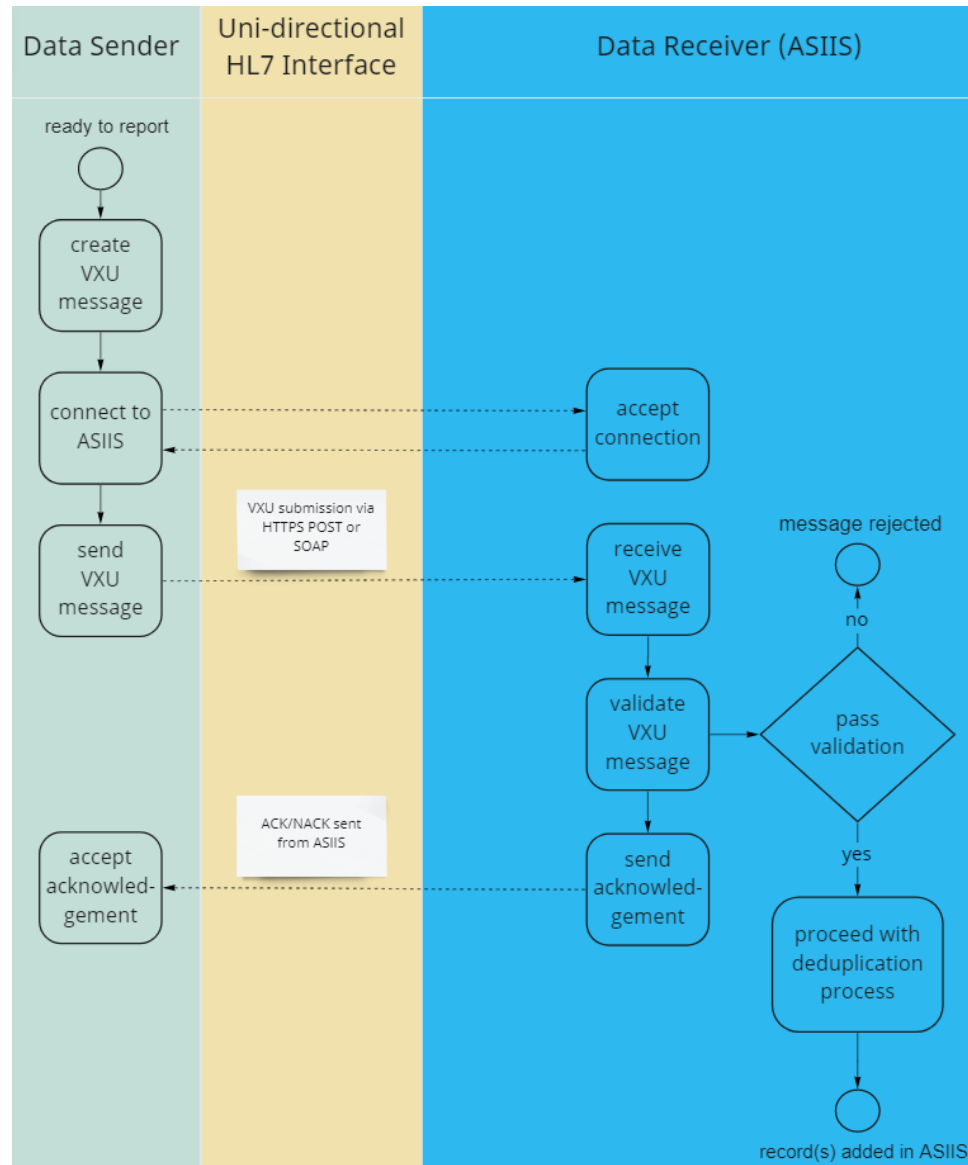


IMMUNIZATION REPORTING & LOT DECREMENTING BY HL7

ASIIS INTEROPERABILITY TEAM

It's just a
matching
game!

