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# SNAPSHOTS

IMMUNIZATION REGISTRY NEWS from AMERICAN IMMUNIZATION REGISTRY ASSOCIATION (AIRA)

## **PRESIDENT'S REPORT**

Dear Colleagues,

Welcome to 2019—'tis the season for cooperative agreement writing! This year brings many opportunities for the immunization information system (IIS) community to collaborate, to grow and mature our systems through innovative projects, and to share accomplishments.

I know you have all been hard at work crafting objectives and activities for the next period. Many of you are also seeking funding through the various competitive components. In these awards is the potential to close gaps in IIS functionality, bringing the nation further into alignment with standards; improve data quality and saturation; increase immunization coverage (especially in underserved populations); share knowledge through IIS-to-IIS partnerships and publications; and build on the work already being done to leverage IIS in support of the National Immunization Survey (NIS). This is a perfect chance for IIS managers to foster their relationships with their immunization program managers. Working together on a vision for these projects can help strengthen your plans and lays the foundation for sustained support. I encourage all of you to take advantage of these opportunities. By seizing this day, we can continue to demonstrate the value that IIS bring to public health and show the positive impact additional funding can have. As you compose your proposals, remember that the work done in support of these awards would make a great *SnapShots* article or 2020 AIRA National Meeting presentation (hint, hint).

We've talked about what's ahead...in this issue of *SnapShots*, we look back at some of the great work that has already been done, including a collaborative project to improve HPV coverage and IIS blazing the trail for cross-jurisdictional data exchange. We'll also hear updates on some current IIS projects, including the transition from Assessment, Feedback, Incentive and eXchange (AFIX) to Immunization Quality Improvement for Providers (IQIP) and how use of IIS is one of three core Centers for Disease Control & Prevention (CDC) quality improvement strategies: the continuation of the NIS-IIS Integration Project; the Provider Project; and one of AIRA's newer resources, *Data Quality Practices to Monitor and Evaluate Data at Rest.* 

In the IIS community, the past guides us, the present inspires us, and the future looks bright!

Regards, **Mandy Harris** AIRA Board President NV WebIZ Manager Nevada Department of Health & Human Services

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Welcome to *SnapShots*, the American Immunization Registry Association's newsletter about the progress, best practices, and accomplishments of Immunization Information Systems (IIS) across the country. We invite you to share news about your IIS. Email us at <u>info@</u> <u>immregistries.org</u> with information about a successful programmatic or technical innovation, major accomplishment, or milestone that your IIS has reached.

To subscribe, please visit <u>www.immregistries.org</u>. This information will remain confidential and will not be sold or passed on to other parties. *SnapShots* is produced quarterly by the AIRA Education Steering Committee. Editor: Katie Reed, N.Y. © 2019 American Immunization Registry Association (AIRA). All rights reserved. AIRA • 1155 F Street NW, Suite 1050 • Washington DC, 20004 • Phone: 202.552.0208 • <u>www.immregistries.org</u> • Email: <u>info@immregistries.org</u>



## A SEAMLESS CONNECTION: SUCCESSFUL CROSS-JURISDICTIONAL IMMUNIZATION INFORMATION EXCHANGE BETWEEN DELAWARE AND PHILADELPHIA

Delaware's Department of Health and Social Services, Division of Public Health and Philadelphia's Department of Public Health announced that they have started exchanging patient information between their immunization information systems (IIS).

The data exchange between these two Centers for Disease Control and Prevention Immunization Program awardees represents the culmination of a pilot program that has been ongoing for nearly two years with the backing of the U.S. Department of Health and Human Services' (HHS) Office of the National Coordinator for Health Information Technology and HHS's Office of the Chief Technology Officer.

