A Tale of Two Collaborators: The IIS Sentinel Site Project and the Centers for Disease Control and Prevention (CDC)

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“Two Heads are Better than One”
Overview

- What is the Sentinel Site Project?
- Sentinel Site Cooperative Agreements
- CDC/Sentinel Site Collaborations
  - Vaccination Coverage Assessment
  - Vaccine Uptake and Shortage
  - Pandemic Preparedness
  - HPV Vaccination Coverage
  - Data Linkage
- Impact of Collaboration
- Future of the Sentinel Site/CDC Relationship
What are IIS Sentinel Sites?

- Regions within a grantee’s jurisdiction (entire jurisdiction or a subset of the jurisdiction) that demonstrate high data quality measures in the IIS:
  - ≥ 85% vaccine provider site participation;
  - ≥ 85% of the child/adolescent (aged < 19 years) participation;
  - ≥ 70% of the doses administered are submitted to and processed by the IIS within 30 days of vaccine administration.

- Receive competitive supplemental section 317 funds to:
  - Assesses vaccine use among persons aged < 19 years
  - Conduct programmatic evaluations
  - Implement enhanced data quality activities
  - Publish and present findings
Purpose of the Sentinel Site Project

- Further enhance the use of IIS data to support the immunization program and other stakeholders, and to enhance IIS data quality and system functionality.

- Further enhance the evaluation and analytic capacity of IIS to conduct evaluations and epidemiologic studies.

- Serve as “learning laboratories” for the entire IIS community
  - Sentinel Sites contributed about 50% of US literature considered by the Task Force on Community Preventive Services in support of IIS
Who are the Sentinel Sites?
2001-2003 pilot

Total grantees piloted: 8

- New York City
- District of Columbia
- San Antonio
- OR (Oregon)
- UT (Utah)
- AZ (Arizona)
- MI (Michigan)
- OK (Oklahoma)
Who are the Sentinel Sites?

- New York City
- District of Columbia
- San Antonio

2001-03 total grantees piloted: 8
2004-07 total grantees funded: 6
Who are the Sentinel Sites?

- New York City
- District of Columbia
- San Antonio

2001-03 total grantees piloted: 8
2004-07 total grantees funded: 6
2008-12 total grantees funded: 8
Who are the Sentinel Sites: 2013–2017 Co-Ag Period (6 Sites)

- New York City
- MI
- OR
- MN
- ND
- WI

Six contiguous counties in Oregon
Sentinel Site Cooperative Agreements

- **IIS Sentinel Site Project Cooperative Agreement (Base Sentinel Site Co-Ag)**
  - Base Sentinel Site Participation Criteria
  - Quarterly Data Submission to IIS TIPS
  - IIS System Evaluations

- **Increasing IIS Capacity for Enhanced Program Support**
  - Pandemic Influenza Preparedness and Response
    - Adult Provider Recruitment and Onboarding
    - Technical Enhancements for Antigen/Adjuvant Tracking
    - Additional IIS-TIPS Data Submissions including Adults
  - HPV Vaccination Coverage and Data Linkage
    - HPV Provider Recruitment and Onboarding
    - Data Linkage feasibility between IIS and HPV outcome databases
Base IIS Sentinel Site Project

The Collaboration
- CDC provides 1.5M per year to IIS Sentinel Sites to increase IIS capacity, while advancing the use, strengths, and benefits of IIS Data.
- Sentinel Sites provide CDC with Program and Systems Evaluations examining IIS priority topics, as well as quarterly demographic and vaccination data from their Sentinel Site Jurisdictions.

The Impact
- Increased IIS use for Immunization Program Activities
- Increased IIS-focused contributions to the literature
- Increased IIS ability to provide timely, complete data for coverage assessment
- Increased examples of the capabilities and versatility of IIS
Increasing IIS Capacity for Enhanced Program Support

The Collaboration

- CDC provides 1.8M per year to IIS Sentinel Sites for Pandemic Preparedness and HPV Vaccination Coverage and IIS Data Linkage Activities
- IIS Sentinel Sites provide key information on the capacity, funds, and staff needed for pandemic preparedness efforts and IIS Data Linkage

The Impact

- Increase in adult onboarding and report to the IIS
- Assessment of IT needs to track vaccine administered with an antigen and adjuvant component
- Identification of strategies to increase HPV vaccination coverage among adolescent and adult providers
- Assessment of the feasibility of linking the IIS with other outcome databases (e.g. Cancer Registry, STD Registry) to assess vaccine effectiveness
“Things Work Better, Together”
A Rich History of Collaboration…

- The Sentinel Site have a long history of serving as “learning laboratories” for the CDC and the IIS community as a whole

- Collaborations between CDC and the IIS Sentinel Sites have included:
  - Vaccination Coverage Assessments
  - Monitoring of Vaccination Uptake and Shortage
  - Pandemic Preparedness
  - HPV Vaccination Coverage
  - Data Linkage
Vaccination Coverage Assessment

