Select AIRA 2020 National Meeting Presentations: Data Use

Tuesday, August 25, 2020
3-4 PM ET
AIRA Webinar Series

• Each Tuesday
• Now through September 22, 2020
• 3-4 PM ET
• Join Us!

Webinar Series at a Glance

Week 1  CDC Panel Discussion: Advancing IIS Together
Week 2  The Immunization Gateway Portfolio
Week 3  Data Quality
Week 4  Data Use
Week 5  Working with End Users
Week 6  IIS Operations
Week 7  Global Perspectives
Week 8  Measurement and Improvement
Today’s Speakers

• **Hannah Peng, MPH**, Senior Statistician, University of Michigan
• **Heather Roth, MA**, Immunization Branch Chief, Colorado Department of Public Health and Environment
• **Jill Rosenthal**, Senior Program Director, The National Academy of State Health Policy
• **Kaitlyn Whiton, MHS**, Director, Discern Health
• **Courtney Barbera, MPH**, Project Manager, Discern Health
Identifying Exposed Persons for Recruitment into the Flint Registry

Hannah Peng, MPH
AIRA Webinar Series
August 25, 2020
Background

Flint Water Crisis

Objective: Identify potentially exposed persons for Flint Registry
Methods

• Identified persons with a Flint ZIP code during the Flint Water Crisis:
  • Michigan Care Improvement Registry (MCIR)
  • Michigan Childhood Lead Poisoning Surveillance System (MiCLPS)
  • Michigan Medicaid

• Most recent contact & demographic information
Methods

Linkage
Methods

- Linkage
- Geocoding
Methods

- Linkage
- Geocoding
- Prioritization
Potentially Exposed Persons in Flint ZIP Codes by MDHHS Data Source
(n = 204,155)

- Michigan Care Improvement Registry (MCIR) - 30.0%
  - Michigan Medicaid - 31.9%
  - Michigan Childhood Lead Poisoning Surveillance System (MiCLPS) - 0.1%

34.9% 2.5% 0.4%
Potentially Exposed Persons in Flint ZIP Codes (n = 204,155)
Children Living in Flint Water System Service Area and Aged 6 or Younger during the Flint Water Crisis

- 14,159 Children
- 10,185 Households
Current Contact Information by MDHHS Data Source (n = 14,159)

Address
- Medicaid: 89%
- MCIR: 10%
- MiCLPS: 1%

Phone Number
- Medicaid: 82%
- MCIR: 9%
- MiCLPS: 2%
- Missing: 7%
People who Moved Out of Exposure Area
(n = 14,159)

- Out of Flint: 27%
- Out of State: 4%
- Flint: 73%
Blood Lead Test Results
(n = 14,159)

- No Results: 76%
- Low result: 22%
- Elevated result: 2%
Conclusions

IIS data can be used to:

- Identify exposed people
- Evaluate health outcomes
Acknowledgements

• Collaborators
  • Marina Goulas, MHI
  • Kevin Dombkowski, DrPH, MS

• Funding
  • CDC, under subcontract to Michigan State University
Hannah Peng, MPH
Senior Statistician
University of Michigan, Division of General Pediatrics
Susan B. Meister Child Health Evaluation and Research (CHEAR) Center
hjary@med.umich.edu
Enhancing IIS to Assess Refugee Vaccination Coverage

Heather Roth, MA
Immunization Branch Chief

August 25, 2020
Outline

• IIS and Refugee Health collaboration
• Project successes
• Project challenges
• Future plans
Project Objectives

• To better understand and improve vaccination coverage among Colorado’s refugee population
• To improve the efficiency, effectiveness and quality of refugee immunization data practices
  • Incorporate A# as a unique identifier in the IIS
  • Enhance existing IIS reports to enable refugee-specific outputs
  • Eliminate duplicative data entry through automation
A# as Unique Identifier

• Until recently, there was not an effective way to uniquely identify refugees within data sources outside the CO Refugee Health Surveillance (RHS) database

• Patient matching difficulties:
  • Naming conventions
  • Phonetic and unknown name spellings
  • Unknown dates of birth

• Gold standard is alien number (A#)
  • Inclusion in public health databases still in infancy
IIS Enhancements

- Capture and store A# as unique identifier
IIS Enhancements

- Capture and store refugee status
IIS Enhancements

• Added refugee filter to canned IIS reports
  • Patient Detail with Services report
  • Patient Roster report
  • Immunization Rates report
  • County/Zip Code Level Immunization Rates report

