



ARIZONA
— DEPARTMENT OF —
HEALTH SERVICES

Data Quality Playbook

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Financial Disclosures

- Danielle Falcone and Valentin Sostaric, faculty for this CE activity, have no relevant financial relationship(s) with ineligible companies to disclose.
- None of the planners for this activity have relevant financial relationships to disclose with ineligible companies.
- The Arizona Alliance for Community Health Centers is accredited by the Arizona Medical Association to provide medical education for physicians.
- The Arizona Alliance for Community Health Centers designated the 2025 Arizona Immunization Conference educational activity for a maximum of 11 hours AMA PRA Category 1 Credits Physicians should only claim credit commensurate with the extent of their participation in the activity.
- The Arizona Pharmacy Association is accredited by the Accreditation Council for Pharmacy Education (ACPE) as a provider of continuing pharmacy education.

In a world full of
cacti in the
desert...be a cactus
in the snow!!



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Saguaro National Park



nationalparkservice  My favorite part of winter is watching it on TV from Arizona.

Wait? Who changed the channel? Even in the Sonoran Desert, Saguaro National Park can be a snowy place. (Talk about some cold pricklies.) A snowstorm can be good for the Desert; as the snow melts it is able to percolate into the ground much more so than the heavy monsoon rains (which come quickly and leave quickly due to the hard soils).

Image: Snow covering green cacti and trees from a storm earlier this week at [@saguaronationalpark](#). NPS/Spreiser

[#cactus](#) [#arizona](#) [#cold](#)
[#winterwonderland](#) [#sonorandesert](#)



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Background

Duplicate Records

Bad Merges

Importance of Quality Data

Resources

Arizona - ASIIS



1998 - State Mandate to report immunizations

Registry - Developed and hosted by STC

Sites reporting: \approx **4,000**

HL7 reporters: \approx **3,300**

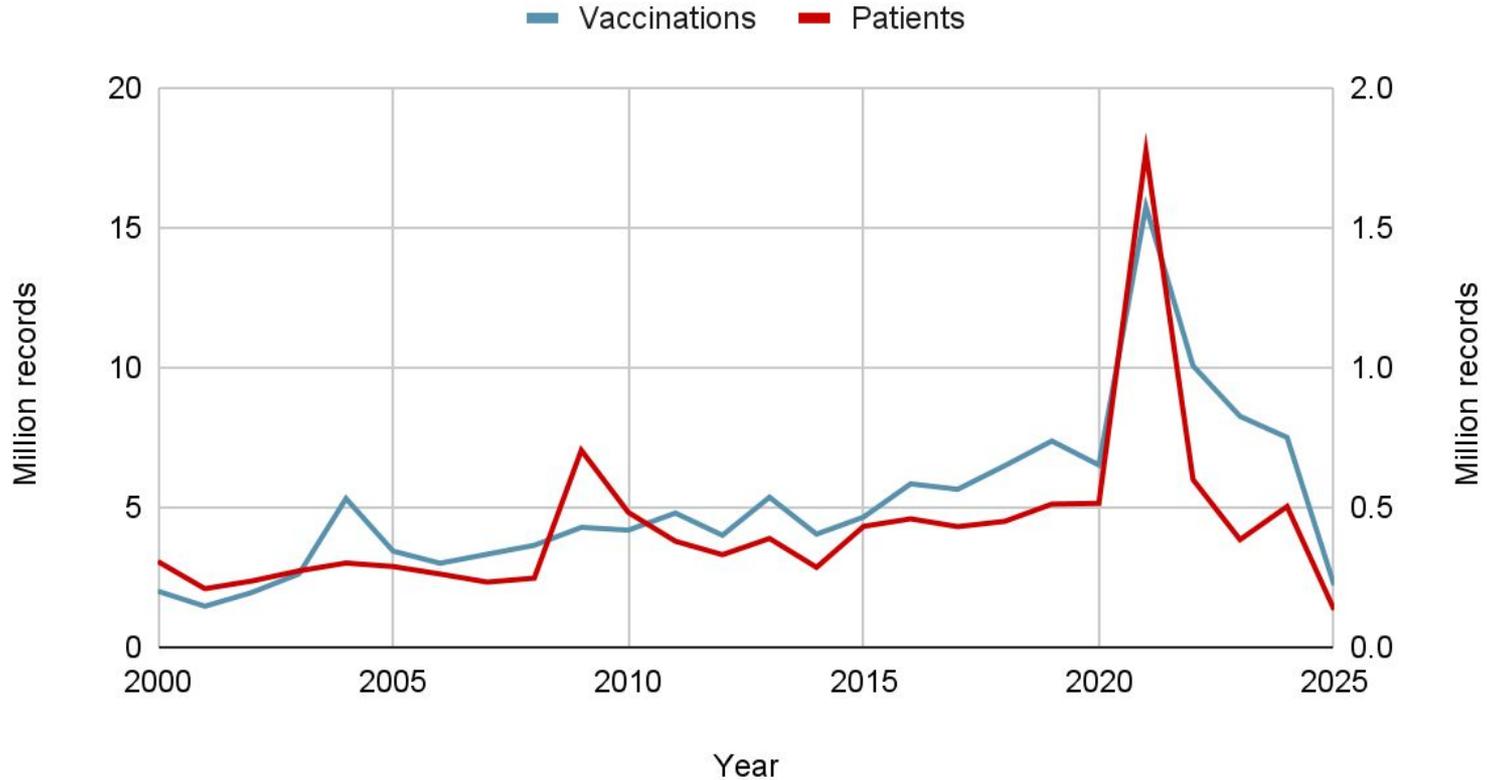
Bi-directional HL7 reporters: \approx **3,000**

