

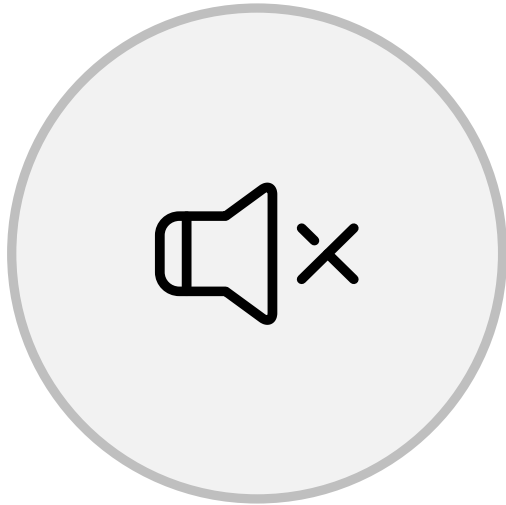


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Importing Legacy Data to Improve IIS Saturation

Discovery Sessions
October 7, 2019

Welcome - AIRA Discovery Session



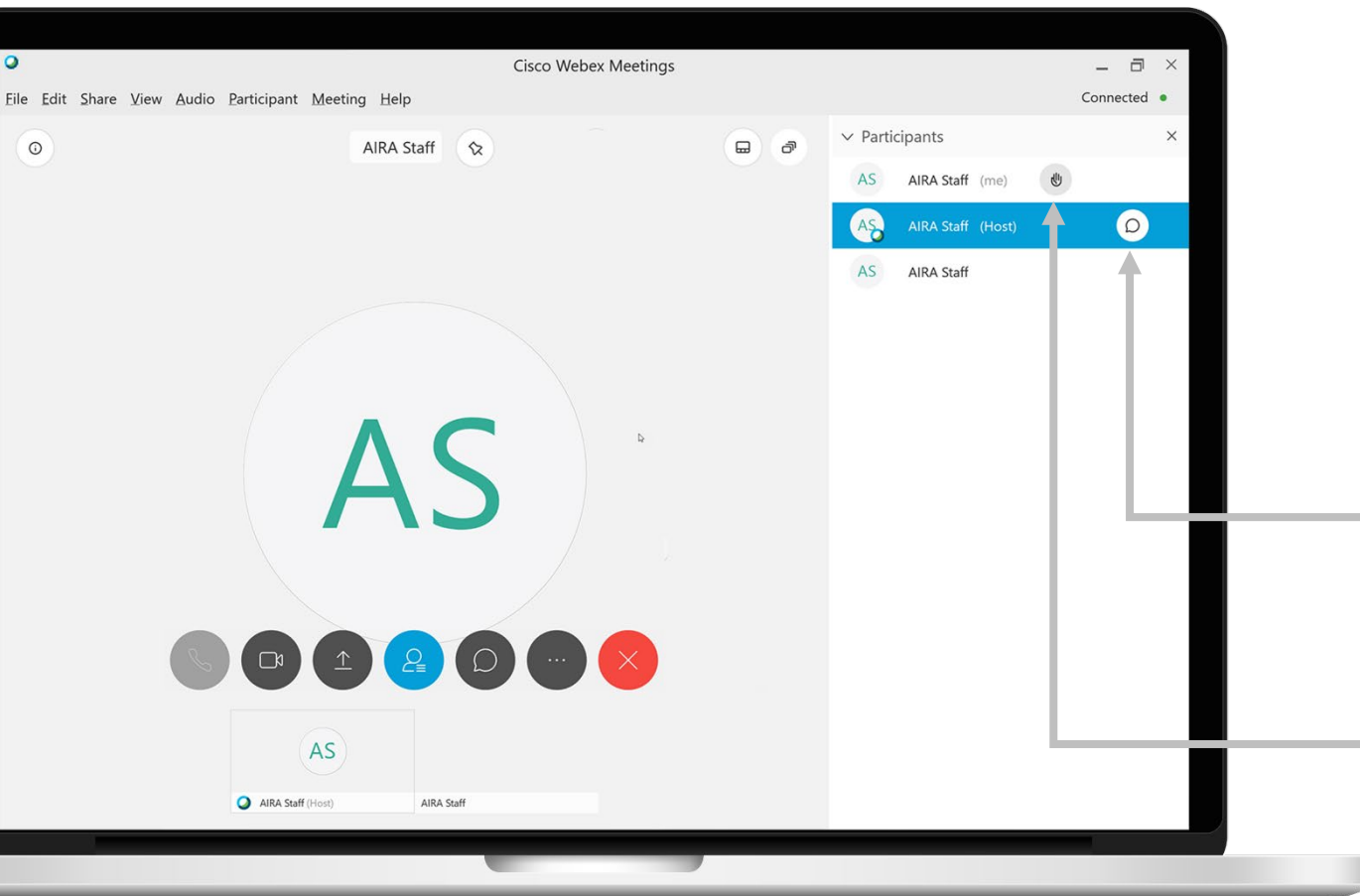
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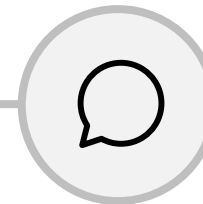