• Added security function to limit access to refugee status
## Immunization Rates

### Report Selection Criteria

- **Provider**
  - SUNRISE COMMUNITY HEALTH CENTER
- **Clinic**
  - SUNRISE MONFORT CHILDREN'S CLINIC

- **Report Type**
  - Appropriate Statistics Summary
  - Patients not Properly Immunized Detail

### Doses By Vaccine Series

<table>
<thead>
<tr>
<th>Vaccine Series Dose Prevalence</th>
<th>DTaP/Tdap</th>
<th>Hepatitis A</th>
<th>Hepatitis B</th>
<th>Hib</th>
<th>HPV</th>
<th>Influenza</th>
<th>Meningococcal</th>
<th>MMR</th>
<th>Pneumococcal</th>
<th>Polio</th>
<th>Rotavirus</th>
<th>Varicella</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
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</tbody>
</table>

- **Age Range**
  - From: 19
  - Through: 25
  - UOM: MONTHS

- **As Of Date Range**
  - From: MM/DD/YYYY
  - Through: MM/DD/YYYY

- **Gender**
  - ALL

### Refugee Status
- REFUGEE
- ASYLEE
- PAROLEE
- SPECIAL IMMIGRANT (SIV)
- VICTIM OF TRAFFICKING
# Immunization Rates (County/Zip Code Level)

## Appropriate Immunizations

- County List = DENVER, DTaP/Tdap Series Count = 5, HepB Series Count = 3, MMR Series Count = 2, Polio Series Count = 4. Exclude = Y. Count Valid And Invalid Doses = N, Age Range = 4 - 6 (YEARS) As Of 01/01/2020 - 03/01/2020, Refugee Status = Refugee, Asylee, Parolee, Special Immigrant (SI), Victim of Trafficking

<table>
<thead>
<tr>
<th></th>
<th>Full Data Set</th>
<th>Compliance Criteria Subset</th>
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</thead>
<tbody>
<tr>
<td>Total Patients</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Total INACTIVE Patients</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Adjusted Total Patients</td>
<td>70</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients GIVEN appropriate number of doses of all indicated antigens</td>
<td>41</td>
<td>58.57%</td>
</tr>
<tr>
<td>Patients NOT GIVEN appropriate number of doses of all indicated antigens</td>
<td>29</td>
<td>41.43%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vaccine Combination</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with at least 5 valid doses in the Tetanus containing/Tdap vaccine series</td>
<td>44</td>
<td>62.86%</td>
</tr>
<tr>
<td>Patients with at least 4 valid doses in the Polio vaccine series</td>
<td>49</td>
<td>70.00%</td>
</tr>
<tr>
<td>Patients with at least 2 valid doses in the MMR/Measles vaccine series</td>
<td>65</td>
<td>92.86%</td>
</tr>
<tr>
<td>Patients with at least 3 valid doses in the HEPB vaccine series</td>
<td>65</td>
<td>92.86%</td>
</tr>
</tbody>
</table>
# Patient Detail with Services

