MCIR: Getting "On-Board" with HL7

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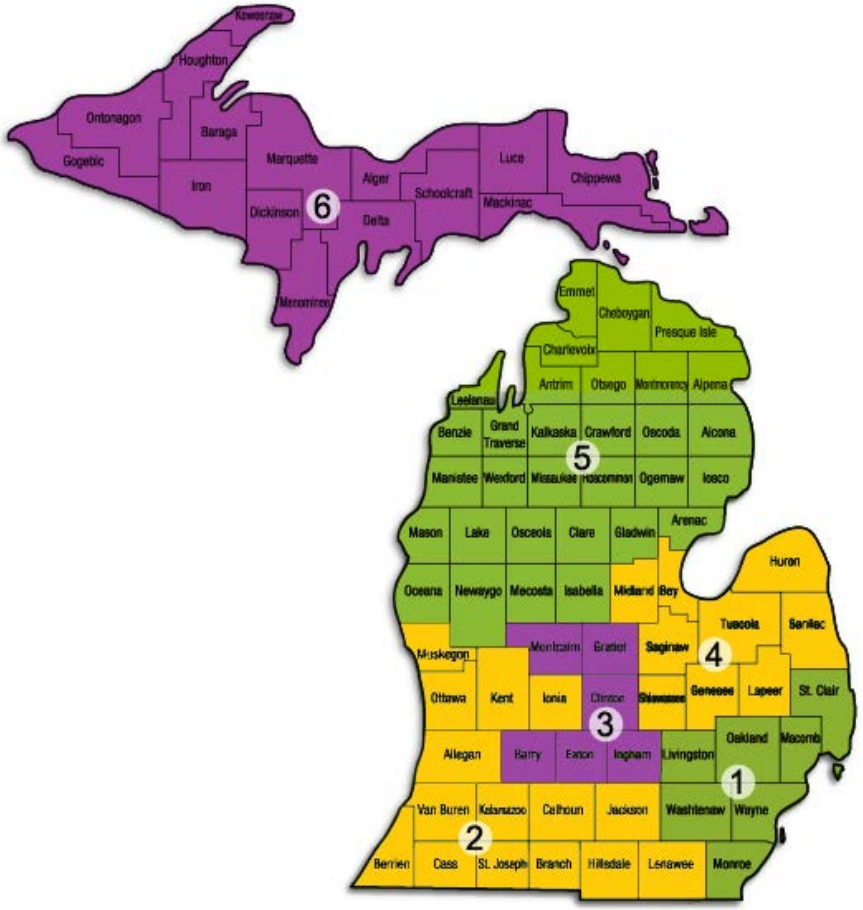
MCIR Basics

