

Interface Basics

When an immunization is entered into an electronic health record (EHR) system, a patient’s record filters data and sends what has been entered into pre-determined fields that include the patient’s demographics and the immunization. The filtered data is then coded into a language (HL7) and sent as a “message” to the State’s Immunization Information System (IIS). The IIS de-codes the message and does a very basic data check. The basic check looks at data in key fields and rejects messages that would cause imMTrax to malfunction. The IIS pinpoints what error(s) caused the message to be rejected. Errors are already being provided to your system in the form of what is called a NACK (negative acknowledgement) message. The errors are HL7 coded and not sent in plain language making it difficult for a non-programmer to understand. As a courtesy, the State is supplying the error information in a different format via the Provider Detail Error Report so staff can make corrections resulting in their EHR and imMTrax having the best data possible.



What is the Provider Detail Error Report?

The Provider Detail Error Report shows errors produced by immunization data sent from an EHR system to Montana’s IIS. It is a report Montana’s IIS vendor created and is not open to changes.

The data listed needs to be corrected by staff for imMTrax to include the data within a patient’s imMTrax record.

What is Needed for Data Corrections?

- A clear understanding of how your EHR works. For example, will a correction made in your EHR send the correction to imMTrax? Your EHR vendor will be able to assist you with such questions.
• How to verify the corrected information is in the IIS.
• Excel skills needed
o How to widen a column when ##### is displayed
o Sorting
o Removing Duplicates



Provider Details Error Report

How to Read and Use the Report

The *Provider Details Error Report* has four sections, and most of the data is not necessary for data entry corrections. This document will review in detail the most useful parts (highlighted in blue) of the report, however; each column is listed along with a description for reference in the *Column Details* section.

SECTION 1: REPORT'S PARAMETERS

The first section of the report shows what parameters were used to produce the report, including the date range for which messages were sent. Please remember it is NOT the date of the immunization administration or when an immunization was entered into your system-it is when a message was sent and received by the State.

| | |
|--|--|
| Start Date: December 01, 2022 | |
| End Date: January 27, 2023 | |
| Message Types: VXU | |
| Providers: AART TESTING ORGANIZATION (80809) | |
| Display: Errors | |

SECTION 2: SUMMARY OF DATA SENT

The second section of the report shows message totals broken down by locations. It lists how many immunization messages were sent per location, how many patients. The first column of importance, the *Representative Facility* lists each of the facilities by their Facility ID. The *# Messages* lists how many messages were sent by the facility. Some interfaces send more than one immunization per message so please keep this in mind when comparing to how many immunizations were provided. The *# Unique* shows how many patients received immunizations as long as every patient is given a unique id. The final useful column is the *# Errors* and it gives the total number of messages failing and not imported into immTrax.

| Provider | Representative Facility | User | Profile | # Message | # unique | # Errors |
|----------|-------------------------|--------|---------|-----------|----------|----------|
| 80809 | SIISCLIENT24781 | AART#1 | 1973 | 661 | 607 | 266 |
| 80809 | SIISCLIENT24781 | AART#1 | 1973 | 1348 | 1308 | 74 |
| 80809 | SIISCLIENT27101 | CS1887 | 1973 | 6 | 6 | 0 |
| 80809 | SIISCLIENT27102 | CS1887 | 1973 | 35 | 26 | 4 |
| 80809 | SIISCLIENT27103 | CS1887 | 1973 | 34 | 34 | 7 |
| 80809 | SIISCLIENT27103 | CS1887 | 1973 | 36 | 35 | 7 |



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SECTION 3: MESSAGE LEVEL ISSUES

The third section lists the specific reason for the message failure. If an organization has many locations, the first column of importance is the *Representative Facility* telling which facility had the error. The *Import ID* is useful to remove duplicates. The *Date Sent* can be helpful and the *MRN* column is the Medical Record Number from the EHR sending the message. It is used to look up the patient and find the problem listed in the *Issue* column.

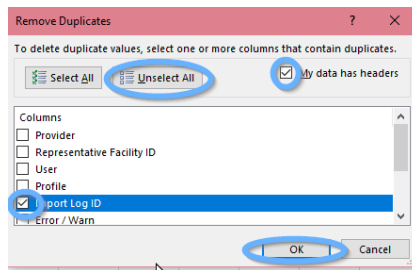
The screenshot displays the 'Provider Details Error Report' interface. At the top, there are dropdown filters for:

- Representative Facility: SIISCLIENT24781
- Import: 30561854
- Date Sent: 12/5/2022 7:47
- MRN: 595T88456
- Issue: patient first name is missing

 Below the filters is a table with columns: Facility, Import ID, Date Sent, MRN, and Issue. The table contains numerous rows of data, each representing a failed message. The 'Issue' column contains various error messages such as 'patient first name is missing', 'patient last name is missing', 'patient address is missing', etc.