VFC Providers: \approx **650**

Public Vaccines shipped in 2024: \approx **1,660,000**

Public Vaccines Admin. in 2024: \approx **1,370,000**

Vaccinations and Patients



ASIIS, April 2025

Master Patient Records: 12,080,602

Reserve Patient Records: 54,667,970

Master Vaccination Records: 138,412,467

Reserve Vaccination Records: 218,485,168

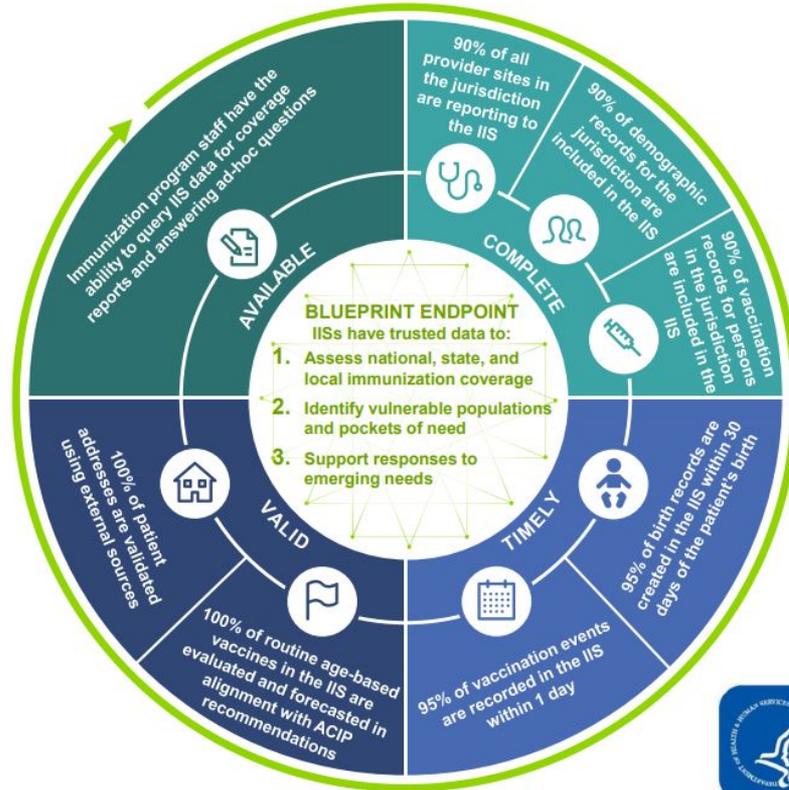


Data Quality Team Focus

- New team formed in 2021
- Bad merges
- Duplicate records
- Data quality issues with reporting
- Monitoring data
- Decrementing doses
- Adding/deleting/updating vaccines
- MyIR Matching Requests



CDC Data Quality Blueprint



Golden Standards of Data Quality

- #1 Validity** - List of rules, requirements and definitions for the data recording process;
- #2 Accuracy** - The records must be accurate and detailed for enabling the well-thought clinical decision making;
- #3 Consistency** - Set of definitions in order to provide a consistent data environment;
- #4 Uniqueness** - This indicates if it is a single recorded instance in the data set used. It is the most critical dimension for ensuring no duplication or overlaps;
- #5 Timeliness** - The fast access to the real-time data influences the service quality and enables the well-thought clinical decision making;
- #6 Completeness** - The records should be entered without gaps in the information and without duplication;
- #7 Integrity** - Maintenance and assurance of accuracy and consistency of the data over its entire life-cycle;
- #8 Conformity** - The data values of the same attributes must be represented in a uniform format and data types;
- #9 Precision** - The degree to which the data has been rounded or aggregated;
- #10 Currency** - Data Currency is about the reflection of the real-world state vs. the state captured in the dataset.

Data Quality Dimensions



Duplicate Records

Patient Demographics

required fields



- First Name
- Last Name
- Birth Date
- Guardian First Name
- Mother's Maiden Name
- Street
- City
- State
- Zip Code
- Sex
- Eligibility Category
- Patient Status

additional fields



- Middle Name
- Race & Ethnicity
- Birth File Number
- Multiple Birth & Birth Order
- Phone Number / Phone Use Code
- Email
- Guardian First & Last Name
- Guardian 2 First & Last Name
- Health Plan Information



MaddieThaBaddiee@yahoo.com



Dirty Data

What can dirty data be:

- Various transpositions and typos
- Misspelling and variations in records formatting and naming



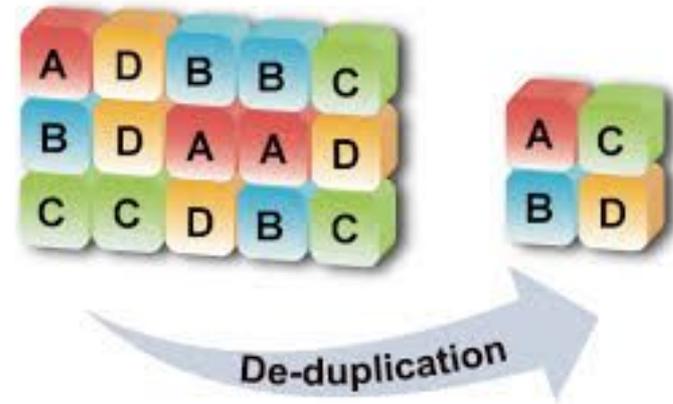
Dirty Data

- **Incorrect data** - validation rules in PHC-Hub (Patients age should be less than 120 years, and months can range only from 1 to 12)
- **Inaccurate records** - Lot numbers and vaccine types (may be correct but inaccurate). The zip code 85007 of Phoenix is accurate, and the state code of New York is NY, but when you use them together, it will be inaccurate.
- **Inconsistent data** - middle names vs middle initials, nicknames vs. legal names
- **Incomplete records** - missing address, phone number, email etc. This happens when users responsible for data entry, misinterpret the value of some data and avoid to enter it.



Duplicate Patients

- The Online Interface forces the user to perform a thorough search for a patient, but duplications are still possible due to the following while performing a search:
 - Variations in the name spelling
 - Address changes
 - Typographical errors
- Overall, any difference between how the patient was originally entered and how it's being searched for can result in the system not locating a match and thus, a duplicate patient is entered.
- Every time a patient demographics is sent via a HL7 message, the registry compares the incoming information with the one in the system. If it finds more than one record with matching information that vaccination will be sent to Manual Deduplication.



Patient Search

- The "Search" process in ASIIS requires a minimum amount of search criteria to be entered.
- This information is fed into a sophisticated search algorithm that is able to search many different combinations of the information against the database tables.

Patient Search [Click here to use the 'advanced' search](#)

First Name or Initial: ID:
Last Name or Initial: SIIS Patient ID / Bar Code:
Birth Date: Chart Number:

Family and Address Information:

Guardian First Name: Mother's Maiden Name:
Street:
City: State:
Zip Code: Phone Number:
Country:

Note: When searching by First and Last Name, you may use the wildcard character % to replace multiple characters and _ to replace a single character.
 Check here if adding a new patient.