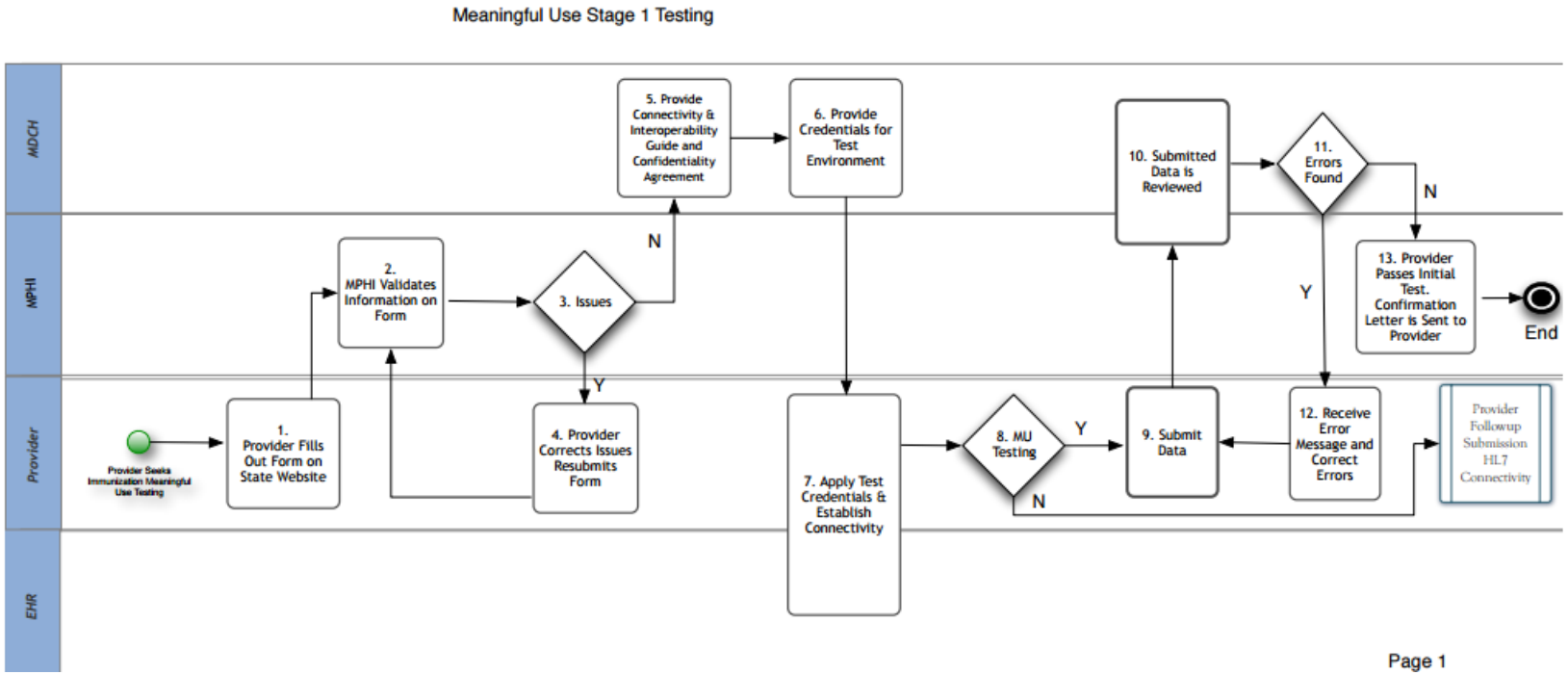
- Mandated reporting for children under the age of 20
- Lifespan IIS
- Six Regions (each with a Help Desk)
- State Help Desk
  - Regions/Schools
  - Meaningful Use



Tackling MU

- Created an onboarding process for eligible providers/hospitals looking to fulfill MU objectives by electronically submitting immunization data to MCIR
  - Registration process
  - Testing
  - Production Approval
  - Training
  - Follow-up
- Developed Task Flow Diagrams with Activity Narratives for Staff

Task Flow


Meaningful Use Stage 1 Testing
MDCH
MPHI
Provider
EHR
Provider Seeks Immunization Meaningful Use Testing
1. Provider Fills Out Form on State Website
2. MPHI Validates Information on Form
3. Issues
N
Y
4. Provider Corrects Issues Resubmits Form
5. Provide Connectivity & Interoperability Guide and Confidentiality Agreement
6. Provide Credentials for Test Environment
7. Apply Test Credentials & Establish Connectivity
8. MU Testing
Y
N
9. Submit Data
10. Submitted Data is Reviewed
11. Errors Found
N
Y
12. Receive Error Message and Correct Errors
13. Provider Passes Initial Test. Confirmation Letter is Sent to Provider
End
Provider Followup Submission HL7 Connectivity
Page 1

Task Flow

Activity Details / Narrative: The supporting information for each process

MEANINGFUL USE STAGE 1 TESTING

1. **PROVIDER FILLS OUT FORM ON STATE WEBSITE**

    - https://mimu.michiganhealthit.org/

2. **MPHI VALIDATES INFORMATION ON FORM**

3. **Issues**

    - If the MCIR ID is not present on the form the provider is encouraged to contact MCIR regional staff for the Site ID.
    - Regions should inquire if the provider administers immunizations.

4. **PROVIDER CORRECTS ISSUES RESUBMITS FORM**

5. **MDCH PROVIDES CREDENTIALS FOR TEST ENVIRONMENT**

    - Provider receives an email with instructions on how to submit their first test message into a secure web form.

