CULTIVATING COMMUNITY
ESTABLISHING STANDARDS
SUPPORTING IMPLEMENTATION

AIRA AMERICAN IMMUNIZATION REGISTRY ASSOCIATION
Immunization Information Systems for a New Era

National Meeting
SEATTLE, WA
APRIL 5-7 2016

MEETING PROGRAM

The AIRA 2016 IIS NATIONAL MEETING is this year's best opportunity for IIS, IMMUNIZATION PROGRAMS, and PARTNERS to come together to share new ideas and innovative strategies.
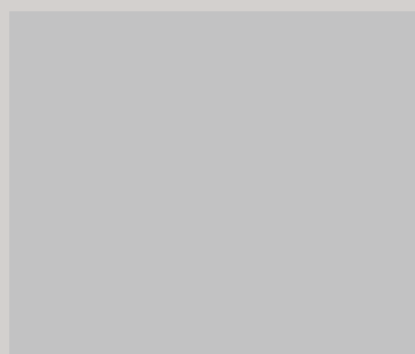
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#AIRA2016

Introduction and General Information

WELCOME

Dear Colleagues,

On behalf of the American Immunization Registry Association (AIRA) Board of Directors and staff, I would like to welcome each of you to the AIRA 2016 National Meeting, **"Cultivating Community, Establishing Standards, Supporting Implementation."** We are thrilled to have another opportunity to bring the IIS community together to share ideas, experiences, and lessons learned. This past year has been filled with exciting new challenges, opportunities for collaboration and joint development, and we have seen a lot of growth both in the IIS community and AIRA. This meeting provides a great space for all of us to come together and continue collectively to move forward as leaders in public health and health information technology.

It is with great pleasure that we welcome two distinguished guests as keynote speakers, both of whom have unique perspectives and experiences in public health:

- Boris D. Lushniak, MD, MPH, Rear Admiral, Retired (RADM Ret), US Public Health Service, Deputy Surgeon General (2010-2015), Acting US Surgeon General (2013-2014)

- Anne Schuchat, MD, Principal Deputy Director, Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry, Rear Admiral, US Public Health Service

Additionally, over the next few days we have a number of excellent presentations and working sessions for you to attend. Building on last year's success, we have three "Create-Your-Own-Session" breakouts planned from community members and partners across a wide variety of topics, including IIS workforce development, AFIX-IIS integration, IIS standards and fundamentals, and innovative IIS technology, to name just a few. Other planned breakout sessions will showcase additional presentations on topics such as successful partnerships and collaborations, programmatic use of IIS, IIS tools and technology, and data quality. We have a very full agenda with a lot of great content being shared over the next few days and I want to thank all of our presenters for being so generous with their time and for sharing their ideas and experiences.

On Wednesday morning, AIRA is planning a roundtable discussion session. Similar to last year's format, we will be focusing the discussion on a single topic: Interoperability Testing and Assessment. We hope to have wide participation again from meeting attendees. The roundtable is a great opportunity to provide valuable feedback on a topic that is having an impact on the future of IIS.

I, along with the entire AIRA Board and staff, would like to personally thank each of you for attending this year's National Meeting. We hope that we have created an opportunity for you to meet new colleagues and partners and reconnect with others, to raise questions, debate approaches, share your expertise and experiences and to make your voice heard. I would also like to take this opportunity to thank our meeting sponsors. Without their support, this meeting would not be possible.

Let's continue to work together to strengthen our community and build a sustainable future for IIS.

Sincerely,

Mary Woinarowicz, MA
North Dakota IIS Manager
AIRA Board President

#AIRA2016

MEETING SPONSORS

Thank you!

We extend our most sincere thanks to the sponsors of AIRA's 2016 IIS National Meeting for their support of our mission and for helping to make this event possible.

All meeting participants are encouraged to take every opportunity to express their appreciation to the sponsor representatives that they come into contact with during the meeting and afterwards.

PLATINUM

Hewlett Packard Enterprise

STC

GOLD

ENVISION TECHNOLOGY PARTNERS

HLN Consulting, L.L.C.

Public Health Informatics Institute

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AMCi Health Informatics

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ABOUT SEATTLE

The Westin Seattle is located in the heart of downtown Seattle, just steps away from shopping, award-winning restaurants and the iconic Pike Place Market. At the Pike Place Market, you'll find cobblestone streets, famous fish mongers, the first Starbucks circa 1975, and locally-owned and renowned Beecher's Handmade Cheese. Walk through the Farmer's Market, a daily shopping haven for local chefs, as well as host to a beautiful array of fresh flowers. April is also tulip season in Seattle! Adjacent to the hotel, you can catch the monorail for a quick 60-second trip to the Seattle Center and experience popular attractions such as the Space Needle, Chihuly Garden & Glass, and the EMP Museum. Also adjacent to the Westin, you can ride the South Lake Union Streetcar to Lake Union, a popular spot for viewing Seaplane takeoffs and landings. The Lake Union area is a growing neighborhood that is home to Amazon, and the Museum of History and Industry. Downtown Seattle is very compact with many attractions that are walkable or easily accessible via public transportation – and the Westin is in the center of it all!

Map courtesy of www.VisitSeattle.org

MEETING ROOMS

Third Floor

VASHON

I   II

BANQUET OFFICE

NORTH TOWER ELEVATORS

SAN JUAN FOYER

EXIT   EXIT

WHIDBEY

ORCAS

BLAKELY

Fourth Floor

GRAND BALLROOM

I   II   III

EXIT

EXIT

EXIT

GRAND FOYER

NORTH TOWER ELEVATORS

GRAND CRESCENT

FIFTH AVENUE ROOM

EXIT   EXIT   EXIT

GRAND CONVENTION OFFICE

GRAND REGISTRATION ROOM
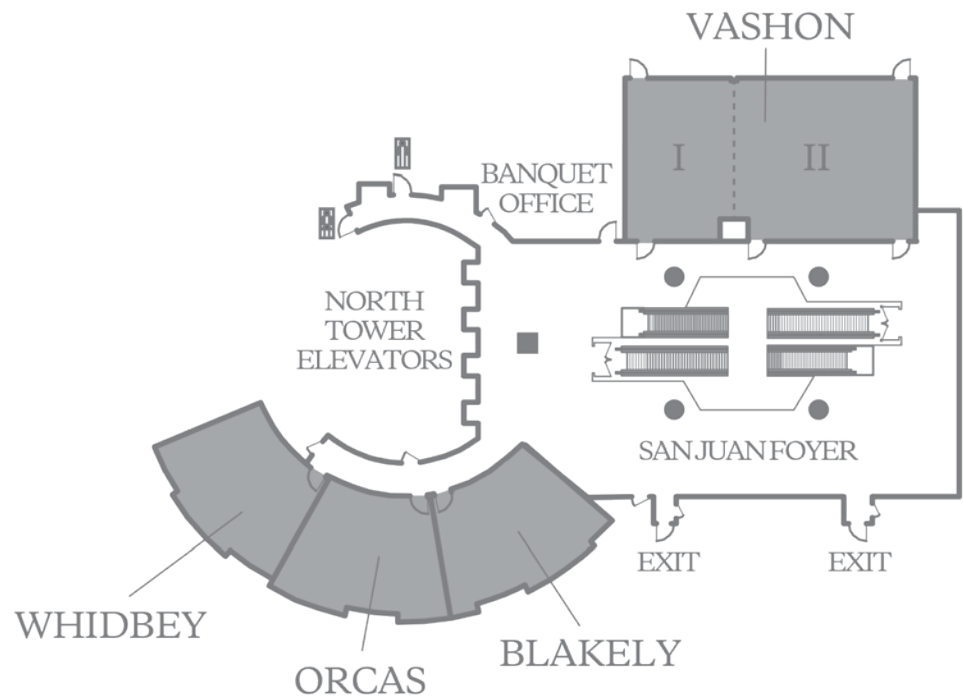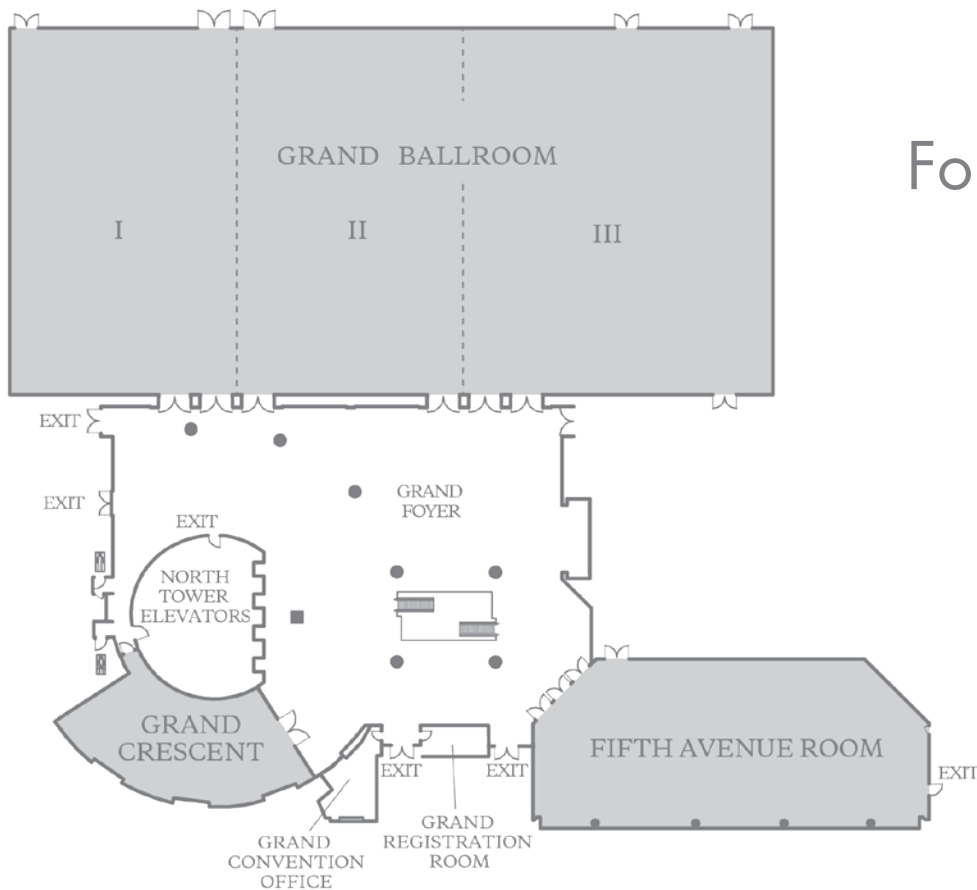
AIRA FAQs

Q. What is AIRA?

American Immunization Registry Association (AIRA) is a membership organization that exists to promote the development and implementation of **immunization information systems (IIS)** as an important tool in preventing and controlling vaccine preventable diseases. **AIRA values the voluntary and collaborative interaction of all of its members.**

Q. How does AIRA serve the IIS community?

AIRA provides a forum through which members combine efforts, share knowledge, and promote activities to advance IIS and immunization programs. **A strong, unified voice for standards, policy and funding, AIRA is a resource for data exchange standards development, information sharing and education/training for IIS managers and staff.**

Q. Who are AIRA's members?

AIRA is mostly an organization of **IIS staff working in health departments**, with partner organizations such as professional medical associations, community advocacy and education coalitions and software industry representatives also participating. There are currently 65 member organizations, businesses and affiliates, representing over 400 individuals.

Q. How do members participate in AIRA's efforts?

AIRA's activities are carried out by members who participate on committees including the **Education Steering Committee**, the **Modeling of Immunization Registry Operations Workgroup (MIROW) Steering Committee**, the **Assessment Steering Committee**, and the **Standards and Interoperability Steering Committee**. Each committee participates in a monthly call to keep the participants focused on their goals.

Q. Who runs AIRA?

AIRA has a very active Board of Directors that works closely with AIRA's Staff: Executive Director Rebecca Coyle, Program Director Alison Chi, Policy and Planning Director Mary Beth Kurilo, Sr. Program Manager Carmela Gupta, Program Manager Ketti Turcato, Sr. Technical Project Managers Nathan Bunker, Nichole Lambrecht and Eric Larson, Sr. Project Manager Maureen Neary, Business and Grants Manager Amanda Dayton, and Administrative Assistant Amanda Branham.

Q. What do current members have to say about AIRA?

AIRA is viewed by its members as **the** centralized core of activity for IIS development, standardization, and best practices.

Q. Why should I want to join AIRA?

- To build and maintain **strong partnerships** with other organizations on issues of common concern to you.

- To advocate for **funding of IIS** development and enhancement through legislation, policy development and public information.

- To contribute to the ongoing development and evolution of IIS through **knowledge sharing** opportunities and **capacity building** activities.

- To promote, advocate for, develop, and disseminate **IIS data exchange standards** that are consistent with national standards and that increase the visibility of IIS as **public health best practice models** for interoperable and integrated health management systems.

Q. What do I get if I/my organization join AIRA?

- **General member** benefits include members-only rates for AIRA-sponsored events, a *SnapShots* (newsletter) subscription; access to Members Only pages of the AIRA website; participation on committees and workgroups; voting privileges; and benefits of our HL7 membership.

- **Organization and Affiliate members** are eligible to serve as voting members of the AIRA Board of Directors.

Q. How do I join AIRA?

Call us at **202-552-0208** to receive membership information or visit **www.immregistries.org** to learn more.

AIRA Member Benefits

ALL MEMBERS RECEIVE:

- SnapShots subscription
- Access to Members Only resources on the AIRA website
- Voting privileges
- Benefits of our HL7 International membership
- Discounts to AIRA sponsored events
- Use of AIRA Member Logo

IIS, IIS IMPLEMENTER & AFFILIATE MEMBERS:

- Three individual voting members
- Three individual non-voting members
- Prominent listing in AIRA publications and on AIRA website
- Option to update to Gold membership status

AIRA GENERAL PARTNERSHIP PROGRAM:

- 2 levels of partnership: Presidential and Premier
- Discounted registration rates at AIRA meetings
- Use of AIRA Partner Logo
- Recognition as AIRA General Partner on AIRA website by level of Partnership
- Receipt of AIRA publications and opportunity to submit Partner updates

AIRA Membership Categories

VOTING MEMBERS ANNUAL DUES

Immunization Information Registry or System (IIS)
Local, state and territorial public health agencies that operate an IIS.

Basic: $ 300
Gold: $1,500

IIS Implementer
An organization specializing in developing, supporting or maintaining software designed for use in an IIS operated by a governmental entity.
IIS Implementer includes both for profit and non-profit entities.

Basic: $ 300
Gold: $1,500

Affiliate
Non-profit organizations.

Basic: $ 300
Gold: $1,500

Individual
Any individual staff member of an IIS, IIS Implementer, or Affiliate that is not designated as a Voting or Non-Voting member of that organization; an individual associated with an Affiliate or IIS Implementer that has less than 3 employees; or any other individual who is not associated with a for-profit organization.

$100

* AIRA recognizes that our Members and Partners often create solutions or provide services that may be of interest to our members. We invite our Members and Partners to join AIRA with the understanding that AIRA must maintain a neutral stance with regards to promoting specific products and services. AIRA does not endorse nor imply any endorsement of any Member or Partner or their products and/or services.

NON-VOTING MEMBERS ANNUAL DUES

RECIPROCAL MEMBERS
Federal agencies and membership organizations such as IHS, ECBT and AIM.

$ 0

HONORARY MEMBERS
An honorary individual member as designated by the Executive Committee and those who have served as AIRA President.

$ 0

These membership changes will go into effect October 1, 2016. Please see our website for details: www.immregistries.org.

AIRA

AMERICAN IMMUNIZATION REGISTRY ASSOCIATION

Immunization Information Systems for a New Era

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PLANNING COMMITTEE

The AIRA 2016 IIS National Meeting is made possible thanks to the diligence and volunteer hours of the Planning Committee.

Terri Adams, Michigan Department of Immunizations

Noam Arzt, HLN Consulting, LLC.

Heidi Augustine, AMCI iSIIS Vision

Erich Daub, Scientific Technologies Corporation

Dannette Dronenburg, Spokane Regional Health District

Hilda Dupwe, Arkansas Department of Health

Sydney Kuramoto, Minnesota Department of Health

Barbara Lyman, AMCI iSIIS Vision

Lorinet Martell-Martinez, Puerto Rico Department of Health

Gwen Navarrete Klapperich, Independent Training & Nonprofit Consultant

Katie Reed, Hewlett Packard Enterprise

Kristal Shearin, SureScripts

Jacki Stockdale, Washington State Department of Health

Amanda Timmons, Oregon Immunization Program

Gary Wheeler, Hewlett Packard Enterprise

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Alison Chi, Program Director

Mary Beth Kurilo, Policy and Planning Director

Carmela Gupta, Sr. Program Manager

Maureen Neary, Sr. Project Manager

Nathan Bunker, Sr. Technical Project Manager

Nicole Lambrecht, Sr. Technical Project Manager

Eric Larson, Sr. Technical Project Manager

Amanda Dayton, Business and Grants Manager

Ketti Turcato, Program Manager

Amanda Branham, Administrative Assistant

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FULL AGENDA

Monday, April 4

4:00ᴾᴹ – 6:00ᴾᴹ	**Registration:** Registration Desk / 4th Fl.

Tuesday, April 5

7:00ᴬᴹ – 8:00ᴬᴹ	**Registration:** Registration Desk / 4th Fl.
	Coffee, Tea & Light Fare: Grand Ballroom Foyer / 4th Fl.

8:00ᴬᴹ – 9:30ᴬᴹ	**WELCOME AND OPENING PLENARY**: Grand Ballroom 3 / 4th Fl.

Moderator: Rebecca Coyle, MSEd, Executive Director, AIRA

Washington Welcome
Michele Roberts, MPH, MCHES, Office Director, Washington State Department of Health, Office of Immunizations and Child Profile

AIRA Welcome
Mary Woinarowicz, MA, AIRA Board President, NDIIS Manager, North Dakota Department of Health

AIRA Update
Rebecca Coyle, MSEd, Executive Director, AIRA

KEYNOTE SPEAKER

➤ **BORIS D. LUSHNIAK**, MD, MPH, Rear Admiral, Retired (RADM Ret), US Public Health Service, Deputy Surgeon General (2010-2015), Acting US Surgeon General (2013-2014)

9:30ᴬᴹ – 10:00ᴬᴹ	**Networking Break**

10:00ᴬᴹ – 11:00ᴬᴹ	**BREAKOUT SESSION 1** (Concurrent)

A / Capturing and Implementing Business Rules and Decisions — The Intellectual Capital of Your Organization Grand Ballroom 1 / 4th Fl.	B / IIS Workforce Development: Findings from Building Training Across Functions and for Specific Roles Grand Cresent / 4th Fl.	C / The AFIX-IIS Integration Project Fifth Avenue Room / 4th Fl.	D / Principles, Challenges, Techniques, and Tools for the Testing of Immunization Forecasting Software Vashon / 3rd Fl.	E / Partnership and Innovation Whidbey / 3rd Fl.
Gladys Lam, Business Rule Solutions, LLC **Ronald G. Ross,** Business Rule Solutions, LLC	**Jessica A. Hill, MPH,** Public Health Informatics Institute, Task Force for Global Health **Kristopher Hall,** Public Health Informatics Institute, Task Force for Global Health	**Bobbie Strickland, CHES,** Masters Certificate in Infection Control, CDC/NCIRD/ ISD/IISSB **Chrystal Averette,** Washington State Department of Health **Kristi Siahaya, MBA, CHES,** Scientific Technologies Corporation	**Michael J. Suralik, MCS,** HLN Consulting, LLC **Nathan Bunker,** AIRA **Amanda Timmons,** Oregon Immunization Program	**Performance on Immunization Quality Measures Using Claims, Medical Record and Registry Data** **Sepheen Byron, MHS**, National Committee for Quality Assurance **Project IMPACT Immunizations: IMProving America's Communities Together** **Benjamin Bluml,** American Pharmacists Association Foundation **Kelly Brock, PharmD,** American Pharmacists Association Foundation

11:00ᴬᴹ – 11:15ᴬᴹ	**Transition Break**

11:15ᴬᴹ – 12:30ᴾᴹ | **BREAKOUT SESSION 2** (Concurrent)

A / Interoperability: A Shared Responsibility Grand Ballroom 1 / 4th Fl.	B / IIS Fundamentals Grand Cresent / 4th Fl.	C / Coverage Assessment Fifth Avenue Room / 4th Fl.	D / Partnering with Vendors Vashon / 3rd Fl.
The Query Quandary: Your Data Has Left the Building, Now What? **Tracy Little,** Oregon Immunization Program	**Implementation of Provider-Based Text Message Recall Through an Immunization Information System** **Monica Sull, MPH,** Bureau of Immunization, New York City Department of Health and Mental Hygiene	**Testing Reliability of Regional Coverage Rates Using Registry Data in Voluntary Reporting Areas** **Zachary Madewell, MPH,** County of San Diego Health and Human Services Agency	**Implementing a Vaccine Management System at the IIS Level** **Megan Meldrum,** New York State Immunization Information System
A National Look at Data Exchange Variation and Improvement Initiatives **Nell Lapres,** Epic **Greg Faber,** Epic	**Improving Private Providers Participation in IIS Through a Data Quality Plan** **Cristina Pérez-Mejías,** Puerto Rico Department of Health	**Using IIS and Vital Statistics Data to Measure Racial/Ethnic Immunization Coverage Disparities in MN** **Sudha Setty, MPH,** Minnesota Department of Health **Miriam Muscoplat, MPH,** Minnesota Department of Health	**Improving the Success and Timeliness of Project Completion in North Dakota** **Mary Woinarowicz, MA,** North Dakota Department of Health
Improving Performance on the Shot Clock: Sharing Responsibilities Between Providers and IIS **Floyd Eisenberg, MD, MPH,** CNI Advantage	**Communicating and Training IIS Users: Washington's Story** **Dannette Dronenburg, MPH,** Washington State Department of Health **Jacy Fitzpatrick,** Scientific Technologies Corporation	**Using an IIS to Provide Quarterly Human Papilloma Virus (Hpv) Coverage Detail to Medical Providers** **Bridget Ahrens, MPH,** Vermont Department of Health	**IIS and Vendors: a Partnership** **Eric Schuh,** Hewlett Packard Enterprise **Jenne McKibben,** Oregon Immunization Program

12:30ᴾᴹ – 1:30ᴾᴹ | **LUNCH:** Grand Ballroom 2 / 4th Fl.

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	A / MIROW Interactive Workshop: Introduction to New Topic Grand Ballroom 1 / 4th Fl.	B / Something Old, New, Measured and Blue: Current Uses and Future Plans for the Functional Standards Grand Cresent / 4th Fl.	C / Improving Coverage Rates Using IIS: Collaborating to Overcome Barriers Fifth Avenue Room / 4th Fl.	D / Using NIST Tools to Advance Interoperability for Immunization Messaging Implementations Vashon / 3rd Fl.	E / Migration Whidbey / 3rd Fl.
1:30ᴾᴹ – 3:00ᴾᴹ ❘ **BREAKOUT SESSION 3** (Concurrent)	**Warren Williams, MPH,** CDC/NCIRD/ISD/IISSB **Elaine Lowery, JD, MSPH,** AIRA **David Lyalin, PhD,** CDC/NCIRD/ISD/IISSB	**Janet Fath, PhD,** CDC/NCIRD/ISD/IISSB **Bill Brand, MPH,** Public Health Informatics Institute **Mary Beth Kurilo, MPH, MSW,** AIRA	**Mary Waterman, MPH,** Association of Immunization Managers	**Robert Snelick, MS,** National Institute of Standards and Technology	**Migrating to a New IIS: The Story of Oklahoma's Success** **Michael J. Suralik, MCS,** HLN Consulting, LLC **Lori Linstead, MS,** Oklahoma State Department of Health **Data Migration Lessons Learned, Data Quality Opportunities for Data at Rest** **Mike Loula,** Hewlett Packard Enterprise **Michael Powell,** California Department of Public Health **Incremental IIS Roll Out: Delivering Tailored Customer Service for Transitioning Providers** **Laura Barrett,** Kentucky Immunization Program **Lacheena Carothers,** Kentucky Immunization Program **Sarah Heimann,** Kentucky Immunization Program **Jody Schweitzer, MPH,** Kentucky Immunization Program

3:00ᴾᴹ – 3:15ᴾᴹ ❘ **Transition Break**

3:15ᴾᴹ – 5:00ᴾᴹ ❘ **PLENARY: CULTIVATING COMMUNITY, ESTABLISHING STANDARDS, SUPPORTING IMPLEMENTATION**
Grand Ballroom 3 / 4th Fl.
Moderator: Kim Salisbury-Keith, MBA, KIDSNET Development Manager, Rhode Island Department of Health

Presentation of AIRA Awards

Partnering With IIS for the Future
Warren Williams, MPH, Acting Branch Chief, CDC/NCIRD/ISD/IISSB

Assessment and Interoperability Testing Update
Mary Beth Kurilo, MPH, MSW, Policy and Planning Director, AIRA
Laura Pabst, MPH, Evaluation Team Lead, CDC/NCIRD/ISD/IISSB

Joint Development and Implementation Update
Gerri Yett, MSN, RN, CHES, Immunization Program Manager, Alaska Department of Health and Social Services, Division of Public Health, Section of Epidemiology

5:30ᴾᴹ – 7:30ᴾᴹ ❘ **RECEPTION** Grand Ballroom 2 / 4th Fl.