**Patient Eligibility:**
- Male
- Not VFC Eligible
- VFC-Medicaid

## Clinic Details

<table>
<thead>
<tr>
<th>Date</th>
<th>Clinic</th>
<th>Type</th>
<th>Lot #</th>
<th>Fund Source</th>
<th>Eligibility</th>
<th>Historical?</th>
<th>Invalid?</th>
<th>Created By</th>
<th>Last Updated By</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/10/2019</td>
<td>NCC</td>
<td>Hep A, Ped Adul</td>
<td>P109T</td>
<td>VFC</td>
<td>VFC-Medicaid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>07/19/2019</td>
<td>NCC</td>
<td>Hep B, Ped Adul</td>
<td>P109T</td>
<td>VFC</td>
<td>VFC-Medicaid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>07/19/2019</td>
<td>NCC</td>
<td>POH-PHP</td>
<td>P109T</td>
<td>VFC</td>
<td>VFC-Medicaid</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>07/19/2019</td>
<td>NCC</td>
<td>Tep</td>
<td>P109T</td>
<td>VFC</td>
<td>VFC-Medicaid</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>07/19/2019</td>
<td>NCC</td>
<td>VAR Varicella</td>
<td>P109T</td>
<td>VFC</td>
<td>VFC-Medicaid</td>
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</tbody>
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<tr>
<th>Date</th>
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<th>Fund Source</th>
<th>Eligibility</th>
<th>Historical?</th>
<th>Invalid?</th>
<th>Created By</th>
<th>Last Updated By</th>
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</thead>
<tbody>
<tr>
<td>02/14/2019</td>
<td>NCC</td>
<td>IRBFP</td>
<td>D2122</td>
<td>Private</td>
<td>Not VFC Eligible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Clinic</th>
<th>Type</th>
<th>Lot #</th>
<th>Fund Source</th>
<th>Eligibility</th>
<th>Historical?</th>
<th>Invalid?</th>
<th>Created By</th>
<th>Last Updated By</th>
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</thead>
<tbody>
<tr>
<td>04/05/2019</td>
<td>NCC</td>
<td>Tep</td>
<td>D2122</td>
<td>Private</td>
<td>Not VFC Eligible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Clinic</th>
<th>Type</th>
<th>Lot #</th>
<th>Fund Source</th>
<th>Eligibility</th>
<th>Historical?</th>
<th>Invalid?</th>
<th>Created By</th>
<th>Last Updated By</th>
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</thead>
<tbody>
<tr>
<td>05/07/2019</td>
<td>NCC</td>
<td>Tep</td>
<td>D2122</td>
<td>Private</td>
<td>Not VFC Eligible</td>
<td></td>
<td></td>
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</tbody>
</table>

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<tr>
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<th>Clinic</th>
<th>Type</th>
<th>Lot #</th>
<th>Fund Source</th>
<th>Eligibility</th>
<th>Historical?</th>
<th>Invalid?</th>
<th>Created By</th>
<th>Last Updated By</th>
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</thead>
<tbody>
<tr>
<td>03/25/2019</td>
<td>NCC</td>
<td>Meningoococcal B Recov</td>
<td>A0032</td>
<td>VFC</td>
<td>VFC-Medicaid</td>
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<td></td>
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</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Clinic</th>
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<th>Lot #</th>
<th>Fund Source</th>
<th>Eligibility</th>
<th>Historical?</th>
<th>Invalid?</th>
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<tr>
<td>03/26/2019</td>
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<td>MCVV  (Marlact)</td>
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<tr>
<td>03/25/2019</td>
<td>NCC</td>
<td>Meningoococcal B Recov</td>
<td>A0032</td>
<td>VFC</td>
<td>VFC-Medicaid</td>
<td></td>
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</table>
### Modules

Click on the checkboxes below to assign/revoke privileges for each available module.

<table>
<thead>
<tr>
<th>Module</th>
<th>View</th>
<th>Add</th>
<th>Update/Delete</th>
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</thead>
<tbody>
<tr>
<td>Admin</td>
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<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Billing</td>
<td>☑</td>
<td>☑</td>
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</tr>
<tr>
<td>Campaigns</td>
<td>☑</td>
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</tr>
<tr>
<td>CRA Quick Add</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Education</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Immunizations</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Inventory</td>
<td>☑</td>
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</tr>
<tr>
<td>IZ Quick Add</td>
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<td>NBS</td>
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<td>Patients</td>
<td>☑</td>
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<tr>
<td>Reports</td>
<td>☑</td>
<td>☑</td>
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</tr>
<tr>
<td>Treatments</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>VTreks Interface</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
</tbody>
</table>

### Functions

Assign the items below to assign/revoke application-specific privileges.

- Add Queries to Query Manager
- Allow Duplicate Vaccination Over Allow Run New Job Option
- Delete Historical PR IMMS
- Recommend Administration
- Reopen Closed Reconciliations
- See Deceased
- See Opt Out Patients
- View Full System Errors
- View Patient Refuge Status
- View SMARTY Streets Address Code
- View User Security Questions
- VTreks-Extract Provider Ending
- VTreks-Extract Provider Fund
- VTreks-Extract Provider Master
Automation

• Joined data between:
  • CDC’s Electronic Disease Notification system (overseas data);
  • CO Refugee Database (domestic medical exam); and
  • CIIS (domestic medical exam and post-DME immunizations)

• Automated creation of new patient records in CIIS

• Automated the addition of overseas immunization data into CIIS
Refugee Immunization Dashboards