MU Dashboard

About MCIR
Contact Us

Resource Library
Publications
Search
Links

SSO Login Page
Password Assistance

HL7 Information
Meaningful Use

Health Plans
Local Health Dept.
Public
Providers
Pharmacies
MCIR Regional Coord
Schools/Childcare

Home

Meaningful Use & MCIR

- DO YOU NEED TO TEST WITH THE IMMUNIZATION REGISTRY?
- HOW TO BEGIN TESTING WITH MCIR
- EXCLUSION
- MCIR & CMS/ONC FINAL RULES
- PUBLIC HEALTH MEANINGFUL USE FAQS
- OTHER USEFUL MEANINGFUL USE RESOURCES

www.mcir.org

MU Checklist

Michigan Care Improvement Registry (MCIR)
Provider Checklist for Achieving Meaningful Use (MU)

1. DETERMINING ELIGIBILITY

- ☐ Is the site an immunizing provider site or hospital? If not, you do not need to test with MCIR for MU.
- ☐ Is the site enrolled with MCIR? (Identify the 11-digit MCIR Provider Site Number)
  If yes, the office site administrator can look up the ID by following the directions provided through this link: Locating the MCIR Site Number.
  If not, contact your Regional MCIR Office: MCIR Regional Contacts to obtain it.
- ☐ The Electronic Health Record (EHR) must be certified. A complete list of certified products can be found at: Certified Health IT Product List

2. REGISTRATION

- ☐ Complete the registration at Michigan Public Health and Meaningful Use Testing Registration
- ☐ Upon completion of the registration and validation by the MCIR staff, the site will receive an email confirming registration and outlining the next steps in the process.

3. TEST MESSAGE SUBMISSION

- ☐ Two emails will be issued to the designated site contact, coming from this extension: @michigan.gov:
  - the first contains submission instructions
  - the second contains the password
- ☐ Follow the test message instructions by entering the exact password into the secure web form. Generate an HL7 immunization message from the EHR; copy the message and paste the message into the secure web form. Click Submit.
- ☐ An immediate acknowledgement from MCIR will be generated when a test is successful.
- ☐ Unsuccessful tests generate an error. The most common errors are:
  "not a VXU message" (incorrect format)
  "conflict with password and Facility ID"

4. CONFIRMATION LETTER

- ☐ A confirmation letter containing the current status will be issued from the State of Michigan in the form of an email attachment.

5. REGISTRATION OF INTENT

- ☐ To pass the Stage 1 and 2 requirements for Follow Up Submission, sites must submit a Registration of Intent notification stating they are actively engaged in the MCIR HL7 Data Quality Assurance (DQA) testing process. This notification must be made by email to: MU_MCIRHELP@mphi.org.

6. ONBOARDING

- ☐ Provide the MCIR Specification Guide to your technical contact.
- ☐ MCIR requires connectivity through a Qualified Organization/Sub-State Health Information Exchange (QO/SSHIE). Choose a QO to transport the HL7 message. A list of available QO's can be found at: Qualified Organizations in the State of Michigan
- ☐ Health Information Exchanges and/or the EHR Vendor should evaluate the message header for required fields as well as ensure that the HL7 message structure conforms to the HL7 message standards before the MCIR DQA process can start. Specific fields are required for HL7 data submission; the following guide details these requirements: MCIR Specification Guide
- ☐ MCIR will not acknowledge a message if the MSH-4 Sending Facility field is not populated with the site's unique HL7 Facility Id. The HL7 Facility Id is assigned by MCIR.
- ☐ Questions regarding the message format can be sent to: MCIRHELP (MU_MCIRHELP@mphi.org).

7. DATA QUALITY ASSURANCE (DQA) TESTING

- ☐ Once a QO is selected and connectivity is established, MCIR will work directly with the site and/or EHR Vendor until they are approved by MCIR for production submission. Live patient data messages that are sent from the QO/SSHIE to MCIR are used for DQA testing. There must be a sufficient number of messages submitted before the DQA process can start.
- ☐ MCIR DQA is conducted prior to production approval. The live patient data required during the DQA process is used for testing purposes only. Sites must continue to use the same method they currently use (hand entry/EXT Transfer upload) to enter data to MCIR until the production go-live date is set up.
- ☐ During DQA, MCIR provides feedback directly to the site and/or EHR Vendor. A site will be considered ready for production submission once all of the DQA issues are resolved. Detailed steps are included in the MCIR Data Quality Assurance Steps document.
- ☐ Approval for production will be delayed if the data being submitted does not include all of the required fields and if invalid data is being documented in the required fields.
- ☐ Upon DQA completion and before a go-live and training date can be set up, the provider must complete the MCIR Provider Site Responsibilities & Contact Information form and email a copy of the form to MU_MCIRHELP@mphi.org and their Regional MCIR Office..
- ☐ Go-live dates and training sessions for the MCIR HL7 Electronic Submission Summary Report (ESSR) will be set up in coordination with the site and the Regional MCIR Office.