How Does HL7 Interface Work



Sample ACK (Successful Transmission)

MSH|^~\&|^|^|EHRSYSTEM^^|69001^^|20230303071852-

0700||ACK^V04^ACK|3396725260.100685267|P|2.5.1|||NE|NE|||Z23^CDCPHINVS|||

MSA|AE|eK3-DI-8.0.1|

ERR|||0^Message accepted^HL70357|I|||Patient Y44E15293 "MorganaAIRA BinghamAIRA" with 1 vaccination accepted into vaccination staging table|

ERR||PID^1^11^1^9|101^Required field missing^HL70357|W|||patient address county is missing|

ERR||PID^1^24^1|101^Required field missing^HL70357|W|||patient multiple birth indicator is missing|

Sample NACK (Unsuccessful Transmission)

MSH|^~\&|^|^|EHRSYSTEM^^|69001^^|20230303071820-

0700||ACK^V04^ACK|6846508379.100684923|P|2.5.1|||NE|NE|||Z23^CDCPHINVS|||

MSA|AE|eK3-DI-21.3.1|

ERR||RXA^1^5^^1|103^Table value not found^HL70357|E|||vaccination ndc code is unrecognized|

ERR||RXA^1^5^^1|100^Segment sequence error^HL70357|E|||vaccination ndc code is unrecognized - Message Rejected|

MSH|^~\&|^|^|EHRSYSTEM^^|69001^^|20230303071820-

0700||ACK^V04^ACK|6846508379.100684923|P|2.5.1|||NE|NE|||Z23^CDCPHINVS|||

MSA|AE|8171615151|

ERR||RXA^1^5^^1|103^Table value not found^HL70357|E|||vaccination ndc code is unrecognized|

ERR||RXA^1^5^^1|100^Segment sequence error^HL70357|E|||vaccination ndc code is unrecognized - Order Group Rejected|

ERR||PID^1^11^1^9|101^Required field missing^HL70357|W|||patient address county is missing|

ERR||PID^1^25^1|101^Required field missing^HL70357|W|||patient birth order is missing|

Scheduled HL7 Data Error Report

Sample Weekly HL7 Error Report

Report Criteria

- Start Date: March 03, 2023
- End Date: March 10, 2023
- Message Types: VXU
- Providers: AIRA AART TESTING #1 (69001)
- Display: Errors

Provider	Representative Facility ID	User	Profile #	Messages #	unique MRN #	Errors
69001	SIISCLIENT69279	NATHAN_69001_HL7	7632	4	4	1

Message level issues

Provider	Representative Facility ID	User	Profile	Import Log ID	Error / Warn	Date Sent	MRN	Issue	Issue Location	Message Control ID
69001	SIISCLIENT69279	NATHAN_69001_HL7	7632	18517726	E	Mar 07, 2023 7:48:27 PM	XYZ000001	vaccination ndc code is unrecognized - Message Rejected	NA	329588

Vaccination issues

Provider	Facility ID	User	Profile	Import Log ID	Error / Warn	Date Sent	MRN	Issue	Issue Location	Historical	Message Control ID	Vaccination Date	Vaccination
69001	SIISCLIENT69279	NATHAN_69001_HL7	7632	18517726	E	Mar 07, 2023 7:48:27 PM	XYZ000001	vaccination ndc code unrecognized	NA		329588	03/03/2023	MMR

How Does HL7 Message Work

MSH|^~\&|ASIIS|60143|ASIIS|ASIIS|20220922|20102770||VXU^V04^VXU_V04|X0005|P|2.5.1
 PID|1||12345-011|^^^MR||CVXOnly^PFR12plusBivalentTest02^||19580912|F||2106-3^White|5615-101 Test
 Dr^^Nowhere^AZ^85106^USA^^04013|||ENG^English|S|||||2186-5^Not Hispanic or Latino|||||N
 ORC|RE
 RXA|0|1|20220922|20220922|300^^CVX~59267-0304-02^^NDC~91312^^CPT|0.3|mL^Milliliters^UCUM||00^New immunization
 record^NIP001||^^^SIISCLIENT77324|||PFR12PLUS|20231031|PFR||CP|A
 RXR|IM^HL70162|LD^Left Deltoid^HL70163|Lot #|Manufacturer Code (MVX)
 OBX|1|CE|30963-3^Vaccine funding source^LN|1|VXC50|||||F
 OBX|2|CE|64994-7^Vaccine funding program eligibility category^LN|2|V01|||||F|||||VXC40^Eligibility captured at the immunization level^CDCPHINVS

