

# IIS Sentinel Site Contributions to Pandemic Preparedness and Response

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# Background: Monitoring vaccination in pandemic

- ❑ **Problem:** Future pandemic vaccine may require two doses 21 days apart for all ages. Use of IIS could provide information for 2 dose tracking, but current use of IIS by adult providers is limited. (8% of internists, 30% of family medicine)
- ❑ **Needs and Considerations for pandemic vaccine response monitoring:**
  - Timely vaccine uptake monitoring
  - Capability to track a 2-dose adjuvanted vaccine and associate with 2<sup>nd</sup> dose administered
  - Access to population-based vaccination coverage estimates for pediatric and adolescent
  - Adult vaccine tracking also needed
  - Reporting mechanism includes provider verified data

# What is an Immunization Information System (IIS)?

- ❑ Population based systems which track vaccination encounters from enrolled providers
- ❑ Can provide clinically verified vaccination data
- ❑ High child population coverage estimates
- ❑ IIS can be used to examine:
  - Co-administration factors (administered with seasonal flu vaccine and other vaccines)
  - Adjuvant used
  - Time between doses
  - Dose number and dose series completion
- ❑ Variability in capacity, scope, and functionality exists among 64 immunization program awardees

# IISentinel Sites

- ❑ **IISentinel Sites are Regions\* within an awardee's jurisdiction that demonstrate high data quality measures in the IIS**
  - 6 sites (MI, MN, ND, NYC, OR\*\*, WI)
  - Established network of highly functional, mature pediatric systems
  - Collaborating with CDC for over 10 years
  - Demonstrated use of data for vaccine-related analysis (e.g., vaccine coverage for seasonal influenza, assess uptake of new vaccines)
- ❑ **The IISentinel Site network is an optimal tool for use during a pandemic**
  - Monitor vaccine uptake and track the use of federally purchased vaccine
  - Track multi-dose vaccine with an adjuvant component
  - Existing data submission mechanism – IIS Trends in Practice System (IIS TIPS)

\*Region = Entire jurisdiction (state) or a subset of the jurisdiction

\*\*Represents a subject of the Portland Metro Area

# Key Components to Achieving Comprehensive Sentinel Site Preparedness Capacity

## ❑ Technical

- Document administration and forecast adjuvanted vaccine in the IIS
- Analyze and report larger volumes of immunization to CDC

## ❑ Operational

- Increase participation in the IIS among adult providers
- Develop guidance documents to decrease time needed to 'ramp up' during a response

## ❑ Strategic

- Identify barriers and challenges to implementation and determine strategies to mitigate impact

## ❑ Funding

- \$870K: Supplemental Funding (OCT 2013-DEC 2014)
- \$1.8M: New Cooperative Agreement (OCT 2014-SEP 2017)

***PANDEMIC INFLUENZA  
SUPPLEMENTAL FOA ACTIVITIES  
(OCT 2013 – DEC 2014)***

# Primary Pandemic Preparedness Activities

- ❑ **Activity 1:** Increase adult provider outreach, enrollment and report to the IIS
  - Target specific providers
  - Outline barriers to enrollment and onboarding, and determine mitigation strategies
- ❑ **Activity 2:** Ensure capability to submit IIS data to the CDC using IIS TIPS
- ❑ **Activity 3:** Enhance system capabilities to track an antigen with an adjuvant component
- ❑ **Activity 4:** Make necessary changes to Clinical Decision Support (CDSi) Framework to forecast multi-dose, adjuvanted vaccine.

