



# ImmPact

MAINE IMMUNIZATION INFORMATION SYSTEM

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## Flat File Transfer Specification

(Space Delimited/Fixed length Text File)

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**IMPACT DATA EXCHANGE CONTACT INFORMATION**

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## INTRODUCTION

Thank you for your interest in electronic data exchange with the Maine Immunization Information System (IIS). Getting timely and accurate immunization data into ImmPact is important for your clinic and for the individuals you serve.

This document outlines the specifications for immunization data exchange between the Maine Immunization Registry and the Provider's Electronic Medical Record (EMR) application.

## INTENDED AUDIENCE

The Data Exchange Specification is intended for technical groups from Immunization Information Systems (IIS) and Electronic Health Records (EHR) that must implement these guidelines. The goal of the Data Exchange Specification is to provide an unambiguous specification for creating and interpreting messages.

### Data Formats Accepted

Data is typically pulled from Electronic Medical Record (EMR) systems or from Practice Management. ImmPact currently accepts the following electronic file types:

- Fixed length flat text files, specific to lengths specified by IIS spec
- Health Level Seven (HL7) Version 2.5.1 Real Time Transfer

This document defines requirements for fixed format text file submissions. Please share this document with technical staff and your software vendor.

### Flat File Message Implementation profile

The guide identifies the set of messages required to enable information systems that maintain immunization records to transmit patient-specific immunization histories electronically to other systems. This allows healthcare providers to have access to these records at the time health care is provided. This includes:

- Sending and receiving immunization histories for individuals
- Sending and receiving demographic information about the individuals
- Requesting immunization histories for individuals
- Responding to requests for immunization histories by returning immunization histories
- Acknowledging receipt of immunization histories and requests for immunization histories
- Reporting error in the messaging process
- Sending observations about an immunization even (this may include funding, reactions, forecasts and evaluations)

## Flat Files Defined

A fixed length flat file stores data in a plain text file. Each line of the text file holds one record, with each field being a predetermined fixed length. IIS accepts fixed length text files that specifically follow the IIS specifications.

A fixed record length file is one where each record is the same length, and each field is also a fixed length. In exporting from your electronic system, padding will be needed to achieve this.

For example, the first two records of a file with First and Last Name fields in a flat file might look like this (do not use \*\* in the file sent to IIS):

```
John****Bill*****  
Roger***Alan*****
```

Note: **The asterisk (\*) is used to represent a space.** Please do not use asterisk in files sent to IIS.

IIS accepts four flat files for immunization data: Patient File (required), Immunization File (required for immunization updates), Comment File (optional), and Event File (optional). The Patient File houses demographic information about the client. The Immunization File captures vaccination data for immunizations administered or reported as histories. The Comment File is used to report history of disease, refusals, as well as allergies or adverse reactions. The Event File describes the event and includes project areas, priority groups and event start and end dates.

## Required Data

IIS needs to receive patient and vaccination data for everyone that receives an immunization. These data must be sent in two separate files: Patient File and an Immunization File. The files will be linked via a unique Record Identifier supplied by the provider of the file. This identifier will uniquely identify each patient and will appear in each file submitted to link individual immunizations to the appropriate patient. At a minimum, IIS requires the following data fields for each patient receiving an immunization:

### Required Patient File Fields

- Record Identifier
- First Name
- Last Name
- Birth Date
- At least two additional identifying demographic fields

**Note: Please see the required data on Page 7**

### Required Immunization File Fields

- Record Identifier
- Vaccine Code
- Vaccination Date
- Lot number, Vaccine Eligibility Code

**Note: Please see the required data on Page 9**

Providers participating in the Vaccines for Children (VFC) program must submit vaccine eligibility codes for all administered vaccines.

When submitting one or more of the optional flat files (Comments File or Event File), the following fields are required.

Required Comment File Fields

- Record Identifier
- Comment Code

Required Event File Fields

- Record Identifier
- Event Code
- Priority Group

### Matching Records

Due to the large volume of records, data received from various sources, additional demographic and immunization information is essential to ensure IIS matches immunization records reported from multiple sources appropriately. If you are unable to supply this information, IIS will not be able to merge your data with other sources to compile a single complete immunization record for each client. Complete records benefit your clinic by providing you with the best possible client data. **IIS encourages sites to send as many demographic elements as possible (e.g., Address, Telephone number, Race, Social Security Number, Mother's maiden name, or Parent/guardian name,)** to improve appropriate record matching.

