RESOURCE AND PATIENT MANAGEMENT SYSTEM

Data Warehouse Export System

(BDW)

Technical Manual

Version 1.0 Patch 6
June 2019

Office of Information Technology
Division of Information Technology

Table of Contents

Version History

Version	Date	Notes
1.0	January 2006	Initial version
1.0	March 2019	Updated with patch 6

Preface

This manual contains the technical guide for the Resource and Patient Management System (RPMS) Data Warehouse Export System.

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

In 2019 (patch 6), a separate export was created to send prescription data to a reporting system at the Data Warehouse. 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.

The National Patient Information Reporting System (NPIRS) is a designated organizational unit within the Information Technology Support Center, Division of Information Resources, 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 NPIRS' new NDW structure. The data to be exported includes demographic data; third-party eligibility information; patient-based clinical data (e.g., health factors); 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.

1.0 Implementation and Maintenance

The Data Warehouse Export System occupies the BDW namespace. Options, security locks and keys, templates, routines, and globals are namespaced BDW.

1.1 System Requirements

- Kernel Version 8.0 or higher
- FileMan v22 or higher
- IHS Data Warehouse Export System (BDW) Version 1.0 through patch 6
- GIS through patch 16 - GIS*0301*16

1.2 Security Keys

Name	Descriptive Name	Description
BDWZ BACKLOAD MENU	BDW BACKLOAD MENU	This key unlocks the backload menu of the data warehouse software. This key should only be given to the person doing the initial backloading of data to the DW.
BDWZ REG EXPORT	BDW REGISTRATION EXPORT	This key unlocks the option to do a full registration export to the Data Warehouse. This key should only be given to the user doing that initial registration backload.
BDWZMENU	BDW MAIN MENU	This key unlocks the main Data Warehouse menu. It should be assigned to all users who need to run Data Warehouse exports.
BDWZ RESET	BDW RESET LOG	This key unlocks the reset option for the Data Warehouse exports. It should be given to the site manager and area office personnel only.
BDWHZ RESET	BDWH RESET LOG	This key unlocks the reset option for the Prescription export. It should be given to the site manager and area office personnel only.
BDWHZMENU	BDWH MAIN MENU	This key unlocks the main menu for the Prescription export.

2.0 Routines

Routine	Description
BDW10P1	IHS/CMI/LAB - PRE/POST INIT
BDW10P3	IHS/CMI/MAW - BDW Patch 3 Post Init
BDW10P4	ihs/cmi/maw - BDW Patch 5
BDW10P40	ihs/cmi/maw - BDW Patch 4
BDW10P5	ihs/cmi/maw - BDW Patch 5
BDW10P6	ihs/cmi/maw - BDW Patch 6
BDW1BLR	IHS/CMI/LAB - DW EXPORT REG DATA BACKLOAD VIA HL7
BDW1VBL	IHS/CMI/LAB - MAIN DRIVER DW VISIT BACKLOAD
BDW1VBL2	IHS/CMI/LAB - DW process visit during backload
BDW1VBLE	IHS/CMI/LAB - log error during backload of visits
BDW1VBLI	IHS/CMI/LAB - Initialization for DW Visit backloading
BDW1VBLL	IHS/CMI/LAB - Display log of dw visit backload
BDW1VBLR	IHS/CMI/LAB - RESET visit backload log
BDW1VBLZ	IHS/CMI/LAB - rerun visit backload log
BDWA	IHS/CMI/LAB - dw export reg data - old version
BDWA0	IHS/CMI/LAB - DW EXPORT - OLD, NOT USED
BDWA1	IHS/CMI/LAB - DW EXPORT - OLD, NOT USED
BDWAID	IHS/CMI/LAB - UNIQUE REGISTRATION RECORD ID
BDWALPMR	IHS/CMI/LAB - BDW Populate Various DW1 HL7
BDWBAN	IHS/CMI/LAB - BANNER FOR DATA WAREHOUSE
BDWBHL	IHS/CMI/LAB - BDW Populate Various DW1 HL7
BDWBHL1	IHS/CMI/LAB - BDW Populate Various DW1 HL7 Segments
BDWCVAR	IHS/CMI/LAB - visit audit report
BDWDDR	IHS/CMI/LAB - Main Driver EXPORT DATE RANGE
BDWDDR2	IHS/CMI/LAB - reexport in date range
BDWDLOG	IHS/CMI/LAB - DISPLAY DW EXPORT LOG DATA AUGUST 14, 1992
BDWDWPX	IHS/CMI/LAB - RPMS report for DW export
BDWDWPX1	IHS/CMI/LAB - RPMS report for DW export-3/12/2004 12:46:58 PM
BDWEPRN	IHS/CMI/LAB - Display TX ERRORS AUGUST 14, 1992
BDWHBAN	IHS/CMI/LAB - BANNER FOR DATA WAREHOUSE
BDWHBHL	ihs/cmi/maw - BDW HOPE BHL DRIVER
BDWHBHL1	IHS/CMI/LAB - BDWH Driver Cont
BDWHDDR	IHS/CMI/LAB - Main Driver EXPORT DATE RANGE

