



AIRA
AMERICAN IMMUNIZATION
REGISTRY ASSOCIATION

Discovery Session: Data Quality Assurance Guide & New IIS Best Practices Community of Practice

AIRA Discovery Session
September 6, 2022
3 PM EST



Today's Speakers

- Amanda (Mandy) Harris, NV
- Miriam Muscoplat, MN
- Rebecca Coyle, AIRA



MIROW Data Quality Assurance in Immunization Information Systems

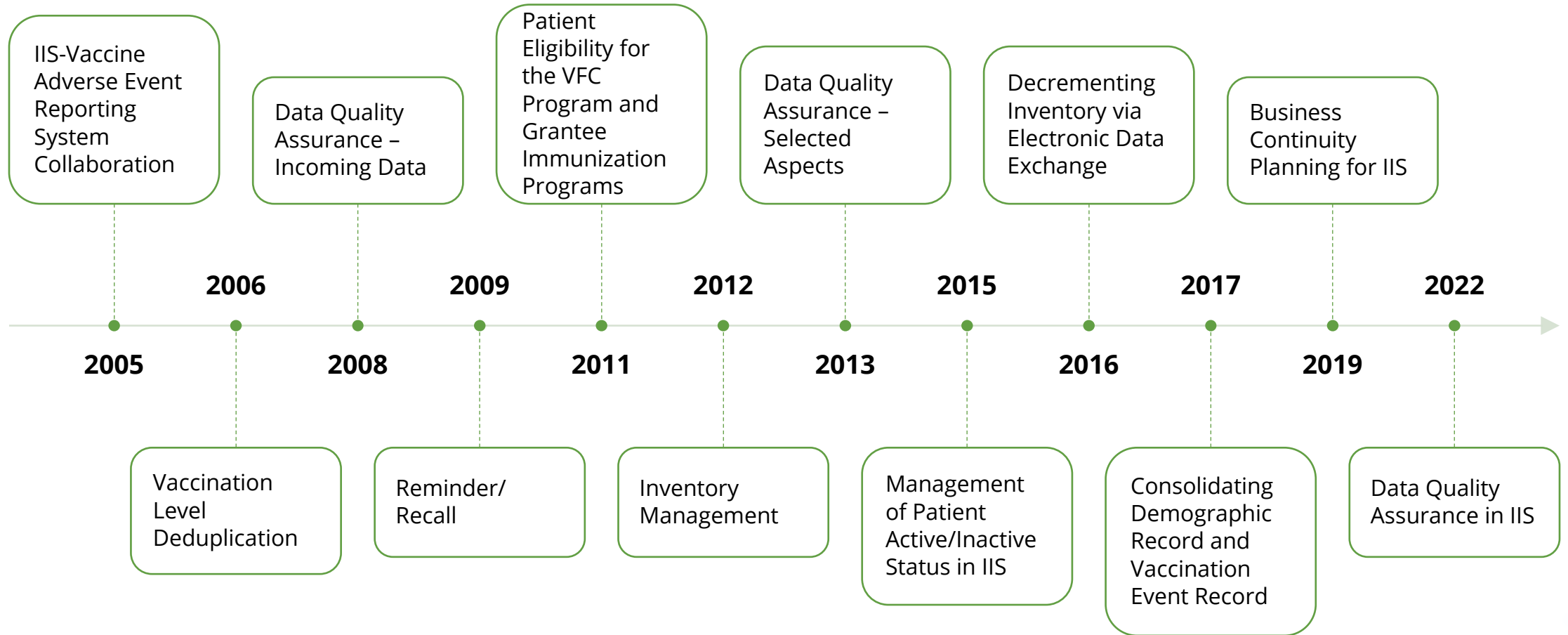
Amanda (Mandy) Harris, NV

Modeling of Immunization Registry Operations Workgroup (MIROW)

- An American Immunization Registry Association (AIRA) steering committee
- Purpose: Develop a best practice operational improvement guidebook and to promote the implementation of best practices in the IIS community



Topics



What is a Best Practice?

- “A superior method or innovative approach that consistently exceeds the standard level of performance as determined by expert review, evidence of significant improvement vs. the standard approach, consistently superior results, or agreement of multiple sources.”
 - Yasnoff WA, Overhage JM, Humphreys BL, LaVenture M. A national agenda for public health informatics: summarized recommendations from the 2001 AMIA Spring Congress. J Am Med Inform Assoc 2001; 8(6):535–45



Simply Speaking...

a best practice for IIS is
the agreed-upon "most
superior way" to
perform a particular
routine operation(s)



Why are Best Practices Valuable?

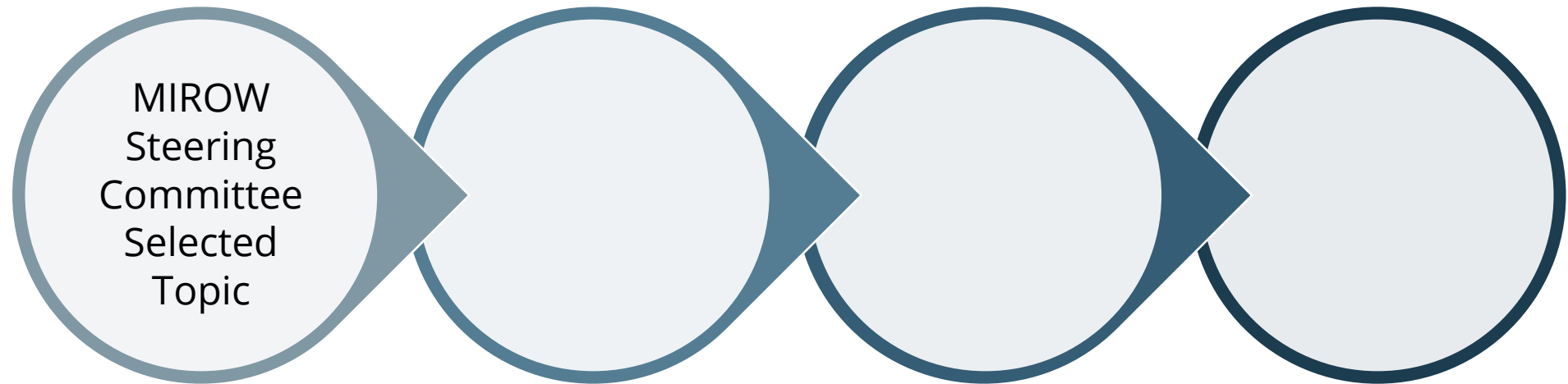


Provide a basis for aligning IIS practices along recommended guidelines to:

- Promote uniformity of IIS operations and processes
- Improve the quality, consistency, and comparability of public health data



Process for Creating the Guide



MIROW Steering Committee

- Baskar Krishnamoorthy, Florida
- David McCormick, Indiana
- Miriam Muscoplat, Minnesota
- Amanda (Mandy) Harris, Nevada
- Megan Meldrum, New York
- Amy Metroka, New York City*
- Katie Reed, DXC
- Brandy Altstadter, Scientific Technologies Corporation*
- David Lyalin, CDC

*No longer participating in MIROW





MIROW Lot Number Validation Best Practices

Validating Lot Numbers for Vaccine Doses

Recommendations of the
American Immunization Registry Association (AIRA)
Modeling of Immunization Registry Operations Work Group (MIROW)

Published on: May 8, 2014
Revision 1.1, June 23, 2015

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Validation Principles (Strategies)	3
Process model	5
Validation rules	6
Illustrative examples for typical validation scenarios	11
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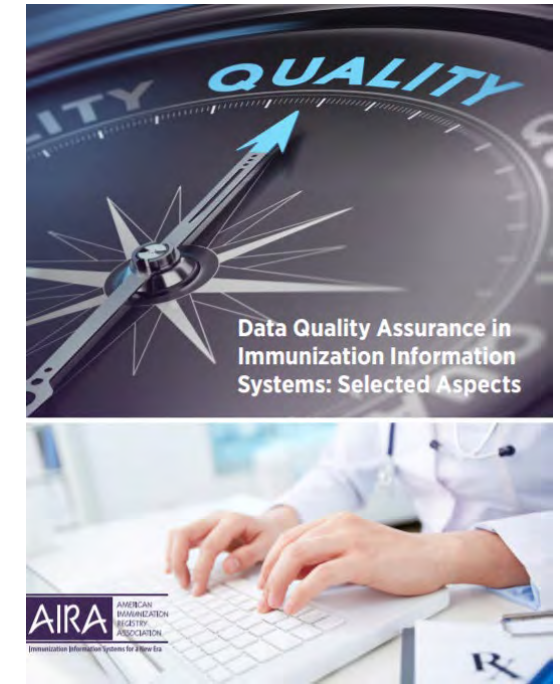
Introduction
The primary purpose of the Lot Numbers Validation Project is to improve the quality of a key Immunization Information System (IIS) data item – lot number for a dose of vaccine – by taking advantage of analysis, modeling, and group development techniques.

This report represents a set of best practice recommendations (micro-guide) in comparison with other, full-blown MIROW guides available at <http://www.imz.org/sites/default/files/2015-06-23-2015-micro-guide.pdf> for validating lot numbers for administered vaccine doses. These recommendations are expected to be shared among all IIS and other stakeholders as a vehicle to improve data quality, promote continuing dialogue and communication within the IIS community and with IIS partners, and facilitate standard-setting efforts. Recommendations are technology-neutral and can be implemented on a variety of technological platforms. The topic of validating (cleaning-up) lot numbers is within a framework for a general data quality assurance theme and will be associated with existing MIROW data quality assurance (DQA) guides [1, 2].

Expected benefits include:

- Higher efficiency and uniformity of data validation process for lot numbers.
- Improved accuracy and comparability of data by encouraging common processes and standards.
- Reduced cost because solutions can be shared among states and reporting sources.
- Reduced software development cost for IIS (a large portion of the cost for a successful software development project is in analysis and design).
- Improved data exchange between IIS and its partners.

AIRA-MIROW Lot Numbers Validation best practices micro-guide 06-23-2015 Page 1 of 15



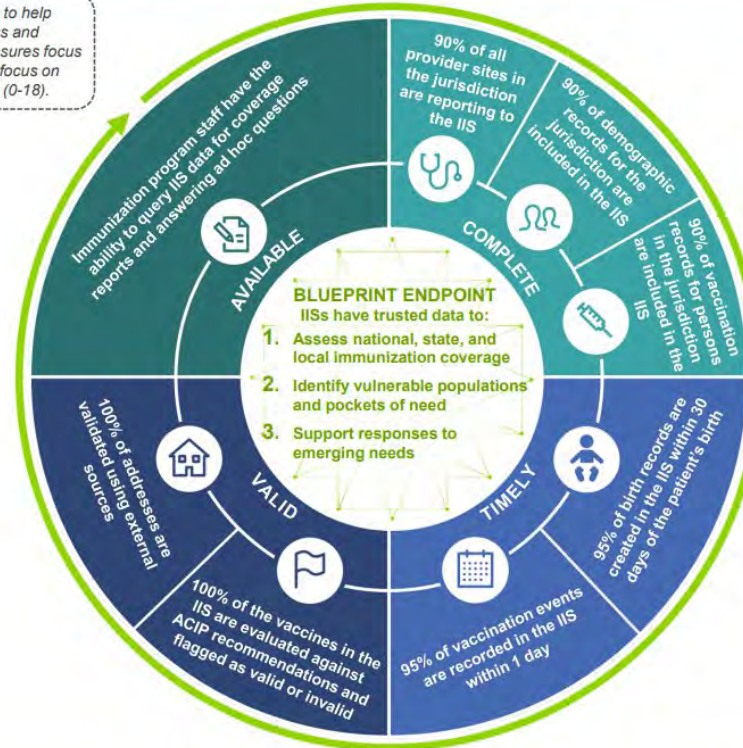
Update Existing MIROW Data Quality Guides



CDC Data Quality Blueprint

Immunization Information Systems (IIS) Data Quality Blueprint

The IIS Data Quality Blueprint is a guide to help immunization program awarddees address and advance data quality within IISs. Its measures focus on improving all IIS data, with a primary focus on data related to children and adolescents (0-18).



02072020

The blueprint focuses on driving improvement on four data quality characteristics. There are other enabling characteristics (i.e., **ACCURATE**, **CONSISTENT**, and **UNIQUE**) and functional processes (e.g., interoperability) that are inherent to high quality IIS data and complement the blueprint data quality characteristics.