### Field Order and Format Requirements

The following tables describe the fields to include in each of the flat files discussed.

- *Column*: The name of the data element.
- *Data length*: Each field's data should be left-justified and padded with blanks to the specified length. If the data in a field is numeric (e.g., dates, zip-code, telephone number, SSN, CVX code) only numeric digits should be entered and padded with blanks as needed.
- *Pos #*: The position of the start of the field in the flat file.
- *Poe#*: The position of the end of the field in the flat file.
- *R/RE*: R = Required field. RE = Required, but may be empty
- *Optional*= ImmPact may read or use the information but does not require it to be sent. Please send values for optional fields if they are available.

Character Fields

These fields must be left justified and padded with blanks to reach the field length specified.

Date Fields

Dates must be entered in this format: MMDDYYYY with leading zeroes (e.g., 01012020).

### Null Values

All fields must be present in the flat file with the specified length. If a site is unable to supply information for a specified field, the entire field must be padded with blanks. IIS recommends submitting as many of the elements listed below for maximum completeness. At a minimum, fields identified with an 'R' in the 'R/RE' column must be submitted for IIS to process the file.

### Patient File (Required)

| Field Name                                | Field Length | Start Position | End Position | R/RE | Notes   |
|---|--------------|----------------|--------------|------|---|
| Record Identifier                         | 32           | 1              | 32           | R    | Supplied by sender, used to link a Patient to Immunization records.   |
| Patient Status                            | 1            | 33             | 33           | R    | Use the IIS code set for <a href="#">Patient Status</a> .   |
| First Name                                | 50           | 34             | 83           | R    | Starting position of the First, Middle, and Last Name of the Patient in the file.   |
| Middle Name                               | 50           | 84             | 133          | RE   |   |
| Last Name                                 | 50           | 134            | 183          | R    |   |
| Name Suffix                               | 10           | 184            | 193          | O    | JR, III etc   |
| Birth Date                                | 8            | 194            | 201          | R    | MMDDYYYY  |
| Death Date                                | 8            | 202            | 209          |      | MMDDYYYY  |
| Mothers First Name                        | 50           | 210            | 259          | RE   | <b>Required</b> If NOFIRSTNAME or NO FIRST NAME is used in PID-5 (unnamed child) the mothers maiden name is required for deduplication. |
| Mothers Maiden Last Name                  | 50           | 260            | 309          | RE   |   |
| Mothers HBsAg Status                      | 1            | 310            | 310          | RE   | Use the IIS code set for <a href="#">Mother's HBsAg Status</a> .  |
| Sex (Gender)                              | 1            | 311            | 311          | R    | M, F, U only  |
| American Indian or Alaska Native          | 1            | 312            | 312          |      | 'Y' if Yes  |
| Asian                                     | 1            | 313            | 313          |      | 'Y' if Yes  |
| Native Hawaiian or Other Pacific Islander | 1            | 314            | 314          |      | 'Y' if Yes  |

|                                |    |      |      |    |  |
|--------------------------------|----|------|------|----|--|
| Black or African-American      | 1  | 315  | 315  |    | 'Y' if Yes   |
| White                          | 1  | 316  | 316  |    | 'Y' if Yes   |
| Other Race                     | 1  | 317  | 317  |    | 'Y' if Yes   |
| Ethnicity Code                 | 2  | 318  | 319  | R  | Use the IIS Code Set for <a href="#">Ethnicity Code</a> .  |
| Social Security Number         | 9  | 320  | 328  | O  | This information is not stored in the IIS or DB – it is ignored  |
| Contact Allowed                | 2  | 329  | 330  | O  | Controls Reminder and Recall Contact. Y/N. Use the IIS code for <a href="#">Contact Allowed</a> .  |
| Patient ID                     | 32 | 331  | 362  | O  |  |
| Medicaid ID                    | 20 | 363  | 382  | O  |  |
| Responsible Party First Name   | 50 | 383  | 432  | R  | Name of associated party.  |
| Responsible Party Middle Name  | 50 | 433  | 482  | RE |  |
| Responsible Party Last Name    | 50 | 483  | 532  | R  |  |
| Responsible Party Relationship | 3  | 5363 | 535  | R  | Personal relationship that the next of kin or associated party has to the patient. Use the IIS code set for <a href="#">Responsible Party Relationship</a> . |
| Street Address                 | 55 | 536  | 590  | R  | Use the IIS code set for County.   |
| Other Address Line             | 55 | 591  | 645  |    |  |
| PO Box Route Line              | 55 | 646  | 7100 |    |  |
| City                           | 52 | 701  | 752  | R  |  |
| State                          | 2  | 753  | 754  | R  |  |
| Zip                            | 9  | 755  | 763  | R  |  |
| County                         | 5  | 764  | 768  | R  |  |
| Phone                          | 17 | 769  | 785  | R  | Example:2035678901   |
| Sending Organization           | 12 | 786  | 797  | R  | Responsible Sending Org ID provided by ImmPact.  |