Wednesday, April 6

7:00^{AM} – 8:00^{AM}	**Coffee, Tea & Light Fare:** Grand Ballroom Foyer / 4th Fl.
	New Member Meet & Greet: Grand Crescent / 4th Fl.
8:00^{AM} – 9:00^{AM}	**ROUNDTABLE: INTEROPERABILITY TESTING AND ASSESSMENT:** Grand Ballroom 2 / 4th Fl.
9:00^{AM} – 9:15^{AM}	**Transition Break**
9:15^{AM} – 10:30^{AM}	**BREAKOUT SESSION 4** (Concurrent)

A / Interoperability and Data Quality	B / IIS Fundamentals	C / IIS Data Informing Schedule Compliance and Coverage	D / Successful Partnerships
Grand Ballroom 1 / 4th Fl.	Grand Cresent / 4th Fl.	Fifth Avenue Room / 4th Fl.	Vashon / 3rd Fl.
IIS Interoperability With Unconventional Systems **Mary Woinarowicz, MA,** North Dakota Department of Health	**Putting Best Practices to Work: Colorado's Experience with IIS-Based Centralized Reminder/ Recall** **Heather Roth, MA,** Colorado Department of Public Health and Environment	**Frequency of Vaccinations Outside Recommended Ages — 2014; Six IIS Sentinel Sites** **Loren Rodgers, PhD,** CDC/NCIRD/ISD/IISSB	**Utility of Linking the WIIS and Refugee Health Screening Database to Assess WA Refugee Immunizations** **Azadeh Tasslimi, MPH,** Washington State Department of Health, Office of Communicable Disease Epidemiology
Comparing IIS and Vaccine Tracking System (VTrckS) Data to Improve IIS Data Quality **Jessica Rao, MPH,** New York City Department of Health and Mental Hygiene and Public Health Solutions	**Wisconsin Immunization Registry Meaningful Use Onboarding Processes and Best Practices** **Jason Suchon,** MetaStar	**Trends in Compliance with Two-dose Influenza Vaccine Recommendations in Young Children, 2010–2015** **Xia Lin, PhD, MSPH,** CDC/NCIRD/ISD/IISSB	**A Tale of Two Collaborators: The IIS Sentinel Site Project and CDC** **LaTreace Harris, MPH,** CDC/NCIRD/ISD/IISSB
Evaluating IIS Address Data Quality following HL7 Implementation by a Retail Pharmacy Chain **Kevin Dombkowski, DrPH, MS,** University of Michigan	**Challenges of Having a Huge Volume of Marginal Data and Strategies to Create a Win-Win Situation** **Yukiko Yoneoka, MS,** Utah Immunization Information System	**Human Papillomavirus Vaccination in Washington State: Estimated Coverage and Missed Opportunities** **Chas DeBolt, MPH, RN,** Washington State Department of Health	**Evaluation of Interstate Immunization Data Exchange between Minnesota and Wisconsin** **Miriam Muscoplat, MPH,** Minnesota Department of Health **Ashley Petit, MPH,** Wisconsin Division of Public Health

10:30^{PM} – 11:00^{AM}	**NETWORKING BREAK:** Grand Ballroom Foyer / 4th Fl.

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11:00^{AM} – 12:00^{PM} | **BREAKOUT SESSION 5** (Concurrent)

A / Decrementing Inventory Via Electronic Data Exchange: MIROW 2016 Guidelines	B / Exploring Strategies and Considerations for Implementing Innovative Technology Within Your IIS	C / IIS-EHR Partnership: Providing and Displaying Immunizations and Clinical Decision Support in EHRs	D / Personalizing Public Health Through Consumer Access to Immunization Records — An Interactive Session	E / New Frontiers for IIS
		Fifth Avenue Room / 4th Fl.		
Grand Ballroom 1 / 4th Fl.	Grand Cresent / 4th Fl.		Vashon / 3rd Fl.	Whidbey / 3rd Fl.
Warren Williams, MPH, CDC/NCIRD/ISD/IISSB	**Gary Wheeler,** Hewlett Packard Enterprise	**Amy Metroka, MSW, MPH,** New York City Department of Health and Mental Hygiene	**Shannon Stokley, MPH,** CDC/NCIRD	**Open Source Revealed: How the IIS Community Can Benefit From Being an Open Source Community**
Elaine Lowery, JD, MSPH, AIRA	**Grant Christie,** Hewlett Packard Enterprise	**Vikki Papadouka, PhD, MPH,** New York City Department of Health and Mental Hygiene	**James Daniel, MPH,** HHS/ONC	**Noam H. Arzt, PhD, FHIMSS,** HLN Consulting, LLC
Elizabeth Parilla, MPH, Minnesota Department of Health			**Erich Daub,** Scientific Technologies Corporation	
Bhavani Sathya, MPH, New Jersey Department of Health			**Lonnie Peterson,** Washington State Department of Health	**AART: Painting a Picture of Your IIS**
Therese Hoyle, Michigan Department of Health and Human Services / Public Health Informatics Institute			**Quan Le, RN,** Louisiana Department of Health and Hospitals	**Nathan Bunker,** AIRA
			Lara Popovich, Scientific Technologies Corporation	**Eric Larson,** Northrop Grumman/AIRA

12:00^{PM} – 1:00^{PM} | **LUNCH:** Grand Ballroom 2 / 4th Fl.

Questions about Meaningful Use Stage 3 (or 2 or 1)? Ask the Expert! Grand Ballroom 3 / 4th Fl.
Grab some lunch and come ask your questions.

James Daniel, MPH, Public Health Coordinator, U.S. Department of Health and Human Services, Office of the National Coordinator for Health Information Technology
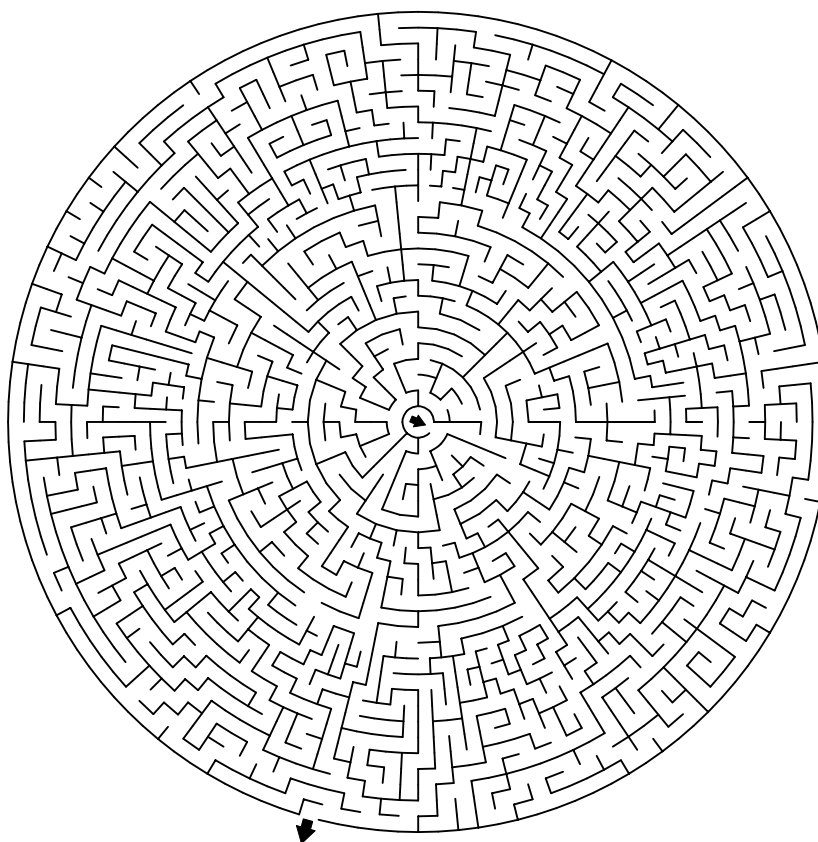
1:00PM – 2:15PM | **BREAKOUT SESSION 6** (Concurrent)

A / Interoperability: Onboarding and Data Quality Grand Ballroom 1 / 4th Fl.	B / Integration and Use of CDC Resources Grand Cresent / 4th Fl.	C / Data Use by Providers and Health Departments Fifth Avenue Room / 4th Fl.	D / Development and Sustainability Vashon / 3rd Fl.
No Pain, No Gain: Using Quality Improvement Processes to Improve Program Efficiency **Heather Roth, MA,** Colorado Department of Public Health and Environment	**Progress Update on Automating VTrckS ExIS Data Exchange and the ExIS Usability Best Practices Catalog** **Janet Fath, PhD,** CDC/NCIRD/ISD/IISSB **Amy Stone, PhD, MA,** Stone User Experience	**Local Health Department Use of Immunization Information Systems** **Lisa McKeown, MPH,** National Association of County and City Health Officials	**"Keeping Up" in a Turbulent Environment: Successful Strategies for IIS Sustainability** **Noam H. Arzt, PhD, FHIMSS,** HLN Consulting, LLC **Bill Brand, MPH,** Public Health Informatics Institute
The Quest for the Best: Establishing a Data Quality Protocol and Tools for Incoming Data **Beth English, MPH,** Massachusetts Department of Public Health **Kimberly Lay, MPH,** Massachusetts Department of Public Health	**An Update on Two-Dimensional (2D) Vaccine Barcoding** **Ken Gerlach, MPH,** CDC/NCIRD/ISD/IISSB **Regina Cox, MPH,** Deloitte Consulting, LLP	**Knowledge and Use of IIS Among a National Network of Physician Primary-care Providers** **Lauren Shaw, MS,** CDC/NCIRD/ISD/IISSB **Laura Pabst, MPH,** CDC/NCIRD/ISD/IISSB	**Agile Philosophy and Its Application Within Software Development in the IIS Community** **Derek Burns,** Hewlett Packard Enterprise
The Results of Implementing IIS Data Exchange With 19 Electronic Health Record Vendors in Washington **Rae Barr, CHTS-TS,** Scientific Technologies Corporation **Karen Meranda,** Washington State Department of Health	**Clinical Decision Support for Immunization: Overview of New Resources and Future Directions** **Stuart Myerburg, JD,** CDC/NCIRD/ISD/IISSB **Eric Larson**, Northrop Grumman/AIRA	**Practical Use of a Data Quality Protocol** **Deborah Richards,** Oregon Immunization Program **Tracy Little,** Oregon Immunization Program	**Applying Joint Development Strategies to Meet Unique Community Needs — the Pacific Island Experience** **Amanda Bryant, MPH,** CDC/NCIRD/ISD/IISSB **Augustus Elias,** Federated States of Micronesia Department of Health and Social Affairs

2:15PM – 2:30PM | **Transition Break**

2:30^{PM} – 3:45^{PM} | **BREAKOUT SESSION 7** (Concurrent)

A / Data Quality Protocols and Practices Grand Ballroom 1 / 4th Fl.	B / Interoperability: Evaluating for Success Grand Cresent / 4th Fl.	C / Programmatic Data Use Fifth Avenue Room / 4th Fl.	D / Partnerships and Stakeholders Vashon / 3rd Fl.
Approaches to Increasing Reporting of Adult Immunizations in the NDIIS **Dominick Fitzsimmons,** North Dakota Department of Health, Disease Control Division	**Development of an Approach to Evaluate HL7 Message Success Across Multi-Level Pathways** **Rob Savage, RN, MS,** Rob Savage, LLC	**Using Existing Disease Reporting to Publicize Registry Influenza Immunization Tracking in Oregon** **Steve Robison, MPH,** Oregon Immunization Program **Deborah Richards,** Oregon Immunization Program	**Mitigating Risk With High Impact Stakeholders** **Katie Reed, MPA,** Hewlett Packard Enterprise
Wisconsin Immunization Registry Report Cards: Providing IIS Data Quality Feedback to Providers **Ashley Petit, MPH,** Wisconsin Division of Public Health	**Using Geographic Information Systems (GIS) in an Evaluation of HL7 Message Data Quality** **Hannah Jary, MPH,** University of Michigan	**Characteristics Associated With Michigan Children Under-immunized in Their First Year of Life** **Rachel Potter, DVM, MS,** Michigan Department of Health and Human Services	**Helping IIS Stakeholders Help Themselves! Driving Daily Business Processes With Self-Serve Resources** **Darrin J. Rosebrook,** AMCI Health Informatics
Michigan's Ongoing Data Improvement Plan **Beatrice Salada,** Michigan Department of Health and Human Services	**Improving Immunization Data Exchange Interface in Wisconsin** **Yi Ou, MPH,** Wisconsin Division of Public Health	**Matching Enhances IIS Data — Assessing Tdap Uptake During Pregnancy in Washington State** **Joanna Eavey, MSPH,** Washington State Department of Health	**Immunize Washington — Taking Public-Private Partnerships to the Next Level With Health Plans** **Kristina Crane,** Scientific Technologies Corporation **Chrystal Averette,** Washington State Department of Health

3:45^{PM} – 4:15^{PM} | **Networking Break**

4:15^{PM} – 5:15^{PM} | **PLENARY: NEW AND EXISTING ACQUISITION MECHANISMS TO SUPPORT IIS STRATEGIC INITIATIVES**
Grand Ballroom 3 / 4th Fl.
Moderator: Bill Brand, MPH, Director, Public Health Informatics Science, Public Health Informatics Institute

Kim Spencer, Public Health Analyst, CDC/NCIRD/ISD/IISSB
Sharon Cunningham, MSA, Public Health Analyst, CDC/NCIRD/ISD/IISSB
Kafayat Adeniyi, MPH, IIS Portfolio Manager, CDC/NCIRD/ISD/IISSB
Anjella Johnson-Hooker, MS, Associate Director for Management and Operations, CDC/NCIRD
Warren Williams, MPH, Acting Branch Chief, CDC/NCIRD/ISD/IISSB

Thursday, April 7

7:00ᴬᴹ – 8:00ᴬᴹ | **Coffee, Tea & Light Fare:** Grand Ballroom Foyer / 4th Fl.

A Community Conversation about Interjurisdictional Exchange: Grand Crescent / Breakout B
James Daniel, MPH, Public Health Coordinator, U.S. Department of Health and Human Services, Office of the National Coordinator for Health Information Technology
Mary Beth Kurilo, MPH, MSW, AIRA
Denise Chrysler, JD, Network for Public Health Law

8:00ᴬᴹ – 8:45ᴬᴹ | **PLENARY I IGNITE PRESENTATIONS:** Grand Ballroom 3 / 4th Fl.
Moderator: Bill Brand, MPH, Director, Public Health Informatics Science, Public Health Informatics Institute

IIS from the Trenches to the Towers
Warren Williams, MPH, Acting Branch Chief, CDC/NCIRD/ISD/IISSB

Taylor Swift and IIS: The Similarities
Michael Flynn, MS, Technical Lead, New York State Immunization Information System

All the Ways Meaningful Use Stage 3 is Like Riding a Bike
James Daniel, MPH, Public Health Coordinator, U.S. Department of Health and Human Services, Office of the National Coordinator for Health Information Technology

Interoperability: Mission Possible
Eric Larson, Senior Technical Project Manager, Northrop Grumman/AIRA

Top Ten Reasons to Invest In Immunization Program-IIS Integration
Jane R. Zucker, MD, MSc, Assistant Commissioner, Bureau of Immunization, New York City Department of Health and Mental Hygiene

Top Ten Reasons I Love the AIRA National Meeting
Jenne McKibben, Director, ALERT IIS, Oregon Immunization Program

8:45ᴬᴹ – 9:00ᴬᴹ | **Transition Break**

9:00ᴬᴹ – 10:15ᴬᴹ | **BREAKOUT SESSION 8** (Concurrent)

A / Data Quality Tools	B / School and Childcare	C / Inventory Management	D / Partners and Stakeholders
Grand Ballroom 1 / 4th Fl.	Grand Cresent / 4th Fl.	Fifth Avenue Room / 4th Fl.	Vashon / 3rd Fl.
Using a Mobile App to Improve Pertussis Vaccination Data Quality and Reporting to an IIS **Melissa W. McClung, MSPH,** Denver Public Health	**The Family Educational Rights and Privacy Act (FERPA): Its Impact on Data Sharing by Schools** **Denise Chrysler, JD,** Network for Public Health Law	**From 0 to 100 in 1 Year: Ramping up Inventory Management and Reporting in the IIS** **Renee Sasha De Leon, MA, MSPH, MS,** Washington State Department of Health	**The Vaccine Safety Datalink and IIS** **Holly Groom**, Research Associate, Center for Health Research, Kaiser Permanente Northwest
Using Quality Assurance Tools to Improve HL7 Reporting to NYC's Citywide Immunization Registry **Emily DeMeo, MPH,** New York City Department of Health and Mental Hygiene	**Use of IIS in MN School-based Mass Vaccination Exercises: Public Health Preparedness Implications** **Miriam Muscoplat, MPH,** Minnesota Department of Health	**Managing the Inventory Funding Source and Patient Eligibility Equation in the IIS** **Matt Halloran,** Scientific Technologies Corporation **Jan Hicks-Thomson, MSW, MPA,** Washington State Department of Health, Office of Immunization and Child Profile	**AFIX Coverage Service: Pre-Calculating Statistics to Support New and Future AFIX Guidance and Improve Report Performance** **Neal Brenner, MBA,** Strategic Solutions Group
Integrating Existing Tools to Monitor HL7 Message Quality **Rob Savage, RN, MS,** Rob Savage, LLC	**Leveraging an IIS to Assist Child Care Centers With Their Annual Immunization Report** **Sydney Kuramoto, MPH,** Minnesota Department of Health	**Valentin Shoshtarikj,** Arizona Immunization Program Office, Arizona Department of Health Services **John Anderson,** Wyoming Department of Health Immunization Unit, Public Health Division	**A Collection of Stories About How an IIS Can Support Pharmacies and How Pharmacies Support an IIS** **Lara Popovich, MS,** Scientific Technologies Corporation **Jeff Key, MS,** PioneerRx Pharmacy Software Systems
		Let's Get Along: Automatic Decrementing of Inventory Demonstrates IIS Functionality Interdependency **Ulrica Andujar, MPH,** CDC/NCIRD/ISD/IISSB **Erin Corrigan, MPH, MFA,** Oregon Immunization Program	

10:15ᴬᴹ – 10:45ᴬᴹ | **NETWORKING BREAK:** Grand Ballroom Foyer / 4th Fl.

10:45ᴬᴹ – 12:00ᴾᴹ | **CLOSING PLENARY:** Grand Ballroom 3 / 4th Fl.
Moderator: Rebecca Coyle, MSEd, Executive Director, AIRA

KEYNOTE SPEAKER
➤ **Dr. Anne Schuchat,** MD, Principal Deputy Director, CDC/Agency for Toxic Substances and Disease Registry, Rear Admiral, US Public Health Service

AIRA Closing Remarks
Rebecca Coyle, MSEd, Executive Director, AIRA
Mary Woinarowicz, MA, AIRA Board President, NDIIS Manager, North Dakota Department of Health

12:00ᴾᴹ | **Adjourn**

#AIRA2016

Welcome and Opening Plenary

MODERATOR:
Rebecca Coyle, MSEd, Executive Director, AIRA

Washington Welcome
Michele Roberts, MPH, MCHES, Office Director, Washington State Department of Health, Office of Immunizations and Child Profile

AIRA Welcome
Mary Woinarowicz, MA, AIRA Board President, NDIIS Manager, North Dakota Department of Health

AIRA Update
Rebecca Coyle, MSEd, Executive Director, AIRA

Keynote Speaker:

Boris D. Lushniak, MD, MPH
Rear Admiral, Retired (RADM Ret), US Public Health Service,
Deputy Surgeon General (2010-2015)
Acting US Surgeon General (2013-2014)

NOTES

A number may not appear twice in the same row or in the same column or in any of the nine 3x3 subregions.

Breakout Session 1

Track A

➤ Capturing and Implementing Business Rules and Decisions — The Intellectual Capital of Your Organization
Using Automated Solutions to Effectively Manage Stage 2 Meaningful Use Challenges

Track B

➤ IIS Workforce Development: Findings from Building Training Across Functions and for Specific Roles Using IIS
Doses Administered Data to Predict Future Vaccine Funding Needs

Track C

➤ The AFIX-IIS Integration Project

Track D

➤ Principles, Challenges, Techniques, and Tools for the Testing of Immunization Forecasting Software

Track E

Partnership and Innovation

➤ Performance on Immunization Quality Measures Using Claims, Medical Record and Registry Data

➤ Project IMPACT Immunizations: **IMP**roving **A**merica's **C**ommunities **T**ogether

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Track A

Capturing and Implementing Business Rules and Decisions — The Intellectual Capital of Your Organization

ABSTRACT

The Centers for Disease Control and Prevention (CDC) is a knowledge-centric organization. The broad mission is to assimilate the best science and medical know-how in the health field for the benefit of the public and the various jurisdictions that serve the public. At a pragmatic level such domain knowledge is best expressed as rules. Business rules are an integral part of operational business decisions, complex business logic, and guidance about how to complete tasks correctly. Undertaking a project from a business rules and decision perspective requires a different mindset. Using Clinical Decision Support for Immunization (CDSi) as a case study, this presentation shows how to …

- Interpret business rules and identify decisions from regulations and other sources
- Model decisions
- Express business rules clearly
- Group, organize and analyze the business rules and decisions
- Implement the business rules and decisions using different business rule technologies

The presentation discusses rule organization, management and publishing. It provides examples of …

- Business rules, decision structures, and decision tables
- Business vocabulary (concept model)
- Business-friendly business rules technologies
- Syntax for various implementation technologies

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IIS Workforce Development: Findings from Building Training Across Functions and for Specific Roles

ABSTRACT

A skilled IIS workforce is central to all aspects of this year's meeting theme, "Cultivating Community, Establishing Standards, Supporting Implementation." Relevant and engaging training is crucial to providing the IIS workforce with the knowledge, skills and abilities (KSAs) to support recruitment and retention, to disseminate best practices, and to support employee and agency success.

In this "Create-Your-Own Session," the Informatics Academy of the Public Health Informatics Institute (PHII) will present findings from the workforce development components of their "IIS-EHR Environmental Scanning and Outreach Support " project, which is funded by the Centers for Disease Control and Prevention (CDC). Through this project, members of the PHII team worked with the IIS community, including American Immunization Registry Association (AIRA) committees, to identify key KSAs for various job roles. In this session, the Academy will provide an overview of IIS workforce competency models developed from these KSAs, outline topics that were identified as foundational knowledge for all IIS staff, and present training products developed for specific roles. It will be an opportunity to share this work back with the IIS community and for participants to learn from peers' experiences with workforce development initiatives.

The session will combine a general presentation format with hands-on participation and peer-to-peer engagement. During small group sessions, participants will be able to explore course offerings developed specifically for IIS staff and walk through training modules. (Please note course offerings will be pre-loaded onto tablets provided by PHII.) There will also be group discussions about training challenges common to many agencies with a focus on sharing innovative ways peers within the group have worked to address those challenges.

As a result of attending this session, participants will: 1) Learn about the process and methodology the Academy used to identify key KSAs for IIS staff; 2) Sample training solutions that focus on those KSAs; 3) Engage with peers about experiences with training successes/challenges; 4) Learn about additional workforce development resources available through the Informatics Academy.

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Track C
The AFIX-IIS Integration Project

ABSTRACT

In 2013, the CDC announced that support for the Comprehensive Clinic Assessment Software Application (CoCASA) would be discontinued and encouraged awardees to leverage their IIS to support AFIX assessments. The development and implementation of uniform standards for generating AFIX assessment outputs from IIS is critical. In the absence of standardized outputs, AFIX assessment outcomes will differ across immunization programs, thereby compromising the integrity of results reported from jurisdiction to jurisdiction, and CDC's ability to evaluate the effectiveness of the AFIX program. Guidance documents for incorporating AFIX assessment functionality in IIS were developed in two phases. The first phase resulted in the development and release of the document "AFIX-IIS Integration: Operational and Technical Guidance for Implementing IIS-Based Coverage Assessment – Phase I." The second phase resulted in additional operational and technical guidance for AFIX assessment and feedback reporting components.

To support AFIX assessments, the IIS needs to implement standardized AFIX assessment outputs, a user interface that allows authorized users to generate the outputs, and a standardized export capability to support uploads of results to the CDC AFIX Online Tool. Funding for implementing AFIX assessment functions occurs through two primary streams. In 2015, 25 awardees received "PPHF 2015 - Immunization - Utilization of Immunization Information Systems (IIS) for Assessment, Feedback, Incentives, and eXchange (AFIX) Assessments" funds. In parallel, Scientific Technology Corporation (STC) was awarded a competitive contract to build an AFIX assessment module.