Welcome - AIRA Discovery Session

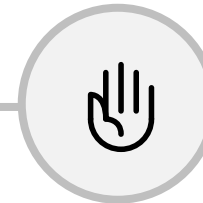


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Today's Topic

Improving IIS patient and vaccine saturation, or capture, through importing legacy or missing data

**IMPORTING
LEGACY DATA
TO IMPROVE
IIS SATURATION**

RECOMMENDATIONS
AND IMPLEMENTATION
CONSIDERATIONS **7.30.2019**



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Today's Speakers

- Danielle Reader-Jolley (AIRA Consultant)
- Rashid Malik (Maryland IIS)
- Kevin Allen (Texas IIS)



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Document Overview

Danielle Reader-Jolley

AIRA Consultant



Document Overview

- Optimal timing for pursuing legacy data
- Preferred formats for identifying and transmitting legacy data
- Common data quality and IIS performance concerns
- Identification of alternative data partners
- Strategies for ongoing interface and data monitoring to identify gaps and changes in provider reporting practices
- Suggestions for resolving data gaps and working with providers to correct issues and resubmit missing data to the IIS



How to read this document...

- Summarized **Considerations and Recommendations** at the end of each major sub-chapter
- **Bolded statements** in text are key points for readers who like to skim
- **Notes** represent sidebar-type commentary related to section content
- Intra-document **hyperlinks** to related content



Methodologies

- AIRA survey
 - 35 respondents (each representing a unique jurisdiction)
- SME Interviews (IIS and EHR representatives)
 - 11 interviews (9 IIS programs and 2 EHR product vendors)



Acknowledgments

- Individual subject matter experts who contributed their expertise through telephone interviews and document review:
 - Michael Powell, California
 - Kim Gulliver, Colorado
 - Steve Jarvis, Colorado
 - Jody Schweitzer, Kentucky
 - Laura Barrett, Kentucky
 - Rashid Malik, Maryland
 - Patricia Swartz, Maryland
 - Kurt Seetoo, Maryland
 - Alok Patra, New Jersey
 - Monica Sull, New York City
 - Alexandra Ternier, New York City
 - Vikki Papadouka, New York City
 - Megan Meldrum, New York State
 - David Baron, Tennessee
 - Melissa Davis, Tennessee
 - Kevin Allen, Texas
 - David Krennek, Texas
 - Matthew Davis, Texas
 - Danny Wise, Allscripts
 - Michelle Sumner, Allscripts
 - Pat Quinlan, Allscripts
 - Greg Faber, Epic
 - Emily Smith, Epic



Working Definitions

Legacy Data: all patients and all vaccinations (historical and historically administered) that may be known to a provider or data partner

Data Saturation: degree to which an IIS has collected all patient and vaccination records within the jurisdiction



Ultimate goal for every IIS:

Facilitate ongoing efforts to gather complete and accurate patient and vaccination information for all residents within their respective jurisdictions!



Why pursue legacy data?

- Legacy data provides information not previously known to the IIS and fills in missing data gaps
- Incomplete patient populations and vaccination histories impact the IIS's ability to:
 - Provide clinical decision support
 - Inform population-based coverage assessment
 - Support disease outbreak response
 - Advise policy changes and decisions
 - Determine resource allocation



So why aren't all IIS pursuing legacy data?

