



RESOURCE AND PATIENT MANAGEMENT SYSTEM

# Data Warehouse Export System

(BDW)

## User Manual

Version 1.0 Patch 7  
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Office of Information Technology  
Division of Information Technology

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## Revision History

Date	Revision	Description	Author
01/25/2006	1.0	User manual v1.0 release	
10/15/2018	1.1	Updated document as a whole for v1.0 patch 5 updates. Most sections required an update.	Lee Baliton
03/20/2019	1.2	Updated document as a whole for v1.0 patch 6 updates. Most sections required an update and added Sections 5.0	Duane Rozsnyai
05/06/2020	1.3	Updated document as a whole for v1.0 patch 7 updates. Most sections required an update and added Sections 6.0	Lori Butcher

## 1.0 Introduction

The Data Warehouse Export (namespace BDW) System is an RPMS (Resource and Patient Management System) software application designed for local export of registration and visit data to the Indian Health Service (IHS) National Data Warehouse (NDW).

In 2019, a separate export was created to send prescription data to a reporting system at the Data Warehouse. Use of the standardized RPMS BDW will assist local sites with extracting data to create an opioid surveillance strategy to monitor local opioid prescribing and leverage utilization of timely, actionable data to inform strategies and interventions. This data will also support opioid stewardship efforts and multi-disciplinary, collaborative approaches to improve outcomes for patients with chronic pain or opioid use disorder diagnoses. This data export will also enable analysis of the effectiveness of harm reduction strategies.

In 2020, a separate export was created to send Coronavirus Disease 2019 (COVID-19) related testing and hospital bed usage data to a reporting system at the Data Warehouse. In this rapidly evolving pandemic, this export will support dashboard reports used to assist COVID-19 operations.

The National Patient Information Reporting System (NPIRS) is a designated organizational unit within the Information Technology Support Center, Division of Information Technology, Indian Health Service, located in Albuquerque, New Mexico and has been in existence since 1986. The purpose of NPIRS is to provide a broad range of clinical and administrative information to managers at all levels of the Indian health system to allow them to better manage individual patients, local facilities, regional and national programs and to allow IHS Management to provide legislatively required reports to the Administration and Congress. The NDW project was initiated to upgrade NPIRS to a new, state-of-the-art, enterprise-wide data warehouse environment to better serve the needs of its users.

This application will allow local RPMS systems to export data to the new NPIRS NDW structure. The data to be exported includes demographic data; third-party eligibility information; patient-based clinical data (e.g., problem list); and encounter-based clinical data (e.g., purpose of visit, procedures, medications, laboratory test results, radiological results). This export will provide for the export of modifications in these data so that the NDW will be able to maintain historical records of changes in these data so information about past as well as current circumstances can be retrieved. Additionally, prescription data can optionally be included in a separate export, so that the NDW can maintain a separate database of prescriptions to support the various opioid initiatives.

The data is exported via HL7 (Health Level Seven) standard messages. For each registration, visit record and/or prescription record that is exported an HL7 message is generated and sent to the NDW.

The Sections included in the manual cover the main components of this system:

Section 1.0: Introduction

Section 2.0: Overview of Menu Options

Section 3.0: Getting Started: System Setup for Regular Patient/Visit exports

Section 4.0: Regular Exporting of Patient/Visit Data to the Warehouse

Section 5.0: Prescription Export to Data Warehouse

Section 6.0: COVID-19 Export to Data Warehouse

## 2.0 Overview of Menu Options

The Data Warehouse Export System is menu controlled. The options available from the main menu are shown on the following page. A brief description of each of the main options follows.

```

*****
**          Data Warehouse Export          **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

GDW      Generate Data Warehouse Export Records
RERX     Re-Run a Previously Run Data Warehouse Export
DLOG     Display Log Entry
DWSR     Data Warehouse Export Summary Report
DWER     List PCC Encounters Not Exported
RSET     Reset Failed Log Entry
PURG     Purge Log Entries
DRE      Export to Data Warehouse for a Date Range
PRA      Create Patient Reg Update Audit File
DVAR     Create Encounter Audit Report
RPE      Re-flag Patient for Export as an Add to NDW
UXP      Search Visits and Mark Unexported Visits
PREX     Prescription Drug Data Warehouse Export Menu ...
COEX     COVID-19 Export Menu ...

Select Data Warehouse Export Menu Option:

```

Figure 2-1: Main Menu for Data Warehouse Export System

### 2.1 Generate Data Warehouse Export Records

The **GDW** option is used to perform the regular monthly or weekly exports to the Data Warehouse. During the export process, commands are passed to the HL7 message generator to create registration and Patient Care Component (PCC) visit HL7 messages. Once all messages are created, an output file will automatically be created and written to the export directory. The process of generating the HL7 messages may take several minutes to an hour to complete after this option is executed. You will not see the output file in the export directory until the HL7 message generation has completed, even though you have been brought back to your menu. A log entry is then created in the **BDW Data Warehouse Export Log** file.

This option can be scheduled to run at a desired interval in task manager. The option that can be scheduled to run automatically is **BDW QUEUE BDW**. For instructions on how to schedule an option to run at a desired interval, see the VA Kernel user manual.

## 2.2 Re-Run a Previously Run Data Warehouse Export

The **RERX** option should be used if an export done previously never made it to the Data Warehouse and the output file cannot be found.

## 2.3 Display Log Entry

The **Data Warehouse Export Log** file is a historical record of the exports done. The **DLOG** report option allows the PCC Manager to review various items contained in the export log file after a **GDW** was executed.

## 2.4 Data Warehouse Export Summary Report

The **SUM** or **DWSR** option provides a summary of all the visits processed during the export by visit type, service category, location, date, clinic and primary provider discipline. This report should be queued to print after every export and then kept for future reference.

## 2.5 List PCC Visits Not Exported

Certain visits will not be exported due to missing required data elements. The required data elements are: Patient, visit type, service category and location of encounter. In addition, DEMO,PATIENT visits are not exported. To see a list of all visits that were not exported, use the **DWER** option.

## 2.6 Reset Failed Log Entry

The **RSET** option is used by the site manager or area office personnel when an export aborts. This option resets the log entry.

**Note:** This option is locked with the BDWZ RESET key. This key should only be given to IT staff.

## 2.7 Purge Log Entries

The **PURG** option purges or deletes the visit pointers from the log file. Once this has been completed, the purged log entry cannot be rerun using the **RERX** option. This option does not delete visits, but rather the log of the visits that were sent during a particular transmission.

## 2.8 Export to Data Warehouse for a Date Range

The **DRE** option can be used to send all visits in a date range to the Data Warehouse. This option should only be used if you are requested by the Data Warehouse to resubmit data from a certain time period.



## 2.9 Create Patient Reg Update Audit File

If you wish to send a patient registration audit report to double check the data sent by the HL7 program, execute the **PRA** option prior to running **GDV**. This will create a second file of registration data to be used to check against the data sent via **GDV**.

## 2.10 Create Visit Audit Report

If you wish to send a visit audit report to double check the data sent by the HL7 program, execute the **VAR** option prior to running **GDV**. This will create a second file of registration data to be used to check against the data sent via **GDV**.

## 2.11 Re-flag Patient for Export as an Add to NDW

This option is used to flag a patient to be sent to the Data Warehouse as an **ADD**. This option should be used if an edit patient record has failed at the warehouse because the patient was never received as an add prior to the edit message being sent. The patient(s) that you choose will be flagged as adds and sent on the next regularly scheduled data warehouse export (**GDW**).

## 2.12 Search Visits and Mark Unexported Visits

This option can be used to flag visits for export that have not previously been exported to the National Data Warehouse. The user will be asked to enter a beginning and ending date. The system will review all visits in that date range, and if the visit has never been exported to the NDW, it will flag it for export on the next export.

**Note:** The earliest date you can enter for this option is Oct 01, 2015.

## 2.13 Prescription Drug Export Menu

This menu consists of a set of options used to manage the exporting of prescription data to a national reporting database maintained at the NDW. This reporting system will enable IHS to track opioid-dispensing data on national, regional, and local levels.

The data will be used to support opioid stewardship efforts and multi-disciplinary, collaborative approaches to improve outcomes for patients with chronic pain or opioid use disorder diagnoses. This data export will also enable analysis of the effectiveness of harm-reduction strategies.

These menu options should only be used if the facility has agreed to participate in this prescription export.

**Note:** This menu is locked with security key BDWHZMENU.  
This key should only be given to those users tasked with monitoring and managing the prescription export process.

```

*****
**      Prescription Export to Data Warehouse      **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

PRGT  Generate Prescription Export Transactions
PRDL  Display Prescription Export Log Entry
PRRX  Re-Run Previously Run Prescription Export
PRDR  Date Range Export of Prescription Transactions
PRPE  Edit Prescription Export Parameter
PRRL  Reset Prescription Export Log

Select Prescription Drug Data Warehouse Export Menu Option:

```

Figure 2-2: Main Menu for the Prescription Data Warehouse Export System

### 2.13.1 Generate Prescription Export Transactions

This option will generate Prescription HL7 messages for prescriptions filled between a specified range of dates. The date range is determined by the system based on the last export done. The export will include prescriptions filled or refilled from the end date of the previous run up to the day before this option is run.

### 2.13.2 Display Prescription Export Log Entry

The Prescription Data Warehouse Export Log file is a historical record of the exports done. The **PRDL** report option allows the user to review various items contained in the export log file after an export was executed.

### 2.13.3 Re-Run Previously Run Prescription Export

This option is used to re-run a previously run export. It should be used only if the original export did not make it to the data warehouse and the original file generated cannot be found.

### 2.13.4 Date Range Export of Prescription Transactions

This option should only be used after consulting with the NDW staff. **PRDX** exports cannot be loaded into the NDW without first making special arrangements. **PRGT** and **PRRX** options should be used for all regularly scheduled exports. This program will generate Prescription transactions for a fill/refill date range entered by the user.

**Note:** Only controlled substances will be exported for any fill dates prior to January 1 of the year in which this option is run. All prescriptions/drugs filled on January 1 and later of the year in which this option is run will be exported.

### 2.13.5 Edit Prescription Export Parameter

This option is used to indicate whether a facility/pharmacy wants to participate in the exporting of prescription transactions. The default is NO, DO NOT ENABLE EXPORT.

### 2.13.6 Reset Prescription Export Log

The **PRRL** option is used by the site manager or area office personnel when a prescription export aborts. This option resets the log entry.

**Note:** This option is locked with key BDWHZ RESET. This key should only be given to IT staff.

## 2.14 COVID-19 Export Menu

This menu consists of a set of options used to manage the exporting of COVID-19 related testing and bed usage data to a national reporting database maintained at the NDW.

**Note:** Before running this export, consult with laboratory personnel to ensure all COVID19 tests that are performed at your facility are included in the BDW COVID-19 DIAGNOSTIC TESTS lab test taxonomy. See Sections 2.14.5 and 3.0.

The data will be used to indicate the prevalence of COVID-19 in Indian communities, such as the number of positive, negative, and indeterminate test results.

**Note:** This menu is locked with security key BDWCZMENU. This key should only be given to those users tasked with monitoring and managing the COVID-19 export process.

```
*****
**          COVID-19 Export to Data Warehouse          **
*****
                          Version 1.0 (Patch 7)

                          2019 DEMO HOSPITAL (INST)

COEX  Generate COVID-19 Export Transactions
CODL  Display COVID-19 Export Log Entry
CORX  Re-Run Previously Run COVID-19 Export
CODR  Date Range Export of COVID-19 Transactions
COTX  Update/Review COVID-19 Lab Test Taxonomy
CORL  Reset COVID-19 Export Log

Select COVID-19 Export Menu <TEST ACCOUNT> Option:
```

Figure 2-3: Main Menu for the COVID-19 Data Warehouse Export System

### 2.14.1 Generate COVID-19 Export Transactions

This option will generate HL7 messages containing COVID-19 testing and hospital bed usage data. The date range is determined by the system based on the last export done. The export will include data from the end date of the previous run up to the day before this option is run. If this is the very first run the system will generate data from March 1, 2020 up to the day before this option is run.

### 2.14.2 Display COVID-19 Export Log Entry

The COVID-19 Export Log file is a historical record of the exports done. The **CODL** report option allows the user to review various items contained in the export log file after an export was executed.

### 2.14.3 Re-Run Previously Run COVID-19 Export

This option is used to re-run a previously run export. It should be used only if the original export did not make it to the data warehouse or if the site had to update their COVID-19 lab test taxonomy to produce more accurate data.

### 2.14.4 Date Range Export of COVID-19 Transactions

This option should only be used after consulting with the NDW staff. A date range export will overlay any data previously sent to the warehouse. The user can indicate a beginning and ending date for the export.

### 2.14.5 Update/Review COVID-19 Lab Test Taxonomy

This option is used to update the BDW COVID-19 DIAGNOSTIC TESTS lab test taxonomy. This is a very important step and must be done before any exports are done. Laboratory personnel should be consulted as they will need to identify all COVID-19 tests that are performed at your facility as well as the positive, negative result values.

### 2.14.6 Reset COVID-19 Export Log

The **CORL** option is used by the site manager or area office personnel when a COVID-19 export aborts. This option resets the log entry.

## 3.0 Getting Started: System Setup for Regular Patient/Visit exports

This section describes the steps that need to be followed to set up and use the Data Warehouse Export System.

1. Confirm the Generic Interface System (GIS) is installed and current with all patches.
2. Confirm that the **GIS INH AUTOPURGE** option has been scheduled to run nightly.
3. Set up and check taxonomies.

### 3.1 Taxonomy Check and Setup

Taxonomies are used to find data items in PCC in order to determine if a patient or visit meets the criteria for which the software is looking.

To ensure comparable data within the agency as well as to external organizations, as much indicator logic as possible is based on standard national codes:

- ICD-9 (International Classification of Disease-9)
- CPT (Current Procedural Terminology)
- LOINC (Logical Observation Identifiers Names and Codes)
- National IHS standard code sets (e.g., Health Factors, patient education codes, etc.)

For terminology that is not standardized across each facility, such as lab tests or medications, RPMS uses taxonomies that can be populated by each individual facility with its own codes.

Several taxonomies must be populated with facility-defined values for the Data Warehouse software to find data within PCC for export. Many of these taxonomies may already be in use at your facility for the Diabetes Management Audit or for GPRA (Government Performance and Results Act).

New taxonomies specific to the Data Warehouse software are created when the software is installed, but they are not populated with any data.

### 3.2 What Is a Taxonomy?

Taxonomies are groupings of functionally related data elements, such as specific codes, code ranges, or terms, that are used by various RPMS applications to find data items in PCC to determine if a patient meets a certain criterion.

For data elements like diagnoses and procedures, the taxonomy simply identifies the standard codes that a program should look for.

For other types of data elements, including medications and lab tests, taxonomies are used to mitigate the variations in terminology that exist in RPMS tables from one facility to another.

For example, one site's Lab table might contain the term Glucose Test while another site's table may contain the term Glucose for the same test. PCC programs have no means for dealing with variations in spelling, spacing, and punctuation. Rather than attempting to find all potential spellings of a particular lab test, the application would look for a pre-defined taxonomy name that is installed at every facility. The contents of the taxonomy are determined by the facility. In this example, the application would use DM AUDIT GLUCOSE TESTS TAXONOMY. The individual facility will enter all varieties of spelling and punctuation for Glucose Tests used at that particular facility.

Codes and terms contained in a taxonomy are referred to as members of the taxonomy.

### 3.3 Site-Defined Taxonomies Used by the Data Warehouse Export

The site will need to review the taxonomies that need to be defined by the site and make sure that all appropriate entries exist or are entered. Table 3-1 can be used as a checklist.

**Notes:** To provide accurate counts, you must include *all* test names that have been used by your facility since 1999, even if these codes are currently inactive. Some indicators search for tests as far back as 10 years.

Many of the taxonomies used by this export have already been established and populated, by other RPMS applications (e.g., Diabetes Management, CRS). These taxonomies should all be reviewed for completeness.