Registration

HOW TO BEGIN TESTING WITH MCIR

Steps for Meaningful Use Testing and Submission to Michigan Public Health Systems

Stage 1:

1. Consult the Statement on the Availability of Public Health Systems to Conduct Meaningful Use Testing available at the end of this page (last updated on 9/20/2012).
2. Three public health systems are available for testing. Download the appropriate specifications guide.

   MCIR Testing Guide

   Michigan Care Improvement Registry Data Quality Assurance Process

   MDSS Testing and Submission Guide

   MSSS Testing and Submission Guide
3. Use the button below to "Register for Meaningful Use Public Health Testing."

   Register with HSTR
4. After MDCH receives your online registration, you will be contacted and given further details on the meaningful use (MU) testing process.
   - Upon receipt, your online registration will be placed into a queue. Testing priority is based upon (1) your agency's reporting period and (2) the order in which online registrations are received. Due to current testing volumes, please allow at least two weeks for a response. An email with test message submission instructions will be sent to the "Site Contact Person"
5. Submit your MU test messages.
   - The State of Michigan validates test messages ahead of and during 90-day attestation reporting periods. To allow time to address any unforeseen problems, your test messages should be submitted at least a month before the end of your 90-day attestation reporting period, and preferably well in advance of the beginning of the period. **You cannot test after the final day of your 90-day reporting period.**
6. After your organization has submitted a test message and has begun the follow-up submission process, MDCH will send a confirmation letter for your MU records.
7. If you have any questions regarding MU testing with Michigan Public Health Systems, please contact: DCHPublicHealthMU@michigan.gov.

Stage 2:

1. MDCH is required to declare the readiness of each of its public health systems and registries to receive electronic submissions of clinical data for Stage 2 of Meaningful Use. CMS intends to develop a centralized list ("CMS repository") of this readiness information that covers all 50 states. If MDCH fails to declare its capability for a given system in the CMS repository prior to the EHR reporting period, the provider may claim an exclusion from the relevant measure. **MCIR, MDSS, and MSSS intend to declare their readiness when the CMS repository is available. Until then, EPs and EHs must consult the Statement on the Availability of Public Health Systems to Conduct Meaningful Use Testing, below, to determine their eligibility for exclusion.** EPs and EHs are required to check the CMS repository within 60 days of the start of their Stage 2 EHR reporting period. If the registry with which they wish to initiate ongoing submission is not ready to receive data, the provider may claim an exclusion from the relevant measure.
2. EPs and EHs must register their intent to move to Ongoing Submission with the appropriate public health registry within 60 days of the start of their Stage 2 EHR reporting period. **Failure to do so will result in failing the relevant Stage 2 MU measure**.
3. If a public health agency sends a written request for movement toward ongoing submission, an EP or EH must respond within 30 days. **Failure to do so, on two separate occasions, will result in failing the relevant Stage 2 Meaningful Use measure**.
4. Detailed instructions for Stage 2 registration of intent to move to ongoing submission will be available soon.
5. In the event that CMS does not have the aforementioned Public Health Readiness repository established by August 1, 2013, please refer to the "Statement on the Availability of Public Health Systems to Conduct Meaningful Use Testing" using the button below.

   Statement on the Availability of Public Health Systems to Conduct Meaningful Use Testing

HL7 - Specs

Michigan Care Improvement Registry
HL7 2.5.1 Specification for Vaccination Messages

Message types supported:

- Vaccination Update (VXU)

The MCIR interface is currently at version 2.5.1 and is backwards compatible to earlier versions.

