



AIRA

AMERICAN IMMUNIZATION
REGISTRY ASSOCIATION

MIROW Data Quality Best Practices: Advancing with the Times

**Turn Around Document (TAD):
MIROW Virtual Workshop at the
2021 AIRA National Meeting**

August 3, 2021

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Executive Summary

The American Immunization Registry Association (AIRA) Modeling Immunization Registry Operations Workgroup (MIROW) has been developing best practice recommendations for immunization information system (IIS) operations since 2005.

This 60-minute virtual discussion session, conducted during the AIRA 2021 National Meeting, was an effort to meet with members of the IIS community and discuss topics related to data quality assurance and MIROW. The session began with an introduction about the history of MIROW and the current MIROW Data Quality Assurance project. After the introduction, participants discussed five questions related to data quality assurance and how MIROW could support improving data quality. The session was conducted by MIROW co-chairs Amanda (Mandy) Harris and Miriam Muscoplat. There were 152 participants representing the IIS community from IIS programs, IIS implementers, and partner organizations.

Workshop Agenda

Time	Phase	Description
1-1:20 p.m. PT	Introduction to Session	Mandy Harris and Miriam Muscoplat, MIROW co-chairs, presented slides to introduce the session, provide background on MIROW, and describe the current Data Quality Assurance project. The slides from this session are available in the AIRA repository .
1:20-1:45 p.m. PT	Group Discussion	The MIROW co-chairs facilitated a discussion about data quality assurance.
1:45-1:50 p.m. PT	Closing	The MIROW co-chairs closed the session by performing a debrief and thanking attendees.

Discussion

The virtual discussion session participants were asked the following five questions about data quality assurance:

1. What was your top data quality challenge in pre-COVID times?
2. What was your top data quality-related accomplishment in the last five years?
3. What have been your top data quality challenges during the COVID-19 response?
4. Has the COVID-19 response inspired any new data quality projects or partnerships?
5. What types of resources (e.g., MIROW guides, tools) do you find helpful in managing data quality challenges?

The following notes are comments that participants provided either verbally or in the Zoom chat feature. The comments have been edited in a limited manner. Comments that were simply stating agreement with a previous comment have been removed. The responses are summarized with word clouds which emphasize the most common words in larger font.

1. What was your top data quality challenge in pre-COVID times?

- The volume of data without sufficient staff to manage data quality issues.
- Problems that you could not control for like staff turnover in provider offices.
- I would say lack of interest and investment in the data from the providers.
- Now everyone wants our data and are mad that it's not always accurate.
- Deduplication
- Provider PIN assignments
- Lack of providing 'non-required' info like demographics.
- Completeness of IIS data in our state, especially for older children and adults.

2. What was your top data quality-related accomplishment in the last five years?

- We have a dedicated data quality team!
- Using Tableau dashboards to monitor DQ issues!
- Yes! We've begun building power BI for this purpose.
- Encouraging and training sites to run reports that allow them to analyze the data their submitting. And encouraging to fix issues themselves.
- Collaboration with the clinics and EHR to coordinate improvements for data quality issues.
- Assessment reports available in the IIS at the provider site level - not having to rely on state or regional IIS staff.
- The creation of reports and dashboards to monitoring the data and sharing with providers to improve.
- On a state level, being able to "build the boat" as we were sailing it. Took a lot of flexibility and effort at all levels.
- Be able to map all our provider electronic submitter to their corresponding pins.



Figure 2: Word cloud of top data quality-related accomplishments in the last five years.

3. What have been your top data quality challenges during the COVID-19 response?

- The volume of data requests. Challenge of retaining control of the process.
- Same ones as pre-COVID. But more urgency and less time to fix.
- Having enough epidemiologists to do the requested/required data pulls!
- The volume of new onboarding.
- Accuracy of who provided the vaccinations, what was provided, and where. Particularly with various groups assisting with data entry.

