MIROW AND THE BEST PRACTICE DEVELOPMENT PROCESS

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AIRA
AMERICAN IMMUNIZATION REGISTRY ASSOCIATION

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ABOUT MIROW

1 ABOUT MIROW

The American Immunization Registry Association (AIRA), in partnership with the Immunization Information Systems Support Branch (IISSB) at the Centers for Disease Control and Prevention (CDC), formed the Modeling of Immunization Registry Operations Workgroup (MIROW) in 2005 to develop best practice guidance for immunization information systems (IIS). MIROW is an AIRA committee governed by IIS stakeholders.

The purpose of MIROW is to develop best practice operational guidelines that increase the credibility and value of IIS, improve the effectiveness and efficiency of IIS operations, and promote the consistency and comparability of IIS data.

Since 2005, MIROW has developed the following operational best practices for IIS functional areas (see Table 1 for more detail):

- Consolidating Demographic Records and Vaccination Event Records
- Decrementing Inventory via Electronic Data Exchange
- Management of Patient Status in Immunization Information Systems
- Data Quality Assurance in Immunization Information Systems: Selected Aspects
- Immunization Information System Inventory Management Operations
- Immunization Information System Collaboration with Vaccines for Children Program and Grantee Immunization Programs
- Reminder/Recall in Immunization Information Systems
- Data Quality Assurance in Immunization Information Systems: Incoming Data
- Vaccine Level Deduplication in Immunization Information Systems
- IIS-Vaccine Adverse Event Reporting System Collaboration (pilot project)

MIROW guides, abridged mini-guides, a micro-guide, and other materials are available at the AIRA and CDC websites.

Table 1 | *MIROW: topic overview*

					Guideline document						
TITLE	**GUIDELINE DOCUMENT RELEASED**	**FACE-TO-FACE MEETING***	**NUMBER OF DAYS FOR THE IN-PERSON MEETING**	**SUBJECT MATTER EXPERT PANEL SIZE**	**PRINCIPLES**	**BUSINESS RULES**	**SCENARIOS**	**DECISION TABLES**	**ACTIVITY DIAGRAMS**	**GENERAL RECOMMEND-ATIONS**	**REPORTS**
Management of Patient Status in Immunization Information Systems	Repackaged in 2019	June 2014 Decatur, GA*	3.5	13	12	13	22				
Consolidating Demographic Record and Vaccination Event Record	August 2017	August 2016 Decatur, GA	2.5	12**	13	69	20		3		
Decrementing Inventory via Electronic Data Exchange	May 2016	July 2015 Decatur, GA	2.5	12**	9	26	27	3			7
Data Quality Assurance in IIS: Selected Aspects	May 2013	August 2012 Decatur, GA	3.5	13	2	27 + 27 updated				7	
IIS Inventory Management Operations	June 2012	September 2011 Atlanta, GA	3.5	14	8	25				23	20
IIS-VFC/Grantee Programs Collaboration	April 2011	June 2010 Atlanta, GA	2.5	14	0	17	26			9	
Reminder/Recall in IIS	April 2009	October 2008 Tampa, FL	2.5	13	29	23				30	
Data Quality Assurance in IIS: Incoming Data	February 2008	August 2007 Atlanta, GA	2.5	11	13	32					
Vaccination Level Deduplication in IIS	December 2006	May 2006 Washington, DC	2.5	20	9	20	23				

* Original guide developed August 2005 in Atlanta, GA during a 2.5 day meeting and with 16 original subject matter experts.