• Compare refugee vaccination coverage at overseas, screening, and post-screening timeframes
• Use data to inform outreach and activities
  • Engage local public health and community partners
  • Understand where to focus scarce resources
Proportion of Refugees Up To Date for Measles-Containing Vaccine by Age Group and Timeframe
Arrival Year(s): 2017

<table>
<thead>
<tr>
<th>Arrival Years</th>
<th>Vaccine</th>
<th>Country Type Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>Measles-Containing</td>
<td>All Countries</td>
</tr>
</tbody>
</table>

19 through 35 Months Based on 1 dose

- At Arrival: 80.4%
- At 3 Months Post Arrival: 91.5%
- At 6 Months Post Arrival: 91.5%
- At 1 Year Post Arrival: 93.2%
- At 2 Years Post Arrival: 93.2%

4 through 6 Years Based on 2 doses

- At Arrival: 49.3%
- At 3 Months Post Arrival: 82.6%
- At 6 Months Post Arrival: 82.1%
- At 1 Year Post Arrival: 86.6%
- At 2 Years Post Arrival: 91.0%

13 through 17 Years Based on 2 doses

- At Arrival: 47.3%
- At 3 Months Post Arrival: 83.1%
- At 6 Months Post Arrival: 88.7%
- At 1 Year Post Arrival: 91.5%
- At 2 Years Post Arrival: 83.0%
Project Successes

• Increased connectivity between CDPHE programs
  • Refugee Health Program and CIIS coordinate regularly on projects now
• Increased connectivity between CDPHE and CDHS Colorado Refugee Screening Program (who oversees the domestic medical exam and resettlement in the state)
• Increased program efficiency by reducing duplicative data entry
• Improved ability to assess refugee vaccination coverage
• Providers serving refugees now have near-real time access to overseas refugee immunization information for review before refugee medical screenings
Project Challenges

• Some manual processes remain
  • Downloading data from EDN and uploading to sFTP site for the automated process to begin

• A# and refugee status are sensitive
  • Additional processes and permissions were put into place to limit the ability of CIIS end-users to view this data or generate reports based on refugee status
Future Plans

• Explore work with CDC to receive batched, automated data exports (to remove a manual step on the CDPHE side)
• Increase data partnership between Refugee Health and CIIS programs
  • Populate CIIS with primary language spoken from the Refugee Database
  • Use primary language to enhance outreach efforts with a health equity lens, including through centralized IIS-based reminder/recall
Questions?

Heather Roth
heather.roth@state.co.us
Opportunities & Barriers to Improve Immunization Rates among Medicaid-Covered Children & Pregnant Women: A Federal-State Partnership

AIRA 2020 National Meeting Webinar Series
August 25, 2020
Jill Rosenthal
Project Overview

To identify solutions to immunization gaps and make progress toward immunization goals by:

• Communicating national immunization program goals to state Medicaid leadership
• Identifying and sharing best practices among Medicaid programs
• Engaging Medicaid program leadership to identify solutions to immunization gaps
• Enhancing collaborative immunization efforts across pertinent state agencies and with CDC by identifying shared priorities and strategies

Partnerships between Medicaid and IZ programs are critical to improve immunization rates for children and pregnant women with Medicaid coverage
Project Goals/Desired Outcomes

1. At least four states will make changes to their Medicaid policies or outreach procedures to facilitate vaccination of children living in poverty
2. At least four states will implement policies that include providers caring for pregnant women and/or adults as covered vaccinators
3. At least four states will increase utilization of Medicaid resources for IIS sustainability
Project Activities

- Literature review/best practices scan
- Environmental Scan to assess CoP barriers and current practices
- Quarterly Steering Committee meetings, annually in-person
- Regular communication with CoP States
  - Ongoing technical assistance
  - Individual and all-state calls
  - Annual CoP Immunization Workshop
  - Monthly newsletter
- Regular communication with CDC and state Medicaid leadership to identify and share best practices
Community of Practice (CoP)
Participating States

Multidisciplinary teams made up of Medicaid, IZ Program and IIS staff
## State Action Plan Goals