- Sentinel Sites provide record level, demographic and vaccination data to CDC quarterly, via the CDC-developed IIS TIPS System.
- In addition to TIPS Submissions, Sentinel Site have consistently provided CDC with coverage estimates (ex. Influenza, HPV, Rotavirus) to quickly assess changes in ACIP recommendations
  - CDC provides data quality check of data submitted to IIS TIPS.
- Sentinel Site data are of great value to CDC
  - High Quality
  - Timely
  - Complete
  - Allow a quick, on the ground assessment of coverage in a jurisdiction
  - NIS comparisons
Vaccine Uptake and Shortage

- IIS Sentinel Sites collaborated with CDC to assess the impact several vaccine recommendation shifts and shortage incidents, including:
  - Transition from PCV7 to PCV13
  - Uptake of Varicella Vaccine
  - Uptake of HPV Vaccine among males and females
  - The impact of Hib vaccine shortage in 2009

- From these collaborations:
  - CDC provided rapid information to NCIRD, ACIP, and others regarding the impact of these events on vaccination coverage
  - IIS Sentinel Sites gained strategies to examine vaccine uptake and the impact of vaccine shortage within their Sentinel Site jurisdictions, with the ability to inform program staff
IIS Pandemic Preparedness

- Sentinel Sites collaborated with the IIS Support Branch (CDC), Adult Immunization Team, and Vaccine Task Force to assess IIS readiness for pandemic response
  - Adult recruitment and onboarding
  - Technical feasibility of antigen/adjuvant tracking
  - Increased, rapid IIS data submissions

- From this collaboration
  - CDC: Gained critical information regarding resources and technical considerations for adult onboarding and antigen/adjuvant tracking
  - Sentinel Sites: Increased internal capacity for pandemic preparedness, increasing adult and pharmacy provider enrollment, and implemented infrastructure for antigen/adjuvant tracking
HPV Vaccination Uptake

- Increasing HPV vaccination coverage continues to be a national priority
  - Increasing HPV-provider enrollment in the IIS (adolescent and adult)
  - Increasing HPV-provider report of HPV to the IIS

- As coverage increases, the exploration of the use of the IIS for HPV vaccine effectiveness becomes more feasible

- CDC and IIS Sentinel Sites are currently collaborating to determine strategies to increase HPV provider report to the IIS, as well as exploring VE studies
  - Increased HPV (adult and adolescent) provider outreach
  - Exploring feasibility of IIS data linkage with other HPV outcome databases
IIS Data Linkages

- IIS Sentinel Sites were funded to determine the feasibility of data linkage between the IIS and HPV related outcome databases

- Collaborators included:
  - IIS Sentinel Site Project
  - State Cancer Registries
  - CDC, IIS Support Branch
  - CDC, Cancer Surveillance Branch

- Sites are currently developing protocols for data linkage and addressing existing barriers to linkage, with the long-term goal of evaluating HPV vaccine effectiveness
“Both Sides Win!”

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<thead>
<tr>
<th>CDC Benefits</th>
<th>IIS Sentinel Site Benefits</th>
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<tbody>
<tr>
<td>Increased knowledge of state-specific IIS systems and practices</td>
<td>Increased Data Quality</td>
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<td>Increased ability to showcase the many attributes of IIS to CDC leadership</td>
<td>Increased internal IIS Capacity</td>
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<td>Increased ability to provide up-to-date information on critical, IIS related</td>
<td>Increased funding to strengthen IIS Infrastructure</td>
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<td>Increased knowledge of the practical implications of IIS community and</td>
<td>Opportunity to be on the “front line” to address complex and</td>
</tr>
<tr>
<td>CDC related guidance</td>
<td>critical IIS related issues</td>
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<td>Increased opportunity to sell the successes and capabilities of the IIS</td>
<td>Opportunity to inform and contribute to the IIS literature</td>
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The Impact of Collaboration

- Beneficial growth and synergy for both CDC and the IIS Sentinel Sites
  - Increased IIS data quality and use
  - Increased understanding of the technical and site specific challenge to maintaining a high quality IIS
  - Increased interest in IIS Sentinel Site data to inform programmatic decisions
    - Pandemic Preparedness
    - Data linkage
    - VE
    - NIS/IIS Estimates
  - Increased understanding of the practical implications of best practices and guidance
  - Increased capacity and program infrastructure
  - Increased collaborative capacity between CDC and Awardees
The Future of IIS Sentinel Site/CDC Collaboration

- Continued focus on high quality, timely data to assist the needs of the Immunization Program as a whole
- Learning Laboratories Expanded/Continued Evaluation
- Continued emphasis on Pandemic Preparedness Activities
- More Interstate Collaboration?
- Expansion????
To infinity and beyond....
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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.