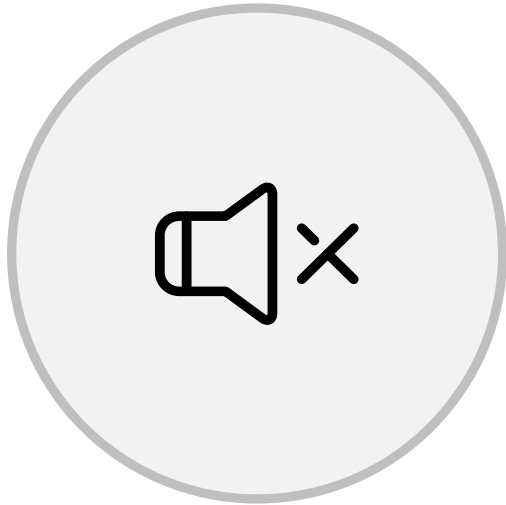# AIRA Repackaging Project

Education Steering Committee

July 18, 2019

Mandy Harris, MIROW Co-Chair
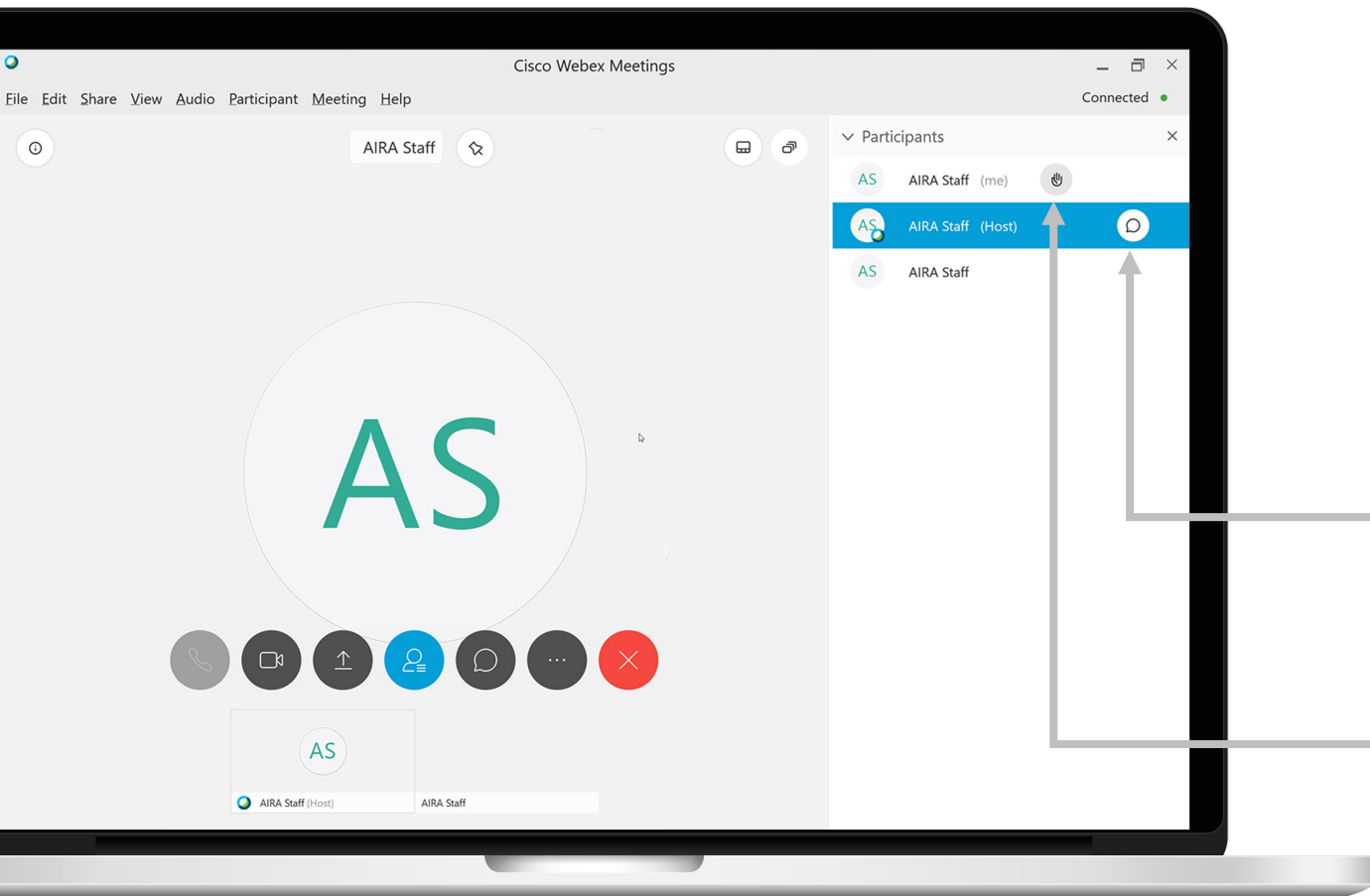
AIRA Repackaging Project

All phone lines are muted

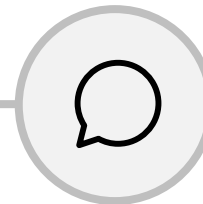**This meeting is being recorded and will be posted on the AIRA repository**
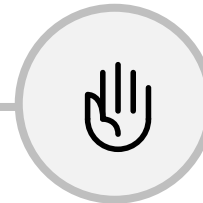
AIRA Repackaging Project

- **How do I ask a question?**
  - There will be time allotted for Q&A following each of the updates, to unmute your line press *6
  - Via WebEx:

Select the chat icon next to the host and type question into the chat box.

Select the hand icon next to your name and you will be called on.