Vaccine:	COVID-19, mRNA, LNP-S, bivalent booster, PF, 30 mcg/0.3 mL dose
Date Administered:	09/22/2022
Invalid Vaccination:	Invalid Coronavirus (SARS-CoV-2)(COVID-19): No immunization schedule found for this vaccine type.
Historical:	No
Manufacturer:	PFIZER, INC
Lot Number:	PFR12PLUS
Lot Facility:	HL7 TEST LOCATION - 18TH AVE
Funding Source:	PAN
Provider Noted on Record:	
Lot Noted on Record:	PFR12PLUS
Manufacturer Noted on Record:	
Vaccinator:	
Originating IIS:	ASIIS
Organization:	60143 - HL7TEST
Facility (Facility Sits ID):	HL7 TEST LOCATION - 18TH AVE (SIISCLIENT77324)
Facility Display Name:	
Anatomical Site:	Left Deltoid
Anatomical Route:	Intramuscular
Dose Size:	Full
Volume (CC):	0.3
VFC Status:	Ineligible

Lot Facility does not come from HL7

**** Important Take Away ****

Lot Facility does not get populated from HL7 message and is only valued when a dose was successfully linked to a lot in site's inventory, in other word, when the doses was decremented properly.

How to Spot Decrementing Issues in ASIIS

- Patient Records – Lot Facility field was empty

Vaccination/Medicine Detail	
Vaccine:	Vaccinia, smallpox monkeypox vaccine live, PF, SQ or ID injection
Date Administered:	07/11/2022
Historical:	No
Manufacturer:	BAVARIAN NORDIC A/S
Lot Number:	444444
Lot Facility:	
Funding Source:	PUB
Provider Noted on Record:	
Lot Noted on Record:	444444
Manufacturer Noted on Record:	
Vaccinator:	
Originating IIS:	ASIIS
Organization:	60137 - 0000 VOMS TRAINING
Facility (Facility SIIS ID):	MY PAN OFFICE (SIISCLIENT77485)

- Patient Detail Reports (By Service) – Decrementated column was valued as N

Patient Detail Report														
Run By														
<input type="radio"/> By Ownership <input type="radio"/> By Service <input checked="" type="radio"/> By Service (official vaccination record)														
Patient ID	First Name	Middle Name	Last Name	Birthdate	Guardian F.N.	Phone Number	VFC Eligible	Facility						
9795577	TEST01		NOTRECEIVINGORDERINTIME	01/01/1993			NO	MY PAN OFFICE						
Vaccine		Vacc. Date	Dose Size	Mfg. Code	Lot	Funding	VFC Eligible	Historical	Decrementated	Vaccinator	Facility	Date VIS Form Given	VIS Publication Date	Reporting Method
COVID-19, mRNA, LNP-S, bivalent booster, PF, 30 mcg/0.3 mL dose		09/12/2022	Full	PFR	333333	PAN	NO	N	N		MY PAN OFFICE			Real Time HL7
Vaccinia, smallpox monkeypox vaccine live, PF, SQ or ID injection		07/11/2022	Full	BN	444444	PUB	NO	N	N		MY PAN OFFICE			Real Time HL7