1

Comprehensive Road Map to IIS Data Quality Assurance

DATA VALIDATION GUIDE

■ For the IIS Onboarding Process



immregistries.org



IIS DATA QUALITY PRACTICES

■ Monitoring and Evaluating Data Submissions



immregistries.org



ONBOARDING
CONSENSUS-BASED
RECOMMENDATIONS

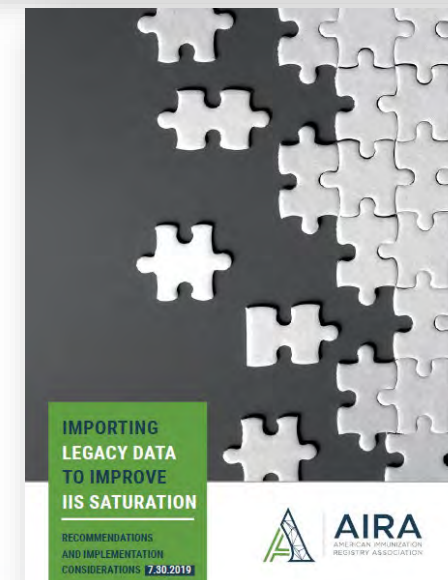
NOVEMBER 2018



IIS
DATA QUALITY
PRACTICES

TO MONITOR AND
EVALUATE DATA
AT REST

5.11.2018

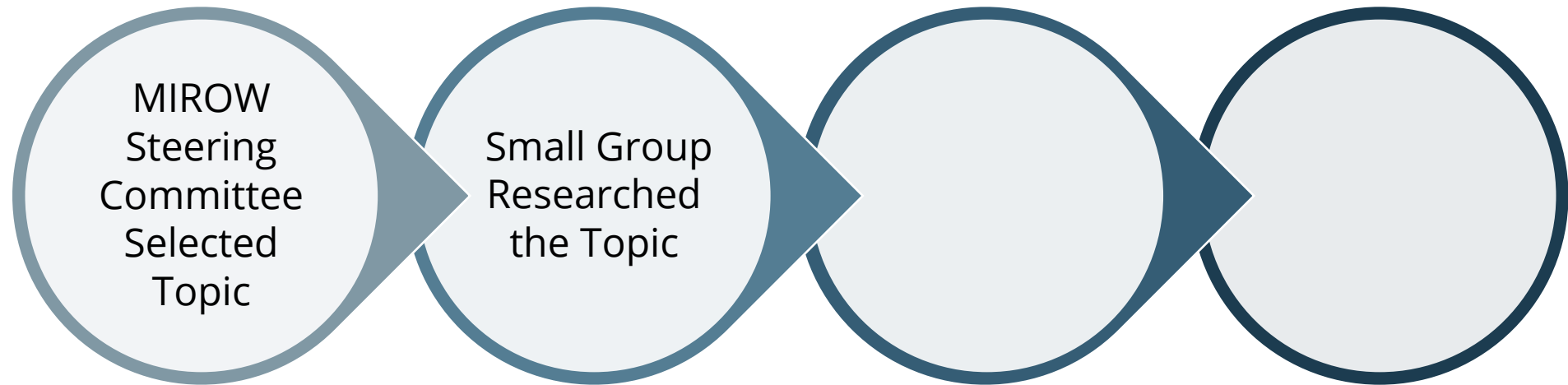


IMPORTING
LEGACY DATA
TO IMPROVE
IIS SATURATION

RECOMMENDATIONS
AND IMPLEMENTATION
CONSIDERATIONS 7.30.2019



Process for Creating the Guide

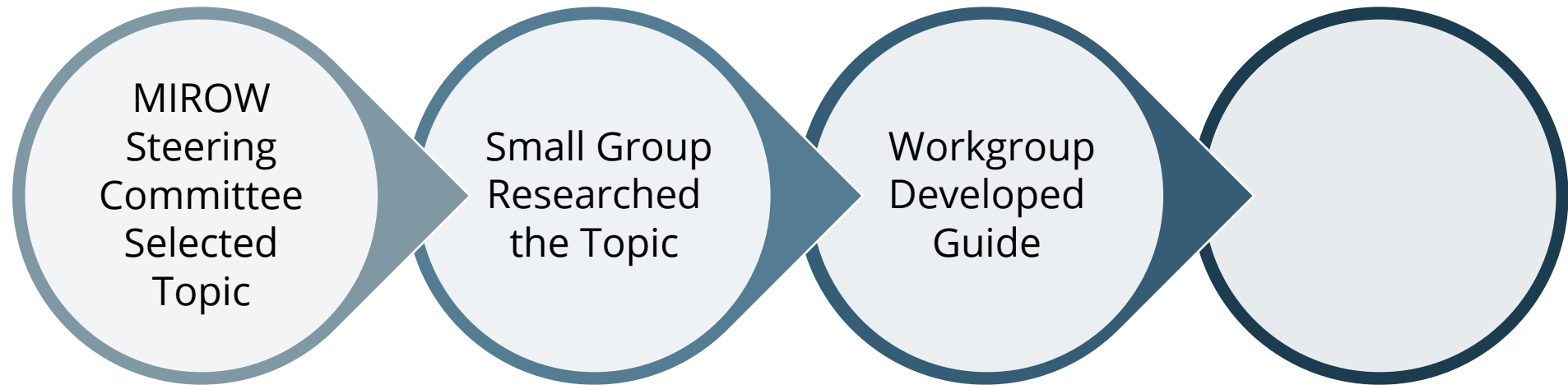


Small Group Members

- Beth Parilla, AIRA Senior Program Manager
- Cindy Scullion, Business Rules Solutions
- David Lyalin, CDC
- Elizabeth Langford, AIRA Consultant
- Jessica Rao, AIRA Consultant
- Nichole Lambrecht, AIRA Consultant



