



RESOURCE AND PATIENT MANAGEMENT SYSTEM

Patient Registration GUI

(AGG)

Installation Guide and Release Notes Graphical User Interface Extension to the RPMS Patient Registration Module (AG)

Version 1.0
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Preface

This manual provides information regarding only the release and installation of the Patient Registration graphical user interface package.

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1.0 Release Notes

Version 1.0 of the Resource and Patient Management System (RPMS) Patient Registration graphical user interface (GUI) application marks the initial release of a GUI to the current RPMS Patient Registration application. This new application replicates a significant subset of the functionality available in the traditional registration package of the AG namespace; however certain pieces will be release in subsequent version updates.

Version 1.0 provides the ability to add/update the core patient registration data fields including patient demographics, address/location info, emergency contact, next of kin, family info, Tribal membership data, alternate resources (Medicaid, Medicare, and Private Insurance only for the initial release), veteran info, document info, and registration notes along with other sections of miscellaneous patient registration data. In addition, access to four patient registration reports has been brought forth into the GUI, including the face sheet.

The intended audiences for this document are Indian Health Service (IHS) site managers and other technical staff. Technical documentation accompanies this installation document in this release. Please refer to the Patient Registration GUI Technical Manual for additional information.

The Patient Registration GUI application's intended users will be registration clerks at any direct Indian/Tribal/Urban (I/T/U) programs using RPMS; however there are many potential secondary users, including benefits coordinators, billing, coding, health information managers, and insurance information managers

The Patient Registration GUI consists of two components: the RPMS M programming language side and the GUI side. Both must be installed to the same version number and functioning in order for this application to work.

2.0 Installation Notes

The following includes the prefix and version number of this installation:

Prefix:	AGG
Current Version:	1.0

Note: Read entire notes file (if included) prior to attempting any installation.

2.1 General Information

- Make a copy of this distribution for offline storage.
- Print all notes/readme files.
- It is recommended that the terminal output during the installation be captured using an auxport printer attached to the terminal at which you are performing the software installation. This will ensure a printed audit trail if any problems should arise.

2.2 Contents of Distribution

The following includes the contents' file names and their descriptions:

File	Description
agg_0100.k	Kernel Installation and Distribution System (KIDS) package containing M routines, files, options, and remote procedure calls
agg_010i.pdf	Installation Guide and Release Notes
agg_010t.pdf	Users Manual
agg_010u.pdf	Technical Manual
agg_0100client.zip	setup.exe—Executable to launch the client-side patient registration GUI installation program Patient Reg Install.msi

2.3 System Requirements

The RPMS server portion of the Patient Registration GUI application does not require a specific version of Cache or OS. However, the RPMS server must be able to fully support BMXNet (BMX) version 4.0, and is therefore subject to any requirements needed to run that application. Please refer to the BMX version 4.0 Technical Manual for additional details.

2.3.1 Required RPMS Server Software

The following table shows the prerequisite patch requirements.

Package and Version	Associated Patch Designation(s)	Brief Patch Description
Patient Registration (AG)	AG*7.1*8	
BMXNet (BMX)	BMX 4.0	

Module	Minimum Version	Recommended Version
VA FileMan (DI)	v22.0 Patch 1002	
VA Kernel (XU)	v8.0 Patch 1015	
BMXNet (BMX)	V4.0	v4.0
IHS/VA Utilities (XB)	v3.0 through Patch 11	
Patient Information Management System (PIMS)	v5.3 through Patch 1009	v5.3 through Patch 1011
Patient Registration (AG)	v7.1 through Patch 8	
AUPN Dictionaries/Patient	v99.1 patch 20	v99.1 Patch 21

2.3.2 GUI Client Workstation Requirements

Client workstation specification details:

Client PC	Minimum Version
Microsoft Windows (any Windows OS that supports .NET 2.0 Framework)	Windows 7 (not certified), Windows Vista, Windows XP SP2, Windows 2003 Server, Windows 2000 SP3+, Windows ME, Windows 98/98SE
Microsoft .NET Framework (The Patient Registration installation package will check for the .NET framework prerequisite and will assist the user with download and installation if needed)	V2.0
Suggested Client PC Hardware	Processor: Suggested: Pentium 4 2GHz+ Memory (RAM): Minimum: 1024MB Suggested: 2048MB+
Approximate Disk Space Requirements	Patient Registration Application Footprint ~25MB .NET 2.0 Framework ~ 100MB (very likely this is already installed via Windows Updates)

3.0 General Installation Instructions

The Patient Registration application contains components that run on both the RPMS server and the client personal computer (PC). Installation of the RPMS server components is conventional and consists of a KIDS build.