# Reporting and Success Measurement: Supplemental FOA (SEP 2013 – DEC 2014)

- ❑ Sentinel Sites submit data to CDC to assess progress towards adult provider enrollment and to ensure readiness to provide adult and pediatric immunization data to IISTIPS
- ❑ Data submissions include:
  - Quarterly: Adult Provider Enrollment and onboarding counts
  - Ad hoc data submissions (based on CDC needs):
    - 2- 3 IISTIPS submissions containing adult and pediatric demographic and vaccination data
    - 3-5 aggregate IISTIPS data submissions
- ❑ Success is measured by:
  - Increased adult provider enrollment, onboarding, and report of vaccinations to the IIS
  - Submission of timely and complete data to IISTIPS for all ages



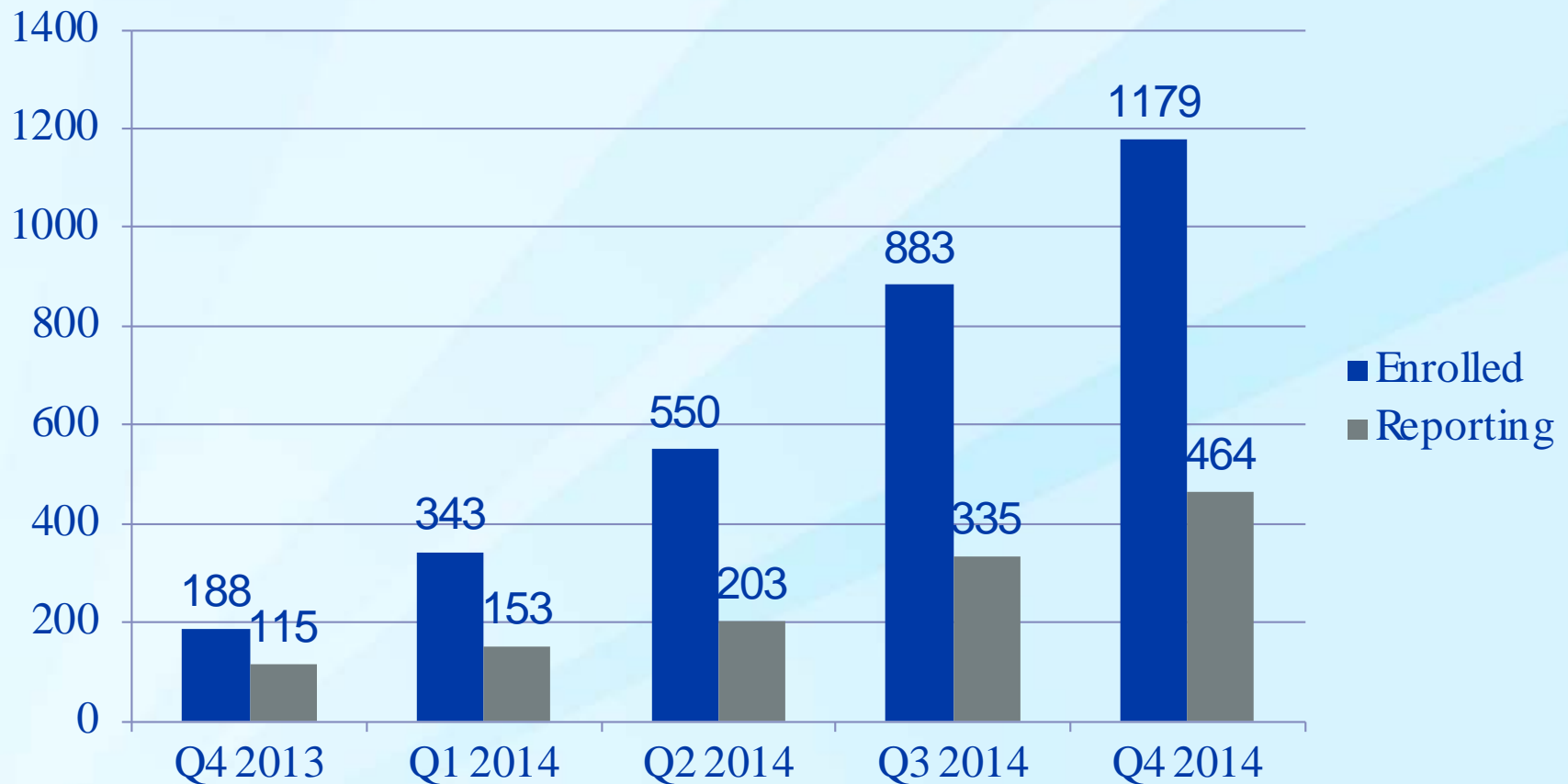
# Activity 1: Challenges to Adult Provider Enrollment