Patient Search Results

Records Found = 7 Search Criteria: Birth Date

Show entries Search:

First Name	Middle Name	Last Name	Birth Date	SIIS Patient ID	Grd First Name	Grd Last Name
SUBJECTRR		TUSTESTRR	09/09/2016	7765076	TUSR	SUBJECTTUSRR
SUBJECTSS		TUSTESTSS	09/09/2016	7765075	TUSS	SUBJECTTUSSS
SUBJECTTT		TUSTESTTT	09/09/2016	7765074	TUST	SUBJECTTUSTT
SUBJECTUU		TUSTESTUU	09/09/2016	7765078	TUSU	SUBJECTTUSUU
SUBJECTVV		TUSTESTVV	09/09/2016	7765077	TUSV	SUBJECTTUSVV
SUBJECTWW		TUSTESTWW	09/09/2016	7765080	TUSW	SUBJECTTUSWW
SUBJECTXX		TUSTESTXX	09/09/2016	7765079	TUSX	SUBJECTTUSXX

Showing 1 to 7 of 7 entries

Patient Search

Patient Search		Click here to use the 'simple' search	
Patient (basic information)		Patient (unique I.D.'s)	
First Name:	<input type="text"/>	SSN:	<input type="text"/>
Middle Name:	<input type="text"/>	Birth File Number:	<input type="text"/>
Last Name:	<input type="text"/>	Medicaid Number:	<input type="text"/>
Birth Date:	<input type="text"/>	Chart Number:	<input type="text"/>
Birth Order:	<input type="text" value="Select..."/>	WIC ID:	<input type="text"/>
		SIIS Patient ID / Bar Code:	<input type="text"/>
Family			
Guardian First Name:	<input type="text"/>	Mother's Maiden Name: (Last Name Only)	<input type="text"/>
Guardian Last Name:	<input type="text"/>	Guardian SSN:	<input type="text"/>
Address			
Street:	<input type="text"/>		
City:	<input type="text"/>	State:	<input type="text" value="Select..."/>
Zip Code:	<input type="text"/>	Phone Number:	<input type="text"/>
Association:	<input type="text" value="Select..."/>		
<input type="button" value="Clear"/> <input type="button" value="Search"/>			
Advanced Searches:		<input checked="" type="radio"/> (edit or view only): <input type="radio"/> Add / Edit / View	
Simple Searches (edit or view only):			
Quick Searches	Other Searches	First Name / Last Name	
<input type="radio"/> First Initial, Birth Date	<input type="radio"/> Guardian	<input type="radio"/> First Name <input type="radio"/> FN&LN <input type="radio"/> Last Name	
<input type="radio"/> Last Initial, Birth Date	<input type="radio"/> Birth File Number	Select search type for First and Last Name:	
<input type="radio"/> Social Security Number	<input type="radio"/> Medicaid Number		
<input type="radio"/> Birth Date	<input type="radio"/> Chart Number		
<input type="radio"/> Phone Number	<input type="radio"/> WIC ID		
	<input type="radio"/> SIIS Patient ID		
	<input type="radio"/> Association	<input type="radio"/> Exact	
	<input type="radio"/> Mother's Maiden Name	<input type="radio"/> Like (Use % or _ as wildcard characters)	
	<input type="radio"/> Guardian First Name, Birth Date	<input checked="" type="radio"/> Phonetic (Search by sound of word)	

Patient Search

First Name or Initial:	<input type="text" value="danielle"/>	WIC ID:	
Last Name or Initial:	<input type="text" value="falcone"/>	SIIS Patient	
Birth Date:	<input type="text" value="mm/dd/yyyy"/>	Chart Number	
		SSN:	

Family and Address Information:

Guardian First Name:	<input type="text"/>	Mother's Maiden Name:	<input type="text"/>
Street:	<input type="text"/>		
City:	<input type="text"/>	State:	<input type="text"/>
Zip Code:	<input type="text"/>	Phone Number:	<input type="text"/>
Country:	United States <input type="button" value="x"/>		

Note: When searching by First and Last Name, you may use the wildcard character % to
 Check here if adding a new patient.

Patient Search Results

Records Found = 1

Show entries

First Name	Middle Name	Last Name	Birth Date
DANIELLE		FALCONE	12/12/1991

Showing 1 to 1 of 1 entries



Patient Search

First Name or Initial:	<input type="text" value="dani%"/>	WIC ID:	
Last Name or Initial:	<input type="text" value="falcone%"/>	SIIS Patient	
Birth Date:	<input type="text" value="mm/dd/yyyy"/>	Chart Number	
		SSN:	

Family and Address Information:

Guardian First Name:	<input type="text"/>	Mother's Maiden Name:	<input type="text"/>
Street:	<input type="text"/>		
City:	<input type="text"/>	State:	<input type="text"/>
Zip Code:	<input type="text"/>	Phone Number:	<input type="text"/>
Country:	United States <input type="button" value="x"/>		

Note: When searching by First and Last Name, you may use the wildcard character % to
 Check here if adding a new patient.

Patient Search Results

Records Found = 4

Show entries

First Name	Middle Name	Last Name	Birth Date
DANIEL		FALCONE	
DANIEL		FALCONE	
DANIELA		FALCONE	
DANIELLE		FALCONE	



Adding New Patient

Patient Search		Click here to use the 'advanced' search				
First Name or Initial:	<input type="text" value="SUBJECTAA"/>	ID:	<input type="text"/>			
Last Name or Initial:	<input type="text" value="AZTESAA"/>	SIIS Patient ID / Bar Code:	<input type="text"/>			
Birth Date:	<input type="text" value="09/09/2016"/>	Chart Number:	<input type="text"/>			
Family and Address Information:						
Guardian First Name:	<input type="text" value="AZGUAA"/>	Mother's Maiden Name:	<input type="text" value="AZIC"/>			
Street:	<input type="text" value="159 S MAIN ST"/>					
City:	<input type="text" value="PHOENIX"/>	State:	<input type="text" value="AZ"/> x ▾			
Zip Code:	<input type="text" value="85007"/>	Phone Number:	<input type="text" value="(480)364-3899"/>			
Country:	<input type="text" value="United States"/> x ▾					
Note: When searching by First and Last Name, you may use the wildcard character % to replace multiple characters and _ to replace a single character.						
<input checked="" type="checkbox"/> Check here if adding a new patient.		(Required fields are highlighted)				
		<input type="button" value="Clear"/>	<input type="button" value="Search"/>			
Patient Search Results						
Records Found = 0		Search Criteria: Advanced Search - Add / Edit / View				
Show	<input type="text" value="10"/> ▾ entries	Search:	<input type="text"/>			
First Name	Middle Name	Last Name	Birth Date	SIIS Patient ID	Grd First Name	Grd Last Name
No data available in table						
Showing 0 to 0 of 0 entries						
Before adding, check to make sure the patient you want to add is not listed above or not pending manual review.						
						<input type="button" value="Add Patient"/>

