BYIM Immunization Data Exchange – BYIM Package & EHR Immunization Component
Presented By...

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Federal Lead – Immunizations
IHS Office of Information Technology
BYIM Interface Management

• BYIM v3.0
  • Two-way Generic Interface System (GIS) HL7
  • Exchange of immunization data with State immunization registries
• EHR v1.1 p29 Immunization Component
Learning Objectives

At the end of this session, participants should be able to …

• Describe the menu options to send HL7 messages and evaluate responses
• Compare and contrast RPMS only, State only, and RPMS + State displays
• Describe differences in Immunization context displays available
• List possible error messages and how to approach resolution
BYIM Menu

Immunization Data Exchange
2021 DEMO HOSPITAL (INST)

BYIM VERSION: 3.0 P 2
HL7 VERSION: 2.5.1 R1.5 2016+
NEXT AUTO EXPORT: JUL 21@14:03
NEXT AUTO IMPORT: JUL 21@09:24:15
OUTPUT CONTROLLER: RUNNING
NEXT AUTO QUERY.: JUL 21@09:27
FORMAT CONTROLLER: RUNNING
NEXT AUTO PURGE.: JUL 22@01:00

IZDE  Start Immunization Data Export
IZCE  Check Immunization Data Export Status
IZFS  File Statistics Report
IZSI  Show Immunizations Exported for a Patient
IZTE  Create TEST Export File
IZQR  Immunization Queries
SET   SETUP Options ...
IZDE Start Immunization Data Export

The last Immunization export ran on: JUL 19, 2021

This export will include: Patients of all ages who have had a visit since the last export.

You can select another date range for the export.

Export Immunizations given since JUL 19, 2021: JUL 19, 2021/
Exclude Immunizations given after JUL 20, 2021: JUL 20, 2021/

Which immunizations should be included:
Select one of the following:

1. NEW or EDITED Immunizations in the date range
2. ALL Immunizations for patients with VISIT in the date range

Send NEW or ALL Immunizations: NEW or EDITED Immunizations// in the date range

Include HISTORIC Immunizations added to RPMS in the date range? NO//

Evaluation of immunizations for export to the State Immunization registry may take several minutes.

Do you want to proceed? NO//
IZDE Start Immunization Data Export—Results

Immunizations for 8060 Patients 0-99 were evaluated.

The file 'izdata_232101_20210720_133353.dat' will be created in the 'G:\Immunization Tracking\BYIM\export\' directory.

File creation may take several minutes. Check for the file in the directory listed above.

If SMM is running, the file should transfer automatically to the State registry.
IZFS File Statistics Report

<table>
<thead>
<tr>
<th>File Name Prefix: izdata_232101_</th>
<th>Report Date: 07/23/2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>20210716_101.dat 07/16/2021 EXPORT</td>
<td></td>
</tr>
<tr>
<td>File Name Prefix: NoImmsToExp_232101_</td>
<td></td>
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<tr>
<td>20210716_114337.dat 07/16/2021 EXPORT</td>
<td></td>
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<tr>
<td>20210716_12091.dat 07/16/2021 EXPORT</td>
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<td>File Name Prefix: izdata_232101_</td>
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<tr>
<td>20210716_123501.dat 07/16/2021 EXPORT</td>
<td></td>
</tr>
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</table>
IZSI Show Immunizations Exported for a Patient

**select the patient to review:**

Enter Name, HRN or DOB:

**Immunization Export summary for:**

TEST, NEWBABY

DOB: 09/03/2014   HRN: 86009

<table>
<thead>
<tr>
<th>Export Date</th>
<th>Immunization</th>
<th>Admin Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>08/01/2016</td>
<td>ROTAVIRUS, PENTAVALVE</td>
<td>08/01/2016</td>
</tr>
<tr>
<td>08/01/2016</td>
<td>DTaP-Hep B-IPV</td>
<td>08/01/2016</td>
</tr>
<tr>
<td>12/20/2015</td>
<td>ROTAVIRUS, MONOVALEN</td>
<td>12/20/2015</td>
</tr>
<tr>
<td>06/08/2021</td>
<td>DTAP</td>
<td>08/01/2017</td>
</tr>
</tbody>
</table>

Press <ENTER> to continue or '^' to exit...:
BYIM Menu Immunization Query

Immunization Query Options - Version: 2.5.1 R1.5 2016+

Select one of the following:

1. Request Patient Imm History and Forecast
2. Send Patient Immunizations
3. Review Query or VXU Response
4. Review Query or VXU Sent
5. Send Scheduled Appt Queries

Which action:
Request Patient Imm History & Forecast

which action: 1  Request Patient Imm History and Forecast
Select patient(s) to send to the State Immunization Registry
Select patient:

DEMO,PATIENT CHILD  
F 11-17-2016 XXX-XX-9895  PIMC 999895

1

DEMO,PATIENT CHILD

Select another patient:
A 'Request for Evaluated Imm History and Forecast' will be sent for:

1

DEMO,PATIENT CHILD

Do you want to proceed? YES//
Please stand by. This may take a couple of seconds...

