AIRA
AMERICAN IMMUNIZATION REGISTRY ASSOCIATION

# Metrics for Calculating RSV Coverage Rates and Defining a Consensus Method for Upcoming Season

## Takeaways from the IIS Data Analyst Collaborative (IDAC)

July 2026

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July 16, 2026

## The IIS Data Analyst Collaborative (IDAC)

The IIS Data Analyst Collaborative (IDAC) is a discussion-based collaborative for people who work with immunization data to connect on important and timely topics. IDAC happens quarterly on the third Thursday at 1 p.m. ET. There are different discussion topics in every meeting. The goals for these collaboratives are to offer an opportunity to share and develop skills and insights, to help people who work with immunization data to connect and spark collaborations, and to create a supportive, engaged community of IIS data analysts.

The July IDAC meeting discussion focused on the metrics involved in calculating RSV coverage rates and defining a consensus method in preparation for the upcoming season.

## Some Questions Discussed During This IDAC Session

- Does your jurisdiction conduct parent/child linking for RSV coverage?
    - If yes
        - Does any jurisdiction report this information back to an EMH or use in Clinical Decision Support?
        - Do you have an indicator in your system for linking and unlinking?
    - If no
        - Does your jurisdiction report parent and infant doses or separately?
        - Do you account for any maternal vaccination in calculation?
- What programs or software help your jurisdictions with RSV coverage?
    - Are there specific packages or coding languages you use for linking?
    - What criteria does your jurisdiction use for parent/child linking?
    - What drawbacks or limitations have you encountered from parent/child linking?
- Are any jurisdictions performing record linking for other vaccine group analysis?
- How does your jurisdiction define RSV season?
- What age cohorts does your jurisdiction report for RSV coverage?
- What vaccine codes are used (CVX or programmed codes)?
- How do you handle misreported RSV doses (inappropriate dose sizes or mAb/vaccine products for age group etc.)?
- How do you handle parents with Abrysvo doses that are not matched to any baby in the system?
- How do you account for the fact that Abrysvo is not recommended for subsequent pregnancies?
- How do you handle duplicates and out-of-state records?
- What other data quality challenges do we face for RSV reporting?

## Meeting Summary

The July IDAC meeting, hosted by AIRA, focused on developing a consistent and practical methodology for calculating RSV (respiratory syncytial virus) coverage rates across jurisdictions.

The session, attended by 44 participants, emphasized collaboration among immunization information system (IIS) data analysts to address methodological inconsistencies, data limitations, and implementation challenges ahead of the upcoming RSV season.

The collaborative serves as a forum for sharing experiences, identifying solutions, and building a stronger data analyst community. As noted in the opening remarks, the group aims to "discuss data analyst issues, challenges, and successes" and foster shared learning.

With RSV prevention efforts expanding—particularly with new maternal vaccines and infant immunization options—there is an urgent need to define consistent metrics that accurately reflect population protection.

A central theme of the discussion was the lack of standardization in defining numerators and denominators for RSV coverage. Jurisdictions vary in how they count protected infants, particularly when considering maternal vaccination versus direct infant immunization. This variability creates challenges in producing comparable and reliable coverage metrics.

Another major topic was parent-child (mother-infant) data linkage, which is critical for accurately assessing RSV protection without double counting. Participants highlighted that most jurisdictions do not have fully integrated linkage systems and instead rely on case-by-case matching, probabilistic algorithms, or partial identifiers. These approaches introduce complexity and potential inaccuracies, underscoring the need for improved data integration and standardized practices.

The meeting also explored technical strategies for data matching, including deterministic and probabilistic linkage methods (e.g., use of name similarity algorithms and multi-variable matching). While these approaches can improve match rates, they require significant computational resources and technical expertise.

Overall, the collaborative highlighted the importance of:

- Establishing consensus definitions and methodologies
- Improving data quality and linkage capabilities
- Sharing best practices across jurisdictions
- Preparing systems and processes for scalable, repeatable RSV coverage calculations

The session reinforced the value of cross-jurisdiction collaboration in advancing public health data practices and ensuring more accurate and actionable immunization coverage metrics.