Process for Creating the Guide

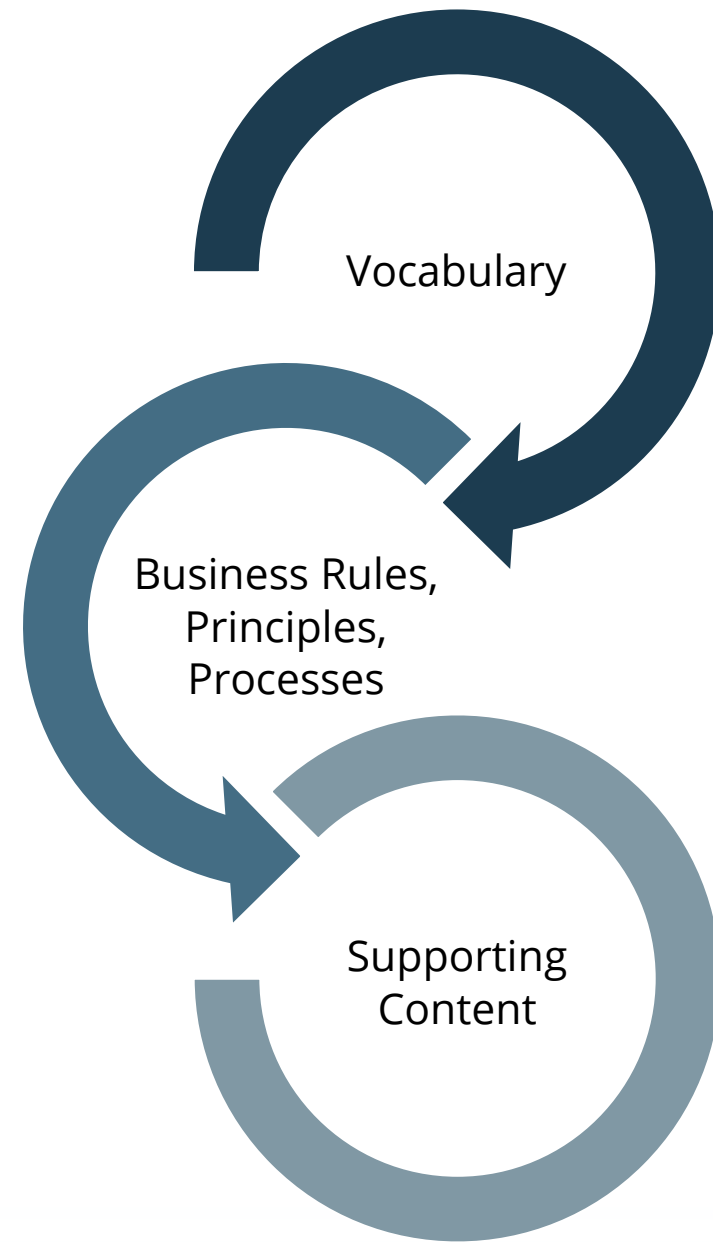


Data Quality Assurance Workgroup

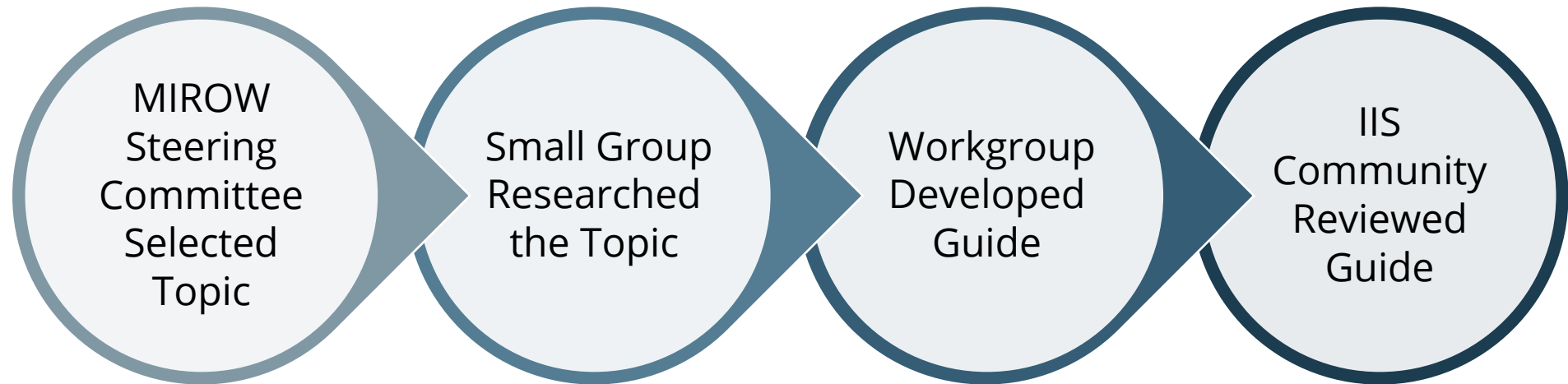
- Iris Cheever, California
- Vanessa Willis, Colorado
- Bolaji Gbadegesin, Indiana
- Eduardo Ballesteros, Kentucky
- Laura Barrett, Kentucky
- Amanda (Mandy) Harris, Nevada (MIROW Chair)
- Iris Cheng, New York City
- Erin Corrigan, Oregon
- Walter Scull, South Carolina
- Jacqueline Logan, Tennessee
- Melisse Chassé, Tennessee
- Janet Fath, CDC
- LaTreace Harris, CDC
- Kevin Snow, Envision
- Dave Rider, Gainwell Technologies
- Linda Pursley, STChealth