- Staffing. We needed to address things at a much faster rate so we could get things fixed to successfully submit data to the CDC.
- Interfaces between pharmacies and IIS. Some shots are going to the wrong records.
- Duplicate client records by poor data entry.
- Multi-race being reported inaccurately, volume of urgently onboarding.
- Dealing with the huge increase in VXU messages, in California.
- Be able to confirm that all the information was sent for example with the federals.
- Onboarding and interface set up.
- Helping providers and patients understand the necessity for current information to ensure their access to their records. Many patients and providers don't recognize why we need a current email address or telephone number then are upset when they can't locate their records.
- And also, lot duplicates of patients.
- Keeping up with provider outreach about DQ issues and identifying what is priority for outreach.
- DOB entered as vaccination date.
- Duplicate records created when date of admin is reported and a second one is reported a few days later when it gets billed.
- Onboarding is a huge task and there was a huge inflow of volume during month of March.
- Texas now requires all VFC Providers to be enrolled and reporting to the IIS as part of its enrollment to the program...a major step in one of the last two OPT IN IIS systems. PS- IQIP really helped move the needle on provider reporting.
- Poor data entry, huge increase in messages due to Covid, duplicates, dealing with many different vendors submitting data.
- Everyone's data requests are an "emergency"!
- Creating new users in the IIS.
- Reconciliation with inventory and poor data quality upon event submissions.
- Agree with other comments about weak data values like DOB used as vaccination date or vice-versa. Junk names. Very low attention to detail.
- I suspect online appointment scheduling systems have led to duplicates created by typos made by individuals making appointments- not everyone has great eyesight or is comfortable with technology.
- Invalid vaccination for a number of reasons.
- Provider feeds shutting down for days at a time and losing thousands of data and then creating a major backfill later.
- Dates were definitely a DQ challenge especially when we first switched to 2021.
- Educating the practices on how to enter the data correctly is a huge task since most of them enter historical immunization data instead of entering actual live data.
- Slow vendor response to fix data quality issues.
- Dealing with large chains with hundreds of locations-hard to get in touch with folks to fix issues.

- Also, expiration dates and "VIS" pub dates.



4. Has the COVID-19 response inspired any new data quality projects or partnerships?

- Office of Analytics. We centralized our data distribution so it can all be vetted in a consistent way.
- Finally, data sharing with neighbor states.
- In MN we are hoping to build a tableau dashboard to monitor DQ issues at a larger scale than just COVID.
- Working with providers to re-work our de-duplication algorithms and manual de-duplication queues within our IIS.
- Yes! IZ Gateway!
- Lots of user feedback about our deduplication queues and deduplication algorithm. So, lots of enhancements coming.
- And the realization that we need to maintain relationships with hospitals, LTC facilities, pharmacy chains, etc. So, we know who to work with in the future. We should also continue to have them submit all vax.
- Because of COVID we have on-boarded quite a few providers who don't normally send to us (I.H.S. and large pharmacies for example).
- For CT was very positive because we went from 200 onboarded clinics to 1,300 in just a few months, providers are now more aware of the importance of information and helping more to fix the data.

- Yes, with pharmacies and other providers now reporting through requirement of the response, TX is putting down the groundwork for more non-reporting providers to start sending data over to the IIS. Plus, Medicaid and Medicare now want data on their clients' participation...a relationship that we did not have at this level in the past.
- Tracking of onboarding.
- Support from large associations (CMA) to strengthen outreach to providers; new data analysis tools for LHDs so that they can get the data they need from one place.
- Our Board of Pharmacy has become a very important partner in assuring DQ for pharmacy-reported data.
- Oklahoma completely changed there HL7 onboarding process and from 11/1/2020 to today we went from 3 providers submitting messages to almost 800 and switched to a new platform too.
- If you are not talking to your insurers, start! Many of them are already conducting data quality for immunization.



5. What types of resources (e.g., MIROW guides, tools) do you find helpful in managing data quality challenges?
 - The MIROW Consolidating Demographic Records and Vaccination Event Records guide is helpful for building an algorithm and for managing day-to-day issues that arise.
 - For COVID, using the CVRS requirements was key to knowing what we needed to monitor and fix soon so we could successfully submit data to the CDC.

- The MIROW guides and tools are a great resource. I've used the patient active/inactive guide for determining our next steps for enhancing patient status indicators in our IIS.
- Viz tools are awesome!



Figure 5: Word cloud of the types of resources that are helpful in managing data quality challenges.

Debrief

What did we do well?

