RESOURCE AND PATIENT MANAGEMENT SYSTEM

Referred Care Information Systems (RCIS)

(BMC)

Installation Guide and Release Notes

Version 4 Patch 16
June 2024

Office of Information Technology
Division of Information Technology

Table of Contents

1.0   Contents of Distribution

File	Description
IHSReferredCare.PatientReferral.vor	Object File for Referral tab (EHR)
IHSReferredCare.Referral.vor	Object File for RCIS tab (EHR)
IHSReferredCare.PatientReferral.dll	DLL file (EHR) Version: 3.0.2.5
IHSReferredCare.Referral.dll	DLL file (EHR) Version: 3.0.2.5
bmc_0400.16k	KIDS build for BMC v4.0 p16 (RPMS)
bmc_0400.16i.pdf	Install Guide for RPMS-RCIS and Referred-RCIS tabs (EHR) components
bmc_0400.16o.pdf	Addendum to RCIS User Manual

2.0   Required Resources

1. REFERRED CARE INFO SYSTEM (BMC) v4.0 p13

2. VA FileMan (DI) v22 or higher

3. VA Kernel (XU) v8 or higher

4. IHS ICD/CPT Lookup & Grouper (AICD) v4.0

5. IHS Patient Registration (AG) v7.1 p15

6. IHS Dictionaries (Pointers) (AUPN) v99.1 p29

7. Taxonomy Package v5.1 p5

8. IHS Dictionaries (Pointers) (AUT) v98.1 p31

9. Lexicon (LEX) v2.0 p1003

10. Order entry (OR) v3.0 p190

11. IHS Standard Terminology (BSTS) v1.0

12. If using PCC:

    IHS PCC SUITE (BJPC) v2.0 p10

13. If using EHR:

    EHR (BGO) v1.1 p13

3.0   RPMS RCIS

3.1   Installation Notes

Prefix: **BMC**
Current Version: **v4.0 p16**

3.1.1   General Information

1. Make a copy of this distribution for off-line storage.

2. Print all notes/readme files.

3. Create a successful backup of the RPMS database.

4. It is recommended that the terminal output during the Installation be captured using an auxport printer attached to the Terminal where the installation is being performed OR that it be captured using a host file. This will ensure a printed audit trail if any problems should arise.

5. Ensure no processes other than the installer are utilizing the BMC files during the install process.

   > **Note**:   This release is cumulative from p13, v4.0 p13 is required.

6. Description of Changes:

   a. 73241 (R&S) Modification to allow Whole Dollar Amounts

   b. 73360 (R&S/GUI) Standardize Medical Priority Options

   c. 73441 (GUI) Display Referral notes for Secondary Referrals

   d. 73950 (R&S/GUI) Use Actual Begin and End dates for Dates of Service

   e. 74643 (GUI) Add Primary Care Provider Column

   f. 76175 (R&S) Referral Letters address to Parent of Child with age parameter

   g. 82839 (R&S/GUI) Add data checks to Prevent duplicate Referrals

   h. 94636 (GUI) Display UEI in Vendor Search in Add/Edit Referrals

   i. 99363 (R&S) Add SNOMED option for General Retrieval Report

   j. 99364 (R&S/GUI) Referral Letter to include Additional Information

   k. 99368 (R&S/GUI) Referral Letter replace Contract Health with Purchased Referred Care

   l. 99372 (R&S) Four reports to include Excel file print option

      m. 99375 (GUI) Allow edits of notes fields for closed referrals

      n. 99378 (GUI) Add ability to add additional notes on closed referrals

      o. 99381 (R&S) New Appointment Letter

      p. 100932 (GUI) Add Acknowledge date column to EHR RCIS lists

      q. 101063 (GUI) Include Direct Email lookup for IHS Facilities

      r. 101074 (GUI) Display Direct Email Dialog regardless if Direct Email is entered

      s. 101488 (R&S/GUI) Add "C1" suffix to Referral Number for Call-in Referrals

      t. 103427 (GUI) Do not allow Special Characters in Priority Field

      u. 105983 (GUI) Error in saving Provider Narrative

      v. 106320 (GUI) Prevent User from being able to close Referral in EHR

      w. 106322 (GUI) IPL list displays incorrectly

7. Typical time for the installation is 10 minutes.

3.2   Installation Instructions

1. Save RCIS Referral File using %GO

      a. Example:

        D ^%GO

        Global output

        Device: C:\PUB\BMCREF.P16.GO

        Parameters? "WNS" =>

        Description (^ for self-loading): RCIS REFERRAL FILE PRIOR TO PATCH 16 INSTALL

        All Globals? No => No

        Global ^BMCREF

        Global ^

        1 global selected from 2279 available globals.

        BMCREF

        1 global written

        PRECERT 128d22>

2. This is a KIDS Install. Use the Installation options on the KIDS menu.

3. Load the Distribution into KIDS using option 1 on the KIDS Installation menu. The distribution was released in a file named bmc_0400.16k

4. Verify the load using option 2 on the KIDS Installation menu.

5. Consider using options 3 and 4 on the KIDS Installation menu to print and compare the Transport.

6. Install the distribution using option 6 on the Installation menu.

7. For results, read the generated MailMan message, or use the KIDS "Install File Print" option to view/print the "BMC*4.0*16" entry.

8. The post-install routine, BMC4P16, will deliver a patch installation mail message to local users that hold the BMCZMENU, XUMGR, XUPROG, or XUPROGMODE security key.