Routine	Description
BDWHDLOG	IHS/CMI/LAB - DISPLAY DW EXPORT LOG DATA AUGUST 14, 1992
BDWHDR	IHS/CMI/LAB - HOPE DATA WAREHOUSE
BDWHEVNT	ihs/cmi/maw - BDWH HL7 Event Driver
BDWHFLDS	ihs/cmi/maw - BDW HOPE Fields
BDWHRDI2	IHS/CMI/LAB - INIT FOR DW EXPORT
BDWHRDR	IHS/CMI/LAB - MAIN DRIVER DW EXPORT
BDWHRDRI	IHS/CMI/LAB - INIT FOR DW
BDWHREDO	IHS/CMI/LAB - REDO A RUN
BDWHRSET	IHS/CMI/LAB - RESET TX LOG AUGUST 14, 1992
BDWHUTL	IHS/CMI/LAB - DW UTILITIES
BDWIN1	IHS/CMI/LAB - BDW Create Insurance Array for GIS DW1 Export
BDWNTEG	ISC/XTSUMBLD KERNEL - Package checksum checker
BDWPRADD	IHS/CMI/LAB - SET PATIENT AS AN ADD
BDWPRE	IHS/CMI/LAB - PRE/POST INIT
BDWPURG	IHS/CMI/LAB - PURGE DW LOG
BDWQ	IHS/CMI/LAB - BDW Place Holder for Destinations
BDWRDR	IHS/CMI/LAB - MAIN DRIVER DW EXPORT
BDWRDR2	IHS/CMI/LAB - DW PROCESS VISIT
BDWRDR21	IHS/CMI/LAB - CONT PROCESS
BDWRDRI	IHS/CMI/LAB - INIT FOR DW
BDWRDRI2	IHS/CMI/LAB - INIT FOR DW EXPORT
BDWRDRI3	IHS/CMI/LAB - INIT CONT DW
BDWRED1	IHS/CMI/LAB - REDO CONT
BDWREDO	IHS/CMI/LAB - REDO A RUN
BDWRERR	IHS/CMI/LAB - LOG ERROR
BDWRSET	IHS/CMI/LAB - RESET TX LOG AUGUST 14, 1992
BDWRXP	cmi/anch/maw - BDW Mark Visit for Export that didn't export already
BDWSR	IHS/CMI/LAB - DW REPORT
BDWSR1	IHS/CMI/LAB - DW REPORT 1
BDWSR2	IHS/CMI/LAB - DW REPORT 2
BDWSRP	IHS/CMI/LAB - DW REPORT PRINT
BDWSRP5	IHS/CMI/LAB - DW REPORT PRINT CONT
BDWUTIL	IHS/CMI/LAB - DW UTILITIES
BDWUTIL1	IHS/CMI/LAB - Data Warehouse Utilities
BDWUTIL2	IHS/CMI/LAB - Data Warehouse Utilities

3.0 Files and Tables

3.1 File List

FILE	GLOBAL	NAME
90212.1	^BDWSITE	BDW SITE FILE
90212.2	^BDWERRC	BDW ERROR CODES
90212.3	^BDWVARD	BDW VISIT AUDIT RECORD DEFINTION
90213	^BDWXLOG	BDW DATA WAREHOUSE EXPORT LOG
90213.1	^BDWHLOG	BDW PRESCRIPTION EXPORT LOG
90214	^BDWBLOG	BDW VISIT BACKLOAD FILE
90215	^BDWRBLOG	BDW REG BACKLOAD LOG

3.2 File Access

FILE (#)	GLOBAL	RD	WR	LYG	DD	DEL
90212.1	^BDWSITE	M	M	M	@	@
90212.2	^BDWERRC	M	@	@	@	@
90212.3	^BDWVARD	@	@	@	@	@
90213	^BDWXLOG	M	M	M	@	@
90213.1	^BDWHLOG	M	M	M	@	@
90214	^BDWBLOG	M	M	M	@	@
90215	^BDWRBLOG	M	M	M	@	@

3.3 Cross References

File #90212.1

B REGULAR

Field: NAME (90212.1,.01)

1)= S ^BDWSITE("B",$E(X,1,30),DA)=""

2)= K ^BDWSITE("B",$E(X,1,30),DA)

File #90212.2

B REGULAR

Field: ERROR CODE (90212.2,.01)

1)= S ^BDWERRC("B",$E(X,1,30),DA)=""

2)= K ^BDWERRC("B",$E(X,1,30),DA)

File #90212.3

B REGULAR

Field: RECORD ID (90212.3,.01)

1)= S ^BDWVARD("B",$E(X,1,30),DA)=""

2)= K ^BDWVARD("B",$E(X,1,30),DA)

Subfile #90212.311

B REGULAR

Field: PIECE (90212.311,.01)

1)= S ^BDWVARD(DA(1),11,"B",$E(X,1,30),DA)=""

2)= K ^BDWVARD(DA(1),11,"B",$E(X,1,30),DA)

File #90213

B REGULAR

Field: BEGINNING DATE (90213,.01)

1)= S ^BDWXLOG("B",$E(X,1,30),DA)=""

2)= K ^BDWXLOG("B",$E(X,1,30),DA)

Subfile #90213.05101

B REGULAR

Field: VISIT (90213.05101,.01)

1)= S ^BDWXLOG(DA(1),51,"B",$E(X,1,30),DA)=""

2)= K ^BDWXLOG(DA(1),51,"B",$E(X,1,30),DA)

Subfile #90213.06101

B REGULAR

Field: PATIENT CENTRIC EXPORTED (90213.06101,.01)

1)= S ^BDWXLOG(DA(1),61,"B",$E(X,1,30),DA)=""

2)= K ^BDWXLOG(DA(1),61,"B",$E(X,1,30),DA)

File #90213.1

B REGULAR

Field: ORIGINAL RUN DATE (90213.1,.01)

1)= S ^BDWHLOG("B",$E(X,1,30),DA)=""

2)= K ^BDWHLOG("B",$E(X,1,30),DA)

Subfile #90213.12101

B REGULAR

Field: FILLS EXPORTED (90213.12101,.01)

1)= S ^BDWHLOG(DA(1),21,"B",$E(X,1,30),DA)=""

2)= K ^BDWHLOG(DA(1),21,"B",$E(X,1,30),DA)

Subfile #90213.131

B REGULAR

Field: AUDIT (90213.131,.01)

1)= S ^BDWHLOG(DA(1),31,"B",$E(X,1,30),DA)=""

2)= K ^BDWHLOG(DA(1),31,"B",$E(X,1,30),DA)

Subfile #90213.141

B REGULAR

Field: BACKLOAD PRESCRIPTIONS (90213.141,.01)

1)= S ^BDWHLOG(DA(1),41,"B",$E(X,1,30),DA)=""

2)= K ^BDWHLOG(DA(1),41,"B",$E(X,1,30),DA)

