
- Link with other data systems
 - WIC
 - Schools
 - Managed care organizations

National Milestones

- All Kids Count (AKC) I and II -- 7 years of RWJ Foundation funding, 16 demonstration projects
- Centers for Disease Control and Prevention (CDC) support through funding and technical assistance
- Healthy People 2010 objective -- Increase the proportion of children who participate in fully operational population-based immunization registries
 - target: 95% of children under age 6 years

FIGURE 1. States, cities, and commonwealths/territories with children aged 0–5 years with at least two vaccine doses recorded in an immunization registry — United States, April 1999



* No report received from Chicago.
 † The Marshall Islands, Micronesia, and the Northern Mariana Islands reported no registry activity. No report received from Guam.

TABLE 1. Number and percentage of immunization jurisdictions (grantees) with immunization registries that have implemented key elements of the 12 essential functional standards — United States, April 1999

Functional standard	Registries meeting all key elements		Registries meeting one or more key elements	
	No.	(%)	No.	(%)
Electronically store data on all National Vaccine Advisory Committee-approved core data elements	30	(70)	43	(100)
Establish a registry record within 2 months of birth for each newborn child residing in the catchment area	31	(72)	31	(72)
Enable providers to retrieve information from the registry on all vaccination records at the time of encounter	38	(88)	38	(88)
Ensure that providers submit information on all vaccination encounters within 1 month of vaccine administration	41	(95)	41	(95)
Protect confidential medical information (confidentiality and security measures)	3	(7)	43	(100)
Recover lost data (disaster recovery)	21	(49)	43	(100)
Exchange vaccination records using Health Level 7 standards	3	(7)	4	(9)
Automatically determine the vaccination(s) needed when a person seeks vaccination based on Advisory Committee on Immunization Practices' recommendations	35	(81)	35	(81)
Identify persons late for vaccination to provide recall notifications	25	(58)	37	(86)
Automatically produce vaccination coverage reports by providers, age groups, and geographic areas	33	(77)	38	(88)
Produce authorized vaccination records	37	(86)	37	(86)
Consolidate vaccination records from multiple providers, using duplication and edit checking procedures to optimize accuracy and completeness	7	(16)	43	(100)

Of the 64 grantees, 43 have implemented immunization registries.

CDC Functional Standards

- Enable providers to retrieve information from the registry on all vaccination encounters at the time of encounter
- Automatically determine the vaccination(s) needed when a person seeks vaccination based on ACIP recommendations
- Consolidate vaccination records from multiple providers, using duplication and edit checking procedures to optimize accuracy and completeness

National Challenges

- On-going funding
- Data quality - matching and merging records
- Data completeness
- Private provider participation
 - technology barriers
 - time constraints
 - lack of incentives

Moving Forward

- All Kids Count (AKC) III
 - integrated data systems
 - continued development of a national registry vision
- American Immunization Registry Association (AIRA)
 - national membership organization
 - advocates for the support of registry development
 - promotes and facilitates information exchange
- Health Care Financing Administration (HCFA) funding for registries

Overview -- NYC

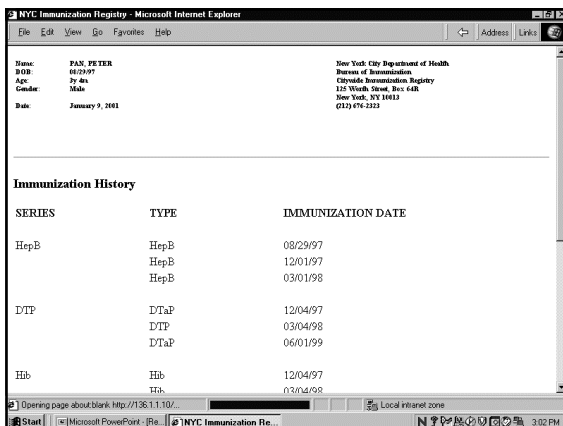
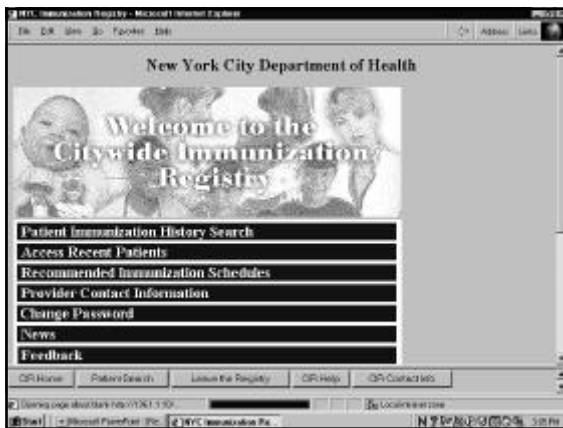
- 125,000 births annually
- 1,200 pediatric provider sites
 - 104 public
 - 1,083 private
- 30 managed care organizations serving NYC children
 - 18 serve Medicaid patients