3.3 Example of installation

```
KIDS 8.0

Select KIDS OPTION: ?
    Answer with KIDS OPTION NUMBER, or NAME
   Choose from:
   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)
   7           RESTART INSTALL OF PACKAGE(S)
   8           UNLOAD A DISTRIBUTION

Select KIDS OPTION: LOAD A DISTRIBUTION
Enter a Host File: C:\pub\bmc_0400.16k

KIDS Distribution saved on Mar 12, 2024@15:10:04
Comment: RCIS V4 Patch 16

This Distribution contains Transport Globals for the following Package(s):

     BMC*4.0*16
OK to continue with Load? NO// YES

Distribution OK!

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

Build BMC*4.0*16 has an Environmental Check Routine
Want to RUN the Environment Check Routine? YES// YES
   BMC*4.0*16
Will first run the Environment Check Routine, BMC4E


                          Hello, JOHN SMITH
```

```
                    Checking Environment for REFERRED CARE INFO SYSTEM V 4.0.

                            Need at least BMC*4.0*13.....BMC*4.0*13 Present
                             Need at least DI v 22.0.....DI v 22.0 Present
                              Need at least XU v 8.0.....XU v 8.0 Present
                            Need at least AICD v 4.0.....AICD v 4.0 Present
                            Need at least AG*7.1*15.....AG*7.1*15 Present
                        Need at least AUPN*99.1*29.....AUPN*99.1*29 Present
                            Need at least ATX*5.1*5.....ATX*5.1*5 Present
                         Need at least AUT*98.1*31.....AUT*98.1*31 Present
                        Need at least LEX*2.0*1003.....LEX*2.0*1003 Present
                          Need at least OR*3.0*190.....OR*3.0*190 Present
                          Need at least BSTS v 1.0.....BSTS v 2.0 Present


Is the Facility using PCC? y  YES
                       Need at least BJPC*2.0*10.....BJPC*2.0*10 Present

Is the Facility using EHR? y  YES
                       Need at least BGO*1.1*13.....BGO*1.1*13 Present

                                    ENVIRONMENT OK.
      In this distribution:

          Changes include
             1. R&S and GUI-Add C1 suffix to Primary Referral number for
                identification of Call-in referrals
             2. R&S and GUI-Prevent duplication of referrals by checking
                new referral for Patient, Vendor, Referral Type, Referring
                Provider, Priority and Visit type
             3. R&S and GUI-Use of Actual Begin/End DOS instead of Estimated
                dates
             4. R&S and GUI-Referral Letter to include changes:
                a. DX code
                b. Case Notes
                c. Removal of End DOS
                d. Change Contract Health to Purchased Referred Care
                e. Added Age parameter for Minor child
             5. R&S-Modification to all whole dollar amounts for cost data
             6. R&S-General Retrieval Report to include SNOMED Code selection
             7. R&S-Reports to include Excel format:
                a. Active Referrals by Date
                b. CHS Status Report for Referrals
                c. Referral Review Report - By Time Period
                d. General Retrieval
             8. R&S-New Appointment Letter
             9. R&S and GUI-Added new standard Medical Priorities
            10. GUI-Screen added UEI to Vendor Search option
            11. GUI-Screen added Primary Care provider column
            12. GUI-Screen added Additional Referral notes
            13. GUI-Screen added Acknowledge Date column
            14. GUI-Included Direct Email lookup in the Location file
            15. GUI-Display Direct Email dialog
            16. GUI-Display of secondary referral notes
            17. GUI-Check for special characters in Priority field
            18. GUI-Remove ability to close referral


Enter RETURN to continue or '^' to exit:
Use INSTALL NAME: BMC*4.0*16 to install this Distribution.
```

```
KIDS 8.0

Select KIDS OPTION: inSTALL PACKAGE(S)
Select INSTALL NAME:    BMC*4.0*16    Loaded from Distribution    3/12/24@15:13:19
     => RCIS V4 Patch 16  ;Created on Mar 12, 2024@15:10:04

This Distribution was loaded on Mar 12, 2024@15:13:19 with header of
   RCIS V4 Patch 16  ;Created on Mar 12, 2024@15:13:19
   It consisted of the following Install(s):
     BMC*4.0*16
Checking Install for Package BMC*4.0*16
Will first run the Environment Check Routine, BMC4E




                         Hello, FONDA JACKSON

           Checking Environment for REFERRED CARE INFO SYSTEM V 4.0.

                 Need at least BMC*4.0*13.....BMC*4.0*13 Present
                  Need at least DI v 22.0.....DI v 22.0 Present
                   Need at least XU v 8.0.....XU v 8.0 Present
                 Need at least AICD v 4.0.....AICD v 4.0 Present
                 Need at least AG*7.1*15.....AG*7.1*15 Present
             Need at least AUPN*99.1*29.....AUPN*99.1*29 Present
                 Need at least ATX*5.1*5.....ATX*5.1*5 Present
                Need at least AUT*98.1*31.....AUT*98.1*31 Present
              Need at least LEX*2.0*1003.....LEX*2.0*1003 Present
                 Need at least OR*3.0*190.....OR*3.0*190 Present
                 Need at least BSTS v 1.0.....BSTS v 2.0 Present


Is the Facility using PCC? YES
                 Need at least BJPC*2.0*10.....BJPC*2.0*10 Present

Is the Facility using EHR? YES
                 Need at least BGO*1.1*13.....BGO*1.1*13 Present

                         ENVIRONMENT OK.

    In this distribution:

        Changes include
          1. R&S and GUI Add C1 suffix to Primary Referral number for
             identification of Call-in referrals
          2. R&S and GUI Prevent duplication of referrals by checking
             new referral for Patient, Vendor, Referral Type, Referring
             Provider, Priority and Visit type
          3. R&S and GUI-Use of Actual Begin/End DOS instead of Estimated
             dates
          4. R&S and GUI-Referral Letter to include changes:
             a. DX code
             b. Case Notes
             c. Removal of End DOS
             d. Change Contract Health to Purchased Referred Care
             e. Added Age parameter for Minor child
          5. R&S-Modification to all whole dollar amounts for cost data
          6. R&S-General Retrieval Report to include SNOMED Code selection
          7. R&S-Reports to include Excel format:
```

```
                  a. Active Referrals by Date
                  b. CHS Status Report for Referrals
                  c. Referral Review Report - By Time Period
                  d. General Retrieval
              8. R&S-New Appointment Letter
              9. R&S and GUI-Added new standard Medical Priorities
             10. GUI-Screen added UEI to Vendor Search option
             11. GUI-Screen added Primary Care provider column
             12. GUI-Screen added Additional Referral notes
             13. GUI-Screen added Acknowledge Date column
             14. GUI-Included Direct Email lookup in the Location file
             15. GUI-Display Direct Email dialog
             16. GUI-Display of secondary referral notes
             17. GUI-Check for special characters in Priority field
             18. GUI-Remove ability to close referral

Enter RETURN to continue or '^' to exit:

     A standard message will be produced by this update.

     If you run interactively, results will be displayed on your screen,
     as well as in the mail message and the entry in the INSTALL file.
     If you queue to TaskMan, please read the mail message for results of
     this update, and remember not to Q to the HOME device.

Enter RETURN to continue or '^' to exit:

Install Questions for BMC*4.0*16


Incoming Files:
   90001     RCIS REFERRAL
Note:  You already have the 'RCIS REFERRAL' File.
   90001.03  RCIS COMMENTS
Note:  You already have the 'RCIS COMMENTS' File.

   90001.31  RCIS SITE PARAMETER
Note:  You already have the 'RCIS SITE PARAMETER' File.

   90001.33  RCIS OUTPUT FORM DEFINITION  (including data)
Note:  You already have the 'RCIS OUTPUT FORM DEFINITION' File.
I will MERGE your data with mine.

   90001.81  RCIS REPORT LISTER ITEMS
Note:  You already have the 'RCIS REPORT LISTER ITEMS' File.

   90001.84  RCIS MEDICAL PRIORITIES  (including data)

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

Want KIDS to INHIBIT LOGONs during the install? NO//

 Install Started for BMC*4.0*16 :
              Mar 12, 2024@15:13:41

Build Distribution Date: Mar 12, 2024

 Installing Routines:    25          50          75
              Mar 12, 2024@15:13:41


 Running Pre-Install Routine: PRE^BMC4P16     25          50
```

```
Saving current DD AUDIT settings for files in BMC 4.0 Patch 16
and turning DD AUDIT to 'Y'.
 File        90001 - RCIS REFERRAL                  - DD audit was 'N'
                                                          Set to 'Y'
 File     90001.03 - RCIS COMMENTS                  - DD audit was 'N'
                                                          Set to 'Y'
 File     90001.31 - RCIS SITE PARAMETER            - DD audit was 'N'
                                                          Set to 'Y'
 File     90001.81 - RCIS REPORT LISTER ITEMS       - DD audit was ''
                                                          Set to 'Y'
DD AUDIT settings saved in ^XTMP(.

 Installing Data Dictionaries:     25             50              75
             Mar 12, 2024@15:13:41

 Installing Data:
             Mar 12, 2024@15:13:41

 Installing PACKAGE COMPONENTS:

 Installing PRINT TEMPLATE:

 Installing INPUT TEMPLATE:

 Installing FORM        25             50              75
             Mar 12, 2024@15:13:41

 Installing OPTION      25             50              75
             Mar 12, 2024@15:13:41
 Running Post-Install Routine: POST^BMC4P16         25              50

Restoring DD AUDIT settings for files in BMC 4.0 Patch 16.
 File        90001 - RCIS REFERRAL                  - DD AUDIT Set to 'N'
 File     90001.03 - RCIS COMMENTS                  - DD AUDIT Set to 'N'
 File     90001.31 - RCIS SITE PARAMETER            - DD AUDIT Set to 'N'
 File     90001.81 - RCIS REPORT LISTER ITEMS       - DD AUDIT Set to ''
DD AUDIT settings restored.        25             50              75

Actual IHS Cost Column Header updated in Gen Ret items . . .

Snomed Term added in Gen Ret items . . .

Updating Medical Priority field . . .

Finished Updating Medical Priority field . . .

Removing Medical Priority Help text . . .

Adding New Appointment Menu Option to Print RCIS Letter Types.


BEGIN Delivering MailMan message to select users.

END Delivering MailMan message to select users.


 Updating Routine file...
 Updating KIDS files...
 BMC*4.0*16 Installed.
             Mar 12, 2024@15:13:42
```

```
 NO Install Message sent
Install Completed
```