|                            |    |     |     |   |                                       |
|----------------------------|----|-----|-----|---|---------------------------------------|
| Has Patient Been Disclosed | 1  | 798 | 798 | R | 'Y' if Yes                            |
| Disclosed Date             | 8  | 799 | 806 |   | MMDDYYYY                              |
| Disclosed By               | 12 | 807 | 818 |   | Sending Org Code supplied by ImmPact. |
| Sharing Status             | 1  | 819 | 819 | R | 'Y' if Yes                            |
| Effective Date             | 8  | 820 | 827 | R | MMDDYYYY                              |
| Update By                  | 12 | 828 | 839 |   | Sending Org Code supplied by ImmPact. |
| LegacyCairID               | 32 | 840 | 871 |   |                                       |
| CairRegion                 | 5  | 872 | 876 |   |                                       |

### Immunization File (Required)

| Field name                      | Field Length | Start Position | End Position | R/RE | Notes  |
|---------------------------------|--------------|----------------|--------------|------|--|
| Record identifier               | 32           | 1              | 32           | R    | Supplied by sender, used to link a Patient to Immunization records.                      |
| NDC Code                        | 13           | 33             | 45           |      |  |
| Trade Name                      | 24           | 46             | 69           | R    |  |
| CPT Code                        | 5            | 70             | 74           | RE   |  |
| CVX Code                        | 3            | 75             | 77           | R    |  |
| Vaccine Group                   | 16           | 78             | 93           |      |  |
| Vaccination Date                | 8            | 94             | 101          | R    | MMDDYYYY   |
| Administration Route Code       | 2            | 102            | 103          | R    | Use the IIS Code set for <a href="#">Administration Route Code</a> .                     |
| Body Site Code                  | 4            | 104            | 107          | R    | Use the IIS code set for <a href="#">Body Site Code</a> .                                |
| Reaction Code                   | 8            | 108            | 115          |      |  |
| Manufacturer Code               | 4            | 116            | 119          | R    | Use the IIS code set for Manufacturer Code   |
| Immunization Information Source | 2            | 120            | 121          | R    | Use the IIS code set for <a href="#">Immunization Information Source</a>                 |
| Lot Number                      | 30           | 122            | 151          | R    | Case Sensitive. Mandatory for dose decrement. Upper Case letter is Must. Example: FLU001 |

|                      |    |     |     |    |  |
|----------------------|----|-----|-----|----|--|
| Provider Name        | 50 | 152 | 201 | R  |  |
| Administered by Name | 50 | 202 | 251 | RE |  |
| Sending Organization | 12 | 252 | 263 | R  | Responsible Sending Org ID provided by ImmPact.                |
| Vaccine Eligibility  | 1  | 264 | 264 | R  | Use the IIS code set for <a href="#">Vaccine Eligibility</a> . |

### Comment File (Optional)

| Field Name        | Field Length | Start Position | End Position | Notes   |
|-------------------|--------------|----------------|--------------|---|
| Record Identifier | 32           | 1              | 32           | Supplied by sender, used to link Comments to a Patients record. |
| Comment Code      | 6            | 33             | 38           | Use IIS code set for Comment code.                              |
| Begin Date        | 8            | 39             | 46           | Begin date to which the comment applies. MMDDYYYY               |
| End Date          | 8            | 47             | 54           | End date to which the comment applies. MMDDYYYY                 |

### Event File (Optional)

| Field Name        | Field length | Start Position | End Position | Notes   |
|-------------------|--------------|----------------|--------------|---|
| Record Identifier | 32           | 1              | 32           | Supplied by sender, used to link Event and Priority Group to a Patient's record |
| Event Code        | 20           | 33             | 52           |   |
| Priority Group    | 20           | 53             | 72           | Use the IIS code set for <a href="#">Priority Group</a> .                       |

## Examples

Records need to be blank filled (i.e., padded with spaces on the right to the required field length). In the following example, **blanks are represented with the '\*' character for illustrative purposes.**

