RESOURCE AND PATIENT MANAGEMENT SYSTEM

Immunization Data Exchange Interface

BYIM

Addendum to User Manual

Version 3.0 Patch 8
November 2025

Table of Contents

1.0   Introduction

Please review these changes and add a copy of them to any printed documentation your site may be using for the Indian Health Service (IHS) Immunization Data Exchange Interface (BYIM) v3.0. These changes will be integrated into future versions of the software and user manuals. These changes will no longer be considered as an addendum at the time of the next version release.

This addendum only provides written guidance on changes made in BYIM v3.0 p8 that are relevant to the user. To see a list of all changes please refer to the patch notes for each of the respective patches.

Version 3.0 p8 moves the transmission functionality from the Simple Message Mover (SMM) third-party application to an IRIS production.

1.1   Summary of Changes

BYIM v3.0 p8 changes:

- Version 3.0 p8 moves the transmission functionality from the Simple Message Mover (SMM) third-party application to an IRIS production. A new webpage was created to edit the configuration information for each destination (e.g., State) where the immunization data is shared.

- A new menu option called IZST (System Status) was added to monitor the status of BYIM.

- The RWT option will be changed to display an overall summary and a detailed breakdown of transactions across BYIM. This is required as part of the Insights and Conditions of Maintenance attestation of HTI-1.

2.0   BYIM v3.0 p8

2.1   Edit Destination

A new message transmission function has been developed because the Simple Message Mover (SMM) is no longer supported and was replaced with an IRIS production. To enter the connection information for each destination, a Destination webpage was created.

Ensure the user has access to the Edit Destinations Zen page. For more information on how to access the Edit Destination webpage, please see section 5.6 of the BYIM Installation Guide and Release Notes**.**

Figure 1:Edit Destinations Page

Once logged in, the user can Add, Edit, or Delete a Destination.

Figure 2:Edit Destinations Details Page

2.2   System Status Report

A new menu option called IZST (System Status) was also added to monitor the health status of the BYIM applications. It validates that all the necessary components of BYIM are running and also checks if messages are successfully being sent to and received by the State destinations.

To access this option, a user needs the BYIMZ IZ SYS STATUS security key to display the IZST menu option. The menu path is BYIM Main Menu --> SETUP Options [SET] --> System Status [IZST].

```
                    Immunization Data Exchange
                    2013 DEMO HOSPITAL (CMBB)

    BYIM VERSION: 3.0 P 8           NEXT AUTO EXPORT: JUL 29@12:16   (1D)
      HL7 VERSION: 2.5.1 R1.5 2016+  NEXT AUTO IMPORT: JUL 28@13:24   (15S)
OUTPUT CONTROLLER: RUNNING          NEXT AUTO QUERY.: JUL 29@23:30   (1D)
FORMAT CONTROLLER: RUNNING          NEXT AUTO PURGE.: JUL 29@23:30   (1D)


    SET    SET UP Immunization Data Exchange Parameters
    IZAD   Define Additional Data Exchange States
    IZIS   Add/Edit IIS Assigned Vaccine Inventory Codes
    IZST   System Status
    IZER   Display ERRORS from State Response
    IZIC   Insights & Conditions of Maintenance
```

Figure 3:IZST Menu

Some of the information that the System Status Report includes:

1.   The IRIS version that is installed.

2.   The BYIM RPMS application version, HL7 version, the status of the GIS controllers, and the status of the BYIM background jobs.

3.   The date/time of the next scheduled RPMS export.

4.   The settings for the Business Operations.

5.   The queue counts for the outbound Business Operations at the site.

6.   The list of current IEN numbers in the IZ HL7 Messages file that needs to be processed by Business Operations.

7.   The list of the last five errors/issues for messages going to each State/destination. Note that most sites will only have one State destination.