Figure 3-1: Example Installation

4.0   Referred-RCIS tabs (EHR)

4.1   Installation Notes

Prefix: **BMC**
Current Version: **v4.0 p16**

4.1.1   Before You Begin

All EHR and Resource and Patient Management System (RPMS) users should be logged off the system during the installation process.

Installation will require administrator access to the VueCentric System Management Utility (VcManager).

> **Note**: If you have already installed the RCIS components in EHR at your site and are now installing a patch or updated version, refer to Section 4.2.1 in this manual for instructions. If you are installing the RCIS component in EHR for the first time at your site, refer to Section 4.2.2 of this manual for full installation instructions.

4.2   Installation Instructions

4.2.1   EHR-Referred Care Component–Existing Install

The EHR installation procedure includes these two stages:

1. Adding two dll files to the lib folder on the EHR network share

   a. IHSReferredCare.PatientReferral.dll

   b. IHSReferredCare.Referral.dll

2. Importing two .vor files to VueCentric Object Registry

   a. IHSReferredCare.PatientReferral.vor

   b. IHSReferredCare.Referral.vor

> **Note**: For Citrix and Terminal Server setups, ensure that the shared files on the server are updated. Desktop setups will need the local files updated on each workstation.

4.2.1.1   Stage 1–DLL Files

Copy the two .dll files into the EHR lib folder on the main EHR network share.

− IHSReferredCare.PatientReferral.dll

− IHSReferredCare.Referral.dll

> **Note**: Verify that the .dll files are placed in the same folder as defined in the VueCentric Site Parameters for the Default object source path.