Adding New Patient

Patient Search Click here to use the 'advanced' search

First Name or Initial:	<input type="text" value="SUBJECTEE"/>	WIC ID:	<input type="text"/>
Last Name or Initial:	<input type="text" value="TUSTESTEE"/>	SIIS Patient ID / Bar Code:	<input type="text"/>
Birth Date:	<input type="text" value="03/03/2016"/>	Chart Number:	<input type="text"/>

Family and Address Information:

Guardian First Name:	<input type="text" value="TUSEE"/>	Mother's Maiden Name:	<input type="text" value="TTEST"/>
Street:	<input type="text" value="123 Main St"/>		
City:	<input type="text" value="PHOENIX"/>	State:	<input type="text" value="AZ"/>
Zip Code:	<input type="text" value="85007"/>	Phone Number:	<input type="text" value="(602)364-3619"/>
Country:	<input type="text"/>		

Note: When searching by First Name, Last Name, or Birth Date, you can use * for wildcards and _ to replace a single character. (Required fields are highlighted)

Check here if adding a new patient. This record already exists in the database. An exact match has been found.

Patient Search Results

Records Found = 1

Show entries

First Name	Middle Name	Last Name	Birth Date	SIIS Patient ID	Grd First Name	Grd Last Name
SUBJECTEE		TUSTESTEE	03/03/2016	7500799	TUSEE	SUBJECTTUSEE

Showing 1 to 1 of 1 entries

Adding Patient Birth Order

Patient Demographics Edit

Patient Status

State Level: Active Organization Level: Inactive
County Level: Active (Maricopa)

Patient

First Name: TEST Race: Other x
Middle Name: Ethnicity: --select--
Last Name: ACCEPT Language: --select--
Suffix: --none--

Birth Date: 04/08/1998 Medicaid #: **Birth Order:** 2
Birth File #: Nationality: --select--
Sex: FEMALE Passport #: **VFC Status:** Ineligible
Mother Maiden Name: ACCEPT Visa #: **Military:**
Reminder/Recall Publicity Code: --select--

Comments:

--Address

Address 1:
Address 2: City:
Country: United States State: --select-- Zip Code:
County/Parish: --select-- Email:
Address Type: --select-- Valid? Primary? **Add**

Street	City	ZIP	Type	Valid	Primary	
1 TREE	AVONDALE	85323		Y	Y	<input type="button" value="Edit"/> <input type="button" value="Remove"/>



Adding Patient Birth Order

Patient Demographic Master View



Record Info

SIIS Patient ID	9221379		
Organization Owner	71008 - CHD - MARICOPA		
Facility Owner	57122 - MARICOPA CHD- WEST (95TH AVE)		
Entry Date	04/08/2021 10:46:34 AM	Last Update	03/21/2024 08:23:48 PM
Entered By	MTX GLOBAL HL7 STAGING	Last Updated By	VALENTIN SOSTARIC

Patient Status

State Level	Active	Organization Level	Inactive
County Level	Active (Maricopa)		

Patient

First Name	TEST	Race	Other
Middle Name		Ethnicity	
Last Name	ACCEPT	Language	
Suffix			
Birth Date	04/08/1998	Medicaid #	
Birth File #		Multi Birth Indicator	Y
		Birth Order	2
Age	25 yrs	Military	
Reminder/Recall		Recall Attempts	0
Publicity Code			
Sex	FEMALE	Nationality	
Mother Maiden Nm	ACCEPT	Passport #	
VFC status	Ineligible	Visa #	
		Vaccine Supply	PRIVATE

- Primary Address

Address 1	1 TREE	Address 2	
City	AVONDALE	State	AZ
Zip Code	85323		
Email			
Country	United States	County/Parish	MARICOPA

Reporting Duplicate Patients

Patient Search [Click here to use the 'advanced' search](#)

First Name or Initial:	<input type="text"/>	ID:	<input type="text"/>
Last Name or Initial:	<input type="text"/>	SIIS Patient ID / Bar Code:	<input type="text"/>
Birth Date:	09/09/2016	Chart Number:	<input type="text"/>

Family and Address Information:

Guardian First Name:	<input type="text"/>	Mother's Maiden Name:	<input type="text"/>
Street:	<input type="text"/>		
City:	<input type="text"/>	State:	Select... ▾
Zip Code:	<input type="text"/>	Phone Number:	<input type="text"/>
Country:	United States X ▾		

Note: When searching by First and Last Name, you may use the wildcard character % to replace multiple characters and _ to replace a single character.

Check here if adding a new patient.

Patient Search Results

Records Found = 8 Search Criteria: Birth Date

Show entries Search:

First Name ▲	Middle Name ◆	Last Name ◆	Birth Date ◆	SIIS Patient ID ◆	Grd First Name ◆	Grd Last Name ◆
SUBJECTAA	AA	AZTESAA	09/09/2016	7768558	AZGUAA	AZTESAA
SUBJECTRR		TUSTESTRR	09/09/2016	7765076	TUSR	SUBJECTTUSRR
SUBJECTSS		TUSTESTSS	09/09/2016	7765075	TUSS	SUBJECTTUSSS
SUBJECTTT		TUSTESTTT	09/09/2016	7765074	TUSTT	SUBJECTTUSTT
SUBJECTUU		TUSTESTUU	09/09/2016	7765078	TUUU	SUBJECTTUSUU
SUBJECTVV		TUSTESTVV	09/09/2016	7765077	TUSVV	SUBJECTTUSVV
SUBJECTWW		TUSTESTWW	09/09/2016	7765080	TUSWW	SUBJECTTUSWW
SUBJECTXX		TUSTESTXX	09/09/2016	7765079	TUSXX	SUBJECTTUSXX

Showing 1 to 8 of 8 entries ◀ ▶

Reporting Duplicate Patients

Report Duplicate Patients

Reason for deduplication:

Please select two or more records you wish to deduplicate

Select	First Name	Middle Name	Grd Last Name
<input type="checkbox"/>	SUBJECTAA	AA	AZTESAA
<input type="checkbox"/>	SUBJECTRR		SUBJECTUSRR
<input type="checkbox"/>	SUBJECTSS		SUBJECTUSSS
<input type="checkbox"/>	SUBJECTTT		SUBJECTUSTT
<input type="checkbox"/>	SUBJECTUU		SUBJECTUSUU
<input type="checkbox"/>	SUBJECTVV		SUBJECTUSVV
<input type="checkbox"/>	SUBJECTWW	TUSTESTWW 09/09/2016 7765080 TUSWW	SUBJECTUSWW
<input type="checkbox"/>	SUBJECTXX	TUSTESTXX 09/09/2016 7765079 TUSXX	SUBJECTUSXX

Reason for deduplication:

- select--
- select--
- DUPLICATE GUARDIAN INFORMATION
- FOUND PLEASE REVIEW
- HARD COPY REVIEWED
- INCOMING RECORD CONTAINS CORRECTED DATA
- OTHER PLEASE SPECIFY
- PARENT COPY MATCHES IMMUNIZATIONS IN REGISTRY
- PATIENTS SHARE MANY IMMUNIZATION DATES
- PREVIOUS IMMUNIZATION PROVIDERS MATCH ON DEMOGRAPHIC SCREEN
- SIGNIFICANT SHARED DEMOGRAPHIC DATA MORE THAN NAME AND DOB

Reporting Duplicate Patients

Please select the master record to be merged into:

Patient Set Merge		
Master Patient:	<input type="radio"/>	<input type="radio"/>
SIIS ID		
First Name	SUBJECTGG	SUBJECTHH
Middle Name		ROBERT
Last Name	TUSTESTGG	TUSTESTHH
Suffix		JR
Birth Date	03/03/2016	03/03/2016
Sex	MALE	MALE
Medicaid Number		
Birth File		
Race		Asian
Language		English
Mother Maiden Name		ELISA
Guardian First Name		JOTEST
Guardian Middle Name		MARY
Guardian Last Name		NUMBERONE
Street Address		321 S MAIN ST
City		PHOENIX
State		ARIZONA
Zip Code		85009
Phone		
Email		
Health Plan		
Health Plan ID		
HP Enroll Date		
Birth Order		
Birth Count		

Place for comments

Reason for deduplication:
FOUND WHEN SEARCHING - PLEASE
REVIEW FOR DUPLICATE

FOUND PLEASE REVIEW

Back Merge

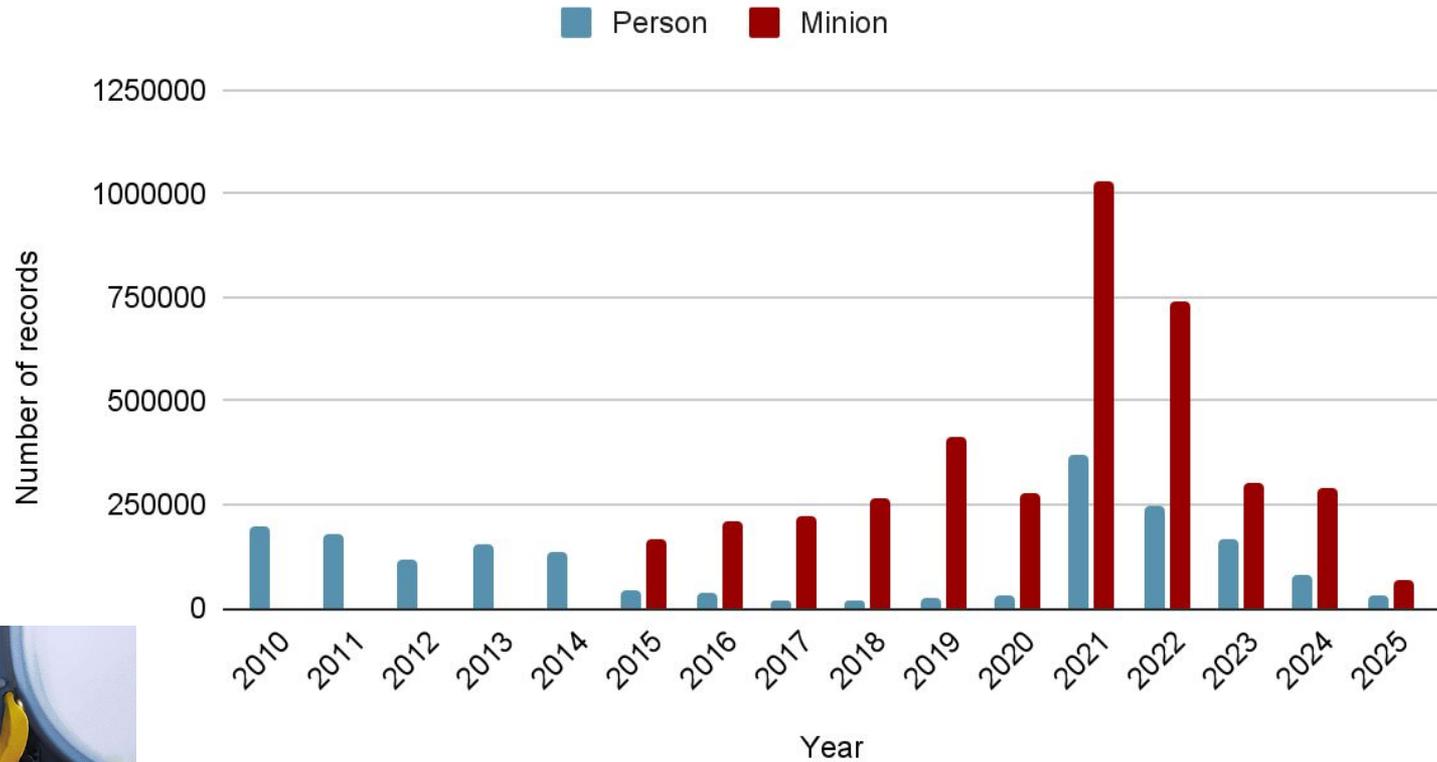
Manual Deduplication

- The registry is designed to minimize the number of duplicate patient and vaccination records within it.
- Manual De-duplication is a "manual" process when an administrator visually reviews both the incoming patient record and the record residing in the "Reserve" table and makes a decision. This decision is either to create a new patient record or merge the patient records.

The number of records coming in daily for "Manual Deduplication" is enormous!