Document Description

This guide is intended for immunization providers and their vendors to assist in connecting to the Michigan Care Improvement Registry (MCIR). MCIR is an immunization registry that compiles complete immunization histories for children and adults in Michigan. Electronic Health Record (EHR) systems that comply with Stage 1 Meaningful Use requirements must be able to submit immunization administration data to their state registry. This document explains technical details of this interface. The recommendations here are in line with CDC and HL7 standards and should be compatible with EHR Systems that are following Meaningful Use guidelines.

MCIR HL7 Submission Information and References.
MCIR Vaccine Codes including U.S. Licensed CVX, and MVX documents

http://www.mcir.org/HL7.html

MCIR codes are a reflection of those maintained at the CDC National Immunization Program website:http://www2a.cdc.gov/vaccines/IIS/IISStandards/vaccines.asp?rpt=cvx

DQA Testing

Quality Report

Batch Title	Batch Type	Profile	Received
Weekly DQA	Weekly	HL7 File	Sun, Mar 15, 2015 12:00 AM thru Sun, Mar 22, 2015

At least 50 messages must be submitted to enable production readiness check.

Scoring Summary

DQA Score	Description
49	Problem

Measurement	Score	Description	Weight
Completeness	84	Good	50%
- Patient	90	Excellent	22%
- Vaccination	95	Excellent	22%
- Vaccine Group	8	Problem	5%
Quality	0	Problem	40%
- No Errors	0	Problem	28%
- No Warnings	0	Problem	12%
Timeliness	70	Okay	10%
- On Time	100	Excellent	7%

Quality Score

Quality Score	Description
0	Problem

Measurement	Score	Description	Weight
No Errors	0	Problem	28%
No Warnings	0	Problem	12%

Coded Value Issues	Count
Unrecognized Codes	2

Errors are expected to be encountered on less than one percent of messages.

Errors

Description	Count	Percent
Vaccination admin code is invalid for date administered	1	8%

Warning to message size rate is expected to be less than ten percent.

Warnings

Description	Count	Percent
Observation observation identifier code is unrecognized	14	117%
Patient guardian responsible party is missing	8	
Vaccination information source is historical but appears to be administered	5	42%
Vaccination CVX code is invalid for date administered	1	8%

Testing may include communication between the state, region, provider and vendor

PRD Approval

Email notification to Provider, Regional Staff, and MU MCIR Help

From: Pam Kowalske
Subject: Dr. Bob's Shot Shack: Ready for HL7 MCIR Production Submission Planning Stage

Hi Dr. Bob,

MCIR is pleased to inform you that Dr. Bob's Shot Shack, Facility Id: 1234-56-78, is ready for the HL7 MCIR Production Submission Planning Stage.

Next Steps:

Complete the attached MCIR HL7 Roles and Responsibilities Information form and send a copy to Wendy Nye (wnye@hline.org) and Pam Kowalske (pkowalsk@mphi.org)

1. After Wendy receives a copy of the form, she will contact provider staff to make arrangements to set up their go-live date and MCIR transfer error report training.
2. Staff should continue to hand enter vaccines in MCIR until the date they go-live.
3. The Processing id in MSH-11.1 is set to the value of P. No changes need to be made. MCIR will process the messages in production on the go-live date.

Note: There are no system or user errors detected during this phase of DQA testing. Staff are documenting all of the required fields in the EHR: Lot#/Manf/Vaccine Eligibility.

Your vendor currently batches and sends HL7 messages to MCIR every 3 to 5 hours.

Thank you and congratulations!

R & R Form

Michigan Care Improvement Registry (MCIR)
HL7 Provider Site Roles and Responsibility Information Form

This form must be completed prior to going live in MCIR Production. Email a copy of the completed form to MU_MCIRHelp@MPHI.org and to your Regional MCIR Coordinator. Click on this link to find your Regional Coordinator's contact information: http://www.mcir.org/contact_regions.html.