The client PC component is currently deployed via a standard Windows installation package application as an “msi” file. New versions of the client software will need to be installed on the client PC as updates are released so that the client software version matches the version of Patient Registration installed on the server. Previous versions of the client software will be automatically removed from the client workstation when the new version is installed. If desired, the Patient Registration client application may be uninstalled via the Windows control panel in the **Add/Remove Programs** option (for Windows XP and prior versions), or the **Programs and Features** option for Windows Vista. Simply select the entry in the list for the Patient Registration version you wish to uninstall, and click **Uninstall**.

In addition, the Patient Registration client PC installation program will check for Microsoft .NET 2.0 Framework on the client PC, and if it has not been previously installed, it will assist the user with download and installation as part of the setup process.

4.0 Installation Instructions

4.1 PreInstallation

1. If possible, initially load the software into a test account, then into the production account. There are no routines or globals to remove after the installation is complete.
2. Refer to the Installation Steps (Section 4.2) and the Sample Installation (Section 4.5) for the applicable prompts and user responses. User responses appear in bold type.
3. Ensure that the BMX 4.0 system is installed and that a BMX monitor process is running. BMX's Integrated Security feature will allow users to connect to RPMS without having to respecify access and verify codes every time. For this feature to work, the integrated security field of the BMX monitor port must be set to Yes. See the BMX 4.0 User and Installation Manuals for details on BMX.

4.2 RPMS Server Install

1. On the RPMS server, load and install `agg_0100.k` file using the **KIDS** menu options. From the **KIDS** menu, select the Installation menu.
4. From the Installation menu, select **Option 1: Load a Distribution**.
5. Type **agg_0100.k** at the "Enter a Host File" prompt. You might need to precede the file name with the appropriate host path. This is the file to retrieve from the appropriate software directory.
6. Type **Yes** (or press the Enter key to accept the default) at the "Want to Continue with Load?" prompt.
7. From the **Installation** menu, select **Option 2: Verify Checksums in Transport Global**. This option provides a mechanism for ensuring the integrity of your routines. It verifies checksums for the components of the Transport global, and reports any errors uncovered.
8. Type **PATIENT REGISTRATION GUI 1.0** as the install name.

Optional: At this time, you can elect to exercise one of the following installation options. Please note these are *optional*. If you elect to use one of these, type **PATIENT REGISTRATION GUI 1.0** as the install name.

- a. **Back Up a Transport Global**—this option creates a MailMan message that will back up all current routines on your system that would be replaced by this release. (Because this is a new release, no files will be replaced.)
 - b. **Compare Transport Global**—this option allows you to view all changes that will result from the installation of this patch and compares them with the values currently loaded on your system (routines, data dictionaries, templates, etc.).
9. From the **Installation** menu, select the **Install Packages(s)** option.
 10. At the “Select Install Name” prompt, type **PATIENT REGISTRATION GUI 1.0**
 11. Respond to the following prompts as indicated:
 - a. At the “Want KIDS to Rebuild Menu Trees Upon Completion of Install?” prompt, type **NO**.
 - b. At the “Want KIDS to INHIBIT LOGONs during the install?” prompt, type **NO**.
 - c. At the “Want to DISABLE Scheduled Options, Menu Options and Protocols?” prompt, type **NO**.
 12. Type the device that will print the install messages. Exit the **Installation** menu.

Proceed to Section 6.0 for further information and setup instructions.

4.3 Client Installation

Determine the method of installing the GUI for the Patient Registration GUI users. Note that the Patient Reg Install.msi file is a Microsoft Installation file intended to be suitable for use with automated workstation install push technologies, such as MS Active Directory Group Policy deployment. Refer to Section 5.0 for descriptions of some of the available deployment options, including options for automated installation.