The Public Health Immunizations (PHIZ) Hub serves to improve the immunization information available to health care providers when a patient may reside in a neighboring state/jurisdiction or has relocated from another region. Most IIS focus on residents in their jurisdiction and vaccinations given by providers in that jurisdiction, so gaps in immunization history can develop. This can lead to unnecessary vaccinations and missed opportunities to complete a vaccine series. The PHIZ Hub helps eliminate those gaps through manual and automated sharing of data for patients seeing a provider in one jurisdiction who have address histories—or live in—another jurisdiction. The data exchange is secure and reliable. It was developed under the legal guidance of the nonprofit Association of State and Territorial Health Officials (ASTHO).

"Delaware and Philadelphia are leading the way as the first public health agencies to go live as a part of the HHS Office of the Chief Technology Officer's Cross Jurisdictional Information Data Exchange Project," said James Daniel, director of public health innovation, HHS Office of the CTO. "Ultimately, we hope to see this scale to a national level leading to better immunization rates across the country."

#### "Ultimately, we hope to see this scale to a national level leading to better immunization rates across the country."

The PHIZ Hub pilot included more than 12 public health agencies around the country, most working in pairs to coordinate data exchange between a variety of underlying software platforms. In addition to the technical challenges, each trading pair had to first navigate their local legal policies regarding access to patient data—a process assisted by ASTHO's legal and regulatory expertise. The ultimate goal is for all participating agencies to operate under a shared-data use agreement that provides access to all U.S. states and territories, vastly improving the completeness of patient immunization records across the country.



## **A SEAMLESS CONNECTION:** SUCCESSFUL CROSS-JURISDICTIONAL IMMUNIZATION INFORMATION EXCHANGE BETWEEN DELAWARE AND PHILADELPHIA continued from page 2

On the first day in production (September 12, 2018), the Delaware IIS and the Philadelphia IIS performed an initial "data dump" of existing immunization records for patients with former or current addresses in each other's jurisdictions. Philadelphia transmitted approximately 3,000 Unsolicited Vaccination Record Update (VXU) messages to Delaware that resulted in approximately 17,600 new immunizations to be created in Delaware's IIS. Delaware, in turn, transmitted around 470 VXU messages to Philadelphia. Since the initial data dump, Philadelphia has transmitted 185 VXU messages (from September 13 to October 22, 2018) resulting in about 650 new immunizations recorded in Delaware. Delaware has transmitted approximately 50 VXU messages to Philadelphia, representing nearly 150 immunizations.

In addition to the automated VXU messages, Delaware and Philadelphia can manually initiate a query (electronic search) of each other's IIS. In order to enable the manual query, the patient must have an address history or current address that is in the other's jurisdiction. The IIS user can initiate the query with the click of a button. The results of the query are displayed, as is the current immunization history for the patient. IIS users can compare the query results with the current immunization history for the patient in their IIS. They then have the option to import some, none, or all of the immunizations obtained through the query into the patient's immunization record. "We were both surprised and thrilled to see the volume of data traded in the first few weeks of exchange," said Delaware Department of Health and Social Services Immunization Program director Jim Talbott. "It highlights the mobility of patients in Delaware visiting the excellent hospital systems in Philadelphia."

"Here in the mid-Atlantic region, we have several population centers with fluid patient populations," Aras Islam, IIS manager at City of Philadelphia's Department of Public Health, said. "Eventually, we'd love to be able to exchange data with our fellow jurisdictions throughout the region. The PHIZ Hub proves that we can improve patient care by looking at data beyond our own borders."

For additional information on the goals and approach of the PHIZ Hub program, visit <u>https://</u> www.healthit.gov/sites/default/files/page/2018-09/IISCongressionalReport.pdf.

- Submitted by Aras Islam and Jenna Jaxheimer, Philadelphia Department of Public Health, James Talbott, Delaware Immunization Program, and Steve Murchie, Envision Technology Partners



## USING CENTRALIZED REMINDER/RECALL TO IMPROVE HPV COMPLETION RATES: AN EXAMPLE FROM GEORGIA

Since 2011, the Community Guide for Preventative Services Task Force has recommended reminder/recall as an evidence-based practice to bolster immunization rates across several populations.

The Community Guide highlights centralized reminder/recall over individual providerbased reminder/recall to effect systematic change and coverage increases across practice types. Research has shown that reminder/ recall interventions are effective at increasing vaccination rates within target age groups.