MCIR Provider Site Name:

MCIR Provider Site ID:

MCIR HL7 Facility ID:

Electronic Health Record (EHR) Name:

- EHR Product Name:
- EHR Version:

HL7 Version:

Current Data Entry Method (hand-entry, EXT transfer):

Messages sent: real-time ☐ batch ☐

- If batched, what is the frequency:

Date Form Completed:

Date of HL7 go-live in MCIR production:

Site Responsibilities include:

ESSR Summary

MCIR Electronic Submission Summary Report

Site Name: [redacted]

Description: ESSR 3-15 to 3-22
Data submission date range: 03/15/2015 - 03/22/2015
Interface PIN/Facility ID: [redacted]
Date Printed: 04/07/2015 **Target Date: 04/07/2015**

PEOPLE	
Persons Added/Updated	8
Persons Opted-Out	0
Persons Deceased	0
Multiple Persons found	0
Persons not found for Update	0
Other Persons Errors	0
Persons Rejected	0
Responsible Party Added	8
Responsible Party Rejected	0
Immunizations Added	8
Immunizations Deleted	0
Immunizations skipped having Person errors	0
Immunizations Accepted	8
Immunizations Rejected	1
Duplicate Immunizations	3
TOTAL IMMUNIZATIONS PROCESSED	12

System Errors

Errors from Transferred Data

Site Name: [redacted]

Description: TFR_1429107948863
Data submission date range: 01/15/2015 - 01/31/2015
Interface PIN/Facility ID: [redacted]
Date Printed: 04/15/2015 **Target Date:** 04/15/2015

	Error Count
OTHER SYSTEM ERROR	6

[redacted] **DOB:** [redacted] **PATIENT ID:** 717091

Vaccine reported in inventory for lot number AHBVC210DB is Hep B (ped/adol)(08), which does not match the vaccine reported as being administered, which was Hep B (adult) (43)

User Errors

Date: 04/21/2015 **USER ERRORS REPORT** Page 8

[redacted]	Original Value	New Value	Status
[redacted] PATIENT ID: 487100			
Represents VFC elig			Vaccine fund eligibility code should be entered

[redacted]	Original Value	New Value	Status
[redacted] PATIENT ID: 637437			
Manufacturer			SKB not found for vaccine code: 106

Transactions

04/07/2015 **Transferred Vim Transactions** Page 1

Site Name: [redacted]

Description: ESSR 3-15 to 3-22

Data submission date range: 03/15/2015 - 03/22/2015

Interface PIN/Facility ID: [redacted]

Date Printed: 04/07/2015 **Target Date: 04/07/2015**

Successful transactions

Admin Date	Product - Lot	Eligibility	Action	Inv.

Failed/Unprocessed transactions

Admin Date	Product - Lot	Eligibility	Action	Inv.
[redacted]				
03/18/2015	TT (Tetanus Toxoid) Adsorbed (sanofi) - A076A **Status:** Lot not found inventory	Private Pay/Insurance	Add	UNK
[redacted]				
03/18/2015	PPSV23 (Pneumovax) (Merck) - K019386 **Status:** Lot not found inventory	Private Pay/Insurance	Add	UNK
03/18/2015	Td (adult) (adsorbed) (MA Biologic) - A076A **Status:** Lot not found inventory	Private Pay/Insurance	Add	UNK
[redacted]				
03/18/2015	TT (Tetanus Toxoid) Adsorbed (sanofi) - A076A **Status:** Lot not found inventory	Private Pay/Insurance	Add	UNK

Training

MCIR Electronic Submission Summary Report (ESSR) Tip Sheet

Defining and Generating the ESSR

The ESSR details HL7 immunization transactions and inventory transaction effects for a specified time period. To generate the ESSR complete the following steps:

Report Generation

1) On the MCIR home page, click the "Reports" tab, and then click "Transfer".
2) The ***Electronic Submission Summary Report*** is the default report, it displays automatically.
   a. Type in the desired date parameters under start date & end date.
   b. Type in a descriptive name for the report (such as the specified date range).
   c. Click Submit.

Report Retrieval

1. On the MCIR home page, click the "Reports" tab, and then click "Ret
2. From the retrieve results screen, click the Report link to the right of t

Section One - MCIR Electronic Submission Summ

This section displays a numerical summary of transactions submitted, accepted, skipped.

Text	Explanation	Effect/Issue
Persons Added/Updated	Number of people with new MCIR records created or current MCIR records updated	• EHR immunization Data transferred successfully int MCIR • New records created for people not matched in MC
Persons Opted Out	Number of people for whom MCIR record has been marked as opted out.	• Doses do not go into MCIR record • Doses do not deduct from inventory

Dictionary of Common HL7 Errors Found in Section Two (Errors from Transferred Data) and Section Three (User Errors)

These sections detail errors that occurred either from an end user data entry error in the EHR or through programming errors made in the EHR HL7 transmission programming. The following table lists examples of error types with an explanation of what they mean and how to fix them.