- ❑ **Quantifying the number of adult providers in a state**
  - A “provider” may represent 1 or more provider sites
    - Ex. Walgreens may report centrally for all Walgreens sites in a state
- ❑ **Increasing adult provider participation in the absence of state mandates**
  - Additional costs to configure provider interface for IIS reporting
  - Additional provider staff time used to report
- ❑ **Limited staff for recruitment and provider onboarding and training**
  - Competing staff priorities

# Adult Provider Enrollment Strategies

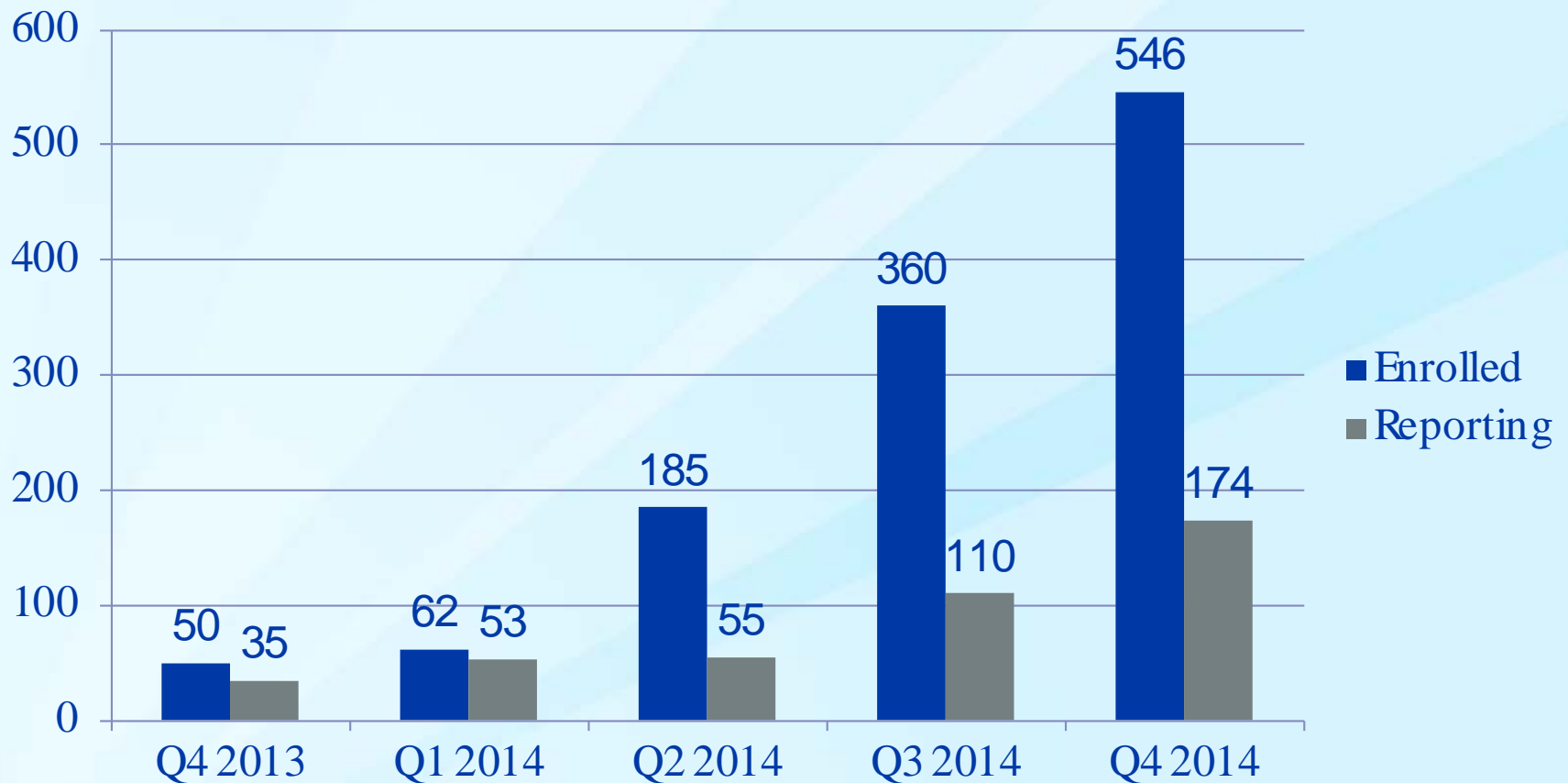
- ❑ Strategies implemented to increase enrollment and report include:
  - Recruiting and onboarding pharmacy providers
  - Increasing outreach to large adult vaccinator groups, community partners, and regional staff
  - Targeting Meaningful Use-ready providers
  - Utilizing current local and regional outreach staff
  - Targeting previous H1NI adult providers