*IIS perception that
data saturation has already
been achieved*

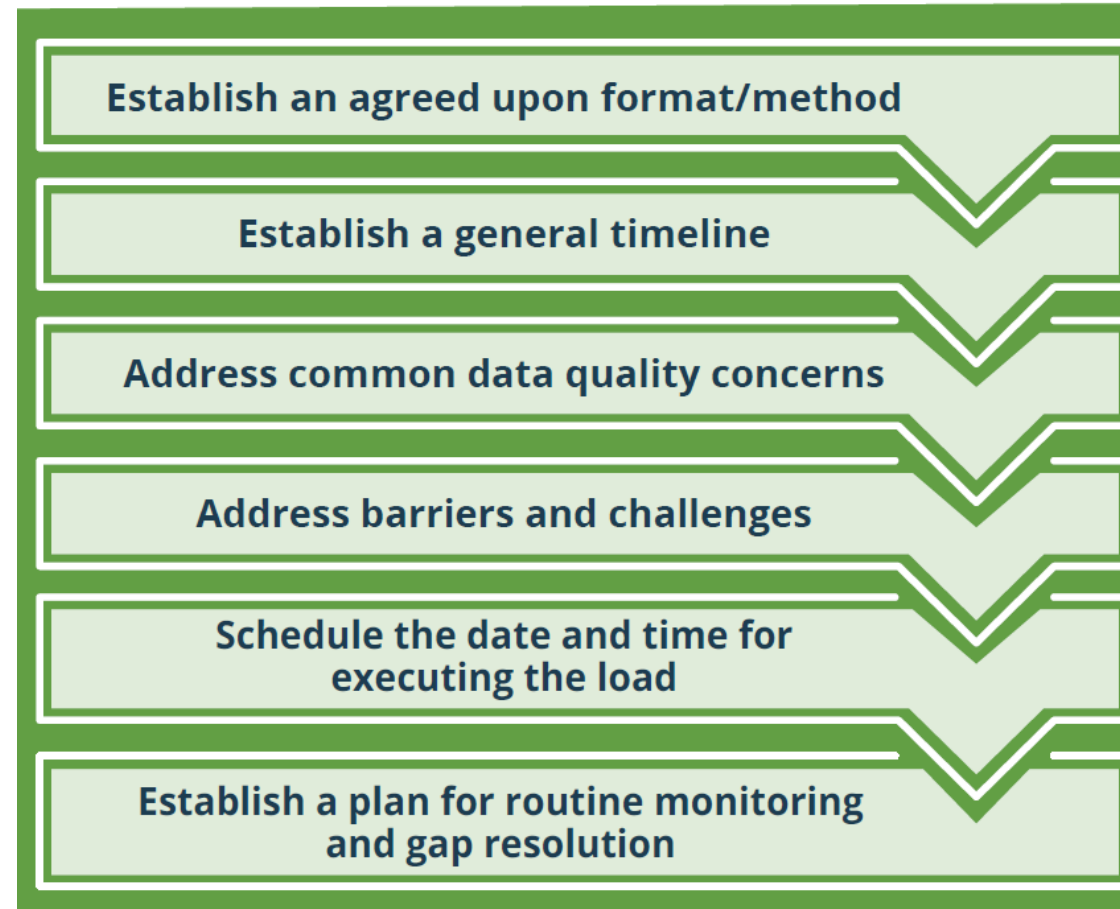
IIS staff resources are
limited, and legacy loads
are not a priority

**Concerns about data quality
and risk of introducing poor
data into the IIS**

Consent laws that restrict IIS from pursuing
records without consent flags or entered
prior to a certain authorized date



Sample Legacy Load Process



Common legacy import methods:

- HL7 (single-patient)
- HL7 batch (multi-patient)
- Traditional flat file
- Direct data entry



Timing of legacy imports

- Prior to onboarding
- During onboarding
- Immediately after onboarding
- Full history with each new VXU
- As time allows



Data Quality in Legacy Imports

Two things are true...

1

Data quality in legacy records is unlikely to meet current data quality standards, with diminishing quality observed with increasingly historic vaccination dates.

2

Providers may be unwilling to invest the time/resources to improve older records and, more importantly, unable to correct legacy data.



A difference of philosophy...



Primary Data Quality Concerns

- Duplicate patient and vaccination records
- Historically “administered” doses that may not include all currently required fields
- Inactive CVX codes, unspecified vaccine types, cross-coding, and CPT codes
- Generic vaccination dates and questionable data sources



Common Barriers/Challenges

- IIS only offers one or two methodologies for importing legacy data
- IIS requirements for data cleansing are too extensive to be properly addressed by vendor/provider
- EHR vendor may be inexperienced with legacy data extraction/transmission
- Vendor fees are prohibitive for providers
- Provider implemented a new EHR system that did not include a data migration



Performance Concern Strategies

- Schedule the timing of the legacy load (date/time)
- Schedule the load during off-peak periods
- Set a start/stop time for large loads
- Limit the size of each batch
- Break data into smaller clusters (by age or vaccination date)
- Monitor the load in progress



Gap Monitoring and Resolution



What contributes to gaps in IIS data?