Table 3-1: Site-Defined Taxonomies

Taxonomy Name	Description	Members
APCH FECAL OCCULT BLOOD	All Fecal Occult Blood Lab Tests	Occult Blood Fecal Occult Blood
BDW PAP SMEAR LAB TESTS	All Pap Smear tests	Pap Smear
BDW PSA TESTS TAX	All PSA tests	

<b>Taxonomy Name</b>	<b>Description</b>	<b>Members</b>
DM AUDIT ACE INHIBITORS	All ACE Inhibitor Drugs	Obtain list of drugs from the pharmacist
DM AUDIT DIET EDUC TOPICS	All DM diet education topics used at your site	DM-DIET, DM-NUTRITION
DM AUDIT GLUCOSE TESTS TAX	All Glucose tests	
DM AUDIT HDL TAX	All HDL Cholesterol Lab Tests <b>Note:</b> Do not include Lipid Panels in this taxonomy	HDL
DM AUDIT HGB A1C TAX	All HGB A1C lab tests	Hgb A1C, A1C, HbA1c, Hemoglobin A1C, Glycosylated hemoglobinHgb, Glycohemoglobin A1c
DM AUDIT LDL CHOLESTEROL TAX	All LDL Cholesterol Lab Tests – NOTE: do not include Lipid Panels	LDL, LDL-C
DM AUDIT MICROALBUMINURIA TAX	All Microalbuminuria Lab Tests	Microalbuminuria Micral Microalbuminuria, Urine A/C Ratio, AC Ratio, ACR, Microalbumin/ Creatinine Ratio, Microalbumin Random
DM AUDIT TRIGLYCERIDE TAX	All Triglyceride Lab Tests <b>Note:</b> Do not include Lipid Panels	Triglyceride
DM AUDIT URINE PROTEIN TAX	All Urine Protein Lab Tests	Urine Protein, Urine Protein Screen

### 3.4 Taxonomy Setup

The menu options to set up the above listed taxonomies can be found in the PCC Management Reports RPMS module. Only certain users have access to these options. You need to find out what users at the facility have access to do this. See your site manager.



## 4.0 Regular Exporting of Patient/Visit Data to the Warehouse

When the initial backloading of data to the warehouse has been completed, a site will begin regular monthly or weekly exports to the data warehouse. Each option used is described in detail in this section of the manual. The normal process would be the following:

1. If a site opts to do so, they can generate an audit file for the registration data and then an audit file for the visit data. This step is optional. The options used to generate these audit files are:
  - Create Patient Reg Update Audit File (**PRA**). See Section 4.8 for details on using this option.
  - Create Encounter Audit Report (**DVAR**) See Section 4.9 for details on using this option.
2. Generate the data warehouse export records. The option is used to generate the data warehouse transaction file is called **GDW** – Generate Data Warehouse Export Records. (See Section 4.1 for details on using this option.) The option **BDW QUEUE GDW** can also be scheduled to run automatically in TaskMan. This alleviates the need for the user to run the GDW manually.
3. On most sites, the exported files will be automatically sent via File Transfer Protocol (FTP) to the National Data Warehouse. If a site is outside the IHS network or has opted not to have the data automatically sent via FTP, they will need to manually send the extract files via FTP to the warehouse.

### 4.1 Generate Data Warehouse Export Records

This option is used to generate the data warehouse export records. This option will generate transactions (HL7 messages) for each patient edited or added to the system since the last time the export was run and will also export all visits added or modified since the last export and up to seven days ago. The seven-day lag time is to provide ample time for visits to be as complete as possible prior to export. This minimizes the need to send a visit more than once. For each patient registration edit or add, an HL7 A31 message is generated; for each visit, an HL7 A08 message is generated.

When you choose option **GDW**, it will loop through all registration records and visits to be exported, and then the processing stops and returns you to your menu. At this point, even though you have been brought back to a menu, the generation of the HL7 messages is still processing in the background. The process just executed simply sends commands to the HL7 message generator. The HL7 background processors are busy generating an HL7 message for each registration record and visit record. You will receive a MailMan message through the local RPMS MailMan system when that process has completed. When that process has completed, you will see a file in the export directory called ASUFACYMMDDHHMMSS.BDW, where ASUFAC is the Area- Service Unit-Facility code of the site you are logged exporting from, and YYMMDDHHMMSS is a date/time stamp. The extension BDW identifies this as a data warehouse export file.

An example of a filename is **808101040526080422.BDW**.

The system is configured to automatically FTP this file to the National Data Warehouse. If your site is outside of the IHS network or this auto-FTP fails, you or your site manager will have to FTP this file to the National Data Warehouse. The National Data Warehouse team will provide you with information on how and where to send the file.

After the messages have been generated and sent to the warehouse, the National Data Warehouse will send an email message confirming receipt of the file. If you do not have auto-FTP set up, you will need to manually FTP the file to the National Data Warehouse using instructions that will be provided by the National Data Warehouse team. After it has been successfully transferred, the file can be archived. It is suggested that you maintain at least a year's worth of files before deleting them in the event a file is lost or needs to be resent to the warehouse.

The **GDW** option should be run on a reasonably fixed schedule, usually on a monthly basis. When **GDW** is executed, the following dialog occurs. For the purposes of demonstration, the execution of the **GDW** option is not queued in this example. This option can be queued to run in the background. It is recommended that you run this after normal working hours when the system is not in heavy use.

To Generate Data Warehouse Export Records:

1. At the "Select Data Warehouse Export Menu Option:" prompt, type **GDW**.
2. At the "Do you want to continue?" prompt, type **YES**.
3. At the "Do you want to Queue this to run at a later time?" prompt, type **YES** or **NO**.

<p><b>Note:</b> Consider queueing this to run after normal working hours when the system is not in heavy use.</p>
---

```

*****
**          Data Warehouse Export          **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

GDW   Generate Data Warehouse Export Records
RERX  Re-Run a Previously Run Data Warehouse Export
DLOG  Display Log Entry
DWSR  Data Warehouse Export Summary Report
DWER  List PCC Encounters Not Exported
RSET  Reset Failed Log Entry
PURG  Purge Log Entries
DRE   Export to Data Warehouse for a Date Range
PRA   Create Patient Reg Update Audit File
DVAR  Create Encounter Audit Report
RPE   Re-flag Patient for Export as an Add to NDW
UXP   Search Visits and Mark Unexported Visits
PREX  Prescription Drug Data Warehouse Export Menu...
COEX  COVID-19 Export Menu ...

Select Data Warehouse Export Menu Option:
Select Data Warehouse Export Menu Option: GDW Generate Data Warehouse
Export Records

Checking for Taxonomies to support the Data Warehouse Extract...

All okay.

This routine will generate IHS Data Warehouse HL7 messages for visits
posted between a specified range of dates. You may "^" out at any prompt and
will be ask to confirm your entries prior to generating transactions.

Last run was for JAN 13,2005 through JAN 28,2005.

The inclusive dates for this run are JAN 29,2005 through APR 16,2005. The
location for this run is DEMO INDIAN HOSPITAL.

Do you want to continue? N// YES
Generating New Log entry..
Do you want to QUEUE this to run at a later time? N// NO

Checking GIS Background Jobs....
Generating Registration HL7 messages (1)

Generating transactions. Counting encounters. (13)

11 HL7 Messages were generated. Updating log entry.
Deleting cross-reference entries. (13) RUN TIME (H.M.S): 0.0.15

```

Figure 4-1: Generating Data Warehouse Export Records

## 4.2 Re-Run a Previously Run Data Warehouse Export

The Rerun Previously Run Data Warehouse Export (**RERX**) option is available for use if a given transmission is lost, damaged, or destroyed, and the file must be re-created and re-sent to the Data Warehouse. This should rarely, if ever, occur. This option serves as a backup function that allows for regenerating the patient registration and visit HL7 messages that had been previously compiled when the **GDW** option was executed. If a log entry for a particular date range has been purged, then the **RERX** option cannot be executed. The Purge function will delete all the visit pointers designating which information was sent at a specific time.

To use the RERX option:

1. At the “Select Data Warehouse Export Menu Option:” prompt, type **RERX**.
2. At the “Select BDW Data Warehouse Export Log Beginning Date:” prompt, type the beginning date of the transaction log. If you do not know this date, type a question mark (?) and then press Enter to view a list of the previous transactions.
3. At the “Do you want to regenerate the transactions for this run?” prompt, type **YES** or **NO**. If the date range displayed is incorrect, type **NO** to return to the main Data Warehouse menu.
4. At the “Do you want to Queue this to run at a later time?” prompt type **YES** or **NO**.

```

*****
**          Data Warehouse Export          **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

GDW   Generate Data Warehouse Export Records
RERX  Re-Run a Previously Run Data Warehouse Export
DLOG  Display Log Entry
DWSR  Data Warehouse Export Summary Report
DWER  List PCC Encounters Not Exported
RSET  Reset Failed Log Entry
PURG  Purge Log Entries
DRE   Export to Data Warehouse for a Date Range
PRA   Create Patient Reg Update Audit File
DVAR  Create Encounter Audit Report
RPE   Re-flag Patient for Export as an Add to NDW
UXP   Search Visits and Mark Unexported Visits
PREX  Prescription Drug Data Warehouse Export Menu ...
COEX  COVID-19 Export Menu ...

Select Data Warehouse Export Menu Option:
Select Data Warehouse Export Menu Option: RERX  Re-Run a previously Run
Data Warehouse Export
Checking for Taxonomies to support the Data Warehouse Extract...

All okay.
```

```

Select BDW DATA WAREHOUSE EXPORT LOG BEGINNING DATE: 3 1-1-2005

Log entry 3 was for date range JAN 1,2005 through
APR 20,2005 and generated 80 transactions from 85 visits.

This routine will re-generate the Data Warehouse Records.
Do you want to regenerate the transactions for this run? N// YES
Do you want to QUEUE this to run at a later time? N// NO

Checking GIS Background Jobs...
Generating transactions. Counting encounters. (85)

80 HL7 Messages were generated. Updating log entry.

RUN TIME (H.M.S): 0.0.2
Resetting VISIT specific data in Log file. (85)
Resetting VISIT TX Flags. (85)

```

Figure 4-2: Using the RERX option

### 4.3 Display Log Entry

After you run an export, you can display information about which transactions were generated and sent to the NDW. The Data Warehouse Log file is a historical record of the exports generated. The **DLOG** report option allows the user to review various items contained in a transmission log file after a **GDW** was executed. The following information is contained in the log file and may be reviewed using the **DLOG** report option:

- The sequence number of the data warehouse export.
- The date range of the export.
- The beginning and ending times for the generation.
- Total run time.
- The run location (i.e., where the export was done).
- Export type: regular or date range export.
- Transmission status.
- A total count of the number of Registration HL7 message plus Visit messages exported.
- The number of registration HL7 messages sent.
- The number of encounters (visits) processed. This is the number of visits that were flagged for export. Some will not be exported. The three most common reasons a visit will not be exported are as follows:
  - It is a visit for a DEMO,PATIENT

- The visit has zero dependent entries. These are not really visits because there is no data appended to it. An example of this would be a patient checked in and a visit created but then the patient left without ever seeing a provider. No PCC form is entered for these visits. The visit will eventually be deleted.
- The visit was added and deleted since the last export.
- The total number of visits exported.
- The number of encounters skipped due to the three reasons listed previously. In addition, if a visit has a missing mandatory piece of information (patient, location of encounter), it will produce an error and will not be exported. These errors very rarely occur and are usually due to a system failure during the creation of a visit.
- The number deleted encounters skipped. These are the visits that were added and deleted since the last export. If a visit was added and never sent to the warehouse and then deleted there is no reason to send a delete visit message.
- The number of visits skipped due to having zero dependent entries.
- The number of visits skipped due to having NO patient entered.
- The number of visits skipped due to having no location of encounter entered.
- The number of visits skipped due to having a missing visit type.
- The number of visits skipped due to having a missing service category.
- The number of visits skipped because they were a visit for a patient whose name starts with “DEMO,PATIENT.”

**Note:** If the value for any of the above record counts is zero the line referring to that count will not display.

To display the Data Warehouse export log entry:

1. At the “Select Data Warehouse Export Menu Option:” prompt, type **DLOG**.
2. At the “Select BDW Data Warehouse Export Log Beginning Date:” prompt, type the log number or the beginning date of the transaction log of interest. If you do not know the date, type a question mark (?) and press Enter to view a list of the export logs.
3. You may print the entry or browse the output on the screen. At the “Do you want to:” prompt, type **P** (Print Output) or **B** (Browse Output on Screen). If you select print, you will be prompted to select an output device.

```

*****
**          Data Warehouse Export          **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

```

```

GDW      Generate Data Warehouse Export Records
RERX     Re-Run a Previously Run Data Warehouse Export
DLOG     Display Log Entry
DWSR     Data Warehouse Export Summary Report
DWER     List PCC Encounters Not Exported
RSET     Reset Failed Log Entry
PURG     Purge Log Entries
DRE      Export to Data Warehouse for a Date Range
PRA      Create Patient Reg Update Audit File
DVAR     Create Encounter Audit Report
RPE      Re-flag Patient for Export as an Add to NDW
UXP      Search Visits and Mark Unexported Visits
PREX     Prescription Drug Data Warehouse Export Menu ...
COEX     COVID-19 Export Menu ...

```

Select Data Warehouse Export Menu Option:

Select Data Warehouse Export Menu Option: DLOG

Select BDW DATA WAREHOUSE EXPORT LOG BEGINNING DATE: 1-29-2005

Select one of the following:

```

B        BROWSE Output on Screen
P        PRINT Output to Printer

```

Do you want to: B// PRINT Output to Printer DEVICE: HOME// Virtual

DATA WAREHOUSE EXPORT LOG REPORT

Information for Log Entry 5 Beginning Date: Jan 29, 2005

```

                                Number: 5
Beginning Date:  Apr 29, 2005
Ending Date:    Apr 16, 2005
Run Start Date/Time: Apr 23, 2005@15:41:57
Run Stop Date/Time: Apr 23, 2005@15:42:11
Run Time:       0.0.15
Run Location:   DEMO INDIAN HOSPITAL
Export Type:    REGULAR EXPORT
Transmission Status: SUCCESSFULLY COMPLETED

```

Total Number of Registration + Encounter Messages Exported: 11

Number of Registration Messages Sent: 1

Total Number of Encounters Processed: 13

Total Number of Encounters Exported: 10

Number of Encounters skipped: 3

Deleted Encounters skipped: 3

To list the visits that were skipped, use option DWER.

Figure 4-3: Displaying the Data Warehouse export log entry

## 4.4 Data Warehouse Export Summary Report

The **DWSR** option provides a summary of all the visits processed during the data transmission by visit date, visit type, service category, and location and other variables. It also displays a copy of the “trailer report” passed to the data warehouse. This report should be queued to print after every data transmission file is generated and then kept for future reference.