Query being sent for: DEMO,PATIENT CHILD

Query for : DEMO,PATIENT CHILD
being sent to: ARIZONA
and to: UNKNOWN
QUERY Message ID: IHS-43527232 for DEMO,PATIENT CHILD
and can be used to look up the responses from:
ARIZONA
UNKNOWN
Send Patient Immunizations

which action: 2 Send Patient Immunizations
which immunizations should be included:

Select one of the following:

1. NEW or EDITED Immunizations in the date range
2. ALL Immunizations for patients with VISIT in the date range

Send NEW or ALL Immunizations: NEW or EDITED Immunizations in the date range

Include HISTORIC Immunizations added to RPMS in the date range? NO/

Select patient(s) to send to the State Immunization Registry

Select patient: TEST, NEWBABY F 09-03-2014 TST 86009

1. TEST, NEWBABY

Select another patient:

An 'Unsolicited Vaccine Record Update (VXU)' will be sent for:

1. TEST, NEWBABY

Do you want to proceed? YES/

Please stand by. This may take a couple of seconds...

Immunization record for: TEST, NEWBABY
being sent to: ARIZONA
and to:
and to:
and to:
Review Query or VXU Response Information Only

3 Review Query or VXU Response

Review Responses from the State IIS
Select by Pat Name, Query/VXU Date or Message ID: demo, patient c

HILD

izrt_qbp_298997_3_20210612_000027.dat
0:00:27 IHS-43527232 ARIZONA

Select one of the following:

1 Immunization Information Only
2 HL7 Message Content

Which display option: Immunization Information Only!!

Response received

Date/State File Name/Message ID

DEMO, PATIENT CHILD (F) 06/12/2021 izrt_qbp_298997_3_20210612_000027.dat
DOB: 11/17/2016 HRN: 999895 ARIZONA IHS-43527232

Response ID: (11744123) Query or VXU ID: (11743909)

DEMO, PATIENT CHILD 11/17/2016 F HRN: 1

<table>
<thead>
<tr>
<th>CVX</th>
<th>VACCINE</th>
<th>ADM.DATE</th>
<th>AGE</th>
<th>LOCATION</th>
<th>REACTION</th>
<th>VOL</th>
<th>SITE</th>
<th>LOT</th>
<th>MAN</th>
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<th>STATUS</th>
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<tr>
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<td>20201121</td>
<td>4 dys</td>
<td>PHOENIX</td>
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<td>.5</td>
<td>KG4M7</td>
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<td>158</td>
<td>FLU-IIV</td>
<td>20170926</td>
<td>10 mts</td>
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<td>FLU-IIV</td>
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<td>LT</td>
<td>4MM5P</td>
<td>G1a</td>
<td>COMPLE</td>
<td></td>
</tr>
</tbody>
</table>
Review Query or VXU Response
HL7 Message Content

3 Review Query or VXU Response

Review Responses from the State IIS

Select by Pat Name, Query/VXU Date or Message ID:  izrt_qbp_298997_3_20210612_000027.dat  DEMO, PATIENT CHILD  Jun 12, 2021@00:00:27  IHS-43527232
ARIZONA

Select one of the following:

1 Immunization Information Only
2 HL7 Message Content

Which display option: Immunization Information Only// 2 HL7 Message Content

Response received Date/State File Name/Message ID

DEMO, PATIENT CHILD (F) 06/12/2021 izrt_qbp_298997_3_20210612_000027.d
DOB: 11/17/2016 HRN: 999895 ARIZONA IHS-43527232
Response ID: (11744123)  Query or VXU ID: (11743909)

MSH|\&\&|ASIIS|\&|ASIIS|\&|RPMS|\&|61588|\&|20210612000028-0700|\|RSP|\&|K11|\&|RSP_K1
|1|4985022043.101576952|P|2.5.1|\|NE|\|NE|\|\|\|\|\|Z44|\&|CDCPHINV5|\&|
MSA|AA|IHS-43527232
QAK|IHS-43527232|OK|Z44|Request Evaluated History and Forecast|CDCPHINV5|
QPD|Z44|Request Evaluated History and Forecast|CDCPHINV5|IHS-43527232|68660
1999895|\&|PHOENIX INDIAN MEDIC|MR|DEMO|PATIENT|CHILD|\&|JON|JANE|\&|\&|20
161117|F|4212 N 16TH ST|PHOENIX|AZ|85016|USA|L|PRW|PH|\&|302|3731344|
Review Query or VXU Sent

4 Review Query or VXU Sent

Select Original Query or VXU sent

Select Patient, VXU or Query Date or Message ID: izrt_qbp_298997_3_20210612_000027.dat DEMO,PATIENT CHILD Jun 12,2021@00:00:27 IHS-43527232 A RIZONA