<table>
<thead>
<tr>
<th>Goal 1</th>
<th>CO</th>
<th>HI</th>
<th>KY</th>
<th>MT</th>
<th>NM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generate Medicaid IZ rates for CO child and pregnant populations</td>
<td>Data Sharing Agreement b/t HI Medicaid &amp; IZ Registry</td>
<td>Increase IZ rates for pregnant women</td>
<td>Evaluate the quality of data available for immunization decision making</td>
<td>Execute a successful interface b/t MMIS (Omnicaid) and NMSIIS</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal 2</th>
<th>CO</th>
<th>HI</th>
<th>KY</th>
<th>MT</th>
<th>NM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engage partners to improve member education and messaging around IZ and well-child visits</td>
<td>HI IZ Registry Program Stop Gap measures</td>
<td>Increase adolescent HPV rates</td>
<td>Ensure stable funding for Immunization Registry (CHIP Health Services Initiative or 90/10)</td>
<td>ID strategies to increase IZ rates in Medicaid and low-income populations, specifically children &amp; pregnant women</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal 3</th>
<th>CO</th>
<th>HI</th>
<th>KY</th>
<th>MT</th>
<th>NM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop provider strategy based on Goal 1 outcomes</td>
<td>Technology Modernization: Rebuild IIS/Interoperability</td>
<td>Establish the IIS as the source for quality data on IZs</td>
<td>Select interventions for immunization improvement</td>
<td>Submit IAPD to CMS for IIS sustainability</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal 4</th>
<th>CO</th>
<th>HI</th>
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<th>MT</th>
<th>NM</th>
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</thead>
<tbody>
<tr>
<td>Increase resources for IIS sustainability</td>
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<td></td>
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</table>
## Common Barriers and Challenges

<table>
<thead>
<tr>
<th>Providers</th>
<th>Access</th>
<th>Data Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provider education (i.e. maternal vaccines, HPV)</td>
<td>• Rural and geographic barriers</td>
<td>• Policy, legal, technical limitations to integrate data IIS/Medicaid</td>
</tr>
<tr>
<td>• Missed opportunities to recommend/deliver vaccine</td>
<td>• Considerations for special population (i.e. large American Indian populations)</td>
<td>• Need for analysis of whether pockets of need are related to access, provider practices, patient education or anti-vaccine movement</td>
</tr>
<tr>
<td>• Few OB/GYNs participating in IIS or VFC</td>
<td>• Need to address surveillance gaps and disparities in coverage between insured and Medicaid</td>
<td>• Medicaid status not reported often enough in IIS to be able to analyze</td>
</tr>
<tr>
<td>• Gaps in vaccine storage, billing capabilities</td>
<td></td>
<td>• Limited capacity/staff</td>
</tr>
<tr>
<td>• Burdensome for providers to participate in/meet requirements for VFC program</td>
<td></td>
<td>• Defining denominator to determine IIS participation</td>
</tr>
</tbody>
</table>

- Differences in provider types between data systems
- Uncertain numbers of clinics/providers beyond VFC
### Common Barriers and Challenges

#### Funding
- Lack of funding and capacity to collect data and conduct interventions
- Lack of billing capabilities in local public health
- Funding cuts (i.e. IIS, Medicaid)

#### Policies
- Participation in IIS, especially if opt-in
- Anti-vaccine movement actions
- Low reimbursement rates
- Variability in scope of practice and reimbursement policies for pharmacists
- CDC no longer requires collaboration with WIC
- Compliance with exemption legislation, school requirements, IIS participation mandates
TA Request/Response Examples

• IIS Funding & Sustainability
  • Connections/clarification/resources around 90/10; 75/25; 50/50 match programs
  • Example IAPD applications from other states

• Cross Agency Collaboration
  • MOU examples
  • FERPA interpretation resources
  • Data use cases
  • Performance Improvement Project (PIP)/Health Service Initiative models

• Data
  • How other states have calculated IZ coverage among pregnant women with Medicaid
  • IIS onboarding support/resources

• Provider Outreach
  • Researching VFC participation strategies
  • ACOG relationship-building

• Community Outreach
  • School-based immunizations
  • HPV materials
## Example CoP Successes