# Sentinel Site Progress in Adult Provider Enrollment: 10/1/2013-12/31/2014



\*Value represents the cumulative total enrollment as of the end of the given quarter

# Sentinel Site Progress in Pharmacy Provider Enrollment: 10/1/2013-12/31/2014



\*Value represents the cumulative total enrollment as of the end of the given quarter

# Barriers to Adult Provider Enrollment

- ❑ **Lack of mandatory reporting for adults**
  - Difficult to quantify total number of adult providers in state/jurisdiction
  - Some adult provider groups don't see a 'need' to report
  - Difficulty getting support from adult partner groups and organizations
- ❑ **Lack of adequate recruitment staff**
  - Staff have multiple recruitment responsibilities
  - Regional staff have competing priorities
- ❑ **Lack of “one size fits all” recruitment strategies**
- ❑ **Inconsistencies in on-site reporting by provider type**
- ❑ **Difficulty classifying provider “facility type” in the IIS**

## Mitigation Strategies To Adult Provider Enrollment

- ❑ Proposal of legislation to strengthen reporting requirements for immunizations to adults
- ❑ Hiring of staff devoted to adult provider enrollment
- ❑ Development of provider group-specific recruitment strategies
- ❑ Development of a comprehensive list of provider facility types that should be reporting adult data to the IIS
- ❑ Prioritizing outreach efforts for maximum impact

## Activity 2: Sentinel Site Test Data Submission

- ❑ Sentinel Sites successfully tested submission of combined adult and pediatric immunization data set to IISTIPS
- ❑ Data submission was made to CDC in September 2014
- ❑ The following focus areas are being assessed:
  - Transmission processing times
  - Conditions and resources needed to ensure timely and efficient receipt of data
  - Parameters and timeframe for the next data submission

# IISTIPS Test Submission Preliminary Analysis

Sentinel Site	Records Submitted to IISTIPS (August 1, 2013 – April 30, 2014)	
	# of Demographic Records	# of Vaccination Records
Michigan	8,034,946	5,272,144
Minnesota	5,771,801	3,790,347
New York City	4,850,968	3,495,162
North Dakota	770,380	491,828
Oregon	2,663,911	1,442,247
Wisconsin	6,481,240	3,968,641
Total	28,573,246	18,460,369

- ❑ Total of 7,968,250 flu doses administered (43% of all submitted vaccination records)



## **Activity 3: IIS Enhancements to accommodate antigen/adjuvant tracking**

- ❑ **IIS Sentinel Sites completed initial enhancements including:**
  - Screen Design Modifications
  - Database changes
  - Updates to IIS functional requirements
- ❑ **CDC developed initial Antigen/Adjuvant Tracking Guidance**
  - Collaboration Sentinel Sites and Clinical Decision Support for Immunization (CDSi) colleagues