To generate the Data Warehouse Export Summary report:

1. Type **DWSR** at the “Select Data Warehouse Export Menu Option:” prompt.
2. Type the beginning date of the transaction log at the “Select BDW Data Warehouse Export Log Beginning Date:” prompt.
3. Type the name of an output device at the “Device:” prompt. The report will print or display (Figure 4-5).

```

*****
**          Data Warehouse Export          **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

GDW      Generate Data Warehouse Export Records
RERX     Re-Run a Previously Run Data Warehouse Export
DLOG     Display Log Entry
DWSR     Data Warehouse Export Summary Report
DWER     List PCC Encounters Not Exported
RSET     Reset Failed Log Entry
PURG     Purge Log Entries
DRE      Export to Data Warehouse for a Date Range
PRA      Create Patient Reg Update Audit File
DVAR     Create Encounter Audit Report
RPE      Re-flag Patient for Export as an Add to NDW
UXP      Search Visits and Mark Unexported Visits
PREX     Prescription Drug Data Warehouse Export Menu ...
COEX     COVID-19 Export Menu ...

Select Data Warehouse Export Menu Option:
Select Data Warehouse Export Menu Option: DWSR      Data Warehouse Export
Summary Re

*****      DATA WAREHOUSE EXPORT SUMMARY REPORT      *****

This report presents a summary of data for a single Data Warehouse Export
Log entry.

Select BDW DATA WAREHOUSE EXPORT LOG BEGINNING DATE: 1  11-12-2004

Log entry 1, was for date range NOV 12,2004 through FEB 6,2005 and exported
the following:
    Patient Registration updates:  4
                                PCC Encounters:  30
    Total transactions exported:  34
DEVICE: HOME// 0;P-OTHER80  Virtual

```

Figure 4-4: Running a Data Warehouse Export Summary report

```
Report Run Date: MAY 23, 2005 Page 1
```

```
DATA WAREHOUSE TRANSMISSION SUMMARY FOR DEMO INDIAN HOSPITAL
Date Export Run: APR 19, 2005@17:05:20
```



This Data Warehouse Export was processed on APR 19, 2005@17:05:20 for Posting Dates NOV 12,2004 to FEB 6,2005. The following transactions were exported:

Patient Registration updates: 4  
 PCC Encounters: 30  
 Total transactions exported: 34

#### DATA WAREHOUSE RECORDS EXPORTED

Following is a breakdown of all encounters that generated DATA WAREHOUSE transactions by Visit Date, Type, Location, Service Category, Clinic and Primary Provider Discipline.

Total # of Hospitalization Encounters to this Facility that were exported:  
 1

#### By Visit Date:

JAN 01, 2000	1
FEB 07, 2000	1
JAN 10, 2003	2
MAY 01, 2003	1
MAR 30, 2004	3
OCT 30, 2004	1
NOV 29, 2004	1
DEC 05, 2004	1
DEC 16, 2004	1
DEC 31, 2004	1
JAN 02, 2005	3
JAN 04, 2005	1
JAN 10, 2005	1
JAN 19, 2005	1
JAN 20, 2005	3
JAN 24, 2005	1
JAN 25, 2005	1
JAN 28, 2005	3
FEB 04, 2005	3

#### By Type:

IHS	21
TRIBE-638 PROGRAM	7

#### Data Warehouse Transmission Summary Page 2

#### By Location:

DEMO INDIAN HOSPITAL	30
----------------------	----

#### By Service Category:

AMBULATORY	24
EVENT (HISTORICAL)	5
HOSPITALIZATION	1

#### By Clinic Type:

NO CLINIC	12
GENERAL	7
MENTAL HEALTH	7
DIABETIC	1
GYNECOLOGY	1
OTHER	1
PHN CLINIC VISIT	1

#### By Provider Type (Primary Provider only):

MENTAL HEALTH TECHNICIAN	6
PHYSICIAN	6
HEALTH AIDE	2

```

PHN DRIVER/INTERPRETER      2
CHN/AIDES                   1
OSTEOPATH                   1

Number of encounters skipped: 13
Zero dep entry visits skipped: 5

To list the encounters that were skipped, use option DWER.

The following 'trailer report' was included with the export to the Data
Warehouse:

EXPORT SITE: DEMO INDIAN HOSPITAL
DATE OF EXPORT: Feb 13, 2005
TOTAL NUMBER OF ENCOUNTERSS EXPORTED: 30
TOTAL NUMBER OF ADDS: 30
TOTAL NUMBER OF MODS: 0
TOTAL NUMBER OF DELETES: 0

1. Location of Encounter 500001

```

Type/Cat	TOTAL COUNT	ADDS	DELETES	CHANGES
6-TRIBE-638/A-AMBULATORY	7	7		
I-IHS/A-AMBULATORY	17	17		
I-IHS/E-EVENT (HISTORICAL	3	3		
I-IHS/H-HOSPITALIZATION	1	1		
O-OTHER/E-EVENT (HISTORICAL	2	2		

Data Warehouse Transmission Summary Page 3

```

COUNT BY DATE OF ENCOUNTERS
TYPE/CAT                                MONTH/YR                                TOTAL
-----
6-TRIBE-638/A-AMBULATORY                Dec 2004                                1
6-TRIBE-638/A-AMBULATORY                Jan 2005                                6
I-IHS/A-AMBULATORY                      Jan 2000                                1
I-IHS/A-AMBULATORY                      Jan 2003                                2
I-IHS/A-AMBULATORY                      May 2003                                1
I-IHS/A-AMBULATORY                      Mar 2004                                2
I-IHS/A-AMBULATORY                      Nov 2004                                1
I-IHS/A-AMBULATORY                      Dec 2004                                1
I-IHS/A-AMBULATORY                      Jan 2005                                7
I-IHS/A-AMBULATORY                      Feb 2005                                1
I-IHS/E-EVENT (HISTORICAL                Mar 2004                                1
I-IHS/E-EVENT (HISTORICAL                Feb 2005                                2
I-IHS/H-HOSPITALIZATION                  Feb 2000                                1
O-OTHER/E-EVENT (HISTORICAL              Dec 2004                                1
O-OTHER/E-EVENT (HISTORICAL              Jan 2005                                1

```

The Transmission Status for this Export is: SUCCESSFULLY COMPLETED

Figure 4-5: Sample Data Warehouse Export Summary report

## 4.5 List PCC Visits Not Exported

If you would like to view a list of visits that were flagged for export but did not get exported to the data warehouse, you can produce a list using this option. The three most common reasons that visits will not export are:

- They do not have any dependent entries. These are not truly visits as there was no data appended to them.
- Deleted visits that were never sent before. This means that a visit was entered after the last export was run and deleted after the last export was run. Since the visit was never passed to the data warehouse there is no reason to send a delete visit command. The most common reason this happens is when pharmacy or lab creates a visit and then data entry merges that visit with another visit and the ancillary created visit is deleted.
- Visits for a patient whose name starts with “DEMO,PATIENT”.

To run a list of PCC visits not exported:

1. At the “Select Data Warehouse Export Menu Option:” prompt, type **DWER**.
2. At the “Select BDW Data Warehouse Export Log Beginning Date:” prompt, type the beginning date of the transaction log.
3. At the “Enter a code indicating what Locations/Facilities are of interest:” prompt, type one of the following:
  - **A** (All locations)
  - **S** (One SERVICE UNIT'S Locations/Facilities)
  - **O** (One Location/Facility)
4. Type the name of an output device at the “Device:” prompt.
5. The report will print or display (Figure 4-7).

```

*****
**          Data Warehouse Export          **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

GDW   Generate Data Warehouse Export Records
RERX  Re-Run a Previously Run Data Warehouse Export
DLOG  Display Log Entry
DWSR  Data Warehouse Export Summary Report
DWER  List PCC Encounters Not Exported
RSET  Reset Failed Log Entry
PURG  Purge Log Entries
DRE   Export to Data Warehouse for a Date Range
PRA   Create Patient Reg Update Audit File
DVAR  Create Encounter Audit Report
RPE   Re-flag Patient for Export as an Add to NDW

```

```

    UXP   Search Visits and Mark Unexported Visits
    PREX  Prescription Drug Data Warehouse Export Menu ...
    COEX  COVID-19 Export Menu ...

Select Data Warehouse Export Menu Option:
Select Data Warehouse Export Menu Option: DWER   List PCC Encounters Not
Exported

Data Warehouse Transmission Error Listing

Select BDW DATA WAREHOUSE EXPORT LOG BEGINNING DATE: 1  11-12-2004

    Select one of the following:

        A      ALL Locations/Facilities
        S      One SERVICE UNIT'S Locations/Facilities
        O      ONE Location/Facility

Enter a code indicating what LOCATIONS/FACILITIES are of interest: O// ALL
Locations/Facilities DEVICE: HOME// Virtual
    
```

Figure 4-6: Running a list of PCC visits not exported

		May 24, 2005		Page 1	
***** DATA WAREHOUSE EXPORT ERROR LISTING *****					
Log Entry: 1 Dates: Nov 12, 2004 to Feb 06, 2005					
ALL Locations/Facilities Included					
Name	HRN	Visit Date/Time	Location	ERROR	
*****					
DEMO,PATIENT L	999999	11/12/2004@12:00	DEMO INDIA	100-DELETED VISIT NEVE	
DEMO,PATIENT F	999998	12/8/2004@12:00	DEMO INDIA	102-ZERO DEPENDENT ENT	
DEMO,PATIENT S	999997	12/24/2004@12:00	DEMO INDIA	102-ZERO DEPENDENT ENT	
DEMO,PATIENT T	999996	12/30/2004@12:00	DEMO INDIA	100-DELETED VISIT NEVE	
DEMO,PATIENT B	999995	1/3/2005@12:00	DEMO INDIA	100-DELETED VISIT NEVE	
DEMO,PATIENT W	999994	1/3/2005@12:00	DEMO INDIA	102-ZERO DEPENDENT ENT	
DEMO,PATIENT Q	999993	1/6/2005@12:00	DEMO INDIA	100-DELETED VISIT NEVE	
DEMO,PATIENT A	999992	1/20/2005@12:00	DEMO INDIA	102-ZERO DEPENDENT ENT	
DEMO,PATIENT J	999991	1/20/2005@12:00	DEMO INDIA	102-ZERO DEPENDENT ENT	

Figure 4-7: Sample list of PCC visits not exported

## 4.6 Purge Log Entries

Periodically you may choose to purge the log entries to free up space in the database. This option is provided to purge visit pointers from the Data Warehouse Log file when the file is no longer needed. The **PURG** option deletes pointers, not visits. Visit pointers and certain other data are stored in the Data Warehouse Log file for each visit processed. The amount of data stored rapidly increases in direct proportion to the amount of patient information added to the system each day. The file may eventually consume large portions of the data storage system. When a given data warehouse file has been transmitted and processed through the National Data Warehouse correctly, the visit data pointers can be purged from the log file, leaving only the summary data. It is recommended to keep the current and two previous fiscal year logs on the system, if possible. The purge option deletes pointers from the oldest log file to the newest. The system will prompt to purge each log file individually, one at a time. It is possible to purge all visit file pointers up to and including the most recent log file.

To purge log entries:

1. At the “Select Data Warehouse Export Menu Option:” prompt, type **PURG**. The number of transaction files in log status will display.
2. At the “Do you want to continue?” prompt, type **Y** or **N**. If you type **N**, you will return to the main Data Warehouse Menu.
3. The system will prompt for purging, starting with the oldest file.
4. At the “Do you want to delete the VISIT pointers for this log entry?” prompt, type **Y** or **N**. Continue by typing **Y** or **N** at the prompts. Once you type **NO**, processing will stop.

Remember that this option will not delete visits, only the pointers which designate which data was sent during a given **GDW** execution will be deleted.

After the pointers have been purged, it is no longer possible to determine which visit information was sent during this time period.

```

*****
**          Data Warehouse Export          **
*****
                                Version 1.0 (Patch 7)

                                DEMO INDIAN HOSPITAL

Generate Data Warehouse Export Records
RERX   Re-Run a Previously Run Data Warehouse Export
DLOG   Display Log Entry
DWSR   Data Warehouse Export Summary Report
DWER   List PCC Encounters Not Exported
RSET   Reset Failed Log Entry
PURG   Purge Log Entries
DRE    Export to Data Warehouse for a Date Range
PRA    Create Patient Reg Update Audit File

```

```

DVAR  Create Encounter Audit Report
RPE   Re-flag Patient for Export as an Add to NDW
UXP   Search Visits and Mark Unexported Visits
PREX  Prescription Drug Data Warehouse Export Menu ...
COEX  COVID-19 Export Menu ...

Select Data Warehouse Export Menu Option:
Select Data Warehouse Export Menu Option: PURG

There are 13 generations with visit data Do you want to continue? (Y/N) N//
Y
LOG ENTRY 1 WAS FOR JUL 1, 2004 THROUGH AUG 4, 2004 AND GENERATED 794
Transactions.
Do you want to delete the VISIT pointers for this log entry? (Y/N) N// Y

Done
THE VISIT POINTERS FOR DATA TRANSMISSION LOG FILE NUMBER 1 JUL 1 THROUGH
AUG 4, 1995 HAVE BEEN DELETED.

LOG ENTRY 2 WAS FOR AUG 6, 2004 THROUGH AUG 31, 2004 AND GENERATED 631
TRANSACTIONS.

Do you want to delete the VISIT pointers for this log entry? (Y/N) N// N
Once you type a NO processing stops.

```

Figure 4-8: Using the PURG option

## 4.7 Export to Data Warehouse for a Date Range

If requested to do so by the Data Warehouse team, you can re-run all visits in a date range by using this menu option. This will export any visit with a visit date in the range you select to the data warehouse.

## 4.8 Create Patient Registration Update Audit File

This option is used to create and send a registration audit file. This is not mandatory, but it does provide a secondary check on the data that is about to be exported. You must select this option prior to using the **GDW** option. Executing this option is a one-step process: choose the option, then type **YES** to continue.

To create a patient registration update audit file, follow these steps:

1. At the “Select Data Warehouse Export Menu Option:” prompt, type **PRA**.
2. At the “Do you want to continue?” prompt, type **Y** or **N**.

```

*****
**           Data Warehouse Export           **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

GDW  Generate Data Warehouse Export Records
RERX Re-Run a Previously Run Data Warehouse Export

```

```

DLOG  Display Log Entry
DWSR  Data Warehouse Export Summary Report
DWER  List PCC Encounters Not Exported
RSET  Reset Failed Log Entry
PURG  Purge Log Entries
DRE   Export to Data Warehouse for a Date Range
PRA   Create Patient Reg Update Audit File
DVAR  Create Encounter Audit Report
RPE   Re-flag Patient for Export as an Add to NDW
UXP   Search Visits and Mark Unexported Visits
PREX  Prescription Drug Data Warehouse Export Menu ...
COEX  COVID-19 Export Menu ...

Select Data Warehouse Export Menu Option:
Select Data Warehouse Export Menu Option: PRA Create Patient Reg Update
Audit File
This option is used to create a registration audit file prior to generating
transactions to send to the data warehouse (GDW option).

This option should only be run immediately prior to using the GDW option.
Do you want to continue? N// YES
Now creating the update DW Patient Audit file....
DOS File Being Created'
Please Standby - Copying Data to DOS File C:\EXPORT\BDWDWPX500001.161

```

Figure 4-9: Creating a Patient Registration Update Audit File

## 4.9 Create Visit Audit Report

This option is used to create and send a visit audit file. This is not mandatory, but it does provide a secondary check on the data that is about to be exported. You must select this option *prior* to using the **GDW** option. Executing this option is a one-step process: choose the option and type **YES** to continue.

To create a visit audit report:

1. At the “Select Data Warehouse Export Menu Option:” prompt, type **DVAR**.
2. At the “Do you want to continue?” prompt, type **Y** or **N**. The **VISIT** audit file will generate.

```

*****
**          Data Warehouse Export          **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

GDW  Generate Data Warehouse Export Records
RERX Re-Run a Previously Run Data Warehouse Export
DLOG  Display Log Entry
DWSR  Data Warehouse Export Summary Report
DWER  List PCC Encounters Not Exported
RSET  Reset Failed Log Entry
PURG  Purge Log Entries
DRE   Export to Data Warehouse for a Date Range
PRA   Create Patient Reg Update Audit File

```

```

DVAR  Create Encounter Audit Report
RPE   Re-flag Patient for Export as an Add to NDW
UXP   Search Visits and Mark Unexported Visits
PREX  Prescription Drug Data Warehouse Export Menu ...
COEX  COVID-19 Export Menu ...

Select Data Warehouse Export Menu Option:
Select Data Warehouse Export Menu Option: DVAR   Create Encounter Audit
Report

This option is used to create a visit audit report to accompany a data
warehouse export.
Last run was for FEB 7,2005 through APR 12,2005.
The inclusive dates for this run are APR 13,2005 through JUN 3,2005. The
location for this run is DEMO INDIAN HOSPITAL.
Do you want to continue? N// YES Generating visit audit report..Please
wait. DOS File Being Created'
Please Standby - Copying Data to DOS File C:\EXPORT\BDWDWVX500001.161

```

Figure 4-10: Creating a visit audit report

## 4.10 Re-flag Patient for Export as an Add to NDW

This option is used to flag a patient to be sent to the Data Warehouse as an ADD. This option should be used if an edit patient record has failed at the warehouse because the patient was never received as an add prior to the edit message being sent.