- Correct Decrementing Tool in VOMS 2.0 – Search for all funding sources

	Vaccine --	Manufacturer --	Organization/ Facility --	Lot # --	Funding Source --	Patient ID	Count # --	Date Imported --	Available Lot Numbers	Reason --
<input type="checkbox"/>	Vaccinia, Smallpox Monkeypox Vaccine Live, Pf, Sq or Id Injection	Bavarian Nordic A/s	0000 Voms Training (60137)/ My Pan Office (77485)	444444	PUB	VIEW	5	09/16/2022	VIEW LOTS	Lot Number is blank or not found in the Inventory
<input type="checkbox"/>	Covid-19, Mrna, Lnp-s, Bivalent Booster, Pf, 30 Mcg/0.3 MI Dose	Pfizer, Inc	0000 Voms Training (60137)/ My Pan Office (77485)	333333	PAN	VIEW	3	09/16/2022	VIEW LOTS	Lot Number is blank or not found in the Inventory
<input type="checkbox"/>	Covid-19, Mrna, Lnp-s, Bivalent Booster, Pf, 30 Mcg/0.3 MI Dose	Pfizer, Inc	0000 Voms Training (60137)/ My Pan Office (77485)	333333	PAN	VIEW	1	09/16/2022	VIEW LOTS	Lot Number is blank or not found in the Inventory
<input type="checkbox"/>	Covid-19, Mrna, Lnp-s, Bivalent Booster, Pf, 30 Mcg/0.3 MI Dose	Pfizer, Inc	0000 Voms Training (60137)/ My Pan Office (77485)	333333	PAN	VIEW	1	09/16/2022	VIEW LOTS	Lot Number is blank or not found in the Inventory

Viewing 1 - 4 out of 4 Entries

Core Vaccine Data Fields in Lot Decrementing

Patient Record in ASIIS

1. Vaccine Name *
2. Lot Number/Lot Noted on Record
3. Manufacturer
4. Organization/Facility (Facility SIIS ID) **
5. Funding Source

HL7 Message

1. RXA-5 (CVX/NDC/CPT)
2. RXA-15 (Lot Number)
3. RXA-17 (MVX)
4. MSH-4.1/RXA-11.4
5. OBX-5 (OBX-3.1 = 30963-3)

Vaccine:	COVID-19, mRNA, LNP-S, bivalent booster, PF, 30 mcg/0.3 mL dose
Date Administered:	09/22/2022
Invalid Vaccination:	Invalid Coronavirus (SARS-CoV-2)(COVID-19): No immunization schedule found for this vaccine type.
Historical:	No
Manufacturer:	PFIZER, INC
Lot Number:	PFR12PLUS
Lot Facility:	HL7 TEST LOCATION - 18TH AVE
Funding Source:	PAN
Provider Noted on Record:	
Lot Noted on Record:	PFR12PLUS
Manufacturer Noted on Record:	
Vaccinator:	
Originating IIS:	ASIIS
Organization:	60143 - HL7TEST
Facility (Facility SIIS ID):	HL7 TEST LOCATION - 18TH AVE (SIISCLIENT77324)
Facility Display Name:	
Anatomical Site:	Left Deltoid
Anatomical Route:	Intramuscular
Dose Size:	Full
Volume (CC):	0.3
VFC Status:	Ineligible

Q

HL7TEST

HL7 TEST LOCATION - 18TH AVE

"RECONCILE INVENTORY - No Reconciliation History Found"

Public

Private

Date Range: N/A

Vaccine	Lot#	Exp Date	Funding Source	Lot History	Quantity On Hand
Coronavirus (SARS-CoV-2)(COVID-19)					
Covid-19, Mrna, Lnp-S, Bivalent Booster, Pf, 10 Mcg/0.2 MI Dose Pfizer 12+ Covid-19 Bivalent Booster (10 Pack-10 Doses) (59267-0565-02) PFR 10 pack - VIALS NDC: 59267-0565-02	PFR5211	10/31/2023	PAN	VIEW	99
Covid-19, Mrna, Lnp-S, Bivalent Booster, Pf, 30 Mcg/0.3 MI Dose Pfizer 12+ Covid-19 Bivalent Booster (10 Pack- 6 Dose Vial)(300 Doses)(59267-0304-02) PFR 10 pack - VIALS NDC: 59267-0304-02	PFR12PLUS	10/31/2023	PAN	VIEW	99
Covid-19, Mrna, Lnp-S, Bivalent Booster, Pf, 50 Mcg/0.5 MI Or 25mcg/0.25 MI Dose Moderna Covid-19 Bivalent Booster (10pack-10dose Vials) (100 Doses) (80777-0282-99) MOD 100 pack - VIALS NDC: 80777-0282-99	MOD001	10/31/2023	PAN	VIEW	99.5