The installation of the Patient Registration client should be coordinated with the installation of the KIDS on the RPMS server so that the GUI is ready to be installed after the KIDS is installed.

Note: There are command-line arguments that may be used when launching the Patient Registration GUI executable to manage the server connection list in a manner that is different than the default behavior. If no command-line arguments are specified, the application will start with a blank server connection list, and will store the server configuration information in the user's Windows roaming local application folder. This location was chosen due to its compatibility with Citrix terminal server deployment. Site managers may wish to explore a centrally-located configuration file that is stored in a shared network location, or specify a specific set of connection parameters. The command-line parameters are described in Section 5.5.

To install the Patient Registration Windows GUI client portion of the application for a basic single-workstation, perform the following tasks:

1. Copy the `agg_0100client.zip` file into a local directory or centrally accessible network share directory, and extract its contents:
 - a. Patient Reg Install.msi
 - b. setup.exe
2. Login to the client PC with administrator privileges.
3. Copy Patient Reg Install.msi and setup.exe to the client PC from the network share directory.
4. Install the Patient Registration software by executing setup.exe on the client PC.
5. When prompted with the **Select Installation Folder** dialog box, select the **Everyone** option to install for all users on the workstation, or click **Just Me** to install only for the user that is currently logged in. Click **Next** to confirm and complete the installation.
6. To run the Patient Registration package:
 - c. Click **Start**
 - d. Choose **All Programs**
 - e. Select **Indian Health Service**
 - f. Click **Patient Registration 1.0**

4.4 Sample RPMS Installation

Note: User responses appear in **bold type**.

```
Select OPTION NAME: XPD MAIN   Kernel Installation & Distribution System
                               Edits and Distribution ...
                               Utilities ...
                               Installation ...

Select Kernel Installation & Distribution System Option: Installation

1   Load a Distribution
2   Verify Checksums in Transport Global
3   Print Transport Global
4   Compare Transport Global to Current System
5   Backup a Transport Global
6   Install Package(s)
    Restart Install of Package(s)
    Unload a Distribution

Select Installation Option: Load a Distribution
```

Figure 4-1: Selecting **Installation** option

Other prompts are shown below:

```
Enter a Host File: d:\rpms_tst\agg_0100.k <Enter> (Note: Type the
appropriate path for your system.)

KIDS Distribution saved on Sep 09, 2010@08:34:51
Comment: PATIENT REGISTRATION GUI VERSION 1.0

This Distribution contains Transport Globals for the following Package(s):
  PATIENT REGISTRATION GUI 1.0
Distribution OK!

Want to Continue with Load? YES//
Loading Distribution...

  PATIENT REGISTRATION GUI 1.0
Use INSTALL NAME: PATIENT REGISTRATION GUI 1.0 to install this Distribution.

Select Installation Option: Verify Checksums in Transport Global <Enter>
```

Figure 4-2: Loading distribution

Other prompts are shown below:

```
Select INSTALL NAME:   PATIENT REGISTRATION GUI 1.0   Loaded from
Distribution          Loaded from Distribution 9/9/10@08:56:02
=> PATIENT REGISTRATION GUI VERSION 1.0 ;Created on Sep 09,
2010@08:34:5

This Distribution was loaded on Sep 09, 2010@08:56:02 with header of
  PATIENT REGISTRATION GUI VERSION 1.0 ;Created on Sep 09, 2010@08:34:51
```

```

    It consisted of the following Install(s):
PATIENT REGISTRATION GUI 1.0
DEVICE: HOME//  VT

PACKAGE: PATIENT REGISTRATION GUI 1.0      Sep 09, 2010 8:56 am      PAGE 1
-----
56 Routine checked, 0 failed.