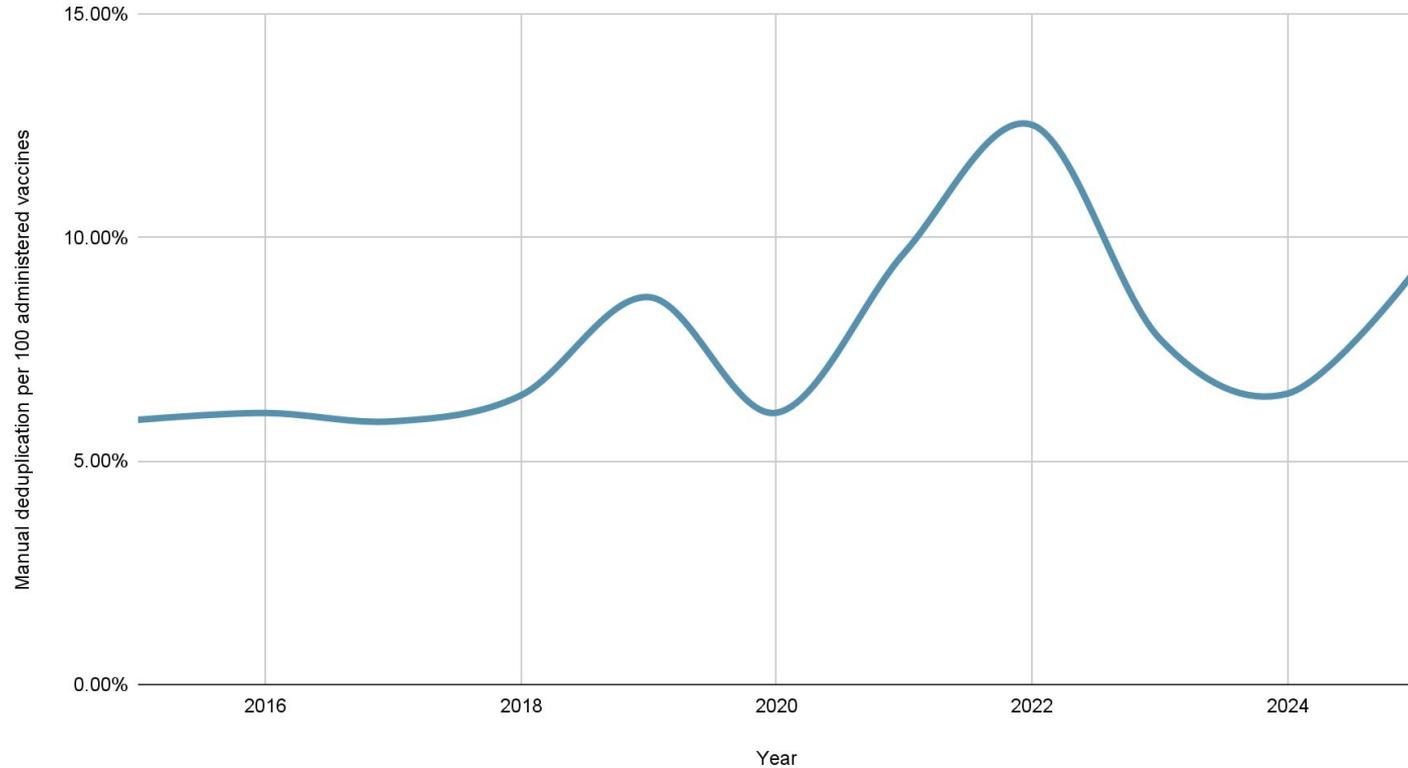
Manual Deduplication - Over the years

Manual Deduplication Decision



Manual Deduplication - Over the years

Manual deduplication per 100 administered vaccines per Year



Manual Deduplication

Join at [menti.com](https://www.menti.com) | use code **6168 0572**

1. Scan the QR Code
2. Click “Sign up for Mentimeter”
3. Enter the code at the top of the screen
4. Hit the “Join” button



Other factors we consider:

- Last names can change due to marriage, divorce, custody changes, etc.
- Addresses change when patients move.
- Twins will have all fields in common except for first names and possibly middle names.
- Sons are named the same as their fathers where the record difference will only be seen in the birth date.

Manual Deduplication

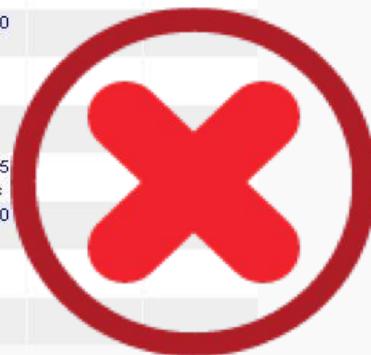
Foster and shelter homes can have several children located at the same address, so addresses and phone numbers are not significant for the record comparison.

We look for swapped entries; such as the First Name being placed in the Last Name field, or Middle Name in the First Name field, etc.

Bad Merges

Separating Bad Merges

Vaccination Summary									
Vaccinations outside the ACIP schedule are marked with an 'X'.									
Vaccine	1	2	3	4	5	6	7	8	
DTaP/DTP/Id	01/10/2001 10 weeks	03/14/2001 4 months	05/11/2001 6 months	02/12/2002 15 months	11/04/2005 5 years	01/04/2010 9 years	04/19/2010 9 years	06/14/2010 9 years	02/17/2015 14 years
Tdap	11/11/2010 10 years								
OPV/IPV	01/10/2001 10 weeks	03/14/2001 4 months	05/11/2001 6 months	11/04/2005 5 years	01/04/2010 9 years	04/19/2010 9 years	06/14/2010 9 years	02/17/2015 14 years	
MMR	X 11/06/2001 12 months	11/04/2005 5 years	02/17/2015 14 years						
Hib	01/10/2001 10 weeks	03/14/2001 4 months	02/12/2002 15 months						
Hep A	11/01/2002 24 months	11/03/2003 3 years							
Hep B - 3 Dose	01/10/2001 10 weeks	03/14/2001 4 months	08/28/2001 9 months	01/04/2010 9 years	04/19/2010 9 years	06/14/2010 9 years			
Varicella	X 11/06/2001 12 months	11/05/2008 8 years	02/17/2015 14 years						
Rotavirus	X 01/04/2010 9 years	X 04/19/2010 9 years	X 06/14/2010 9 years						
Influenza	11/05/2008 8 years	10/29/2009 8 years	10/04/2010 9 years	11/07/2011 11 years	09/18/2013 12 years	01/02/2015 14 years			
Pneumo (PCV)	01/10/2001 10 weeks	03/14/2001 4 months	05/11/2001 6 months	01/04/2010 9 years	04/19/2010 9 years	06/14/2010 9 years			
Meningococcal	11/07/2011 11 years								
Novel Influenza H1N1-09	10/29/2009 8 years								