4.2.1.2   Stage 2–VOR Files

1. Open VcManager.exe located in EHR\bin or EHR\utl folder.
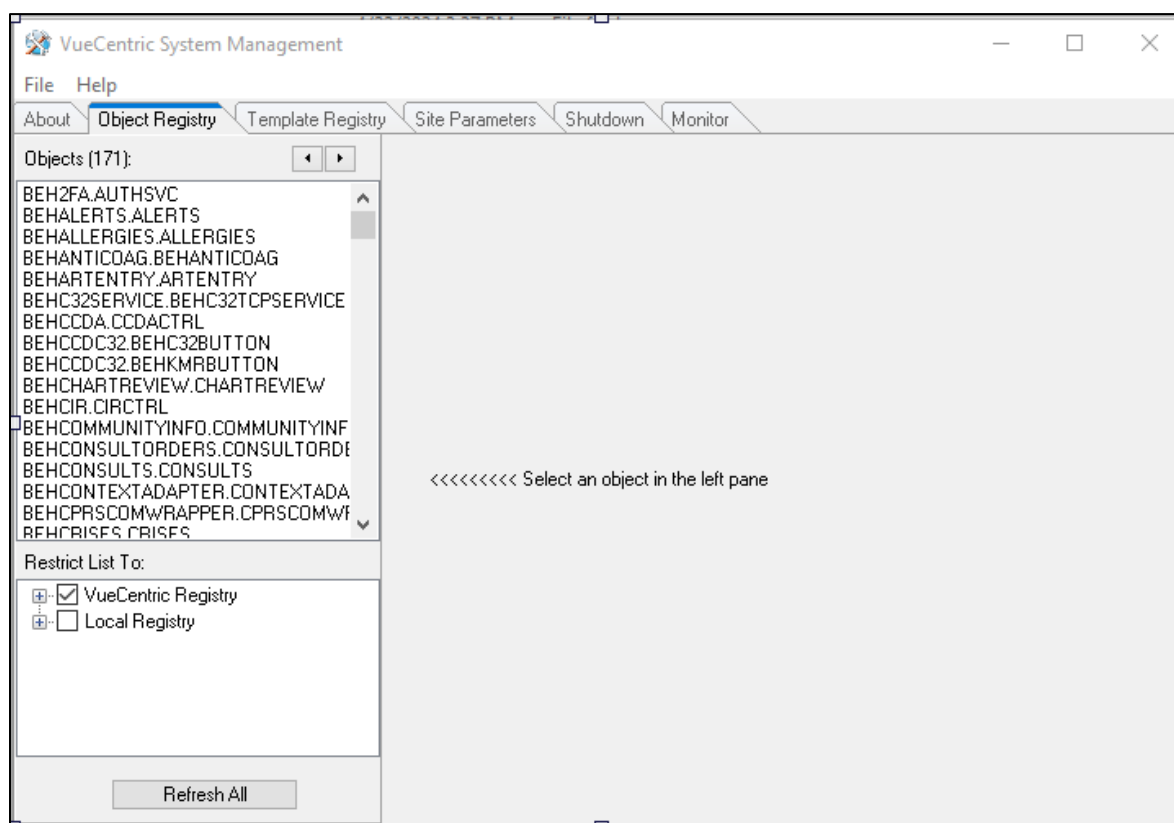
Figure 4-1: VcManager Screen

2. Select the **Object Registry** tab.

3. For each of the following, select the object name and click on the **Delete** button in the right-pane. This is to remove the objects from the previous install.

   a. **IHSReferredCare.PatientReferral**

   b. **IHSReferredCare.Referral**

4. Click on the **Refresh All** button to confirm that the 2 objects have been removed.

5. Go to **File | Import**.

6. Select the new **IHSReferredCare.PatientReferral.vor** file and click open to import. Then click on the **Apply** button to confirm the changes.
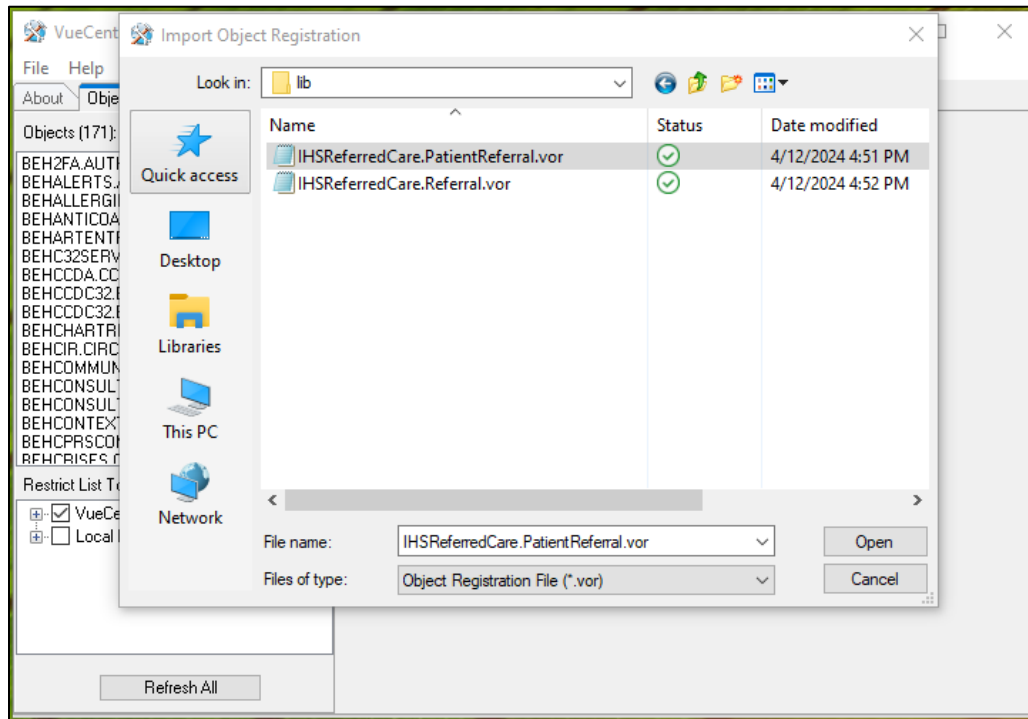
Figure 4-2: Select Import Object screen