8.   The list of the last five successfully processed messages going to each State/destination.

```
-------------------------- BYIM SUMMARY START ----------------------------
Report time:            2025-08-06 16:24:16
RPMS namespace:         CMBA
Ensemble namespace:     BYIMCMBA
Intersystems version:   IRIS for windows (x86-64) 2022.1.3 (Build 668U) Fri Apr 7
 2023 12:37:55 EDT

BYIM version:           3.0 P 8
HL7 Version:            2.5.1 R1.5 2016+
Output Controller:  Running
Format Controller:  Running
Next Auto Export (BYIM IZ AUTO EXPORT):             AUG 09@15:10   (1D)
Next Auto Import (BYIM IZ AUTO IMPORT):             AUG 06@16:24   (15S)
Next Auto Query  (BYIM IZ SCHEDULED APPT QUERY):    AUG 08@23:14   (1D)
Next Auto Purge  (BYIM IZ PURGE OLD QUERY/RESP):    AUG 08@23:14   (1D)
State Destination(s): AZ,NM,OK
Server environment:  Test
   Set:              04/18/2025 21:53:38.41282
   Last checked:     08/06/2025 19:29:28.38707


Enter RETURN to continue or '^' to exit: █
BYIM Local production status: Running
   Global Inbound BS:    Enabled
   API Inbound BS:       Enabled

Ensemble Business Operation settings:
   QBP Outbound ~ AZ T: Enabled
      Type:           SOAP
      Facility ID:    63027
      URL:            https://stage-asiis.org/phchub/soa
   VXU Outbound ~ AZ T: Enabled
      Type:           SOAP
      Facility ID:    63027
      URL:            https://stage-asiis.org/phchub/soa
   QBP Outbound ~ NM T: Enabled
      Type:           SOAP
      Facility ID:    IHS1565
      URL:            https://www.nmhit.org/services/RhapWSUAT_EHR_IIS.RhapWSU
AT_EHR_IISHttpSoap12Endpoint
   VXU Outbound ~ NM T: Enabled
      Type:           SOAP
      Facility ID:    IHS1565
      URL:            https://www.nmhit.org/services/RhapWSUAT_EHR_IIS.RhapWSU
AT_EHR_IISHttpSoap12Endpoint

Last date/time of:
   API Inbound message received:    2025-08-01 13:11:47.53284   (2151753)
   Global Inbound message received: 2025-08-06 19:23:19.27755   (2151792)
   Update Production called:        2025-08-06 19:29:28.38292

Enter RETURN to continue or '^' to exit:
Local production Queue counts.
   QBP Outbound ~ AZ T: 0          VXU Outbound ~ AZ T: 0
   QBP Outbound ~ NM T: 0          VXU Outbound ~ NM T: 0

Global queue entries for processing
   ^BYIMRT(TSTYPDES,CE,QBP,AZ) current entries
      None
   ^BYIMRT(TSTYPDES,CE,VXU,AZ) current entries
      None
   ^BYIMRT(TSTYPDES,CE,QBP,NM) current entries
      None
   ^BYIMRT(TSTYPDES,CE,VXU,NM) current entries
      None
   ^BYIMRT(TSTYPDES,CE,QBP,OK) current entries
      97813
   ^BYIMRT(TSTYPDES,CE,VXU,OK) current entries
      97810
   ^BYIMRT(TSTYPDES,CE,QBP,UT) current entries
      94968   94975   94979   94983   94987
      94991   94995   94999   95003   95007
      95011   95015   95019   95031   95035
      ... 29 More
   ^BYIMRT(TSTYPDES,CE,VXU,UT) current entries
      None
   ^BYIMRT(TSTYPDES,CE,QBP,WI) current entries
      94967   94978   94982   94986   94990
      94994   94998   95002   95006   95014
      95018   95030   95034   95038   95042
      ... 15 More
   ^BYIMRT(TSTYPDES,CE,VXU,WI) current entries
      95850   95854   95858   95862   95870
      96301   96452   96471   96480   96504
      96835   97348

Enter RETURN to continue or '^' to exit:
```