```

Figure 4-3: Installing patient registration

Other prompts are shown below:

```

Select Installation Option:
 1  Load a Distribution
 2  Verify Checksums in Transport Global
 3  Print Transport Global
 4  Compare Transport Global to Current System
 5  Backup a Transport Global
 6  Install Package(s)
    Restart Install of Package(s)
    Unload a Distribution
Select Installation Option: Install Package(s)

```

Figure 4-4: Installation options

4.4.1 Installation

```

Select Installation Option: 6  Install Package(s)
Select INSTALL NAME:      PATIENT REGISTRATION GUI 1.0      Loaded from
Distribution
n   Loaded from Distribution  9/9/10@08:51:20
    => PATIENT REGISTRATION GUI VERSION 1.0 ;Created on Sep 09,
2010@08:34:5

This Distribution was loaded on Sep 09, 2010@08:51:20 with header of
  PATIENT REGISTRATION GUI VERSION 1.0 ;Created on Sep 09, 2010@08:34:51
  It consisted of the following Install(s):
PATIENT REGISTRATION GUI 1.0
Checking Install for Package PATIENT REGISTRATION GUI 1.0

Install Questions for PATIENT REGISTRATION GUI 1.0

Incoming Files:

 9009068.3 AGG WINDOW DEFINITION (including data)

 9009068.5 AGG ERROR CODES (including data)

 9009068.6 AGG REPORTS (including data)

Want KIDS to Rebuild Menu Trees Upon Completion of Install? YES// NO

```

```

Want KIDS to INHIBIT LOGONs during the install? YES// NO
Want to DISABLE Scheduled Options, Menu Options, and Protocols? YES// NO

Enter the Device you want to print the Install messages.
You can queue the install by enter a 'Q' at the device prompt.
Enter a '^' to abort the install.
DEVICE: HOME//  VT

      Install Started for PATIENT REGISTRATION GUI 1.0 :
                Sep 09, 2010@08:54:30

Build Distribution Date: Sep 09, 2010

Installing Routines:
                Sep 09, 2010@08:54:31

Running Pre-Install Routine: ^AGGPRES1

Installing Data Dictionaries:
                Sep 09, 2010@08:54:32

Installing Data:
                Sep 09, 2010@08:54:32
                        PATIENT REGISTRATION GUI 1.0
-----

Installing PACKAGE COMPONENTS:

Installing REMOTE PROCEDURE

Installing OPTION
                Sep 09, 2010@08:54:34

Updating Routine file...

Updating KIDS files...

PATIENT REGISTRATION GUI 1.0 Installed.
                Sep 09, 2010@08:54:34

Not a VA primary domain

NO Install Message sent
-----

    100%      [-----]
Complete |      25          50          75          |
-----

Install Completed

```

Figure 4-5: Installation

4.5 Sample GUI Client Installation

The following section outlines the installation procedure for loading the Patient Registration GUI client application onto a single workstation machine. Options are available to install the Patient Registration client on multiple workstations through automated deployment methods. Please refer to Section 5.0 for descriptions of these other options.

1. Navigate to the folder on the client machine that contains the Patient Registration installation program and launch the setup.exe program:

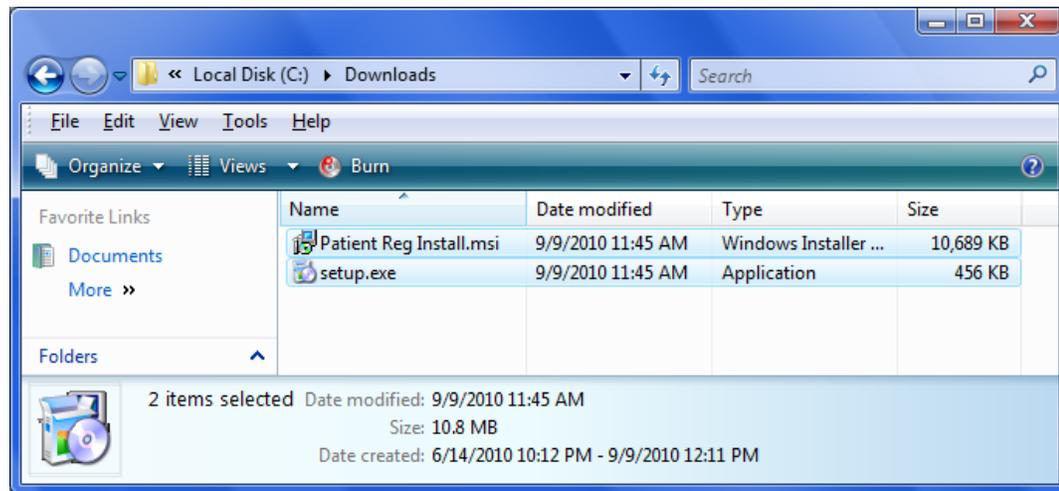


Figure 4-6: Setup.exe program

2. Click **Next** on the **Welcome** screen to continue.



Figure 4-7: **Welcome** screen

3. In the **Select Installation Folder** screen, you can choose to install for everyone (all users of that machine) or only for the current user's account. Then click **Next** to continue.