Developing the Pieces of the Guide

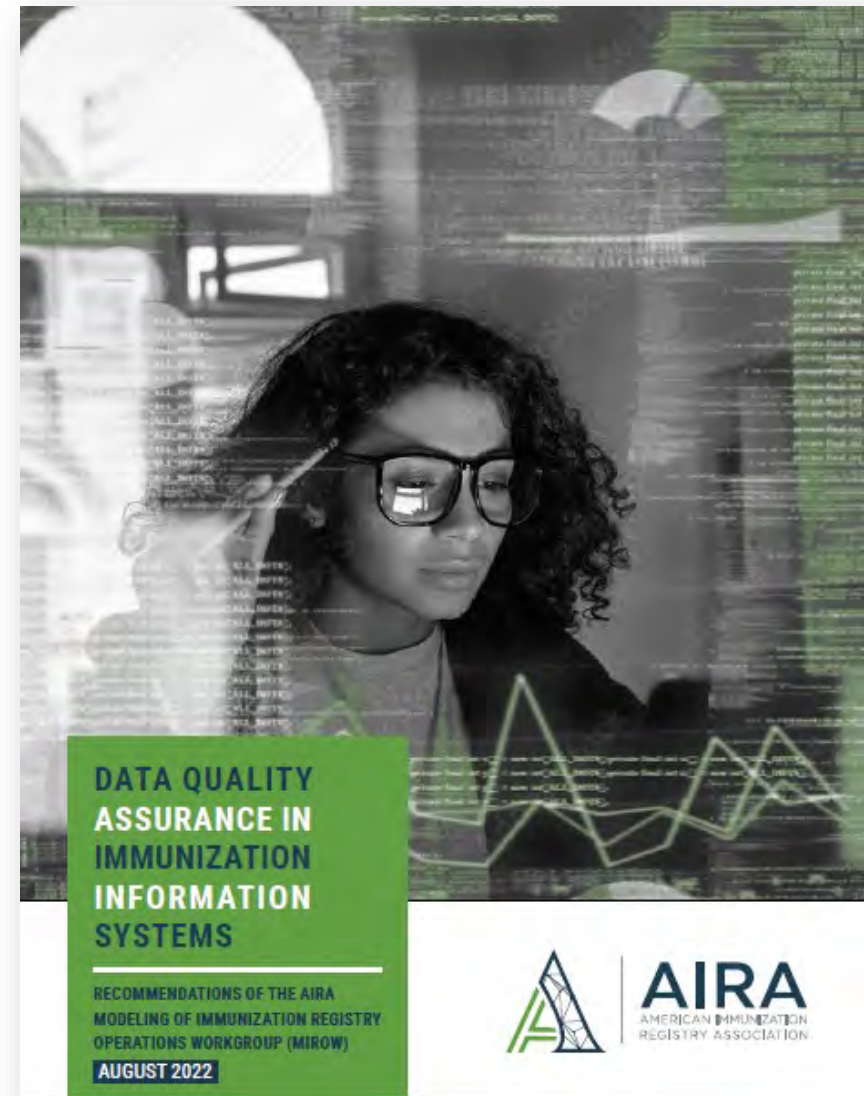


Process for Creating the Guide



Data Quality Assurance for Immunization Information Systems

- Guide and mini-guide
- AIRA Resource Repository
 - <http://repository.immregistries.org/>





Target Audience

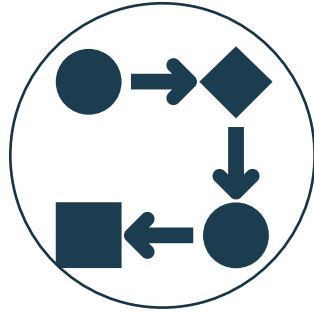
- Programmatic, technical, and operational personnel involved in assuring data quality in IIS
- The following IIS and immunization program staff:
 - Onboarding staff
 - Technical staff
 - Epidemiologists
 - Data analyst staff who troubleshoot data quality issues
 - Program, education, and training staff that support provider organizations with data quality and data use issues



Sections of the Guide



Fundamental
Concepts



Processes



Principles and
Business Rules



Implementation
Considerations



Why Should You Read This Guide?

- Clear best practice recommendations for improving data quality
- Helpful implementation recommendations
- Detailed examples in the appendices

IMPLEMENTATION BY DATA ELEMENT

	SUBMISSION			
	Demographic-Only	Administered Vaccination Event + Demographic	Historical Vaccination Event + Demographic	Demographic from Vital Records
Vaccinating Organization		X		
Recording Organization			X	
Submitting Organization	X	X	X	X
Patient First Name	X	X	X	X
Patient Last Name	X	X	X	X
Date of Birth	X	X	X	X
Birth Certificate Number				X
Birth Facility				X
Patient Gender				X
Vaccination Event Date		X	X	
Vaccine Type		X	X	
Administered/Historical Indicator		Administered	Historical	

LEGEND

Reject entire submission for the patient (i.e., demographic submission and all related vaccination event submissions)	
Reject the specific vaccination event submission with the missing data element	





Key Recommendations



Seven Data Quality Characteristics



AVAILABILITY



COMPLETENESS



TIMELINESS



VALIDITY



ACCURACY



CONSISTENCY



UNIQUENESS



Multiple Approaches



Jurisdictional Flexibility for Violation Actions



Data Quality Throughout the Process of Receiving & Managing Data



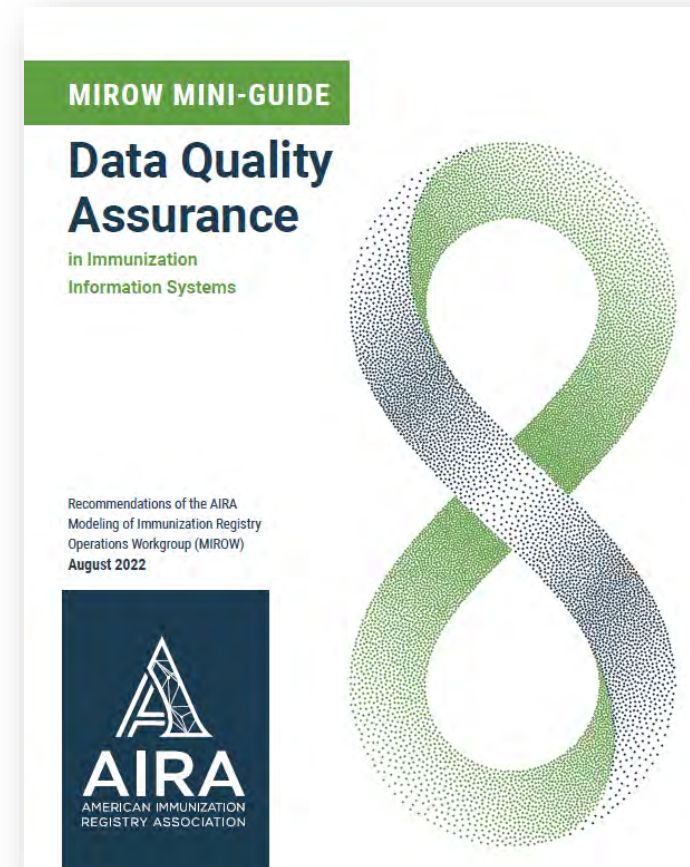
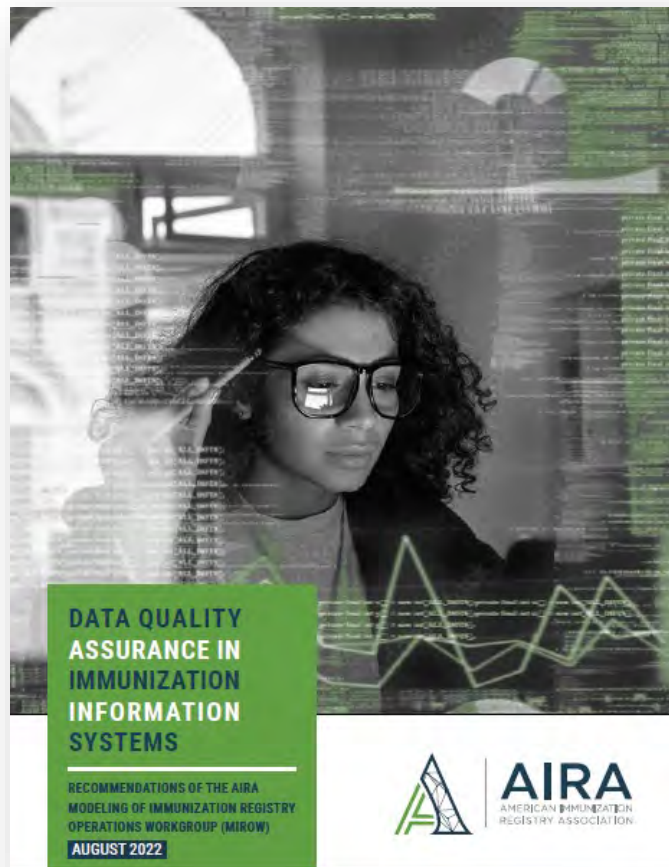
Prioritize the Quality of
Specific Data Elements