** Panel included a small group of paid public health consultants.

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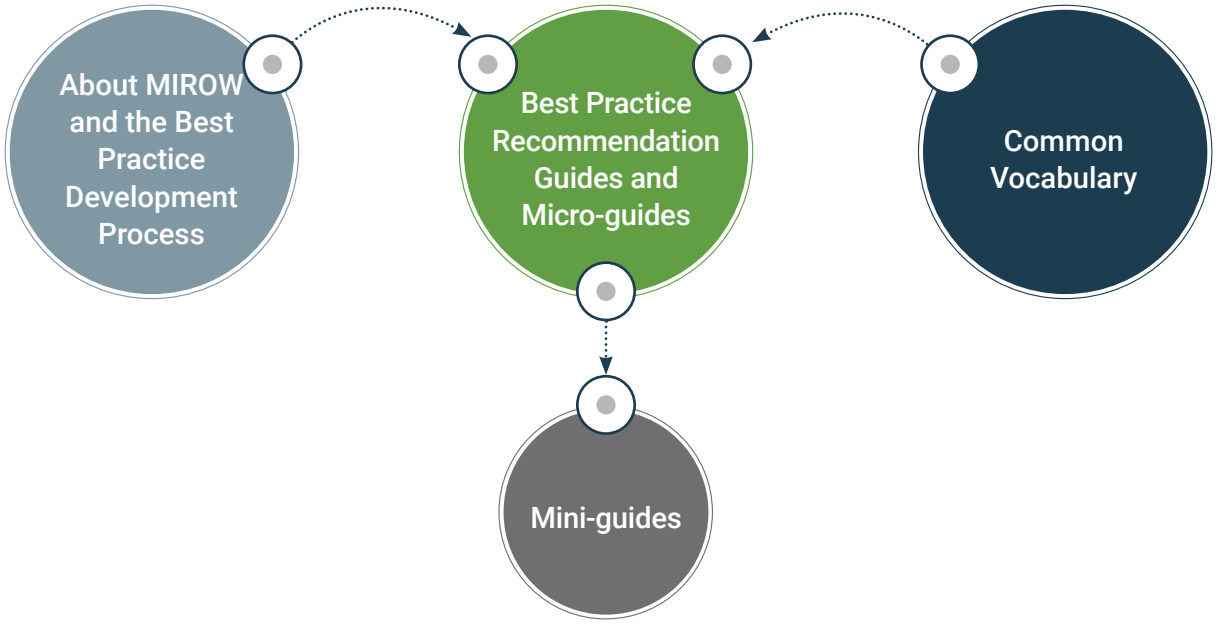
ABOUT THIS DOCUMENT

2 ABOUT THIS DOCUMENT

In 2017, the MIROW Steering Committee conducted a review of the MIROW process and products and determined that there were certain materials that remained largely consistent between all guides (e.g., MIROW background information and common vocabulary). The committee determined that these materials should reside in separate documents. Two documents have been identified and developed as a result of this review process.

This document, *MIROW and the Best Practice Development Process*, serves to introduce the reader to how MIROW develops best practice materials and what tools are utilized during the process. A second document, *MIROW Common Vocabulary*, serves as a glossary of terms so the reader understands the common vocabulary used in all MIROW guides. Figure 1 below illustrates how these guides all fit together.

Figure 1 | *MIROW material relational diagram*



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MIROW DEVELOPMENT APPROACH

3 MIROW DEVELOPMENT APPROACH

MIROW guides provide consensus-based best practice recommendations for topics related to IIS operations. This description of the MIROW development approach provides basic information on the development approach used to develop all MIROW guides, past and future.

The development cycle starts when the MIROW Steering Committee selects a topic and assembles a topic development team, hereafter referred to as "team." The composition of a team is designed to best address development of a particular topic and may include business analysts, public health consultants, and subject matter experts (SMEs).

COMPOSITION OF TEAM

CDC, AIRA, and public health consultants: Conduct business analysis and support the development process

AIRA staff: Organizational support for in-person meetings

Consultants: Facilitation support for in-person meetings

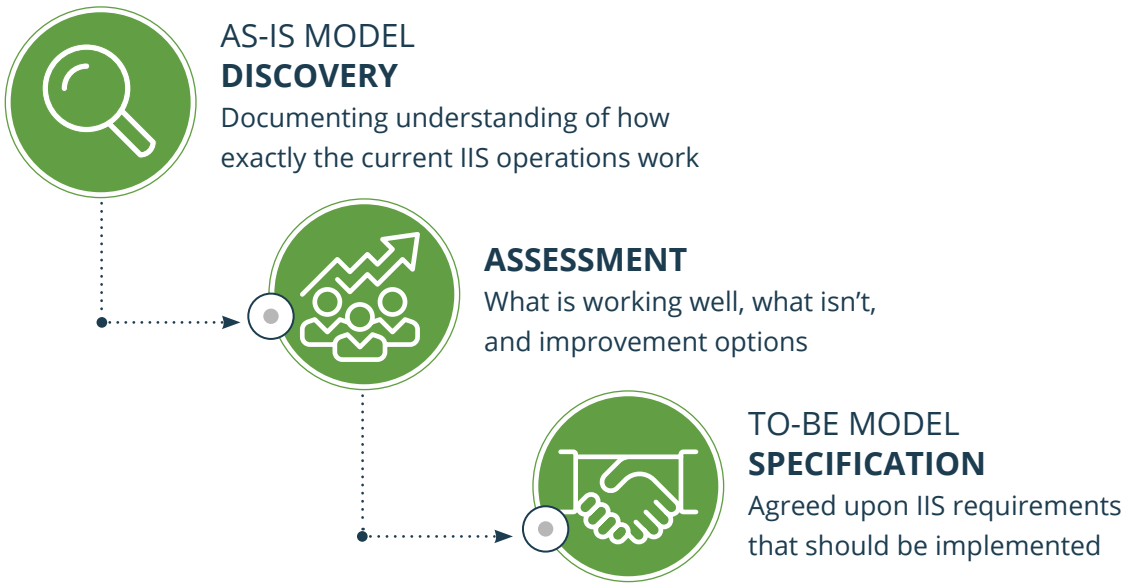
Volunteer SMEs from the IIS community: Contribute knowledge of IIS operations and processes