Error Text	Explanation	How to fix in an EHR that sends Electronic Edits (Deletes & Adds)	How to fix in an EHR that sends only Add-type messages
Vaccine for this lot is Influenza TIV Injectable (141) which does not match the vaccine submitted on this record which was Influenza TIV P-Free Inj (140).	The lot number sent with the HL7 message indicates a different vaccine than the one that was sent in the HL7 message. In this particular example: Influenza TIV Injectable CVX Code: 141 are indicated by the lot number sent, but CVX Code: 140 Influenza TIV P-Free is the code that came through. MCIR picks up the mismatch and does not process the message with the conflicting data.	Enter the correct vaccine type in the EHR. The corrected vaccine will be sent to MCIR.	Enter the correct vaccine directly in MCIR.
No record to delete for the child 01234567890, vaccine code: 114 and shot date: 20120412	There wasn't a record to delete in MCIR, no action was taken.	No action needed.	Not applicable.
MCIR Id: 01234567890 Unable to delete dose. More than one record having vaccine Hep B (adult) (43) and shot date: 20120416 has been found	Duplicate shot with conflicting lot number information cannot be deleted.	Identify the lot number that was administered. In MCIR: delete the inaccurate immunization(s) from the patient's Immunization History screen. If necessary, in the EHR click Submit/Accept to trigger an HL7 message, to send the correct data to MCIR.	Delete the incorrect immunization from the patient's Immunization History screen in MCIR. Make the correction to the lot number in the EHR so that it matches a lot number in the active MCIR inventory, this will generate submission to MCIR.

Training

MCIR Vaccine Codes Including U.S. Licensed CVX, CPT-4, MVX and Unspecified

CDC Vaccine Code (CVX)	MCIR Vaccine Display Name	CDC Product Name	CDC Vaccine Name	CDC Current Procedural Terminology Code (CPT-4)	MANUFACTURER	Manufacturer Code (MVX)
24	Anthrax	BIOTHRAX	Anthrax	90581	BioPort	MIP
19	BCG	MYCOBAX	BCG: Bacilus of Calmette & Guerin	90728	Sanofi	PMC
		TICE BCG	BCG: Bacilus of Calmette & Guerin	90585	Organon teknika	OTC
27	Botulinum Antitoxin		Botulinum Antitoxin	90287		
26	Cholera		Cholera	90725		
29	CMVIG (IV)		CMVIG (IV): Cytomegalovirus globulin	90291	MAPH	MA
12	Diphtheria antitoxin			90296		
28	DT (pediatric)	DT (GENERIC)	Diphtheria-Tetanus (DT pediatric)	90702	Sanofi	PMC
106	DTaP (Daptacel)	DAPTACEL	DTaP (5 pertussis)	None	Sanofi	PMC
20	DTaP (Pediatric)	TRIPEDIA	DTaP	90700	Sanofi	PMC
		INFANRIX	DTaP	90700	GlaxoSmithKline	SKB
110	DTaP-HepB-IPV (Pediarix)	PEDIARIX	DTaP-HepB-IPV	90723	GlaxoSmithKline	SKB
50	DTaP-Hib (TRIHIBIT)	TRIHIBIT	DTaP-Hib	90721	Sanofi	PMC
120	DTaP-Hib-IPV (Pentacel)	PENTACEL	DTaP-Hib-IPV	90698	Sanofi	PMC
130	DTaP-IPV (Kinrix)	KINRIX	DTaP-IPV	90696	GlaxoSmithKline	SKB
30	HBIG: HepB globulin		HBIG: Hep B globulin	90371	NABI	NAB
52	HepA (adult)	HAVRIX-ADULT	Hepatitis A adult (HepA)	90632	GlaxoSmithKline	SKB
		VAQTA-ADULT	Hepatitis A adult (HepA)	90632	Merck	MSD

Follow-Up

- Go-Live date chosen upon completion of training
- Request made to “flip-the-switch”
- Short-term monitoring of data flow/quality
- Ongoing HL7 reports for monitoring
- Post-go-live communications if necessary

For More Info…

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