Educate Provider Organizations



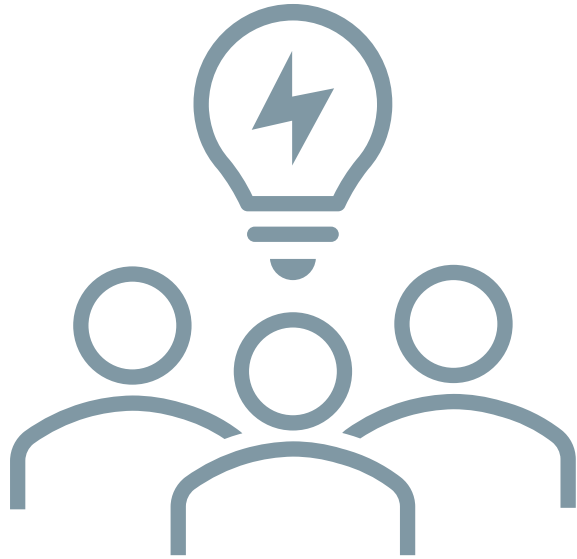
Now Available in the AIRA Repository!



Immunization Information System Best Practices Community of Practice

Miriam Muscoplat, MN

Immunization Information System (IIS) Best Practices Community of Practice (CoP)



- A new AIRA community of practice
- Support creation and curation of best practice recommendations for IIS
- Forum for collaboration to:
 - analyze existing practices
 - brainstorm new approaches
 - develop consensus-based best practices



Evolving from and replacing the MIROW Steering Committee



Why Was the CoP Developed?

- In 2020, the Board Executive Committee and AIRA management completed an analysis of AIRA's groups
- MIROW Steering Committee tasked with evaluating and refining the activities of the group



Decision of MIROW Steering Committee



Open group structure



Increased flexibility



Continued support for MIROW activities
& resources + allowing for innovation



Path Forward for MIROW within the IIS Best Practices CoP



Modeling of Immunization Registry Operations Workgroup (MIROW)

transforms to
→

IIS Best Practices Community of Practice (IIS Best Practices CoP)

Timeframe: 2005-2022

Group Type: AIRA Steering Committee

Work Products To Be Developed and Maintained:
MIROW-type guides

Timeframe: 2022-forward

Group Type: AIRA Community of Practice

Work Products To Be Developed and Maintained:
Variety, including, but not limited, to MIROW-type guides



What About MIROW Resources?

Will MIROW guides and resources still be available?
Will new MIROW guides and resources be created?

MIROW guides and resources will absolutely still be available and the CoP will continue to create new MIROW-style guides and resources in the future.






Who Can Join the IIS Best Practices CoP?

- An open group which, ideally, will include experts from IIS programs, public health organizations, CDC, and IIS and EHR implementers/vendors





When is the First Meeting?

- First meeting:
October 19 from 12-1 PM ET
- The meetings will be monthly
on the third Wednesday of the
month from 12-1 PM ET



How Can I Join?

- You can join the IIS Best Practices CoP by filling out a short form



What Will We Be Working on in the IIS Best Practices CoP?



Modeling of Immunization Registry Operations Workgroup (MIROW)

Rebecca Coyle, AIRA

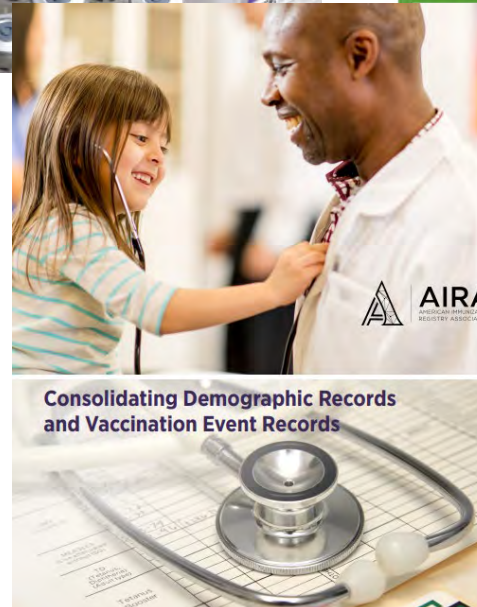
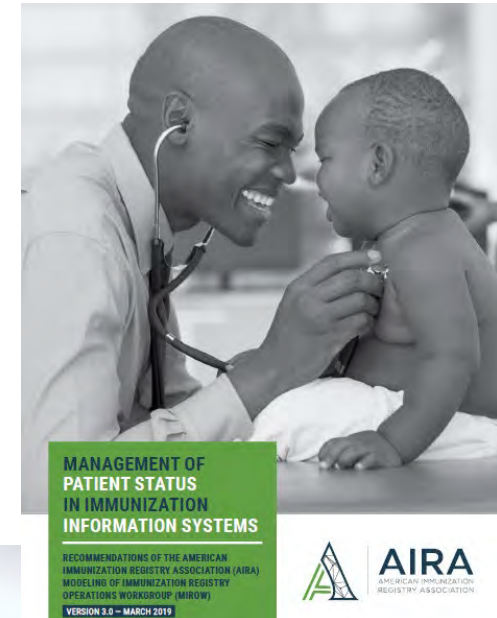


MIROW Started in 2005



Over the Next 17 Years, MIROW Created...