The Washington State Immunization Information System (WAIIS) received PPHF 2015 funds and uses the STC IIS solution. STC will support WAIIS and all other awardees identified in the contract using their consortium model. STC will build the AFIX assessment functionality for awardees that use the STC IIS solution and other awardees that agreed to work with STC under the contract, some of which are not receiving PPHF 2015 funds.

Session attendees will learn about challenges and successes associated with the collaboration between CDC, WAIIS, and STC as well as lessons learned and best practices.

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Track D

Principles, Challenges, Techniques and Tools for the Testing of Immunization Forecasting Software

ABSTRACT

A key component of any IIS is the software module that generates the immunization decision support. (aka "Immunization Forecasting"). Both providers and IIS staff depend upon its evaluations and recommendations to ensure that their patients and population are kept up to date on their immunizations. Some IIS utilize an immunization forecaster that they developed themselves, while others utilize a 3rd party solution. Regardless of which immunization decision support solution an IIS utilizes, a common challenge that all IIS are faced with is the need to repeatedly test their immunization decision support solution whenever it is updated to support new vaccines or rule changes from the Advisory Committee on Immunization Practices (ACIP). IIS also confront this testing challenge when they attempt to compare their existing immunization decision support software to other solutions.

In this session, participants will be educated about general principles for effective test strategies, as well as techniques and tools for addressing specific challenges. For example, this session will address the risk of test cases becoming ineffective due to the passage of time, and will learn about techniques and open source tools for developing test cases that can be utilized at any time. As another example, this session will discuss the issues related to the interactions between different vaccines and the need to properly test beyond the scope of a specific vaccine rule change to ensure that related rules are not inadvertently adversely affected.

A collaboration of three organizations will share their knowledge and experiences with the IIS community. Three major topics will be covered. First, the presenters will teach participants about effective testing strategies and the challenges that IIS should plan for, before they attempt to test their immunization decision support software. This will include a practical demonstration on how to compare actual results against expert expectations and how to properly compare results from different forecasting software. Next, presenters will discuss how one IIS conducts its testing, including ongoing testing challenges that are generalizable across IIS platforms, and will demonstrate a freely available tool that it utilizes to help them age their test cases. Finally, presenters will demonstrate a freely available, open-source, automated testing tool, which comes with a library of more than 2,600 test cases. The tool submits each test case to an immunization forecaster and then compares the actual results from that forecaster against the expected results that are documented as a part of the test case.

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Track E: Partnership and Innovation

Performance on Immunization Quality Measures Using Claims, Medical Record and Registry Data

ABSTRACT

Background: Many adolescents now receive immunizations from a variety of places, including primary care providers, pharmacies and school-based clinics. Thus, immunization registry data are an increasingly important data source. The National Committee for Quality Assurance has two HEDIS® performance measures assessing meningococcal, Tdap/Td and HPV vaccination for adolescents enrolled in health plans. Both measures allow data from claims, medical records and registries. This study sought to compare performance rates on these measures by data source.

Methods: Five health plans (three Medicaid HMOs, two Commercial HMOs) used claims data to identify percent of adolescents who turned 13 in 2013 and received the following vaccines by their 13th birthday: Tdap/Td vaccine; meningococcal vaccine; or 3 doses of HPV vaccine. Plans calculated performance rates based on three data sources: 1) claims only; 2) claims supplemented with medical record data (hybrid data); and 3) hybrid data supplemented with immunization registry data. We also determined performance rates on the HPV vaccination indicator using registry data only, obtained from seven state immunization registries.

Results: The mean plan performance rate on the Tdap/Td indicator and the meningococcal indicator using claims or hybrid data were 67% and 60%, respectively. However, performance rates on Tdap/Td and meningococcal after supplementing hybrid data with registry data rose to 89% and 82%, respectively. The mean plan performance rate on the HPV vaccine indicator was 14% using claims or hybrid data, 21% using hybrid supplemented with registry data, but decreased to 8% using registry-only data.

Conclusions: Combining data from administrative claims, medical records and immunization registries is important for reporting performance rates on vaccine-related quality measures and may more accurately reflect receipt of recommended vaccines among adolescents. Efforts to assist providers in accessing immunization registry data are vital to enhancing use of registry data and accuracy in reporting performance measures.

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Track E: Partnership and Innovation

Project IMPACT Immunizations:
IMProving America's Communities Together

ABSTRACT

Summary: Key stakeholders from Project IMPACT Immunizations, a research initiative in Washington State, will lead a thought provoking session about opportunities to partner with pharmacists at a community level to help identify unmet vaccination needs and increase vaccination rates for routinely recommended adult vaccinations.

Objectives: The primary objectives of this session are to: 1) share information about Project IMPACT Immunizations, a research initiative in Washington State that supported implementation of an innovative care model in community pharmacies to help pharmacists identify unmet vaccination needs and increase adult vaccination rates and 2) inspire a discussion among key stakeholders about ways to partner with pharmacists at a community level to improve vaccination rates.

Structure of the Session: During this session, Benjamin Bluml, Senior Vice President for Research and Innovation for the American Pharmacists Association Foundation will share information about Project IMPACT Immunizations, a research initiative that supported implementation of an innovative care model in 8 community pharmacies in Washington State. A methodological review of how Project IMPACT Immunizations evaluated an innovative care model that enabled pharmacists to utilize a bi-directional immunization information system (IIS) to assess patients' vaccination histories, identify patients' unmet vaccination needs, and document the care will be provided. In addition, the community coordinator of Project IMPACT Immunizations will describe implementation best practices in the community pharmacies that had a positive impact on vaccination rates.

The breakout session will end with an engaging question and answer session where session attendees will be engaged to strategize and share ideas about how key stakeholders can cultivate partnerships in local communities to improve vaccination rates and maximize the role of pharmacists in immunization delivery and public health.

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Breakout Session 2

Track A: Interoperability: A Shared Responsibility

➤ The Query Quandary: Your Data Has Left the Building, Now What?

➤ A National Look at Data Exchange Variation and Improvement Initiatives

➤ Improving Performance on the Shot Clock: Sharing Responsibilities Between Providers and IIS

Track B: IIS Fundamentals

➤ Implementation of Provider-Based Text Message Recall Through an Immunization Information System

➤ Improving Private Providers Participation in IIS through a Data Quality Plan

➤ Communicating and Training IIS Users: Washington's Story

Track C: Coverage Assessment

➤ Testing Reliability of Regional Coverage Rates Using Registry Data in Voluntary Reporting Areas

➤ Using IIS and Vital Statistics Data to Measure Racial/Ethnic Immunization Coverage Disparities in MN

➤ Using an IIS to provide Quarterly Human Papilloma Virus (HPV) Coverage Detail to Medical Providers

Track D: Partnering with Vendors

➤ Implementing a Vaccine Management System at the IIS Level

➤ Improving the Success and Timeliness of Project Completion in North Dakota

➤ IIS and Vendors: A Partnership

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Track A: Interoperability: A Shared Responsibility
The Query Quandary: Your Data Has Left the Building, Now What?

ABSTRACT

Last year we shared lessons learned around bidirectional data exchange and discussed limitations and the need to formalize best practices for query messaging. In particular we outlined improvement efforts with one very engaged, high volume query partner to improve our testing and onboarding processes as well as the business processes and rules that guide the IIS and its matching for patient history.

This year we plan to review ALERT IIS query messaging trends and how our partners are using responses with specific focus on what data (e.g., immunization histories, forecasts, etc.) is (and is not) consumed on the receiving end — detailing methods, de-duplication, discrepancy resolution and roadblocks.

The presentation will address challenges with data quality and use once the information has 'left the building' including mismatching implications and lack of visibility into the receiving system. Technical limitations and disconnects (both IIS and receiving system) will also be reviewed.

Finally, we will discuss future enhancement opportunities and the impact of Meaningful Use Stage 3 on moving our partners to bidirectional data exchange. Our hope is to engage participants in the larger discussion on best practices for bidirectional data exchange as well as to encourage heart healthy activities.

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Track A: Interoperability: A Shared Responsibility
A National Look at Data Exchange Variation and Improvement Initiatives

ABSTRACT

Immunization registries are a vital public health and bio-surveillance resource. For care organizations, electronic health record systems (EHRs) are the critical resource that can simplify the process of collecting and submitting the information these registries need. Epic's customers have had success to date, exchanging data securely with 48 state registries and 4 city registries. In this presentation, Epic EDI experts outline the industry initiatives that have been effective in improving EHR/Registry connectivity. They also share some of the challenges that continue to hinder care organizations' efforts to share data efficiently. Ongoing efforts to standardize code sets and publish industry-wide technical specifications and communication methods have substantially simplified data exchange with registries. For example, the forums AIRA has created to encourage public discussion are supporting efforts to increase standardization nationwide. While progress has been strong, significant challenges remain. Differences in interpretation and regulation of standards across registries prevent EHR vendors from creating a single registry-neutral interface for care organizations. Instead, each organization must configure interfaces to suit the needs of the individual registries they exchange data with. In addition, accepted clinical workflows often hinder accurate collection of immunization data. The process and requirements for capturing data like the Vaccines for Children status at the point of care can be challenging for providers. Continuing collaborative efforts in these and other areas will help the industry to deliver streamlined workflows for end users while still allowing care organizations to share the information registries need.

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Track A: Interoperability: A Shared Responsibility

Improving Performance on the Shot Clock: Sharing Responsibilities Between Providers and IIS

ABSTRACT

Immunization management is a significant component of all medical practices. It is especially critical that pediatricians have safe, effective and efficient processes to assure timely and appropriate immunization of their patients. Electronic Health Records (EHRs) can play an important role in supporting the process. CDC has published a draft set of comprehensive guidance principles and basic functional software tests to assist vendors with development and evaluation of software for immunizations for comment and evaluation. The guidance includes recommendations for enhancing usability and for incorporating usability directly in the software development process specific to immunization-related workflow. Work to-date has addressed specific immunization-related interactions with decision support and immunization registries (IIS') and the Office of the National Coordinator (ONC) EHR Certification Program and Centers for Medicare and Medicaid Services (CMS) Meaningful Use measures for 2015 require bidirectional exchange of immunization data with the IIS'.

The Center for Disease Control and Prevention (CDC) funded CNI Advantage to evaluate the potential for a voluntary EHR recognition program focused solely on immunization management. Part of that project produced a conceptual model for end-to-end immunization management, requirements for clinical software to support the providers' workflow, guidance and functional tests to evaluate software, and usability principles to improve safety, efficiency, effectiveness and data quality. The immunization process is defined as eight general user workflows: (a) Register and Identify a Patient, (b) Manage Query, Response and Reconciliation, (c) Manage Information for Medical Decision Making, (d) Manage Inventory, (e) Administer Vaccine and Report, (f) Manage a Cohort, (g) Manage Adverse Event Reporting, (h) Provide Patient Access. This session will summarize the guidance and testing now available for vendor implementation to improve and evaluate their products' immunization-related capabilities. The presentation will further highlight and recommend potential solutions for critical areas in which clinical provider workflow leads to variance between data captured routinely and data expected by IIS.

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Track B: IIS Fundamentals

Implementation of Provider-Based Text Message Recall Through an Immunization Information System

ABSTRACT

Background: Use of IIS to conduct reminder/recall is an evidence-based strategy to keep children up-to-date with immunizations. However, recall lists can be large and providers may not have the resources to call or mail a letter to every patient. As cell phone use increased, text messaging has emerged as a novel, effective approach to conduct reminder/recall.

Methods: In 2012, the New York City Bureau of Immunization (BOI) received funding to implement text message recall through the CIR. Enhancements allowed providers to send one-time or recurrent text messages to patients based on age, gender, and vaccine-type. Patients with a mobile phone were opted in by default to receive messages with the ability to opt-out at any time. BOI consulted with legal counsel to review governance around text messaging and ensure compliance with privacy rules and regulations. BOI contracted with a mobile platform vendor to offer the text message service at no cost to providers. Text messaging became available to all providers in August 2015. Utilization was assessed post-implementation.

Results: As of 10/16/15, 30 sites scheduled text message jobs, 53 jobs were completed, and 22,056 text messages were sent; 4.5% of patients opted out. In comparison, during the same time, 17 facilities ran 31 reminder/recall letter jobs generating 5,772 letters. At the time of implementation, only 110,894 patients had a mobile phone number in the CIR. To increase mobile phone data and the utility of text message recall, 1,176,880 patients' existing phone numbers were verified as mobile phones and used to populate the mobile phone field in late-September.

Conclusions: Text messaging is acceptable among providers as an easy way to recall patients, reaching hundreds with one job. Initial results post-implementation show greater utilization than of letter mail reminder/recall. In the future, we plan to evaluate the impact of text message recall on vaccine coverage.

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Track B: IIS Fundamentals

Improving Private Providers Participation in IIS Through a Data Quality Plan

ABSTRACT

Issue: Puerto Rico Immunization Registry (PRIR) has been managing the Island's electronic immunization records since 1994. Despite PRIR's advancements in recent years, there are still considerable challenges, especially with private providers reporting data to PRIR. Trough the implementation of data quality structured plan, we expect to increase the participation of private providers into our IIS.

Description of the project: On March 2015 a 24% (105/429) of private providers that immunize were reporting into PRIR. A structured work plan for the increase of private provider data reporting on the PRIR was developed based on four phases: identification, training, monitoring and engagement. The first phase was to identify all private providers that immunize in Puerto Rico and how much of them were registered into PRIR and reporting. The second phase consist in the training of providers who were not registered on PRIR and retraining private providers that are registered but no reporting data. A monitoring plan was developed with the purpose to identify providers that stop reporting in a timely manner. Finally an engagement plan was developed to promote and motivate the private provider sector to steadily report their data on PRIR in a timely manner.

Lessons learned: After the beginning of the implementation of the work plan an increase of 31% of private providers reporting into IIS were observed. At the end of the third trimester a 55% (238/429) of private providers identified were active and 68% (163/238) continuously reporting into PRIR. 100% (57/57) of new identified providers were trained and are reporting data. The monitoring plan has been helping identifying areas of need between the providers.

Recommendations: Following a structured and detailed plan of data quality is a viable way to increase the participation of the private provider sector in the IIS.

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Track B: IIS Fundamentals

Communicating and Training IIS Users: Washington's Story

ABSTRACT

Background: In June 2015, Washington transitioned all IIS work to a small team of Washington State Department of Health (DOH) staff. Prior to this transition, most IIS work was contracted to our largest county health department. This transition allowed Washington's new IIS staff to redesign our user training and communication strategies which previously lacked standardization. There were many challenges, but the opportunity to improve was invaluable.

Methods: We identified ways to:

- Proactively address training and communication gaps with IIS users by sending monthly newsletters through an email vendor.
- Organize and improve access to IIS trainings and materials. We researched Learning Management Systems to start building an IIS training portal.

Implementation: We used an inexpensive email vendor to implement an IIS e-newsletter that was created using the vendor's highly customizable format. We used email addresses from the IIS to populate a distribution list and reached over 21,000 of our 35,000 users in the first month! This newsletter allows us to send out messages about upcoming trainings, new materials, surveys and more. Feedback from surveys integrated in the newsletters will help us target user training needs. Washington is also in the beginning phase of implementing a Learning Management System (LMS) to consolidate and organize all IIS training content. The LMS will make training content more readily available to users through their IIS login and allow us to track completed trainings and evaluate efficacy. The LMS also provides tools to develop role-specific trainings and send notifications to users.

Results: These strategies are in progress, but so far we were able to reach 60 percent of WAIIS users with our first e-newsletter and can easily push out other communication campaigns to users. The LMS training portal will allow us to easily connect users to training content in many formats to meet the needs of all learning styles.

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Track C: Coverage Assessment

Testing Reliability of Regional Coverage Rates Using Registry Data in Voluntary Reporting Areas

ABSTRACT

BACKGROUND: Accurate and timely immunization coverage levels are essential to program planning and public health practice. Registry data may not provide reliable estimates in voluntary reporting states such as California due to lack of comprehensive population data. To counter the lack of registry data, immunization coverage rates are currently obtained in San Diego using Random Digit Dialing (RDD) telephone surveys that are cumbersome and costly in time and resources. This project tests the reliability of utilizing the San Diego Immunization Registry (SDIR), which provides incomplete data, for coverage rates estimation. The purpose of testing this reliability is to ultimately establish multivariable regression predictive models.

METHODS: RDD records with names were matched to all patients aged 19-35 months in SDIR. Concordance between survey results and registry data are being assessed using the Kappa statistic. Assuming the RDD as the standard, sensitivity and specificity are also being calculated to further evaluate self-reported vaccination status compared with the electronic vaccination records.

RESULTS: The County of San Diego Health and Human Services Agency conducted its most recent RDD survey to assess county-level immunization coverage rates in 2013. There were 553 surveys for children ages 19-35 months, of which 122 (22%) were missing names, leaving 431 records available for matching records in SDIR. Of these 431 name-matched records, the Kappa statistic will be determined between RDD and SDIR vaccinations and a weighted Kappa will be found with vaccine dose pending ongoing analysis. Initial reliability estimates will also use these data.

CONCLUSIONS: This project examines the reliability of registry data in voluntary reporting jurisdictions for providing real-time estimation of immunization coverage in children ages 19-35 months. This model will be used for estimations of all age-groups through a future comparison between SDIR and the next RDD survey, planned in 2017.

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Track C: Coverage Assessment
Using IIS and Vital Statistics Data to Measure Racial/Ethnic Immunization Coverage Disparities in MN

ABSTRACT

Background: Targeting and eliminating health disparities is a major, organization-wide objective for the Minnesota Department of Health (MDH). MDH encourages staff to use data to measure state health disparities. MDH staff for the Minnesota Immunization Information Connection (MIIC), Minnesota's Immunization Information System (IIS), have taken this opportunity to assess Minnesota's Somali population's immunization coverage rates.

The 2011 Twin Cities measles outbreak, along with anecdotes from health care providers reporting MMR vaccine resistance among Somali Minnesotans, prompted MDH to make a Somali population-specific MMR assessment. MIIC staff worked with MDH Somali outreach staff to locate Somali population centers and get by-county childhood immunization rates for 24-month-old children of Somali descent compared with the rest of the population.

While MIIC includes race/ethnicity fields in nearly all data exchange methods, MIIC staff found that these fields were frequently overwritten with "other" or "unknown" indicators from incoming messages. MDH Vital Statistics data include race/ethnicity, as well as mother's birth country, from birth certificates. By linking MIIC immunization data to MDH Vital Statistics race/ethnicity data, MIIC staff could detect differences in coverage across racial/ethnic groups. This matching method is limited by the number of years for which race/ethnicity data are available.

Results: MIIC staff found that MMR rates for 24-month-old children of Somali descent born in Minnesota from 2007-2012 were significantly less than MMR rates for the rest of the population (53% vs. 88% in 2012). Somali outreach staff have used these data to target outreach and engage partners in Minnesota's Somali population centers.

Future Directions: MIIC staff will use this method to examine immunization gaps in other race/ethnicity groups, different age ranges, and vaccines. Upcoming projects include: examining HPV rates by zip code for American Indian/Alaska Native adolescents and analyzing racial/ethnic immunization gaps for incoming seventh grade children post-implementation of new school entry requirements.

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Track C: Coverage Assessment

Using an IIS to Provide Quarterly Human Papilloma Virus (HPV) Coverage Detail to Medical Providers

ABSTRACT

In Vermont, as in other states, vaccine coverage with Human Papilloma Virus (HPV) Vaccine among teens has not met expectations. Despite increased evidence of effectiveness in the prevention of multiple cancers, HPV series completion rates for Vermont girls aged 13-17 years were only 49.8% in 2014, and male rates were even lower. According to the National Immunization Survey, over a third of Vermont girls in that age group had yet to receive any doses of HPV. Many organizations including the VT branch of American Academy of Pediatrics, Vermont Child Health Improvement Project (VCHIP), and the Immunization Program at the Vermont Department of Health chose HPV as a quality improvement initiative in 2015.

The Vermont Immunization Registry provides medical practices with a report to assess their own immunization coverage for any of the routinely administered vaccine series. Since increasing HPV vaccine coverage was a priority initiative in VT, we undertook a longitudinal project to send detailed information about practice level HPV series initiation and completion to Vermont providers on a quarterly basis.

To date, we have provided three quarterly reports that demonstrate significant progress in all areas. We recognize that while Registry efforts had an influence on coverage rates, other initiatives also had strong effects. In particular, we plan to examine the impact of a targeted initiative by VCHIP, in partnership with the National Improvement Partnership Network and the Academic Pediatric Association, in which they worked closely with a set of large practices serving a teenaged population to improve rates of HPV series initiation.

Immunization Registries are rich sources of information that can improve health outcomes by providing regular feedback to providers. Providing specific and longitudinal feedback from the Registry to providers is part of our overall educational efforts to improve immunization-specific health care delivery in VT.

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Track D: Partnering with Vendors

Implementing a Vaccine Management System at the IIS Level

ABSTRACT

As with many IIS, an external vendor maintains and updates NYSIIS. Although this partnership is rewarding in many ways by allowing IIS staff to concentrate on the public health aspects of managing a registry, there are opportunities to improve efficiency by moving more control over system management to IIS staff. One example of system management is the addition and modification to vaccine codes. Maintaining and updating new vaccine codes and associated manufacturers, trade names, and vaccine relationships at the same speed as providers acquire the vaccine can be challenging when relying on an external vendor to update during scheduled system releases.

NYSIIS worked with Hewlett-Packard (HP) to create functionality that allows NYSIIS staff to directly manage vaccine information. During requirements development, testing, and release to production staff learned that variations in how tradename, vaccine code, manufacturer, and age rules were implemented made a difference in how incoming data was stored in the background. We also discovered the need to take into account how these variables affect inventory management, vaccine ordering, and the immunization forecaster. A "quick" project became very involved as NYSIIS staff began to look more deeply at how these relationships had been created in the past and the effect on data tables used for analysis. Instead of simply implementing a tool for NYSIIS staff the program gained valuable knowledge on how data was used and stored within NYSIIS.

This presentation will review project planning and implementation as well as lessons learned, benefitting other IIS who wish to execute a similar system enhancement.

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Track D: Partnering with Vendors

Improving the Success and Timeliness of Project Completion in North Dakota

ABSTRACT

The North Dakota Immunization Information System (NDIIS) is a grantee-developed IIS that is currently hosted and supported by Noridian Mutual Insurance Company (NMIC). Historically, when the North Dakota immunization program received grant funding for the development of specific NDIIS projects, we had relied on our technical team to design, develop and deploy all functionality with informal input from the immunization program. Unfortunately, this usually led to a lot of changes that were needed after user acceptance testing (UAT) because the system or functionality that was developed didn't fully meet our expectations and/or was missing some vital pieces. In 2014, the NDIIS manager developed a template for more formal business requirements that would be written prior to any development work being done. We also made improvements to our overall process for development of new functionality in the NDIIS. Now, the IIS manager will complete the business requirements document that includes information on the current processes, detailed descriptions of requested improvements, flowcharts for the current and new end-user workflow and rough screen-shot designs of the new functionality. Input from others in the immunization program who will be using the new functionality is also gathered and included in the requirements phase. The completed requirements are then given to the development team. Using the detailed requirements, the vendor team provides the NDIIS team with an estimate for the cost of the work, a timeline and reviews any questions they may have about the requirements. As a result of this change in process and the investment in the initial planning stages, two new major pieces of functionality, pandemic preparedness reporting and vaccine returns and wastages, have been completed and were complete with no major changes requested during UAT and the returns and wastages project was completed on time and within budget.

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Track D: Partnering with Vendors
IIS and Vendors: A Partnership

ABSTRACT

Maintaining good communication may be the most important aspect of any relationship. Participants will learn how developing a process for appropriate communication has benefited both parties. This process informs staff of what is crucial to communicate immediately, what can wait for the group process, and who needs to be involved. Communicate as often as needed, but remember over-communication can complicate issues quickly and with a good process this can be controlled.

The immunization community is always changing and keeping up with all of the projects can be a challenge. Since IIS maintenance and enhancement planning is much smoother when it is a collaborative process, meeting regularly to discuss what is going well and what needs improvement can lead to a more successful IIS. Participants will learn the change control process that has been implemented by Oregon and HP. This collaborative process impacts both parties because more people are involved in decision making. This is especially critical when prioritizing competing projects.

Participants will hear that the IIS and IIS vendor relationship is not unlike other relationships. As the saying goes "good fences make good neighbors", and in this situation a good contract can make a good partnership. It is important to take a contract for what it is and use it to benefit both parties. We will demonstrate in this presentation ways to make contracts and service level agreements work for you.

The presentation will also address challenges we have faced along the way. From system outages, performance issues, and bug fixes, we have managed to maintain a symbiotic partnership. Finally, we will discuss future enhancement opportunities including AFIX-IIS integration and what happens when neither the vendor nor the IIS receive funding.