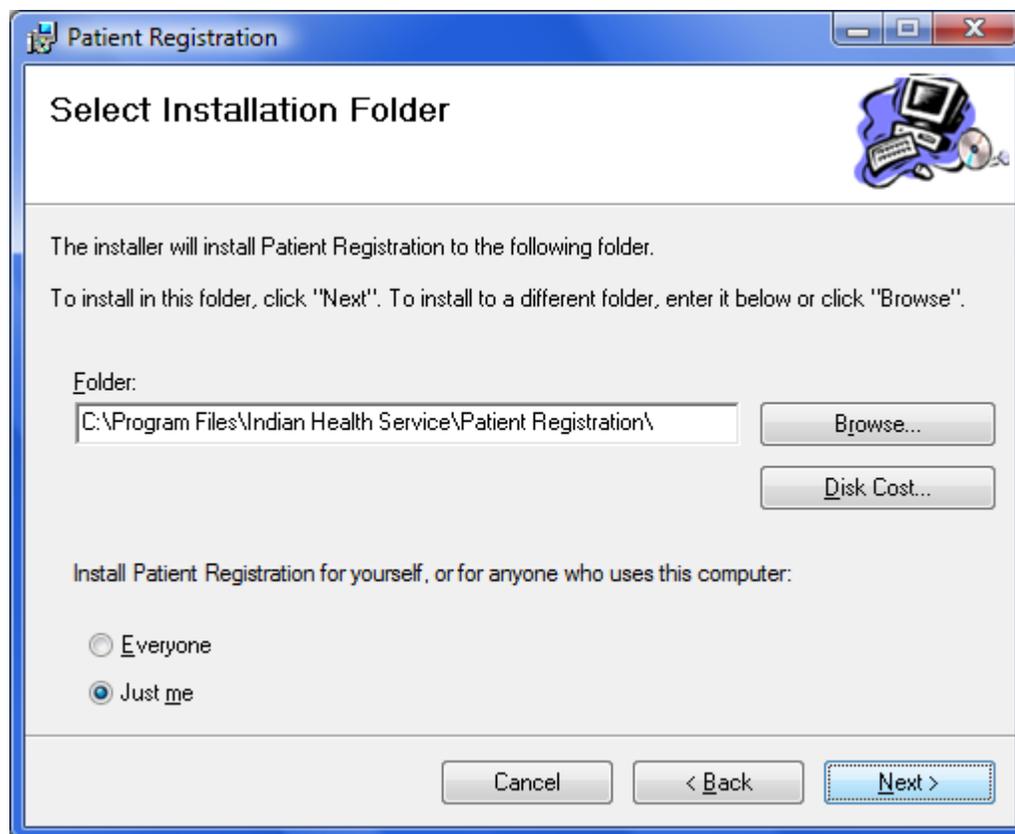


Figure 4-8: Select Installation Folder screen

4. Click **Next** to confirm installation.

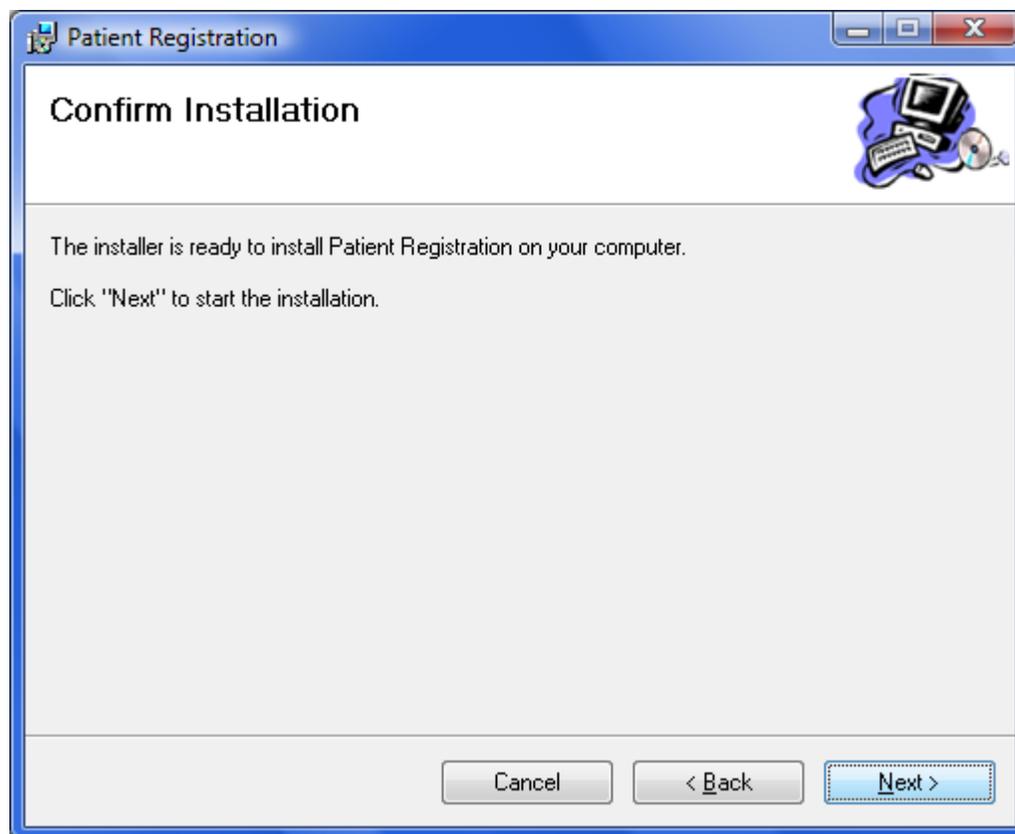


Figure 4-9: Confirm Installation screen

5. Click **Close** to complete the installation.

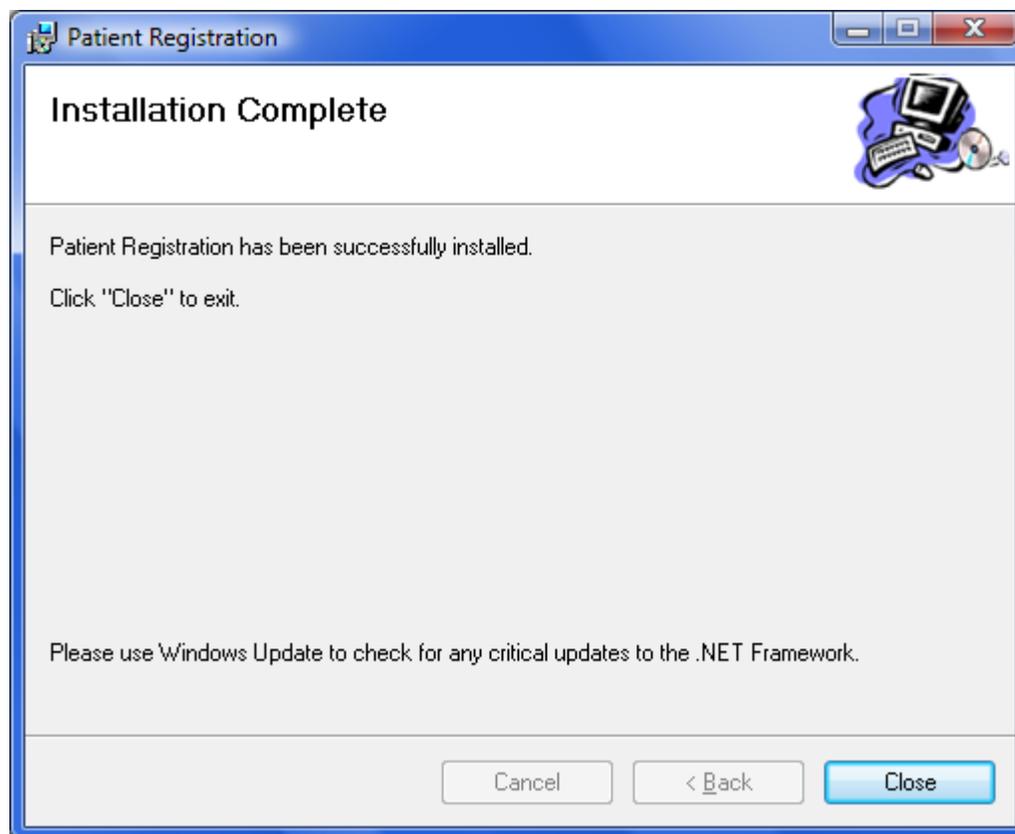


Figure 4-10: **Installation Complete** Screen

5.0 GUI Deployment Options

There are several methods for deployment of the Patient Registration GUI application. The installation package is created as an “msi” file, which provides wide compatibility with automated deployment approaches.

5.1 Basic Single-Workstation Installation

The basic single-workstation procedure is outlined in Section 4.5 of the Patient Registration GUI (AGG)–Installation Guide and Release Notes Manual. Step-by-step instructions are provided for executing the Patient Registration GUI client install package to install directly on a user’s workstation machine.

5.2 Terminal Services/Citrix Server Installation

For sites that utilize thin client/terminal services such as Citrix or MS Terminal Services to manage application delivery, the update process for multiple users is simplified, as the Patient Registration client version will only need to be updated on the terminal server machines via standard application install procedures for publishing applications.

5.3 Windows SMS

Some IHS sites may utilize Microsoft’s System Management Server (SMS) to assist with management of software on desktop machines. The Patient Registration GUI client installation files were created with automated deployment in mind and should be compatible with SMS deployment. The Patient Registration GUI client install is provided as an .msi file Microsoft installer package, along with a setup.exe file that provides .Net bootstrapping to check for installed .Net framework environment if required.