The team begins by assembling appropriate background materials for the topic. The team collaborates via emails, phone calls, and in-person meetings as needed. SME input is gathered during a facilitated in-person session, surveys, phone calls, and emails and may also include one-on-one phone interviews. As topics are developed, the team determines which combination of these methods is best suited to gather input on the topic. As MIROW evolves over time, new methods may be explored to reduce burden on volunteering SMEs. IIS community feedback is incorporated in the final best practices guide prior to publication.

MIROW uses a multiple-step process to create best practice recommendations (see Figure 2).

- At the discovery stage, the team develops "as-is" analysis models that document an understanding of how current IIS operations work within the topic area.
- At the assessment stage, the team uses analysis models to capture what is working well, what isn't working as well, and improvement options.
- At the specification stage, the team develops "to-be" analysis models that reflect agreed-upon IIS requirements that should be implemented.

Figure 2. MIROW *development process*



BUSINESS ANALYSIS TECHNIQUES AND MODELS

The best practice recommendations in MIROW guides are formulated using consensus-building facilitation techniques and business analysis models. Note that each guide may contain one or more of these models but not necessarily all of them. A sample list of the business analysis models most frequently used in MIROW guides are described in Table 2, but others may be introduced as needed based on the topic. MIROW guides may contain operational scenarios that illustrate how to apply best practice recommendations in typical and challenging situations, free-style illustrative sketches, as well as general recommendations that represent suggestions for IIS functionality.

Table 2. Business *analysis models used in MIROW guides*

ANALYSIS AREA	MODELS	USE
Scope	Venn diagram, context diagram, process diagram, use case diagram, text	Structure boundaries of the project: what is in, what is out
Decision	Principles*, business rules**, and decision tables	Document high-level policies, institutional knowledge, and operational-level decision making
Process	Use cases (structured description of operational scenarios) and a variety of process diagrams	Describe processes and process participants
Events	State/event diagram	Helps to analyze events that lead to change of statuses for various public health concepts (e.g., patient status)
Terms	Domain diagram (high-level class diagram, conceptual-level entity-relationship diagram), table of terms and definitions	Defines main concepts and their relationships, provides vocabulary (terms and definitions)

* Principles give a high-level direction that helps to capture institutional knowledge and to guide the development of more specific business rules.

** Business rules represent specific requirements and decision-making logic for IIS processes and operations.

ASSUMPTIONS

The following assumptions reflect the MIROW approach to the development of best practice recommendations:

- The focus should be on recommendations that have the greatest potential for providing value and use across all IIS.
- The recommendations represent an attempt to balance ideal practices with pragmatic considerations of what can be implemented in an IIS.
- Recommendations are made at the operational level, as opposed to a technology/ implementation level. Specific implementation of recommended best practices may vary based on resources, goals, needs, and unique implementation concerns.
- The recommendations for each topic are not exhaustive. Each individual IIS may choose to implement additional rules based on its unique requirements and insights.
- Finally, the recommended best practices are not static and will need to change and evolve over time as business requirements change.

VALUE OF CONSENSUS

Every MIROW best practice recommendation is consensus-based. That consensus is reached through a facilitated collaborative effort among SMEs. Consensus among SMEs, does not require 100% agreement but means each SME is comfortable to state, **"I can live with that and support it."** The first part ("can live with that") allows the group to focus on achieving a consensus in principle, avoiding prolonged discussions on minor issues. The second part ("support it") provides a due-diligence check to ensure there are no serious disagreements left among the SMEs, assuring that the SMEs agree with the recommendation sufficiently to stand behind it and support it.

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