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Breakout Session 3

Track A

➤ MIROW Interactive Workshop: Introduction to New Topic

Track B

➤ Something Old, New, Measured and Blue: Current Uses and Future Plans for the Functional Standards

Track C

➤ Improving Coverage Rates Using IIS: Collaborating to Overcome Barriers

Track D

➤ Using NIST Tools to Advance Interoperability for Immunization Messaging Implementations

Track E

Migration

➤ Migrating to a New IIS: The Story of Oklahoma's Success

➤ Data Migration Lessons Learned, Data Quality Opportunities for Data at Rest

➤ Incremental IIS Roll Out: Delivering Tailored Customer Service for Transitioning Providers

Track A
MIROW Interactive Workshop: Introduction to New Topic

ABSTRACT
The AIRA (American Immunization Registry Association) Modeling Immunization Registry Operations Workgroup (MIROW) has been developing best practice recommendations for immunization information systems (IIS) operations since 2005. This workshop is an effort to gather inputs from a larger spectrum of subject matter experts across the IIS community for the next best practices guidance document (under development). An additional objective is to provide further education about the process employed to document operational best practices. This session is to begin with a short introduction to the topic scope and instructions on activities that will be conducted throughout the session. The session will progress into facilitated activities aimed to gather feedback on the scope, initial analysis models, and 'problem areas' to help guide the development of this best practices guidance document. Members of the MIROW Steering Committee will act as facilitators for small group activities.

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Track B

Something Old, New, Measured and Blue: Current Uses and Future Plans for the Functional Standards

ABSTRACT

This panel-facilitated session is about actively engaging conference participants in more fully understanding the important roles the Functional Standards play, both old and new, in the IIS community. It will include a brief overview of the history and evolution of the standards, along with current examples from various awardees on how they use the standards to support effective planning and performance improvement ("Something old"). It will include updates on how the standards are at the core of several exciting new initiatives, including AIRA's Assessment and Certification Initiative, the CDC's IIS Strategy, and the CDC/PHII Enhanced Support and Collaboration initiative ("Something New"). It will also address a number of collaborative initiatives to better define what success looks like in achieving the standards, as well as an update on CDC's plans to develop/refine metrics and to update the standards for 2018-2022, seeking input from participants on the process ("Something measured"). Finally, and very importantly, participants will be asked to share examples of which standards are particularly challenging for them to either measure or achieve, including solutions-oriented discussion between the panel and the participants ("Something blue").

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Track C

Improving Coverage Rates Using IIS: Collaborating to Overcome Barriers

ABSTRACT

Integrating the Immunization Information System (IIS) into all aspects of an Immunization Program is essential. While using the IIS is relevant to and a priority for Program Managers (PMs), due to a number of barriers, many programs continue to face challenges with using the IIS to increase coverage rates. A survey conducted by the Association of Immunization Managers (AIM), and completed by half of the 64 federally funded programs, identified "Using IIS / data to increase immunization rates and promote program activities" as an area in which peer support would be most helpful to best support PMs' ability to achieve the requirements and outcomes of their cooperative agreements.

To address the need for additional peer support related to IIS, AIM assembled a workgroup of subject matter experts comprised of PMs and partners to provide guidance to AIM in assisting PMs in overcoming the leadership challenges related to utilizing IIS. AIM gathered feedback from this group to determine the most prevalent IIS barriers PMs face. The barriers identified included: issues with funding the IIS; quality / reliability of the data in the IIS; complexity of the IIS; consolidation of IT in health departments; and privacy concerns.

This session will explore the barriers and challenges identified by PMs, including pros and cons, through short presentations about each of the barriers. The presentations will help session participants relate to the experiences PMs have had with each challenges.

By first recognizing the scope of each IIS challenge, potential solutions can be identified and explored. Following the presentations, session participants will collaboratively strategize possible solutions by breaking into small, mixed groups consisting of PMs, IIS managers, and other program staff to discuss new ideas and innovative solutions and approaches that can be used to overcome each of the challenges and barriers identified.

Utilizing a gameshow style format, each small group will then present their top proposed solution in a four minute "pitch" to the session participants, trying to convince participants of why this solution is the best solution and why it will work for PMs. The panel of experts will listen to the pitches, ask tough questions, and assess each solution. The panel will give insights and advice about each of the proposed solutions and, along with the audience, will collectively determine the feasibility of each solution offered and how it can be applied to programs.

At the conclusion of this session, attendees will be able to summarize the top barriers to using the IIS to increase rates identified by PMs; relate the experiences of PMs have had with each of the challenges; discuss the feasibility of potential solutions; and determine if and how possible solutions to the barriers/challenges can be applied their programs.

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Track D

Using NIST Tools to Advance Interoperability for Immunization Messaging Implementations

ABSTRACT

The format of the session is a general presentation.

NIST (in collaboration with the CDC and AIRA) has developed a number conformance testing and productivity tools in support of the immunization community. This session provides an overview of each tool, a demonstration and tutorial on how to use the tools, and guidance on how to utilize and/or incorporate the tools to support your IIS installation. The tools include the NIST Immunization Test Suite that supports testing of conformance to SOAP protocols and HL7 v2.5.1 messaging specifications (including the aspects required for ONC 2015 Edition Certification in support of Meaningful Use), and of EHR and IIS functional capabilities. Additional tools covered in this presentation include the NIST HL7 v2.5.1 messaging validation web service and an update on the NIST Implementation Guide Authoring and Management Tool (IGAMT). The specific tools to be presented and topics that will be covered for each tool are listed below:

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NIST Immunization Test Suite:

- Web based application that supports End-to-End Conformance Testing
- Testing of SOAP Envelope and SOAP Connectivity based on the CDC WSDL
- Testing of HL7 v2.5.1 Immunization Messaging Implementation Guide (R1.5)
- Support for all 8 profiles (including Query and Response)

- Targeted Test Cases
- Data Quality Assurance (DQA)
- EHR-S and IIS Functional Requirements

ONC 2015 Edition HIT Certification:

- Review ONC 2015 Edition criterion for Immunization Messaging
- Understand the impact on the IIS community

- Learn how the NIST Immunization Test Suite is used to certify EHR systems
- Review NIST Test Cases used in certification

NIST HL7 v2.x Validation Web Service:

- Web Service Application Programming Interface (API)
- Immunization Messaging Release 1.4 (VXU Only)
- Immunization Messaging Release 1.5 (All Profiles)

- Example Clients in Java and C#
- Validate production messages at IIS sites
- Use of validation reports to analyze data quality

NIST Implementation Guide Authoring Tool (IGAMT):

- Tool to create HL7 v2.x implementation guides, including local implementation guides, based on National Standard

- Produces artifacts for input to validation tool

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Track E: Migration

Migrating to a New IIS: The Story of Oklahoma's Success

ABSTRACT

The Oklahoma Immunization Program is currently utilizing an IIS that the health department developed 15 years ago. Because the existing system did not meet the CDC's functional standards and because it is built upon aging and in some cases expensive technologies, Oklahoma began a project in 2006 to replace the existing homegrown IIS with a new and improved system. Along the way, this migration project ran into a variety of obstacles, causing the Immunization Program and other stakeholders to become concerned about the ultimate success of the project.

Beginning in the Summer of 2014, the Immunization Program, Informatics Division, and Information Services Division took a series of steps that transformed the project for the better and substantially increased the quality and speed of the project activities. In addition, the new approach to this project was supported by the resources and efforts of several other organizations, including the CDC, the Public Health Informatics Institute (PHII), and HLN Consulting, LLC.

In this presentation, participants will learn about the strategies, decisions, and actions that enabled Oklahoma to overcome the obstacles. These include increased collaboration among a variety of organizations, flexible staffing changes, agile methods of managing and conducting the project, strong support from senior management, leveraging expertise from outside of the health department, and the shared commitment to focusing on the IIS replacement project.

The presentation will not only reveal the guiding principles that were responsible for the success of this project, but also offer detailed examples of how new techniques were put into practice. Participants should be able to utilize the lessons learned from the Oklahoma experience because many of the obstacles that Oklahoma faced are not unique to Oklahoma, and many of the techniques that Oklahoma utilized to overcome the obstacles can be utilized in other jurisdictions as well.

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Track E: Migration

Data Migration Lessons Learned, Data Quality Opportunities for Data at Rest

ABSTRACT

The California Immunization Registry (CAIR) is consolidating 7 regional systems into a single state-wide immunization system. California Department of Public Health and Hewlett Packard Enterprise are working together on migrating the data from the seven operational regional systems into the consolidated IIS. The 7 regional systems on average, house over 23 million dose records each with the smallest containing around 5 million and the largest with over 60 million.

The data migration activities focused not only on developing the process and methods for moving the data, in addition to those activities, CDPH and HPE took the opportunity to do extensive analysis on the existing data at rest for potential data quality improvements and develop a strategy to minimize data integrity risk. While many improvements may be specific to the data migration, there are also areas identified that could benefit any mature IIS.

CDPH and HPE will walk through the data migration planning and execution process. Discuss the analysis of the 7 regional systems database schema. Provide insight into the review of the legacy acceptable data values compared to the new IIS database schema. The categorization of the tables and data fields into composite groupings. And finally the mapping and transformation of data elements to be transmitted in to the consolidated IIS. This analysis also included putting into place a process to survey providers to update non required data fields in the current regional systems that were identified to be essential elements to a successful data migration.

The goal will be to provide perspective on what can be applied to operational data quality activities not just data migration. Additionally provide specific examples of data quality improvements.

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Track E: Migration

Incremental IIS Roll Out: Delivering Tailored Customer Service for Transitioning Providers

ABSTRACT

The existing culture of customer service the Kentucky Immunization Program (KIP) promotes through its Vaccine for Children (VFC) field staff set the precedent of having a positive, responsive, and helpful presence with its providers during the IIS transition. In order to continue that level of support into the IIS transition the decision was made to implement an incremental roll out. Three IIS trainers were hired to conduct one-on-one trainings with VFC providers and serve as the IIS helpdesk.

We will present the VFC provider feedback collected through the KIP satisfaction survey on our training methods. IIS trainers will discuss any changes made to the training strategy based on user feedback. The trainers will address the obstacles encountered during one-on-one trainings, such as varying computer literacy, lack of training time for provider staff, and concerns about the additional time spent on data entry. They will then share the solutions they have been able to apply in the field. The trainers will detail positive aspects of one-on-one training. One example is the comfort of being in the user's space. This allows for a user's questions to be asked more readily and for answers to be tailored to the correct educational level for each user. The first and only training VFC users receive can be fine-tuned to fit their individual needs. Trainers will also share concerns they have heard from providers and ways they have encouraged wary providers through their transition into IIS. The floor will open to discussion on common concerns heard by session attendees and how they (or how others would) recommend addressing them.

Ensuring providers access to a plethora of training resources is vital to the success of the IIS transition. Each user's computer literacy and learning preferences are different. It is beneficial to offer online access to printable guides and training videos. KIP has also used webinars to refresh providers on how to utilize the new IIS. A helpdesk e-mail address and a phone line have proven to be tremendous assets to both providers and the program.

While we know it is likely that some programs implementing a new IIS already have these materials, we feel that it would be beneficial to share best practices for each training resource. We will break into four groups. Each group will have a KIP staff member participating. Groups will create a list of most common mistakes and best practices for their assigned training resource. The resources discussed will be: an IIS training, a website, a training video/webinar, and an IIS helpdesk phone call and e-mail. These common mistakes and best practices will be documented and shared with the group.

We will wrap-up the discussion of best practices in training and customer service for transitioning providers. We will then discuss lessons learned during an incremental roll out and open the floor up to questions and comments.

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Afternoon Plenary

Cultivating Community, Establishing Standards, Supporting Implementation

MODERATOR:
Kim Salisbury-Keith, MBA, KIDSNET Development Manager, Rhode Island Department of Health

Presentation of AIRA Awards
Warren Williams, MPH, Acting Branch Chief, CDC/NCIRD/ISD/IISSB

Partnering with IIS for the Future
Warren Williams, MPH, Acting Branch Chief, CDC/NCIRD/ISD/IISSB

### Assessment & Interoperability Testing Update
Mary Beth Kurilo, MPH, MSW, Policy and Planning Director, AIRA
Laura Pabst, MPH, Evaluation Team Lead, CDC/NCIRD/ISD/IISSB

Joint Development and Implementation Update
Gerri Yett, MSN, RN, CHES, Immunization Program Manager, Alaska Department of Health and Social Services, Division of Public Health, Section of Epidemiology

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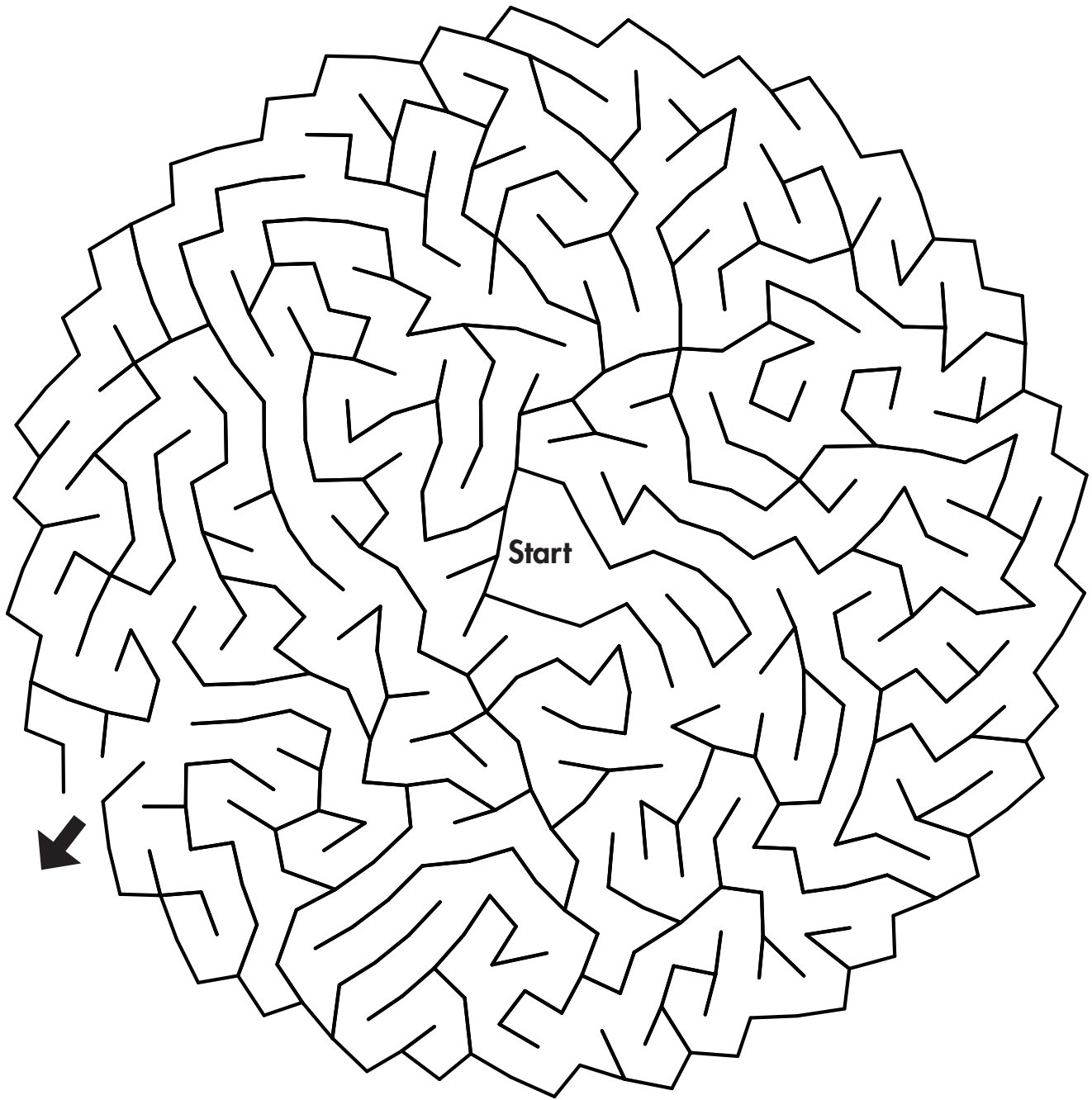
Breakout Session 4

Track A: Interoperability and Data Quality

➤ IIS Interoperability with Unconventional Systems

➤ Comparing IIS and Vaccine Tracking System (VTrckS) Data to Improve IIS Data Quality

➤ Evaluating IIS Address Data Quality following HL7 Implementation by a Retail Pharmacy Chain

Track B: IIS Fundamentals

➤ Putting Best Practices to Work: Colorado's Experience with IIS-Based Centralized Reminder/Recall

➤ Wisconsin Immunization Registry Meaningful Use Onboarding Processes and Best Practices

➤ Challenges of Having a Huge Volume of Marginal Data and Strategies to Create a Win-Win Situation

Track C: IIS Data Informing Schedule Compliance and Coverage

➤ Frequency of Vaccinations Outside Recommended Ages — 2014; Six IIS Sentinel Sites

➤ Trends in Compliance with Two-dose Influenza Vaccine Recommendations in Young Children, 2010–2015

➤ Human Papillomavirus Vaccination in Washington State: Estimated Coverage and Missed Opportunities

Track D: Successful Partnerships

➤ Utility of Linking the WIIS and Refugee Health Screening Database to Assess WA Refugee Immunizations

➤ A Tale of Two Collaborators: The IIS Sentinel Site Project and CDC

➤ Evaluation of Interstate Immunization Data Exchange between Minnesota and Wisconsin

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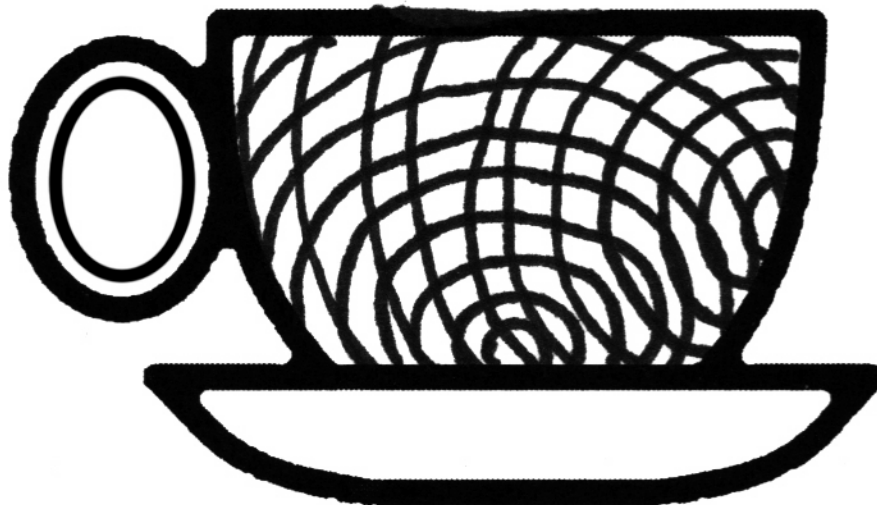
Track A: Interoperability and Data Quality
IIS Interoperability with Unconventional Systems

ABSTRACT

As of October 2015, the North Dakota Immunization Information System (NDIIS) is interoperable with over 200 providers, representing more than 60% of all immunizations reported to the NDIIS. All of the connections are real time and fully bi-directional. With the majority of our traditional immunization providers connected and over 30 others in progress, the NDIIS team is now working with unconventional providers and systems. In 2014, we developed a flat file specification documentation and secure file transfer with a local pharmacy chain. This group includes 31 pharmacies and is the largest pharmacy provider of adult immunizations in the state. Additionally, we are the process of establishing a real time, one-way connection with the CVS pharmacies in North Dakota. There are six locations in North Dakota and, although they administer a high volume of adult immunizations, they do not currently report to the IIS. Completing this connection will increase the percent of adult immunizations reported to the NDIIS. The North Dakota immunization program is part of the Department of Health Division of Disease Control. Other programs in our division use the NDIIS to look up immunization histories for cases of vaccine preventable diseases reported to the department. The NDIIS team is working on a query-response connection between the NDIIS and our MAVEN disease surveillance system. This will reduce the amount of staff time spent manually searching for an immunization history and extracting that data into MAVEN. The connection will also include a filter to trigger the query to the NDIIS only for vaccine-preventable diseases reported to MAVEN. All of these efforts to set up interoperable connections with non-conventional systems will be complete in 2015 and will increase the reporting of adult immunizations to the NDIIS as well as decrease the amount of time spent on disease investigations in North Dakota.

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Track A: Interoperability and Data Quality

Comparing IIS and Vaccine Tracking System (VTrckS) Data to Improve IIS Data Quality

ABSTRACT

Background: In April 2015 the 9vHPV was included in the VFC contract. NYC sent a notice alerting providers of the availability of the new vaccine and CVX code. Shipping began on May 5, 2015. CIR experience with introduction of new vaccines has been that Electronic Health Records (EHRs), the main source of CIR data, are slow to update their tables with new CVX codes. Consequently, there is a transition period during which incorrect codes or no data are being reported for the new vaccines. CIR analyzed the problem to help providers transition faster and ensure higher CIR data quality.

Methods: VTrckS ship file data were used to identify 9vHPV lot numbers distributed through the Vaccines for Children (VFC) program. These lot numbers were then used to query the CIR to identify immunizations reported with CVX codes for HPV vaccines other than 9vHPV. Miscoded immunizations were automatically corrected by the CIR weekly. Sites reporting incorrect CVX codes were instructed to have their EHR vendor update their screens and tables with the new 9vHPV vaccine and CVX code.

Results: As of October 22, 2015, 8,621 immunizations from 362 facilities with 9vHPV lot numbers were reported incorrectly as 2vHPV, 4vHPV or HPV NOS. The CIR corrected these immunizations by recoding the incorrect CVX code to the correct one. Sites were contacted via email; 40 high-volume sites were also contacted by phone. Of sites misreporting, 64% updated their EHRs to correct the issue.

Conclusions: Comparing VTrckS and IIS data is an effective method to improve IIS data. Capturing vaccine products accurately also results in correct evaluation of children's records, can prevent under- and/or over-immunization, and improves coverage estimates. Accurate lot numbers are also needed for dose decrementing in vaccine inventory management. This methodology will also be applied to serogroup B meningococcal vaccines (MenB) and results reported in 2016.

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Track A: Interoperability and Data Quality

Evaluating IIS Address Data Quality Following HL7 Implementation by a Retail Pharmacy Chain

ABSTRACT

Background: HL7 interoperability with retail pharmacies has the potential to improve the quality of information reported to IIS and may have an important impact on contact information.

Objective: We assessed the extent to which address information reported post-HL7 by retail pharmacies to the Michigan Care Improvement Registry (MCIR) provides more complete or updated contact information.

Methods: We acquired all vaccination records reported by a national retail pharmacy chain in Michigan that commenced HL7 reporting in October 2013. Address and phone information reported by HL7 for doses reported during the 2013-14 flu season were matched with subjects' historical contact information maintained in MCIR. We classified the contact information reported by HL7 as being the same, updated, changed, removed, or new to MCIR, compared to the historical data. In addition, we assessed the age distribution of subjects for vaccinations reported to MCIR pre- and post-HL7 adoption.

Results: Overall, 107,788 vaccination records were reported pre-HL7 and 107,978 were transferred post-HL7; the majority of doses reported were for adults. Among doses reported pre-HL7, 30% (32,399) of subjects were new to MCIR compared to 46% (49,791) post-HL7. Among individuals previously known to MCIR, reported updates were similar pre-HL7 (15%) versus post-HL7 (16%). Half (49%) of doses reported for individuals pre-HL7 had the same address as that already in MCIR compared to 32% following HL7 implementation. This difference was primarily due to a new address being reported for more persons post-HL7 (52%) compared to pre-HL7 (36%).

Conclusions: A greater proportion of individuals who received vaccinations following HL7 implementation also reported a new address to MCIR, compared to pre-HL7. The increase in new address information reported to MCIR by large retail pharmacy chains may improve successful contact of immunization outreach efforts.

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Track B: IIS Fundamentals

Putting Best Practices to Work: Colorado's Experience with IIS-Based Centralized Reminder/Recall

ABSTRACT

Background: Reminder/recall (R/R) is one of the strongest evidence-based strategies demonstrated to increase vaccination coverage rates, but fewer than 20% of primary care providers nationally conduct R/R for their patient populations. Geographic R/R conducted centrally by health departments (HD) has been shown to be more effective and cost-effective than practice-based R/R approaches. A centralized approach may reduce the administrative burden on practices and reach patients without a primary care provider. This session highlights centralized R/R collaborations between the Colorado Department of Public Health and Environment (CDPHE) and the Adult and Child Consortium for Health Outcomes Research and Delivery Science (ACCORDS) at the University of Colorado Denver.

Objectives: The objectives of this session are to provide information to other IIS programs about how centralized IIS-based R/R programs could be successfully implemented by: 1) reviewing results of previous centralized R/R trials; 2) describing methods and lessons learned and; 3) reviewing provider and parent attitudes and preferences regarding centralized R/R.