- Low provider participation
- Incomplete reporting of data:
 - Poor manual reporting from providers using direct data entry
 - Existing data in an EHR not being reported to the IIS once an electronic interface has been established
 - Gaps or inconsistencies in ongoing data feeds not being identified and/or properly resolved
- Patients simply not receiving all recommended vaccinations



Gap Monitoring/Resolution

- Develop a monitoring plan/process to routinely assess the production IIS and identify gaps in patient and vaccination reporting.
- Develop a resolution plan/process to address gaps identified in patient and vaccination data or reporting.
- Ensure that providers are aware of how to monitor their data, correct issues, and resubmit messages to the IIS as needed.



Alternative Data Sources/Partners

- Medicaid
- Medicare
- Insurance companies/large health plans
- Pharmacies
- Very large organizations (Kaiser Permanente, Ochsner, etc.)
- Regional public health and community health centers
- Schools (w/FERPA consent)



Appendix Overview



APPENDIX A
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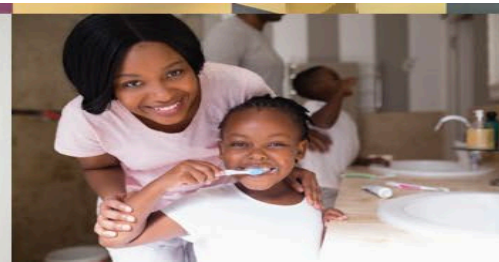
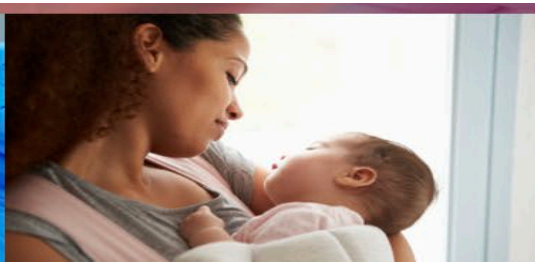




IMPORTING LEGACY DATA TO IMPROVE IIS SATURATION

Rashid M. Malik, MSHI, RHIA

10/03/2019



Importing Legacy Data into IIS

Maryland Perspective

Agenda

- When do we pursue legacy data loads and how do we encourage providers to participate
- Our general process: supported file formats, content requirements, scheduling considerations
- Primary challenges and how we address them
- Best practices learned over time

When do we pursue legacy data loads?

- **Onboarding phase** (most common) – part of the initial onboarding scope of work.
- **Post-onboarding phase** (less common) – right after the initial on-boarding as a secondary project handled by a different team.
- At a **later time** when the EHR/EMR is able to send historical data at cost or no cost to the provider/practice (somewhat rare).

(Note: Maryland has always encouraged submission of the historical data; however, the requirement has been to submit new administrations only. Our new reporting legislation states that as of October 1, 2019, all vaccinations administered in the State of Maryland are required to be reported to ImmuNet. The submission of the historical data is being treated as required)

How do we encourage providers to participate in historical data submissions?

- Provider training and education
- Website content, email communications
- Highlight to providers that their participation will help:
 - Consolidate immunization information from multiple providers into a single **complete** record, which can be provided as official vaccination records for school, licensed day care center, and camp entry requirements;
 - Aid in managing immunizations so children receive only the vaccines they need within the appropriate timeframes;
 - Allow providers' offices with Electronic Health Records (EHR) systems to submit data without duplicate entry;
 - Generate reminder and recalls to send to parents to remind them when their child's immunizations are due or have been missed;
 - **Decrease time spent by office staff looking for immunization histories from previous providers.**
- As a result of these immediate benefits, providers often realize many **long-term benefits** such as a reduction in paperwork, staff time and costs associated with immunization related activities.

Our general process (high level)

- Due to the large size, all historical data is initially accepted as a single batch file to fully catch-up on patient immunization histories.
- The acquisition of historical data is an ongoing event
- Post Go-Live date, new historical data is more manageable and is often sent with new administrations

Supported Formats and Scheduling

- We accept historical loads in various formats
 - HL7 (preferred)
 - Comma Delimited CSV format (new format)
 - Flat file format (least preferred)
- Scheduling
 - Initial load is requested in a single file or multiple files in less than 100mb file size.
 - These files are processed manually after 5pm to minimize the impact on the system
 - After batch processing is complete, all data is processed on a daily basis.