Select one of the following:
1 Immunization Information Only
2 HL7 Message Content

Which display option: Immunization Information Only// 2 HL7 Message Content

HL7 Message sent Date/State File Name/Message ID
DEMO,PATIENT CHILD (F) 06/12/2021 izrt_qbp_298997_3_20210612_000027.d
DOB: 11/17/2016 HRN: 9999895 ARIZONA IHS-43527232

Query or VXU ID: (11743909)

MSH|^~\&|RPMS|61588|ASIIS|ASIIS|20210612000027-0700||QBP^Q11|QBP_Q11|IHS-43
527232\P[2.5.1]\ER\AL\]\]\]\Z44^CDCPHINV5|61588^^^^^^^|
QP|Z44^Request Evaluated History and Forecast^CDCPHINV5|IHS-43527232|60660
1999895^^^^PHOENIX INDIAN MEDIC^MR|DEMO^PATIENT^CHILD^^^^L|JOE^JANE^^^^^M|20
161117\F|4212 N 16TH ST^^PHOENIX^AZ^85016^USA^L^^|PRN^PH^^^^302^373134
Send Scheduled Appointment Queries

select a date for which to send queries for:
scheduled appointments only

Date for Appointment Queries: 6/12

Queries will be sent for all patients who have
Scheduled appointments only on JUN 12, 2021

Press <ENTER> to continue or '^' to exit...:
EHR Immunization Component

![Image of Immunization Record]

<table>
<thead>
<tr>
<th>Source</th>
<th>Immunization Record</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Forecast**

- DTAP NOS: past due
- POLIO NOS: past due
- HEP B NOS: past due
- MMR: past due

**Contraindications**

- Add
- Delete

**Immunization History**

<table>
<thead>
<tr>
<th>Registry</th>
<th>Vaccine</th>
<th>Visit Date</th>
<th>Age@Visit</th>
<th>Location</th>
<th>Reaction</th>
<th>Volume</th>
<th>Inj. Site</th>
<th>Lot</th>
<th>Manufacturer</th>
<th>VIS Date</th>
<th>Administered By</th>
<th>Vaccine Eligibility</th>
<th>Admin Date</th>
<th>Admin Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPMS ONLY</td>
<td>DTaP (PEDIARIX)</td>
<td>08/01/2016</td>
<td>22 mths</td>
<td>2021 DEMO HOSPITAL (INST)</td>
<td></td>
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<td></td>
<td></td>
<td>Am Indian/AK Native</td>
<td>08/01/2017</td>
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<tr>
<td>RPMS ONLY</td>
<td>DTaP</td>
<td>08/01/2017</td>
<td>34 mths</td>
<td>2013 Demo-1 Tribal Clinic</td>
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<tr>
<td>RPMS ONLY</td>
<td>IPV (PEDIAIRIX)</td>
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<td>ROTA-1</td>
<td>12/20/2015</td>
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### Immunization History

<table>
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</tbody>
</table>
# EHR Immunization Component

## Last Export Failure

### Immunization Record

- **Source**: RPMS + AZ
- **Forecast**: DTAP NOS, POLIO NOS, HEP B NOS, MMR
- **Contraindications**

### Immunization History

<table>
<thead>
<tr>
<th>Registry</th>
<th>Vaccine</th>
<th>Visit Date</th>
<th>Age@Visit</th>
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<td></td>
<td>08/01/2017</td>
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</tbody>
</table>
EHR Immunization Component (Examples)

Example 1

Example 2

Example 3

The State immunization history and forecast are presented for reference purposes and may not be identical to information found in RMS. Users can refer to State information to identify and update any immunizations missing from RMS, but should always make clinical immunization decisions using the RMS forecast, which was designed in accordance with IHS immunization policy and best practice.
EHR Immunization Component
RPMS Only Options

Source: Immunization Record

<table>
<thead>
<tr>
<th>Source</th>
<th>RPMS + AZ</th>
<th>AZ: No state data found</th>
<th>Refresh State</th>
<th>State Immunization Profile</th>
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</table>

Forecast

<table>
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<tr>
<th>Vaccine</th>
<th>Status</th>
</tr>
</thead>
<tbody>
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<td>DTAP</td>
<td>past due</td>
</tr>
<tr>
<td>POLIO</td>
<td>past due</td>
</tr>
<tr>
<td>HEP B</td>
<td>past due</td>
</tr>
<tr>
<td>MMR</td>
<td>past due</td>
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</tbody>
</table>

Contraindications

<table>
<thead>
<tr>
<th>Add</th>
<th>Delete</th>
</tr>
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</table>

Immunization History

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<tr>
<th>Registry</th>
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Print Official Record

Add Vaccination

Edit Vaccination

Delete Vaccination

Print Due Letter

Print Profile

Case Data

Display Visit Detail

Web References

No Query Response on file for TEST.NEW/BABY (Click to Remove)
Questions & Discussions