Objective 1: The first study (3) implemented a centralized county-wide R/R (CC-R/R) in 16 rural and urban counties in Colorado for children 19-35 months old. Counties were randomized to either the CC-R/R (letters sent centrally through local health department) or practice-based arm. In the CC-R/R arm, up to three postcards were sent to children needing one or more immunizations according to the IIS. In the practice-based arm, clinics were trained on how to conduct IIS-based R/R for their patients. Effectiveness (any shot and brought up-to-date) and cost-effectiveness was compared between the two R/R approaches after six months. Methods and results will be discussed. The second study presented during this session builds on the first trial of centralized county-wide R/R for young children and similar methods were employed. However, this trial allowed primary care practices to collaborate by: (1) including their name and telephone number on the centralized R/R notifications along with that of their local health department, and (2) proactively updating patient addresses and/or telephone numbers once the R/R efforts were underway. Methods and results will be discussed. The final study presented during this session builds on the previous trials by looking at collaborations between public health entities and Accountable Care Organizations (ACOs). Additionally, this trial expanded the age ranges for CC-R/R to include adolescents and adults.

Objective 2: Based on the CC-R/R trials presented, we will share lessons learned and discuss data implications. Sample auto-dialer scripts and postcards will be shared.

Objective 3: Providers and parents were surveyed about their attitudes and preferences for who should send R/R notifications. Both parents and providers showed support for CC-R/R conducted by health departments. Methods and results will be shared.

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Track B: IIS Fundamentals

Wisconsin Immunization Registry Meaningful Use Onboarding Processes and Best Practices

ABSTRACT

MetaStar, as part of its mission to effect positive change in the quality, efficiency, and effectiveness of health care, was awarded a Centers for Medicare and Medicaid Services (CMS) Special Immunization Information Systems project grant. The goal of the project was to improve reporting of adult immunizations to the Wisconsin Immunization Registry (WIR) via electronic health records (EHRs), particularly for Medicare beneficiaries.

In conjunction with WIR, MetaStar improved and increased the data exchange adult immunization electronic reporting rates to WIR. The success of this project and other similar projects led the Wisconsin Department of Health Services to engage with MetaStar in order to create the Medicaid Health IT Extension Program. Through this program, MetaStar assists Medicaid-enrolled health care providers as they adopt and meaningfully use certified electronic health record technology. MetaStar provides meaningful use onboarding assistance and has developed specific processes, documentation, and best practices to use during onboarding.

Stage 3 of meaningful use requires submission of bi-directional query messaging from EHR systems to Immunization Registries as well as the ability to take the response from the Immunization Registry into the provider's EHR system. This enables health care professionals to use the historical immunization events in their clinical workflow.

To provide technical assistance to Medicaid-enrolled providers and to prepare for meaningful use Stage 3, MetaStar has developed documentation regarding the meaningful use onboarding process specific to Query by Parameter (QBP) Messaging that includes the following:

- Onboarding Kickoff Questionnaire
- Onboarding Process Workflow Diagram
- Roles and Responsibilities Documentation
- Swim Lane Documentation
- Project Tracking and Acknowledgements

MetaStar has Salso developed documentation on guidelines and best practices when evaluating QBP Messaging onboarding, including the following:

- Test Data vs. Production Data
- System Response Evaluation
- Query Messaging Optimization
- System Monitoring
- EHR Immunization Reconciliation and Incorporation

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Track B: IIS Fundamentals

Challenges of Having a Huge Volume of Marginal Data and Strategies to Create a Win-Win Situation

ABSTRACT

Background: Intermountain Healthcare (IHC) is the largest network of health care providers in Utah. IHC is also USIIS' strongest advocate, and collectively the largest user base and data supplier. Historically, approximately 85% of all USIIS data has been submitted from IHC. Much of this data was marginal and accepted as a special accommodation for IHC's proprietary systems and workflow. Over time, this massive amount of data created challenges. When the data volume started to negatively affect USIIS's daily operations and data storage costs became unsustainable, USIIS was compelled to examine its practices.

Challenges

1. Due to a dated data loading design, manual de-duplication of incoming and existing USIIS records had integral redundancy, creating huge backlogs. Help desk cases for missing immunization records—split among records in idiosyncratic database tables—increased dramatically, as did customer frustration.

2. Data processing time slowed, conflicts occurred among various loading procedures, and USIIS database storage cost increased.

3. Patient data quality suffered due to the nature of IHC data, which lacked important components for matching and merging records.

Strategies

1. The data loading design was modified to insert incoming records, that previously would have gone to manual review tables, into user accessible tables to make de-duplication more effective.

2. The allocation of data in the database was closely examined. Non-essential data tables/data were dropped. Archive and log files were moved to less expensive database systems. Dated patient records without immunizations were removed from the database.

3. The USIIS loading algorithm was enhanced to reject unacceptable IHC data without disrupting IHC's workflow.

Results

1. The numbers of help desk cases regarding missing data decreased.

2. USIIS data processing speed increased while database storage costs decreased.

3. Overall data quality increased.

Lessons learned: Re-evaluating historical practices, database utilization, and data quality improved USIIS operations and customer satisfaction.

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Track C: IIS Data Informing Schedule Compliance and Coverage

Frequency of Vaccinations Outside Recommended Ages — 2014; Six IIS Sentinel Sites

ABSTRACT

Background: Administration of vaccines outside recommended ages can reduce effectiveness. When revaccination is required, errors create unnecessary cost, reduce supply, and inconvenience patients and parents. During 2000–2013, the Vaccine Adverse Event Reporting System received 5,947 reports of vaccine schedule errors. Although this voluntary system cannot measure incidence, commonly reported issues warrant additional study. We analyzed IIS records to determine frequency of vaccine administration errors due to timing violations.

Methods: IIS sentinel sites (Michigan, Minnesota, North Dakota, six Oregon counties, Wisconsin, and New York City), meet high data quality standards. We analyzed de-identified vaccination records for doses administered during 2014 to persons age ≤17 years within sentinel sites. We used SAS® 9.3 to identify doses administered outside the allowable age ranges specified by Clinical Decision Support for Immunizations, accounting for grace periods. We were unable to exclude vaccinations deliberately administered off-schedule (e.g., during outbreaks or patient travel) from error counts.

Results: Among 13,701,588 vaccine doses administered during 2014, rotavirus and MMR vaccines were the most frequently administered outside allowable ages. Among 873,068 rotavirus doses, 5,172 (0.6%) were given after age 8 months. Among 565,510 MMR doses, 2,243 (0.4%) were administered to infants younger than 12 months. Swapping of similar vaccines included DTaP and Tdap; 7,934 DTaP doses were administered at age 7–17 years (0.4% of 1,900,180 DTaP doses), and 1,272 Tdap doses were administered to persons age <7 years (0.3% of 395,546 Tdap doses).

Conclusions: Although erroneous doses constituted a small percentage of doses administered, thousands of errors were identified within this limited dataset; impact includes wasted supply, decreased effectiveness, and increased risk of potential adverse events. Complexity in vaccine schedules and confusion among similar products might contribute to these events. Prevention strategies should be explored, including provider training and utilization of IIS forecasting functions to identify recommended vaccines.

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Track C: IIS Data Informing Schedule Compliance and Coverage

Trends in Compliance With Two-dose Influenza Vaccine Recommendations in Young Children, 2010 – 2015

ABSTRACT

Background: Two doses of influenza vaccine may be required for children aged <9 years to gain adequate immunity against the disease. However, poor two-dose compliance has been reported in the literature.

Methods: We analyzed data for >2 million children from six immunization information system (IIS) sentinel sites during each influenza vaccination season from July 2010 through June 2015. Vaccination season was defined as July 1 through June 30. Full vaccination was defined as having received at least the recommended number of influenza vaccine doses (one or two), based on Advisory Committee on Immunization Practices recommendations for that season. Partial vaccination was defined as having received only one influenza vaccine dose when recommended to receive two doses that season. Two-dose compliance among those who were recommended for 2 doses and initiated the series was defined as the percentage of children who received at least two doses of influenza vaccine during that season.

Results: Across seasons, ≥1-dose influenza vaccine coverage was stable within the age groups, ranging from 62%–68% in 6–23 month olds, 44%–48% in 2–4 year olds, and 36%–40% in 5–8 year olds; however, for the 2–4 and 5–8 year olds, full vaccination coverage showed an increasing trend from the 2010–2011 season through the 2014–2015 seasons. Two-dose compliance remained low across all seasons for all age groups, especially for older children (ranging from 63%–68% for 6–23 month olds, 10%–16% for 2–5 year olds, and 7%–12% for 5–8 year olds).

Conclusion: Improved messaging of the two-dose influenza vaccine recommendation is needed for both vaccination providers and parents. Providers are encouraged to determine a child's eligibility for 2 doses of influenza vaccine using vaccination history, especially for older children, who are at highest risk of infection.

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Track C: IIS Data Informing Schedule Compliance and Coverage

Human Papillomavirus Vaccination in Washington State: Estimated Coverage and Missed Opportunities

ABSTRACT

Background: Human papillomavirus (HPV) causes almost all cervical cancer in women and contributes to vaginal, anal, oropharyngeal, and penile cancer morbidity and mortality. Vaccines effective in preventing up to nine types of HPV are available; however, vaccination rates remain low nationally. We assessed HPV vaccination coverage by county, age, and gender using Washington State Immunization Information System (IIS) data.

Methods: Vaccination doses administered according to ACIP recommendations to Washington residents and recorded in the IIS were included in the coverage numerator; census estimates were used for the denominator. On-time dose coverage by county and statewide was calculated for the years 2006-2013 among male and female adolescents aged 11-12 years; coverage by age 18 years was also assessed. Missed opportunities were calculated as the number of visits at which doses of other adolescent vaccines were administered, without administration of the first dose of HPV vaccine (HPV1).

Results: In 2013, HPV vaccine coverage estimates with one, two and three doses (HPV1-3) for adolescents aged 11-12 years were 48.5%, 32.4%, and 18.3% in females and 31.2%, 17.1%, and 8.1% in males. HPV3 coverage estimates increased to 40.1% in females by age 18, but remained stagnate for males. Coverage estimates and completion rates varied by age, sex, and county. One-third of eligible, unvaccinated females and two of five eligible males aged 11-17 years had at least one missed opportunity to receive HPV1.

Conclusions: Despite a recommendation to vaccinate both males and females aged 11-12 years, coverage was significantly higher among females and among adolescents aged 13-18 years. Improved understanding of the variability of HPV vaccination coverage rates by sex, age, and county can inform targeted interventions statewide.

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Track D: Successful Partnerships

Utility of Linking the WIIS and Refugee Health Screening Database to Assess WA Refugee Immunizations

ABSTRACT

Background: Refugees receive a domestic health screening exam, including an immunization assessment, within 90 days of arrival to the US. Beginning 7/1/2012, the Washington Refugee Health Program implemented screening guidelines to standardize practices across clinics performing domestic health screening exams. These guidelines recommend clinicians ensure refugees are up-to-date (UTD) per ACIP and enter documented overseas and domestic vaccine information into WIIS. We linked the WIIS and Refugee Health Screening Database (RHSD) to evaluate the utility of this data linkage for monitoring completeness and accuracy of refugee immunization information in WIIS, and assessing post-resettlement refugee immunization rates.

Methods: All refugee health providers use WIIS to enter immunization history and doses administered. The RHSD maintains domestic health screening outcomes. We linked these databases by name and DOB using SAS. Refugees 0-18 years old arriving 7/1/2012-6/30/2014 were included. For eligible records, we assessed the proportion UTD per ACIP at three points: arrival, domestic health screening, and 18 months post-screening.

Results: 99% of 2,046 refugees 0-18 years old had a matching record in WIIS. 2,018 with no medical contraindications were included in analysis. The proportion UTD at arrival for MMR and DTaP/Tdap vaccine was 48% and 13%, respectively. The majority (>88%) were UTD for most vaccines after the domestic health screening. By 18 months post-screening, the proportion UTD exceeded estimated 2014 WA NIS/NIS-Teen and Kindergarten school-reporting immunization rates.

Conclusions: Linkage with WIIS is feasible and will be instrumental in leveraging refugee health program evaluation activities. Partnership with WA DOH Office of Immunizations facilitated access to and understanding of WIIS data. The refugee health screening guidelines ensure refugees initiate any needed doses shortly after arrival and thereby help achieve high coverage post-resettlement. The WIIS reflects accurate immunization information on nearly all pediatric refugees allowing providers and public health to accurately assess their future immunization needs.

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Track D: Successful Partnerships
A Tale of Two Collaborators: The IIS Sentinel Site Project and CDC

ABSTRACT

In an effort to support the development of public health capacity of Immunization Information Systems (IIS) and their staff, the National Center for Respiratory Diseases (NCIRD) established the IIS Sentinel Site Project in 2004, awarding supplemental funding to six IIS with high data quality. During the 2013-2017 funding cycle, six IIS (Michigan, Minnesota, North Dakota, New York City, Oregon, and Wisconsin) were provided supplemental funding to examine vaccine use, develop methodologies for IIS analyses, and evaluate the impact of key IIS initiatives. These IIS Sentinel Sites include high quality population-based immunization data that have been successfully used to conduct evaluations of vaccine use, IIS system functionality, and IIS support of immunization partner objectives.

In addition, the Sentinel Sites have become an ever-ready and continual partners with CDC, rising to the challenge to rapidly assess important emerging issues including Pandemic Influenza Preparedness and Adult provider outreach, strategies to increase HPV vaccination coverage among adolescent and adult providers, and feasibility of data linkages between the IIS and Cancer Registries to assess HPV vaccine effectiveness. Sites have also contributed to the systematic evaluation of critical IIS initiatives including interoperability, real-time data exchange, reminder recall, data quality improvement, and VTrckS ExIS implementation. The success of the Sentinel Site project is demonstrated, in part, by the diverse publications in the literature that have resulted from Sentinel Site evaluations. The submission of record-level demographic and vaccination data to the IIS Trends in Immunization Practices (IIS-TIPS) System also assists CDC in conducting critical programmatic investigations. CDC has also leveraged the expertise of Sentinel Sites to determine appropriate analytic methods and considerations when examining IIS data.

Public Health Impact: Sentinel Sites provide an example of how federal funding can not only enhance awardee infrastructure and capacity, but also provide "on the ground" data-driven perspectives critical to informing federal programs and initiatives.

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Track D: Successful Partnerships

Evaluation of Interstate Immunization Data Exchange Between Minnesota and Wisconsin

ABSTRACT

Background: Minnesota and Wisconsin share a 290 mile border, with many people crossing the border to receive healthcare. Since 2006, the Minnesota Immunization Information Connection (MIIC) and the Wisconsin Immunization Registry (WIR) have exchanged data weekly. The current data exchange between WIR and MIIC involves a batch load process that requires substantial human interaction. Prior to considering new processes and functionality, MIIC and WIR evaluated the usefulness of interstate data exchange.

Results: Over 27,000 unique MIIC clients have received a combined 54,300 immunizations from WIR since July 1, 2014. Seventy-two percent of MIIC clients updated by WIR live in a county that directly borders Wisconsin. Seventy-eight of 87 MN counties (90%) have at least one MIIC client record with an immunization from WIR added since July 1, 2014. Similarly, over 32,000 WIR clients, representing all Wisconsin counties, have been updated by MIIC since July 1, 2014. Eighty-two percent of WIR clients updated by MIIC live in a county that directly borders Minnesota.

Vaccination coverage estimates for clients whose records contain interstate data were similar to estimates for clients who only had data from providers in their state. MIIC clients ages 19-35 months as of October 1, 2015 who received an immunization from WIR on or after July 1, 2014 had a 69.72% up-to-date rate for the 4:3:1:3:3:1:4 series, versus a 72.27% up-to-date rate among MIIC clients in that age range, overall. Using the same age and series metrics, WIR clients who received an immunization from MIIC were 75.25% up-to-date, versus 78.60% of WIR clients up-to-date, overall.

Conclusions: Data exchange between Wisconsin and Minnesota improves the completeness of immunization histories found in both systems. By improving overall data completeness, interstate data exchange between Wisconsin and Minnesota helps decrease the likelihood of over-vaccination and increase the accuracy of jurisdiction-level vaccination coverage estimates.

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NOTES

Breakout Session 5

Track A

➤ Decrementing Inventory via Electronic Data Exchange: MIROW 2016 Guidelines

Track B

➤ Exploring Strategies and Considerations for Implementing Innovative Technology within Your IIS

Track C

➤ IIS-EHR Partnership: Providing and Displaying Immunizations and Clinical Decision Support in EHRs

Track D

➤ Personalizing Public Health through Consumer Access to Immunization Records — An Interactive Session

Track E

New Frontiers for IIS

➤ Open Source Revealed: How the IIS Community Can Benefit From Being an Open Source Community

➤ AART: Painting a Picture of your IIS

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Track A

Decrementing Inventory Via Electronic Data Exchange: MIROW 2016 Guidelines

ABSTRACT

The AIRA (American Immunization Registry Association) Modeling Immunization Registry Operations Workgroup (MIROW) has developed best practice recommendations in nine guides for immunization information systems (IIS) operations. The most recently published MIROW guide presents best practice recommendations to automate and standardize across immunization programs the process of decrementing a provider organization's vaccine inventory in IIS via electronic data exchange between the provider organization's electronic health record and the IIS. The process is referred to as decrementing inventory via electronic data exchange (DI-v-EDE). The demand for DI-v-EDE by immunization providers has increased due to the Meaningful Use Electronic Health Records (EHR) Incentive Program and increased requirements for vaccine accountability of publicly-funded vaccine. As IIS are becoming the centralized vaccine management system for each jurisdiction it is only natural that immunization providers would like to utilize DI-v-EDE rather than managing inventory in the IIS via direct user interface while submitting vaccination event data electronically. Advances in electronic data exchanges between immunization provider organizations and IIS make development of the DI-v-EDE guide timely.

This session will provide three presentations: one presentation (~20 min) will give an overview of the DI-v-EDE best practice recommendations; two additional presentations (~10 min each) will include user testimonies about how to prepare for and implement DI-v-EDE incorporating the guidelines. The presentations will be followed by an expanded (~20 min) question and answer session.

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Track B

Exploring Strategies and Considerations for Implementing Innovative Technology Within Your IIS

ABSTRACT

Technology is ever evolving. As a result, it can be difficult to understand and make effective decisions as to what technologies will position your IIS for success. This session will take an interactive approach toward gaining understanding of supporting technology focused on hosting models and third party supporting IIS software. A PowerPoint presentation along with using green and red cards for audience polling throughout the presentation. For the final portion of the presentation, participants will be provided a model service level agreement to start the process of building your own technology services agreement. During this portion, participants will work in small groups to start to build their own SLA, share with others in the presentation, and engage the experts on any questions they have regarding the material and content.

30 minutes would be ideal for the session but can reduce time if required. The material that will be covered is as follows: Hosting models for IIS support will be defined and explored including Traditional, Virtual, Cloud, and State-hosted models. Current examples will be provided from our IIS customer base nationally along with future plans for various project. Strengths and limitations of each model will be presented based on client experience.

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Key hosting services will be defined including industry best practices and examples of existing IIS practices across multiple jurisdictions. Service areas addressed include:

- Network management – Strategies for network management requirements along with examples of ongoing metrics to be reviewed by IIS managers.

- System administration – Services to maintain operating system, patching schedule and anti-virus.

- Database administration – Strategies for patch management and maintaining a healthy database.

- Backup and restore – Best practices for frequency, location, and back-up validation will be shared.

- Security – Best practices and security models will be shared outlining intrusion detection, encryption, ongoing vulnerability scans, and localized security requirements

- Failover (redundancy) – This will be defined along with in-use options and decision making considerations for making a jurisdictional specific selection.

- Disaster recovery – This will be defined along with presenting specific models in use nationally today. Will cover concept of geographic separation and return to operations standards. Frequency and types of disaster recover tests will be addressed.

- System performance – Defining and measuring system performance.

- System availability – Existing ranges of availability standards.

- Issue response time and coverage – Models of ranges of response times from technology stakeholders.

IIS supporting technologies and products will be explored. This will focus on use of third party software products, outside the core IIS, necessary to support the system or supply specific services. This section will explore:

- Understanding types of products (open source, licensed, etc.)

- Strategies for technology selection (specific examples will be provided)

- Staying updated with product releases

- Ongoing support considerations (product support and IIS performance)

Service Level Agreements (SLAs) outlining hosting services, supporting technologies, and metrics will be provided to session participants as well as a "Build-Your-Own" SLA template will be shared for in-session work and discussion.

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Track C

IIS-EHR Partnerships: Providing and Displaying Immunizations and Clinical Decision Support in EHRs

ABSTRACT

Background: Stage 2 of the federal Meaningful Use (MU) program requires providers who administer immunizations to report from certified EHRs to the Immunization Information System (IIS) in their jurisdiction. Immunization reporting is one of the core objectives providers must meet to qualify for financial incentives under Medicaid and Medicare. Although bidirectional communication is not required for MU 2, clinicians continue to demand it and use is growing.

As of September 30, 2015, 374 childhood immunizing facilities in NYC are using their EHRs to exchange immunizations bi-directionally with the CIR via an HL7 Web service. Of these facilities, 335 (90%) also receive CIR's clinical decision support (CDS) for immunizations in their EHRs in real-time. The EHRs obtain CDS from the CIR's Immunization Calculation Engine (ICE) version 2 or 3 (ICE2 or ICE3); the latter is available as an Open Source CDS service.

The EHRs currently receiving and displaying immunizations and CDS, including the number of facilities using each EHR, are: eCW (160), Office Practicum (69), MDLand (100), and CyberMed (6). At present, eCW obtains CDS from ICE 3 while the other EHRs receive it from ICE 2. The CIR will transition to ICE 3 in early 2016, at which time the other EHRs will obtain CDS from ICE 3. ICE 2 is integrated into the CIR database as a serial process. ICE 3 is modular and is able to process requests in parallel, allowing for a faster response.

The benefits of displaying immunizations and CDS within the EHR workflow for clinicians are quick access to up-to-date immunization records and recommendations as well as time saved by eliminating the need to use a separate application to manually search for patients and enter immunizations. Real-time access to patient immunization histories and CDS by clinicians is also expected to increase vaccination rates by reducing missed opportunities to vaccinate.

Description of Session: The objective of this session will be to present the step-by-step process of how a clinician uses their EHR to:

1) Send a request to the IIS for a patient immunization record

2) Receive and reconcile (de-duplicate) IIS immunizations with existing EHR data

3) Report immunizations to the IIS that are in the EHR but not in the IIS

4) Request, receive, and display CDS from the IIS or ICE 3

5) Report immunizations administered at the visit to the IIS

6) Request, receive, and display new CDS from the IIS or ICE 3

We will simulate the user experience for each EHR using test patients. This will be followed by a detailed description of the technical processes occurring behind the screens, including the speed at which HL7 messages are processed and CDS is delivered. Best practices will be identified and discussed. A 20-minute question and answer session following the presentation will be held.

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Track D

Personalizing Public Health Through Consumer Access to Immunization Records — An Interactive Session

ABSTRACT

What if the impact of your IIS on immunization outcomes did not entirely depend on its use by healthcare providers? What if IIS records were available to consumers and family members anywhere, anytime? How might you use direct-to-consumer communications to improve immunization awareness and uptake? How might you effectively create this engagement while maintaining security and confidentiality?

This session's objective is to interactively address these questions through the experience of four states participating in an ongoing ONC Consumer Access to Immunization Records Pilot Project. This session is structured as a series of connected briefings and discussion facilitated by a panel experienced in relevant implementation aspects. Topics and Panelists include:

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The Possibilities of Engaging Consumers – an Orientation

James Daniel, MPH, Public Health Coordinator, ONC

How might state IIS programs improve immunization outcomes by engaging consumers in addition to healthcare providers? New standards, technology and tools now allow on-demand "personalized public health." Mr. Daniel will explore leveraging IIS data so consumers can take direct immunization action and establish an "information-relationship" with state immunization programs.

Findings from a Multi-Method Evaluation of Consumer IIS Records Access

Shannon Stokley, MPH, Associate Director for Science, CDC NCIRD

What are the consumer and healthcare provider experiences with enrollment and application use? Ms. Stokley will present survey data from healthcare providers who register interested patients and from consumers who register for a consumer access account. Additional data compares consumer immunization status at the time of enrollment and as of July 30, 2015. Findings include over 54% of consumers consulting or visiting a healthcare provider for immunizations after electronically accessing their IIS records and learning a vaccination was due.

Secure Enrollment Techniques

Erich Daub, Scientific Technologies Corporation

How do you ensure that the right records are accessible by the right persons? What considerations need to be given to preserving confidentiality while affording anytime, anywhere records access? Mr. Daub will describe identity-proofing workflows, including new techniques that do not require healthcare provider participation. Algorithms coupled with IIS data allow user-account creation through a combination of "something known" (demographic information) with "something owned" (SMS text device or phone).

