

# New York Citywide Immunization Registry

## New York City Department of Health and Mental Hygiene

### Immunization Information Systems Sentinel Site Project- Site Profile

#### New York City



New York City (NYC), a large and diverse city, is comprised of 5 boroughs (counties) covering an area of 322 square miles: Manhattan, Brooklyn, Queens, Staten Island and Bronx. The sentinel population includes all children < 19 years of age living in the 5 boroughs of NYC.

The New York Citywide Immunization Registry (CIR) was implemented in 1997 when a NYC Health Code Amendment went into effect requiring providers to report all immunizations administered to children age 7 and younger to the NYC Department of Health and Mental Hygiene (DOHMH). In August 2005, the mandatory reporting age was extended though age 18, with voluntary reporting of immunizations administered to patients 19 years of age and over, with the individual's consent. This amendment

has better positioned CIR to capture the whole age range of the VFC eligible population (0-18 years) and to perform CIR based VFC accountability. This amendment also allows CIR to now track compliance with Tdap, MCV 4, Varicella, HPV, Hepatitis B and MMR requirements for adolescents.

Integration of CIR with the DOHMH Lead Poisoning Prevention Program registry, through the Master Child Index (MCI), was completed in February 2004. The MCI includes robust matching and merging technologies that have improved data quality by reducing the creation of duplicate records in the CIR. This integration has also made lead screening histories available to providers along with immunization histories, through the Online Registry.

Data quality is a top priority for the CIR. In addition to the MCI, the CIR uses several preprocessing programs which check data files and individual data fields for data quality. Data from paper forms are double data entered and data values that do not match are resolved by a third party. A number of rules are applied that reject data that do not conform to field type specifications, logical or valid values, etc. and reject data that do not conform to expected results. A 5-person data quality team is dedicated to following up with data submitters to resolve rejected data and improve overall data quality.

Records in the CIR can be accessed by phone, in person, in batch file, and through the Online Registry. Overall use of the CIR has been increasing: over 1.2 million records were accessed in 2007 by providers, hospitals, parents, agencies, etc.

In September 2006, the CIR implemented VFC accountability through the CIR. Providers must report to the CIR more than 80% of doses shipped by VFC to receive their full order, otherwise their orders are reduced. The VFC-CIR integration has not only resulted in better VFC accountability, but also in dramatic improvement in CIR reporting (70% increase from 2005 to 2006).

The CIR is well integrated with other components of the Bureau of Immunization (BoI): On a quarterly basis, providers receive a letter with feedback on their CIR-based UTD coverage and VFC vaccine accountability. The Perinatal Hepatitis B Prevention Unit uses the CIR to monitor birth dose coverage by hospital and retrieve Hepatitis B doses missing from their system. The CIR is the core tool of the Immunization Improvement Spread Project, a unit that closely works with providers to improve coverage rates. The CIR is also used by AFIX, Surveillance, BoI immunization clinics, and program support (WIC linkages). Finally, the CIR is used to track uptake of vaccines and guide policy decisions.

**Table 1- Population Characteristics**

Population Characteristics		
Sentinel Population	All children <19 years, all boroughs	
NYC population	8 million	
NYC population < 18 years	1,999,912	
Yearly birth cohort	~125,000	
NYC race/ethnicity groups For children < 18 years	White/non-Hispanic 35.5% African American 29.6% Asian/Pacific Islander 10.4% Am. Indian/Alaska Nat 0.5% Other: 21.6% --- Hispanic 33.8%	
Percentage of individuals < 18 years below poverty level	27.7%	
IIS Highlights		
IIS Created	1997	Children < 8
Expanded	2005	Children < 19
Mandatory	yes	
Integrated with Lead Registry	February 2004	
Number of Patient Records	3.3 million	
Number of Immunizations	33 million	
IIS Provider Participation		
# of facilities participating	1800, 300 public, 1500 private	
Reporting methods	Electronic batch file: 51% Paper: 24% Online: 25%	
1.2 million records were accessed in 2007	Phone/Fax/Mail, in person: 2% On line registry: 65% Electronic batch file: 33%	
Data Capture		
Birth certificates	Loaded weekly	

# immunizations loaded/month	~500,000	
% of doses submitted and processed within 30 days of vaccine administration	75%	
% of children with 2 or more immunization	90%	

This document can be found on the CDC website at:

<http://www.cdc.gov/vaccines/programs/iis/activities/downloads/NYC-sentinel.pdf>