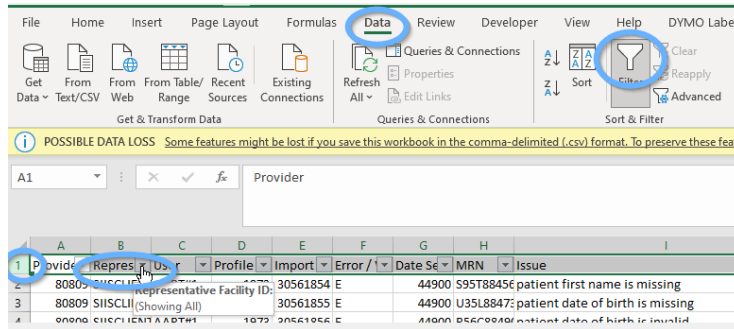
Best Practices:

1. The *Providers Details Error Report* may list the same issue using only slightly different wording. To prevent duplicate correctional efforts, it is best to have a list with every issue listed only once. To accomplish this:
 - a. Copy only Section 3 into a new data sheet ensuring to capture the column headings.
 - b. Click the Data group in Excel and choose Remove Duplicates.
 - c. When the Remove Duplicates popup appears, ensure the My data has headers is check marked, click on the Unselect All, and lastly click on the Import Log ID column header and the OK button.



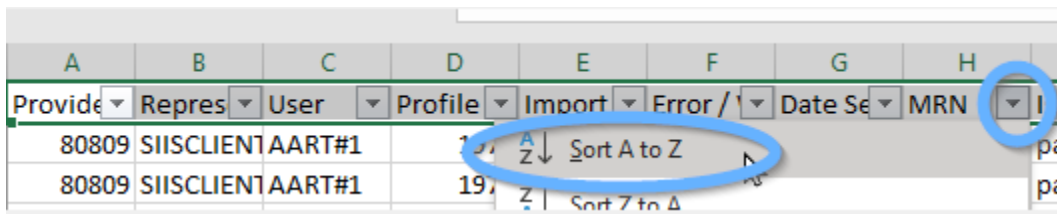
2. If multiple staff members will be fixing issues for their location, the list should be separated by location. Steps are:

- a. Click the Data group.
- b. Click the row heading 1 to highlight the row containing the Column Headings.
- c. Select the Auto Filter command on the Data group toolbar.
- d. Use the Representative Facility ID to show separate lists for staff members.



3. Make finding multiple messages submitted for the same encounter easier to find by sorting by MRN. Steps are:

- a. Follow the steps A-C from above if Auto Filter (the down arrows) is not active
- b. Click on the MRN down arrow
- c. Select the Sort by A-Z



Provider Details Error Report



THE FOURTH SECTION – VACCINE SPECIFIC ERRORS

It is not necessary to use Section Four. The fourth section is a duplication of vaccine related errors in Section 3 but gives further details. Most of the columns are the same as Section Three with an additional three columns pertaining to vaccine details. This section is useful if a vaccine error is not immediately recognized within a patient's record. The three columns will list if the vaccination is historical, the administration date of the vaccine, and the vaccine group. It will allow staff to pinpoint the problematic immunization. It may be useful to detect a problematic vaccine in an inventory as well.

| Facility ID | Date Sent | MRN | Issue | Historical | Vaccination Date | Vaccination |
|----------------|----------------|-----------|---|------------|------------------|-------------|
| SISCLIENT24781 | 12/5/2022 7:47 | X22A88507 | vaccination date before patient date of birth | Y | 10/4/2022 | Varicella |