Health Promotion Techniques and State Records Request Fulfillment

Lonnie Peterson, Washington State Department of Health

Washington State households with children aged birth to six years receive age-appropriate health promotion mailings at various lifespan intervals. Ms. Peterson will describe this unique promotional approach. Approximately 100,000 households with 4 1/2-year-old children will receive information on how to directly access family immunization information through this method this year alone. She will also discuss procedures by which state immunization program staff enroll consumers for on-line records access accounts when processing requests for copies of official paper records.

Batch Registration

Quan Le, IIS Manager, Louisiana Department of Health and Hospitals

How might states register consumers hundreds or thousands at a time? Mr. Le will describe Louisiana's approach to "batch registration," a process that tests the ability to create pre-approved user accounts by processing data exported from health plans and large group practices.

NOTES

Track E: New Frontiers for IIS

Open Source Revealed: How the IIS Community Can Benefit From Being an Open Source Community

ABSTRACT

The open source world can be a confusing one, replete with strange terms and concepts that are often misunderstood. This presentation will reduce the mystery behind open source by defining key concepts, like copyright, copyleft, public domain, and open source, that relate to the intellectual property rights surrounding software. More importantly, the presentation will discuss the impact that open source software can have on users as well as a proprietary software market that might exist. The notion of an open source "community" and its attributes will be introduced, including a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) of an open source software approach. Finally, these concepts will be applied to the IIS software marketplace specifically. Examples will be provided from both the IIS world and the non-IIS worlds. Strategies for success for IIS will be offered, including recommendations for IIS to move to more modular, service-oriented architectures; better leverage of widely-used open source products; joint development of open source products across IIS projects; broader collaboration with the larger health IT community over open source initiatives; coordination of open source development to prevent detrimental branching of source code; and management of any turbulence that open source projects might cause in the commercial product marketplace. Open source represents a strategy that manager, technologists, and policy makers all must understand as its use (and neglect!) has implications in all domains.

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Track E: New Frontiers for IIS
AART: Painting a Picture of Your IIS

ABSTRACT

In 2015 AIRA began testing IIS as part of the Interoperability Testing Project. The goal of this project was to discover how IIS were implementing the HL7 interfacing standard and to provide information to IIS on ways to more closely align with national standards. Now AIRA has real-time test connections to the majority of IIS test systems and has created a new system, the Aggregate Analysis Reporting Tool (AART), which provides a dynamic report for IIS to review the results of this testing project. This session will introduce this new report and provide a venue for attendees to ask questions of the AIRA technical team.

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Breakout Session 6

Track A: Interoperability: Onboarding and Data Quality

➤ No Pain, No Gain: Using Quality Improvement Processes to Improve Program Efficiency

➤ The Quest for the Best: Establishing a Data Quality Protocol and Tools for Incoming Data

➤ The Results of Implementing IIS Data Exchange with 19 Electronic Health Record Vendors in Washington

Track B: Integration and Use of CDC Resources

➤ Progress Update on Automating VTrckS ExIS Data Exchange and the ExIS Usability Best Practices Catalog

➤ An Update on Two-Dimensional (2D) Vaccine Barcoding

➤ Clinical Decision Support for Immunization: Overview of New Resources and Future Directions

Track C: Data Use by Providers and Health Departments

➤ Local Health Department Use of Immunization Information Systems

➤ Knowledge and Use of IIS among a National Network of Physician Primary-care Providers

➤ Practical Use of a Data Quality Protocol

Track D: Development and Sustainability

➤ "Keeping Up" in a Turbulent Environment: Successful Strategies for IIS Sustainability

➤ Agile Philosophy and its Application within Software Development in the IIS Community

➤ Applying Joint Development Strategies to Meet Unique Community Needs — the Pacific Island Experience

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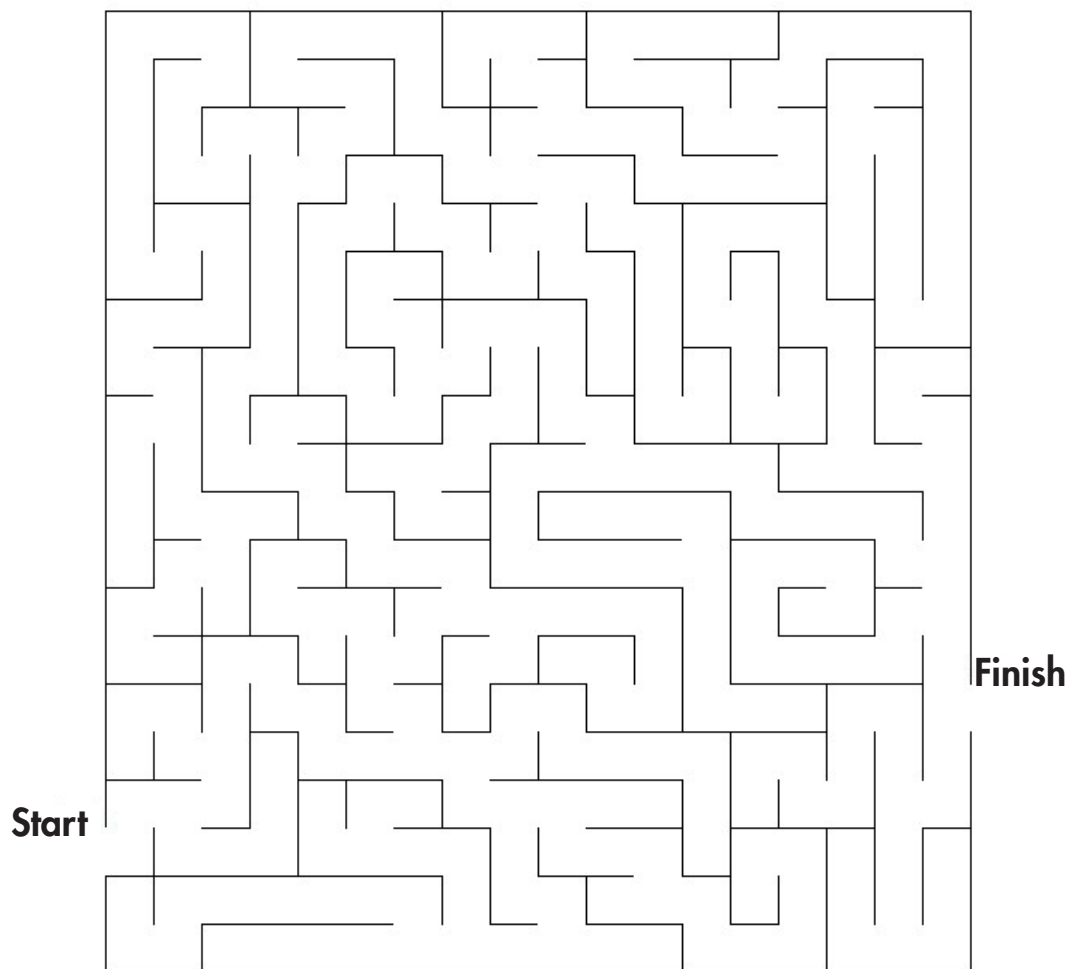
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Track A: Interoperability: Onboarding and Data Quality

No Pain, No Gain: Using Quality Improvement Processes to Improve Program Efficiency

ABSTRACT

Background: Currently, the Colorado Department of Public Health and Environment (CDPHE) has a backlog of approximately 525 healthcare providers interested in electronic data exchange with the Colorado Immunization Information System (CIIS). At the current staffing level, the average interface project takes approximately nine months to complete. In 2015, CDPHE completed a Quality Improvement (QI) project intended to improve the cycle time for IIS interface implementation with the long-term goal of eliminating the healthcare provider backlog and improving data completeness and timeliness. The timing of the QI project was crucial as CIIS had just received funding to hire more interoperability and data quality staff and is in the process of rolling out a self-serve Health Level 7 (HL7) testing tool. This session will highlight the phases of Colorado's QI project as well as specific interventions put in place by CDPHE to address the lengthy cycle times of interface projects.

Methods: QI participants identified the reasons for action, conducted process mapping of the initial state as well as the desired target state, gathered baseline and post-implementation metrics, performed root cause analyses, identified and tested potential solutions, and conducted 30, 60 and 90-day post-implementation meetings to measure progress.

Implementation: CDPHE incorporated several changes to its interface implementation process to: (1) ensure healthcare providers are adequately trained on entering data into their Electronic Health Records (EHR); (2) identify show-stopper data quality issues earlier in the interface projects; and (3) identify champions within the clinics to acknowledge project expectations and gain ongoing project commitment.

Results: All pre-production testing now occurs in a self-serve HL7 testing tool without any burden placed on CDPHE staff. Interface project workflow was updated, documented and understood by all interoperability staff members. The numbers of wait-times, steps and hand-offs in the interface implementation process decreased after implementation.

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Track A: Interoperability: Onboarding and Data Quality

The Quest for the Best: Establishing a Data Quality Protocol and Tools for Incoming Data

ABSTRACT

Data submitted to the MIIS have been primarily sourced from Electronic Health Record systems using the HL7 2.5.1 standard. While the MIIS team had been examining data quality as part of the provider on-boarding process, it became apparent that there was a need for more intensive scrutiny. An impetus for this focus stemmed from the rapid growth in on-boarding providers to the system, and addressing data quality in more depth became a high priority.

In May 2015 a group of subject matter experts was convened to review and improve current data quality practices, so a new MIIS Data Quality Protocol could be developed. Five phases which impact data quality during the on-boarding process were identified and defined:

 1) pre-certification;

 2) certification;

 3) production monitor;

 4) ongoing submissions; and

 5) one-time legacy data flat file load.

Over the six-month project period, in addition to developing the data quality protocol, several tools associated with each given phase were designed, reviewed and finalized. Each tool was geared to address the specific needs for each type of respective MIIS end user. These tools include: a provider-focused onboarding document; a HL7 checklist with CVX/MVX mapping tables for technical representatives from provider and/or EHR vendor organizations; an HL7 Administration Console for technical data review; predefined queries run by MIIS staff for internal review to assess data accuracy, timeliness and completeness; a series of standard test cases to be submitted by technical end users; the revision of a current tool used by clinical contacts to compare EHR to MIIS data; and a MIIS Data Quality Dashboard accessed by end users through the MIIS Graphic User Interface.

The presenters will describe and demonstrate each of these tools as well as share their utility when tested on a sample of newly onboarded providers.

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Track A: Interoperability: Onboarding and Data Quality

The Results of Implementing IIS Data Exchange With 19 Electronic Health Record Vendors in Washington

ABSTRACT

Summary: Washington State Department of Health and Scientific Technologies Corporation (STC) partnered to study interoperability data to determine data compliance, stratify by EHR and craft recommendations that result in improved data quality.

Background: The Department of Health, in partnership with STC, has been implementing immunization information system data exchanges with electronic health record (EHR) vendors for several years. With this rich pool of knowledge a review and summary of data element compliance by EHR vendor was completed. This presentation will review required Meaningful Use data elements in an immunization record and summarize the data elements that are most challenging to collect.

Methods: A comprehensive list of 19 EHR vendors submitting to the Washington Immunization Information System (WAIIS) was obtained. A random sample of HL7 messages submitted by each vendor from April 2015 through October 2015 was validated for compliance in STC's Public Health Connection Hub, PHC-Hub™. Compliance was determined by the presence of the appropriate data in the field for each element in the messages submitted and the party responsible for any issues with obtaining that information was documented.

Results: This information was translated into a spreadsheet to show which data elements were always provided, rarely provided or had issues with being providing by EHR vendors. This information was also stratified by vendor and a scorecard was developed and used to assess and monitor compliance.

Conclusion: The results of this observational analysis of EHR vendors was used to provide state interoperability teams strategies for working and supporting efforts to ensure Meaningful Use success as well as improve the quality of the data being sent to Immunization Information Systems.

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Track B: Integration and Use of CDC Resources

Progress Update on Automating VTrckS ExIS Data Exchange and the ExIS Usability Best Practices Catalog

ABSTRACT

It has been over two years since all 64 federally funded immunization programs (known as awardees) transitioned to CDC's Vaccine Tracking System (VTrckS). Since that time many awardees have taken steps to enhance their IIS or another external information system (ExIS) to include vaccine ordering and inventory management functionality as well as online provider enrollment, temperature logging, flu vaccine prebooking, inventory reconciliation using data from electronic health records (EHR), usability improvements, and other functions.

In 2014, CDC initiated two projects to support advancement of awardee ExIS and leverage work that has been done in awardee jurisdictions to improve efficiency, increase accountability, and support providers as they order vaccine and manage inventory. In 2015, awardees engaged in activities to help CDC understand requirements and challenges for automated VTrckS ExIS data exchange. Recent developments related to this effort include analysis of errors in files uploaded manually to VTrckS, and a proposed technical solution. These developments and a new CDC blanket purchase agreement can help awardees prepare for automated VTrckS ExIS data exchange now. Guidance, lessons learned, and possible next steps for this effort will be shared with the entire VTrckS ExIS community.

The Usability Best Practices Catalog project includes contributions from awardees who shared information on their ExIS solutions, and provided feedback on proposed solutions based on usability principals and standards. The catalog represents proposed best solutions for core vaccine ordering and inventory management functions.

Participants in this session will hear updates on CDC efforts to automate VTrckS ExIS data interchange and steps that awardees can take to prepare for automated data exchange when that functionality is supported in VTrckS. Participants will also receive an overview of ways to leverage the Usability Best Practices Catalog to improve efficiency, accountability, and provider satisfaction by incorporating usability best practices into ExIS solutions.

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Track B: Integration and Use of CDC Resources
An Update on Two-Dimensional (2D) Vaccine Barcoding

ABSTRACT

There are a number of ongoing initiatives and tools related to two-dimensional (2D) barcodes on Vaccine Information Statements (VIS) and vaccine products at the unit-of-use level (vials/syringes) as well as the unit-of-sale level. This presentation will highlight some of the initiatives conducted by the Centers for Disease Control and Prevention (CDC). The CDC has conduct two pilot implementations of 2D vaccine barcodes involving vaccine manufacturers, providers, and health information system (HIS) vendors. The projects obtained and analyzed de-identified record level data from participating providers on 2D and linear barcoded vaccine products. In addition, staff at the participating provider sites completed on-line perception surveys, a number of workflow analyses were completed amongst a subset of the participating providers, 2D barcodes were affixed onto Vaccine Information Statements (VIS), and 2D software functional capabilities were identified.

This presentation will give an update on 2D vaccine barcoding including an overview of the status of 2D barcoding on vaccine unit-of-use packaging, highlight additional progress made by health information system vendors to integrate 2D barcoded vaccine functionality, and review of the CDC's 2D Vaccine Barcode projects with lessons learned, related resources, and a summary of the findings. These findings represent the final analysis of the 2D adoption data and provide additional insights related to data quality, user experiences, time savings, and provider staff compliance with scanning of 2D barcodes.

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Track B: Integration and Use of CDC Resources

Clinical Decision Support for Immunization: Overview of New Resources and Future Directions

ABSTRACT

The Clinical Decision Support for Immunization (CDSi) project provides resources to improve the accuracy and consistency of immunization evaluation and forecasting, as well as make it easier to develop and maintain immunization clinical decision support applications. While initially focused only on childhood immunizations, the resources have evolved recently to include the adult schedule and risk-based recommendations for both adults and children.

The presentation will:

- Introduce attendees to the CDSi resources for the adult schedule
- Provide an overview of the risk-based recommendations for children and adults
- Describe the codification process for underlying conditions
- Present information gathered from the status check projects
- Discuss the future of CDSi

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Track C: Data Use by Providers and Health Departments
Local Health Department Use of Immunization Information Systems

ABSTRACT

Background: NACCHO is the voice of the 2800 local health departments in the United States that work every day to protect and promote the health and well-being for all people in their communities. According to NACCHO's 2013 National Profile of Local Health Departments, 90% of local health departments provide adult and childhood immunization services and 85% use an IIS.

Methods: In October 2015, NACCHO distributed a survey to 300 local health departments to identify and explore the use of IISs within local health department clinical and programmatic functions. The survey remained in the field for three and a half weeks and participants were reminded to complete the survey through two reminder emails and one follow-up phone call.

Results: Results on the survey are still pending. However, local health departments that use an IIS will report on the management structure of the IIS related to the state and local health department, how vaccine administration data is reported to the IIS, and the use of IIS functions (reminder/recall, patient look-up, vaccine ordering, vaccine inventory management, and coverage rate assessments) within the last six months. In addition, local health departments who have not used an IIS in the past six months will report on why they have not used an IIS. All local health department respondents will identify three priorities for how the IIS in their jurisdiction could be made more useful to local health departments.

Conclusions: Following the initial survey, NACCHO plans to conduct follow up interviews with select local health departments to collect more in-depth information on their use of IIS. The information from the survey and interviews will be used to support and promote the role of IISs within local health department immunization programs.

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Track C: Data Use by Providers and Health Departments

Knowledge and Use of IIS Among a National Network of Physician Primary-care Providers

ABSTRACT

Background: In 2015, the Community Preventive Services Task Force identified a critical need for information about the use of Immunization Information Systems (IIS) by vaccination providers in clinical settings. Understanding clinical provider knowledge and use of IIS functions can assist with increasing provider and client participation and data quality in IIS.

Methods: From January to April 2015, we conducted an internet and mail survey of a national network of pediatric, family physician (FP), and general internal medicine (GIM) physicians to understand their awareness and use of different IIS functions, and provider and practice characteristics associated with use of their state/local IIS. We compared pediatric, FP, and GIM responses using chi square tests and conducted a multivariable analysis predicting use of IIS for any purpose with independent variables including physician and practice characteristics as well as current electronic health record (EHR) capabilities.

Results: Response rate was 69% (911/1330). GIMs were less likely to report using an IIS for any purpose (75/274, 27%) compared with pediatricians (257/326, 79%) and FPs (221/311, 71%) (p<.0001). Many pediatricians, FPs, and GIMs reported not knowing whether their IIS had specific functions including determining immunization needs at the point-of-care (22%, 29%, 52%, respectively), reminder/recall (67%, 71%, 78%), calculation of up-to-date coverage rates (61%, 68%, 62%), and vaccine inventory and tracking (47%, 62%, 66%) (p<0.05 for all comparisons). Although 92–94% of physicians reported EHR use, few reported submitting (17–33%) or receiving (5–8%) real-time data. In adjusted multivariable models, factors predictive of IIS use included pediatric specialty, practicing in the Midwest and younger physician age.

Conclusions: Primary care physicians have large knowledge gaps related to IIS functions, especially GIM physicians who infrequently use IISs. Addressing physician knowledge gaps related to IIS use is essential to increase provider and client participation in IIS as well as IIS development nationally.

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Track C: Data Use by Providers and Health Departments
Practical Use of a Data Quality Protocol

ABSTRACT

Since the first round of interoperability funding (ARRA grant), ALERT IIS has been tracking how providers have enhanced their data submission with the expectation of seeing more accurate, complete, and timely data. Surely an enhanced interface would deliver more and better data…and we'll show that it does. But that's not without some challenges. What we've learned over the last four years is that having a Data Quality Protocol (and sticking to it) is critical in this time of ever-changing technology and flexing priorities both local and national. We wrote our first Data Quality Protocol many years ago but it wasn't until 2013 that we completed a thorough overhaul and retooling of how we utilize it in our daily work. We also have a dedicated Data Quality Team that is integrated with the Data Exchange/Onboarding Team.

Participants will hear an introduction and overview of the ALERT IIS Data Quality Protocol including leveraging of IIS community tools and best practices in its development. We will review the trends in ALERT IIS data accuracy, completeness and timeliness (A.C.T.) and show how that correlates (or doesn't) with internal and external environmental forces such as Meaningful Use, IISAR, PPHF funding, new mandates for pharmacies to submit data, and opportunities to share data with other public health programs, etc.

We will attempt to answer these titillating questions:

- How can we leverage these forces for good?
- How can we develop strategic partnerships with data champions to share the burden of monitoring data exchange or collaborate on corrective and preventive actions?

Finally, participants will learn about successes, roadblocks, challenges and how we hope to get closer to our goal with each quality cycle.

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Track D: Development and Sustainability

"Keeping Up" in a Turbulent Environment: Successful Strategies for IIS Sustainability

ABSTRACT

Many factors push against successful IIS sustainability: competing agency priorities, IT centralization, inadequate and short-term funding commitments, increasing funder requirements and user expectations, changing technologies. Some projects, however, are able to not only sustain themselves but thrive in the process. This presentation will identify and explain twelve critical success factors that can help propel an IIS project to success and provide the best opportunity for long-term effectiveness and sustainability. While offering no panacea, the presenters draw on over 40 years of collective experience in IIS planning, deployment, and operations to offer insights on what works, what doesn't, and what may be emerging to keep IIS projects successful. The topics range from organizational to technical to process. Examples will be provided from projects and activities around the country. One of the key conclusions is that while funding is important, money alone is not sufficient. And while outside help may be useful, even great technical assistance can't substitute for having good people in an agency. Technology alone cannot solve performance problems — people do. Yet without the right tools, even the best staff will flounder.

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Track D: Development and Sustainability

Agile Philosophy and Its Application Within Software Development in the IIS Community

ABSTRACT
Learning Objectives:
- Review the Agile Manifesto.
- Brief discussion on choosing the right software development methodology.
- An introduction to the Scrum framework.
- Utilizing Agile within the IIS Community

Abstract Body:
Agile Unified Process, Crystal Clear Methods, Extreme Programming, Kanban, Scrum and the list goes on. Where is one to start if you've come to the conclusion that it's time to adapt an Agile approach to software development)? While you have variations to choose from the selection process can often be simplified by asking "What can be done to increase customer satisfaction, while providing a superior product as quickly as possible?". Perhaps it's the full scale adoption of an Agile Methodology, like Scrum, or maybe it only involves adding a daily stand up to your morning routine. This presentation aims to be the starting point of a conversation between program management and IT professionals to ensure every team is reaching its highest potential.

Hewlett Packard Enterprise has chosen Scrum as it's framework for adapting the Agile Methodology. For the purposes of this presentation we will take a look at the key roles and terms within a Scrum team and help clear up any confusion regarding where certain team members from a traditional Waterfall SDLC would fit within an Agile SDLC. After the introduction to Scrum we'll move into ideas and concepts for utilizing Agile/Scrum methodologies within the IIS community and how teams can incorporate Agile/Scrum methodologies within their current SDLC's.

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Track D: Development and Sustainability

Applying Joint Development Strategies to Meet Unique Community Needs — the Pacific Island Experience

ABSTRACT

Thoughtful adaptation and implementation of IIS functionality is key to successful leveraging of IIS for program operations support. The Pacific Island U.S. Territories of American Samoa, the Commonwealth of the Northern Mariana Islands (CNMI) and Guam, and freely associated nations of the Federated States of Micronesia (FSM), the Republic of the Marshall Islands (RMI) and Palau, is a unique community experiencing unique challenges in their implementation and operation of IIS.

This presentation will discuss the similarities and differences between Pacific Island IIS programs and those of their stateside counterparts and will also examine the impact of their unique circumstances on their IIS requirements. This presentation will also discuss the inception of the Pacific Island IIS User Group, its governance structure, and the Group's leverage of a unified IIS maintenance and support agreement and a joint development approach to strengthen their individual and community immunization goals. It will also describe the adopted approach for identification and selection of the enhancements by the User Group, as well as the development, testing, funding, training and rollout cycle. The presentation will close with a review of the User Group's short-term and long-term IIS goals for their community.

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Breakout Session 7

Track A: Data Quality Protocols and Practices

➤ Approaches to Increasing Reporting of Adult Immunizations in the NDIIS

➤ Wisconsin Immunization Registry Report Cards: Providing IIS Data Quality Feedback to Providers

➤ Michigan's Ongoing Data Improvement Plan

Track B: Interoperability: Evaluating for Success

➤ Development of an Approach to Evaluate HL7 Message Success Across Multi-Level Pathways

➤ Using Geographic Information Systems (GIS) in an Evaluation of HL7 Message Data Quality

➤ Improving Immunization Data Exchange Interface in Wisconsin

Track C: Programmatic Data Use

➤ Using Existing Disease Reporting to Publicize Registry Influenza Immunization Tracking in Oregon

➤ Characteristics Associated with Michigan Children Under-immunized in Their First Year of Life

➤ Matching Enhances IIS Data — Assessing Tdap Uptake during Pregnancy in Washington State

Track D: Partnerships and Stakeholders

➤ Mitigating Risk with High Impact Stakeholders

➤ Helping IIS Stakeholders Help Themselves! Driving Daily Business Processes with Self-Serve Resources

➤ Immunize Washington — Taking Public-Private Partnerships to the Next Level with Health Plans

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Track A: Data Quality Protocols and Practices

Approaches to Increasing Reporting of Adult Immunizations in the NDIIS

ABSTRACT

Beginning in 2014, the North Dakota Immunization Information System (NDIIS) team developed and implemented a training and outreach program targeting key providers of adult and adolescent immunizations. The program focuses on non-traditional adult immunization providers and providers of human papillomavirus (HPV) vaccines, specifically focusing on long term care and family planning facilities. The program set a goal to conduct outreach visits with 75 long term care facilities per year from 2014 – 2017 and all of the 23 family planning facilities in the state. Amongst these, a combination of providers already enrolled and reporting immunizations to the NDIIS and provider sites not currently reporting are targeted to reach both current users and to recruit new users. The outreach program training includes background information on the NDIIS, the purpose and benefits of the NDIIS, an overview of current immunization recommendations, Healthy People 20/20 immunization goals, current immunization rates in North Dakota, and training on the basic functionality of the NDIIS. The trainings' immunization education is specific to each type of provider; for long term care providers, training includes information on all routinely recommended adult immunizations and for family planning, the immunization information is specific to HPV. At the end of the first year post-implementation, the outreach program has proven to serve as an effective recruitment strategy for new providers. As a result of the program, 10 new long term care providers have signed up for NDIIS access, and visits with newly enrolled providers have engaged associated facilities that are targeted for the next phase of outreach. Additionally, follow-up with provider facilities with medical records systems capable of electronic data submission is also in progress as a result of the outreach visits.