File #90214

B REGULAR

Field: BEGINNING DATE (90214,.01)

1)= S ^BDWBLOG("B",$E(X,1,30),DA)=""

2)= K ^BDWBLOG("B",$E(X,1,30),DA)

Subfile #90214.05101

B REGULAR

Field: VISITS SKIPPED (90214.05101,.01)

1)= S ^BDWBLOG(DA(1),51,"B",$E(X,1,30),DA)=""

2)= K ^BDWBLOG(DA(1),51,"B",$E(X,1,30),DA)

File #90215

B REGULAR

Field: EXPORT DATE (90215,.01)

1)= S ^BDWRBLOG("B",$E(X,1,30),DA)=""

2)= K ^BDWRBLOG("B",$E(X,1,30),DA)

3.4 Table File

FILE #: 90212.1 BDW SITE FILE GLOBAL: ^BDWSITE(

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.001	NUMBER			N
.01	NAME	D0,0	1	P
.02	SOFTWARE INSTALLED DATE	“	2	D
.03	*DELAY	“	3	N
.04	DATE COMPLETE REG EXPORT DONE	“	4	D
.05	NUMBER OF VISITS TO BACKLOAD	“	5	N
.06	DATE VISIT BACKLOAD COMPLETED	“	6	D
.07	SEND VISIT AUDIT REPORT?	“	7	S
1101	TURN OFF ADDED PATCH 6 DATA?	D0,11	1	S
1201	HFS DIRECTORY	D0,12	1	F
2100	ENABLE PRESCRIPTION EXPORT	21		
2100 .01	PHARMACY OUTPATIENT SITE	21	1	P
2100 .02	ENABLE HOPE EXPORT	21	2	S
2100 .03	DATE BACKLOAD COMPLETED	21	3	D

FILE #: 90212.2 BDW ERROR CODES GLOBAL: ^BDWERRC(

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	ERROR CODE	D0,0	1	F
.02	DESCRIPTION	“	2	F
1	LONG DESCRIPTION	(90212.21)		
.01	LONG DESCRIPTION	D0,1,D1,0	1	W

FILE #: 90212.3 BDW VISIT AUDIT RECORD DEFINTION GLOBAL: ^BDWVARD(

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	RECORD ID	D0,0	1	F
1101	ELEMENTS (90212.311)			
.01	PIECE	D0,11,D1,0	1	N
.02	ELEMENT	“	2	F
1	GET VALUE	D0,11,D1,1		K

FILE #: 90213 BDW DATA WAREHOUSE EXPORT LOG GLOBAL: ^BDWXLOG(

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.001	NUMBER			N
.01	BEGINNING DATE	D0,0	1	D
.02	ENDING DATE	“	2	D
.03	RUN START DATE/TIME	“	3	D
.04	RUN STOP DATE/TIME	“	4	D
.05	COUNT OF VISITS SKIPPED (ALL)	“	5	N
.06	COUNT OF TXS (REG+PCC)	“	6	N
.07	EXPORT TYPE	“	7	S
.08	COUNT OF VISITS PROCESSED	“		
.09	RUN LOCATION	“	9	P
.11	# REG MESSAGES	“	11	N
.12	MESSAGE HEADER	“	12	F
.13	RUN TIME	“	13	F
.14	TRAILER MESSAGE #	“	14	F
.15	TRANSMISSION STATUS	“	15	S
.16	PROCESSING ERROR ENCOUNTERED	“	16	P
.18	NUMBER OF VISITS EXPORTED	“	18	N
.21	AUDIT FILE	“	21	F
.22	REDO? "	“	22	S
.23	HEADER RECORD EXPORT TYPE	“	23	F
2101	VISITS (90213.2101)			

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	VISIT	D0,21,D1,0	1	P
.02	TX GEN'D	“	2	S
.03	MESSAGE #	“	3	F
3101	DEMO PATIENT RECORDS	D0,31	1	N
3102	ZERO DEPENDENT ENTRIES	“	2	N
3103	DELETED VISITS NEVER SENT	“	3	N
3104	NO PATIENT	“	4	N
3105	NO LOCATION OF ENC	“	5	N
3106	NO TYPE OF VISIT	“	6	N
3107	NO SERVICE CATEGORY	“	7	N
3108	ADDS	“	8	N
3109	MODS	“	9	N
3110	DELETES	“	10	N
3111	MFI VISITS SKIPPED	“	11	N
4101	PATIENTS EXPORTED (90213.4101)			
.01	PATIENTS EXPORTED	D0,41,D1,0	1	P
.02	BASE RECORD	“	2	D
.03	DEMO RECORD	“	3	D
.04	ALIAS	“	4	D
.05	CHART	“	5	D
.06	ELIG	“	6	D
.07	MESSAGE #	“	7	F
5101	VISITS WITH ERRORS (90213.05101)			
.01	VISIT	D0,51,D1,0	1	P
.03	MSG	“	3	F
6101 PATIENT CENTRIC EXPORTED	PATIENT CENTRIC EXPORTED	D0,61,D1,0		
.01	PATIENT CENTRIC EXPORTED	“	1	P
.02	MESSAGE #	“	2	F
8801	USER	D0,100	1	P
9901	TRAILER REPORT (90213.99)			
.01	TRAILER REPORT	D0,99,D1,0	1	W