| Facility ID | Issue | Facility | Sequence Error ID | Date Sent | MRN | Issue | Facility | Sequence Error ID | Date Sent | MRN | Issue | Facility | Sequence Error ID | Date Sent | MRN | Issue | Facility | Sequence Error ID | Date Sent | MRN | Issue |
|----------------|--|----------|-------------------|-----------|-----------|--|----------|-------------------|-----------|-----------|--|----------|-------------------|-----------|-----------|--|----------|-------------------|-----------|-----------|--|
| SISCLIENT24781 | vacination date before patient date of birth | 1001 | SIS00147 | 12/5/2022 | X22A88507 | vacination date before patient date of birth | 1001 | SIS00147 | 12/5/2022 | X22A88507 | vacination date before patient date of birth | 1001 | SIS00147 | 12/5/2022 | X22A88507 | vacination date before patient date of birth | 1001 | SIS00147 | 12/5/2022 | X22A88507 | vacination date before patient date of birth |
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| Issues that Trigger <u>Errors (E)</u> Resulting in IIS Rejecting | Descriptions and Details |
|---|---|
| Patient gender is missing, invalid, or unrecognized | All patients must have a gender indicated. The only valid gender codes are M (male), F (female), and U (unknown/undifferentiated). |
| Patient first name or last name are invalid or missing | Name fields can only contain the characters: A-Z, a-z, single quote, dash, period, or space. Cannot be a bogus name (e.g. Unknown or Test) and cannot contain any special characters such as (, ",). Names must be 48 characters or less. |
| Patient Death Date is in the future, before the vaccination date, or before the patient's date of birth | A patient's death date cannot be in the future, nor can an immunization date be after a date of death, nor can it be before a patient's birth. |
| Patient SSN | Montana does not allow the submission or storage of Social Security Numbers. |
| Patient DOB (date of birth) is required and/or missing, or invalid | A patient's date of birth is required and must be valid. It cannot be in the future, nor can an immunization date be after a date of death, nor can it be before a patient's birth. |
| Patient ID is missing | The patient's MRN (medical record number) or sometimes referred to as chart number needs to be sent. |
| Vaccination date is invalid, after the lot expiration date, before the patient's date of birth, after the patient's date of death, or after the system entry date | Dates must be formatted as YYYYMMDD and the format is changed behind the scenes. Any other format is considered invalid. An immunization will be rejected if the administration date is after the vaccine's expiration date. Vaccinations cannot be an estimate so no administration before the date of birth or after the date of death. Vaccinations cannot be in the future. |
| Vaccination Information Source is missing, invalid or unrecognized | An immunization must be coded as either newly administered or as historical. |
| Vaccination CVX code is missing, invalid, or unrecognized | All administered vaccines must include an active CVX code indicating which type of vaccine was given. Inactive CVX codes are only valid for historical immunization records. |
| Vaccination Facility ID is missing on an administered vaccine, is invalid on an administered vaccine, is unrecognized on an administered vaccine, or exceeds character limit | Newly administered immunizations must indicate what facility the immunization was given by using its facility ID. The facility id must match the IIS designated facility ID and will never exceed the character limit for the field. |
| Vaccination (or Substance) Refusal is unwanted | Montana currently rejects Refusal messages. We will be fully testing Refusal messages in the coming year so the messages will be processed. At this time, no corrections are needed for this issue. |

PROVIDER DETAIL ERROR REPORT COLUMN HEADINGS

| Section(s) | Column Title | Description |
|------------|----------------------------|---|
| 2 | # Errors | Number of messages that produced errors and were not accepted by the IIS. |
| 2 | # Messages | Total number of messages received during the selected date range. |
| 2 | # Unique MRN | Number of messages received for unique MRNs thus identifying the number of patients' messages sent during the selected date range. |
| 3, 4 | Date Sent | Date and time the message was received by the IIS. |
| 1 | Display | What type of issue is being reported? "Errors". |
| 1 | End Date | The last day's immunizations listed in the report. |
| 3, 4 | Error/Warn | <i>We are currently sending error messages only so will be valued with an "E"-Data is <u>not</u> accepted into the IIS and will not display in patient's record.</i> |
| 4 | Facility ID | See Representative Facility ID. |
| 4 | Historical | A "Y" indicates the immunization was sent as a historical immunization. A blank indicates the immunization was newly administered. |
| 3, 4 | Import Log ID | Unique identifier assigned to each message by MT's IIS. |
| 3, 4 | Issue | Description of the error. |
| 3, 4 | Issue Location | The HL7 field location of the error. |
| 3, 4 | Message Control ID | The ID assigned to the HL7 message by the organization sending the data. |
| 1 | Message Types | There are several types of messages that can be sent and analyzed. In the technical world, an immunization sent to the State is known as a VXU. |
| 3, 4 | MRN | The sending organization's medical record number (chart number) for the patient. |
| 2, 3, 4 | Profile | An id used within Montana's IIS. |
| 1, 2,3,4 | Provider & Providers | The organization submitting the data. An organization is the top-level of a business identification. Representative Facility ID are the locations underneath an organization. In Section 1. Providers will be textual followed by the organizational ID. In Sections 2, 3, and 4 it will be the organizational ID only. |
| 2, 3 | Representative Facility ID | The numerical ID of the facility within an organization that sent the data. |
| 1 | Start Date | The first day's immunizations listed in the report. |
| 2, 3, 4 | User | The interface's account name. |
| 4 | Vaccination | The vaccine with the error. |
| 4 | Vaccination Date | The date the immunization was administered. |