MIROW Steering Committee Members

Co-Chairs
- Elaine Lowery (AIRA)
- Amanda Harris (NV)

IIS Representatives
- Amy Metroka (NYC)
- Baskar Krishnamoorthy(FL)
- Megan Meldrum (NY)
- Dave McCormick (IN)
- Miriam Muscoplat (MN)

Vendor Representatives
- Brandy Altstadter (STC)

- Katie Reed (DXC)

CDC Representative
- David Lyalin

AIRA Support
- Rebecca Coyle
- Beth Parilla

CDC Support
- Cindy Scullion

Famous Repackaging Projects Throughout History

Cinderella

Hans Christian Anderson
Emperor's New Clothes

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

MIROW
Looking good MIROW!

Introducing MIROW Repackaging

Why repackage the guides?

More concise, user-friendly guides

Improved readability

Increased community uptake/impact
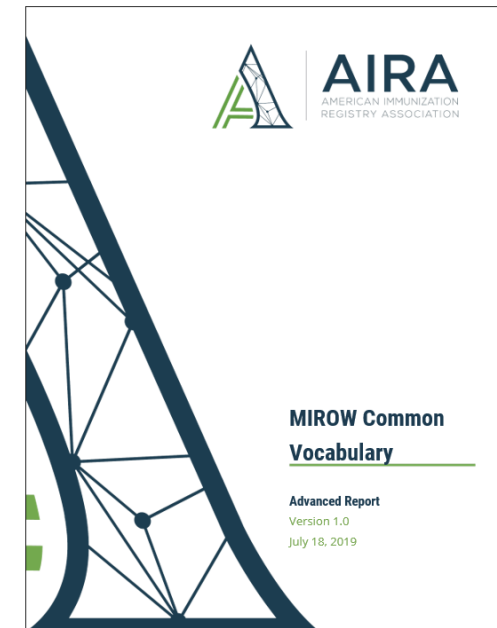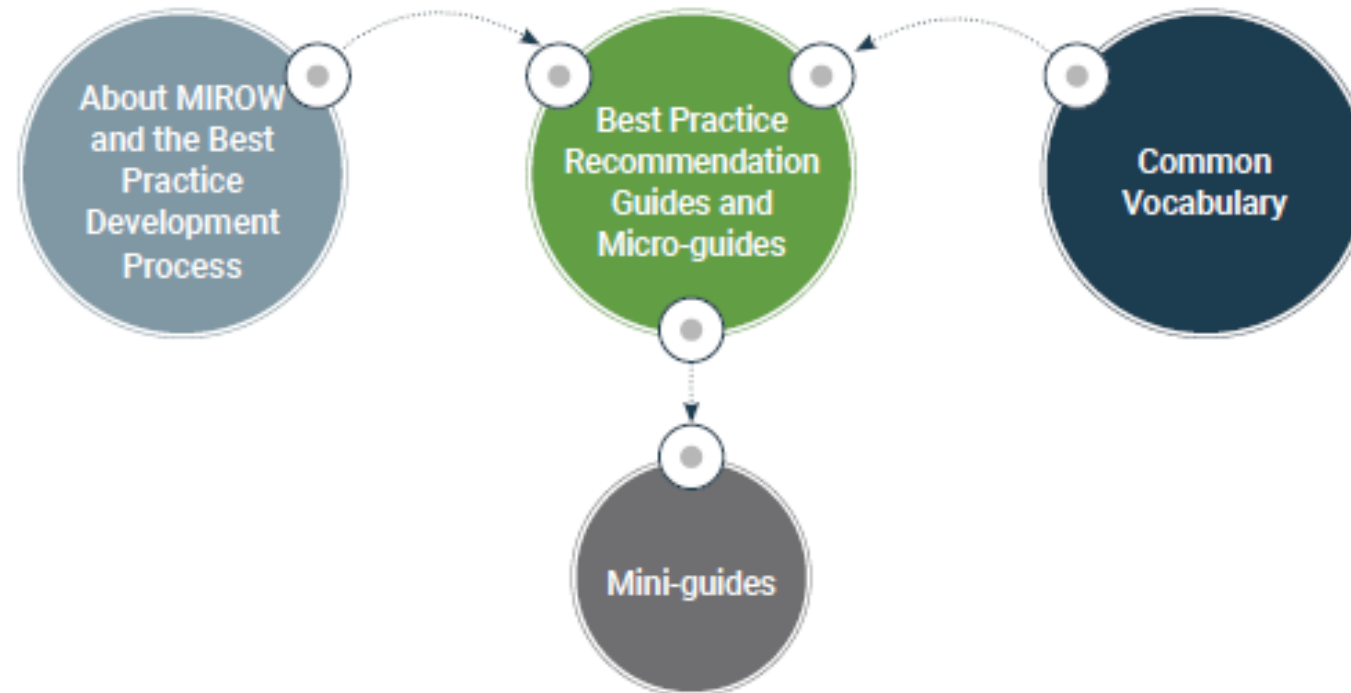
And, what does repackaging mean, *exactly*?

- Move material that is consistent in all MIROW guides and place into separate documents

- Prioritize existing guides to determine whether to retire, update or repackage

- Update with the latest AIRA logo and graphics

How do the new guides fit together?

Considerations for repackaging...

- ✓ Reformat to adhere to a common "repackage" outline

- ✓ Reorganization and cosmetic changes

- ✓ No change in meaning, retain all substantive content

- ✓ No major "updating" that would require subject matter expertise

- ✓ Different presentation okay but no new analysis

What's in "About MIROW and the Best Practice Development Process"?

About MIROW

- How and when MIROW was created
- List of best practices guides it has produced

MIROW Development Approach

- Choosing a topic
- Putting together a team
- Developing "as-is" model
- Consensus-based SME recommendations
- Business analysis techniques

What is the "Common Vocabulary"?