FILE #: 90213.1 BDW PRESCRIPTION EXPORT LOG GLOBAL: ^BDWXLOG(

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.001	NUMBER			N
.01	ORIGINAL RUN DATE	D0,0	1	D
.02	BEGINNING FILL DATE	“	2	D
.03	ENDING FILL DATE	“	3	D
.04	RUN STOP DATE/TIME	“	4	D
.05	COUNT OF FILLS PROCESSED	“	5	N
.06	COUNT OF FILLS SKIPPED	“	6	N
.07	EXPORT TYPE	“	7	S
.08	COUNT OF FILLS EXPORTED	“		
.09	RUN LOCATION	“	9	P
.1	RUN START DATE&TIME	“	10	D
.11	MESSAGE HEADER	“	11	F
.12	TRAILER MESSAGE #	“	12	F
.13	RUN TIME	“	13	F
.15	TRANSMISSION STATUS	“	15	S
.16	PROCESSING ERROR	“	16	P
.18	NUMBER OF VISITS EXPORTED	“	18	N
.22	REDO? "	“	22	S
.23	HEADER RECORD EXPORT TYPE	“	23	F
2101	FILLS PROCESSED (90213.12101)			
.01	FILLS EXPORTED	D0,21,D1,0	1	P
.02	PRESCRIPTION #	“	2	F
.03	REFILL #	“	3	N
.04	FILL DATE	“	4	D
.05	OUTPATIENT SITE	“	5	P
.06	MESSAGE #	“	6	F
.07	EXPORTED?	“	7	S
.08	REASON NOT EXPORTED	“	8	F
3101	AUDIT (90213.131)			
.01	AUDIT	D0,31,D1,0	1	D
.02	USER	“	2	P
.03	OPTION NAME	“	3	P
.04	STATUS	“	5	F

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
4101	BACKLOAD FILLS EXPORTED (90213.14101)			
.01	BACKLOAD PRESCRIPTIONS	D0,41,D1,0	1	P
.02	PRESCRIPTION #	“	2	F
.03	REFILL #	“	3	N
.04	FILL DATE	“	4	D
.05	OUTPATIENT SITE	“	5	P
.06	MESSAGE NUMBER	“	6	F
8801	USER	D0,100	1	P

FILE #: 90214 BDW VISIT BACKLOAD FILE GLOBAL: ^BDWBLOG(

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.001	NUMBER			N
.01	BEGINNING DATE	D0,0	1	D
.02	ENDING DATE	“	2	D
.03	RUN START DATE/TIME	“	3	D
.04	RUN STOP DATE/TIME	“	4	D
.05	COUNT OF VISITS SKIPPED	“	5	N
.06	COUNT OF TXS	“	6	N
.08	COUNT OF VISITS PROCESSED	“	8	N
.09	RUN LOCATION	“	9	P
.12	MESSAGE HEADER	“	12	F
.13	RUN TIME	“	13	F
.14	MESSAGE TRAILER	“	14	F
.15	TRANSMISSION STATUS	“	15	S
.16	PROCESSING ERROR ENCOUNTERED	“	16	P
.18	NUMBER OF VISITS EXPORTED	“	18	N
.19	LAST VISIT EXPORTED	“	19	N
.21	AUDIT FILE	“	21	F
3101	DEMO PATIENT RECORDS	D0,31	1	N
3102	ZERO DEP ENTRIES	“	2	N
3103	DELETED VISITS NEVER SENT	“	3	N
3104	NO PATIENT	“	4	N
3105	NO LOCATION OF ENC	“	5	N
3106	NO TYPE OF VISIT	“	6	N
3107	NO SERVICE CATEGORY	“	7	N

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
3108	MFI VISITS SKIPPED	“	8	N
5101	VISITS SKIPPED (90214.05101)			
.01	VISITS SKIPPED	D0,51,D1,0	1	P
.03	MESSAGE	“	3	F

FILE #: 90215 BDW REG BACKLOAD LOG GLOBAL: ^BDWRBLOG(

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	EXPORT DATE	D0,0	1	D
.02	END TIME	“	2	D
.029	ELAPSED TIME	COMPUTED		
.03	PATIENTS PROCESSED	D0,0	3	N
.04	PERFORMED BY	“	4	P
.05	HL7 MESSAGES GENERATED		5	N
.06	SITE WHERE RUN	“	6	P
.07	HEADER MESSAGE NUMBER		7	N
.08	TRAILER MESSAGE NUMBER		8	N

4.0 Archiving and Purging

There is no archiving and purging in this package.

5.0 External Relations

5.1 External Calls

This package calls the following documented entry points:

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Routine             is Invoked by:
   DD^%DT              BDWHRDI2,BDWRDRI2,BDWRDRI3,BDWSR,BDWSRP,BDWSRP5
   ^%DTC               BDW1VBLI,BDWCVAR,BDWDDR,BDWDWPX1,BDWRDR21,BDWUTIL
   C^%DTC              BDWDDR,BDWHRDI2,BDWRDRI2,BDWRDRI3
   COMMA^%DTC          BDWDDR,BDWHDDR,BDWHRDR,BDWRDR
   NOW^%DTC            BDW1VBL,BDWBHL,BDWDDR,BDWHBHL,BDWHDDR,BDWHRDR,BDWHREDO
                       BDWRDR,BDWREDO
   HOME^%ZIS           BDW1BLR,BDW1VBLI,BDWA,BDWCVAR,BDWDDR,BDWHDDR,BDWHRDRI
                       BDWRDRI
   ^%ZISC              BDWBHL,BDWHBHL
   $$OPEN^%ZISH        BDWBHL,BDWHBHL
   ^%ZTLOAD            BDW1VBLI,BDWBHL,BDWDDR,BDWHBHL,BDWHDDR,BDWHRDRI,BDWRDRI
   QNTCVT^AGTX1        BDWDWPX
   $$GETMCR^AGUTL      BDWIN1
   $$GETRRE^AGUTL      BDWIN1
   $$HASMBI^AGUTL      BDWIN1
   $$START1^APCLDF     BDWUTIL1
   $$CLINIC^APCLV      BDWUTIL
   $$PRIMPOV^APCLV     BDWUTIL1
   $$PRIMPROV^APCLV    BDWUTIL
   $$SECPOV^APCLV      BDWUTIL1
   $$SECPROV^APCLV     BDWUTIL
   $$CPT^AUPNCPT       BDWDDR2,BDWUTIL
   ^AUPNPAT            BDW1VBL2,BDWCVAR,BDWRDR2,BDWRDR21
   $$HRN^AUPNPAT       BDWEPRN
   $$MCD^AUPNPAT       BDWUTIL1
   $$MCR^AUPNPAT       BDWUTIL1
   $$PI^AUPNPAT        BDWUTIL1
   KILL^AUPNPAT        BDW1VBL,BDWCVAR,BDWDDR,BDWRDR,BDWREDO
   $$UID^AUPNVSIT      BDW1VBL,BDWDDR,BDWRDR
   DRIVER^BDW1VBL      BDW1VBLZ
   RESET^BDW1VBL       BDW1VBL2
   ^BDW1VBL2           BDW1VBL
   VA^BDW1VBL2         BDWCVAR,BDWDDR
   ^BDW1VBLE           BDW1VBL,BDW1VBL2
   ^BDW1VBLI           BDW1VBL
   $$WRITE^BDW1VBLI    BDW1VBL
   BASICS^BDW1VBLI     BDW1VBLZ
   CHKSITE^BDW1VBLI    BDW1VBLZ
   GIS^BDW1VBLI        BDWDDR,BDWRDR,BDWREDO
   QUEUE^BDW1VBLI      BDW1VBLZ
   ^BDWA1              BDWA
   $$UID^BDWAID        BDWA1,BDWALPMR,BDWDWPX
   $$UIDV^BDWAID       BDW1VBL,BDW1VBL2,BDWDDR,BDWRDR
   $$FLG^BDWBHL        BDWRDR
   $$DW1ALPMR^BDWBHL1  BDWRDR2
   AUTOSEND^BDWBHL1    BDWBHL
   BULL^BDWBHL1        BDWBHL
   CPT^BDWBHL1         BDWBHL
   HF^BDWBHL1          BDWBHL
   IFC^BDWBHL1         BDWBHL
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LAB^BDWBHL1          BDWBHL
MSR^BDWBHL1          BDWBHL
PED^BDWBHL1          BDWBHL
RESETFLG^BDWBHL1     BDWBHL
SKT^BDWBHL1          BDWBHL
XAM^BDWBHL1          BDWBHL
ZIM^BDWBHL1          BDWBHL
$$FULLEP^BDWDWPX     BDW1BLR
$$WRITE^BDWDWPX1     BDWDWPX
MAIN^BDWHBHL         BDWHEVNT
AUTOSEND^BDWHBHL1    BDWHBHL
BULL^BDWHBHL1        BDWHBHL
$$DW1HHDR^BDWHEVNT   BDWHRDR
$$DW1HTRLR^BDWHEVNT  BDWHDDR,BDWHRDR,BDWHREDO
$$O13^BDWHEVNT       BDWHRDR
^BDWHRDI2            BDWHRDRI
ABORT^BDWHRDR        BDWHDDR
LOG^BDWHRDR          BDWHDDR
PROCESS^BDWHRDR      BDWHDDR,BDWHREDO
RUNTIME^BDWHRDR      BDWHDDR,BDWHRDR,BDWHREDO
^BDWHRDRI            BDWHRDR,BDWHREDO
CHKSITE^BDWHRDRI     BDWHDDR
QUEUE^BDWHRDRI       BDWHREDO
$$AFFIL^BDWHUTL      BDWHBHL,BDWHFLDS
$$DAYS^BDWHUTL       BDWHBHL,BDWHFLDS
$$DEA^BDWHUTL        BDWHBHL,BDWHFLDS
$$DEAVA^BDWHUTL      BDWHBHL,BDWHFLDS
$$DEMO^BDWHUTL       BDWHRDR
$$DETOXMID^BDWHUTL   BDWHBHL,BDWHFLDS
$$NDC^BDWHUTL        BDWHRDR
$$NPI^BDWHUTL        BDWHBHL,BDWHFLDS
$$RXDETOXN^BDWHUTL   BDWHBHL,BDWHFLDS
$$VADC^BDWHUTL       BDWHRDR
$$VANUM^BDWHUTL      BDWHBHL,BDWHFLDS
RST4AF^BDWRDR        BDWBHL
RUNTIME^BDWRDR       BDWDDR,BDWREDO
^BDWRDR2             BDWDDR,BDWRDR,BDWREDO
ALPMR^BDWRDR2        BDWRDR,BDWREDO
^BDWRDRI             BDWRDR,BDWREDO
BASICS^BDWRDRI       BDWDDR
CHKSITE^BDWRDRI      BDWDDR,BDWPURG
QUEUE^BDWRDRI        BDWREDO
^BDWRDRI2            BDWRDRI
CHKOLD^BDWRDRI2      BDWCVAR,BDWRED1
CHKVISIT^BDWRDRI2    BDWCVAR
CONFIRM^BDWRDRI2     BDWCVAR
CURRUN^BDWRDRI2      BDWCVAR
ERRBULL^BDWRDRI2     BDWHRDR,BDWRDR
GETLOG^BDWRDRI2      BDWCVAR
ERRBULL^BDWRDRI3     BDWHREDO,BDWREDO
INIT^BDWRED1         BDWREDO
^BDWRERR             BDWDDR,BDWRDR,BDWRDR2,BDWRDR21,BDWREDO
V^BDWSR1             BDWSR
CLINIC^BDWSR2        BDWSR1
LOC^BDWSR2           BDWSR1
PROV^BDWSR2          BDWSR1
SC^BDWSR2            BDWSR1
TYPE^BDWSR2          BDWSR1
VD^BDWSR2            BDWSR1
^BDWSRP              BDWSR
HEAD^BDWSRP          BDWSRP5
^BDWSRP5             BDWSRP
```