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Track A: Data Quality Protocols and Practices

Wisconsin Immunization Registry Report Cards: Providing IIS Data Quality Feedback to Providers

ABSTRACT

Background: Many Wisconsin Immunization Registry (WIR) providers enter immunization data into an electronic health record (EHR) system that then transmits data to the WIR. While data exchange is efficient, it presents its own set of challenges. It is possible that certain data elements are not being transmitted to the IIS, or are being incorrectly coded at some point in the data entry process. These errors or omissions can have an adverse effect on the WIR's ability to de-duplicate vaccination history records and accurately forecast vaccines that are needed. In addition, if the EHR does not use the WIR forecasting and recommendations, providers may not recognize when they are giving vaccines inappropriately.

Implementation: In December 2014 the WIR was modified to include the ability to run provider-level report cards. The report cards contain information on the timeliness of entry, completeness of immunization and demographic data and invalid, discontinued or unexpected doses entered over a one-month period.

Methods: We will describe the report cards and the information they contain. As of October 2015, only providers that have volunteered to pilot the report cards have received them each month via email. We will share information on what these providers have found useful about the report cards, unique ways in which they are being used and challenges faced in rolling the report cards out to all WIR providers.

Conclusions: Changes in the way data are being entered into the WIR have created new challenges related to data timeliness, completeness and accuracy. To help ensure that patient vaccination histories and vaccine recommendations are accurate, the WIR developed report cards that evaluate the data being sent to the WIR on an individual provider level and can identify areas needing improvement.

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Track A: Data Quality Protocols and Practices
Michigan's Ongoing Data Improvement Plan

ABSTRACT

Introduction: MDHHS Division of Immunizations received a Prevention and Public Health Funds Interoperability Grant in 2012. The grant required development of a sustainability plan that includes an ongoing data quality monitoring plan. Accurate, complete, and timely data in the Michigan Care Improvement Registry (MCIR) promotes participation among healthcare providers, health plans, schools, and others. Higher participation in the registry results in complete immunization records for patients. Benefits of higher data quality include:

- Increased provider trust
- Increased data use
- Improvements in clinical decisions
- Improved patient health
- Improved public health

The speaker will describe Michigan's process to develop a DQI plan and resulting best practice document.

Project Purpose: The intent of the project was to operationalize the Ongoing Data Quality Improvement (DQI) Plan to increase the quality of data coming into MCIR.

Project Objectives: Operationalize the Ongoing DQI Plan to increase the quality, timeliness, and accuracy of incoming data through the following:

- Develop policies/procedures for needed items in the current DQI Plan.
- Develop business requirements for DQI system enhancements
- Develop best practice strategies for monitoring incoming data to MCIR
- Develop metrics for ongoing data quality initiatives

Project Outputs/Deliverables

- New policies and procedures for current DQI plan
- DQI system enhancements needed to carry out current DQI plan
- Corrective Action Plan Committee identified
- Best practices document for current DQI plan
- Metrics document for ongoing data quality initiatives
- Implementation of DQI plan
- Identify future DQI system enhancements needed for monitoring incoming data to MCIR
- Business requirements for future DQI system enhancements

Time/Major Milestones

- In January 2015, began scheduling meetings with MCIR SMEs and other stakeholders to begin operationalizing an ongoing data quality plan
- By August 2015 implemented DQI plan
- By October 2015 identified future DQI system enhancements needed for monitoring incoming data to MCIR
- By October 2015 developed business requirements for future DQI system enhancements

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Track B: Interoperability: Evaluating for Success

Development of an Approach to Evaluate HL7 Message Success Across Multi-Level Pathways

ABSTRACT

Electronic Health Record Systems (EHRs) connect to the Michigan Care Improvement Registry (MCIR) through a number of different pathways, each being composed of several layers. The entities in these pathways have independently developed business processes pertaining to HL7 message handling. The objective of this study was to document those business processes to develop and implement an HL7 message evaluation framework for messages sent to MCIR (VXU, QBP) and received from MCIR (ACK, RSP). This report systematically investigates the internal processes of each stakeholder organization in message transmission, facilitating efforts to maximize success.

Each EHR connects to one of six regional Health Information Exchanges (HIEs) or directly to the Michigan Health Information Network (MiHIN), the statewide HIE. Each regional HIE connects to MiHIN, which subsequently connects to the internal Michigan Department of Health and Human Services (MDHHS) Data Hub which ultimately connects to MCIR. The HIEs employ different business rules for HL7 message handling. One HIE opens the message to be sure that the MSH is appropriately constructed and immediately returns an error message if not; otherwise it forwards it on unchanged. Another HIE opens the message and sets the receiving organization and receiving system to fixed values; it returns an ACK confirming receipt but does not return the ACK from MCIR. MiHIN accepts the message and passes it on to the MDHHS Data Hub for processing, which varies depending on the message type.

We developed a structured interview using Business Process Modeling Notation 2.0 (BPMN 2.0) to capture the behaviors of each partner organization. This facilitates planning for the evaluation of messaging success and investigation of problems.

This presentation describes the process used to document the message flow and the unique role each partner organization actually plays in HL7 message handling. Our findings highlight the importance of carefully documenting the processes employed by each partner in HL7 message transfer and how they may ultimately impact the quality of IIS data.

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Track B: Interoperability: Evaluating for Success

Using Geographic Information Systems (GIS) in an Evaluation of HL7 Message Data Quality

ABSTRACT

Background: HL7 interoperability has been achieved by over 1,900 clinic and hospital sites throughout Michigan. Michigan's IIS, the Michigan Care Improvement Registry (MCIR) is being evaluated for timeliness, completeness, and accuracy of HL7 messages to ensure data quality. Objective: The objective of this study was to explore the potential utility of GIS tools to better understand HL7 message and MCIR data quality issues, and to identify potential public health implications. Methods: We acquired MCIR data for all immunizations administered by national retail pharmacy chains during the 2012-13, 2013-14, and 2014-15 flu seasons, which included periods pre- and post-HL7. The geographic populations served by retail pharmacies were profiled using patients' home addresses reported on HL7 messages. The completeness of contact information in MCIR was evaluated for adults and children using newly-added contact information; differences were contrasted by geographic area, pre- and post-HL7. The timeliness and accuracy of MCIR patient contact information were assessed using updates reported pre- and post-HL7. Patient address and other contact information updates were evaluated by proximity to providers and Health Provider Shortage Areas (HPSAs). Results: The geographic summaries and analysis using GIS illustrate how aspects of MCIR data quality have been influenced by the transition to HL7 messaging. We evaluated geographic profiles of changes in contact information including newly-reported adults as well as updated addresses and phone numbers to assess the quality of immunization data reported to MCIR by retail pharmacies. Geographic areas and provider sites in need of data quality improvement were also evaluated. Conclusions: GIS can provide important additional perspectives to evaluate the timeliness, completeness, and accuracy of MCIR data reported by HL7 messages. Maps may be used to more effectively illustrate how IIS can be used across jurisdictions to identify areas for improvement. This has potential for public health community outreach and planning efforts.

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Track B: Interoperability: Evaluating for Success
Improving Immunization Data Exchange Interface in Wisconsin

ABSTRACT

The Wisconsin Immunization Registry (WIR) is Wisconsin's secure, web-based IIS implemented in 1999. The primary functions of the WIR are to serve as a centralized database of immunization information to ensure Wisconsin residents receive their recommended immunizations in a timely manner and to exchange immunization data with Wisconsin healthcare entities and immunizers to determine current and future vaccination needs in Wisconsin. In 2002, the WIR adopted real-time data exchange capability with Electronic Medical Records (EMRs)/Electronic Health Records (EHRs) through Health Level 7 (HL7) message reporting and querying. Health Level 7 query messaging, together with meaningful use initiatives, enhances the immunization data completeness and reporting timeliness; however, it has come to the WIR staff's attention that there are some interface issues with the data being sent between some EMR/EHRs and the WIR system. Despite the WIR sending back error messages, the EMR/EHR end users may not always be aware of the messages or know how to interpret them, which can then affect the data quality components of the immunization data sent to the WIR.

This presentation will provide an overview of the WIR's current progress in bidirectional data exchange, describe interface issues observed in practice, categorize the identified issues based on their common nature, and discuss immediate and long-term solutions implemented to address these issues. After this presentation, one's better understanding of data interface challenges from HL7 data exchange will help promote effective communication and well-coordinated workflows among IIS staff and their partners, which can then optimize immunization data sharing and data quality.

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Track C: Programmatic Data Use

Using Existing Disease Reporting to Publicize Registry Influenza Immunization Tracking in Oregon

ABSTRACT

The Oregon Immunization Program (OIP) is currently in our third season of collaborating with Oregon's Acute and Communicable Disease Program (ACDP) to publicize our weekly, near-real time influenza immunization surveillance. What OIP is doing for near-real influenza immunization reporting is novel both for registry-based surveillance and for our collaboration with influenza disease surveillance. Using weekly ALERT IIS reports throughout the influenza season, OIP estimates influenza immunizations with only a two week lag. This near-real time surveillance allows both for tracking progress across the season, and for evaluation of flu vaccine uptake by geography or age groups. A challenge for OIP was finding a way to publicize our capacity to provide local, timely estimates of immunization uptake. In Oregon ACDP publishes and widely distributes in Oregon a weekly newsletter summary of influenza disease activity called "FluBites". Adding weekly immunization information to FluBites complements existing influenza disease surveillance, and has been very well received by this newsletter's audience. The benefits to OIP from collaborating with ACDP include not only reaching a broad target audience but also in avoiding the costs and staffing to produce a separate publication.

The material of this presentation will cover in brief the registry side of setting up a near-real time surveillance system for influenza, along with the types of products produced. Our experience in the collaborative publishing process with the Oregon Acute and Communicable Disease Program will be highlighted. Learning objectives for participants include both the feasibility of setting up near-real time reporting, and the value of collaborating with existing disease reporting programs for disseminating results.

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Track C: Programmatic Data Use

Characteristics Associated With Michigan Children Under-immunized in Their First Year of Life

ABSTRACT

Introduction: Following the Advisory Committee on Immunization Practices-recommended schedule protects children from vaccine-preventable diseases when they are most vulnerable. Michigan ranked 47th among all states in the 2014 National Immunization Survey for children aged 19-35 months completing the combined series of recommended immunizations. To identify differences in immunization practice in the first year of life and targets for early interventions, we described mothers of children under-immunized by age 12 months, and compared them with mothers of fully-immunized children.

Methods: We assessed the 2012 birth cohort included in Michigan's IIS, supplemented with birth record data, for ≥3 doses of hepatitis B, DTaP, PCV, IPV, and the primary series of Hib by their first birthday. We classified under-immunized children as either unimmunized (received no vaccines), selectively-immunized (no doses of ≥1vaccine, but all of another), or delayed (neither unimmunized nor selectively-immunized). We compared maternal characteristics using bivariate analyses.

Results: By age 12 months, 37.3% (N=40,104) were under-immunized (88.2% immunization-delayed, 5.5% selectively-immunized, and 6.3% unimmunized). Of 35,355 mothers of immunization-delayed children, 66.5% were White, 51.9% were married, and their median age at birth was 27. Compared with mothers of fully-immunized children, those delayed were more likely to be Black [RR 1.27 (95%CI: 1.24,1.29)], unmarried [RR 1.25 (95%CI: 1.23,1.27)], have a high school education [RR 1.12 (95%CI: 1.10,1.15)], and have received no 1st trimester prenatal care [RR 1.33 (95%CI: 1.30,1.35)]. When compared with mothers of fully-immunized children, mothers of unimmunized children were more likely to be White [RR 2.91 (95%CI: 2.59,3.27)], married [RR 3.01 (95%CI: 2.74,3.32)], and have completed college [RR 1.50 (95%CI: 1.38,1.65)]. Most characteristics of selectively-immunized children's mothers were similar to unimmunized children's mothers.

Conclusions: Immunization-delayed children were the most common subset of under-immunized children. Characteristics of immunization-delayed children's mothers identified here could be utilized to target interventions to increase vaccination rates.

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Track C: Programmatic Data Use

Matching Enhances IIS Data — Assessing Tdap Uptake During Pregnancy in Washington State

ABSTRACT

Background: In response to national increases in pertussis, the American College of Obstetricians and Gynecologists recommended in June 2013 that women receive Tdap (which protects against tetanus, diphtheria and pertussis) during every pregnancy at 27-36 gestation to best protect infants 0-2 months of age from pertussis. Tdap coverage among pregnant women in Washington State is of particular concern after recent outbreaks of pertussis in 2012 (4916 cases) and 2015 (1281 cases YTD). To measure implementation of the new Tdap recommendations in Washington, we matched Washington Immunization Information System (WAIIS) records to birth certificates to identify new mothers and assess Tdap coverage.

Methods: The WAIIS is a robust lifetime registry that contains >80 million records for >8 million unique individuals. Washington Center for Health Statistics records each of the ~88,000 Washington births that occur annually. Records for 7191 women who delivered during January 2015 were matched to >1.1 million WAIIS records of women ages 18 – 55. A probabilistic match using SAS v.9.4 compared first and last name, date of birth, and ZIP code. Absolute Tdap coverage and the percent of women who received Tdap during the third trimester as recommended were calculated.

Initial Results: Analysis is ongoing and will be completed in the next two months. Twenty-nine percent of birth records matched exactly to the WAIIS. Manual matching has so far identified an additional 1168 records. After manual matching of fuzzy pairs is complete, immunization records for matched mothers will be pulled from the WAIIS. Using these and the date of delivery from vital records, we will calculate Tdap coverage and uptake.

Conclusions: Matching IIS data to external sources like vital records allows public health to drill down to specific populations and monitor emerging situations by increasing the amount and quality of information available about immunization coverage.

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Track D: Partnerships and Stakeholders
Mitigating Risk With High Impact Stakeholders

ABSTRACT

Why is Stakeholder Management Processes important to IIS? It provides a proactive approach to helping keep your program at the table, ensuring the messages being sent are what you want sent and puts you back in control.

At the beginning of IIS projects, program staff created their list of stakeholders, prioritized them by influence or power, and developed strategies for management of these groups. Much of this process was focusing on implementation of the system, recruitment and retention of providers, and communication to key decision makers of the value of the systems.

Times have changed dramatically and now the list of stakeholders have grown in number but also complexity. Stretching from internal programs within public health to external and possibly competing entities, examples could include Electronic Heath Record Systems, Health Information Exchanges, and Chief Information Officers.

Stakeholder Management is a process to help the program identify stakeholders and their influence. This will provide the necessary framework to develop strategies of managing the stakeholder, whether it is as a stakeholder to manage or a stakeholder to leverage.

Having an active and up to date stakeholder management process can help mitigate negative risk that could impact your project goals and possibly provide insight into positive risk mitigation strategies to help further your goals. It is important to revisit this process often and ensure as our projects and systems mature we are keeping our stakeholder management approach up to date and proactive.

The goal of this presentation will be to review stakeholder management processes, walk through examples of how it has been applied, and explore ways to manage or leverage stakeholders for a stronger program.

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Track D: Partnerships and Stakeholders

Helping IIS Stakeholders Help Themselves! Driving Daily Business Processes With Self-Serve Resources

ABSTRACT

The primary focus of early immunization registries was to establish a reliable, secure system and interact with primary immunization providers (family practices and pediatrics). During this early phase, programs were able to support their efforts with minimal staff using paper-driven processes and spreadsheets to track provider recruitment and training.

Today, immunization registries have evolved into extremely robust Immunization Information Systems charged to work with an expanding universe of non-traditional immunization providers including pharmacies, schools, Electronic Heath Record vendors, and Health Information Exchanges. Further, the IIS must now facilitate Meaningful Use reporting, support AFIX reporting, and increase their collaboration with Vaccine for Children (VFC) programs to accommodate annual VFC enrollment.

Although these daily responsibilities have increased more than tenfold, staffing levels have not grown, meaning that limited resources are often stretched beyond capacity. Cumbersome paper-driven processes are inefficient and frustrating: spreadsheets are unmanageable and fragmented (leading to an unreliable source of reportable data); and programs struggle to meet continuously expanding provider needs.

In response, innovative IIS programs are successfully leveraging a common platform of self-serve resources to standardize, streamline and facilitate more efficient staffing assignments, eliminate paper, improve tracking of reportable metrics, and accelerate completion of daily technical and administrative tasks.

The presentation will discuss future innovations in IIS self-service solutions as well as three case studies in using an online presence to increase communications while reducing call volume, reducing manual administrative tasks, and eliminating paper-driven processes:

- Colorado's improvements in on-boarding timelines to increase interoperability and faster establishment of data interfaces.
- Kansas' use of self-serve kiosks to reduce the time for their VFC provider enrollment process from 6 months in 2014 to 1 month in 2015.
- Massachusetts' breakthrough to improve IIS enrollment capability and streamline transitioning to new Stage 3 Meaningful Use reporting regulations.

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Track D: Partnerships and Stakeholders

Immunize Washington — Taking Public-Private Partnerships to the Next Level With Health Plans

ABSTRACT

Objectives:

- Explain the partnership value of Health Plans to increase provider's use and data quality in the IIS; review tool kits and incentive programs developed.

- Describe how enhanced data sharing between health plans and IIS can improve immunization rates.

- Review actionable "how-to" steps on partnering with health plans.

Background: Health plans in Washington State partnered together to develop a state-wide recognition program featuring certificates signed by the Governor and Secretary of Health. The program successfully helps providers focus on key measures; improving AFIX/HEDIS rates without mixed messages regarding specific outcomes. Through information sharing sessions between health plans and DOH, best practices and collaborative efforts are implemented, including plans to enhance data sharing between IIS and Health Plans.

Activities: Immunize Washington focused public- private partnership provides incentives to healthcare providers to monitor and increase their clinic's immunization rates through use of the Washington State Immunization Information System (WAIIS). This initiative developed consistent messaging to providers regarding immunization metrics and best practice strategies, including:

- Communication tools for providers to monitor their immunization rates using WAIIS.

- Provider incentive and education plans, developed by health plans, based on Immunize Washington core measures.

- Provider recognition, for the second year, the first week of April for rates within the IIS (we anticipate 100% increase of providers recognized).

- Plans to pilot streamlined data sharing between WAIIS and health plans in 2016.

Outcomes:

- Over 45 provider organizations improved coverage rates.

- Health plans use measure to market their networks.

- Health plan/DOH representatives report less confusion regarding quality measures.

Later outcomes:

- Aggregate health plan member data available for various coverage assessments and geographic levels to inform interventions.

- Meet Health Plan HEDIS/AFIX, and Healthy People measures for all vaccines.

- Reduce cost through efficiencies gained by improving health plan and IIS data sharing.

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Afternoon Plenary

New and Existing Acquisition Mechanisms to Support IIS Strategic Initiatives

ABSTRACT

This panel-facilitated session will be a forum to describe and discuss acquisition mechanisms available to IIS awardees and the flexibility these mechanisms offer for obtaining necessary resources to operate the IIS. Panelists will describe the mechanisms available to procure services, illustrate through case studies how each mechanism works, and elaborate on the roles and responsibilities of CDC Program Operations Branch, CDC Immunization Information Systems Support Branch, awardees and vendors to ensure success in delivering resources and/or services procured. They will also describe the overall acquisition life cycle and timelines for each mechanism.

Panelists will describe both familiar and new mechanisms. For instance, many awardees are familiar with Federal Direct Assistance (DA) Other leveraged through an existing interagency agreement (IAA) with General Services Administration (GSA). Awards through GSA are available through the Immunization Program Operations Manual (IPOM) with 317 / Vaccines For Children (VFC) funds. New Blanket Purchase Agreements (BPAs) aim to address awardee requirements through a more efficient, streamlined procurement process. Panelists will clarify the goals of the BPAs and describe the benefits from economies of scale to increase cost savings when addressing requirements. They will discuss limitations of funding mechanisms (e.g., DA Other is not an option for use with Prevention and Public Health Funds (PPHF)). Although there is a CDC directive to eventually reduce the number of agency wide IAAs, BPAs and the DA Other mechanism will be available for the immediate future.

Panelists will present case studies, illustrating both existing and new mechanisms. One case study will illustrate current use of the BPA to address requirements for Assessment, Feedback, Incentives and eXchange (AFIX) CDC reporting. In addition to current opportunities, panelists will discuss future opportunities for use of the BPAs. The vision is to utilize this new acquisition mechanism for other common services required by the community at large.

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Morning Plenary | Ignite Presentations

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IIS from the Trenches to the Towers
Warren Williams, MPH, Acting Branch Chief, CDC/NCIRD/ISD/IISSB

Taylor Swift and IIS: The Similarities
Michael Flynn, MS, Technical Lead, New York State Immunization Information System

All the Ways Meaningful Use Stage 3 is Like Riding a Bike
James Daniel, MPH, Public Health Coordinator, U.S. Department of Health and Human Services, Office of the National Coordinator for Health Information Technology

Interoperability: Mission Possible
Eric Larson, Senior Technical Project Manager, Northrop Grumman/AIRA

Top Ten Reasons to Invest in Immunization Program-IIS Integration
Jane R. Zucker, MD, MSc, Assistant Commissioner, Bureau of Immunization, New York City Department of Health and Mental Hygiene

Top Ten Reasons I Love the AIRA National Meeting
Jenne McKibben, Director, ALERT IIS, Oregon Immunization Program
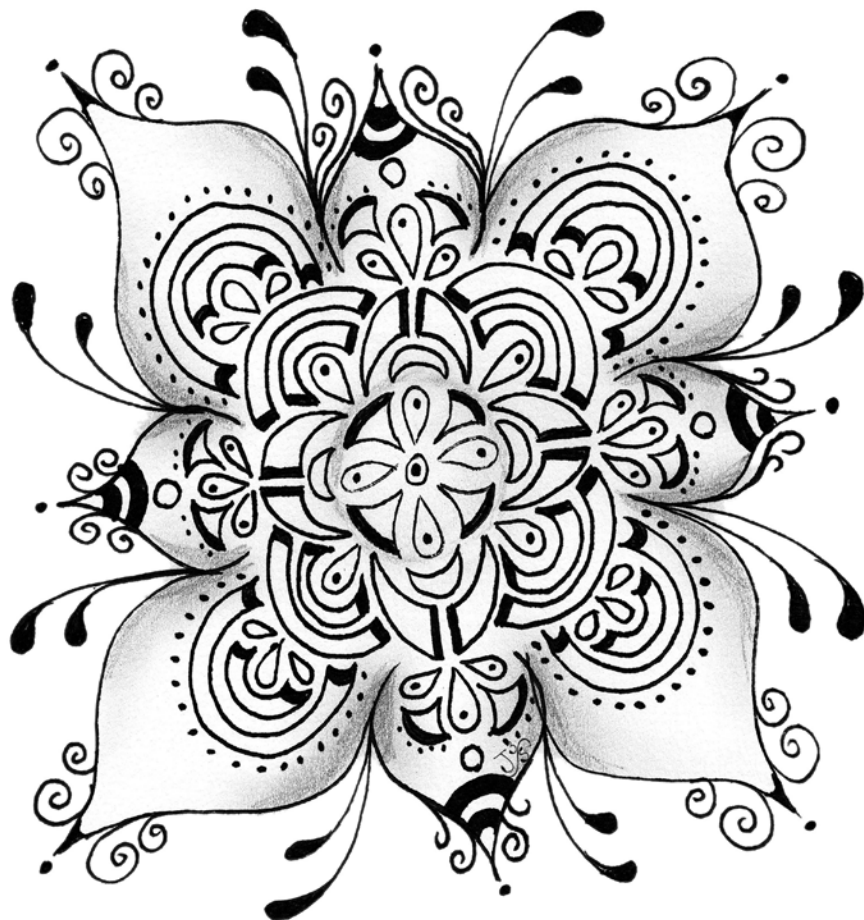
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Breakout Session 8

Track A: Data Quality Tools

➤ Using a Mobile App to Improve Pertussis Vaccination Data Quality and Reporting to an IIS

➤ Using Quality Assurance Tools to Improve HL7 Reporting to NYC's Citywide Immunization Registry

➤ Integrating Existing Tools to Monitor HL7 Message Quality

Track B: School and Childcare

➤ The Family Educational Rights and Privacy Act (FERPA): Its Impact on Data Sharing by Schools

➤ Use of IIS in MN School-based Mass Vaccination Exercises: Public Health Preparedness Implications

➤ Leveraging an IIS to Assist Child Care Centers with Their Annual Immunization Report

Track C: Inventory Management

➤ From 0 to 100 in 1 Year: Ramping up Inventory Management and Reporting in the IIS

➤ Managing the Inventory Funding Source and Patient Eligibility Equation in the IIS

➤ Let's Get Along: Automatic Decrementing of Inventory Demonstrates IIS Functionality Interdependency

Track D: Partners and Stakeholders

➤ The Vaccine Safety Datalink and Immunization Information Systems (IIS): Evaluation of IIS Data

➤ AFIX Coverage Service: Pre-Calculating Statistics to Support New and Future AFIX Guidance and Improve Report Performance

➤ A Collection of Stories About How an IIS Can Support Pharmacies and How Pharmacies Support an IIS

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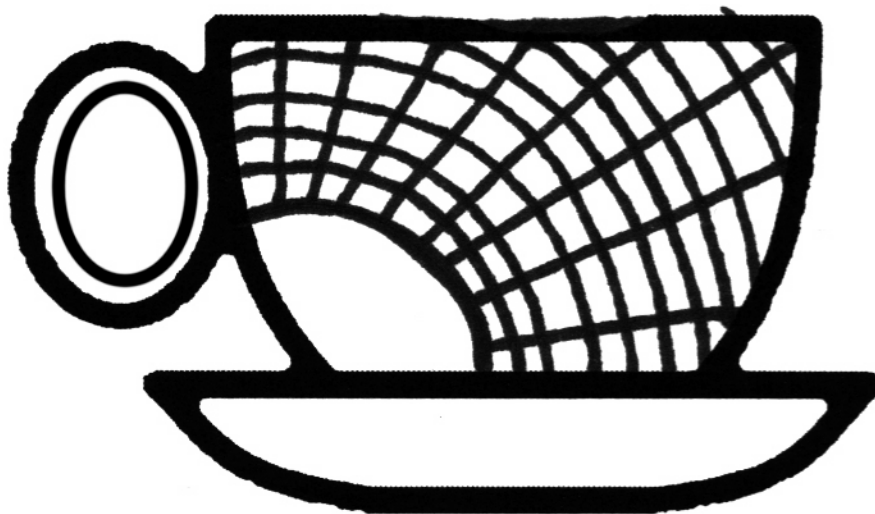
Track A: Data Quality Tools

Using a Mobile App to Improve Pertussis Vaccination Data Quality and Reporting to an IIS

ABSTRACT

Background: At epidemic levels in Denver in August 2012, Denver Public Health (DPH) mounted a multi-pronged response to elevated pertussis case reports including targeted efforts to vaccinate childcare workers (CCWs) at their worksite. DPH's Hand-held Automated Notification for Drugs and Immunizations (HANDI) mobile application was deployed as a data collection tool to capture vaccination data at the point of service. HANDI provides a paperless system that is timely, efficient, secure and accurate due to careful workflow analysis and electronic standardized data.