- Gave us a voice. :)
- Share and hear what others are going through. It's nice to know we're not alone! :)
- It's good to know we're all in the same boat!
- Opportunity to hear from colleagues.
- Hearing from other states having the same issue is always helpful.
- Reminder to go in and look at new resources in the repository.
- As always MIROW was a forum to share experiences.
- Tech was great!

What could we do better?

- Virtual option for each breakout.
- Breakout rooms?
- Provide opportunity to discuss strategies to address some of the challenges - maybe using MIROW documents.
- Be in the same room ;(
- Maybe some more polls for those who might like anonymity? :)

Overall impressions?

- Good job!
- Great job
- Yes, I agree! Great job.
- Very pleased with the degree of participation & attendance!
- Great job, thank you.
- I think it went quite well. It's refreshing to know other jurisdictions are having very similar problems.
- It was great. Liked the discussion.

Appendix A: Acknowledgements

MIROW greatly appreciates:

- Enthusiastic participation and contributions of all attendees.
- Invaluable support of the subgroup of MIROW members that planned this session.

Participants

Staff from 28 IIS programs participated in the discussion session. The states with IIS program staff participants are highlighted in Figure 6. There were also participants from 24 additional organizations including the Centers for Disease Control and Prevention, Health & Human Services, IIS implementers, and other valuable partners.¹

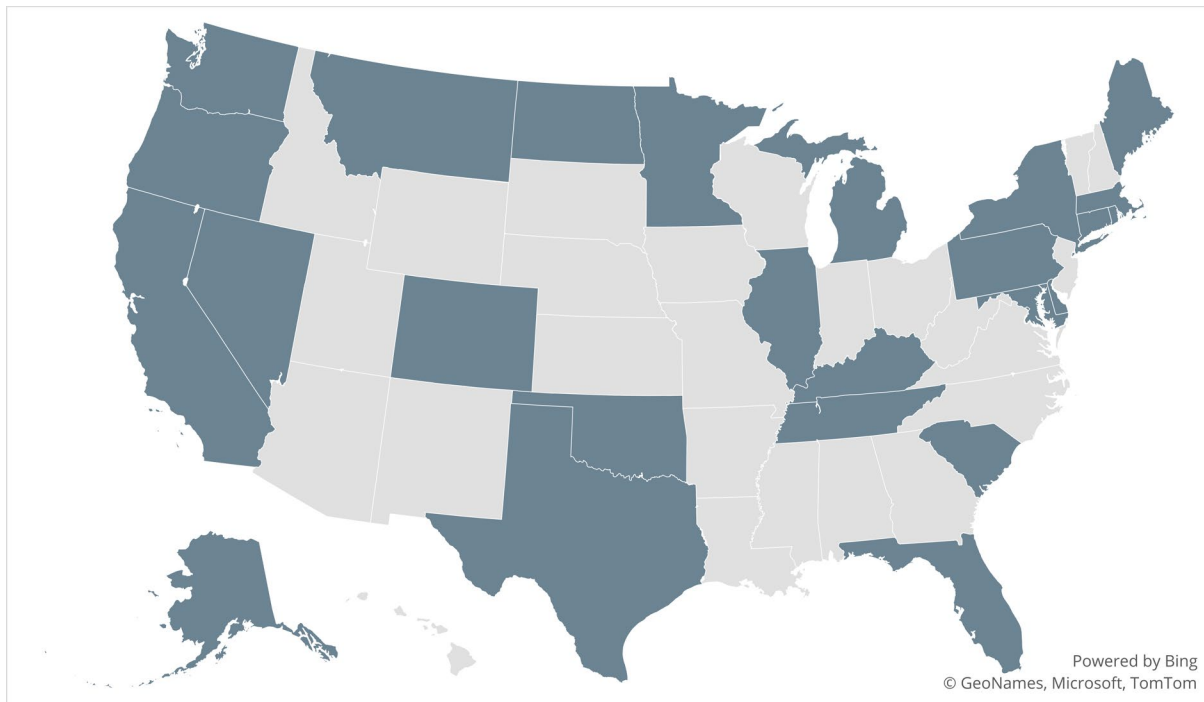


Figure 6: States with participating IIS program staff.

¹ Since the virtual discussion was performed over Zoom, participants provided their own information when they signed in. Not all participant provided enough information to support identification of the individual in the registration information. Eleven participants were not identifiable based on the provided information.

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