```
   $$LABDONE^BDWUTIL   BDWUTIL1
   $$LABRES^BDWUTIL    BDWUTIL1
   CPT^BDWUTIL         BDW1VBL2,BDWBHL1
   DENT^BDWUTIL        BDW1VBL2,BDWBHL
   EXAM^BDWUTIL        BDWBHL1
   LAB^BDWUTIL         BDWBHL1
   MEAS^BDWUTIL        BDWBHL1
   PED^BDWUTIL         BDWBHL1
   POVS^BDWUTIL        BDW1VBL2,BDWBHL
   $$CHART^BDWUTIL1    BDWEPRN
   $$CHARTREG^BDWUTIL1 BDWUTIL1
   $$ORF^BDWUTIL1      BDWRDR,BDWREDO
   IFC^BDWUTIL1        BDWBHL1
   IMM^BDWUTIL1        BDWBHL1
   MC^BDWUTIL1         BDWBHL1
   MED^BDWUTIL1        BDWBHL
   PROC^BDWUTIL1       BDW1VBL2,BDWBHL
   PROV^BDWUTIL1       BDW1VBL2,BDWBHL
   ST^BDWUTIL1         BDWBHL1
   IMC^BDWUTIL2        BDWALPMR
   PRB^BDWUTIL2        BDWALPMR
   REF^BDWUTIL2        BDWALPMR
   WH^BDWUTIL2         BDWALPMR
   $$CHK^BHLBCK        BDW1BLR,BDW1VBLI
   $$DW1A08^BHLEVENT   BDW1VBL2,BDWRDR2
   $$DW1HDR^BHLEVENT   BDW1BLR,BDW1VBL,BDWDDR,BDWRDR,BDWREDO
   $$DW1MRG^BHLEVENT   BDWRDR,BDWREDO
   $$DW1REG^BHLEVENT   BDW1BLR,BDWRDR,BDWREDO
   $$DW1TRLR^BHLEVENT  BDW1BLR,BDW1VBL,BDW1VBLR,BDWDDR,BDWRDR,BDWREDO
   $$MSG^BHLEVENT      BDWBHL1
   EOJ^BHLEVENT        BDWBHL1
   COMPILE^BHLU        BDW10P3,BDW10P4,BDW10P40,BDW10P5,BDW10P6
   MPORT^BHLU          BDW10P4,BDW10P6
   EN^DDIOL            BDW10P6,BDWHDLOG
   ^DDS                BDW10P6
   ^DIC                BDW10P1,BDW10P3,BDW10P4,BDW10P40,BDW10P5,BDW10P6
                       BDW1VBLL,BDW1VBLR,BDW1VBLZ,BDWDDR,BDWDLOG,BDWEPRN
                       BDWHDDR,BDWHDLOG,BDWHRDI2,BDWHREDO,BDWHRSET,BDWPRADD
                       BDWPRE,BDWRDRI2,BDWRED1,BDWRSET,BDWSR
   IX^DIC              BDW10P1,BDW10P3,BDW10P4,BDW10P40,BDW10P5,BDW10P6,BDWPRE
   FILE^DICN           BDW1BLR,BDW1VBLI,BDWA,BDWHDLOG,BDWPRADD,BDWPRE
   DT^DICRW            BDW1VBLI,BDWCVAR,BDWDDR,BDWDWPX1
   ^DIE                BDW10P6,BDW1BLR,BDW1VBL,BDW1VBLI,BDW1VBLR,BDWBHL,BDWDDR
                       BDWHBHL,BDWHDDR,BDWHDLOG,BDWHRDR,BDWHRDRI,BDWHREDO
                       BDWPRADD,BDWPRE,BDWRDR,BDWRDR21,BDWRDRI,BDWREDO,BDWRXP
   UPDATE^DIE          BDW10P4,BDW10P5,BDW10P6,BDWHRDR,BDWHREDO
   WP^DIE              BDW10P4
   ^DIK                BDW10P4,BDW1BLR,BDW1VBLI,BDW1VBLR,BDWDDR,BDWHDDR
                       BDWHRDRI,BDWHRSET,BDWPRADD,BDWPRE,BDWRDR,BDWRDRI,BDWRSET
   IX^DIK              BDWHDDR,BDWHRDR,BDWHREDO
   IX1^DIK             BDW1VBL,BDWDDR,BDWPRE,BDWRDR,BDWREDO
   IXALL^DIK           BDW10P6
   $$GET1^DIQ          BDWAID,BDWBHL,BDWDWPX,BDWHBHL,BDWHDLOG,BDWHEVNT,BDWHFLDS
                       BDWIN1,BDWUTIL,BDWUTIL1,BDWUTIL2
   EN^DIQ              BDW1VBLR,BDWHRSET,BDWRSET
   EN^DIQ1             BDWSR2,BDWSRP
   ^DIR                BDW10P6,BDW1BLR,BDW1VBL,BDW1VBLI,BDW1VBLL,BDW1VBLR
                       BDW1VBLZ,BDWCVAR,BDWDDR,BDWDLOG,BDWDWPX,BDWEPRN,BDWHDDR
                       BDWHDLOG,BDWHRDI2,BDWHRDR,BDWHRDRI,BDWHREDO,BDWHRSET
                       BDWPURG,BDWRDR,BDWRDRI,BDWRDRI2,BDWRED1,BDWREDO,BDWRSET
                       BDWRXP,BDWSRP
   EN^DIU2             BDWPRE
```