In December 2016, in collaboration with the Georgia Comprehensive Cancer Control Program, GRITS (Georgia's Immunization Registry for Immunization Transactions Statewide) began implementing a reminder/recall project designed to improve HPV completion rates in adolescents 11–14 years old. From December 1, 2016, to May 4, 2017, a text was sent to all adolescents aged 9–14 years with at least one HPV vaccination dose in GRITS. Using GRITS, an initial list of eligible individuals was pulled on December 1, 2016, and additional lists were pulled in January and March as additional text funds were available.

Approximately 94,000 individuals were included in the analysis; of those, 29,357 were considered control population, as they did not have phone contact information listed in their GRITS record. Nearly 65,000 individuals were included in the text or intervention group. Over 97% of sent texts were successful. Two percent had land lines listed in place of cell phone numbers in the GRITS record. Less than 1 percent had a "bad phone" or incomplete number listed as a cell phone contact.

In preparation for data analysis, individual patient HPV vaccination records were retrieved for all clients. Submission reports from the Teletask System were collected and reviewed. Clients who were ultimately ineligible to participate in the intervention were removed from the analysis. This included individuals who may have completed the series prior to receiving a text message from the program. GRITS vaccination records were analyzed for series completion at the end of the intervention period.

Overall, the text-based reminder/recall was found to be effective in increasing HPV vaccination rates among those who had received a text message from the GRITS program. Thirty percent of intervention group participants completed their two-dose HPV series compared to 19% in the control group (significance level, p<.0001). While the intervention was successful in increasing series completion rates, the reminder/recall intervention was not without some issues.



## USING CENTRALIZED REMINDER/RECALL TO IMPROVE HPV COMPLETION RATES:

AN EXAMPLE FROM GEORGIA Continued from page 4

Overall, the text-based reminder/recall was found to be effective in increasing HPV vaccination rates among those who had received a text message from the GRITS program.

Often, the GRITS client information (ID numbers, responsible party information, and in some cases vaccination history) changed between the time the initial sample was retrieved and when vaccination histories were reviewed at the end of the intervention. Secondly, since the intervention used the responsible party's contact information, it was possible that individuals in the control group and in the intervention group both received a text for a client in the intervention group. This was possible because although participants in the control group didn't have phone numbers listed, it's likely their siblings had phone numbers listed for their shared responsible party.

Staff within the immunization program have developed a revised reminder/recall protocol to guide future reminder/recall interventions to improve series completion rates and overall intervention efficiency.

### - Submitted by Inas Mahdi, MPH, Laura Ngounou, and Nikki Griffin,

Georgia Department of Public Health Immunization Program



## **UPDATE ON CDC'S NEW IQIP PROGRAM**

In June 2018, the Immunization Services Division of the Centers for Disease Control and Prevention (CDC) announced its new national immunization quality improvement (QI) program, Immunization Quality Improvement for Providers (IQIP).

The new program will be launched on July 1, 2019, and will replace CDC's Assessment, Feedback, Incentive, and eXchange (AFIX) program. As the QI arm of the Vaccines for Children (VFC) program, IQIP's purpose is to promote and support the implementation of provider-level QI activities designed to increase vaccine uptake among childhood and adolescent patients in adherence with the Advisory Committee on Immunization Practices' (ACIP) recommended routine immunization schedule.

The IQIP program will accomplish this goal with VFC providers singly, in group practices, or at the health system level using a 12-month process of engagement that emphasizes workflow, collaboration, and technical assistance. This shift will be achieved by:

- Assessing immunization workflow
- Identifying strengths and opportunities for improvement
- Selecting appropriate strategies to increase vaccine uptake
- Providing ongoing technical assistance for the implementation of selected strategies
- Measuring progress using baseline and follow-up vaccination coverage assessments

The IQIP program is conceptually similar to AFIX; however, it has a few distinguishing features that differ from AFIX and impact IIS.