Based on site administrator feedback from previous versions, the default behavior for the .msi installation includes the automatic removal of previous Patient Registration GUI versions to simplify the deployment process.

The details of deploying/publishing applications via SMS are beyond the scope of this document. Please refer to the Microsoft SMS documentation to identify the procedure to deploy the application with appropriate installation options such as silent install, etc.

5.4 Active Directory Application Deployment

Microsoft Active Directory is another option for deploying the Patient Registration GUI Client to desktop machine through an automated process. To use this method, the installation files are placed in a shared network folder that allows at least reader access for all users that will be installing the application. Once this has been created, an Active Directory administrator can go into the Group Policy Editor and assign the application to the appropriate group(s) of users or machines that are registered in the Active Directory.

Additional details and walk-through of this process are available in the links below.

Windows 2000 Server

<http://support.microsoft.com/kb/314934/>

Windows 2003 Server

<http://support.microsoft.com/kb/816102>

General Walk-Through

http://www.windowsnetworking.com/articles_tutorials/Group-Policy-Deploy-Applications.html

5.5 Command-Line Argument Options

Command-line arguments are available to provide additional options for managing the server connection list that is provided to the user upon login.

If no command-line arguments are provided, the application will present a blank server connection list and allow the user to enter new connection entries that will be stored in the user's Windows roaming local application folder. This location was chosen based feedback from sites using Citrix thin-client deployments.

The available arguments are defined below. The options may be used together to achieve desired server connection management results.

5.5.1 /configpath:"{File path}"

```
Example:  
agg-PatientReg.exe /configpath:"\\appserver1\shared\PatientRegConfig\"
```

Figure 5-1: Example

When the configpath argument is specified, the application will check in the defined file path location for the server connection configuration file named bmx_config.xml. If a configuration file is found, it will load the connection items for the user to select from in the login screen. If no configuration file is found and the folder path specified is valid, then a new blank bmx_config.xml configuration file will be created in that location and changes will be stored and managed at that location.

The file location may be any valid storage location, including network shares and local system directories. You must, however, have read/write access to the directory.

If an invalid directory is specified, the application will present a message indicating that the location is not valid, and it will ignore the parameter and use the default location.

5.5.2 /lockedit

```
Example:  
agg-PatientReg.exe /lockedit
```

Figure 5-2: Example

When the lockedit argument is included, the application will disallow the user from editing the defined server connection information, and will be limited to the items that are defined in the drop-down list.