The patient(s) that you choose will be flagged as additions and sent on the next regularly scheduled data warehouse export (**GDW**). The user will be asked to enter the patient names.

```

*****
**           Data Warehouse Export           **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

GDW  Generate Data Warehouse Export Records
RERX Re-Run a Previously Run Data Warehouse Export
DLOG Display Log Entry
DWSR Data Warehouse Export Summary Report
DWER List PCC Encounters Not Exported
RSET Reset Failed Log Entry
PURG Purge Log Entries
DRE  Export to Data Warehouse for a Date Range
PRA  Create Patient Reg Update Audit File
DVAR Create Encounter Audit Report
RPE  Re-flag Patient for Export as an Add to NDW
UXP  Search Visits and Mark Unexported Visits
PREX Prescription Drug Data Warehouse Export Menu ...
COEX COVID-19 Export Menu ...

Select Data Warehouse Export Menu Option: RPE  Re-flag Patient for Export as an Add
to NDW

```



This option is used to flag a patient to be sent to the Data Warehouse as an ADD. This option should be used if an edit patient record has failed at the warehouse because the patient was never received as an add prior to the edit message being sent. The patient(s) that you choose will be flagged as adds and sent on the next regularly scheduled data warehouse export (GDW).

```
Select PATIENT NAME: DEMO,PATIENT MJ      <A>   M 12-30-1989 XXX-XX-7227   TST 111582
Flagging DEMO,PATIENT MJ as an add.
```

```
Select PATIENT NAME: DEMO,PATIENT B  <A>   F 04-04-1974 XXX-XX-5115   TST 106275
Flagging DEMO,PATIENT B as an add.
```

```
Select PATIENT NAME: (PRESS ENTER WHEN FINISHED ENTERING PATIENT NAMES)
```

Figure 4-11: Re-flag Patient for Export as an Add to NDW

## 4.11 Search Visits and Mark Unexported Visits

This option can be used to flag visits for export that have not previously been exported to the National Data Warehouse. The user will be asked to enter a beginning and ending date. The system will review all visits in that date range, and if the visit has never been exported to the NDW, it will flag it for export on the next export.

**Note:** The earliest date you can enter for this option is Oct 01, 2015.

```
*****
**          Data Warehouse Export          **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

GDW   Generate Data Warehouse Export Records
RERX  Re-Run a Previously Run Data Warehouse Export
DLOG  Display Log Entry
DWSR  Data Warehouse Export Summary Report
DWER  List PCC Encounters Not Exported
RSET  Reset Failed Log Entry
PURG  Purge Log Entries
DRE   Export to Data Warehouse for a Date Range
PRA   Create Patient Reg Update Audit File
DVAR  Create Encounter Audit Report
RPE   Re-flag Patient for Export as an Add to NDW
UXP   Search Visits and Mark Unexported Visits
PREX  Prescription Drug Data Warehouse Export Menu ...
COEX  COVID-19 Export Menu ...

Select Data Warehouse Export Menu Option: UXP  Search Visits and Mark
Unexported Visits
```

This option can be used to flag visits for export that have not previously been exported to the National Data Warehouse.

You will be asked to enter a beginning and ending date. The system will review all visits in that date range and if the visit has never been exported to the NDW it will flag it for export on the next export.

The earliest date you can enter for this option is Oct 01, 2015.

Enter Beginning Date: (10/1/2015 - 1/23/2019): 100118 (OCT 01, 2018)

Enter Ending Date: T-1 (JAN 22, 2019)

Searching.....

Figure 4-12: Search Visits and Mark Unexported Visits

## 5.0 Prescription Export to Data Warehouse

Centers for Disease Control (CDC) data indicates that American Indians and Alaska Natives (AI/AN) had the second highest overdose death from all opioids in 2016 (13.9 deaths per 100,000 population) among racial or ethnic groups in the U.S. AI/AN had the second highest overdose death rates from heroin (5.0) and third highest from synthetic opioids (4.1). These concerning trends have resulted in many tribes declaring local states of emergency to respond to the opioid epidemic. Surveillance strategies and access to timely data are key for tribes to create an effective and informed public health response.

The IHS has worked with its information technology teams to create a data reporting system to track opioid dispensing data on national, regional, and local levels. This information can be used locally to identify areas of improvement, monitor trends, intervene early and effectively, and enhance efforts to train medical providers. Opioid quality assurance and performance improvement processes are the responsibility of local and regional health system leadership. Use of the standardized RPMS BDW data warehouse export will assist local sites with extracting data to create an opioid surveillance strategy to monitor local opioid prescribing and leverage utilization of timely, actionable data to inform strategies and interventions. This data will also support opioid stewardship efforts and multi-disciplinary, collaborative approaches to improve outcomes for patients with chronic pain or opioid use disorder diagnoses. This data export will also enable analysis of the effectiveness of harm reduction strategies.

Two security keys are distributed with the prescription export system:

- **BDWHZMENU** – This key unlocks the main prescription export menu (BDWHMENU). This key should be given to personnel responsible for performing and/or monitoring these exports.
- **BDWHZ RESET** – This key unlocks the option to reset a prescription export log. This key should only be given to IT staff who may need to reset a log entry after an error occurs during an export.

To access the prescription export to data warehouse, select the **PREX Prescription Drug Data Warehouse Export Menu ...** menu option within the RPMS BDW application.

To setup and use the Prescription Drug Data Warehouse Export System, do the following.

1. Confirm GIS is installed and current with all patches.
2. Confirm the **INH AUTOPURGE** option has been scheduled to run nightly.

3. The installer will allow sites to configure the prescription export parameter for each pharmacy defined in the **Pharmacy Outpatient Site** file. The default is set to **NO, DO NOT ENABLE EXPORT**. To verify or edit a pharmacy's prescription export setting, do the following:
  - Use option **PRPE** to verify/edit which pharmacies will be exporting data to the national reporting database at the NDW.

**Note:** If there are no pharmacies set to **YES, ENABLE EXPORT**, then there is no need to do an export.

Federal sites *must* set the parameter to **YES, ENABLE EXPORT**.

Tribal and Urban sites must verify with site leadership/Health Director prior to setting the parameter to **YES, ENABLE EXPORT**.

4. It is important to perform the very first export after install manually using the **PRGT** menu option to confirm the export ran successfully and was received at the NDW. See Sections 5.1.1 for details about performing the first export.
5. After confirming the very first export completed successfully, do one of the following:
  - Use the **PRGT** menu option to manually run the export at a given interval (monthly, weekly, etc.).
  - Schedule the export to automatically run at a user defined interval in task manager. The option that can be scheduled to run automatically is **BDWH QUEUE PRESCRIPTION EXPORT**.

**Note:** For instructions on how to schedule an option to run at a desired interval, see the VA Kernel user manual.

6. After an export has been done, use the **PRDL** menu option to display how many fills/refills were exported, etc.
7. A designated user will receive an email confirmation from NPIRS indicating that the file was received. If this email confirmation is not received, check with the NPIRS staff to see if the file made it to the NDW.

**Note:** The NDW team maintains a site contact list of users who receive email confirmations when a data warehouse export has been received. If there is a different group of contacts required for prescription data than the regular visit exports, contact NPIRS and request that they add those contacts to the site contact list. To add or modify contact information for users receiving the acknowledgements, submit a request to [itsupport@ihs.gov](mailto:itsupport@ihs.gov).

```

*****
**      Prescription Export to Data Warehouse      **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

PRGT  Generate Prescription Export Transactions
PRDL  Display Prescription Export Log Entry
PRRX  Re-Run Previously Run Prescription Export
PRDR  Date Range Export of Prescription Transactions
PRPE  Edit Prescription Export Parameter
PRRL  Reset Prescription Export Log

Select Prescription Drug Data Warehouse Export Menu Option:

```

Figure 5-1: Main Menu for the Prescription Data Warehouse Export System

## 5.1 Generate Prescription Export Transactions

The **PRGT Generate Prescription Export Transactions** menu option will generate Prescription Data Warehouse HL7 messages for prescriptions filled or refilled for a specific date range. The date range is determined by the system based on the last completed export. The export will include prescriptions filled or refilled from the end date of the previous export through the day before this option is run.

The very first export *must* be completed using this **PRGT** option, See Sections 5.1.1 for details about performing the first export. After confirming the very first export completed successfully and received at the NDW, subsequent exports can be performed automatically (without using PRGT) by scheduling a **BDWH QUEUE PRESCRIPTION EXPORT** task manager option to run at a desired interval.

**Note:** Most sites opt to schedule the export to run monthly, larger facilities with a large number of prescription fills and refills may opt to run this export weekly. For instructions on how to schedule an option to run at a desired interval, see the VA Kernel user manual.

### 5.1.1 Performing the prescription first export

It is important to verify the system is operating as designed prior to everyday use. Two things occur during the first export for all pharmacy divisions set to **YES, ENABLE EXPORT** that do not occur with subsequent exports; therefore, first prescription export *must* be performed using the **PRGT** menu option, which will confirm the export ran successfully and was received at the NDW. The two things occur during the first export are as follows:

- A backload for all prescription fills and refills of controlled substances from January 1, 2013 through December 31 of the year prior to the date of the first export will be exported to the NDW.
- A backload of fills and refills for all prescriptions from January 1 of the year in which the first export is run through the day before the export is run will be exported to the NDW.

**Note:** For example, if the first export is performed on April 1, 2019, all controlled substances fills and refills from January 1, 2013 through December 31, 2018 will be exported. All fills and refills for all prescriptions from January 1, 2019 through March 31, 2019 will be exported.

To perform the very first export:

1. At the “Select Prescription Drug Data Warehouse Export Menu Option:” prompt, type **PRGT** and press Enter.
2. Confirm the information presented on the screen is accurate. All pharmacy divisions that are set to enable the export should be displayed with an indication that a backload will be exported. If the information presented is accurate, type **Y** (Yes) to the “Do you want to Continue” prompt.

**Note:** If the information presented is not accurate or if there are divisions listed that should *not* be exporting data, type **N** (No) to the “Do you want to Continue” prompt to exit the menu without performing an export. To edit the site parameters, use the **PRPE** menu option (See Sections 5.5).

- a. You will be asked if you want to queue this option to run at a later date and time.

**Note:** It is recommended that the first export be run when the clinic or hospital is not busy. For example, schedule the first export to run at 7 p.m. local time to ensure it runs over night when most users are off of the system.

- b. Wait a day or so to confirm that you or the designated individual received an email message from NPIRS indicating that the NDW received the export file.

**Note:** If you or the designated contact does not receive confirmation from NPIRS, submit a request to [itsupport@ihs.gov](mailto:itsupport@ihs.gov) asking for confirmation and verify the site contact list is accurate for your site.

```

*****
**      Prescription Export to Data Warehouse      **
*****
                                Version 1.0 (Patch 7)

                                DEMO INDIAN HOSPITAL

PRGT  Generate Prescription Export Transactions
PRDL  Display Prescription Export Log Entry
PRRX  Re-Run Previously Run Prescription Export
PRDR  Date Range Export of Prescription Transactions
PRPE  Edit Prescription Export Parameter

Select Prescription Drug Data Warehouse Export Menu Option: PRGT  Generate
Prescription Export Transactions

This option will generate Pharmacy Prescription Data Warehouse HL7 messages
for prescriptions filled between a specified range of dates.
You may "^" out at any prompt and will be ask to confirm your entries prior
to generating the HL7 messages.

No log entry.  First run ever assumed (excluding date range re-exports).

NOTE:  PHARMACY DIVISION DEMO INDIAN HOSPITAL backload has not been
completed.
Controlled substances from Jan 01, 2013 through Dec 31, 2018 will be
exported.

NOTE:  PHARMACY DIVISION DEMO INDIAN HLTH CTR backload has not been
completed.
Controlled substances from Jan 01, 2013 through Dec 31, 2018 will be
exported.

All fills/refills for all drugs from Jan 01, 2019 through Jan 23, 2019 will
be exported.
                                DEMO INDIAN HOSPITAL
                                DEMO INDIAN HLTH CTR

The computer database location for this run is DEMO INDIAN HOSPITAL.

Do you want to continue? N// YES
Generating New Log entry.
Do you want to QUEUE this to run at a later time? N// YES
Requested Start Time: NOW//T@7PM  (JAN 24, 2019@19:00:00)

Request Queued!!

Okay, request queued!!

```

Figure 5-2: Process for performing the first Prescription Data Warehouse export

## 5.1.2 Generating Subsequent Prescription Exports

After the first export has completed successfully for every pharmacy division set to **YES, ENABLE EXPORT**, regular exports can be performed at a desired scheduled interval (monthly or weekly for larger facilities). Generating subsequent prescription exports can be performed as follows:

It is possible to schedule the export to automatically run at a user defined scheduled interval without any user interaction. The IT staff can schedule this job to run at a desired interval through TaskMan for the option **BDWH QUEUE PRESCRIPTION EXPORT**.

**Note:** For instructions on how to schedule an option to run at a desired interval, see the VA Kernel user manual.

To perform prescription exports manually:

1. At the “Select Prescription Drug Data Warehouse Export Menu Option:” prompt, type **PRGT** and press Enter. Verify the date range information displayed on the screen for each pharmacy division set to enable export. The date range will be as follows:
  - If a pharmacy division has not completed an export, the date range displayed will indicate that a backload needs to be completed. The backload includes fills and refills of controlled substances from January 1, 2013 through December 31 of the year prior to the date run and fills and refills for all prescriptions from January 1 of the year in which the export is run through the day before the export is run. For example, if the first export is performed on April 1, 2019, all controlled substances fills and refills from January 1, 2013 through December 31, 2018 will be exported. All fills and refills for all prescriptions from January 1, 2019 through March 31, 2019 will be exported.
  - If a previous export was completed for a pharmacy division, the date ranges displayed will include the date range from the last export was run and the date range the new export will run. Assuming the backload was completed, and the exports are run monthly, the date range displayed on the screen will include the last month’s date range and the current month’s date range. For example, if the last completed export ran on March 1, 2019, and this export is to run on April 1, 2019, the date ranges displayed will be as follows:
    - Last run was for Prescription Fill dates FEB 1, 2019 through FEB 28, 2019.
    - All fills/refills for all drugs from MAR 1, 2019 through MAR 31, 2019 will be exported for the following divisions:



- A prescription export cannot be executed more than once per day. If a prescription export has already been performed on the current day, a message will display indicating that there is no new data to send. For example, using the previous example, if you run a manual export on April 1, 2019 and then later in day attempt to run another manual export, the following will be displayed:

```
Last run was for Prescription Fill dates MAR 1, 2019 through MAR 31, 2019.
There is no new data to send.
Press Enter to continue:
```

Figure 5-3: Error message indicating that there is no new data to send

- If the export was previously run and an export is already queued to run, you cannot perform the export until the day after the queued export is complete. For example, if export was last run on April 1, 2019 and another export is queued to run on April 15, the following message will display:

```
Last run was for Prescription Fill dates MAR 1, 2019 through MAR 31, 2019.
Data Warehouse Prescription Transmission is already queued to run!!
Press Enter to continue:
```

Figure 5-4: Error message indicating that a transmission is already queued to run

2. If the information presented is accurate, answer **Y** (Yes) to the “Do you want to Continue” prompt. If the information on the screen is not accurate, type **N** for No, and press Enter to exit the menu without performing an export.
3. At the “Do you want to QUEUE this to run at a later time?” prompt, do one of the following:
  - Type **Y** for Yes and press Enter if you want to queue the report to run later time.
    - At the “Requested Start Time: NOW” prompt, type the date and time you want to queue the export to run and press Enter.