#### **Coverage Assessment**

The IQIP and AFIX programs recommend measuring immunization practice quality using IIS-based vaccination coverage assessments. For childhood vaccination, IQIP recommends the same coverage assessment parameters as AFIX: 24- to 35-month-olds with assessment of their vaccination status as of the second birthday. However, for adolescent coverage assessments, rather than the AFIX-requirement of measuring the vaccination status of 13- to 17-year-olds as of the date the assessment is conducted, IQIP recommends narrowing the focus to 13-year-olds with assessment of their vaccination status as of the 13th birthday:

Coverage Assessment Parameters, AFIX and IQIP		
Childhood	AFIX	IQIP
Age range	24–35 months*	24–35 months*
Compliance by	2nd birthday	2nd birthday
Adolescent		
Age range	13–17 years^	13 years
Compliance by	Assessment date	13th birthday

\*have celebrated their 2nd birthday but have not yet turned 3 years ^have celebrated their 13th birthday but have not yet turned 18 years



## UPDATE ON CDC'S NEW IQIP PROGRAM Continued from page 6

The change in the recommended adolescent coverage assessment is introduced to better measure how well providers are immunizing their 11- and 12-year-old patients according to ACIP recommendations. It is important to note that IQIP is not prohibiting programs from using the standard AFIX adolescent coverage assessment or any additional reports that they think will be helpful for discussion during the IQIP process with the provider.

This new approach to adolescent coverage assessment is a change in direction for immunization programs and IIS. IQIP requires programs to report information about their IQIP activities, including coverage assessment results, to CDC. However, capacity among IIS to produce an on-demand adolescent coverage assessment that follows IQIP recommendations varies. To accommodate this variability, programs may continue to use and report the standard AFIX adolescent assessment for IQIP; assessment of 13-yearolds evaluated at the assessment date is also acceptable. However, programs are strongly encouraged to identify and use the coverage assessment generated from their IIS that will most closely measure adherence to ACIP recommendations for adolescents. Whatever assessment method programs choose to use as their adolescent measure, the key to reliably gauging the effect of the QI strategy is to perform the same type of assessment at the end of the 12-month IQIP process as was used at the initial visit when the IQIP cycle started.

#### Leveraging IIS Functionality to Improve Immunization Practice

The IQIP program will promote three core QI strategies, one of which is to *Leverage IIS Functionality to Improve Immunization Practice.* When offering this strategy to VFC providers, the immunization program staff who conduct the IQIP site visits will collaborate with providers to identify the most appropriate use of the IIS to inform their immunization practices. IQIP consultants will then provide technical assistance and ongoing support to the provider office staff so that they will have the knowledge needed to implement the QI strategy and sustain its use throughout the 12-month IQIP cycle and beyond.

#### Potential Implementation of IIS Core Strategy Among Immunization Providers

- Demonstrate how the IIS can support provider immunization practice, such as
  - Calculate practice-based coverage assessments
  - Generate patient lists such as missed opportunities
  - Review vaccines due for scheduled and unscheduled patients
- Immunization program staff who conduct IQIP site visits can provide
  - Hands-on demonstration, technical assistance, training, and troubleshooting
  - Promotion of IIS data quality, timeliness, and completeness
  - Promotion of routine patient status management (PAIS, MOGE, etc.)
- Concepts covered will vary based on the functionality of the awardee IIS



## UPDATE ON CDC'S NEW IQIP PROGRAM Continued from page 7

#### How IIS Can Support Immunization Programs in Their Implementation of IQIP

As the featured tool in one of the three core IQIP strategies, IIS will play a central role in immunization programs' collaboration with providers to ensure children are immunized appropriately and on time. IIS can do the following to help assure success in IQIP activities:

As the featured tool in one of the three core IQIP strategies, IIS will play a central role in immunization programs' collaboration with providers to ensure children are immunized appropriately and on time.