Figure 4:System Status Report

```
Last 3 errors from the local production for messages transmitted to AZ:
   1. ^BYIMRT(97797)      2025-07-30 21:46:25.76488
      Err: 9~Communication issue. :
   2. ^BYIMRT(97797)      2025-07-30 21:41:25.75938
      Err: 9~Communication issue. :
   3. ^BYIMRT(97797)      2025-07-30 21:36:25.75525
      Err: 9~Communication issue. :

Last 3 errors from the local production for messages transmitted to NM:
   1. ^BYIMRT(97799)      2025-08-01 13:11:47.51752
      Err: 9~Communication issue. :
   2. ^BYIMRT(97788)      2025-07-29 16:54:24.7715
      Err: 9~Communication issue. :
   3. ^BYIMRT(97788)      2025-07-29 16:51:10.60532
      Err: 9~Communication issue. :

Last 3 errors from the local production for messages transmitted to OK:
   1. ^BYIMRT(97800)      2025-08-01 13:11:47.53284
      Err: 7~Destination facility ID not defined.
   2. ^BYIMRT(97766)      2025-07-21 21:06:21.67086
      Err: 7~Destination facility ID not defined.
   3. ^BYIMRT(97763)      2025-07-21 21:04:17.50593
      Err: 7~Destination facility ID not defined.

Enter RETURN to continue or '^' to exit: █
Last 3 successful messages transmitted to AZ:
   1. ^BYIMRT(97808)      2025-08-06 19:23:19.2741
   2. ^BYIMRT(97814)      2025-08-06 19:23:19.26925
   3. ^BYIMRT(97811)      2025-08-06 19:23:19.26117

Last 3 successful messages transmitted to NM:
   1. ^BYIMRT(97809)      2025-08-06 19:23:19.27755
   2. ^BYIMRT(97812)      2025-08-06 19:23:19.27114
   3. ^BYIMRT(97803)      2025-08-01 21:11:25.77502

Last 3 successful messages transmitted to OK:
   1. ^BYIMRT(97752)      2025-07-09 12:01:52.13479
   2. ^BYIMRT(97751)      2025-07-09 12:01:52.08354
   3. ^BYIMRT(97746)      2025-07-05 16:06:22.75526

Completed

Enter RETURN to continue or '^' to exit: █
```

Figure 5:Cont. of System Status Report

2.3   Update for Insights and Conditions of Maintenance Report

Per Insights and Conditions of Maintenance HTI-1 requirements, a more detailed version of RWT metrics is needed. The RWT option will be changed to display an overall summary and a detailed breakdown of transactions across BYIM.

The user does not need a security key to access the I&C Report.

The menu path is BYIM Main Menu > SETUP Options [SET] > Insights & Conditions of Maintenance [IZIC].

```
                    Immunization Data Exchange
                    2021 DEMO HOSPITAL (INST)

      BYIM VERSION: 3.0 P 8          NEXT AUTO EXPORT: JUL 09@06:00    (1D)
        HL7 VERSION: 2.5.1 R1.5 2016+  NEXT AUTO IMPORT: JUL 08@12:38:30 (15S)
OUTPUT CONTROLLER: RUNNING           NEXT AUTO QUERY.: JUL 08@23:14    (1D)
FORMAT CONTROLLER: RUNNING           NEXT AUTO PURGE.: JUL 08@23:14    (1D)


   SET    SET UP Immunization Data Exchange Parameters
   IZAD   Define Additional Data Exchange States
   IZIS   Add/Edit IIS Assigned Vaccine Inventory Codes
   IZST   System Status
   IZER   Display ERRORS from State Response
   IZIC   Insights & Conditions of Maintenance
```

Figure 6:IZIC Menu Option

The Report Type input has three options:

1. Option 1 (Year to Date)

2. Option 2 (By Quarter)

3. Option 3 (By Date Range)

```
Select Report Type:

    Select one of the following:

        1            Year to Date
        2            By Quarter
        3            By Date Range
```