**Note:** If this is the very first export, refer to Sections 5.1.1 before continuing with this option.

- Type **N** for No and press Enter if you want to queue the report to run now. The system will display a counter of how many fills and refills are being processed on the screen. When finished a total count will display.

```

Generating Prescription transactions.  Counting fills and refills.  (1200)
928  HL7 Messages were generated.
Updating log entry.
RUN TIME (H.M.S): 0.1.2
DONE -- Press Enter to Continue:

```

Figure 5-5: PRGT queue now screen sample

4. Wait a day or so and confirm that you or the designated individual received an email message from NPIRS indicating that the export file was received at the NDW.

**Note:** If you or the designated contact does not receive confirmation from NPIRS, submit a request to [itsupport@ihs.gov](mailto:itsupport@ihs.gov) asking for confirmation and verify the site contact list is accurate for your site.

```

*****
**      Prescription Export to Data Warehouse      **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

PRGT  Generate Prescription Export Transactions
PRDL  Display Prescription Export Log Entry
PRRX  Re-Run Previously Run Prescription Export
PRDR  Date Range Export of Prescription Transactions
PRPE  Edit Prescription Export Parameter

Select Prescription Drug Data Warehouse Export Menu Option: PRGT  Generate
Prescription Export Transactions

This option will generate Prescription Data Warehouse HL7 messages for
prescriptions filled between a specified range of dates.
You may "^" out at any prompt and will be ask to confirm your entries prior
to generating the HL7 messages.

Last run was for Prescription Fill dates JAN 1,2019 through JAN 31,2019.

All fills/refills for all drugs from FEB 01, 2019 through FEB 28, 2019 will
be exported.
      DEMO INDIAN HOSPITAL
      DEMO INDIAN HLTH CTR

The computer database location for this run is DEMO INDIAN HOSPITAL.

Do you want to continue? N// YES
Generating New Log entry.
Do you want to QUEUE this to run at a later time? N// YES
Requested Start Time: NOW//T@7PM (MAR 1, 2019@19:00:00)

Request Queued!!

Okay, request queued!!

```

Figure 5-6: Process for performing a Prescription Data Warehouse export

## 5.2 Display Prescription Export Log Entry

After you run an export you can display information about what transactions were generated and sent to the NDW. The **Data Warehouse Prescription Log** file is a historical record of the exports generated. The **PRDL Display Prescription Export Log Entry** menu option allows the user to review various items contained in a transmission log file after a **PRGT** was executed.

To view the information in the log file, do the following:

1. At the “Select Prescription Drug Data Warehouse Export Menu Option:” prompt, type **PRDL** and press Enter.
2. At the “Select BDW PRESCRIPTION EXPORT LOG ORIGINAL RUN DATE” prompt, do one of the following:
  - Type the date the original PRGT was done.
  - Or, if you do not know this date, type a question mark (?) and press Enter.

**Note:** If you enter a date that an export was not performed, no logs will be available to choose from. Type two question marks (??) to display a list of available logs to view.

3. The log report will display an audit trail indicating the user who ran the export, the date the export was run, and the option used to perform the export. Follow the instructions on the screen for viewing pages and quitting the report. For a description of the information contained in the audit log file, see Table 5-1. If a backload was performed, the log will include the backload dates. A list of prescription fills that were skipped, if any are included in the log. Reasons a fill may be skipped are as follows:
  - Fills for demo patients
  - Fills with a status of deleted
  - Fills that were returned to stock
  - Fills with a status of suspended

```

*****
**      Prescription Export to Data Warehouse      **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

PRGT  Generate Prescription Export Transactions
PRDL  Display Prescription Export Log Entry
PRRX  Re-Run Previously Run Prescription Export
PRDR  Date Range Export of Prescription Transactions
PRPE  Edit Prescription Export Parameter

Select Prescription Drug Data Warehouse Export Menu Option: PRDL  Display
Prescription Export Log Entry

Display PHARMACY PRESCRIPTION DATA WAREHOUSE EXPORT Log Entry

Type a ?? and press Enter at the following prompt to view a list of
ORIGINAL RUN DATES.
Or, if you know the original run date you can enter it in the format
MM/DD/YY: e.g. 2/26/19

Select BDW PRESCRIPTION EXPORT LOG ORIGINAL RUN DATE: 2  1-24-2019

                          PRESCRIPTION DRUG DATA WAREHOUSE EXPORT LOG REPORT
                          Information for Log Entry 1 Beginning Date:  Jan 01, 2019

                          Number:      1
                          Original Run Date:  JAN 24, 2019
                          Beginning Fill Date:  JAN 01, 2019
                          Ending Fill Date:    JAN 23, 2019
                          Run Start Date/Time:  JAN 25, 2019@10:50:38
                          Run Stop Date/Time:   JAN 25, 2019@10:50:38
                          Run Time:            0.0.0
                          Run Database/Location: DEMO INDIAN HOSPITAL
                          Export Type:         REGULAR EXPORT
                          Transmission Status:  SUCCESSFULLY COMPLETED
                          Number of Prescription Fills Processed:  108
                          Total Number of Fills Exported:        104
                          Total Number of HL7 Messages Exported: 2058
                          Number of Prescription Fills Skipped:    2
                          Filename Created:    2321013190124111934.BDWH
                          Backload Begin Date:  JAN 01, 2013
                          Backload End Date:    DEC 31, 2018
                          Total # of Backload Prescription Fills: 2381

The following fills/refills were skipped and not exported:
RX #          FILL DATE  REF#  REASON NOT EXPORTED
-----
148111        01/14/2019  0     OUTPATIENT SITE NOT IN SITE PARAMETER FILE
148629        01/23/2019  0     DEMO PATIENT SKIPPED

AUDIT:
Date: JAN 24, 2019@14:16 User: DEMO,USER Option: BDWH PRESCRIPTION GENERATE

```

Figure 5-7: Process for displaying a Prescription export log

Table 5-1: Prescription Export Log Information Details

<b>Log Data Fields</b>	<b>Description</b>
Number	The log number
Original Run Date	Date the export was originally run
Beginning Fill Date	First fill date for the export run
Ending Fill Date	Ending fill date for the export run
Run Start Date/Time	Date/Time the run started
Run Stop Date/Time	Date/Time the run ended
Run Time	Total run time
Run Database/Location	Database (Facility) at which the export was performed
Export Type	Type of export (Regular or Date Range)
Transmission Status	Status of the export: C – Successfully Completed R – Running Q – Queued to Run F – Failed Due to Error
Number of Prescription Fills Processed	Number of fills/refills processed for the export date range.
Total Number of Fills Exported	Number of fills/refills included in the export
Total Number of HL7 Messages Exported	Number of HL7 messages sent
Number of Prescription Fills Skipped	Number of prescriptions not processed/exported
Filename Created	Name of the file created for the export

Table 5-2: Backload Data (Only displayed if backload was performed)

<b>Log Data Fields</b>	<b>Description</b>
Backload Begin Date	Date backload starts
Backload End Date	Date backload ends
Total # of Backload Prescription Fills	Total number of backload fills completed for backload date range

Table 5-3: Skipped/Not Exported Data

<b>Log Data Fields</b>	<b>Description</b>
Rx#	Prescription number
Fill Date	Date prescription was filled
Ref #	Prescription reference number
Reason Not Exported	Reason why the prescription was not exported

Table 5-4: Audit Data

Log Data Fields	Description
Date	Date/Time export was performed
User	User who performed export
Option	BDW option used to perform the export

### 5.3 Re-Run a Previously Run Prescription Export

If an export transmission is lost, damaged, or destroyed, the file must be recreated and resent to the NDW. The **PRRX Re-Run a Previously Run Prescription Export** menu option regenerates the prescription HL7 messages previously compiled when the **PRGT** option was executed and sends the regenerated file to the NDW.

**Note:** This is unlikely to occur; however, this menu option serves as a backup function for this type of failures.

To re-run a previously run prescription export, do the following:

1. At the “Select Prescription Drug Data Warehouse Export Menu Option:” prompt, type **PRRX** and press Enter. If a run has not been completed or is in progress, this option cannot be performed and will display the following message:

```
Previous run not completed.
Press Enter to continue:
```

Figure 5-8: Error message if a run has not been completed or is in progress

2. At the “Select BDW PRESCRIPTION EXPORT LOG ORIGINAL RUN DATE:” prompt, do one of the following:
  - Type the date the original PRGT was done.
  - If you do not know this date, type a question mark (?) and press Enter.
3. At the “Do you want the entire BDW PRESCRIPTION EXPORT LOG List?” prompt. Type **Y** and press Enter to view a list of the previous transactions. You can also enter the log number if you know the log number.
4. At the “Do you want to regenerate the HL7 messages for this run?” prompt, do one of the following:
  - Type **Y** for Yes and press Enter if you want to regenerate the selected export.
  - Type **N** for No if the date range displayed is incorrect or if you do not want to regenerate the selected export and to return to the main **Prescription Export Data Warehouse** menu.

5. At the “Do you want to Queue this to run at a later time?” prompt, do one of the following:
  - Type **Y** for Yes and press Enter if you want to queue the report to run later time. At the “Requested Start Time: NOW” prompt type the date and time you want to queue the export to run and press Enter.
  - Type **N** for No and press Enter if you want to queue the report to run now. The system will display a counter of how many fills and refills are being processed on the screen. When finished a total count will display.
6. Wait a day or so and confirm that you or the designated individual received an email message from NPIRS indicating that the export file was received at the NDW.

**Note:** If you or the designated contact does not receive confirmation from NPIRS, submit a request to [itsupport@ihs.gov](mailto:itsupport@ihs.gov) asking for confirmation and verify the site contact list is accurate for your site.

```

*****
**      Prescription Export to Data Warehouse      **
*****
                                Version 1.0 (Patch 7)

                                DEMO INDIAN HOSPITAL

PRGT  Generate Prescription Export Transactions
PRDL  Display Prescription Export Log Entry
PRRX  Re-Run Previously Run Prescription Export
PRDR  Date Range Export of Prescription Transactions
PRPE  Edit Prescription Export Parameter

Select Prescription Drug Data Warehouse Export Menu Option: PRRX  Re-Run
Previously Run Prescription Export
Type a ?? and press Enter at the following prompt to view a list of
ORIGINAL RUN DATES.
Or, if you know the original run date you can enter it in the format
MM/DD/YY: e.g. 2/26/19

Select BDW PRESCRIPTION EXPORT LOG ORIGINAL RUN DATE: 2  1-24-2019

Log entry 2 was for date range JAN 1, 2019 through JAN 23, 2019 and
exported 5 prescription fills/refills.
Do you want to regenerate the HL7 messages for this run? N// YES
Do you want to QUEUE this to run at a later time? N// NO

Generating Prescription transactions.  Counting fills and refills. (8)

4 HL7 Messages were generated.
Updating log entry.

RUN TIME (H.M.S): 0.0.0
DONE -- Press Enter to Continue:

```

Figure 5-9: Using the PRRX option queueing to run now.

## 5.4 Date Range Export of Prescription Transactions

If requested to do so by the NDW team, you can re-run all prescription fills and refills in a date range by using this menu option. The user will be asked to enter a beginning and an ending fill date.

**Note:** Do not run this export option without checking with NPIRS first. PRDR exports cannot be loaded into the NDW without first making special arrangements. Use the **PRGT** and **PRRX** options for all regularly scheduled exports.

At the direction of the NDW, do the following to re-export all prescription fills and refills for a specified date range:

1. At the “Select Prescription Drug Data Warehouse Export Menu Option:” prompt, type **PRDR** and press Enter.
2. At the “Enter Beginning Fill Date” prompt, type the starting date for including prescription data in the export.
3. At the “Enter Ending Fill Date” prompt, type the ending date for prescription data to include in the export.

**Note:** Only controlled substances will be exported for any fill dates prior to JAN 01, 2019. All prescriptions (all drugs) filled after JAN 01, 2019 will be exported.

4. Verify the date range information displayed on the screen. If the information presented is accurate, type **Y** (Yes) to the “Do you want to Continue” prompt.

**Note:** If the information presented is not accurate, type **N** (No) to the “Do you want to Continue” prompt to exit the menu without performing an export.

5. At the “Do you want to QUEUE this to run at a later time?” prompt, do one of the following:
  - Type **Y** for Yes and press Enter if you want to queue the report to run later time. At the “Requested Start Time: NOW” prompt, type the date and time you want to queue the export to run and press Enter.
  - Type **N** for No and press Enter if you want to queue the report to run now. The system will display a counter of how many fills and refills are being processed on the screen. When finished a total count will be displayed.
6. Wait a day or so and confirm that you or the designated individual received an email message from NPIRS indicating that the export file was received at the NDW.



**Note:** If you or the designated contact does not receive confirmation from NPIRS, submit a request to [itsupport@ihs.gov](mailto:itsupport@ihs.gov) asking for confirmation and to verify the site contact list is accurate for your site.

```

*****
**      Prescription Export to Data Warehouse      **
*****
                                Version 1.0 (Patch 7)

                                DEMO INDIAN HOSPITAL

PRGT  Generate Prescription Export Transactions
PRDL  Display Prescription Export Log Entry
PRRX  Re-Run Previously Run Prescription Export
PRDR  Date Range Export of Prescription Transactions
PRPE  Edit Prescription Export Parameter

Select Prescription Drug Data Warehouse Export Menu Option: PRDR  Date
Range Export of Prescription Transactions
                                DEMO INDIAN HOSPITAL

*****  IHS DATA WAREHOUSE PRESCRIPTION EXPORT IN A DATE RANGE  *****

ATTENTION:

Please do not run this export without checking with NPIRS first.
PRDR exports cannot be loaded into the NDW without first making special
arrangements.

You should use the PRGT and PRRX options for all regularly scheduled
exports.

This program will generate Prescription transactions for a fill date range
that you enter.  A log entry will be created which will log the number of
fills processed and the number of Prescription HL7 messages generated.

Please enter the date range for which the Prescription HL7 messages should
be generated.

Please NOTE:  Only controlled substances will be exported for any fill
dates prior to Jan 01, 2019.
All prescriptions (all drugs) filled after Jan 01, 2019 will be exported.

Enter Beginning Fill Date:  (1/1/2013 - 1/29/2019): 010113  (JAN 01, 2019)
Enter Ending Fill Date:    (1/1/2013 - 2/28/2019): 022819  (FEB 28, 2019)

Log entry 9 will be created and messages generated for fill date range JAN
01, 2013 to FEB 28, 2019.

Do you wish to continue? N// YES
Generating New Log entry.
Do you want to QUEUE this to run at a later time? N// O

Generating Prescription transactions.  Counting fills and refills.  (53805)

2058 HL7 Messages were generated.
Updating log entry.

```

```
RUN TIME (H.M.S): 0.7.37
End of Job. Press Enter.:
```

Figure 5-10: Using the PRDR option

## 5.5 Edit Prescription Export Parameter

Prior to performing any prescription exports, the prescription export parameter must be configured to enable exports. This menu option allows users to view and update the export parameter setting for each pharmacy in the Pharmacy Outpatient Site file. Enabling this data export will assist local sites with extracting data to create opioid surveillance strategy to monitor local opioid and leverage utilization of timely, actionable data to inform strategies and interventions.

**Note:** Federal sites *must* set the parameter to **YES, ENABLE THE EXPORT**. Tribal and Urban sites *must* verify with site leadership/Health Director prior to setting the parameter to Yes.

To view or update the prescription export parameter, do the following:

1. At the “Select Prescription Drug Data Warehouse Export Menu Option:” prompt, type **PRPE** and press Enter.
2. Review the information on the screen and press Enter to continue.
3. At the “Which Action” prompt, type **E** for Edit and follow the instructions on the screen to update the parameter setting for a pharmacy.
4. At the “Edit which one:” prompt, type the number of the pharmacy to update.
5. At the “ENABLE PRESCRIPTION EXPORT:” prompt, do one of the following:
  - If you want to enable prescription exports for the selected pharmacy, type **Y** for YES, ENABLE EXPORT and press Enter.
  - If you do not want to enable prescription exports for the selected pharmacy, type **N** for NO, DO NOT ENABLE EXPORT and press Enter.