- Partner with immunization programs to identify key functionalities to feature during IQIP visits and train IQIP consultants.
- If the IIS cannot generate the IQIP-recommended adolescent coverage measure, work with the immunization program to identify available options for on-demand adolescent coverage assessments that provide the best measure of on-time vaccination in accordance with ACIP recommendations.
- Assist in the development of IIS educational resources for IQIP, either for use during visits or for later reference during providers' implementation of IIS functionality in their practices.
- Stay in contact with the IQIP program to ensure IQIP consultants remain up to date on IIS functionality.

#### For More Information

For answers to questions about the IQIP program, please contact the CDC IQIP Program at <u>AFIXINFO@cdc.gov.</u>

- Submitted by Amanda Bryant, MPH and Adam Bjork, PhD, CDC



## NEW AIRA RESOURCE ON ASSESSING DATA QUALITY PRACTICES: DATA AT REST

Data quality is complex and ever changing. It is a constant battle to keep up with data cleansing practices while continuously finding new points of intervention.

However, the benefits are grossly underestimated when it comes to use of the data and impacts on the global public health arena. For this reason, the AIRA Assessment Steering Committee (ASC) developed a new data quality resource for the IIS community focusing on data at rest.

Data Quality Practices to Monitor and Evaluate Data at Rest is the third in a series of guides that provide practical guidance to IIS staff for assessing and improving the quality of their data. The purpose of the guide is to provide practical guidance on techniques, methodologies, and processes for IIS to use in assessing the quality of data at rest.

The purpose of the guide is to provide practical guidance on techniques, methodologies, and processes for IIS to use in assessing the quality of data at rest.

This guide focuses on the data quality dimensions of completeness, accuracy, and timeliness, with the additions of validity, consistency, and uniqueness. Examining data at rest provides unique opportunities to analyze data across providers or within providers and to look for patterns of issues not otherwise apparent.

#### Highlights of the Guide:

- Tables of Data Quality Indicators (organized by data quality dimension).
- System-level activities such as cleansing and correcting address data and the prevention of duplicates and bad merges.
- Template for a step-by-step process for building a data at rest quality analysis plan.
- Examples of address cleansing services used in North Dakota, Minnesota, and Washington.
- Data at rest sample reports are available from Envision Technology Partners, Michigan, and the CDC IIS-TIPS project.

#### - Submitted by Nichole Lambrecht, AIRA



#### SPOTLIGHT

## DATA AT REST EVALUATION ACTIVITIES CONDUCTED IN NORTH DAKOTA

North Dakota routinely assesses our IIS data at rest for a number of data quality measures, the majority of which are aimed at managing our IIS population denominator. Since we use our IIS for almost every aspect of our immunization program and continually assess immunization coverage rates using our IIS, having the most accurate population denominator is incredibly important.

We also try to engage our IIS users in helping with our data quality. Specifically, IIS users flag duplicate/fragmented and deceased-patient records so that IIS staff can merge the duplicates and remove deceased records. Once a week, IIS staff run reports that look for patient records that have been flagged as duplicates or deceased so they can be acted on. We do receive death record notifications from Vital Records; however, we rely on IIS users to identify those that may have been missed (due to mismatched names) or to identify those that should be removed as soon as possible, before we get the information from Vital Records. Additionally, North Dakota has automated patient-level deduplication that identifies all patient records touched the previous day and scans the entire database for potential duplicates. If a duplicate is identified, the records are placed in a queue for review and action by IIS staff.

North Dakota has implemented a large program of using the IIS to conduct centralized, state-wide immunization reminder and recall. The program started with sending recall notices to our adolescent (13–17 year) population and has been expanded to include infants 24–35 months of age and adults 60 and older, reminder notices for school-required immunizations for kids entering kindergarten, 7th, 11th, and 12th grades, and HPV-

Evaluating data at rest is an ongoing process in our state, and we're continually looking for ways to improve our data quality.

specific reminders to kids who recently turned 11 years old. The reminder/recall program also led to the implementation of an address cleansing process. We routinely submit address data for all IIS patient records to the U.S. Postal Service (USPS) National Change of Address (NCOA) system to identify records that need their address updated. Once we have identified addresses that need to be changed, we look for any address that is newly marked as out-of-state so that the NDIIS patient record status can be changed to Moved or Gone Elsewhere (MOGE). This process uses an automated data update script, does not require much manual intervention by IIS staff, and effectively removes records from the IIS denominator when we assess statewide, countylevel, and provider-level coverage rates. We also use reminder/recall notices that are returned as undeliverable to update address records and MOGE status. Evaluating data at rest is an ongoing process in our state, and we're continually looking for ways to improve our data quality.

