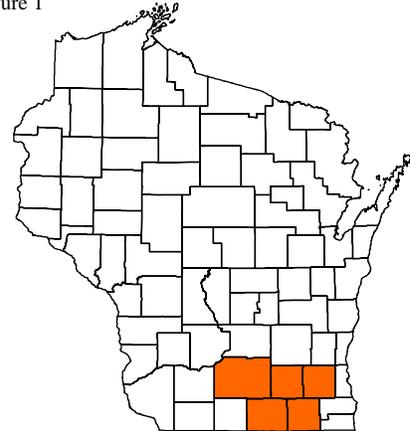


**Wisconsin IIS Sentinel Site  
Implementation Project Summary  
April 2008**

The geographic area of Wisconsin's sentinel site subpopulation (**Figure 1**) covers the five contiguous counties of Dane, Jefferson, Rock, Walworth and Waukesha and represents 21% (1,142,188/5,375,751) of Wisconsin's 2005 population. The racial distribution of the sentinel site population is 85.1% White, 5.0% African American, 0.3% Native American, 3.1% Asian and 6.5% Hispanic (any race). Additionally, 7.7% live below the poverty level.

Figure 1



**Population Participation:**

Table 1 shows the percent of the population in the sentinel site that participates, as defined by having two or more doses of vaccine recorded, in the Wisconsin Immunization Registry (WIR), by age group.

**Table 1- Percent of sentinel site population that participates in the WIR , by age group**

**Wisconsin Immunization Registry**

The WIR is a computerized Internet database application that was developed to record and track immunization dates of Wisconsin's children and adults. Statewide implementation began in June 2000. This population based, life-long registry receives weekly automatic

| Table 1. Percent of sentinel site population that participates in the WIR, by age group |                            |            |         |
|---|----------------------------|------------|---------|
| Age Group   | # Vaccinated with 2+ shots | Population | Percent |
| 0-5 Years   | 76,646                     | 88,175     | 87%     |
| 6-10 Years  | 64,839                     | 73,821     | 88%     |
| 11-12 Years   | 23,168                     | 27,395     | 85%     |
| 13-15 Years   | 32,470                     | 33,683     | 96%     |
| 16-18 Years   | 37,105                     | 38,541     | 96%     |

downloads of birth, death and adoption data from Wisconsin's Vital Records on all children born in Wisconsin since 1995. Currently there are over 1,200 immunization providers and some 2,747 schools with access for a total of over 10,000 active users throughout the state. These providers account for 38 million immunizations given to 5.9 million clients. Approximately 15,000 immunizations are entered into the WIR daily through direct data entry and bulk electronic data downloads. Demonstrations and trainings are conducted for providers throughout the state at no cost. The demonstrations show providers the many functions of the system that are designed to improve the immunization status of patients and the efficiency of their practices.

In 2002 the Immunization Program received funding from the National Immunization Program to establish the capabilities for a HL7/real time interface between electronic medical record (EMR) systems and the WIR. This technology has been made available to the 17 state, territory,

or urban immunization projects that are using all or portions of the WIR software. The WIR Systems Manager is working closely with representatives of the EPIC Systems Corporation and GE Medical Systems to establish real-time interfaces with their respective EMR systems. Two large clinical entities in Wisconsin (one in the Sentinel Site Project area) are currently utilizing a real-time query between their EPIC system EMR system and the WIR. In addition the RECIN System managed by the Marshfield Clinic has also established HL7 real-time query capabilities with the WIR. WIR receives immunization data from these entities through either real-time or batch downloads. Discussions are ongoing with a major clinical entity in Waukesha County using GE Medical System technology to establish a similar partnership. Linkage with this clinical entity is expected to take place in the first quarter of 2008.

**Provider enrollment:**

Provider enrollment rates by sector in the sentinel site are shown in Table 2. Numerator data are the number of provider sites in the sentinel site area enrolled in the WIR. Denominator data are the number of provider sites in the sentinel site area that are enrolled in the Vaccines for Children Program.

**Table 2- Provider enrollment rates by sector**

| Table 2. Provider enrollment rates by sector. |           |             |      |
|---|-----------|-------------|------|
| Sector  | Numerator | Denominator | Rate |
| Public  | 5         | 5           | 100% |
| Private                                       | 61        | 80          | 76%  |
| Combined                                      | 66        | 85          | 77%  |

Private provider participation rates in the WIR are less than optimal, particularly in Waukesha County. With implementation of this project and active participation of the project epidemiologist, recruitment efforts, e.g., identifying and outreaching non-participating providers, will increase.

**Timeliness:**

WIR data are processed in a timely manner. Table 3 shows the percentage of records received and processed within 30 days, between 30 and 60 days and more than 60 days for sentinel site children born and vaccinated between 1/1/06 and 12/31/06.

**Table 3- Time from vaccination until vaccination event is recorded in the WIR: Sentinel site children, 2006**

| Table 3. Time from vaccination until vaccination event is recorded in the WIR: Sentinel site children, 2006. |                |     |                           |    |                      |    |
|--|----------------|-----|---------------------------|----|----------------------|----|
| Sentinel Site<br>(N=31888<br>vaccinations)   | Within 30 Days |     | Between 30 and<br>60 days |    | More than 60<br>days |    |
|  | N              | %   | N                         | %  | N                    | %  |
|  | 31532          | 99% | 155                       | 0% | 201                  | 1% |

**Ongoing Data Quality Procedures:**

Duplicate immunization business rules guide automated data quality measures. The most recent deduplication test score for the WIR was 96%. Records that score too low for an automated match are deduplicated manually.

**Data Quality Objectives:**

The Wisconsin IIS sentinel site project will focus on:

- Increasing the percentage of records in the target population with race information; VFC eligibility reporting, and historical lot information.
- Implementing future data quality standards as recommended by NVAC and MIROW
- Maintaining that at least 90% of immunization information be entered into the WIR within 30 days of administration.
- Maximizing the accuracy of the deduplication process to decrease duplicate records in the WIR.

**Other Objectives:**

- Increasing sentinel site private provider participation in the WIR.
- Increasing from 67% to 90% the percent of children age 19-35 months of age who meet the goal of 4:3:1:3:3:1.
- Developing new reports as needed to assist in individual practice or Immunization Program management.

This document can be found on the CDC website at:

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