**Note:** To perform a prescription export, one or more pharmacies must be configured to enable prescription exports. If you are *not* sure, please set the parameter to **NO, DO NOT ENABLE EXPORT**.

6. To perform other actions, such as Add or Delete, type the appropriate letter at the “Which Action” prompt for the desired action, press Enter, and follow the on-screen prompts.

7. To exit the prescription export parameter menu and return to the main **Prescription Export Data Warehouse** menu, type **Q** for Quit at the “Which Action” prompt.

```

*****
**      Prescription Export to Data Warehouse      **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

PRGT  Generate Prescription Export Transactions
PRDL  Display Prescription Export Log Entry
PRRX  Re-Run Previously Run Prescription Export
PRDR  Date Range Export of Prescription Transactions
PRPE  Edit Prescription Export Parameter

Select Prescription Drug Data Warehouse Export Menu Option: PRPE  Edit
Prescription Export Parameter

For each Pharmacy in the Pharmacy Outpatient Site file you must provide a
response as to whether the pharmacy will enable prescription data to be
exported to the national reporting database at the National Data Warehouse
to support the Heroin, Opioids, and Pain Efforts (HOPE) and other opioid
initiatives.

Enabling this data export will assist local sites with extracting data to
create opioid surveillance strategy to monitor local opioid and leverage
utilization of timely, actionable data to inform strategies and
interventions.

Federal sites MUST set the parameter to YES - Enable the export.
Tribal and Urban sites must verify with site leadership/Health Director
prior to setting the parameter to Yes.

If you are NOT sure, please set the parameter to NO - Do not enable export.

Press Enter to continue:
  PHARMACY OUTPATIENT SITE          ENABLE PRESCRIPTION EXPORT?
  -----
1) DEMO INDIAN HOSPITAL             YES, ENABLE EXPORT
2) DEMO INDIAN HLTH CTR             NO, DO NOT ENABLE EXPORT

Select one of the following:

      E      Edit a Pharmacy's Parameter Setting
      A      Add a new Pharmacy to the List
      D      Delete a Pharmacy from the list
      Q      Quit

Which action: E//

```

Figure 5-11: Using the PRPE option

## 5.6 Reset Prescription Export Log

The **PRRL** option is used by the site manager or area office personnel when a prescription export aborts. This option would be executed at the direction of an IT staff member after it was determined that the export aborted due to a ‘hard’ error. This option resets the log entry.

**Note:** This option is locked with the BDWHZ RESET key. This key should only be given to IT staff.

To reset the prescription export log, do the following:

1. At the “Select Prescription Drug Data Warehouse Export Menu Option” prompt, type **PRRL** and press Enter.
2. At the “Select BDW PRESCRIPTION EXPORT LOG ORIGINAL RUN DATE” prompt, do one of the following:
  - Type the date the original PRGT was done.
  - If you do not know this date, type a question mark (?) and press Enter. At the “Do you want the entire BDW PRESCRIPTION EXPORT LOG List?” prompt, type **Y** and press Enter to view a list of the previous transactions. You can also enter the log number if you know the log number.
3. Follow the on screen prompts until you get to the “Are you sure you want to do this? N” prompt.
4. At the “Are you sure you want to do this? N” prompt, do one of the following:
  - Type **Y** for Yes and press Enter if you want to reset the selected log entry.
  - Type **N** for No and press Enter if you do not want to reset the selected log entry and return to the main **Prescription Export Data Warehouse** menu.

```

*****
**      Prescription Export to Data Warehouse      **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

PRGT  Generate Prescription Export Transactions
PRDL  Display Prescription Export Log Entry
PRRX  Re-Run Previously Run Prescription Export
PRDR  Date Range Export of Prescription Transactions
PRPE  Edit Prescription Export Parameter
PRRL  Reset Prescription Export Log

Select Prescription Drug Data Warehouse Export Menu Option: PRRL  Reset
Prescription Export Log

```

```
This option will reset the Prescription Data Warehouse Export Log. You
must be absolutely sure that you have corrected the underlying problem that
caused the Export process to fail in the first place!
```

```
The Prescription Data Warehouse Export log entry you choose will be REMOVED
from the log file and all Utility and Data globals associated with that run
will be killed!!
```

```
You must now select the Log Entry to be RESET. <<< SELECT CAREFULLY >>>
```

```
Select BDW PRESCRIPTION EXPORT LOG ORIGINAL RUN DATE: 6 02-26-2019 FEB
26, 2019
```

```
Information for Log Entry 6
```

```
NUMBER: 6 ORIGINAL RUN DATE: FEB 26, 2019
BEGINNING FILL DATE: FEB 25, 2019 ENDING FILL DATE: FEB 25, 2019
EXPORT TYPE: REGULAR EXPORT RUN LOCATION: DEMO INDIAN HOSPITAL
RUN START DATE&TIME: FEB 26, 2019@13:28:51
MESSAGE HEADER: 2032538 TRANSMISSION STATUS: RUNNING
HEADER RECORD EXPORT TYPE: PRGT
```

```
Are you sure you want to do this? N// YES
```

Figure 5-12: Using the PRRL option

## 6.0 COVID-19 Export to Data Warehouse

COVID-19 test result data is an important indicator of the prevalence of COVID-19 in Indian communities. This export sends COVID-19 related data to a reporting system at the Data Warehouse. This data includes the number of tests performed, the number of positive test results, and the number of negative test results. In addition, the export includes the number of COVID-19 (Abbott ID NOW) tests and results as a subset of the total tests performed. Hospital bed and ICU beds are occupied with COVID-19 patients. The data elements on the HL7 message can be found in Table 6-1.

Table 6-1: HL7 Data Elements

Segment	Sequence	Field	Description	Example
ZHB-Hospital Beds	1	Date	Date of exported data	20200301
	2	ASUFAC	Facility ASUFAC	303101
	3	Total Hospital Beds	Number of Beds Authorized	20
	4	Total Occupied Beds	Number of Beds Occupied	10
	5	Total Open Beds	Number of Open Beds	10
ZIC-ICU Beds	1	Date	Date of exported data	20200301
	2	ASUFAC	Facility ASUFAC	303101
	3	Total ICU Beds	Number of ICU Beds	10
	4	Total Occupied ICU Beds	Number of ICU Beds Occupied	8
	5	Total Open ICU Beds	Number of ICU Beds Open	2
ZCP-COVID Patients	1	Date	Date of exported data	20200301
	2	ASUFAC	Facility ASUFAC	303101
	3	COVID Patients in Hospital Beds	Number of COVID Patients in Beds	20
	4	COVID Patients in ICU Beds	Number of COVID Patients in ICU Beds	8
ZPD-Disposition	1	Date	Date of exported data	20200301
	2	ASUFAC	Facility ASUFAC	303101
	3	Number Discharged Home	Patients discharged home	10
	4	Number Transferred to Another Facility	Patients Transferred	2
	5	Number of COVID Deaths at Facility	COVID Deaths	1
ZPT-Patients Tested	1	Date	Date of exported data	20200301

Segment	Sequence	Field	Description	Example
	2	ASUFAC	Facility ASUFAC	303101
	3	Number Tested	Number of tests	60
	4	Number Positive	Number of positive tests	3
	5	Number Negative	Number of negative tests	30
	6	Number in Process	Number of tests still in process	42
	7	Number Indeterminate	Number of tests could not determine	12
ZAB-Abbott Tests	1	Date	Date of exported data	20200301
	2	ASUFAC	Facility ASUFAC	303101
	3	New Tests Received	Number of tests	60
	4	New Tests Resulted	Number of tests resulted	3
	5	New COVID-19 Positive Tests	Number of positive tests	30
ZCM-Cumulative Tests	1	ASUFAC	Facility ASUFAC	303101
	2	Cumulative Number Tested	Cumulative tests done	425
	3	Cumulative Number Positive	Cumulative positive results	14
	4	Cumulative Number Negative	Cumulative negative results	315
	5	Cumulative Abbott Tests Received	Cumulative Abbott tests	410
	6	Cumulative Abbott Tests Resulted	Cumulative Abbott tests resulted	400
	7	Cumulative Abbott COVID-19 Positive Tests	Cumulative Abbott COVID-19 positive	80

Two security keys are distributed with the COVID-19 export system:

- **BDWCZMENU** – This key unlocks the main COVID-19 export menu (BDWCOVMENU). This key should be given to personnel responsible for performing and/or monitoring these exports.
- **BDWCZ RESET** – This key unlocks the option to reset a COVID-19 export log. This key should only be given to IT staff who may need to reset a log entry after an error occurs during an export.

To use COVID-19 Data Warehouse Export System, do the following:

1. Access the COVID-19 export to data warehouse, select the **COEX COVID-19 Data Warehouse Export Menu ...** menu option within the RPMS BDW application.

```

*****
**          Data Warehouse Export          **
*****
                          Version 1.0 (Patch 7)

                          DEMO INDIAN HOSPITAL

GDW      Generate Data Warehouse Export Records
RERX     Re-Run a Previously Run Data Warehouse Export
DLOG     Display Log Entry
DWSR     Data Warehouse Export Summary Report
DWER     List PCC Encounters Not Exported
RSET     Reset Failed Log Entry
PURG     Purge Log Entries
DRE      Export to Data Warehouse for a Date Range
PRA      Create Patient Reg Update Audit File
DVAR     Create Encounter Audit Report
RPE      Re-flag Patient for Export as an Add to NDW
UXP      Search Visits and Mark Unexported Visits
PREX     Prescription Drug Data Warehouse Export Menu ...
COEX    COVID-19 Export Menu ...

Select Data Warehouse Export Menu Option:

```

Figure 6-1: COVID-19 Export Menu

2. Set up the BDW COVID-19 DIAGNOSTIC TESTS lab test taxonomy using the **COTX** menu option (See Sections 6.1).

**Note:** This is a very important step. This must be done prior to doing any exports.

```

*****
**          COVID-19 Export to Data Warehouse          **
*****
                          Version 1.0 (Patch 7)

                          2019 DEMO HOSPITAL (INST)

COEX     Generate COVID-19 Export Transactions
CODL     Display COVID-19 Export Log Entry
CORX     Re-Run Previously Run COVID-19 Export
CODR     Date Range Export of COVID-19 Transactions
COTX    Update/Review COVID-19 Lab Test Taxonomy
CORL     Reset COVID-19 Export Log

Select COVID-19 Export Menu <TEST ACCOUNT> Option:

```

Figure 6-2: COVID-19 Taxonomy Menu option



- Schedule the option BDWCOV QUEUE COVID-19 EXPORT through TaskMan to run daily. Alternatively, you can opt to run the export manually using the **COEX Generate COVID-19 Export Transactions**.

## 6.1 COTX – Update/Review COVID-19 Lab Test Taxonomy

The **COTX Update/Review COVID-19 Lab Test Taxonomy** option is used to set up and review the BDW COVID-19 DIAGNOSTIC TESTS lab test taxonomy. This *must* be done prior to running any COVID-19 data exports. This taxonomy update should be done by the laboratory staff. A laboratory staff member must be given access to the COVID-19 export menu in order to perform this taxonomy update. They will need to have the names of all COVID-19 test results that are performed in the lab and know the positive, negative, and indeterminate test result values.

To add or delete a lab test or modify result values, do the following:

- Select the **COTX** option from the **COVID-19** menu.

```

*****
**          COVID-19 Export to Data Warehouse          **
*****
                          Version 1.0 (Patch 7)

                          2019 DEMO HOSPITAL (INST)

COEX  Generate COVID-19 Export Transactions
CODL  Display COVID-19 Export Log Entry
CORX  Re-Run Previously Run COVID-19 Export
CODR  Date Range Export of COVID-19 Transactions
COTX  Update/Review COVID-19 Lab Test Taxonomy
CORL  Reset COVID-19 Export Log

Select COVID-19 Export Menu <TEST ACCOUNT> Option: COTX  Update/Review
COVID-19 Lab Test Taxonomy

```

**Note:** The first time the option is used the taxonomy will be empty and the following screen will display:

```

COVID-19 DIAGNOSTIC TESTS      May 05, 2020 12:29:35      Page:      1 of      1
UPDATE/VIEW COVID-19 DIAGNOSTIC TESTS TAXONOMY

BDW COVID-19 DIAGNOSTIC TESTS

          Enter ?? for more actions
E      Add/Edit/Delete Lab Tests          Q      Quit
Select ACTION: Q//

```

Figure 6-3: COTX - Update/Review COVID-19 Lab Test Taxonomy

- At the “Select ACTION” prompt, type **E** and press Enter.

3. To add a lab test to the taxonomy, type **A** at the “Which action” prompt and press Enter.
4. At the “Which LAB Test” prompt, type in the name of the lab test and press Enter.
5. To enter positive result values for the lab test, type **A** at the “Which action” prompt and press Enter. Enter the first positive result value and press Enter.
6. At the next prompt, do one of the following and press Enter:
  - To add another positive result value, type **A**.
  - To delete a positive result value, type **D**.
  - If all positive result values have been entered, type **N** to continue.
7. To enter negative result values for the lab test, type **A** at the “Which action” prompt and press Enter. Enter the first negative result value and press Enter.
8. At the next prompt, do one of the following and press Enter:
  - To add another negative result value, type **A**.
  - To delete a negative result value, type **D**.
  - If all negative result values have been entered, type **N** to continue.
9. To enter indeterminate result values for the lab test, type **A** at the “Which action” prompt and press Enter. Enter the first indeterminate result value and press Enter.
10. At the next prompt, do one of the following and press Enter:
  - To add another indeterminate result value, type **A**.
  - To delete an indeterminate result value, type **D**.
  - If all indeterminate result values have been entered, type **N** to continue.

Lab Tests None recorded

Select one of the following:

A Add a Lab Test  
N No Change

Which action: N// Add a Lab Test  
Which LAB Test: \_COVID-19 (Abbott ID NOW)

Please enter the various POSITIVE result values for test \_COVID-19 (Abbott ID NOW)

Select one of the following:

A Add a POSITIVE result value  
N No Change

Which action: N// Add a POSITIVE result value

ENTER POSITIVE RESULT VALUE: **P**

Please enter the various POSITIVE result values for test \_COVID-19 (Abbott ID NOW)

1) P

Select one of the following:

A Add a POSITIVE result value  
D Delete a POSITIVE result value  
N No Change

Which action: N// Add a POSITIVE result value

ENTER POSITIVE RESULT VALUE: POSITIVE

Please enter the various POSITIVE result values for test \_COVID-19 (Abbott ID NOW)

1) P

2) POSITIVE

Select one of the following:

A Add a POSITIVE result value  
D Delete a POSITIVE result value  
N No Change

Which action: N// **No** Change

Please enter the various NEGATIVE result values for test \_COVID-19 (Abbott ID NOW)

Select one of the following:

A Add a NEGATIVE result value  
N No Change

Which action: N// Add a NEGATIVE result value

```

ENTER NEGATIVE RESULT VALUE: N

Please enter the various NEGATIVE result values for test _COVID-19 (Abbott
ID NOW)
  1) N

      Select one of the following:

          A          Add a NEGATIVE result value
          D          Delete a NEGATIVE result value
          N          No Change

Which action: N// Add a NEGATIVE result value

ENTER NEGATIVE RESULT VALUE: NEGATIVE

Please enter the various NEGATIVE result values for test _COVID-19 (Abbott
ID NOW)
  1) N
  2) NEGATIVE

      Select one of the following:

          A          Add a NEGATIVE result value
          D          Delete a NEGATIVE result value
          N          No Change

Which action: N// No Change

Please enter the various INDETERMINATE result values for test _COVID-19
(Abbott ID NOW)

      Select one of the following:

          A          Add a INDETERMINATE result value
          N          No Change

Which action: N// Add a INDETERMINATE result value

ENTER INDETERMINATE RESULT VALUE: COMMENT

Please enter the various INDETERMINATE result values for test _COVID-19
(Abbott
ID NOW)
  1) COMMENT

      Select one of the following:

          A          Add a INDETERMINATE result value
          D          Delete a INDETERMINATE result value
          N          No Change

```

Figure 6-4: Process for performing Update/Review COVID-19 Lab Test Taxonomy

The updated lab taxonomy will display. Repeat the steps above to add additional lab tests to the taxonomy.

```

COVID-19 DIAGNOSTIC TESTS      May 05, 2020 12:39:15      Page:      1 of      1
UPDATE/VIEW COVID-19 DIAGNOSTIC TESTS TAXONOMY

BDW COVID-19 DIAGNOSTIC TESTS
1) COVID-19 (Abbott ID NOW)
   POSITIVE RESULT VALUES:      P,  POSITIVE
   NEGATIVE RESULT VALUES:      N,  NEGATIVE
   INDETERMINATE RESULT VALUES: COMMENT

      Enter ?? for more actions

      Enter ?? for more actions
E   Add/Edit/Delete Lab Tests      Q   Quit

```

Figure 6-5: Update/Review COVID-19 Lab Test Taxonomy Added/Updated Complete

## 6.2 Generate COVID-19 Export Transactions

The **COEX Generate COVID-19 Export Transactions** menu option will generate COVID-19 Data Warehouse HL7 messages for a specific date range. The date range is determined by the system based on the last completed export. The export will include data from the end date of the previous export through the day prior to the date the export is run.