7. To verify that no Checksum errors occur, click on the **Retrieve** button.

8. The Select Target Folder will display if the import steps were completed successfully. You can then click the **Cancel** button to close the window.
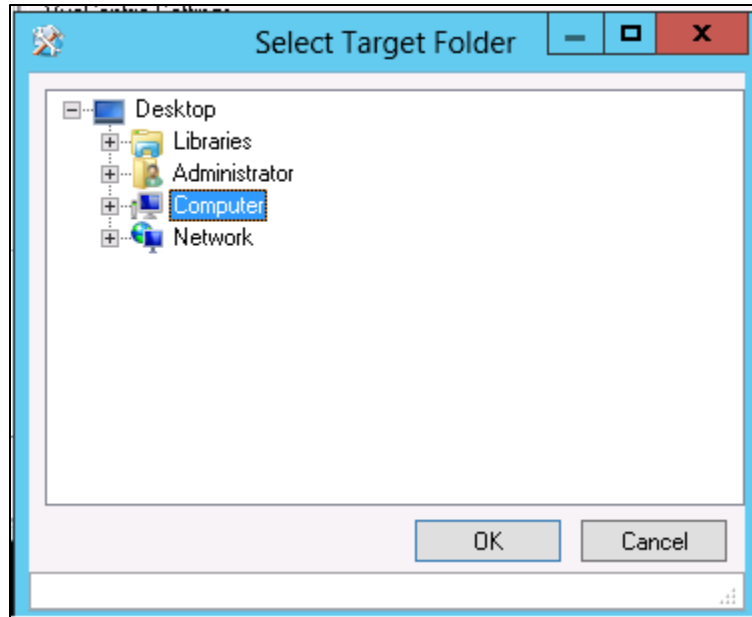
Figure 4-3: Select Target Folder screen

9. Repeat steps 5-8 with the **IHSReferredCare.Referral** file.

4.2.1.3   Fixing Checksum Error

If you see a 'File checksum invalid' error message in a pop-up alert after performing the steps in the previous section, then follow the steps below to correct the error.
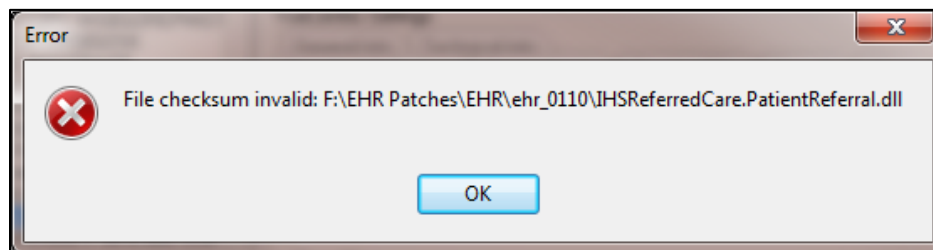
Figure 4-4: File Checksum Invalid error message

1. Close and restart the VcManager.

2. Select the **Object Registry** tab.
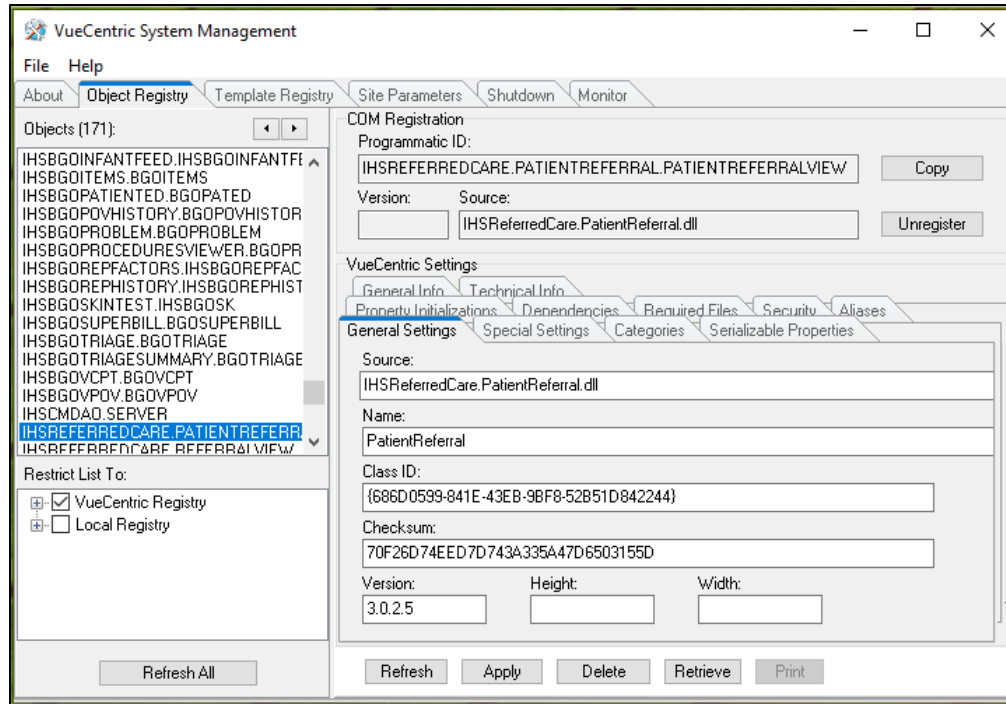
Figure 4-5: Object Loaded view in VCManager

3. Go to **File | Import**.

4. Select the **IHSReferredCare.PatientReferral.vor** file and click open to import.

5. Click on the **Copy** button once. Verify that the Checksum value updates when you click the **Copy** button. If the Checksum field becomes empty, repeat the steps in this section.

6. Click **Apply** to save the information.

7. Repeat the Steps 3-6 for the **IHSReferredCare.Referral.vor** file.

8. Close the VcManager application when complete.

4.2.2   EHR-Referred Care Component–First Time Install

The EHR installation procedure includes these three stages:

1. Adding two dll files to the lib folder on the EHR network share

   a.   IHSReferredCare.PatientReferral.dll

   b.   IHSReferredCare.Referral.dll

2. Importing two .vor files to VueCentric Object Registry

   a.   IHSReferredCare.PatientReferral.vor

b. IHSReferredCare.Referral.vor

3. Modifying Provider template to add two referral components

> **Note**: For Citrix and Terminal Server setups, ensure that the shared files on the server are updated. Desktop setups will need the local files updated on each workstation.