• Consolidated all terms found in the MIROW guides

• Core terms (appear in 3 or more guides)

• Patient Status terms

What are the benefits?

- Ability to share terminology easily

- Save time and effort

- Provides clarity and consistency

- $$ valuable resource

- Step toward harmonization
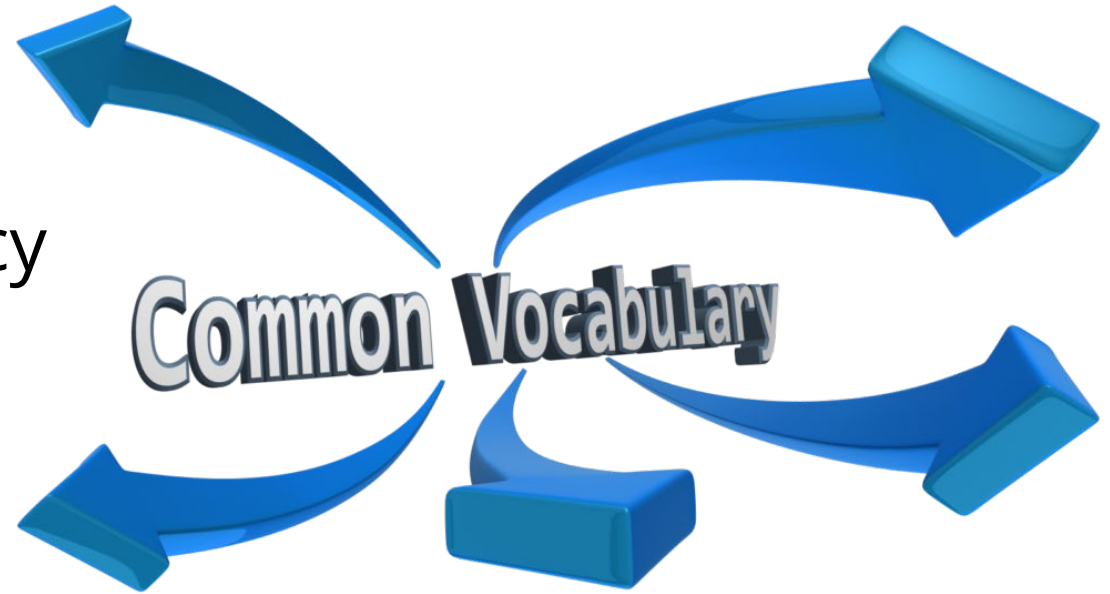
Statistics

What does it contain?

- Reports

- Domain diagrams

- Supporting discussion notes

- X-walk to CDC endorsed data elements

Advanced Report example:

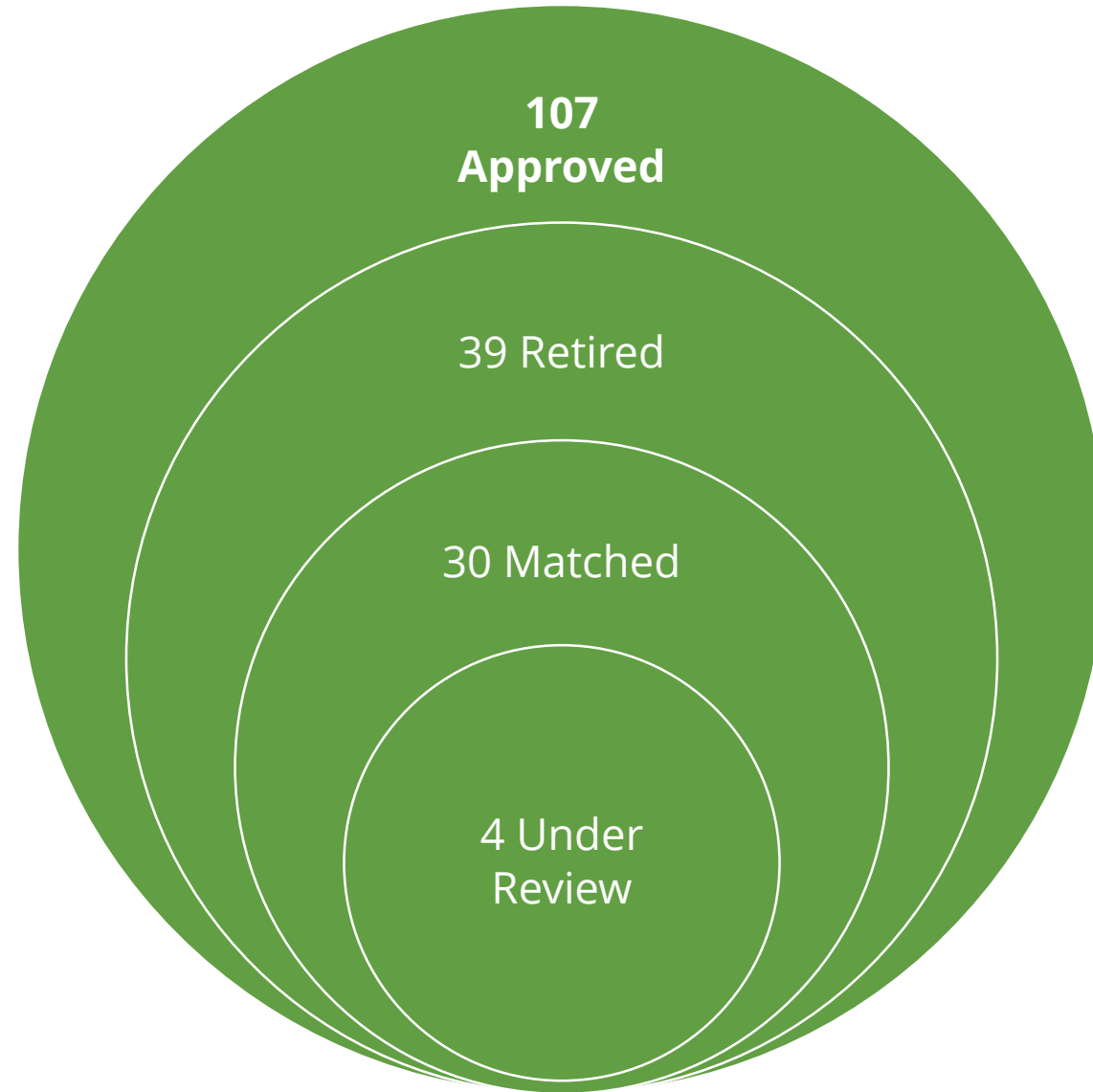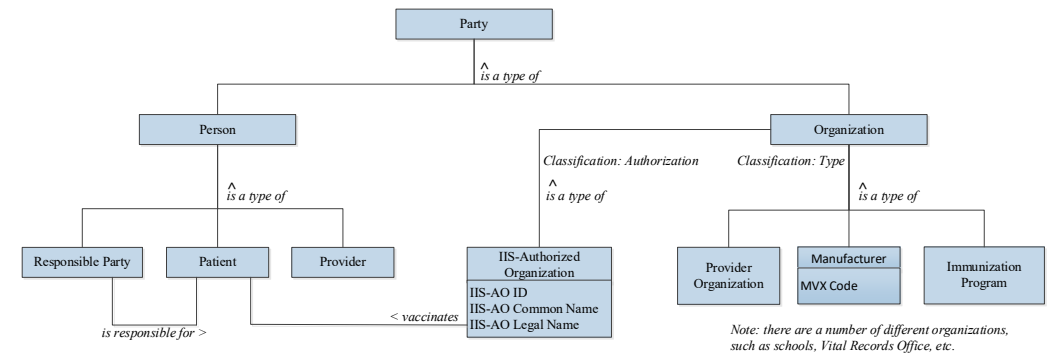| Term	Definition	Comment	Term Alias	CDC Endorsed Data Element X-Walk	MIROW Guide
Administered/ Historical Indicator	the state of the association between a vaccination event and a provider organization indicating whether the provider organization administered the vaccination event or is submitting the vaccination event on behalf of another provider organization	Values for the indicator are administered or historical. Administered value means that the provider organization recorded and/or submitted its own vaccination event (i.e., attests that it conducted the vaccination event). Historical value means that the provider organization submitted a vaccination event conducted by a different provider organization (i.e., states that it did not conduct the vaccination event).	None	Vaccination Event Record Type: Indicates whether the vaccination event is based on a historical record or was given by the administered at location.	CR-2017 DINV-2016 PAIS-2015 DQA-2013 DQA-2008
Alternate Patient ID	a data element of an alternate patient ID group that is a unique identifier for a patient	None	None	Patient ID: Unique identifier assigned by IIS-AO (Data Source) to each Patient.	CR-2017 DQA-2013

Next Steps

- Publication of first release

- Continue development of domain diagrams

- Return to common vocabulary when developing new topic or updating old chapter
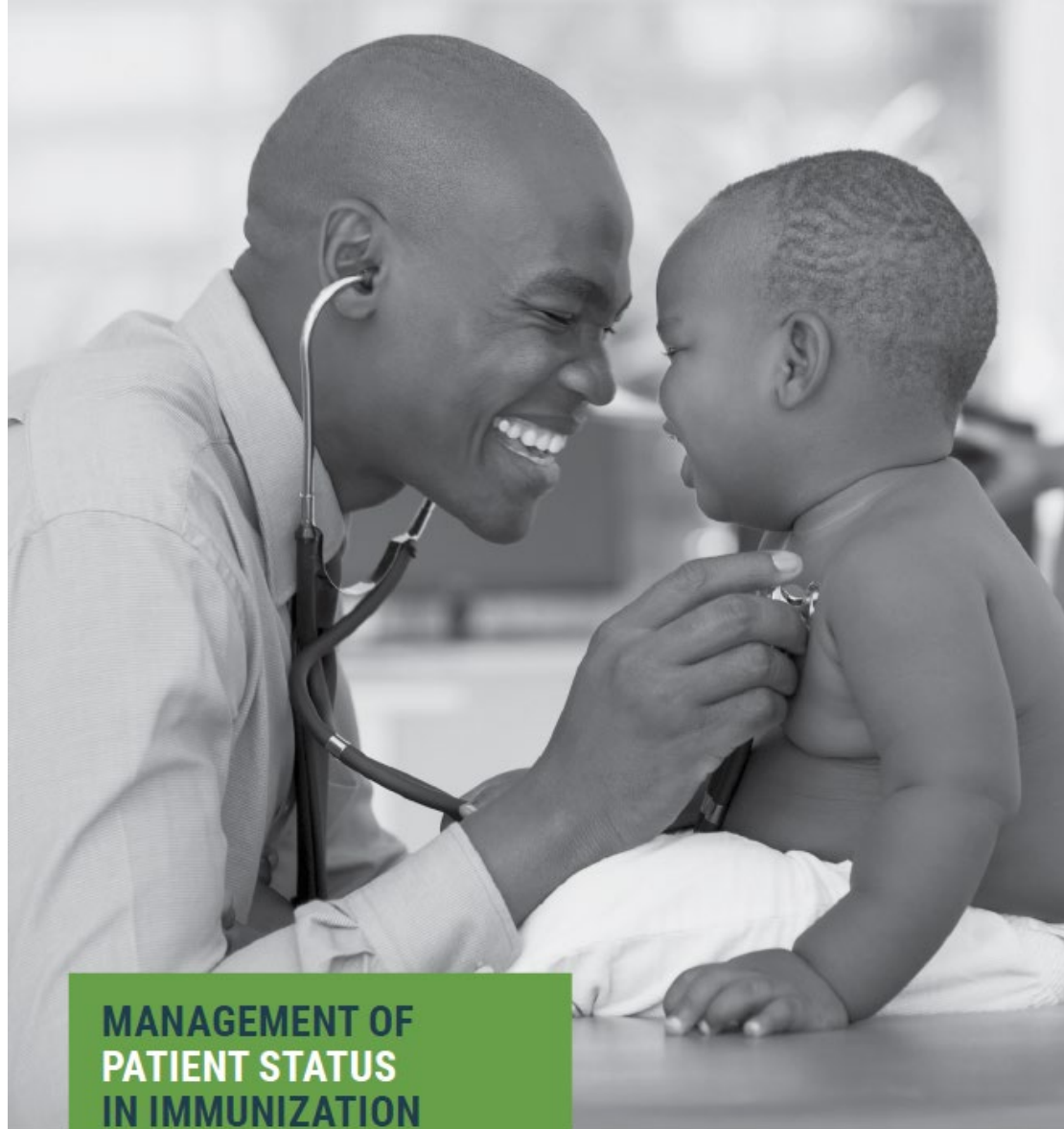
AIRA
AMERICAN IMMUNIZATION
REGISTRY ASSOCIATION