**Note:** The very first export will include data for the date range March 1, 2020 through the day prior to the date the export is run.

Most sites opt to schedule the export through TaskMan, to run daily rather than performing this export manually using the **COEX** option. The option to schedule is called **BDWCOV QUEUE COVID-19 EXPORT**. For instructions on how to schedule an option to run at a desired interval, see the VA Kernel user manual.

Except for the first export, the export will take approximately 15 minutes to write the file.

To manually generate COVID-19 export, do the following:

1. Choose the **COEX** option from the **COVID-19** menu.
2. At the “Do you want to continue?” prompt, type **Y** to generate the export. Type **N** to exit the menu option without generating the export.

```

*****
**          COVID-19 Export to Data Warehouse          **
*****
                          Version 1.0 (Patch 7)

                          2019 DEMO HOSPITAL (INST)

COEX  Generate COVID-19 Export Transactions
CODL  Display COVID-19 Export Log Entry
CORX  Re-Run Previously Run COVID-19 Export
CODR  Date Range Export of COVID-19 Transactions
COTX  Update/Review COVID-19 Lab Test Taxonomy
CORL  Reset COVID-19 Export Log

Select COVID-19 Export Menu <TEST ACCOUNT> Option: COEX  Generate COVID-19
Export Transactions

This option will generate an export of Hospital Bed and COVID-19 testing
data for a specified range of dates.
You may "^" out at any prompt and will be ask to confirm your entries prior
to generating the HL7 messages.

No log entry.  First run ever assumed.

The computer database location for this run is 2013 DEMO HOSPITAL (CMBA).

Do you want to continue? N// YES
Generating New Log entry.

Generating transactions.
.....
.....
.....
Updating log entry.

RUN TIME (H.M.S): 0.0.0
DONE -- Press ENTER to Continue:

```

Figure 6-6: Process for performing the first COVID-19 Data Warehouse export

### 6.3 Display COVID-19 Export Log Entry

The **Data Warehouse COVID-19 Log** file is a historical record of the exports generated and sent to the NDW. The **CODL Display COVID-19 Export Log Entry** menu option allows the user to review various items contained in a transmission log file after an export was executed.

To view the information in the log file, do the following:

1. Choose the **CODL** option from the **COVID-19** menu.
2. At the “Select BDW COVID EXPORT LOG RUN DATE/TIME” prompt, do one of the following:
  - Type the date and time the export was done.

- To see a list of all exports, type two question marks (??) and press Enter.

**Note:** If you enter a date that an export was not performed, no logs will be available to choose from.

3. The log report will display the data elements that were included on selected export.

```

*****
**          COVID-19 Export to Data Warehouse          **
*****
                          Version 1.0 (Patch 7)

                          2019 DEMO HOSPITAL (INST)

COEX  Generate COVID-19 Export Transactions
CODL  Display COVID-19 Export Log Entry
CORX  Re-Run Previously Run COVID-19 Export
CODR  Date Range Export of COVID-19 Transactions
COTX  Update/Review COVID-19 Lab Test Taxonomy
CORL  Reset COVID-19 Export Log

You have PENDING ALERTS
      Enter "VA to jump to VIEW ALERTS option

Select COVID-19 Export Menu <TEST ACCOUNT> Option: CODL  Display COVID-19
Export

Display COVID-19 EXPORT Log Entry

Type a ?? and press enter at the following prompt to view a list of RUN
DATES.
Or, if you know the run date you can enter it in the format MM/DD/YY:  e.g.
2/26/19

Select BDW COVID EXPORT LOG RUN DATE/TIME: 04/28/2020@1302

                          COVID-19 DATA WAREHOUSE EXPORT LOG REPORT
                          Information for Log Entry 3 Run Date:  APR 28, 2020@13:02

                                  Number:      3
Run Database/Location:  2019 DEMO HOSPITAL (INST)
      Beginning Date:   APR 27, 2020
      Ending Date:     APR 27, 2020
      Export Type:     REGULAR
Transmission Status:   SUCCESSFULLY COMPLETED
      Filename Created: 2321013200428070201.BDWC

DATE/ASUFAC DATA EXPORTED
04/27/2020
Location:                2019 DEMO HOSPITAL (INST)
# of Hospital Beds:     52
# of Occupied Beds:     13
# of Open Beds:         39
# of ICU Beds:          5
# of Occupied ICU Beds: 1
# of Open ICU Beds:     4
# of COVID Patients in Hospital: 0
# of COVID Patients in ICU Beds: 0
# Discharged Home:     0
# Patients Transferred: 0
# COVID Deaths:        0
# of Tests Done:       8
# of Positive Tests:    3
# of Negative Tests:    4

```



```

# of Indeterminate Tests: 1
# of Tests in Progress: 0
# of Tests Done (Cumulative): 85
# of Positive Tests (Cumulative): 30
# of Negative Tests (Cumulative): 36
# of Indeterminate Tests (Cumulative): 18
# of Tests in Progress (Cumulative): 1
# of Abbott Tests Done: 2
# of Abbott Tests Resulted: 2
# of Abbott Tests Positive: 1
# of Abbott Tests Done (Cumulative): 29
# of Abbott Tests Resulted (Cumulative): 29
# of Abbott Tests Positive (Cumulative): 13
Location: TONHC SELLS HOSP
# of Hospital Beds: 0
# of Occupied Beds: 0
# of Open Beds: 0
# of ICU Beds: 0
# of Occupied ICU Beds: 0
# of Open ICU Beds: 0
# of COVID Patients in Hospital: 0
# of COVID Patients in ICU Beds: 0
# Discharged Home: 0
# Patients Transferred: 0
# COVID Deaths: 0
# of Tests Done: 0
# of Positive Tests: 0
# of Negative Tests: 0
# of Indeterminate Tests: 0
# of Tests in Progress: 0
# of Tests Done (Cumulative): 2
# of Positive Tests (Cumulative): 1
# of Negative Tests (Cumulative): 1
# of Indeterminate Tests (Cumulative): 0
# of Tests in Progress (Cumulative): 0
# of Abbott Tests Done: 0
# of Abbott Tests Resulted: 0
# of Abbott Tests Positive: 0
# of Abbott Tests Done (Cumulative): 1
# of Abbott Tests Resulted (Cumulative): 1
# of Abbott Tests Positive (Cumulative): 1
    
```

Figure 6-7: Process for displaying a COVID-19 export log

The header information displayed for the export file is shown in Table 6-2.

Table 6-2: COVID-19 Export Log Information Details

Log Data Fields	Description
Number	The log number
Original Run Date	Date the export was originally run
Beginning Date	Beginning date for data
Ending Date	Ending date for data
Run Database/Location	Database (Facility) at which the export was performed
Export Type	Type of export (Regular or Date Range)

Log Data Fields	Description
Transmission Status	Status of the export: C – Successfully Completed R – Running Q – Queued to Run F – Failed Due to Error
Filename Created	Name of the file created for the export

The data elements displayed for each date and facility for which testing data was exported is listed in Table 6-3.

Table 6-3: Audit Data

Log Data Fields	Description
# of Hospital beds	# of beds defined in the IHS Ward Definition file
# of Occupied beds	# of beds filled from admitted patients in the Patient Movement file
# of Open Beds	# of occupied beds subtracted from the total # of beds
# of ICU Beds	# of ICU defined in the IHS Ward Definition file
# of Occupied ICU Beds	# of assigned to an ICU bed
# of Open ICD Beds	Total occupied ICU beds subtracted from total ICU Beds
# of COVID Patients in Hospital	Admitted patients who have had a COVID-19 positive test
# of COVID Patients in ICU Beds	Admitted patients who have had a COVID-19 positive test who are occupying an ICU bed
# Discharged Home	COVID patients with a discharge disposition of Discharged Home
# Patients transferred	COVID patient with discharge disposition of Transferred
# COVID Deaths	COVID patients admitted or in ER with a discharge disposition of Death or Expired
# of Tests Done	# COVID-19 lab tests accessioned on this date
# of Positive Tests	# COVID-19 lab tests with a result date on this date that were positive
# of Negative Tests	# COVID-19 lab tests with a result date on this date that were negative
# of Indeterminate Tests	# COVID-19 lab tests with a result date on this date with an indeterminate result
# of Tests in Progress	# COVID-19 lab tests accessioned on this date that have not yet been resultd
# of Tests Done (Cumulative)	# COVID-19 lab tests accessioned from 03/01/2020 through this date

Log Data Fields	Description
# of Positive Tests (Cumulative)	# COVID-19 lab tests with a result date from 03/01/2020 through this date that were positive
# of Negative Tests (Cumulative)	# COVID-19 lab tests with a result date from 03/01/2020 through this date that were negative
# of Indeterminate Tests (Cumulative)	# COVID-19 lab tests with a result date from 03/01/2020 through this date with an indeterminate result
# of Tests in Progress (Cumulative)	# COVID-19 lab tests accessioned from 03/01/2020 through this date that have not yet been resultated
# of Abbott Tests Done	# Abbott COVID-19 lab tests accessioned on this date
# of Abbott Tests Resulted	# Abbott COVID-19 lab tests with a result date on this date
# of Abbott Positive Tests	# Abbott COVID-19 lab tests with a result date on this date that were positive
# of Abbott Tests Done (Cumulative)	# Abbott COVID-19 lab tests accessioned from 03/01/2020 through this date
# of Abbott Tests resulted (Cumulative)	# Abbott COVID-19 lab tests with a result date from 03/01/2020 through this date
# of Abbott Positive Tests (Cumulative)	# COVID-19 lab tests with a result date from 03/01/2020 through this date that were positive

## 6.4 Re-Run a Previously Run COVID-19 Export

If an export transmission is lost, damaged, or destroyed, or if it was determined that the BDW COVID-19 DIAGNOSTIC TESTS taxonomy was not properly set up when the export was run, the file must be recreated and resent to the NDW. The **CORX Re-Run a Previously Run COVID-19 Export** menu option regenerates the HL7 messages previously compiled when the **COEX** option was executed and sends the regenerated file to the NDW.

**Note:** This is unlikely to occur; however, this menu option serves as a backup function for these types of failures. Also, if it is determined that due to a lab taxonomy issue several exports must be regenerated and sent it would be easier to do a date range export (see Sections 6.5) and produce one export with the entire range of dates that must be re-exported.

To re-run a previously run COVID-19 export, do the following:

1. Choose the **CORX** option from the **COVID-19** menu. If a run has not been completed or is in progress, this option cannot be performed and will display the following message:

```
Previous run not completed.  
Press Enter to continue:
```

Figure 6-8: Error message if a run has not been completed or is in progress

2. At the “Select BDW COVID-19 EXPORT LOG ORIGINAL RUN DATE:” prompt, do one of the following:
  - Type the date the original export was done.
  - If you do not know this date, type a question mark (?) and press Enter. At the “Do you want the entire BDW COVID-19 EXPORT LOG List?” prompt, type **Y** and press Enter to view a list of the previous transactions. You can also enter the log number if you know the log number.
3. At the “Do you want to regenerate the HL7 messages for this run?” prompt, do one of the following:
  - Type **Y** for Yes and press Enter if you want to regenerate the selected export.
  - Type **N** for No if the date range displayed is incorrect or if you do not want to regenerate the selected export and to return to the main **COVID-19 Export Data Warehouse** menu.

```

*****
**          COVID-19 Export to Data Warehouse          **
*****
                          Version 1.0 (Patch 7)

                          2019 DEMO HOSPITAL (INST)

COEX  Generate COVID-19 Export Transactions
CODL  Display COVID-19 Export Log Entry
CORX  Re-Run Previously Run COVID-19 Export
CODR  Date Range Export of COVID-19 Transactions
COTX  Update/Review COVID-19 Lab Test Taxonomy
CORL  Reset COVID-19 Export Log

Select COVID-19 Export Menu <TEST ACCOUNT> Option: CORX  Re-Run Previously
Run COVID-19 Export
Type a ?? and press enter at the following prompt to view a list of
ORIGINAL RUN DATES.
Or, if you know the original run date you can enter it in the format
MM/DD/YY:  e.g. 2/26/19

Select BDW COVID EXPORT LOG RUN DATE/TIME: 04/28   APR 28, 2020
partial match to:  APR 28, 2020@07:00
...OK? Yes//   (Yes)

Log entry 3 was for date range APR 27, 2020 through APR 27, 2020.

Do you want to regenerate the data warehouse export file for this run? N//
YES

Generating transactions. ....
Updating log entry.

RUN TIME (H.M.S): 0.0.0
DONE -- Press ENTER to Continue:

```

Figure 6-9: Using the CORX option to re-run an export

## 6.5 Date Range Export of COVID-19 data

If requested to do so by the NDW team, an export with a user-defined date range can be run using the **CODR** option. This may also be necessary if the COVID-19 lab taxonomy was not completed at the time of previous exports. The user will be asked to enter beginning and ending dates.

To run an export with a user-defined date range, do the following:

1. Choose the **CODR** option from the **COVID-19** menu.
2. At the “Enter Beginning Date” prompt, type the starting date for data to include in the export.

3. At the “Enter Ending Date” prompt, type the ending date for data to include in the export.
4. Verify the date range information displayed on the screen. If the information presented is accurate, type **Y** (Yes) to the “Do you want to Continue” prompt.

**Note:** If the information presented is not accurate, type **N** (No) to the “Do you want to Continue” prompt to exit the menu without performing an export.

```

*****
**          COVID-19 Export to Data Warehouse          **
*****
                          Version 1.0 (Patch 7)

                          2019 DEMO HOSPITAL (INST)

COEX  Generate COVID-19 Export Transactions
CODL  Display COVID-19 Export Log Entry
CORX  Re-Run Previously Run COVID-19 Export
CODR  Date Range Export of COVID-19 Transactions
COTX  Update/Review COVID-19 Lab Test Taxonomy
CORL  Reset COVID-19 Export Log

Select COVID-19 Export Menu <TEST ACCOUNT> Option: CODR  Date Range Export
of COVID-19 Transactions

                          2019 DEMO HOSPITAL (INST)

*****  IHS DATA WAREHOUSE COVID-19 EXPORT IN A DATE RANGE  *****

This program will generate COVID-19 transactions for a
date range that you enter.  A log entry will be created which will log
the data generated.

Please enter the date range for which COVID-19 data should be generated.

Enter Beginning Date:  (3/1/2020 - 5/5/2020): 04012020  (APR 01, 2020)
Enter Ending Date:    (3/1/2020 - 5/5/2020): 04302020  (APR 30, 2020)

Log entry 13 will be created and data generated for
date range APR 01, 2020 to APR 30, 2020.

Do you wish to continue? N// YES
Generating New Log entry.

Generating transactions.
.....
.....
Updating log entry.

RUN TIME (H.M.S): 0.0.3
DONE -- Press ENTER to Continue:

```

Figure 6-10: Using the CODR option

## 6.6 Reset COVID-19 Export Log

The **CORL** option is used by the site manager or area office personnel when a COVID-19 export aborts. This option would be executed at the direction of an IT staff member after it was determined that the export aborted due to a ‘hard’ error. This option resets the log entry.