<table>
<thead>
<tr>
<th>CO</th>
<th>HI</th>
<th>KY</th>
<th>MT</th>
<th>NM</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Strengthened data capabilities and data sharing to calculate vaccination rates among pregnant women.</td>
<td>• Enacted legislation requiring HPV vaccination for 7th grade enrollment.</td>
<td>• Created immunization information dashboard for providers, data focused on adolescent and pregnant women.</td>
<td>• Added pharmacies and non-pediatric immunizing healthcare practices who actively submit immunization data to IIS.</td>
<td>• Successfully applied for CMS funding to upgrade IIS and hire health educators for NM DOH.</td>
</tr>
<tr>
<td>• Matched Medicaid and IIS data (98%).</td>
<td>• Developed data sharing MOU Medicaid/IIS.</td>
<td>• Enrolled VFC providers and onboarded pharmacies in IIS.</td>
<td>• Added childhood immunizations to Medicaid value-based programs.</td>
<td>• Saw positive trends in Medicaid immunization data.</td>
</tr>
</tbody>
</table>
Current and Future Considerations

• Effects of COVID-19 on state progress toward increasing immunization rates
  • Reduced well-child visits due to stay-at-home guidance and subsequent reduced IZ
  • Effects on value-based payment programs and incentive payments
  • Back-to-school IZ catch up opportunities

• Funding opportunities in support of data integration strategies
  • HITECH sunsetting

• Medicaid incentives and metrics
  • Explore VFC and IIS participation strategies and incentives

• Expanded set of providers (i.e. pharmacists)

• Upcoming sharing of project results and lessons learned
Disseminating Resources and Best Practices

- Blog posts, newsletters and resources
- Project Resources - Google Drive
  - Monthly Newsletters
  - IIS Resources
- AcademyHealth Project Landing Page
- Immunize Colorado Resource Library
- NASHP Project Landing Page
## Contact Information

<table>
<thead>
<tr>
<th>AcademyHealth</th>
<th>National Academy for State Health Policy (NASHP)</th>
<th>Immunize Colorado</th>
</tr>
</thead>
<tbody>
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<td>Jill Rosenthal, MPH</td>
<td>Stephanie Wasserman, MSPH</td>
</tr>
<tr>
<td>Director</td>
<td>Senior Program Director</td>
<td>Executive Director</td>
</tr>
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</tr>
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</tbody>
</table>
The Importance of Comprehensive Immunization Data for Quality Measurement

AIRA 2020 National Meeting Presentations Webinar Series
August 25, 2020
Presenters

Kaitlyn Whiton, MHS
Director

Courtney Barbera, MPH
Project Manager

In collaboration with
American Medical
Group Association

Project supported by
GlaxoSmithKline
Adult Immunization in the U.S.

Adult immunization rates are low across all CDC Advisory Committee on Immunization Practices (ACIP)-recommended vaccines.\(^1\)

The **COVID-19 pandemic** has dramatically decreased vaccination rates for all age groups compared to previous years.\(^2\)

**Quality measures** can help providers measure performance, track quality improvement activities, and understand the vaccination status of their patient population.

**CDC Adult Immunization Rate Estimates\(^3\)**

- Influenza: 45.4%
- Tetanus (Td/Tdap): 63.4%
- Zoster (Shingles): 34.9%
- Pneumococcal: 24.5%

CDC=Centers for Disease Control and Prevention; COVID-19=Coronavirus disease 2019
What is a quality measure?

Tool that helps measure the healthcare processes, outcomes, patient experiences, and organizational structures associated with high-quality, evidence-based care.\(^4\)

Typically counts the number of times something occurs out of the number of times something could have occurred, or how many patients are impacted out of a population of interest.

Can assess performance of a provider, system, health plan, or other population.

Data for measures may come from various sources.
Adult Immunization Status (AIS) Measure

Percentage of individuals 19 years of age and older who are up-to-date on all age-appropriate, recommended vaccines.5

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
<th>Age Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Influenza</strong></td>
<td>Influenza vaccine received between July 1 of year prior to June 30 of measurement period.</td>
<td>19 and older</td>
</tr>
<tr>
<td><strong>Td/Tdap</strong></td>
<td>Td or Tdap vaccine within the past 10 years.</td>
<td>19 and older</td>
</tr>
<tr>
<td><strong>Zoster (Shingles)</strong></td>
<td>1 dose of live herpes zoster vaccine (Zostavax) or 2 doses of recombinant herpes zoster (Shingrix) vaccine on or after 50th birthday.</td>
<td>50 and older</td>
</tr>
<tr>
<td><strong>Pneumococcal</strong></td>
<td>Polysaccharide and conjugate vaccine ≥ 12 months apart on or after age 60.</td>
<td>66 and older</td>
</tr>
<tr>
<td><strong>AIS Composite Rate</strong></td>
<td>Percent of vaccines received out of all recommended vaccines based on age.</td>
<td>19 and older</td>
</tr>
</tbody>
</table>