Management of Patient Status
in Immunization Information Systems

**MANAGEMENT OF
PATIENT STATUS
IN IMMUNIZATION
INFORMATION SYSTEMS**

AIRA
AMERICAN IMMUNIZATION
REGISTRY ASSOCIATION

The Pilot: Patient Active/Inactive Status

Shortened vocabulary definitions and added reference to separate document

Deleted stuff now covered in separate documents

Shorter Executive Summary

Moved a bunch of stuff to the appendices

Restructured to present basic concepts better

Renamed PAIS Management to Patient Status Business Rules

Renamed the guide

Did not change any meaning

Consolidated implementation language for HL7

The BIG Unveil

1-1 and 1-M approaches

IISs have two common approaches to implementing the concept of a provider organization having responsibility for immunizing a patient. Some IISs allow only one provider organization to have responsibility for a patient at a time (i.e., "1 to 1" approach). Other IISs allow more than one provider organization to have responsibility for a patient simultaneously (i.e., "1 to many" approach).

Throughout this document

- The following shorthand is used to refer to these two approaches:
  - 1-1:1 to 1 approach
  - 1-M: 1 to many approach

- Green **highlighting of text** is used for the **1-1 approach** and blue highlighting is used for the **1-M approach**. Therefore, it is best to print this document in color.

Following are key points regarding these two approaches:

- Both 1-1 and 1-M are valid best practice approaches for determining PAIS at the provider organization level.

- When the 1-1 approach is used, a patient may be included in reminder-recall notifications and assessment reports for only one provider organization at a point in time, but when the 1-M approach is used, a patient may be included in reminder-recall notifications and assessment reports for more than one provider organization at the same time.

  - Note that even for the 1-1 approach, a patient who changed provider organizations may be included in assessment reports for more than one provider organization over a period of time (at different points in time).

- These two approaches are more [alike] than might be apparent at first glance. In the 1-1 approach, the provider organization responsible for a patient's immunizations would be [one of the] provider organizations responsible for the patient in the 1-M approach.

- The main idea behind the 1-M approach is to better support modern population trends, when many individuals, especially adults, do not have a single primary immunization provider, and to hold more provider organizations accountable for patients' immunizations. Since several provider organizations have responsibility for the patient, there is a higher probability to get the patient back in for future immunizations. A potential drawback with such an approach is that multiple resources could be spent on some of the same efforts (i.e., reminder-recalls).

The main idea behind the 1-1 approach is to maintain one provider with clear responsibility for the patient, as well as to focus resources for reminder-recalls and assessments on the single provider organization. Routinely, the provider that administered the most recent immunization is documented as the one provider bearing responsibility for that patient. A potential challenge with this approach can be seen in a scenario where the [right] vaccines are given by a provider organization other than the most recent provider organization. In such cases, selection of a single provider organization for the assessment may not reflect the provider organization that is most likely to see the patient on an ongoing basis.

Several operational scenarios presented in Chapter 6 of this document illustrate basic differences between 1-1 and 1-M approaches. One of the indicative situations, when a patient receives immunizations from more than one provider, is described with scenarios S301 and S302.

OLD

In this guide, **icons** are used to identify when something is signifying the **1-1 approach** or the **1-M approach**. If no icon appears, then the principle, business rule, or scenario can apply to both approaches.

Figure 2 | *Key points for 1–1 and 1–M*

1-1 1–1 APPROACH	**1-M** 1–M APPROACH
- Maintains one provider organization with clear responsibility for the patient. - Focuses resources for reminder/recalls and assessments on a single provider organization. - May result in association of a patient with a provider organization that is most likely to see the patient on an ongoing basis. **Notes:** If an IIS uses the 1–1 approach, a patient is included in reminder/recall notifications and assessment reports for only one provider organization at a point in time. Routinely the provider organization that [administered] the most recent vaccination is documented as the one provider organization bearing responsibility for that patient.	- May support modern population trends better than a 1–1 approach. Many individuals, especially adults, do not have a single primary vaccination provider. - May hold more provider organizations accountable for the patient's vaccinations. [Several] provider organizations [may] have responsibility for a patient. [There] may be more opportunity to ensure that the patient is appropriately vaccinated. - May result in multiple provider organizations devoting resources to the same efforts, such as reminder/recalls. **Notes:** If an IIS uses the 1–M approach, a patient can be included in reminder/recall notifications and assessment reports for more than one provider organization at the same time.

