



AIRA

AMERICAN IMMUNIZATION
REGISTRY ASSOCIATION

Coverage Rate Assessment Metrics

Takeaways from the IIS Data Analyst
Collaborative (IDAC)

April 2024

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April 18, 2024

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 every other month on the third Thursday at 1 p.m. ET. There will be a different discussion topic each month. 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.

Questions

What methods are you currently using for coverage rate assessment of routine childhood vaccinations?

How do you integrate Census data?

- Many jurisdictions use IIS data to calculate denominator for early childhood and adolescent series due to the complicated nature of Census age strata.
 - While Census data are often the go-to source for capturing denominator, there is difficulty in making rate analysis because Census data do not provide single-age counts. No IIS has successfully figured out an analysis to account for this yet.
- Some IIS feel strongly about using IIS-based denominators (even if less accurate) due to the complicated nature of explaining biases between IIS numerator and Census-based denominator.
- Consider use of a few other robust data sources:
 - [PUMS data](#)
 - [Census Population Estimates Program \(PEP\) data](#)
 - [Recommended repository for additional Census data](#)

How do you calculate county-level denominators?

- Many states use kindergarten enrollment data rather than IIS data to estimate county-level coverage.

- Some states present number of vaccinations per year rather than rates; this is especially helpful if policy changes have impacted ability to compare years or calculate denominators accurately.
- Using an IIS feed with Vital Records to capture birth cohort denominators is a good option; there are still overinflation worries with this method, however.
- California has implemented logarithmic ogive weighting function denominator calculations to help combat overinflation.
 - These calculations assign a weight to each person based on how recent that person's last vaccination was; recent vaccinations are weighted higher because the recipients are more likely to be in the state still.
 - One can read more about this in AIRA's [*Analytical Guide for Assessing Vaccination Coverage Using an IIS.*](#)

What unique challenges have you overcome?

- San Diego County uses a local random digit dialing (RDD) survey that is modeled after the National Immunization Survey (NIS). These coverage rates are considered the "Gold Standard" for the program, although there are known issues with telephone-based surveys.
- Business rules for inactivating patients are difficult. Most IIS are implementing business rules for when to exclude a record from analysis rather than inactivating in the IIS. That way, a record is still eligible for reminder/recall initiatives but does not impact coverage assessments.
 - Wisconsin created a "dormant client" criterion; they will present this at a session at the AIRA National Meeting!
 - Rhode Island removes records from the denominator if there is neither a primary care provider (PCP) nor a payor on record.
 - Louisiana excludes adults from the denominator if they have received only one COVID vaccination in the state and there's nothing else on them in LINKS.
- Some jurisdictions are using Smarty to geocode data for analysis. This has its own challenges due to accuracy and completion of address records. There will be an under-

representation because some addresses cannot be geocoded; however, it is a good option for those seeking a very granular level of data.

- Many IIS are considering partnering with LexisNexis, the Division of Motor Vehicles, or claims databases to better understand the adult denominator population.

In which population(s) are you confident of your accuracy?

- Most IIS felt confident using population denominator for COVID since there was single-dose accountability. There is considerably less confidence since commercialization.
- The consensus is that the more granular one gets with data, the less confident one is. The caveats that come with more granular data can be difficult to communicate clearly.