Content requirements – RXA-9

- IMMUNET recognizes **00 to indicate New Immunization Administered/Owned by the Sending Organization** or **01 to indicate Historical Record – Source Unspecified**. If the source for a historical record is known, an EHR should use values 02 through 08 in Table NIP001 (next page).
- If this field is left blank, the immunization will be recorded as **historic** (i.e. not owned by the sending organization) in IMMUNET. ALL immunizations that are administered in a provider office should be recorded as “00” to ensure that the record is correctly associated with your organization in IMMUNET
- Sample value: |00^NEW IMMUNIZATION RECORD^NIP001|

NIP001 – Immunization Information Source

CDC-defined NIP001 - Immunization information source

Use in RXA-9

Value	Description
00	New immunization record
01	Historical information - source unspecified
02	Historical information - from other provider
03	Historical information - from parent's written record
04	Historical information - from parent's recall
05	Historical information - from other registry
06	Historical information - from birth certificate
07	Historical information - from school record
08	Historical information - from public agency

Catch
all
value

Primary challenges

- **Data quality.** Lack of detail in the data (missing demographics (i.e address, phone, guardian, responsible parties, and other), missing lot number, dose amount, source); pending/deduplication
- **Inactive codes and code mismatches:**

The Status column indicates if the vaccine is currently available in the United States.

- **Active:** A currently available administrable vaccine
- **Inactive:** An administrable vaccine formulation that is no longer available for patient administration, but can be found in historical patient records.
OR A historical record of a vaccine administered where the exact formulation is unknown
- **Pending:** A vaccine that is expected to become active in the future
- **Non-US:** A vaccine that available outside the US only
- **Never Active:** A vaccine that was never available and is not in the pipeline of new vaccines

Hep A, pediatric, unspecified formulation	hepatitis A vaccine, pediatric dosage, unspecified formulation	31	Inactive	9/30/2010	Do NOT use this code. If formulation is unknown, use CVX 85. There is only one formulation of Hep A, peds.
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Primary challenges ...

Recommendation: For the current or replaced CVX, we refer EHRs to the CDC Current HL7 Standard Code Set or our specs:

CVX -- Vaccines Administered

<https://www2a.cdc.gov/vaccines/iis/iisstandards/vaccines.asp?rpt=cvx>

CDC NDC Lookup Crosswalk

<https://www2a.cdc.gov/vaccines/iis/iisstandards/vaccines.asp?rpt=ndc>

ImmuNet Specs

https://www.mdimmunet.org/ir_docs/hl7_251_realtime_gts.pdf

Notes:

Foreign administrations: We do not support foreign administrations. All foreign CVX codes are rejected.

Newborns: Baby Boy, Baby Girls are rejected; In most case this data is resubmitted to us by the pediatricians.

Primary challenges ...

- EHRs often DO NOT include historical submissions as part of their onboarding scope of work.
- A separate payment or project is required for historical submissions that may involve a different team.
- This is also true if historical data is requested at later time.

Best practices learned over time

- Encourage providers to include the historical data as part of their initial onboarding SOW. Even if it requires a separate ticket item, it is generally cheaper to get a cost estimate upfront as opposed to after the fact by working with a completely different team.
- Do a thorough testing with EHR to avoid any CVX/CPT/NDC codes mismatches and a proper use of any replaced codes.
- IIS staff Develop processes to identify data quality issues more readily.
- Partner with other large networks (i.e. MedStar, JH, UMMS, Medicaid, HIE, other IIS, inter-state) to fill in any data gaps.
- Avoid reprocessing of the previously sent historical data to avoid repeating the deduplication process. Request EHRs to flag data that has been previously submitted.
- Lastly, “no data is better than incomplete or inaccurate data,” while “some good data is better than no data.”

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TEXAS
Health and Human
Services

**Texas Department of State
Health Services**

Texas Immunization Registry

AIRA Community Webinar – IIS Data Saturation

Presenter: Kevin Allen, IIS Manager

Agenda



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Texas Department of State
Health Services

- Legacy data
- Process for submitting data
- Challenges
- Best Practices
- Data migration project

Legacy Data

Scope of legacy data

- Will legacy data be submitted?
- How much legacy data exists?
 - Number of Clients
 - Number of Immunizations
- How far back does data go?
- Outdated vaccine code exist?