New York Citywide Immunization Registry

- Citywide Immunization Registry (CIR) contains 1.9 million records, 10 million immunizations
- Reporting immunizations is mandated by City Health Code
- Reporting options:
 - paper, electronic and on-line
- Web-based Intranet application
 - child-by-child look-up
 - designed for immunization screening and printout

CIR Access/Use of Data

- Providers -- on-line or via telephone
 - child by child look-up
 - print-outs
 - recommendations for immunizations due
- Parents -- written application
 - parent brochure
 - paper application
 - record faxed or mailed to parent



CIR / MCO Collaborations

1. **Batch Data Exchange** to supplement chart review data for NYS QA measures
2. **Recall Pilot**
 - 3 MCOs
 - ~ 950 children
 - recall letters sent to families
3. **Immunization Recall Project**
 - all 18 NYC Medicaid managed care plans

Batch Data Exchange

- Managed care plans provide lists of enrolled children in sample for NYS QA
- Automated and manual matching of records
- CIR provides immunization records in flat file format
- 10 Plans sought CIR data in 2000
- Plans able to raise scores by 5% or more with out-of-plan immunizations

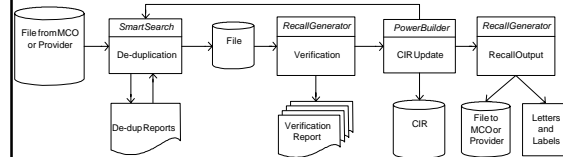
Recall Pilot

- A collaborative pilot to recall of children in need of immunizations using registry/managed care plan combined data
 - 3 Plans -- voluntary participation
 - N= ~ 950 children
 - recall letters sent for all children not UTD

Objectives

- To pilot recall of children in need of immunizations using registry/managed care combined data
- To improve CIR data quality
- To design and develop an automated process to create recall letters using the CIR immunization forecasting algorithm

Process



Process (continued)

- File de-duplicated using *Smart Search*
- Report of immunizations (Verification Report) in the CIR created by *Recall Generator*
- Managed care plan personnel review report, correct and add immunizations from medical record

Process (continued)

- Report returned to DOH, data updated in CIR
- For children not UTD, past immunizations and immunizations currently due are automatically generated for a file or paper printout
- Letters or file sent to the managed care plan
- Plans or DOH mail recall letters to members

Confidentiality

- Plans identify children per NYC Health Code regulations
- Plans identify PCP and family address
 - Office of Vital Statistics does not allow release of address from birth records
- Strict matching algorithms and manual review guarantee that records returned are the same children
- No demographic information released

Process (continued)

Products

- *Smart Search*: Visual Basic client that accesses CIR database
- *Recall Generator*: Visual Basic product that accesses file generated by *Smart Search*

Process (continued)

Smart Search Parameters

Smart Search - Report Parameters

File Options Help

Input File: Browse

Output File Path: Browse

Format: Use first line of file App Format Special

Format: Default

Not Used: Done/D

Not Good: Pass

Extra Data: Recall

Options Run Query (Search) Review Exit

Process (continued)

Smart Search Options

Options

Quick Process Files S1 Queries S2 Queries Opt Queries W3C Review/DEI OK

Step 1 Queries

These queries are close matches and are applied on data rows only by the "close" matches. They run only when the process selects step 1 on the General tab.

Q1.1 Last, First, DOB, Gender

Q1.2 Medical Record #, DOB

Q1.3 Medical

Q1.3a CIR id

Q1.3b CIR address/addr1

Q1.4 Telephone Number

Q1.1 After Step 1, Query report (only from the #both side are valid)

While searching with these queries as well as Q1.1 and Q1.2 queries using raw data from the input file, show only top the number of matches per row (0 means no match).

Limit: 100

If a list is returned from all the fields will be matched using the available fields where there are enough available fields.