Several operational scenarios presented in Chapter 6: Operational Scenarios of this document illustrate basic differences between the 1–1 and 1–M approaches.

NEW

9 Chapter 2 | Patient Status Fundamentals

But Wait – There's More

Chapter 4: PAIS Management

Nomenclature of statuses

According to considerations presented in Chapter 3, "PAIS Fundamentals", patient/individual statuses are defined at two levels — provider organization level and geographic jurisdiction level. Since a geographic jurisdiction can contain another geographic jurisdiction, these definitions cover a hierarchical structure of statuses at provider organization-city-county-state levels. (For a visual description of this concept, see domain diagrams in Appendix A. The domain model is a key tool to understanding the multiple relationships in assessing patient status in IIS.)

Patient statuses at the provider organization level are:

- Active
- Inactive, with the following reason codes:
  - No longer a patient
  - Lost to follow-up
  - Unspecified
- Deceased

Statuses for an individual at the geographic jurisdiction level are:

- Active
- Inactive, with the following reason codes:
  - Outside jurisdiction
- Unknown, with the following rea[son codes:]
  - No address - no vaccina[tion]
  - No activity for extended [pe]riod of t[ime]
- Deceased

Descriptions of these statuses and conditions for transitioning from one status to another are presented with business rules in Table 3 and are shown in diagrams in Fig. 2.
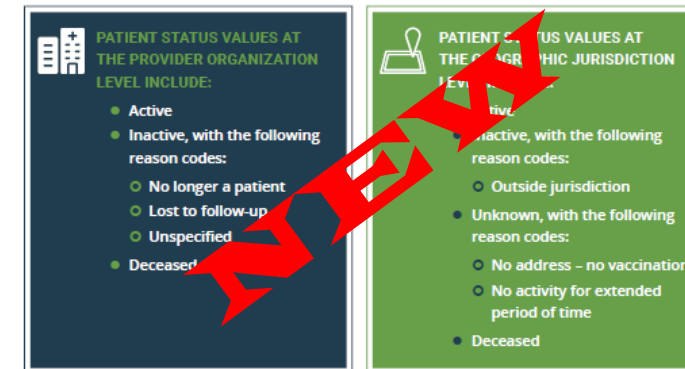
Implementation consideration: reason codes can be handled as sub-statuses of the "inactive" status (i.e., at the provider organization level, inactive-no longer a patient, inactive-lost to follow-up, inactive-unspecified).

OLD

4 PATIENT STATUS BUSINESS RULES

NOMENCLATURE OF STATUSES

Patient status is defined at two levels—at the provider organization level and at the geographic jurisdiction level. Since a geographic jurisdiction can contain another geographic jurisdiction, these definitions cover a hierarchical structure of statuses at provider organization, city, county, and state levels (see Appendix B: Vocabulary and Domain Diagrams).

Figure 3 | List of patient statuses

PATIENT STATUS VALUES AT THE PROVIDER ORGANIZATION LEVEL INCLUDE:

- Active
- Inactive, with the following reason codes:
  - No longer a patient
  - Lost to follow-up
  - Unspecified
- Deceased

PATIENT ST[AT]US VALUES AT THE G[EO]GR[AP]HIC JURISDICTION [L]EV[EL]

- [Act]ive
- Inactive, with the following reason codes:
  - Outside jurisdiction
- Unknown, with the following reason codes:
  - No address – no vaccination
  - No activity for extended period of time
- Deceased

NEW

Descriptions of these statuses and conditions for transitioning from one status to another are presented with business rules in Table 2 and are shown in Figure 7 in Appendix F: Patient Status Diagrams.

And More…

Table 8. Selected operational scenarios.

#	Scenario	Resolution	Remarks
1. Place of Residence/Moving			
S101	**S101. Patient moved out of state, but uses in-state provider organization** ■ Patient moved out of the state ■ Patient continues to use services of a provider organization within the state	**Status:** ■ Patient status at the geographic level (state) should be set to "Inactive: Outside jurisdiction" ■ Patient status at the provider organization level should be set to "Active" with that in-state provider organization **Consequences:** ■ Patient should be excluded from the geographic jurisdiction (state) reminder-recalls and assessments ■ Patient should be included in the provider organization reminder-recalls and assessments.	■ See P310 "Out of state" patients. ■ See BR413 Inactive status at the geographic jurisdiction level with the reason code "Outside jurisdiction". ■ See BR402A and BR402B. Active status at the provider organization level.
S102	**S102. Patient moved out of state and ceased to use in-state provider organizations** ■ Patient moved out of the state ■ Patient no longer receives services of a provider organization within the state	**Status:** ■ Patient status at the geographic level (state) should be set to "Inactive: Outside jurisdiction." ■ Patient status at the provider organization level should be set to "Inactive: No longer a patient" for each in-state provider organization(s) that has an "Active," "Inactive-Lost to Follow Up," or "Inactive: unspecified" status for that patient. **Consequences:** ■ Patient should be excluded from the geographic jurisdiction (state) reminder-recalls and assessments ■ Patient should be excluded from the provider organization reminder-recalls and assessments.	■ See BR413 Inactive status at the geographic jurisdiction level with the reason code "Outside jurisdiction". ■ See BR404A and BR404B Inactive status at the provider organization level with the reason code "No longer a patient."
S103	**S103: Patient address not known, patient receives services within state** ■ Patient address is not known, and ■ Patient receives services from a provider organization within the state, Provider Org A	**Status:** ■ Patient status at the geographic jurisdiction level (state) should be set to "Active." ■ Patient status at the provider organization level should be set to "Active" with Provider Org A. **Consequences:** ■ Patient should be included in the geographic jurisdiction (state) reminder-recalls and assessments ■ Patient should be included in Provider Org A provider organization reminder-recalls and assessments	■ See BR412 Active status at the geographic jurisdiction level and P303 'Avoid having people 'fall through the cracks'. ■ See BR402A and BR402B Active status at the provider organization level.

