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2.0 Implementation and Maintenance

2.1 General Information

The BPRM application is a browser-accessible application that is installed locally at an IHS Site (or Area Office) on an IIS(Internet Information Services) application server. BPRM communicates with the local RPMS site via ODBC (Open Database connectivity). BPRM connects to RPMS over the Healthshare super-server port.

2.2 System Requirements

The following resources are required for a locally deployed standalone application server for BPRM:

- IIS Application server (Windows Server 2016or above + IIS 10 or above)
- Microsoft.Net Core Runtime version 6.0 or above (<https://www.microsoft.com/net/download>)
- 2.0+ Ghz quadcore 8-12 GB RAM
- 20 GB free space

2.3 Package-wide Variables

There are no package-wide variables.

2.4 Menu & Security Keys

There are no package-specific security keys. The BPRM package operates on existing RPMS security keys.

BPRM security is built on top of the RPMS Menus and Keys system. Table 2-1 defines the relationship between BPRM Roles and RPMS security keys.

Table 2-1: Security key names and descriptions

Menus & Keys	Definition
Menu: <ul style="list-style-type: none"> • AGMENU • AGPAT • AGZMENU Keys: <ul style="list-style-type: none"> • AGZMENU 	<ul style="list-style-type: none"> • Can access BPRM Registration module • Search and View Patient • Update Patient information • Can Register (Add) Patient • View Registration Reports • Can print face sheet, wristband and wellness handout

Menus & Keys	Definition
Menu: <ul style="list-style-type: none"> • AGMENU Keys: <ul style="list-style-type: none"> • AGZMENU • AGZMGR 	<ul style="list-style-type: none"> • Registration User Access + • Update Registration Settings • Change Patient Name • Change Patient Death Info • Change Health Record Number
Menu: <ul style="list-style-type: none"> • AGVIEWONLY Key: <ul style="list-style-type: none"> • AGZVIEWONLY 	<ul style="list-style-type: none"> • Can Only Search and View patient info. • Other Registration Roles access is trumped by this role. • E.G A user with Registration Supervisor and Registration View Only role will be restriction to 'View Only' access
Menu: <ul style="list-style-type: none"> • BSDMENU Key: <ul style="list-style-type: none"> • SDZMENU 	<ul style="list-style-type: none"> • Can access BPRM scheduling module • Can View and Update appointments for assigned clinics • Can view/add/update/remove to clinic Wait List • Can view Scheduling Reports • Can search patients • Can view Patient Appointments tab (Registration/Patient Profile) • Can print scheduling letters • Can print wristband, routing slip, wellness handout
Menu: <ul style="list-style-type: none"> • 'BSD MENU SUPERVISOR' Key: <ul style="list-style-type: none"> • SDZSUP 	<ul style="list-style-type: none"> • Scheduling User access + • Add/Update Clinic, configuration and availability • Can update Scheduling Configuration settings • Can access clinics marked 'Prohibited'
Menu: <ul style="list-style-type: none"> • BDGMENU Key: <ul style="list-style-type: none"> • DGZADT • DGZNUR • DGZMENU 	<ul style="list-style-type: none"> • Can access BPRM ADT module • Can view admission, discharges and transfers • Can admit, discharge and transfer patient • Can view ADT reports • Can print A-sheet, wristband for patient

Menus & Keys	Definition
Menu: <ul style="list-style-type: none">• BDGMENU Key: <ul style="list-style-type: none">• DGZPCC• DGZMENU	<ul style="list-style-type: none">• ADT User access +• Can access Incomplete Charts
Menu: <ul style="list-style-type: none">• BDGMENU Key: <ul style="list-style-type: none">• DGZADT• DGZICE• DGZNUR• DGZSUP• DGZSYS• DGZMENU	<ul style="list-style-type: none">• ADT Coder +• Add/Update Wards• Add/Update room-beds• Update ADT configuration settings

3.0 Routine Descriptions

No RPMS routines are released with this application.

4.0 File and Tables

There are no FileMan files distributed with BPRM package.

BPRM application reads from and writes into FileMan files using BMW Cache classes. BMW cache classes are mapped onto Fileman files and provides SQL access to FileMan files.

4.1 File List

The file list is not applicable.

4.2 File Access

File access is not applicable.

4.3 Cross References

Cross references are not applicable.

4.4 Database Views

Table 4-1 lists the database views used by the BPRM application suite.