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Process

Close coordination

- Ensure proper people included

How to submit

- Real-time vs. Batch

Number of files/messages

- Extra time needed to process

Special naming of files

- Easy to identify legacy files

Timing of submissions

- Process during off peak hours



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Challenges

- Limited historical data
- Data fields may be limited
- Older historical data not migrated
- Additional time to validate data
- Cost prohibitive to providers



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Best Practices

- Ask Early, Ask Often
- Vaccine Code review
- Communicate clearly
- Start slow (sample file)
- Monitor processed files



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San Antonio Immunization Registry Migration Project

Opt-out to Opt-in issue

- Consent initiative
- Educate providers about registry consent

Monthly conference calls

- Problem resolution & planning

Vaccine code review/resolution

Data file submissions

- 2.2 million clients
- 300 data files by year of birth
- Start with youngest



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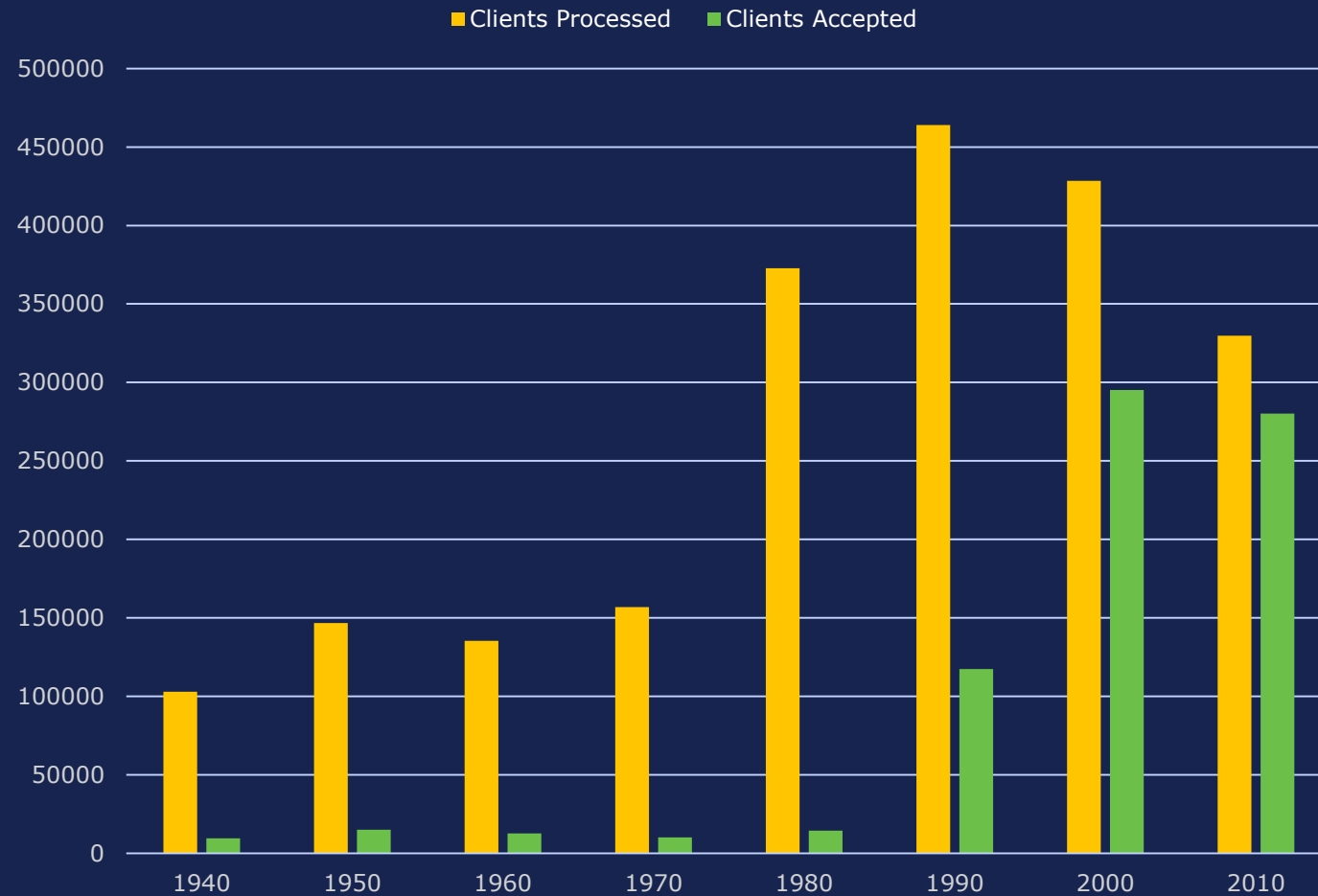
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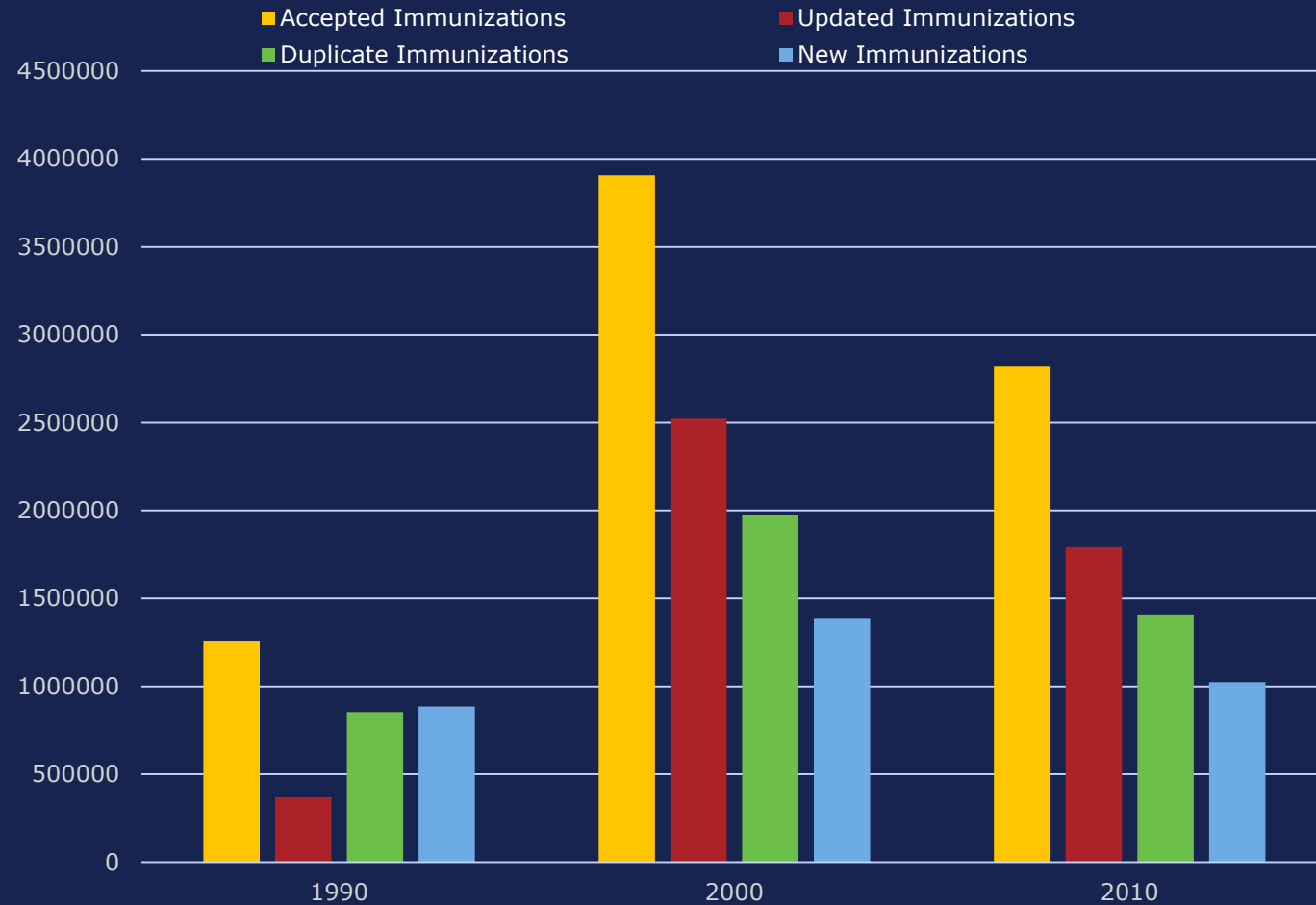


San Antonio Immunization Registry Migration Project



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Health Services**

Thank you

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Questions?