Methods: Beginning in November 2012, nurse vaccinators traveled to Denver childcare sites and used HANDI to collect pertussis vaccination data. Installed on iPod touch devices equipped with magnetic stripe and barcode scanners, nurses scanned driver's licenses or other state-issued IDs, entered Tdap vaccination-related eligibility and contraindication information and captured pertinent data (e.g., vaccine lot number and injection site). Encrypted data were stored on HANDI devices until outreach workers returned to DPH; data were securely transferred via Wi-Fi to the HANDI server, converted to HL7 messages (Version 2.3.1) and transported to the Colorado IIS (CIIS) using established protocols.

Results: From November 2012 through March 2013, DPH provided 405 Tdap doses to CCWs in the community (worksite or meeting sites). All CCW Tdap vaccination data were successfully converted to HL7 and electronically transferred to CIIS. Usability was rated high by end-users trained specifically for this campaign.

Conclusion: HANDI supported timely, efficient and accurate reporting of pertussis vaccination to CIIS through standardized data capture and message format. HANDI's mobility allowed CCW work location and schedules to be accommodated without the need for a paper-based data collection system and subsequent manual data entry after the vaccination events. HANDI offers a readily extensible model for mobile data collection to streamline vaccination documentation and reporting, while improving IIS data quality and completeness.

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Track A: Data Quality Tools

Using Quality Assurance Tools to Improve HL7 Reporting to NYC's Citywide Immunization Registry

ABSTRACT

Since implementing an HL7 Web Service in June of 2009, the CIR has established interfaces with over 1,400 provider and hospital facilities and received millions of VXU and VXQ/QBP messages. With this large volume of data, automated tools for assuring data quality are critically important.

CIR's main Quality Assurance (QA) tool, called the CIR Administration Tool (CAT), is used to search for VXU or VXQ/QBP messages from individual facilities to identify errors and quantify the number of successful, partially successful, and failed messages sent. The tool lists parsed field values for each message and displays errors and warnings at a field level. CAT also generates QA statistics by facility and a summary of fatal and non-fatal errors. CIR staff shares this information with EHR vendors and facility staff to help troubleshoot and resolve errors.

In addition to using CAT for QA activities, CIR generates a daily report of facilities sending failed messages. This report is distributed each morning via email to CIR staff and includes the CIR facility code and number of failed messages sent within the previous seven days. Facilities that have stopped reporting are identified, including the number of days since the facility last sent messages. This daily report flags facilities that have serious reporting issues, while CAT allows an in-depth examination of each facility's data to diagnose specific problems.

A demonstration of CAT, along with sample daily reports, will be presented to illustrate the usefulness of these tools for improving CIR data quality. Further, limitations of the tools and plans for future enhancements will be discussed.

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Track A: Data Quality Tools

Integrating Existing Tools to Monitor HL7 Message Quality

ABSTRACT

An IIS may receive and send many thousands of HL7 messages a day. Evaluating HL7 message quality using automated, real-time tools enables ongoing monitoring to effectively identify and reconcile problems. We assessed the feasibility of using public domain tools to support ongoing monitoring of HL7 message quality.

The External Validation Service (EVS) tool developed by the National Institute of Standards and Technology (NIST) was integrated into HL7 processing at the Michigan Department of Health and Human Services (MDHHS) Data Hub. A copy of each HL7 message received by the Data Hub was captured and routed through the EVS. Each message was evaluated for conformance based on a profile and related value sets built into the EVS tool. The resulting report was saved into a database for subsequent analysis. In addition, we integrated the Data Quality Assessment tool, developed by Nathan Bunker. The timeliness, completeness and accuracy of HL7 message content was evaluated using the DQA tool and results were captured in the database for summarization. The results of the EVS and the DQA may be combined for each message, permitting analysis across both HL7 correctness and data quality.

The feasibility and utility of using other reporting tools to summarize HL7 data quality evaluation results for individual sites or aggregate levels is also being explored. Reporting tools such as those developed by HLN Consulting are being considered for a comprehensive HL7 processing dashboard. Preliminary examples of reports summarizing messaging effectiveness will be discussed. The strengths and weaknesses of this approach and the viability of use by other IIS will also be considered.

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Track B: School and Childcare

The Family Educational Rights and Privacy Act (FERPA): Its Impact on Data Sharing by Schools

ABSTRACT

Schools can be valuable partners to increase immunization rates of their students. Indeed, schools are usually required to implement mandatory immunization laws by determining that students have required vaccinations or an appropriate waiver. However, schools are limited in their ability to provide immunization information to public health agencies by the Family Educational Rights and Privacy Act (FERPA). For schools with access to IIS, they may be able to obtain information, but can contribute only limited information without a parent's consent. This presentation will cover permissible and prohibited disclosures of student information by schools. It will stress potential approaches to interpreting and implementing FERPA that maximize data sharing and support partnerships between schools and public health agencies to protect students and school staff against vaccine preventable diseases.

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Track B: School and Childcare

Use of IIS in MN School-based Mass Vaccination Exercises: Public Health Preparedness Implications

ABSTRACT

Background: From 2013-2014, fifty-two Community Health Boards and local/tribal health departments participated in mass vaccination exercises throughout Minnesota. Most seventh graders required additional vaccinations before the 2014 academic year due to new Minnesota school immunization requirements. With federal 317 funds and support from the Minnesota Department of Health (MDH), jurisdictions were able to obtain and provide Meningococcal conjugate (MCV4), Tetanus, diphtheria, and acellular pertussis (Tdap), HPV, Influenza, and/or other vaccines free of cost to schoolchildren while exercising mass vaccination plans. Exercise impacts, best practices, and lessons learned were identified in After Action Reports.

Results: Over half of participating jurisdictions used the Minnesota Immunization Information Connection (MIIC) for pre-planning and data entry. MIIC usage was identified as a best practice in determining student immunization statuses before and during exercises, the number of eligible students, and the amount of vaccines to order. MIIC's inventory features were essential in tracking vaccines, including doses provided. As part of the lessons learned, many participating jurisdictions identified the need for additional MIIC training and connecting to MIIC for troubleshooting prior to the exercises. Collaboration among state and local public health immunization and emergency preparedness, as well as among healthcare providers and schools, was critical for the overall success of the exercises. Exercise planning, assessment, vaccine provision, funding, consistent communication, public awareness, and MIIC usage were all dependent on these collaborations; avenues for further partnerships have been identified.

Conclusions: The Minnesota mass vaccination exercises were effective in increasing the number of schoolchildren with up-to-date vaccinations and contributing to overall public health preparedness. The use of MIIC, as well as collaboration among public health programs and non-traditional immunizers, were major components of this success.

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Track B: School and Childcare

Leveraging an IIS to Assist Child Care Centers With Their Annual Immunization Report

ABSTRACT

Background: Minnesota statute requires licensed child care centers to submit an annual immunization status report to the Minnesota Department of Health (MDH). To complete this report, child care centers often do a thorough review of attendee immunization histories to determine compliance with complex, state-specific immunization requirements. As a result, child care centers spend countless hours determining compliance and completing a paper-based form. MDH implemented a pilot program that helped child care centers in high risk ZIP codes (low immunization rates, high poverty rates) use the Minnesota Immunization Information Connection (MIIC), Minnesota's Immunization Information System (IIS), to complete the report. The program allowed child care centers to create rosters in MIIC, which staff at MDH could use to generate their reports in SAS.

Implementation: In 2013, MDH expanded the program statewide. In the first two years of the program, the total number of participating centers increased from 57 to 77 centers, with a report submission rate of over 90%.

Program benefits include: centers can request use of MIIC information for the report, thereby reducing staff time, frustration, and errors, can access attendees' immunization information entered directly by healthcare providers, and can send MDH missing immunization information to make MIIC immunization records more complete.

Program challenges include: high center training needs due to infrequent IIS use and high staff turnover, underdeveloped MDH communication channels to center users, and policy concerns regarding what information centers can share with MIIC.

Conclusions: The program continues to grow each year. Feedback from child care centers regarding the program is positive. Immediate future plans include updating and creating new resources and trainings for program participants. Future IIS enhancements include building the child care report into MIIC to allow centers to generate and verify the report independently within the user interface.

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Track C: Inventory Management

From 0 to 100 in 1 Year: Ramping up Inventory Management and Reporting in the IIS

ABSTRACT

Background: Washington requires all providers to report vaccine accountability each month. The state must submit provider inventory electronically to the VTrckS system with each vaccine order. Our reporting process was done on paper. We have a well-established Immunization Information System (IIS). We used an interim strategy where providers manually enter inventory and usage data on an order screen in the IIS. Over the last three years we fully integrated this functionality in the IIS.

Method: We worked with our vendor to build online inventory and doses administered reporting into the IIS. We developed training videos, PowerPoint slides, and reference guides on IIS inventory and doses administered reporting. We provided one-on-one outreach to Local Health Jurisdiction (LHJ) staff, targeting those that were lagging. We developed tracking tools, including monthly progress reports and charts, and shared them with LHJs and providers. We used the progress reports to incentivize them to meet the reporting goals. We developed training materials for LHJ and state staff on monitoring usage and inventory in the IIS. We trained LHJ staff on monitoring provider accountability in the IIS and conduct quality improvement activities supporting best practices.

Results: Successful completion of over a dozen trainings offered to all providers and LHJ staff. Development of a multitude of training materials in various formats that are all available on-demand for new providers or new clinic staff entering the program. Increase in online inventory reporting in the IIS from 34% (December 2014) to 80% (October 2015) and doses administered reporting from 0% to 77% during that same period.

Conclusions: Easily accessible and useable online tools, targeted training in a variety of formats, and continued motivation and outreach led to a significant increase in online inventory and doses administered reporting in less than a year.

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Track C: Inventory Management

Managing the Inventory Funding Source and Patient Eligibility Equation in the IIS

ABSTRACT

Management of patient eligibility categories, vaccine inventory and their associated funding sources in the IIS is a complex issue that impacts how well a state is able to track dose level accountability. With an ever changing landscape of state and federal vaccine programs and HL7 codes, the IIS is required to have built in flexibility to adapt. Beginning in December 2014, Alaska, Arizona, Washington, Wyoming and Scientific Technologies Corporation began a collaboration to design a system that would allow for state IIS administrators to define and map Patient Eligibility Categories to Vaccine Funding sources and their associated HL7 codes. Historically, this has been handled through specific hard coding of mappings that did not allow for easy state adaptability.

The joint collaboration is important because all states involved have unique workflows and requirements to accommodate. Specifically, the variables addressed during implementation were: Federal Program Requirements; VTrckS Integration; HL7 Implementation; Universal; Universal Select and Depot Order Fulfillment workflows. As a result of the collaboration, two significant changes were made to the STC IIS to allow for the ability to track specific vaccine funding sources on inventory and for that inventory to correctly decrement by evaluating patient eligibility and vaccine funding source.

Each state involved will discuss their perspectives on the following:

- State specific workflow considerations
- Importance of being able to accurately track and manage patient eligibility categories.
- Importance of being able to accurately track and manage vaccine funding sources.
- Joint Development process,sSuccesses and lesson's learned.

Conclusions: The solution delivered as a result of the joint collaboration provides states greater flexibility when needing to adapt to changing patient eligibility and funding source program requirements. Additionally, the economies of scale achieved by working together reduced the cost for all states involved and improved the quality of the design.

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Track C: Inventory Management

Let's Get Along: Automatic Decrementing of Inventory Demonstrates IIS Functionality Interdependency

ABSTRACT

Immunization information systems (IIS) are confidential, population-based, computerized databases that record all immunization doses administered by participating providers to persons residing within a given geopolitical area. IIS are capable of supporting immunization program needs by leveraging the interrelationship of core system functionality for decision making. A core function is the ability to exchange immunization information with immunization healthcare providers. Data exchange between IIS and other information systems helps ensure timely immunizations, consolidation of records, and allows immunization providers to work more efficiently.

Most immunization program awardees have also implemented baseline vaccine ordering and inventory management functionality in their IIS, which is considered to be routine upload of inventory and order data to CDC's Vaccine Tracking System (VTrckS). A number of efficiencies and improvements have been realized by awardees that not only implemented baseline functionality, but also integrated functionality enhancements to increase accountability. One area where increased inventory management efficiencies have yet to be fully realized is automatic decrementing of inventory using data exchanged from provider electronic health records (EHRs). Vaccine doses administered that are entered directly into the IIS are more easily decremented than doses received from provider EHRs due to a number of challenges including data missing from the HL7 messages sent to the IIS. Automatic decrementing of inventory in the IIS is a topic that many awardees are interested in learning more about through formal channels, such as Modeling of Immunization Registry Operations Workgroup (MIROW), and informal information sharing between awardees.

Participants in this session will learn about interoperability and VTrckS External Information System (ExIS) efforts from the national perspective, with an emphasis on how successful data exchange between IIS and provider EHRs directly impact inventory management and the ability of an IIS to automatically decrement inventory. Session presentations will focus on interoperability, vaccine inventory management, and successful implementation of these complementary functional areas at the awardee level, demonstrating the interdependency and shared outcome of successful decrementing of inventory from multiple data sources. Challenges experienced and benefits of implementation will also be discussed.

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Track D: Partners and Stakeholders

The Vaccine Safety Datalink and Immunization Information Systems (IIS): Evaluation of IIS Data

ABSTRACT

Background: The Vaccine Safety Datalink (VSD) is a leading U.S population-based project for monitoring and researching vaccine safety. Using data from approximately 9.7 million individuals (2.1 million children; 7.6 million adults) the VSD evaluates vaccine safety, vaccine effectiveness, vaccine uptake, and vaccine coverage among populations across the lifespan. A recent review of adolescent vaccination data in the VSD Vaccine file for Kaiser Permanente Northwest (KPNW) -- one of six data-contributing VSD sites -- revealed that approximately 8.25% of vaccination data for the site's adolescent members were obtained exclusively from the state Immunization Information System; these vaccinations may not have been identified if relying exclusively on data available in the KPNW electronic medical record (EMR). This example highlights critical areas for consideration in the VSD in regards to incorporation of IIS data:

1) Study designs, such as case-control, case-centered approach, and even cohorts, have the potential to be biased when assessment of vaccination status is incomplete.

2) Certain vaccines (e.g. influenza) are more likely to be administered outside of the VSD integrated health care systems, and thus are not always incorporated into the health systems' EMR. As a result, VSD studies examining these vaccines have the potential for under-reporting of vaccination. Similarly, vaccines administered in outbreak settings, such as the MenB vaccines recently offered in mass campaigns at the University of Oregon, are typically administered outside of the health care system and may not be incorporated into health systems' EMR on a timely basis, if at all.

3) VSD studies that examine vaccination coverage and up-to-date status rely heavily on data completeness in order to accurately characterize patients' vaccination status.

Project Goal: Provide an updated description of the current state of data exchange between each of the six VSD data sites and their jurisdictional IIS, and quantify and describe the additional vaccination data gained by including IIS data in VSD Vaccine files.

Conclusion: Inaccurate assessment of vaccination status has real implications for vaccine safety studies, which are used to inform ACIP deliberations related to post-marketing surveillance of vaccine safety. Understanding the relative contributions of IIS data to each VSD data site can help to validate the quality of VSD data and support continuation and expansion of IIS bi-directional exchange.

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Track D: Partners and Stakeholders

AFIX Coverage Service: Pre-Calculating Statistics to Support New and Future AFIX Guidance and Improve Report Performance

ABSTRACT

A key goal of an Immunization Information System is the ability for a user to run reports that assess a large amount of data and have the results returned in a time that is acceptable within agreed upon service level agreements. It is also important that the performance of the system is dependable and consistent. If the application relies on the execution of a large query to gather patient data, count shots, determine validity, and calculate ages each time that a report is initiated, then there is the risk that the individual performance of producing an output is unpredictable and inconsistent.

This session will review a process where instead of running a large query each time that a coverage report is initiated, the system instead pre-calculates and stores all of the data required for coverage reports each time that a shot is added, edited, or removed from a patient's record. This information is saved in a way that makes it easily referenceable when a standard coverage report is run. This eliminates the need to calculate information on the fly when a standard coverage report is initiated which dramatically improves report performance and makes the code much more maintainable and testable. This method also provides the opportunity for a patient level coverage report to be available on demand at the patient level.

Participants in this session will review what data elements and values need to be stored for the Standard Childhood and Standard Adolescent Coverage Reports based on the Assessment, Feedback, Incentives, and eXchange requirements. Participants will also identify ways to implement the process either through shared code or via a cloud based service.

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Track D: Partners and Stakeholders

A Collection of Stories About How an IIS Can Support Pharmacies and How Pharmacies Support an IIS

ABSTRACT

Across the nation, pharmacies of all size are racing to comply with laws mandating that they report immunizations to their local immunization registry. However, a few early adopters are realizing that there is a lot more to it than just compliance. Consumer engagement, proactive campaigns to increase adolescent rates, travel immunizations, and adult outreach are all positively impacting the public and private partnerships between IIS and pharmacies.

By presenting a collection of pharmacy immunization facts and stories as captured over the past two years via STC's partnerships we will illustrate the power and value of connecting today's front line health care providers to leveragable data in the IIS. Some of the outcomes we will demonstrate are:

- Pharmacist as immunizer at employer on site flu clinics gives more than just flu shots, cuts sick days by 50% and improves employee/employer productivity

- 14% reduction in missed opportunities using pharmacy immunization intelligence improves overall state immunization rates

- Enhancing travel vaccine programs at the pharmacy improves IIS depth of data

- Bi-directional success at the point of care identifies that 80% of adults presenting for a flu shot have a record in the IIS and are due for 3 other immunizations

STC will use dashboard mapping software to drill down into the above referenced metrics and more to compare pharmacy data and results versus state and national figures and recommendations.

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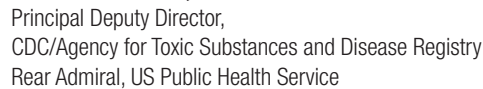lara_popovich@stchome.com

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Closing Plenary

MODERATOR:
Rebecca Coyle, MSEd, Executive Director, AIRA

Keynote Speaker:

Dr. Anne Schuchat, MD
Principal Deputy Director,
CDC/Agency for Toxic Substances and Disease Registry
Rear Admiral, US Public Health Service

AIRA Closing Remarks
Rebecca Coyle, MSEd, Executive Director, AIRA
Mary Woinarowicz, MA, AIRA Board President, NDIIS Manager, North Dakota Department of Health

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What is your overall grade for the 2016 IIS Meeting regarding organization, presentation and value?

A	B	C	D	F
○	○	○	○	○

	Excellent	Satisfactory	Unsatisfactory	Not Applicable
Meeting/Informational Materials & Processes				
a. Meeting Information on AIRA website	○	○	○	○
b. Call for abstracts - communications/flyer	○	○	○	○
c. Online abstract submission	○	○	○	○
d. Meeting Program	○	○	○	○
Registration				
a. Online registration	○	○	○	○
b. On-site procedures	○	○	○	○
Agenda				
a. Plenary/Breakout/Roundtable balance	○	○	○	○
b. Time allotted for plenary presentations	○	○	○	○
c. Time allotted for breakout presentations	○	○	○	○
d. Time allotted for roundtable session	○	○	○	○
e. Time allotted for breaks and networking	○	○	○	○
Quality of Presenters				
a. Plenaries/Panels	○	○	○	○
b. Breakout Sessions	○	○	○	○
Quality of Moderators				
a. Plenaries/Panels	○	○	○	○
b. Breakout Sessions	○	○	○	○
c. Roundtable Sessions	○	○	○	○
Meeting Staff				
a. Pre-meeting support	○	○	○	○
b. On-site support	○	○	○	○
Meeting Accommodations				
a. Location/City	○	○	○	○
b. Hotel	○	○	○	○
c. Food and snacks	○	○	○	○
d. Local restaurants and shopping	○	○	○	○
e. Meeting rooms	○	○	○	○
Special Events				
a. Reception	○	○	○	○
Roundtables				
a. Format of facilitated discussions	○	○	○	○
b. Relevance of topics/questions	○	○	○	○
Ignite Presentations				
a. How would you rate the format of the presentations?	○	○	○	○

	Yes	No	Maybe	Not Applicable
b. Would you be interested in doing an Ignite presentation of your own?	○	○	○	○

How relevant was this Meeting's content to the work that you do?	Very relevant	Relevant	Somewhat irrelevant	I would like my time back please
	○	○	○	○

How likely are you to utilize this Meeting's content in your work or to share it with colleagues who may use it?	Very likely	Likely	Somewhat unlikely	Not at all likely
	○	○	○	○

How fresh was the content that you received in this Meeting?	Very fresh	Fresh	Somewhat stale	Clean the fridge!
	○	○	○	○

Which breakout session was a standout? Why?

Did you find any session(s) problematic? Which one(s) and why?

Was there any aspect of this meeting you would like to learn more about?

What topics would you like to see included in sessions at the next National Meeting?

Is there anything you would like to see less of at the next National Meeting?

Is there a location you would like to suggest for a future National Meeting?

Additional comments:

If you are looking for ways to get involved in the AIRA community, please tell us a little about yourself and how you would like to become involved:

First & Last Name: _____

Job Title: _____

Organization: _____

City: _____

State: _____

Phone: _____

Email: _____

Sign me up!

☐ I would like to receive email updates from AIRA.

☐ I would like to volunteer for the Planning Committee for the next AIRA National Meeting.

☐ I am interested in joining an AIRA steering committee.

If so, please check the committee(s) that interest you:

☐ Education Steering Committee

☐ Standards & Interoperability Steering Committee

☐ Assessment Steering Committee

If you would like additional information about any of these committees, please contact us at **info@immregistries.org**.

Thank you!

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Sudoku Answers

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4	6	7	3	2	1	8	5	9
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