* The vaccine name displayed in patient record can be different than the description from what is displayed in VOMS 2.0, this does not always mean the provider send in the wrong vaccine code but rather a sign of mis-matching in other fields

** For provider who use reporting site to report, the organization/facility information can be different if the record was still in the middle of processing

More Checkpoints in Troubleshooting Decrementing Issues (1)

Did provider office receive VFC/Pandemic order that contained impacted lot number prior to vaccine administration or reporting date

Recommendation: Always complete order receiving process the same day when the shipment arrived

Example of undecrementated dose reported before order received in ASIIS

Vaccination/Medicine Detail	
Vaccine:	Vaccinia, smallpox monkeypox vaccine live, PF, SQ or ID Injection
Date Administered:	07/11/2022
Historical:	No
Manufacturer:	BAVARIAN NORDIC A/S
Lot Number:	444444
Lot Facility:	
Funding Source:	PUB
Provider Noted on Record:	
Lot Noted on Record:	444444
Manufacturer Noted on Record:	
Vaccinator:	
Originating IIS:	ASIIS
Organization:	60137 - 0000 VOMS TRAINING
Facility (Facility SIIS ID):	MY PAN OFFICE (SIISCLIENT77485)

LOT HISTORY

Vaccinia, Smallpox Monkeypox Vaccine Live, Pf, Sq or Id Injection Jynneos Lot #: 444444 Exp Date: 08/31/2023 Funding: PUB		
From:	<input type="text" value="Start date"/>	To: <input type="text" value="09/27/2022"/>
		<input type="button" value="REFRESH"/> <input type="button" value="PRINT"/>
Doses Received: 100		
Date	Order/Transfer #	Doses Received
09/17/2022	Unknown Order/Transfer #	100

More Checkpoints in Troubleshooting Decrementing Issues (2)

Had the record been completely processed and posted to the provider's account

Recommendation: Wait at least 24 hours (or vaccination date is displayed in blue when viewed under provider's facility account) before checking the decrementing status for reported doses (for RPT Site clients, it would take up to 48 hours)


Example of a record added by RPT Site client before fully processed and posted to their own account

Vaccination/Medicine Detail	
Vaccine:	COVID-19, mRNA, LNP-S, PF, 100 mcg/0.5mL dose or 50 mcg/0.25mL dose
Date Administered:	09/01/2021
Historical:	No
Manufacturer:	MODERNA US,INC.
Lot Number:	045C21A
Lot Facility:	
Funding Source:	PAN
Provider Noted on Record:	
Lot Noted on Record:	045C21A
Manufacturer Noted on Record:	MODERNA
Vaccinator:	
Originating IIS:	ASIIS
Organization:	64007 - RPT SITE - MY REPORTING ORGANIZATION
Facility (Facility SIIS ID):	MY REPORTING FACILITY (SIISCLIENT36073)
Facility Display Name:	
Anatomical Site:	Left Arm
Anatomical Route:	Intramuscular
Dose Size:	Full
Volume (CC):	0.5
VFC Status:	Ineligible

More Checkpoints in Troubleshooting Decrementing Issues (3)

Is the impacted lot number still active and has greater than zero available dose(s) in ASIIS inventory

Recommendation: Wait until the available dose amount for a lot becomes zero (0) before de-activating the lot number from inventory. Do not manually adjust the dose on hand amount to zero if reported doses not being deducted from your inventory.



LOT HISTORY

Dtap,ipv,hib,hepb | Vaxelis (Vials)
Lot #: 277227 | Exp Date: 08/31/2023 | Funding: VFC

From:

To:

Doses Received: 30

Date	Order/Transfer #	Doses Received
09/17/2022	Unkown Order/Transfer #	30

Doses Administered: 0

Admin Date	Patient ID	Vaccine Eligibility
No doses were administered for this date range.		

Reconciliation Adjustments: 1

Date	Description	Dose Change
09/29/2022	Correction of invalid entry	-30



Email Your Questions and Comments to Arizona Immunization Interoperability Team

ASIS_Electronic_Reporting@azdhs.gov



thank you!