- 14 guides
- 2 micro-guides
- 136 principles
- 303 business rules



And It Took a Village...

Alison Chi
Amanda Harris
Amy Groom
Amy Kirsch
Amy Metroka
Andrew Luker
Angel Aponte
Angela Lindsay
Angela Ramirez
Anne Cordon
Barbara Canavan
Baskar
Krishnamoorthy
Bea Salada
Bhavani Sathya
Bianca Perri
Bill Brand
Bolaji Gbadegesin
Brandy Alstadter
Bridget Ahrens
Cherie Thomas

Chris Kim
Cindy Scullion
Craig Newman
Cynthia Findley
Cynthia Sutliff
Danielle Hall
Danielle Reader-
Jolley
Dannette
Dronenburg
Dave McCormick
Dave Rider
David Lyalin
Deb Warren
Deborah Richard
Diana Bartlett
Don Blose
Eduardo Ballesterro
Elaine Lowery
Elizabeth Langford
Elizabeth Parilla

Ellen Wild
Emily Emerson
Erich Daub
Erin Corrigan
Frank Caniglia
Gary Rinaldi
Hanan Awwad
Heather Roth
Iris Cheever
Iris Cheng
Jacqueline Logan
Jan Hicks-Thomson
Janet Balog
Janet Fath
Janet Kelly
Jennifer Bednar
Jessica Rao
Jim Aspevig
Jodi Warren
Karen White
Kathleen Blaney

Katie Reed
Kent Ware
Ketti Turcato
Kevin Davidson
Kevin Snow
Kim Salisbury-Keith
Kris Lyons
LaTonya Thomas
LaTreace Harris
Laura Barrett
Laura Korten
Laura Pabst
Laura Zimmerman
Lee Peters
Linda Colegrove
Linda Pursley
Lisa McKeown
Loren Rodgers
Loretta Santilli
Marlene Lugg
Martha Froetschner

Mary Beth Kurilo
Mary Woinarowicz
Megan Meldrum
Melissa Mickle-Hope
Melisse Chassé
Michael Flynn
Michael Hansen
Michelle Ruiz
Miriam Muscoplat
Nancy Fenlon
Nathan Bunker
Nathan Crawford
Nichole Lambrecht
Rae Barr
Ray Seggelke
Rebecca Coyle
Richard Bradley
Rob Savage
Ruth Gubernick
Sandra Diagostino
Sandra Frawley

Shane Speciale
Sharon Polek
Sherry Riddick
Stephanie Sanchez
Steve Rose
Susan Salkowitz
Tammy LeBeau
Terri Adams
Therese Hoyle
Thomas Maerz
Thomas Moss
Tory Lorenz
Tracy Little
Valentin Shoshtarikj
Vanessa Willis
Vicky Papadouka
Walter Scull
Warren Williams





Advanced Strategies





new system and vaccination event data

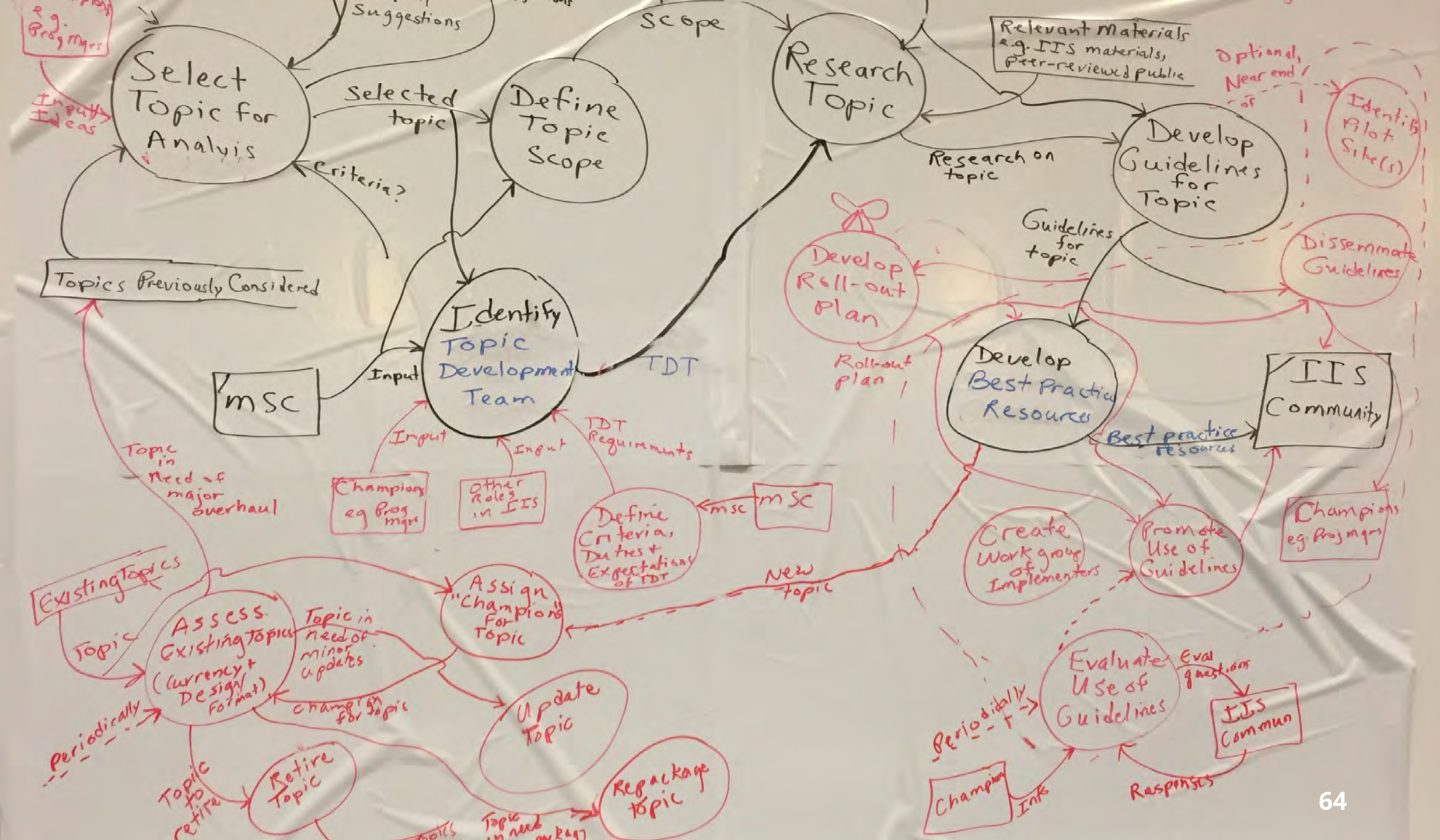
Candidate B6. This occurs before match inventory to ensure capture vaccination event even if inventory exists