- Submitted by Mary Woinarowicz, North Dakota Department of Health

## CDC COMMUNITY OF PRACTICE PROMOTING PROVIDER IIS PARTICIPATION GETS STRONG START

Over a dozen IIS teams responded to CDC's request for interest in being part of a CDC Community of Practice (CoP) for improving provider IIS participation. CDC selected seven IIS teams for the CoP, and seven others volunteered as mentors to the CoP.



The partners in the CoP include AIRA, the Association of Immunization Managers (AIM), the American Academy of Pediatrics (AAP), and the American Academy of Family Physicians (AAFP). The partners will work with the IIS teams as they test, refine, and implement strategies to advance best practices for improving provider participation. Scientific Technologies Corporation's Public Health Division won the competitive bid to provide technical assistance for the project. The project got under way in December 2018. Significant progress has been made to date.

CDC and STC worked with each team to identify barriers to participation. Common barriers included:

- Inaccuracies in data used for reporting provider participation for the IIS Annual Report
- Provider outreach and training
- Onboarding and EHR vendor relationship building
- Data quality for electronic data exchange

Additional barriers identified by the teams include developing and implementing policies requiring VFC and non-VFC providers to report to the IIS, improving the ability to identify and track provider types within the IIS, and managing IIS user accounts.

## Provider Participation ls Key to IIS Success

Provider participation is critical for every immunization program and IIS. Low provider participation creates data gaps that negatively impact vaccine forecasting, coverage assessment, and coverage rate improvement efforts. Regular submission of data to the IIS by providers helps assure the completeness of vaccination and patient demographic data for programs, providers, and patients and assures the IIS can promote best practices in patient care and support local, national, and stakeholder immunization goals.

Nationally, about 85% of providers participate in an IIS. This rate is below the national target of 95%. Individual IIS report provider IIS participation ranging from less than 47% to as high as 100% for VFC providers. For non-VFC providers, the statistics aren't as impressive, starting below 35%, with only a few IIS reporting greater than 82% IIS participation by non-VFC providers.



## CDC COMMUNITY OF PRACTICE PROMOTING PROVIDER IIS PARTICIPATION GETS STRONG START

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CDC and STC developed a resource identifying strategies and activities for addressing these barriers. Draft implementation plans were created for each team. The teams prioritized the barriers to address, then selected strategies and activities for implementing their plans. Throughout the project, the IIS teams will receive one-on-one technical support and consultation from partners in the CoP, a CDC analyst, and a public health consultant from STC.

The project includes three CoP meetings (one in-person and two virtual meetings). The in-person CoP took place in Atlanta, February 27–28. During the meeting, mentors shared their experience with strategies to overcome common barriers. Local AAP representatives from each state attended and gave the provider perspective for each barrier. AAP, AAFP, AIRA, and AIM described resources they have to support the project as well as how they will help get feedback from and promote communication with their members. AIRA and STC described technical assistance support they can provide the participants. The IIS teams worked in small groups with the provider representatives from their local AAP chapters to finalize their implementation plans. IIS teams will initiate their plans in March. Virtual CoP meetings are planned for May and August 2019.

For more information, contact Jan Hicks-Thomson at <u>hbv8@cdc.gov</u> or (404) 718-1555.

- Submitted by Jan Hicks-Thomson, CDC

SnapShots is just one way to engage with AIRA. We hope you'll consider joining us for the AIRA 2019 National Meeting August 13-15, 2019 in Indianapolis, Indiana for three days of invaluable content. Visit <u>www.airanationalmeeting.org</u> for more information.