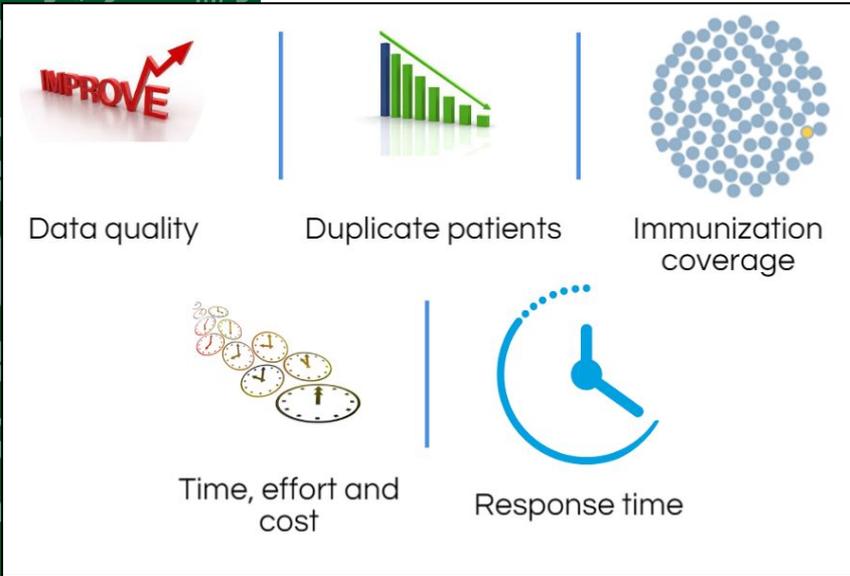
Data Quality - Demographics

Entering current and accurate patient demographics helps ASIIS and all of us to find the correct patient and avoid creating duplicate patients and helps to prevent bad merges.



Importance of Quality Data

How is this all tied together?



Improving the data quality of patient records leads to:

- a. Reducing the number of duplicate patients in ASIIS and helps to prevent bad merges
- b. Reducing the number of duplicate patients in ASIIS which will improve providers coverage rates
- c. Reduces labor time and effort in everyday work
 - i. Providers finding the patients, reviewing reports
 - ii. State deduplication of the records, reviewing patient data quality
- d. Reduces response time when providing quality services to our clients - the patients

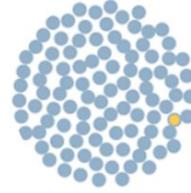
Long-term Benefits of Good Data

1. Population coverage rates and analytics

1. Accurate Statistical data

1. Accurate Research data

1. Effective Reminder/Recall



Population coverage



Research data



Statistical data



Reminder/Recall

Immediate Benefits of Good Data



MyIR

Ultimately:

- Prevents invalid or outside of ACIP recommendations (Advisory Committee on Immunization Practices)
- Accurate vaccine forecasting
- Preventing unnecessary vaccinations
- Accurate immunization records



ARIZONA DEPARTMENT
OF HEALTH SERVICES



**LIFETIME
IMMUNIZATION
RECORD**

Resources



Data Quality Best Practices

Data Quality Tips

Importance of Data Completeness

Tips for Ensuring ASiIS Data Quality

Bad Merges and What to Do

Ensure Your Office Submits Quality Data to ASiIS

VOMS 2.0 Training Guide

VOMS 2.0 Training Guide

Our team is dedicated to ensuring you have the knowledge and tools to maintain the highest standards in data quality.

We're here to support you every step of the way. If you have any questions or need further assistance, feel free to contact us.

Together, we can build a foundation for your success.

Ensure Your Office Submits Quality Data to ASiIS



High-quality data is accurate, complete, and timely:

- **Accurate:** ASiIS data accurately reflects what occurred in a clinical visit
- **Complete:** Full patient information is captured in ASiIS. The more patient information ASiIS has, the higher the chances that incoming data will be merged with the correct patient
- **Timely:** Timely submission helps ensure that the data is in ASiIS by the next doctor visit

High quality data benefits your office and patients:



Supports more accurate vaccine forecasting to decrease missed opportunities and over-vaccination



Ensures the patients immunization record is portable and follows the patient as they see other providers

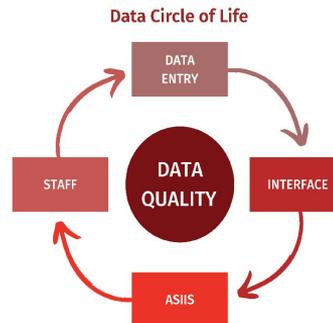


Helps schools and childcare facilities generate accurate and complete records required for entry



Supports the ability to assess accurate coverage rates and address gaps

Take these steps to ensure high data quality with your patient records:



High data quality is maintained by ensuring data being entered/reported into ASiIS is accurate and it takes the cooperation between all areas to make sure the information is accurate, complete, and timely.



Tips for Ensuring ASIIS Data Quality



Receive doses into ASIIS inventory before administering to patient

- When shipment arrives, open immediately
- Compare packing slip with contents in box and ASIIS order
- If you administered doses before receiving them into your ASIIS inventory, contact the AIPO immediately
- Check lot number
- Check manufacturer
- Check expiration date
- Do not reject doses



Ensure lot number, expiration date, manufacturer, funding source, NDC/CVX/CPT in EMR are accurate

- CDC [CVX/CPT code resources](#)
- Allow 24 hours for HL7 data transfer
 - Contact ASIIS_Electronic_Reporting@azdhs.gov for reporting issues seen from your HL7 interface



Use a [Dose Accountability Log](#) and/or [Lot Tracking Log](#) to help keep track of doses administered

- Go to azdhs.gov/vfc then "Operations Guide and Resources" to locate these under the Dose Accountability header



Ensure Patient Data Accuracy

- Check patient's name (use a legal name, not nicknames)
- Check date of birth
- Check address

Common Errors

Lot number typos

- 5 and S
- 2 or Z
- 4 or A
- G or 6
- 1 or i
- 0 or O
- Extra numbers or letters
- Missing numbers or letters
- Lot number 1/Lot number 2 - Due to not receiving lot numbers correctly in ASIIS when a shipment contains 2 lot numbers of the same vaccine type
- Transposed numbers and letters
- Extra numbers or letters
- Writing NDC number instead of lot number
- Writing lot number from the vial or syringe instead of the box
- Writing lot number from the diluent instead of the vaccine box

Vaccine Error

- Adult HepA and Pediatric HepA
- Adult HepB and Pediatric HepB
- HPV4 and HPV9
- Unspecified formula
- DTP and DTaP
- MenB and MenACWY
- PCV13 and PPSV23

Do not leave manufacturer, funding source, or lot number blank. Do not mark unknown. Any information left blank or marked unknown results in a non-complete record for the patient and will not decrement from your inventory.