Process (continued)

Smart Search Record Review

Recall Record Review

File Options

Orig Row: MARY SMITH 11/17/196 F 1 row

Possible Matches:

1	X	12756275 N MARY SMITH 11/17/196 F BROWN 09/25/1964 DB	
2		ADDRESS: 7 WEST 7TH STREET NEW YORK NY 11111	
3			
4			
5			
6			
7			
8			

next next sel next no sel next long 2 / 6 Changed

Process (continued)

Recall Generator Parameters

Recall Generator - Report Parameters

File Options Help

Input File: Browse

Output File Prefix: Browse

Format: Use first line of file App Format

Not Used: medicad,momname,momdob,phone,nbirth,vital,crb

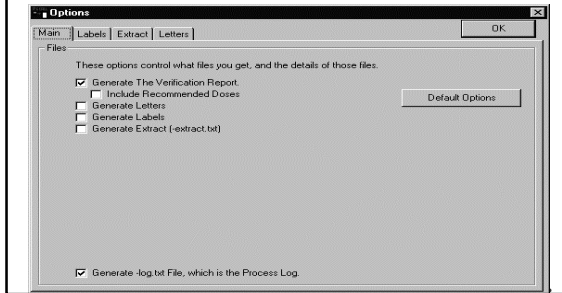
Not Good:

Extra Data:

Letter:

Options Generate Output Exit

Process (continued) Recall Generator Options



Process (continued) Verification Report

NYC CIR **Recall Process Verification Report** Eff: 12/2/1999

Provider: BUCKROD LASCOTT BROKEN HEART HOSP. Initials for Verification

Provider	CIR Immunization Info	Lead Screening Date(s)	Initials for Verification
KENNETH ALEXANDU 123 Quak Lane New City, New York 11911 DOB: 05/22/1964 SSN: 158171624 gender: M med rec	DTaP1d 11/22/1992 12/22/1992 3/11/1993 10/11/1994 11/22/1992 12/22/1992 3/11/1993 10/11/1994 11/22/1992 12/22/1992 3/11/1993 10/11/1994 11/22/1992 12/22/1992 3/11/1993 10/11/1994 11/22/1992 12/22/1992 3/11/1993 10/11/1994		
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Process Letter Generation



Pilot Results

- MCO #1
 - CIR contained 899 immunizations for 130 children
 - 329 immunizations added on 72 children from medical record review
- MCO #2
 - CIR contained 2,191 immunizations for 411 children
 - 3,725 immunizations added on 338 children from medical record review
- MCO #3
 - CIR contained 3,454 immunizations for 354 children
 - 1,707 immunizations added on 256 children from medical record review

Results (continued)

- Average of 53% not up-to-date
 - 4th DTaP
 - Varicella
 - intervals not accepted
- Letters sent in July/August 2000
- Preliminary results from CIR
- Need more in-depth follow-up
 - evaluation
 - outreach

Immunization Recall Project

- A collaborative effort between the NYC Department of Health Citywide Immunization Registry, the Division of Health Care Access, Medicaid Managed Care Plans, and Primary Care Providers (PCPs)
- Builds on the Recall Pilot -- all Medicaid managed care plans, ongoing

Objectives

- To identify and recall all 2-year-old children in NYC enrolled in Medicaid managed care not up-to-date on immunizations
- To improve immunization coverage of 2-year-old children at risk for vaccine preventable disease in NYC
- To increase completeness of CIR records

Methods

- Submission received from 18 Medicaid managed care plans in NYC
- Each file contains demographic data of all currently enrolled children born in 1998 and primary care provider (PCP)
- Files size: Total=17,871 children, range of 65-3100, average file size ~1000

Methods

Phase I: Data Processing

- Data matched against CIR, multiple/fragmented records merged
 - ~90% of children's records found in CIR
- Immunization record generated for each child (and UTD status calculated)
- Commissioner of DOH contacting each PCP by letter
- Each child's record sent to their PCP for verification

Methods

Phase II: PCP Verification

- PCPs verify immunization records and report additional immunizations to the CIR
- Each child's record is updated manually
- Customized recall letters generated for children not UTD
- Recall letters sent to families
- MCOs informed of children not UTD
- MCOs to undertake further outreach/recall activities

Progress to Date

- All 18 files received and data cleaned
- Phase I: Data Processing
 - all files processed
 - children's records sent to PCPs
 - time frame 6 weeks for turnaround
- Phase II: PCP Verification and Recall
 - in process
 - estimated time 6-8 weeks

Challenges

- Understand competing priorities for Plans
- Determine if recall should continue to be a centralized function
- Medical chart and registry data is needed
- Need for more record review at the provider level

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Conclusions

- Potential for multiple benefits is high
 - data in the CIR more complete and useful
 - PCP incentive to participate in registries increases
 - health plans can use registry data to improve ability to outreach to children in need of services
 - health plans can use registries to save costs and improve efficiency
 - regular recall should improve immunization coverage