4.2.2.1 Stage 1–DLL Files

Copy the two .dll files into the EHR lib folder on the main EHR network share.

– IHSReferredCare.PatientReferral.dll

– IHSReferredCare. Referral.dll

> **Note**: Verify that the .dll files are placed in the same folder as defined in the VueCentric Site Parameters for the Default object source path.

4.2.2.2 Stage 2–VOR Files

1. Open VcManager.exe located in EHR\bin or EHR\utl folder.

Figure 4-6: VcManager Screen

2. Select the **Object Registry** tab.

3. Go to **File | Import**.

4. Select **IHSReferredCare.PatientReferral.vor** and click open to import.
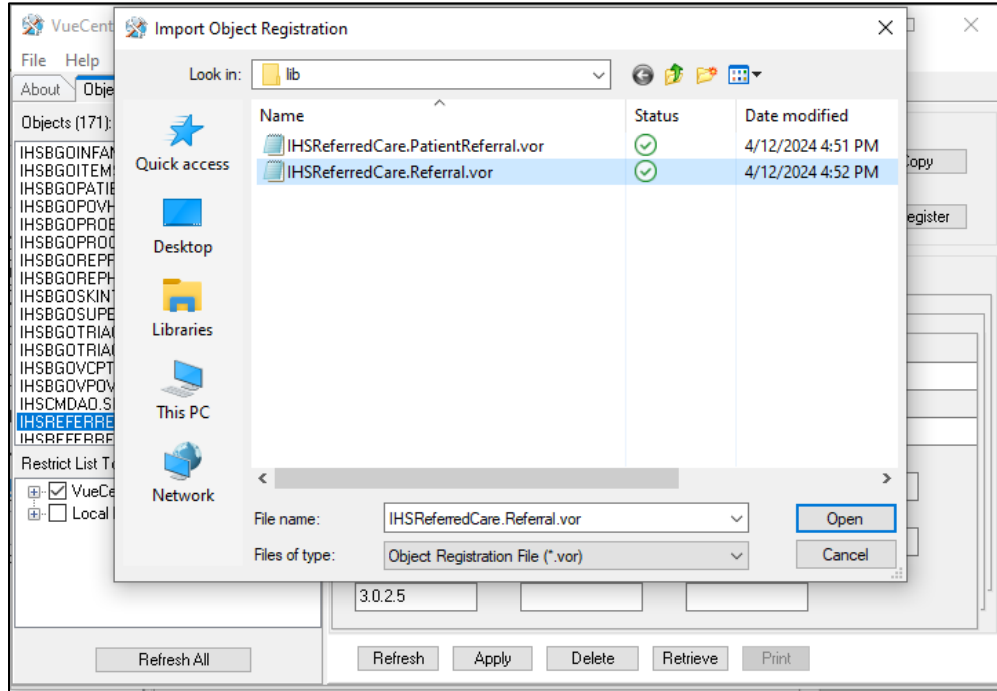
Figure 4-7: Select Import Object screen

5. Click **Apply** to save the information.
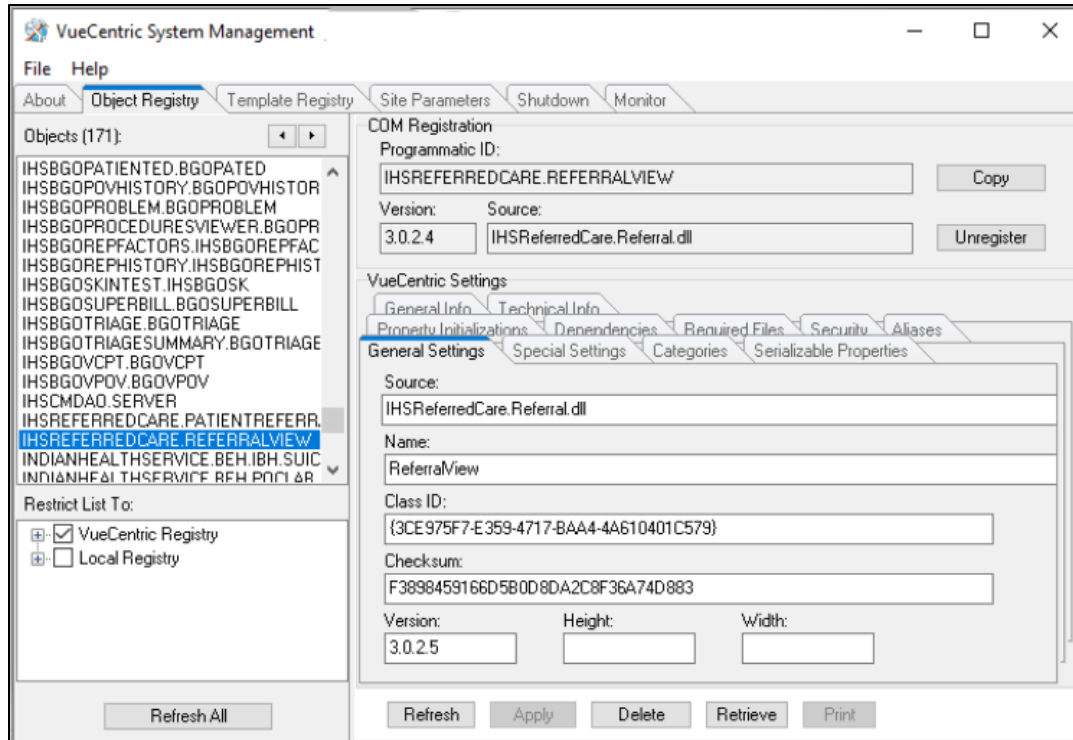
Figure 4-8: Object Loaded view in VcManager