```
$$ICDDX^ICDCODE     BDWDWPX,BDWUTIL2
$$ICDDX^ICDEX       BDWUTIL,BDWUTIL1,BDWUTIL2
$$ICDOP^ICDEX       BDWUTIL1
^INHF               BDWBHL1,BDWHEVNT
$$DATE^INHUT        BDW1VBL2,BDW1VBLI,BDWBHL,BDWBHL1,BDWCVAR,BDWDDR,BDWDWPX
                    BDWDWPX1,BDWHBHL,BDWIN1
$$CHKF^INMPORT      BDW10P5
$$CHKS^INMPORT      BDW10P5
$$SFADD^INMPORT     BDW10P5
FULL^VALM1          BDW1VBLL,BDWDLOG,BDWHDLOG
^XBDBQUE            BDW1VBLL,BDWDLOG,BDWEPRN,BDWSR
$$VAL^XBDIQ1        BDW10P6,BDW1VBLL,BDWBHL,BDWDDR,BDWDLOG,BDWEPRN,BDWHBHL
                    BDWHDLOG,BDWHRDI2,BDWHRDRI,BDWHUTL,BDWIN1,BDWRDR,BDWSR2
                    BDWSRP5,BDWUTIL,BDWUTIL1
$$VALI^XBDIQ1       BDWBHL,BDWHBHL,BDWHRDR,BDWHUTL,BDWUTIL,BDWUTIL1
$$DIR^XBDIR         BDWA
^XBFMK              BDW1BLR,BDW1VBL,BDW1VBLI,BDWA,BDWDDR,BDWEPRN,BDWHDDR
                    BDWHRDI2,BDWHRDR,BDWHREDO,BDWPRADD,BDWPRE,BDWRDR
                    BDWRDRI2,BDWREDO,BDWRXP
$$EXTSET^XBFUNC     BDWRDR2
^XBGSAVE            BDW1VBLI,BDWA,BDWCVAR,BDWDDR,BDWDWPX1
VIEWR^XBLM          BDW1VBLL,BDWDLOG,BDWHDLOG
EN^XBVK             BDW1BLR,BDW1VBL,BDW1VBLR,BDW1VBLZ,BDWA,BDWCVAR,BDWDDR
                    BDWEPRN,BDWHDDR,BDWHRDR,BDWHREDO,BDWRDR,BDWREDO,BDWRXP
                    BDWSR
$$FMADD^XLFDT       BDW1VBLI,BDW1VBLR,BDWBHL,BDWHBHL,BDWHDDR,BDWHRDI2
                    BDWHRDR,BDWRDR,BDWRDRI2,BDWREDO,BDWRXP,BDWSR
$$FMTE^XLFDT        BDW1VBLI,BDW1VBLL,BDWA,BDWDDR,BDWDLOG,BDWEPRN,BDWHDDR
                    BDWHDLOG,BDWHRDI2,BDWHREDO,BDWRDR,BDWRXP
$$FMTHL7^XLFDT      BDWHBHL,BDWHFLDS,BDWUTIL2
$$NOW^XLFDT         BDW1BLR,BDW1VBL,BDW1VBL2,BDW1VBLI,BDWA,BDWBHL,BDWCVAR
                    BDWDDR,BDWDWPX,BDWDWPX1,BDWHBHL,BDWHRDR,BDWHREDO
$$CJ^XLFSTR         BDW10P1,BDW10P3,BDW10P4,BDW10P40,BDW10P5,BDW10P6,BDWPRE
$$UP^XLFSTR         BDWHDDR,BDWHDLOG,BDWHRDI2,BDWHREDO
^XMB                BDWHRDI2,BDWRDRI2,BDWRDRI3
^XMD                BDWBHL1,BDWHBHL1
$$ADD^XPDMENU       BDW10P1,BDW10P6,BDW1VBLZ
RENAME^XPDMENU      BDW10P6
BMES^XPDUTL         BDWPRE
MES^XPDUTL          BDW10P1,BDW10P3,BDW10P4,BDW10P40,BDW10P5,BDW10P6,BDWPRE
$$SENDTO1^ZISHMSMU  BDWBHL1,BDWHBHL1
```

5.2 Callable Routines

There are no published entry points in this package.

5.3 Exported Options

OPTION NAME	OPTION TEXT
BDW BACKLOAD LOG DISP	Display Encounter Backload Log Entry
BDW BACKLOAD MENU	Backload Data Menu
BDW BACKLOAD RESET	Reset DW Encounter Backload Log

OPTION NAME	OPTION TEXT
BDW BACKLOAD VISITS	Generate Encounter Records for Backloading the NDW
BDW BL VISITS RERUN	Re-run a backload run of visits
BDW CREATE PAT REG AUDIT	Create Patient Reg Update Audit File
BDW DATE RANGE EXPORT	Export to Data Warehouse for a Date Range
BDW DISPLAY LOG	Display Log Entry
BDW EDIT DELAY VALUE	Edit the Delay Value
BDW GENERATE TXS	Generate Data Warehouse Export Records
BDW INT MARK VISIT FOR EXPORT	Search Visits and Mark Unexported Visits
BDW LIST ERRORS	List PCC Encounters Not Exported
BDW MARK VISIT FOR EXPORT	Search Visit File and Mark Unexported Visits
BDW PURGE VISIT PTS	Purge Log Entries
BDW QUEUE GDW	Queueable Data Warehouse Export (GDW)
BDW REDO	Re-Run a Previously Run Data Warehouse Export
BDW REFLAG PATIENT FOR EXPORT	Re-flag Patient for Export as an Add to NDW
BDW REG BL LOG	Display Full Registration Backload Log Entry
BDW RESET LOG	Reset Failed Log Entry
BDW SUMMARY REPORT	Data Warehouse Export Summary Report
BDW TAXONOMY SETUP	Data Warehouse Export Taxonomy Setup
BDW VISIT AUDIT REPORT	Create Encounter Audit Report
BDWA DW EXPORT	Data Warehouse Full Registration Export
BDWH DATE RANGE EXPORT	Date Range Export of Prescription Transactions
BDWH DISP PRESCRIPTION LOG	Display Prescription Export Log Entry
BDWH PRESCRIPTION GENERATE TXS	Generate Prescription Export Transactions
BDWH PRESRIPTION PARM EDIT	Edit Prescription Export Parameter
BDWH QUEUE PRESCRIPTION EXPORT	Queueable Prescription Data Warehouse Export
BDWH REDO	Re-Run Previously Run Prescription Export
BDWH RESET PRESCRIPTION LOG	Reset Prescription Export Log
BDWHMENU	Prescription Drug Data Warehouse Export Menu
BDWMENU	Data Warehouse Export Menu

6.0 Internal Relations

All users should be given the access to the appropriate options and keys to them, as needed. All of the options in this system stand alone.

7.0 How to Generate Online Documentation

The file number range for this package is 90212–90215. The namespace is BDW. All templates, routines, screen forms, etc. begin with BDW.

This section describes some of the methods by which users can generate IHS Data Warehouse Export system technical documentation. Online technical documentation pertaining to the IHS Data Warehouse Export software, in addition to that which is located in the help prompts and on the help screens throughout the IHS Data Warehouse Export System package, can be generated through the use of several Kernel options. These include, but are not limited to, the following:

- %INDEX
- Menu Management
- Inquire Option
- Print Option File
- VA FileMan
- Data Dictionary Utilities
- List File Attributes

Entering question marks at the "Select...Option" prompts can also provide users with valuable technical information. For example, a single question mark (**?**) lists all options that can be accessed from the current option. Typing two question marks (**??**) lists all options accessible from the current one, showing the formal name and lock for each. Three question marks (**???**) displays a brief description for each option in a menu, whereas an option name preceded by a question mark (?OPTION) shows extended help, if available, for that option.

For a more exhaustive option listing and further information about other utilities that supply online technical information, please consult the DHCP Kernel Reference manual.

7.1 %INDEX

This option analyzes the structure of a routine to determine in part if the routine adheres to RPMS Programming Standards. The %INDEX output can include the following components:

- Compiled list of errors and warnings
- Routine listing
- Local variables
- Global variables

- Naked globals
- Label references
- External references