Table 4-1: Database Views

View Name	Description
AG_ALTERNATE_RESOURCE_DETAIL_VIEW	Gives access to all of the patient insurances detail
AG_ALTERNATE_RESOURCE_VIEW	Gives access to all of the patient insurances
AG_BENEFIT_COORDINATOR_CASES_VIEW	Gives access to patient benefit cases
AG_GUARANTOR_INSURER_VIEW	Gives access to guarantors
AG_INTERNET_ACCESS_QUESTION_VIEW	Gives access to patient Internet access
AG_PATIENT_APPLICATIONS_VIEW	Gives access to patient applications submitted against a benefit case
AG_PATIENT_DEMOGRAPHICS_VIEW	Gives access to patient demographics
AG_PATIENT_FACE_SHEET_VIEW	Gives access to patient information for face sheet
AG_PATIENT_FLAG_VIEW	Used for checking whether the patient record is flagged or not

View Name	Description
AG_PATIENT_GENDER_IDENTITY_VIEW	Gives access to patient gender identity info
AG_PATIENT_OTHER_LANGUAGES_VIEW	Gives access to the patient's other languages
AG_PATIENT_PROFILE_VIEW	Gives access to the patient information other than demographics
AG_PATIENT_SEARCH_VIEW	Gives access to patient records for searches
AG_PATIENT_SEXUAL_ORIENTATION_VIEW	Gives access to patient sexual orientation info
AG_PRF_ASSIGNMENT_VIEW	Gives access to patient record flag information
AG_PRIOR_AUTHORIZATIONS_VIEW	Gives access to patient prior authorizations
AG_RESOURCE_ELIGIBILITY_VIEW	Gives access to all of the patient insurance eligibilities
AG_SEQUENCE_EFFECTIVE_DATE_GROUP_VIEW	Gives access to a patient's insurance category sequence list
AG_SEQUENCE_GROUP_VIEW	Gives access to a patient's insurance category sequence detail
AG_SEQUENCE_VIEW	Gives access to patient insurance sequencing
BDG_ADMITTED_PATIENTS_VIEW	Gets info from VA_PATIENT for patients who are currently admitted
BDG_CURRENT_ADMISSION_VIEW	Gets details about all patients currently admitted
BDG_INCOMPLETE_CHART_STATISTICS_VIEW	Gets statistics for incomplete chart dashboard
BDG_INCOMPLETE_CHART_STATUS_VIEW	Gets data to display on A&D Dashboard and Incomplete Charts tab
BDG_INCOMPLETE_CHART_VIEW	Gets all incomplete charts
BSDX_APPOINTMENT_VIEW	Gives access to patient appointments
BSDX_CLINIC_WORKLOAD_VIEW	Used for calculating appointments for the Clinic Workload report
BSDX_WAITING_LIST_VIEW	Gives access to the clinic waiting list

4.5 Database Stored Procedures

Table 4-2 lists the stored procedures used by the BPRM application suite.

Table 4-2: Stored Procedures

Store Procedure Name	Description
AG_CheckAndSetSilentSPTAccessQ	Implements SPT for BPRM. Checks and silently tracks access to sensitive patient data
AG_CheckSPTAccessQ	Implements SPT for BPRM. Checks access to sensitive patient data
AG_GetPatientInsuranceErrorsAndWarningsQ	Fetch patient (insurance) errors and warnings
AG_GetPatientInsuranceInUseQ	Fetch a patient's insurance inuse status
AG_GetPatientInsurancesQ	Fetch a patient's insurances
AG_GetPatientMbiQ	Fetches patient Mbi
AG_GetPatientSearchResultQ	Fetch patient search result by Name, SSN, DOB, Gender, Eligibility Status, HRN , Phone Number, InPatient Or Outpatient
AG_PatientInsuranceAddCategorySequenceQ	Add insurance sequence for a patient
AG_PatientInsuranceRemoveCategorySequenceQ	Remove insurance sequence for a patient
AG_SetPatientInsuranceCategorySequenceBulkQ	Bulk add patient's insurance sequences
AG_PatientRegisterEventQ	Performs post-patient register HL7 messages using CREATMSG^AGMPIHLO and AG^AGHL7
AG_PatientUpdateEventQ	Performs post-patient update HL7 messages using UPDATE1^AGED and AG^AGHL7
AG_SetCorrectPatientNameQ	Updates patients name (correct name) and can add previous name to alias
AG_SetPatientCellNumberQ	Update patient's cell number
AG_SetPatientDateOfDeathQ	Update patient's date of death
AG_SetPatientGenderIdentityQ	Update patient's Gender Identity