### Patient Record

*This Information:*

Record ID: 1234567

Status Active: A

Name: Jenny Brown

Birth Date: 10/10/2018

Mother's Maiden Name: Sarah Green

Gender: Female(F)

Race: White(Y)

Ethnicity: Not Hispanic or Latino (NH)

Responsible Party: Smith Brown

Relationship: Father (FTH)

Address: 1234 Test Street, Portland ME04103

Phone: 4932227744

Sending Organization: 34567

Has patient Been Disclosed: Y

Sharing Status: Y

Effective date: MMDDYYYY

**Results in the following Patient record:**

```
1234567*****AJENNY*****
*****BROWN*****
*****10102018*****SARAH*****
*****GREEN*****
*****F***Y*NH*****
*****SMITH*****
*****BROWN*****
*****FTH1234*TEST*STREET*****
*****PORTLAND*****
**ME04103*****4932227744*****34567*****Y*****
Y10292020*****
```

## Immunization Record

*This information:*

Record ID: 1234567  
Trade Name: MMR II  
Date Administered: MMDDYYYY  
Administration Route Code: Intramuscular (IM)  
Body Site Code: Right Thigh (RT)  
Manufacturer: Merck and Co., Inc. (MSD)  
Information Source: New Immunization record (00)  
Lot Number: MEAM123  
Administered by: BARBIE  
Sending Organization: 34567  
Vaccine Eligibility: A

```
1234567*****MMR*II*****  
  
*****08152019IMRT*****MSD*00MEAM123*****  
  
*****BARBIE*****  
  
*****34567*****A Total Field Length:264
```

## Comment Record

*This information:*

Record Identifier: 1234567  
Comment Code: RABEXP  
Begin Date: 05012019

```
1234567*****RABEXP05012019*****
```

## Event Record

*This Information:*

Record Identifier: 1234567  
Event Code: Test  
Priority Code: GPT3

```
1234567*****TEST*****GPT3
```

## APPENDIX

### Sex (Gender)

| Value | Description | Definition  |
|-------|-------------|---|
| F     | Female      | Person reports that she is female                   |
| M     | Male        | Person reports that he is male                      |
| U     | Unknown     | No assertion is made about the gender of the person |

### Ethnicity Code

| Value | Description            |
|-------|------------------------|
| H     | Hispanic or Latino     |
| NH    | Not Hispanic or Latino |

### Responsible Party Relationship

| Value | Description  |
|-------|--------------|
| BRO   | Brother      |
| CGV   | Care giver   |
| CHD   | Child        |
| FCH   | Foster child |
| FTH   | Father       |
| GRD   | Guardian     |
| GRP   | Grandparent  |
| MTH   | Mother       |
| OTH   | Other        |
| PAR   | Parent       |
| SCH   | Stepchild    |
| SEL   | Self         |
| SIB   | Sibling      |
| SIS   | Sister       |
| SPO   | Spouse       |

## Mother's HbsAg Status

| Value | Description  |
|-------|--------------|
| 1     | Negative     |
| 2     | Not Screened |
| 3     | Positive     |
| 4     | Unknown      |

## Contact Allowed

| Value | Description        |
|-------|--------------------|
| 01    | No contact Allowed |
| 02    | Contact Allowed    |

## County Code

| Value               | Description |
|---------------------|-------------|
| Androscoggin County | 23001       |
| Aroostook County    | 23003       |
| Cumberland County   | 23005       |
| Franklin County     | 23007       |
| Hancock County      | 23009       |
| Kennebec County     | 23011       |
| Knox County         | 23013       |
| Lincoln County      | 23015       |
| Oxford County       | 23017       |
| Penobscot County    | 23019       |
| Piscataquis County  | 23021       |
| Sagadahoc County    | 23023       |
| Somerset County     | 23025       |
| Waldo County        | 23027       |
| Washington County   | 23029       |
| York County         | 23031       |

## Administration Route Code

| Description         | Route Code | Definition  |
|---------------------|------------|---|
| Intradermal         | ID         | Within or introduced between the layers of the skin                                       |
| Intramuscular       | IM         | within or into the substance of a muscle  |
| Intranasal          | NS         | Given by nose   |
| Intravenous         | IV         | administered into a vein  |
| Oral                | PO         | administered by mouth   |
| Other/Miscellaneous | OTH        |   |
| Percutaneous        |            | made, done, or effected through the skin.   |
| Subcutaneous        | SC         | Under the skin or between skin and muscles.   |
| Transdermal         | TD         | describes something, especially a drug, that is introduced into the body through the skin |