6. Repeat the Import (Steps 3–5) for the **IHSReferredCare.Referral.vor** file.

7. Close the VcManager application when complete.

4.2.2.3   Stage 3–Provider Template

1. Open the EHR application and log in.

2. Right-click the header to display a context menu.

3. Select **Design Mode** option.

Figure 4-9: **Design Mode** option

4. Select the **Layout Manager** from the **Design** menu.

5. Highlight **Tabbed Notebook** and click **Properties**.
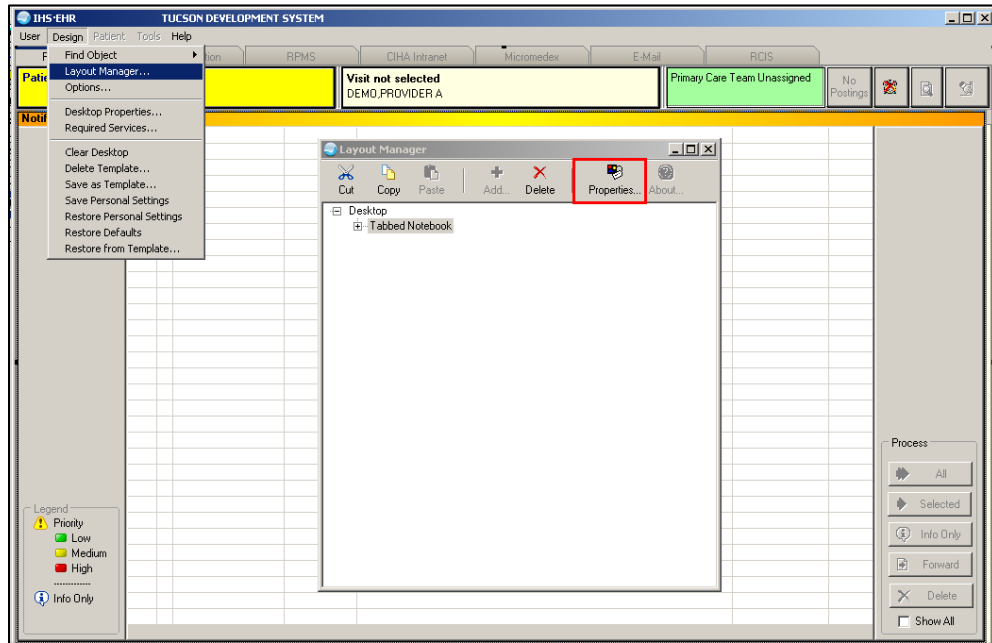
Figure 4-10: **Design menu**: **Layout Manager**

6. Select the **Tab Editor** and add a new tab named **RCIS**. Click **OK**.
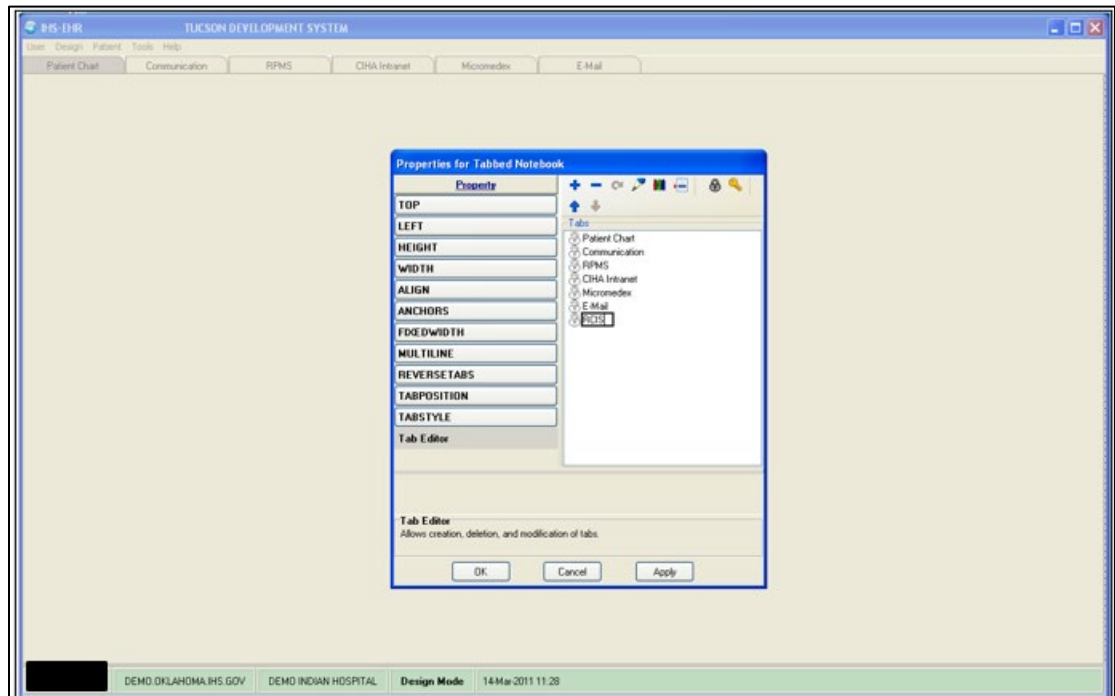
Figure 4-11: EHR Designer Mode - Create new RCIS tab