Table 7 | Operational scenarios

PLACE OF RESIDENCE

S101. Patient moved out of state but uses in-state provider organization

Description:
- Patient moved out of the state but continues to use the services of a provider organization within the state.

Status:
- Patient status at the geographic level (state) should be set to inactive: outside jurisdiction.
- Patient status at the provider organization level should be set to active with that in-state provider organization.

Consequences:
- Patient should be excluded from the geographic jurisdiction (state) reminder/recalls and assessment reports.
- Patient should be included in the provider organization reminder/recalls and assessment reports.

References:
- P310. Out-of-state patients
- BR413. Patient status at the geographic jurisdiction level: inactive: outside jurisdiction
- BR402A. Active status at the provider organization level: 1
- BR402B. Active status at the provider organization level: M

S102. Patient moved out of state and ceased to use in-state provider organizations

Description:
- Patient moved out of the state and no longer receives services of a provider organization within the state.

Status:
- Patient status at the geographic level (state) should be set to inactive: outside jurisdiction.
- Patient status at the provider organization level should be set to "inactive: no longer a patient" for each in-state provider organization that has an "active, inactive: lost to follow-up" or "inactive: unspecified" status for that patient.

Consequences:
- Patient should be excluded from the geographic jurisdiction reminder/recalls and assessment reports.
- Patient should be excluded from the provider organization reminder/recalls and assessment reports.

References:
- BR404A. Patient status at the provider organization level: inactive: no longer a patient: 1–1
- BR404B. Patient status at the provider organization level: inactive: no longer a patient: 1–M
- BR413. Patient status at the geographic jurisdiction level: inactive: outside jurisdiction

Evaluation of the pilot by the MIROW SC
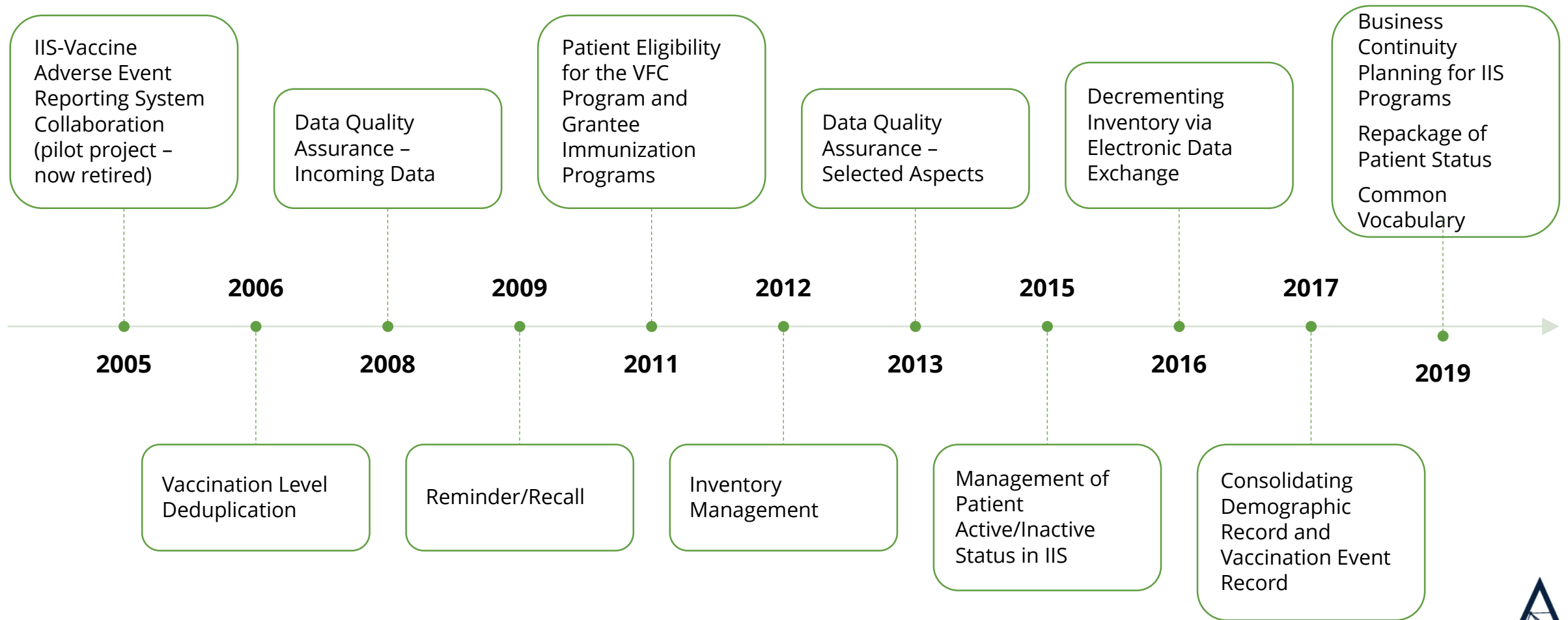
- Did we meet the repackaging goals?

  - More concise, readable, user-friendly guides

  - Improved readability

  - Increase community uptake/impact

- MIROW SC felt that the substantial work involved in repackaging is not warranted unless a guide will be updated at the same time.