1. Verify lot number to document:
a. compares the lot number reported in the vaccination event submission with all numbers in the inventory for provider.org
b. If lot number not found in provider's inventory:
1. Log issue
2. Notify Provider.org that no match found for lot number in provider's inventory B6.g.
3. By sending HL7 message to Enroll
4. other mechanism
5. End use case
6. Data level eligibility does not correspond to public/private indication in a jurisdiction that allows borrowing
1. Create borrowing transaction
2. Continue with next step

Borrowing is not allowed in all states, e.g. universal states, NYCT, some states
Borrowing is discount aged

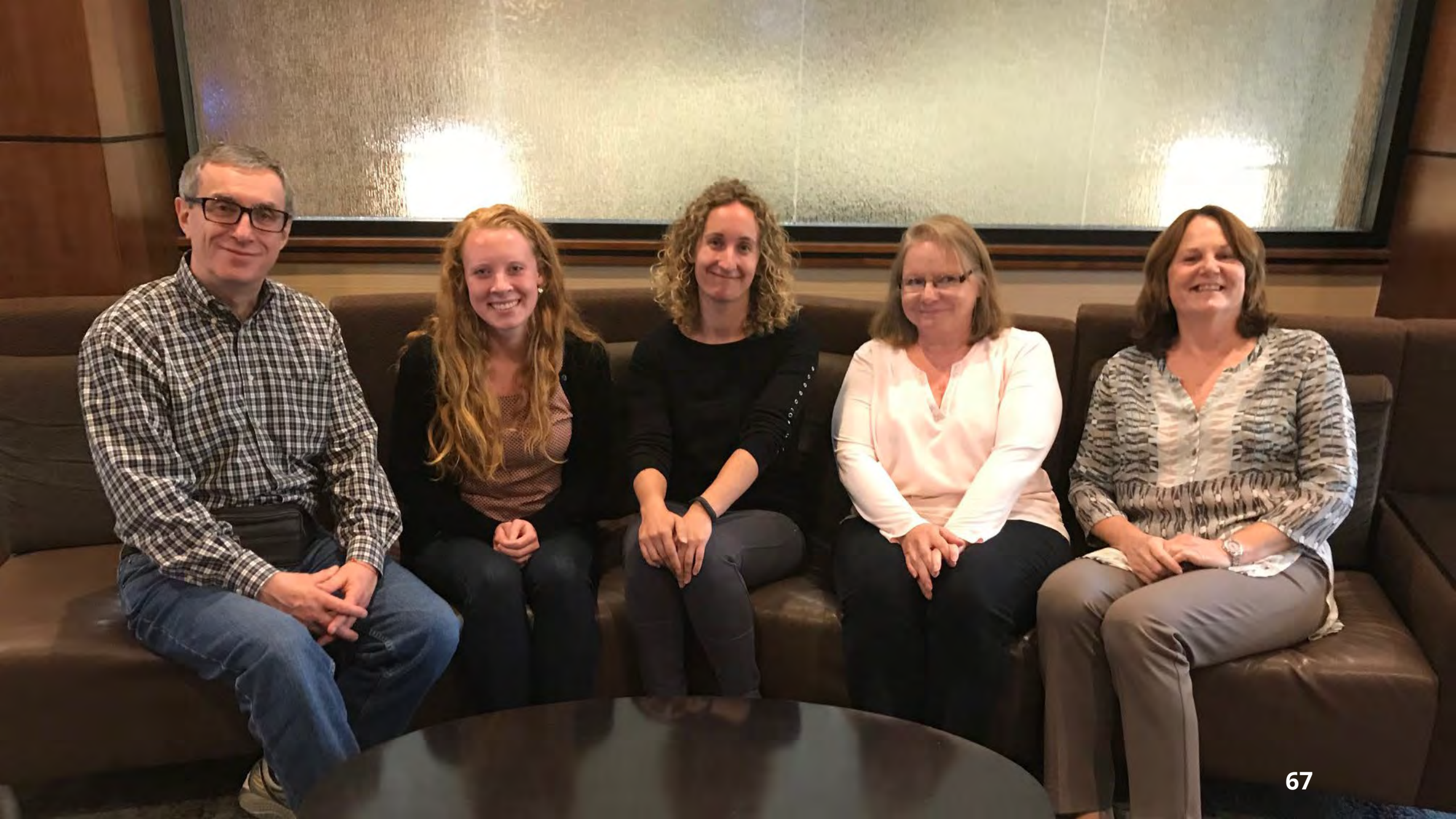
Warren Williams -WW
Lead Public Health Analyst
CDC
















A
Huge
Thank You!

- Plus, a special thank you to:
 - our amazing co-chairs, Miriam and Mandy
 - our long-standing previous co-chairs, Elaine Lowery and Warren Williams
 - the ongoing dedication and support from David Lyalin, CDC





Thank you to our presenters, and thanks to all of you for joining us!

Please complete a brief evaluation survey.

The next Discovery Session
will be on September 26, 2022