## Discussion

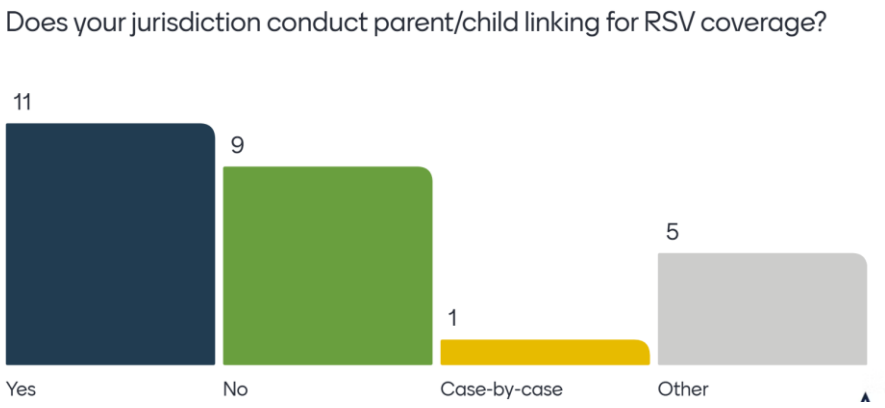
### Defining RSV coverage: key challenges

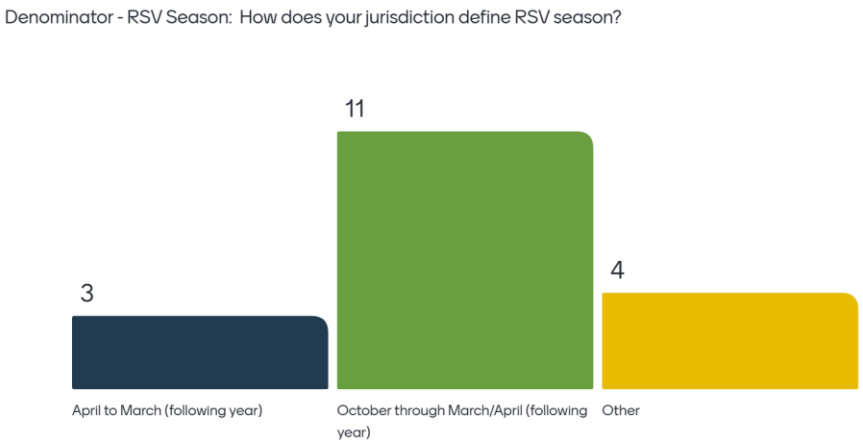
#### *Numerator and denominator complexity*

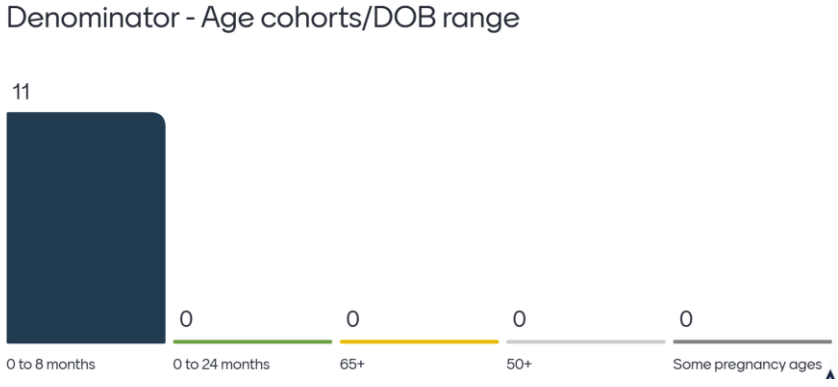
A core issue discussed was how to define:

- Numerator: Who counts as "protected" (infants receiving RSV immunization vs. maternal vaccination during pregnancy)
- Denominator: The appropriate population base (e.g., live births, eligible infants, or linked mother-infant pairs)

During the session, Mentimeter was used to gather feedback, and participants noted that different jurisdictions use different definitions, making comparisons difficult and potentially misleading. The complexity increases when attempting to account for indirect protection via maternal vaccination, which requires linking maternal and infant records.