Store Procedure Name	Description
AG_SetPatientSexualOrientationQ	Update patient's sexual orientation
AG_SetPatientTempHRNQ	Set a temp HRN for a patient
AG_SetPatientVeteranStatusQ	Update patient's veteran status
AG_SetSPTAccessQ	Log sensitive patient tracking access activity
AG_SetPatientGenderQ	MU2- updates patient's gender in all related files, when gender is updated through BPRM. Using SEXELIG^AGUTL
BDG_GetAdsReportQ	Get ADS report data
BDG_GetIsReAdmitCheckQ	Should BPRM ask if this discharge will be a Re-Admit
BDG_CancelMovementQ	Cancel/Undo a patient movement
BDG_SetPatientMovementEditV4Q	Edit a patient movement
BDG_SetPatientAdmissionV4Q	Admit patient
BDG_SetPatientMovementDischargeV4Q	Discharge patient
BDG_SetPatientSpecialtyTransferV4Q	Specialty transfer for patient
BDG_SetPatientTransferV4Q	Ward transfer for patient
BSD_GetSchedulingAccessBlocksQ	Get a clinic availability for a date range
BSD_GetSchedulingAvailableSlotsQ	Get a clinic's future available appointment slots
BSD_GetConfigAccessBlocksQ	Provides the clinic availabilities upto on year in future
BSD_SetPatientAppointmentV4Q	Creates an appointment on schedule command
BSD_SetPatientAppointmentCancelQ	Cancel an appointment
BSD_SetPatientAppointmentCheckInV4Q	Creates a visit on appointment check in
BSD_SetPatientAppointmentUndoCheckInV4Q	Undo check-in: delete visit if exists

Store Procedure Name	Description
BSD_SetSchedulingAddHolidayQ	Add a holiday to scheduling configuration
BSD_SetSchedulingRemoveHolidayQ	Remove a holiday from scheduling configuration
Core_AuthenticateUserV2Q	Authenticates access and verifies codes on login.
Core_ChangeVerifyCodeQ	Change user verify code
Core_GetDatabaseTimeQ	Get current datetime of DB (RPMS/Ensemble) server
Core_SetBusaAuditLogQ	Set MU Busa audit log
Core_SetRemotePatientContextQ	Set DFN for an outside application (Switch patient in EHR for the user, when a patient is selected in BPRM)
Core_SetSessionVariablesQ	Sets session variables
Core_SetWordProcessingQ	Set word processing data field (can be used to insert data into any word processing field)
AG_SendBenefitCaseAssignMsgQ	Mailman message for the benefits case assigned.

5.0 External Relations

Table 5-1: RPMS external packages with minimum version and patch

RPMS Package	Minimum Version and Patch
BMW	Version 2020.3
HealthShare	2017.2.x

5.1 Callable Routines

Callable routines are not applicable.

5.2 Published Entry Points

Published entry points are not applicable.

5.3 Exported Options

Exported options are not applicable.

6.0 Internal Relations

Internal relations are not applicable.

7.0 Archiving and Purging

Archiving and purging are not applicable.

8.0 Documentation Resources

The BPRM package does not provide any methods to generate online technical documentation.

The documentation shown in Table 8-1 is included with the BPRM distribution:

Table 8-1: File distribution and Documentation Resources

File	Description
bprm0400.04.msi	BPRM Application Installer
bprm0400.04.xml	BPRM custom cache classes file
bprm0400.04i.pdf	Version 4.4 Installation Guide and Release Notes
bprm0400.04u_Overview.pdf	User Manual – Overview
bprm0400.04u_Registration.pdf	User Manual – Patient Registration Module
bprm0400.04u_Scheduling.pdf	User Manual – Scheduling Module
bprm0400.04u_ADT.pdf	User Manual – ADT Module
bprm0400.04t.pdf	Technical Manual

9.0 SAC Requirements and Exemptions

There are no applicable SAC requirements and exemptions.

Appendix A GUI Components

A.1 Authentication

Users of the BPRM must be RPMS users with valid RPMS credentials. The login screen will authenticate user credentials to the local RPMS instance. Only those RPMS users with security keys listed in the earlier section can access BPRM.

A.2 Application Server Specification

The minimum specification for BPRM application server is Windows Server 2016 or above with Microsoft .NET Core Runtime version 6.0 and above with 2.0+ Ghz quadcore with 8-12 GB RAM and 20 GB free space.

A.3 Browser Specification

Users with network access to the local application server must access the tool via:

- Google Chrome® Version 68 or higher
- Microsoft Edge
- Mozilla Firefox

A.4 Web Application Specification

The web application was created with Microsoft.Net technology C#. It renders the web pages in HTML5.

Glossary

BPRM

Namespace for the Practice Management Application Suite.

ODBC

A set of computer software components that programmers can use to access data and data services. It is a part of the base class library that is included with the Microsoft .NET Framework. It is commonly used by programmers to access and modify data stored in relational database systems.

Fileman Files

FileMan files define the schema of an RPMS database.

Namespace

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

Schema

An underlying organizational pattern or structure; conceptual framework.

Acronym List

Acronym	Term Meaning
IHS	Indian Health Service
IIS	Internet Information Service
OS	Operating System
RPMS	Resource and Patient Management System
SSL	Secure Sockets Layer
GUI	Graphical User Interface
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)

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