**Note:** This option is locked with key BDWCZ RESET. This key should only be given to IT staff.

To reset the COVID-19 export log, do the following:

1. Choose the **CORL** option from the **COVID-19** menu.
2. At the “Select BDW COVID-19 EXPORT LOG ORIGINAL RUN DATE” prompt, do one of the following:
  - Type the date the original export was done.
  - If the date is not known, type a question mark (?) and press Enter. At the “Do you want the entire BDW COVID-19 EXPORT LOG List?” prompt, type **Y** and press Enter to view a list of the previous transactions. You can also enter the log number if you know the log number.
3. Follow the on screen prompts until the “Are you sure you want to do this?” prompt, then do one of the following:
  - Type **Y** for Yes and press Enter if you want to reset the selected log entry.
  - Type **N** for No and press Enter if you do not want to reset the selected log entry and return to the main **COVID-19 Data Warehouse** menu.

```

*****
**          COVID-19 Export to Data Warehouse          **
*****
                          Version 1.0 (Patch 7)

                          2019 DEMO HOSPITAL (INST)

COEX  Generate COVID-19 Export Transactions
CODL  Display COVID-19 Export Log Entry
CORX  Re-Run Previously Run COVID-19 Export
CODR  Date Range Export of COVID-19 Transactions
COTX  Update/Review COVID-19 Lab Test Taxonomy
CORL  Reset COVID-19 Export Log

Select COVID-19 Export Menu <TEST ACCOUNT> Option: CORL  Reset COVID-19
Export Log
This option will reset the COVID-19 Data Warehouse Export Log.  You must be
absolutely sure that you have corrected the underlying problem that caused
the Export process to fail in the first place!

The COVID-19 Data Warehouse Export log entry you choose will be REMOVED
from the log file and all Utility and Data globals associated with that

```

```
run will be killed!!

You must now select the Log Entry to be RESET. <<< SELECT CAREFULLY >>>

Select BDW COVID EXPORT LOG RUN DATE/TIME:      5-6-2020@10:20:27

Information for Log Entry 13

LOG NUMBER: 13                                RUN DATE/TIME: MAY 06,
2020@10:20:27
  RUN LOCATION: 2019 DEMO HOSPITAL (INST)
  RUN STOP DATE/TIME: MAY 06, 2020@10:22:31
  FILENAME CREATED: 2321013200506102231.BDWC
  EXPORT TYPE: DATE RANGE                      BEGIN DATE DATA: APR 01, 2020
  END DATE DATA: APR 30, 2020                TRANSMISSION STATUS: FAILED DUE TO
ERROR
  RUN TIME: 0.0.3
Are you sure you want to do this? N// YES
```

Figure 6-11: Using the CORL option



## Appendix A Rules of Behavior

The Resource and Patient Management (RPMS) system is a United States Department of Health and Human Services (HHS), Indian Health Service (IHS) information system that is **FOR OFFICIAL USE ONLY**. The RPMS system is subject to monitoring; therefore, no expectation of privacy shall be assumed. Individuals found performing unauthorized activities are subject to disciplinary action including criminal prosecution.

All users (Contractors and IHS Employees) of RPMS will be provided a copy of the Rules of Behavior (ROB) and must acknowledge that they have received and read them prior to being granted access to a RPMS system, in accordance IHS policy.

- For a listing of general ROB for all users, see the most recent edition of *IHS General User Security Handbook* (SOP 06-11a).
- For a listing of system administrators/managers rules, see the most recent edition of the *IHS Technical and Managerial Handbook* (SOP 06-11b).

Both documents are available at this IHS Web site:

<https://home.ihs.gov/security/index.cfm>.

<p><b>Note:</b> Users must be logged on to the IHS D1 Intranet to access these documents.</p>
---

The ROB listed in the following sections are specific to RPMS.

## A.1 All RPMS Users

In addition to these rules, each application may include additional ROBs that may be defined within the documentation of that application (e.g., Dental, Pharmacy).

### A.1.1 Access

RPMS users shall

- Only use data for which you have been granted authorization.
- Only give information to personnel who have access authority and have a need to know.
- Always verify a caller's identification and job purpose with your supervisor or the entity provided as employer before providing any type of information system access, sensitive information, or nonpublic agency information.
- Be aware that personal use of information resources is authorized on a limited basis within the provisions *Indian Health Manual* Part 8, "Information Resources Management," Chapter 6, "Limited Personal Use of Information Technology Resources."

RPMS users shall not

- Retrieve information for someone who does not have authority to access the information.
- Access, research, or change any user account, file, directory, table, or record not required to perform their *official* duties.
- Store sensitive files on a PC hard drive, or portable devices or media, if access to the PC or files cannot be physically or technically limited.
- Exceed their authorized access limits in RPMS by changing information or searching databases beyond the responsibilities of their jobs or by divulging information to anyone not authorized to know that information.

### A.1.2 Information Accessibility

RPMS shall restrict access to information based on the type and identity of the user. However, regardless of the type of user, access shall be restricted to the minimum level necessary to perform the job.

RPMS users shall

- Access only those documents they created and those other documents to which they have a valid need-to-know and to which they have specifically granted access through an RPMS application based on their menus (job roles), keys, and FileMan access codes. Some users may be afforded additional privileges based on the functions they perform, such as system administrator or application administrator.
- Acquire a written preauthorization in accordance with IHS policies and procedures prior to interconnection to or transferring data from RPMS.

### A.1.3 Accountability

RPMS users shall

- Behave in an ethical, technically proficient, informed, and trustworthy manner.
- Log out of the system whenever they leave the vicinity of their personal computers (PCs).
- Be alert to threats and vulnerabilities in the security of the system.
- Report all security incidents to their local Information System Security Officer (ISSO)
- Differentiate tasks and functions to ensure that no one person has sole access to or control over important resources.
- Protect all sensitive data entrusted to them as part of their government employment.
- Abide by all Department and Agency policies and procedures and guidelines related to ethics, conduct, behavior, and information technology (IT) information processes.

### A.1.4 Confidentiality

RPMS users shall

- Be aware of the sensitivity of electronic and hard copy information and protect it accordingly.
- Store hard copy reports/storage media containing confidential information in a locked room or cabinet.
- Erase sensitive data on storage media prior to reusing or disposing of the media.
- Protect all RPMS terminals from public viewing at all times.
- Abide by all Health Insurance Portability and Accountability Act (HIPAA) regulations to ensure patient confidentiality.

RPMS users shall not

- Allow confidential information to remain on the PC screen when someone who is not authorized to that data is in the vicinity.
- Store sensitive files on a portable device or media without encrypting.

### A.1.5 Integrity

RPMS users shall

- Protect their systems against viruses and similar malicious programs.
- Observe all software license agreements.
- Follow industry standard procedures for maintaining and managing RPMS hardware, operating system software, application software, and/or database software and database tables.
- Comply with all copyright regulations and license agreements associated with RPMS software.

RPMS users shall not

- Violate federal copyright laws.
- Install or use unauthorized software within the system libraries or folders.
- Use freeware, shareware, or public domain software on/with the system without their manager's written permission and without scanning it for viruses first.

### A.1.6 System Logon

RPMS users shall

- Have a unique User Identification/Account name and password.

- Be granted access based on authenticating the account name and password entered.
- Be locked out of an account after five successive failed login attempts within a specified time period (e.g., one hour).

### A.1.7 Passwords

RPMS users shall

- Change passwords a minimum of every 90 days.
- Create passwords with a minimum of eight characters.
- If the system allows, use a combination of alpha-numeric characters for passwords, with at least one uppercase letter, one lower case letter, and one number. It is recommended, if possible, that a special character also be used in the password.
- Change vendor-supplied passwords immediately.
- Protect passwords by committing them to memory or store them in a safe place (do not store passwords in login scripts or batch files).
- Change passwords immediately if password has been seen, guessed, or otherwise compromised, and report the compromise or suspected compromise to their ISSO.
- Keep user identifications (IDs) and passwords confidential.

RPMS users shall not

- Use common words found in any dictionary as a password.
- Use obvious readable passwords or passwords that incorporate personal data elements (e.g., user's name, date of birth, address, telephone number, or social security number; names of children or spouses; favorite band, sports team, or automobile; or other personal attributes).
- Share passwords/IDs with anyone or accept the use of another's password/ID, even if offered.
- Reuse passwords. A new password must contain no more than five characters per eight characters from the previous password.
- Post passwords.
- Keep a password list in an obvious place, such as under keyboards, in desk drawers, or in any other location where it might be disclosed.
- Give a password out over the phone.

### A.1.8 Backups

RPMS users shall

- Plan for contingencies such as physical disasters, loss of processing, and disclosure of information by preparing alternate work strategies and system recovery mechanisms.
- Make backups of systems and files on a regular, defined basis.
- If possible, store backups away from the system in a secure environment.

### A.1.9 Reporting

RPMS users shall

- Contact and inform their ISSO that they have identified an IT security incident and begin the reporting process by providing an IT Incident Reporting Form regarding this incident.
- Report security incidents as detailed in the *IHS Incident Handling Guide* (SOP 05-03).

RPMS users shall not

- Assume that someone else has already reported an incident. The risk of an incident going unreported far outweighs the possibility that an incident gets reported more than once.

### A.1.10 Session Timeouts

RPMS system implements system-based timeouts that back users out of a prompt after no more than 5 minutes of inactivity.

RPMS users shall

- Utilize a screen saver with password protection set to suspend operations at no greater than 10 minutes of inactivity. This will prevent inappropriate access and viewing of any material displayed on the screen after some period of inactivity.

### A.1.11 Hardware

RPMS users shall

- Avoid placing system equipment near obvious environmental hazards (e.g., water pipes).
- Keep an inventory of all system equipment.
- Keep records of maintenance/repairs performed on system equipment.

RPMS users shall not

- Eat or drink near system equipment.

### A.1.12 Awareness

RPMS users shall

- Participate in organization-wide security training as required.
- Read and adhere to security information pertaining to system hardware and software.
- Take the annual information security awareness.
- Read all applicable RPMS manuals for the applications used in their jobs.

### A.1.13 Remote Access

Each subscriber organization establishes its own policies for determining which employees may work at home or in other remote workplace locations. Any remote work arrangement should include policies that

- Are in writing.
- Provide authentication of the remote user through the use of ID and password or other acceptable technical means.
- Outline the work requirements and the security safeguards and procedures the employee is expected to follow.
- Ensure adequate storage of files, removal, and nonrecovery of temporary files created in processing sensitive data, virus protection, and intrusion detection, and provide physical security for government equipment and sensitive data.
- Establish mechanisms to back up data created and/or stored at alternate work locations.

Remote RPMS users shall

- Remotely access RPMS through a virtual private network (VPN) whenever possible. Use of direct dial in access must be justified and approved in writing and its use secured in accordance with industry best practices or government procedures.

Remote RPMS users shall not

- Disable any encryption established for network, internet, and Web browser communications.

## A.2 RPMS Developers

RPMS developers shall

- Always be mindful of protecting the confidentiality, availability, and integrity of RPMS when writing or revising code.
- Always follow the IHS RPMS Programming Standards and Conventions (SAC) when developing for RPMS.
- Only access information or code within the namespaces for which they have been assigned as part of their duties.
- Remember that all RPMS code is the property of the U.S. Government, not the developer.
- Not access live production systems without obtaining appropriate written access and shall only retain that access for the shortest period possible to accomplish the task that requires the access.
- Observe separation of duties policies and procedures to the fullest extent possible.
- Document or comment all changes to any RPMS software at the time the change or update is made. Documentation shall include the programmer's initials, date of change, and reason for the change.
- Use checksums or other integrity mechanism when releasing their certified applications to assure the integrity of the routines within their RPMS applications.
- Follow industry best standards for systems they are assigned to develop or maintain and abide by all Department and Agency policies and procedures.
- Document and implement security processes whenever available.

RPMS developers shall not

- Write any code that adversely impacts RPMS, such as backdoor access, "Easter eggs," time bombs, or any other malicious code or make inappropriate comments within the code, manuals, or help frames.
- Grant any user or system administrator access to RPMS unless proper documentation is provided.
- Release any sensitive agency or patient information.



## A.3 Privileged Users

Personnel who have significant access to processes and data in RPMS, such as, system security administrators, systems administrators, and database administrators, have added responsibilities to ensure the secure operation of RPMS.

Privileged RPMS users shall

- Verify that any user requesting access to any RPMS system has completed the appropriate access request forms.
- Ensure that government personnel and contractor personnel understand and comply with license requirements. End users, supervisors, and functional managers are ultimately responsible for this compliance.
- Advise the system owner on matters concerning information technology security.
- Assist the system owner in developing security plans, risk assessments, and supporting documentation for the certification and accreditation process.
- Ensure that any changes to RPMS that affect contingency and disaster recovery plans are conveyed to the person responsible for maintaining continuity of operations plans.
- Ensure that adequate physical and administrative safeguards are operational within their areas of responsibility and that access to information and data is restricted to authorized personnel on a need-to-know basis.
- Verify that users have received appropriate security training before allowing access to RPMS.
- Implement applicable security access procedures and mechanisms, incorporate appropriate levels of system auditing, and review audit logs.
- Document and investigate known or suspected security incidents or violations and report them to the ISSO, Chief Information Security Officer (CISO), and systems owner.
- Protect the supervisor, superuser, or system administrator passwords.
- Avoid instances where the same individual has responsibility for several functions (i.e., transaction entry and transaction approval).
- Watch for unscheduled, unusual, and unauthorized programs.
- Help train system users on the appropriate use and security of the system.
- Establish protective controls to ensure the accountability, integrity, confidentiality, and availability of the system.
- Replace passwords when a compromise is suspected. Delete user accounts as quickly as possible from the time that the user is no longer authorized system. Passwords forgotten by their owner should be replaced, not reissued.

- Terminate user accounts when a user transfers or has been terminated. If the user has authority to grant authorizations to others, review these other authorizations. Retrieve any devices used to gain access to the system or equipment. Cancel logon IDs and passwords and delete or reassign related active and backup files.
- Use a suspend program to prevent an unauthorized user from logging on with the current user's ID if the system is left on and unattended.
- Verify the identity of the user when resetting passwords. This can be done either in person or having the user answer a question that can be compared to one in the administrator's database.
- Shall follow industry best standards for systems they are assigned to and abide by all Department and Agency policies and procedures.

Privileged RPMS users shall not

- Access any files, records, systems, etc., that are not explicitly needed to perform their duties
- Grant any user or system administrator access to RPMS unless proper documentation is provided.
- Release any sensitive agency or patient information.

## Glossary

### **Backloading**

In order to populate the new Data Warehouse database with existing data each site must “backload” or send existing data to the Data Warehouse. This involves a one-time export of all Patient Registration data and the export of all visit data from October 1, 2000 to the present. For the Prescription export it involves sending all controlled substance fills and refills from January 1, 2013. For the COVID-19 export it involves sending all COVID-19 data from March 1, 2020.

### **Generic Interface System**

The RPMS package that manages and creates HL7 messages. This system manages the passing of the HL7 messages from one place to another.

### **Health Level 7**

An international standard messaging system for passing data from one site to another. The Data Warehouse Export System passes data from RPMS to the Data Warehouse using HL7 messages.

## Acronym List

<b>Acronym</b>	<b>Meaning</b>
AI/AN	American Indians and Alaska Natives
COVID-19	Coronavirus Disease 2019
CPT	Current Procedural Terminology
FTP	File Transfer Protocol
GIS	Generic Interface System
GPRA	Government Performance and Results Act
HL7	Health Level Seven
ICD	International Classification of Disease
IHS	Indian Health Service
LOINC	Logical Observation Identifiers Names and Codes
NDW	National Data Warehouse
NPIRS	National Patient Information Reporting System
PCC	Patient Care Component
RPMS	Resource and Patient Management System

## 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](mailto:itsupport@ihs.gov)