Attend the Dose Accountability Webinar

- More tips on troubleshooting ASIIS inventory issues
- Held on the last Wednesday of every month (except in April and December - live sessions are offered in April at the annual immunization conference) 12-1:30pm
- Follow these [instructions to sign up](#)



Bad Merges

Important tips

Locating patient records can present challenges at times. In this informational, we will provide you with valuable tips on effectively managing and resolving issues related to merged patient records.

1

Do not create a new patient

Exercise caution when creating new patient records. It is crucial to consider the possibility that a patient may have been merged with another patient, have a twin, or be accidentally merged with a family member. Creating a duplicate patient record can lead to complications and inaccuracies in medical records.



2

Search for patient

It is crucial to employ efficient search techniques. One effective strategy is to utilize the patient's guardians as a search element. Collect comprehensive information about the patient's guardians and use their details as search parameters. Engage with guardians or patient to gather any additional information that could assist in locating the patient.



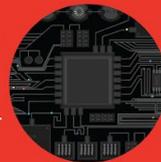
3

Reach out to Data Quality

Feel free to reach out to our [Data quality team](#). They will be able to assist in locating, merging, and with badly merged patients.

Their email address is: asiis_data_quality@azdhs.gov.

Be sure to provide as much information as possible when attempting to locate, merge or resolve a bad merge.



4

Prevention

To prevent data quality issues, we encourage you to continue to provide full and concise patient information to their records, diligently verify patient information, cross-reference existing records, and consult with relevant staff members or departments before proceeding with the creation of a new patient entry.



5

Closing

In conclusion, exercise caution when creating new patient records to avoid complications and inaccuracies. Consider the possibility of patient merges, twins, or accidental merges with family members. Efficient search techniques can be instrumental in locating patients. For assistance, our [Data Quality team](#) is available at asiis_data_quality@azdhs.gov.



***It is impppssible for the
Registry datasabe
software to
regocnize spilling
mestakes.***

Any
Questions

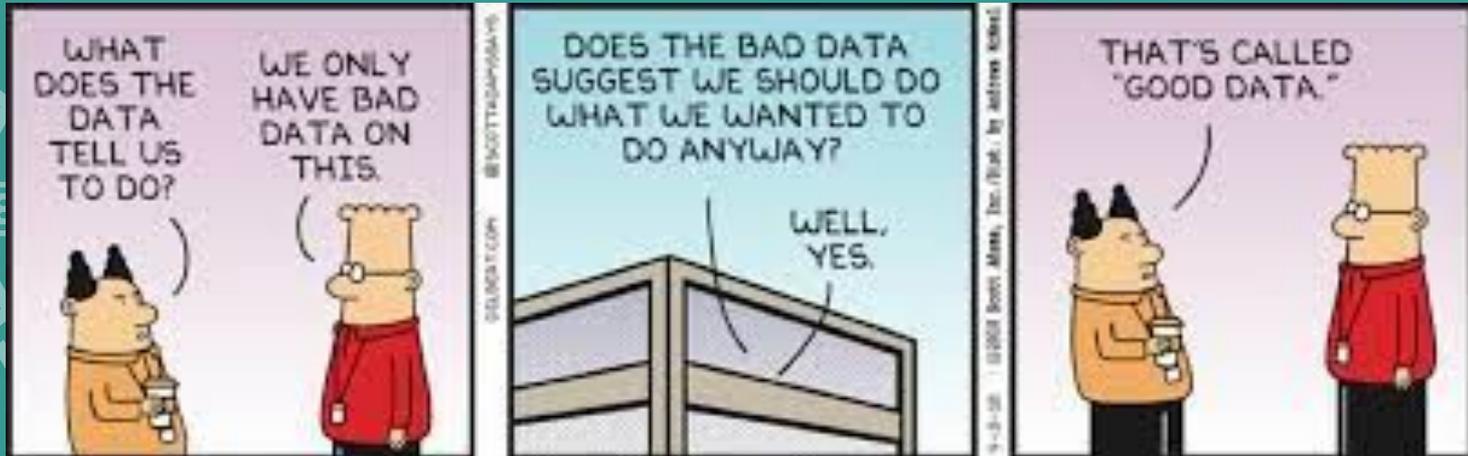
Take Away Moment

Write two things you can do or use from what you just learned.

Circle the one you plan to do first.



Conclusion





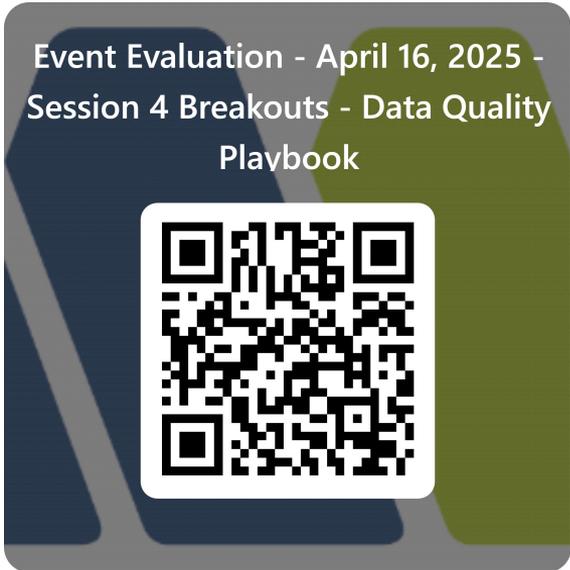
THANK
YOU!



Danielle Falcone | Immunization Data Quality Manager
Valentin Sostaric | Immunization Data Systems Chief
Arizona Department of Health Services



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