Figure 7:IZIC Report Type Options

The user can then select between Summary or Detailed Report.

```
    Select one of the following:

        1            Summary Only
        2            Detailed Report

Which Report: Summary Only//
```

Figure 8:Summary or Detailed Report Menu Option

```
            Report: Summary               Date: 04/21/2025
        Date Range: Jan 01, 2024 to Dec 31, 2024
        ----------  ----------------------------  ----------
    Immunizations.....:   232
    Administered Imms.:    83
    Historic Event....:   149
                            Stuck in transmission Queue:      2
                            Responses with         Error:    10
Immunizations     Sent:   140  Immunization Responses Recd:   77
Administered Imms Sent:    80  Administered Imms      Recd:   17
Historic Events   Sent:    60  Historic Events        Recd:   60
    % VXU's Sent/Imms:  60 %        % RSP Recd/VXU Sent:   55 %
            (140/232)                      (77/140)

Queries           Sent:   447  Query responses        Recd:  157
                                   % RSP Recd/QBP Sent:   35 %
                                        (157/447)
```

Figure 9: IZIC Summary Report

```
              Report: Age                      Date: 04/21/2025
        Date Range: Jan 01, 2024 to Dec 31, 2024
              Age....: 18 and under
        ----------- ------------------------------ ----------
    Immunizations.....:    99
    Administered Imms.:    32
    Historic Event....:    67
                                Stuck in transmission Queue:       1
                                Responses with        Error:       6
Immunizations     Sent:    47  Immunization Responses Recd:      24
Administered Imms Sent:     0  Administered Imms       Recd:       0
Historic Events   Sent:     0  Historic Events         Recd:       0
    % VXU's Sent/Imms:  47 %          % RSP Recd/VXU Sent:  51 %
          (47/99)                           (24/47)

Queries           Sent:   189  Query responses         Recd:      71
                                    % RSP Recd/QBP Sent:  37 %
                                          (71/189)
```

```
              Report: Age                      Date: 04/21/2025
        Date Range: Jan 01, 2024 to Dec 31, 2024
              Age....: 19 and older
        ----------- ------------------------------ ----------
    Immunizations.....:   133
    Administered Imms.:    51
    Historic Event....:    82
                                Stuck in transmission Queue:       1
                                Responses with        Error:       4
Immunizations     Sent:    93  Immunization Responses Recd:      53
Administered Imms Sent:     0  Administered Imms       Recd:       0
Historic Events   Sent:     0  Historic Events         Recd:       0
    % VXU's Sent/Imms:  69 %          % RSP Recd/VXU Sent:  56 %
          (93/133)                          (53/93)

Queries           Sent:   258  Query responses         Recd:      86
                                    % RSP Recd/QBP Sent:  33 %
                                          (86/258)
```

```
              Report: State                    Date: 04/21/2025
        Date Range: Jan 01, 2024 to Dec 31, 2024
              State: ARIZONA
        ----------- ------------------------------ ----------
    Immunizations.....:   232
    Administered Imms.:    83
    Historic Event....:   149
                                Stuck in transmission Queue:       2
                                Responses with        Error:      10
Immunizations     Sent:   113  Immunization Responses Recd:      72
Administered Imms Sent:    58  Administered Imms       Recd:      17
Historic Events   Sent:    55  Historic Events         Recd:      55
    % VXU's Sent/Imms:  48 %          % RSP Recd/VXU Sent:  63 %
          (113/232)                         (72/113)

Queries           Sent:   180  Query responses         Recd:     156
                                    % RSP Recd/QBP Sent:  86 %
                                          (156/180)
```

Figure 10:IZIC Detailed Report

Figure 11:Cont. of IZIC Detailed Report

Acronym List

Acronym	Meaning
EHR	Electronic Health Record
I & C	Insights and Conditions
SMM	Simple Message Mover

Contact Information

If you have any questions or comments regarding this distribution, please contact the IHS IT Service Desk.

Phone: (888) 830-7280 (toll free)

Web: https://www.ihs.gov/itsupport/

Email: itsupport@ihs.gov