*Excludes adults from all rates with history of immunocompromising conditions or chemotherapy, bone marrow transplant or in hospice during the measurement year
**Updates**  1. Removal of pneumococcal conjugate vaccine to align with updated guidelines
   2. No composite score

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<td>At least one dose of the polysaccharide vaccine at or after age 60</td>
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</table>

*Excludes adults from all rates with history of immunocompromising conditions or chemotherapy, bone marrow transplant or in hospice during the measurement year*
Benefits of AIS Measure

1. Provides a comprehensive perspective on facilities’ vaccination programs.\(^6\)

2. Encourages vaccine providers to focus on ensuring patients are up-to-date on all recommended vaccines.

3. Electronic Clinical Data Systems (ECDS) measures encourage the use of health IT and interoperability between data sources.\(^7\)

Data Sources

- EHRs
- Registries
- Claims
- Case Management

Includes immunization information systems (IIS)
Project Goal: Understand AIS measure performance in medical groups and assess related data challenges and implications of measure use beyond health plans.

Rationale
- AIS measure was only tested at the health plan level for HEDIS® use.
- It is unclear whether AIS measure is feasible for measuring performance of medical groups and providers in other quality programs, such as MIPS and MSSP.

Methods

**Quantitative analysis**
- of retrospective, de-identified claims and electronic health data from three study sites to calculate AIS measure for two periods.
  - **Year 1**: 2016-2017
  - **Year 2**: 2017-2018

**Qualitative interviews**
- with representatives from three study sites to understand underlying challenges associated with capture and reporting of immunization data.

HEDIS: Healthcare Effectiveness Data and Information Set; MIPS=Merit-based Incentive Payment System; MSSP=Medicare Shared Savings Program
Assessment of AIS Measure in Medical Groups

**Site 1**
Single-state health system in the East including PCMH
Smallest organization (200-500 employees)
Unidirectional exchange with IIS

**Site 2**
Multi-state ACO in Midwest
Largest organization (10,000+ employees)
Partial (some states) bidirectional exchange

**Site 3**
Single-state health system in Midwest
Medium-sized organization (1,000-5,000 employees)
Bidirectional exchange with IIS

PCMH: Patient-centered medical home; ACO=Accountable Care Organization
Key Quantitative Findings

Immunization Rates for Four Vaccines (Year 2)
Compared to National Estimates

- Influenza
- Tetanus (Td/Tdap)
- Zoster (Shingles)
- Pneumococcal

- National Estimates
- Site 1
- Site 2
- Site 3
Sites could submit data for immunizations received outside the medical group (alternative documentation).
- Pharmacy records
- IIS
- Patient self-report (flu)

External sources of immunization data contributed remarkably to performance.
Variation in data availability exists between the three medical groups and across states.

**State-specific policies for immunization reporting**
In states where reporting by pharmacies is not required, pharmacies report fewer vaccinations to IIS.

**Maturity of IIS**
In states with less advanced IIS, sites pull data from the registry to the EHR manually, which is resource-intensive.
The use of data from external sources like IIS provides a comprehensive view of immunization rates.

The AIS measure is feasible to use in medical groups and rates calculated using the measure are comparable to national estimates.

Including the AIS measure in quality programs (e.g., MIPS and MSSP) may help raise adult immunization rates to meet national goals and priorities.
Thank you!

Contact

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Courtney Barbera
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Efforts in AIS Measure Development and Implementation

DEVELOPMENT
Composite measure conceptualized during National Adult and Influenza Immunization Summit (NAIIS)¹

IMPLEMENTATION
- 2012
- 2019

- Added to HEDIS® (Early 2019)⁴
- Proposed and declined for addition to MIPS and MSSP (July 2019)⁵
- Recommended for inclusion in 2020 Medicaid Core Set but not added (Nov. 2019)⁶

Ongoing
Study Limitations

- Not all sites submitted alternative documentation.
- Data collection directions given to site were intentionally broad; sites may have had interpreted what data to extract differently.
- While claims data was permitted, sites submitted only EHR data.
  - High proportion of data used for ECDS measures is administrative claims data.
- Availability of Shingrix and timing of data extraction were key factors.
- HEDIS® measure was specified for health plans so modifications and interpretations of the measure were made.