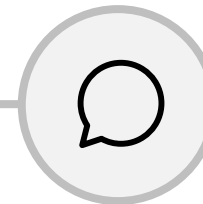
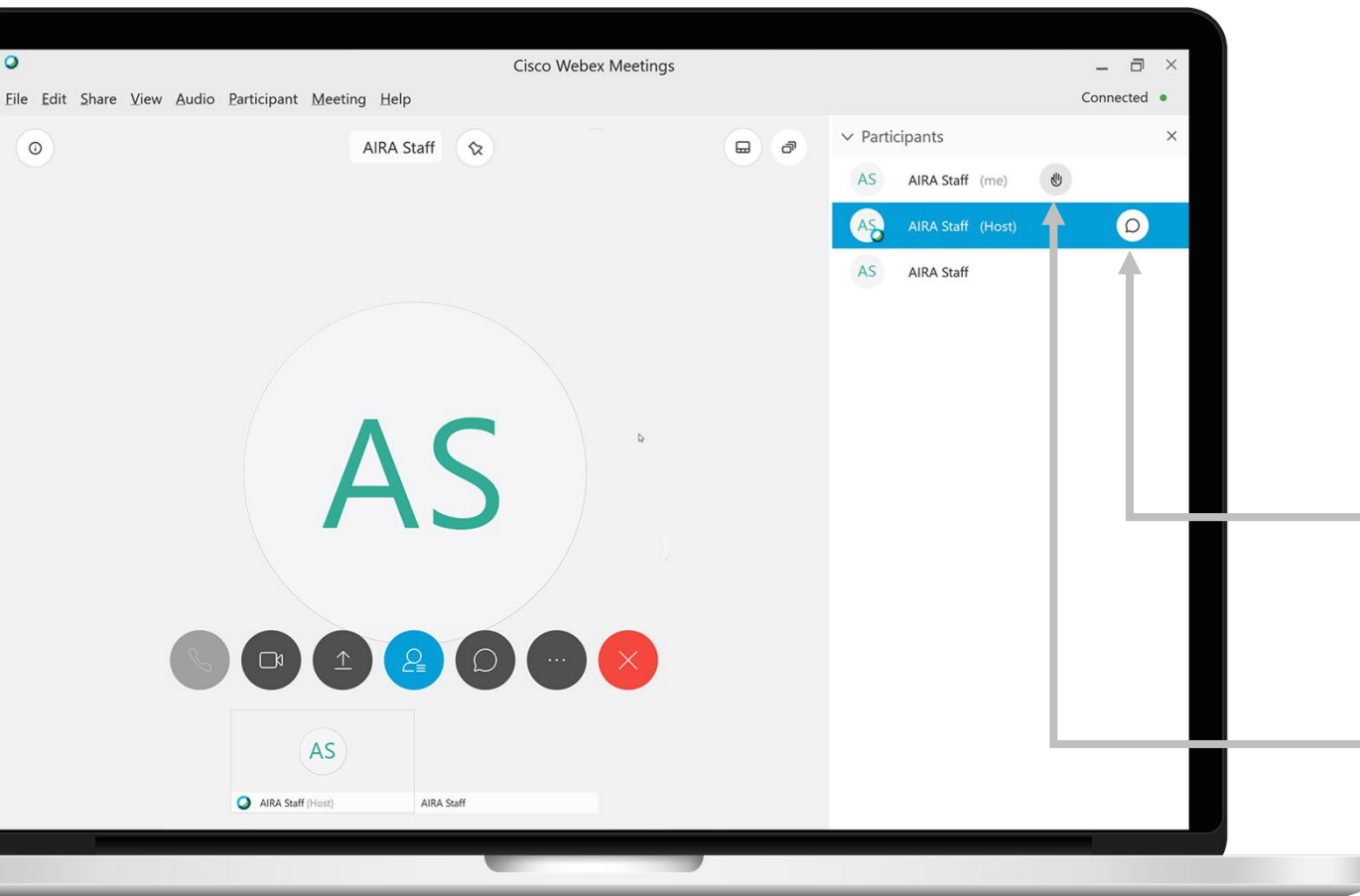
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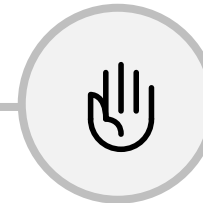
AIRA Discovery Session – Legacy Data

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Thank you to our presenters, and thanks to all of you for joining us!

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A brief evaluation survey will be sent out
following this webinar

The next Discovery Session will be October 28th
at 4pm ET