This option is useful in conjunction with the configpath argument specified above to achieve a centrally-managed configuration in which users are not allowed to edit the shared configuration file. Refer to Section 5.5.4 for more details.

5.5.3 /rpms:

```
Example:  
agg-PatientReg.exe /rpms:"server1,10501,MyServer  
Connection,PRD1,Win,60000,40000"
```

Figure 5-3: Example

The rpms argument allows the specification of a specific server connection entry to be passed into the application from the command-line. The entry that is specified will appear as an entry in the server connection drop-down list. This argument may be used in conjunction with the lockedit option to force the user to connect to a single specific location.

The comma-delimited arguments are:

- Server Address (Numeric IP or server name)
- Port Number for the BMXNet listener
- Display name of connection (This will be the title used in the drop-down list)
- Namespace (optional)
- Windows Authentication (set to Win for Windows authentication)
- Receive Timeout (in milliseconds, recommended 60000)
- Send Timeout (in milliseconds, recommended 40000)

5.5.4 Setting Up a Central Shared Server Configuration List

Site managers may choose to implement a central `bm_x_config.xml` configuration file to be shared by multiple users. This approach has the advantage that new users will not need to enter the server configuration settings when first connecting the Patient Registration GUI to the RPMS server(s). If configuration changes are made to the RPMS server, such as a change or network address or BMXNet port number, the changes can be centrally managed by editing the single configuration file.

To configure this approach, the following steps may be followed:

1. An administrator should create the `bm_x_config.xml` file with the server connections that are desired. The easiest way to do this is for the administrator to start the Patient Registration application using the `/configpath` command-line argument to specify the network location where the file will be stored. When the application starts, the administrator can specify the connection(s) that are desired to be available to the users sharing this configuration file. After signing in to the Patient Registration GUI application, the file at the specified `/configpath` location will contain the connection entries that were entered.
2. Once the `bm_x_config.xml` file has been created in the desired shared location with the appropriate connection entries, each user's application shortcut/launch string should be edited to include the same `/configpath` location so that the connection settings are loaded when the user starts the application. It is recommended that the `/lockedit` argument also be used so that user's sharing the central configuration file are not allowed to edit that file, but instead can only select from the available choices.

6.0 Postinstallation Configuration

After installing the Patient Registration GUI KIDS, ensure that all users of the new Registration GUI are set up properly and make sure that BMX is up and running.

6.1 User Setup

All users for the Patient Registration GUI must have the appropriate remote procedure calls (RPC) option calls; BMXRPC; and AGGRPC set up in the secondary menu options under the **Edit an Existing User** option.

```
Select Systems Manager Menu Option: User Management<Enter>

    Add a New User to the System
    Grant Access by Profile
    Edit an Existing User
    Deactivate a User
    Reactivate a User
    List users
    User Inquiry
    Switch Identities
    File Access Security ...
    Clear Electronic signature code
    Electronic Signature Block Edit
    Manage User File ...
    OAA Clinical Trainee ...
    Person Class Edit
    Reprint Access agreement letter

Select User Management Option: Edit an Existing User<Enter>
Select NEW PERSON NAME: USER,GUI REG
    Edit an Existing User
NAME: USER,ICARE                                     Page 1 of 5
-----
NAME... USER,GUI REG          INITIAL: ICU
  TITLE:                      NICK NAME:
  SSN: 999999999             DOB:
  DEGREE:                    MAIL CODE:
  DISUSER:                   TERMINATION DATE:
  Termination Reason:

    PRIMARY MENU OPTION: AKMOCORE<Enter>
  Select SECONDARY MENU OPTIONS: AGGRPC<Enter>
  Want to edit ACCESS CODE (Y/N):          FILE MANAGER ACCESS CODE: M#
  Want to edit VERIFY CODE (Y/N):
```

Figure 6-1: Editing an existing user

Contact Information

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

Phone: (505) 248-4371 or (888) 830-7280 (toll free)

Fax: (505) 248-4363

Web: <http://www.ihs.gov/GeneralWeb/HelpCenter/Helpdesk/index.cfm>

Email: support@ihs.gov