### *Parent-child linkage: a critical barrier*

A major focus of the discussion was whether and how jurisdictions perform parent-child linkage when calculating RSV coverage. Responses varied widely:

- Some jurisdictions link records only for research or special cases.
- Others perform case-by-case linkage without permanent system integration.
- Some do not link at all, relying on separate data sets.

As one participant explained, decisions on linking "the mother to the child and how to count those numbers are…very tricky."

### *Avoiding double counting*

A key reason for linkage is to prevent double counting when both maternal vaccination and infant immunization occur. One jurisdiction described linking records using identifiers (e.g., names) specifically to ensure that only one form of protection is counted per infant.

### *Data limitations*

Most IIS environments lack robust, automated linkage capabilities. As a result:

- Linkage is often manual or semi-automated.
- Systems lack persistent relational structures.
- Data quality issues (e.g., inconsistent names, missing identifiers) hinder accuracy.

## Technical approaches to data matching

### *Deterministic vs. probabilistic matching*

Participants discussed different approaches to linking records:

- Deterministic matching: Exact matches on fields like name, date of birth, or address
- Probabilistic matching: Uses algorithms to estimate match likelihood based on partial similarities

One example included the use of string similarity techniques (e.g., Jaro-Winkler) and progressive matching criteria to improve linkage rates.

### *Incremental matching strategies*

Jurisdictions described layered approaches:

1. Start with strict matching criteria (multiple fields).
2. Gradually relax criteria for unmatched records.
3. Use weighted scoring systems to identify likely matches.

### *Future directions*

Some participants are exploring:

- Automation via data lakes
- Advanced models, e.g., NLP-based matching (NLP is natural language processing)
- Integration with vital records systems

These efforts aim to improve scalability and reduce manual effort.

#### *Variability across jurisdictions*

The discussion highlighted significant heterogeneity in practices, including:

- Use of birth files or integrated child data systems
- Differences in data infrastructure and resources
- Variation in policy and reporting requirements

This variability reinforces the need for national or collaborative guidance to standardize RSV coverage calculations.

#### *Data quality and infrastructure considerations*

Accurate RSV coverage measurement depends heavily on:

- High-quality, complete data
- Reliable linkage between systems (IIS, vital records, EHRs)
- Timely data availability

Participants emphasized that data quality improvement is foundational to any methodological solution.

#### *Collaboration and knowledge sharing*

The IDAC meeting underscored the importance of:

- Peer learning across jurisdictions
- Sharing tools, methodologies, and lessons learned
- Building a community of practice

The collaborative format encourages analysts to identify practical solutions and focus on implementation, not just theory.

## Key Takeaways and Next Steps

### Need for standardization

There is a clear need to develop consensus definitions for:

- RSV coverage numerator and denominator
- Inclusion/exclusion criteria
- Handling of maternal vs. infant protection

### Improved linkage capabilities

Enhancing parent-child linkage is critical for:

- Accurate measurement
- Avoiding duplication
- Capturing full protection pathways

### Investment in technology

Jurisdictions may benefit from:

- Advanced matching algorithms
- Integrated data systems
- Automation tools

### Continued collaboration

Ongoing discussions within IDAC and similar forums will be essential to:

- Refine methodologies
- Share innovations
- Align practices nationally

## Conclusion

The July IDAC meeting highlighted both the complexity and urgency of accurately measuring RSV coverage. While jurisdictions are actively developing solutions, significant challenges remain in data linkage, standardization, and system capability. Through continued collaboration and shared problem-solving, the data analyst community is well positioned to develop robust, consistent, and scalable approaches that support effective public health decision making.