All MIROW Products

MIROW Products

IIS-Vaccine Adverse Event Reporting System Collaboration (pilot project – now retired)

Data Quality Assurance – Incoming Data

Patient Eligibility for the VFC Program and Grantee Immunization Programs

Data Quality Assurance – Selected Aspects

Decrementing Inventory via Electronic Data Exchange

Business Continuity Planning for IIS Programs

Repackage of Patient Status

Common Vocabulary

2006 **2009** **2012** **2015** **2017**

2005 **2008** **2011** **2013** **2016** **2019**

Vaccination Level Deduplication

Reminder/Recall

Inventory Management

Management of Patient Active/Inactive Status in IIS

Consolidating Demographic Record and Vaccination Event Record

AIRA website: http://www.immregistries.org/mirow.html

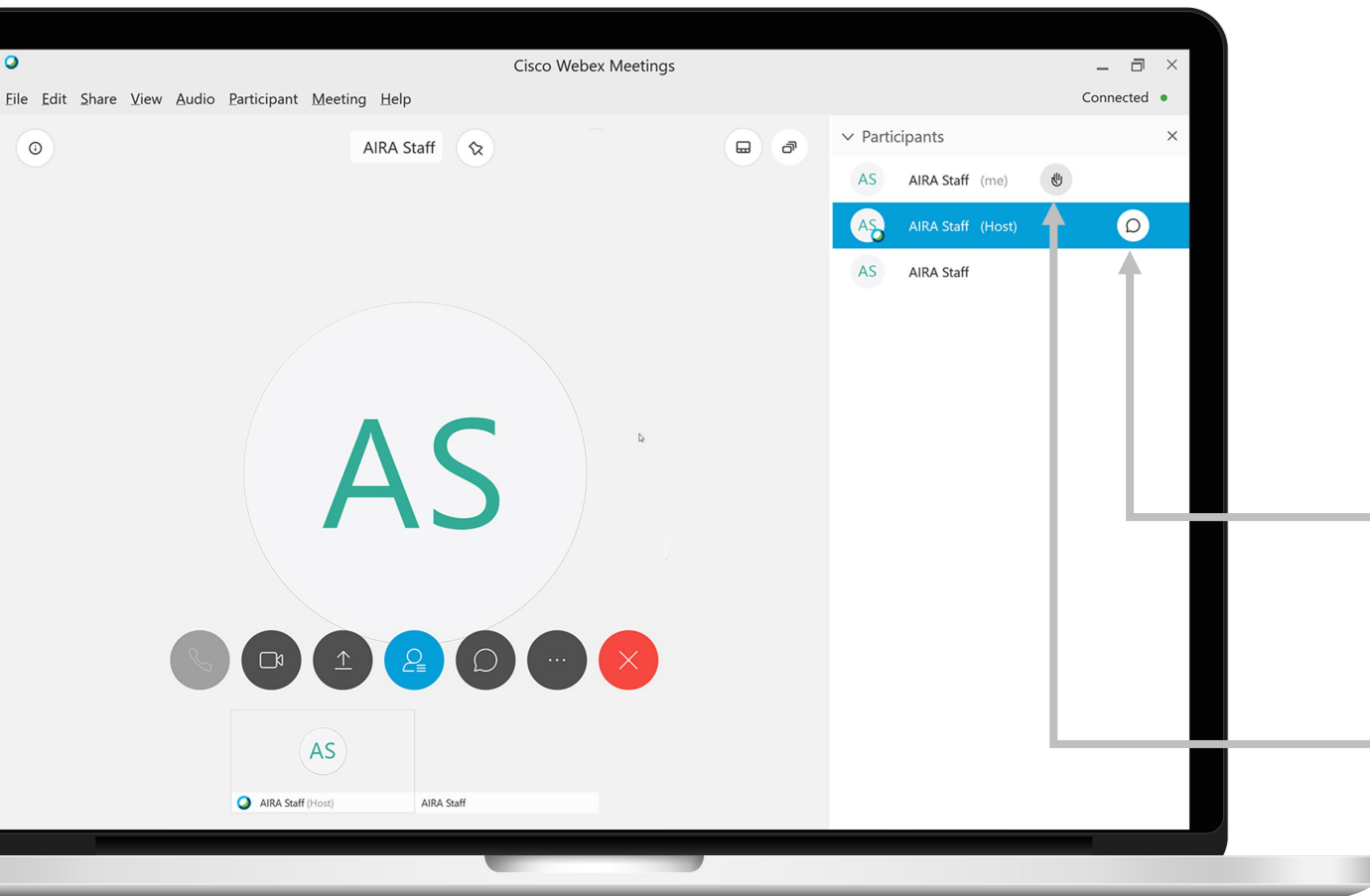CDC website: http://www.cdc.gov/vaccines/programs/iis/activities/mirow.html

Questions?

- Amanda (Mandy) Harris, MIROW Co-Chair
  asharris@health.nv.gov

- Elaine Lowery, MIROW Co-Chair
  elaine.lowery@comcast.net

- Cindy Scullion, Business Analysis
  yro5@cdc.gov

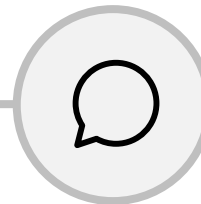- Beth Parilla, AIRA Staff
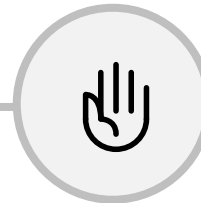 bparilla@immregistries.org

AIRA Repackaging Project

- **How do I ask a question?**
  - There will be time allotted for Q&A following each of the updates, to unmute your line press *6
  - Via WebEx:

Select the chat icon next to the host and type question into the chat box.

Select the hand icon next to your name and you will be called on.