By running %INDEX for a specified set of routines, you are afforded the opportunity to discover any deviations from RPMS Programming Standards that exist in the selected routines and to see how routines interact with one another (i.e., which routines call or are called by other routines).

To run %INDEX for the IHS Data Warehouse Export System package, specify the BDW namespace at the Routine(s)?> prompt.

7.2 Inquire Option

This menu management option provides the following information about a specified option:

- Option name
- Menu text
- Option description
- Type of option
- Lock (if any)

In addition, all items on the menu are listed for each menu option. To secure information about IHS Data Warehouse Export System options, you must specify the BDW namespace.

7.3 Print Option File

This utility generates a listing of options from the Option file (#19). You can choose to print all of the entries in this file or you can specify a single option or range of options. For a list of IHS Data Warehouse Export System options, please refer to Section 5.3.

7.4 List File Attributes

This VA FileMan option allows you to generate documentation pertaining to files and file structure. Using the Standard format of this option yields the following data dictionary information for a specified file:

- File name and description
- Identifiers
- Cross-references

- Files pointed to by the file specified
- Files that point to the file specified input, print, and sort templates

In addition, the following applicable data is supplied for each field in the file:

- Field name, number, title, and description
- Global location
- Help prompt
- Cross-references
- Input transform
- Date last edited
- Notes

Using the Global Map format of this option generates an output that lists the following information:

- All cross-references for the file selected
- Global location of each field in the file
- Input, print, and sort templates

8.0 SAC Exemptions

This program uses two standard globals for export of data to the Data Warehouse. The global are called ^BDWDATA and ^BDWHDATA (and they are killed at the root level).

The kill of these unsubscripted globals has been approved by the Standards and Conventions committee.

Glossary

Archiving

The storing of historical or little-used data off-line (often on tape).

Banner

A line of text with a user's name and domain.

Browser

An interactive application that displays ASCII text on a terminal that supports a scroll region. The text can be in the form of a word-processing field or sequential local or global array. The user is allowed to navigate freely within the document.

Callable Entry Points

Places in a routine that can be called from an application program.

Carat (^)

A circumflex, also known as a "carat," "hat," or "up-hat," is used as a piece delimiter in a global. The carat is denoted as "^" and is typed by pressing Shift+6 on the keyboard.

Cross-reference

An indexing method whereby files can include pre-sorted lists of entries as part of the stored database. Cross-references (x-refs) facilitate look-up and reporting.

Entry Point

Entry point within a routine that is referenced by a "DO" or "GOTO" command from a routine internal to a package.

File

A set of related records or entries treated as a single unit.

FileMan

The database management system for RPMS.

Global

In MUMPS, global refers to a variable stored on disk (global variable) or the array to which the global variable may belong (global array).

INDEX (%INDEX)

A Kernel utility used to verify routines and other MUMPS code associated with a package. Checking is done according to current ANSI MUMPS standards and RPMS programming standards. This tool can be invoked through an option or from direct mode (>D ^%INDEX).

Kernel

The set of MUMPS software utilities that function as an intermediary between the host operating system and application packages, such as Laboratory and Pharmacy. The Kernel provides a standard and consistent user and programmer interface between application packages and the underlying MUMPS implementation. These utilities provide the foundation for RPMS.

Menu

A list of choices for computing activity. A menu is a type of option designed to identify a series of items (other options) for presentation to the user for selection. When displayed, menu- type options are preceded by the word "Select" and followed by the word "option" as in Select Menu Management option: (the menu's select prompt).

Namespace

A unique set of two to four alpha characters that are assigned by the database administrator to a software application.

Option

An entry in the Option file. As an item on a menu, an option provides an opportunity for users to select it, thereby invoking the associated computing activity. Options may also be scheduled to run in the background, non-interactively, by TaskMan.

Patient Care Component

The central repository for data in the Resource and Patient Management System.

Queuing

Requesting that a job be processed at a later time rather than within the current session.

Routine

A program or sequence of instructions called by a program that may have some general or frequent use. MUMPS routines are groups of program lines that are saved, loaded, and called as a single unit via a specific name.

Utility

A callable routine line tag or function. A universal routine usable by anyone.

Variable

A character or group of characters that refers to a value. MUMPS recognizes three types of variables: local variables, global variables, and special variables. Local variables exist in a partition of the main memory and disappear at sign-off. A global variable is stored on disk, potentially available to any user. Global variables usually exist as parts of global arrays.

Acronym List

Acronym	Meaning
HL7	Health Level Seven
IHS	Indian Health Service
NDW	National Data Warehouse
NPIRS	National Patient Information Reporting System
RPMS	Resource and Patient Management System

Contact Information

If you have any questions or comments regarding this distribution, please contact the OIT Help Desk (IHS).

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

Web: http://www.ihs.gov/helpdesk/

Email: support@ihs.gov