# Sentinel Site Success Stories:

## ❑ Michigan

- Employed a regional recruitment approach to recruit, train, and support newly enrolled providers
- Onboarded 58% of all new providers enrolled
- Worked with providers and vendors to increase the number of sites reporting via HL7 from 367 to 1588

## ❑ New York City

- Conducted training sessions for pharmacists on proper vaccination procedures and IIS data entry
- Enrolled 45 new, independent pharmacy locations in the CIR (NYC immunization registry)

## ❑ Successful IIS-TIPS submission in September 2014

- Submission of adult and pediatric immunization data
- Systems modifications ongoing to accommodate adult data processing

***PANDEMIC INFLUENZA  
COOPERATIVE AGREEMENT  
ACTIVITIES  
(OCT 2014 – SEP 2017)***

# Pandemic Influenza Cooperative Agreement Overview

- ❑ **Project Period: 3 years (October 2014-September 2017)**
- ❑ **Sentinel Sites will continue previous pandemic preparedness activities with an increased focus on:**
  - Identifying specific provider types for outreach, recruitment and onboarding
  - Setting specific goals for provider enrollment and onboarding
  - Proactively implementing mitigation strategies to address challenges
  - Assessing data processing requirements needed for IIS TIPS submission
  - Improving IIS capabilities to track antigen administered with an adjuvant
  - Testing technical and operational plans

# Targeted Outreach to Adult Provider Groups (New Cooperative Agreement)

Sentinel Sites	Sentinel Site Targeting Outreach Goal (%*) for Each Provider Type**
Michigan	Family Practice (48%), Urgent Care Facilities (25%)
Minnesota	ObGYN's (25%)
New York City	ObGYN's (79%), Long Term Care Facilities(100%)
North Dakota	Long Term Care Facilities (35%), Local Public Health Units (50%)
Oregon	Hospitals (32%), Mass Vax (50%), ObGYN (36%), Pharmacy (25%)
Wisconsin	Long Term Care Facilities (40%)

\* Represents the percentage of providers who have not yet been enrolled in the IIS

\*\* Provider Type may represent one or more provider site

# Sentinel Site Adult Provider Enrollment Strategies

Sentinel Sites	Adult Provider Outreach Strategy
Michigan	Additional recruitment efforts from regional staff, add adult recruitment lead, develop targeted recruitment materials
Minnesota	Increased partner interaction (ACOG, MCH), targeted staff increased provider recruitment
New York City	Collaboration with Office of Preparedness and Response, Implementation of online facility registration
North Dakota	Adult provider outreach coordinator hired, creating ND IIS Flat files from EHR files received
Oregon	Increased provider outreach, implementation of new reporting tools for monitoring participation
Wisconsin	Addition of adolescent and adult recruitment coordinator

## Successes in Overall Pandemic Preparedness

- ❑ Increase in adult provider enrollment and report to the IIS
- ❑ Development of ongoing adult provider outreach strategies by Sentinel Sites
- ❑ Initial steps made in state IIS system infrastructure to support tracking of antigen with adjuvant components
- ❑ Ongoing system's modifications to IISTIPS to accommodate adult data
- ❑ CDSi draft guidance completed

# Next Steps

## Awardees

- Enhanced adult provider outreach, enrollment, and onboarding activities
- Implementation of enhancements for tracking of antigen/adjuvant pairs
- Implementation of enhancements for Clinical Decision Support for Immunization (CDSi) forecasting functionality
- Participation in potential pandemic simulation exercises

## CDC

- Developing guidance for antigen/adjuvant tracking
- Finalizing guidance for CDSi implementation
- Optimizing IIS-TIPS Data Processing Capabilities



# Project Contributors

## ❑ IISentinel Sites

- Michigan, Minnesota, New York City, North Dakota, Oregon, and Wisconsin

## ❑ CDC Pan Flu Team

- Warren Williams
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