## Body Site Code

| Code | Description            |
|------|------------------------|
| LT   | Left Thigh             |
| LA   | Left Arm               |
| LD   | Left Deltoid           |
| LG   | Left Gluteous Medius   |
| LVL  | Left Vastus Lateralis  |
| LLFA | Left Lower Forearm     |
| RA   | Right Arm              |
| RT   | Right Thigh            |
| RVL  | Right Vastus Lateralis |
| RG   | Right Gluteous Medius  |
| RD   | Right Deltoid          |

|      |                     |
|------|---------------------|
| RLFA | Right Lower Forearm |
| LN   | Left Nares          |
| RN   | Right Nares         |
| BN   | Bilateral Nares     |
| MO   | Mouth               |

### VFC Eligibility Funding Codes

| Code  | Value | Description                                     |
|-------|-------|---|
| V04   | A     | VFC Eligible- American Indian or Alaskan native |
| V01   | B     | Private Stock                                   |
| V05   | F     | VFC Eligible- Underinsured                      |
| V02   | M     | VFC Eligible - Medicaid/Maine Care-Under19      |
| V07   | O     | 317 Eligible-Underinsured Adult                 |
| V03   | N     | VFC Eligible- Not insured                       |
| MEA01 |       |   |

### Immunization Information Source

| Value | Description   | Operational Definition   |
|-------|---|--|
| 00    | New immunization record                               | The record of a newly administered dose of vaccine. The dose was administered by the organization that is reporting this dose. |
| 01    | Historical information - source unspecified           | The record of a vaccine dose from a reliable historical source, such as an immunization card.                                  |
| 02    | Historical information - from other provider          | The record of a vaccine dose from another health care provider's historical records.   |
| 03    | Historical information - from parent's written record | The record of a vaccine dose from parentally maintained written records.   |
| 04    | Historical information - from parent's recall         | The record of a vaccine dose from a parents recall. The reliability of this record is considered low.                          |
| 05    | Historical information - from other registry          | The record of a vaccine dose from another Immunization Information System (IIS).   |
| 06    | Historical information - from birth certificate       | The record of a vaccine dose from a birth record.  |
| 07    | Historical information - from school record           | The record of a vaccine dose from a written school record.   |
| 08    | Historical information - from public agency           | The record of a vaccine dose from a written public health agency record.   |



## Patient Status

| Value | Description                     |
|-------|---------------------------------|
| A     | Active                          |
| I     | Inactive-Other                  |
| M     | Inactive-MOGE                   |
| P     | Inactive-Permanently (Deceased) |
| L     | Inactive-Lost to Follow Up      |
| O     | Inactive-One Time Only          |
| S     | Inactive-MOOSA                  |
| U     | Inactive-Unknown                |

## Priority Group

| Value (Code) | Short Name   | Description  |
|--------------|--|--|
| HNST1        | Homeland and nations security, Tier 1              | Deployed and Mission critical personnel.   |
| HNST2        | Homeland and nations security, Tier 2              | Essential support and sustainment personnel, Intelligence services, Border protection personnel, National Guard personnel, and Other domestic national security personnel. |
| HNST3        | Homeland and nations security, Tier 3              | Other active duty and essential support.   |
| HCCSST1      | Health care and community support services, Tier 1 | Public health personnel, Inpatient health care providers, Outpatient and home health providers, and Health care providers in LTCFs.  |
| HCCSST2      | Health care and community support services, Tier 2 | Community support and emergency management.  |
| HCCSST3      | Health care and community support services, Tier 3 | Other important health care personnel.   |
| CIT3         | Critical Infrastructure, Tier 3                    | Transportation sector personnel, Food and agriculture sector personnel, Banking and finance personnel, Pharmaceutical sector personnel, Chemical sector personnel, Oil     |

|      |                            |   |
|------|----------------------------|---|
|      |                            | sector personnel, Postal and shipping personnel, and Other important government personnel.    |
| GPT1 | General population, Tier 1 | Pregnant women and Infants and toddlers 6 - 35 months old.                                    |
| GPT2 | General population, Tier 2 | Household contacts of infants < 6 months and Children 3 - 18 years with high risk conditions. |
| GPT3 | General population, Tier 3 | Children 3 - 18 years without high risk conditions.   |
| GPT4 | General population, Tier 4 | Persons 19 - 64 with high risk conditions and Persons >65 years old.                          |
| GPT5 | General population, Tier 5 | Healthy adults 19 - 64 years old.   |