7. To add an object to the new RCIS tab, click **Add** (+) and expand the **Type |
    Object** list.

8. Select the **ReferralView** object from the list and click **Add**.
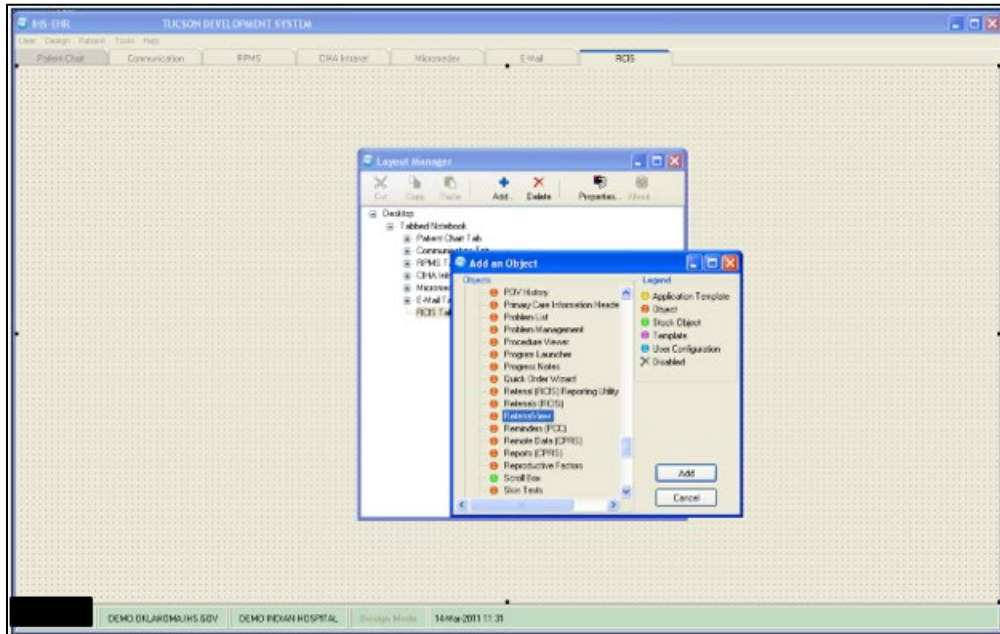
Figure 4-12: EHR Designer Mode - Add ReferralView object to **RCIS** tab

9. Open the properties for **ReferralView** and select **Align–All** to expand the
    component inside the **RCIS** tab.
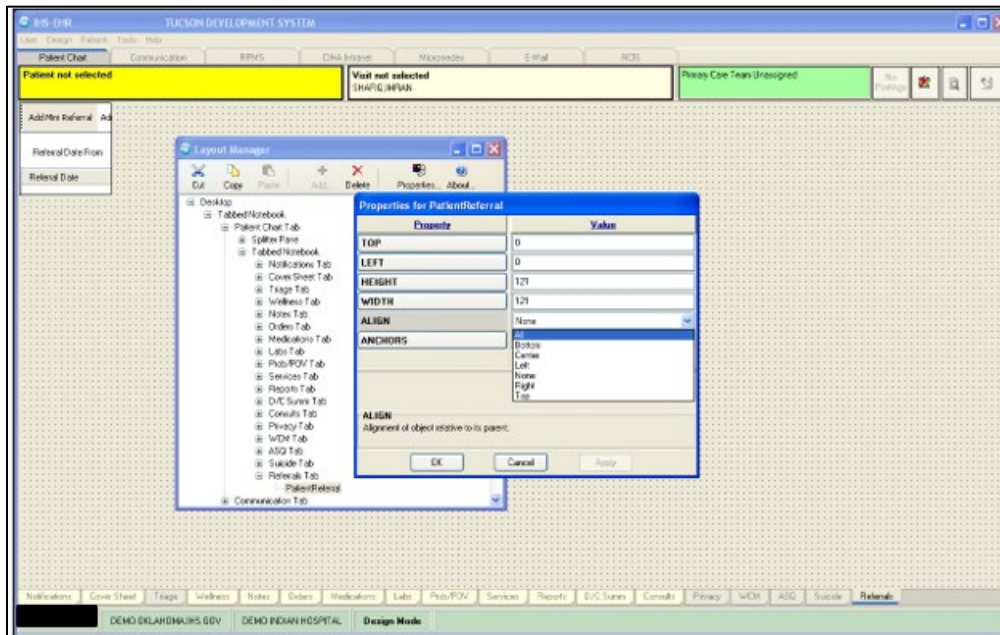
Figure 4-13: EHR Designer Mode-Align Setting in Object Properties

10. Select the **Layout Manager** from the **Design** menu again to add another new tab under the **Patient Chart** tab.

11. Open the properties for the Tabbed Notebook located under **Patient Chart**.
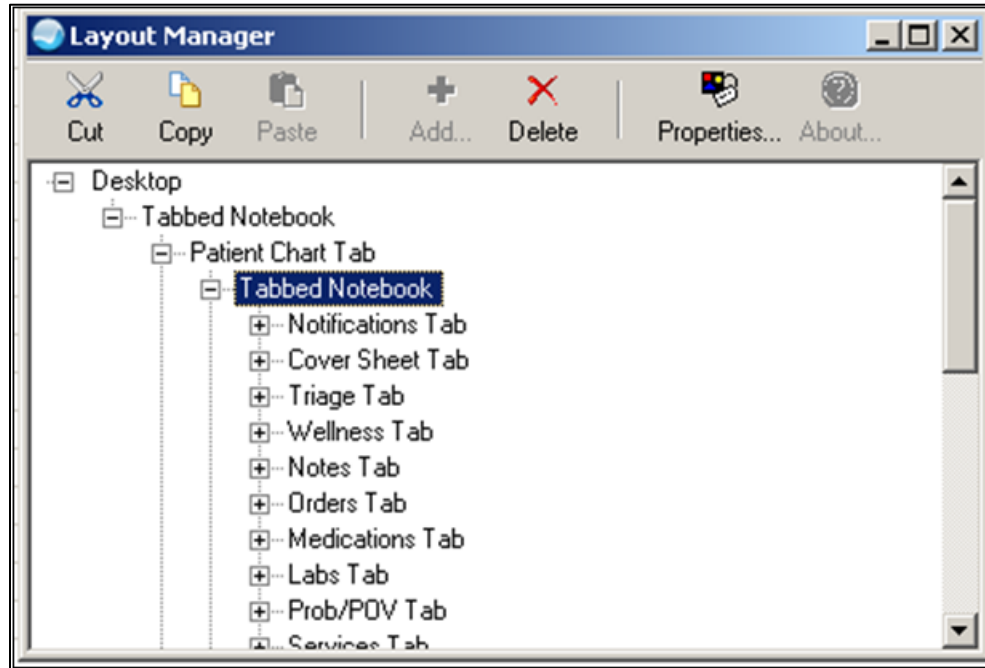
Figure 4-14: EHR Designer Mode-Layout Manager Close-up

12. Use the Tab Editor to add a new tab named **Referrals** and click **OK**.
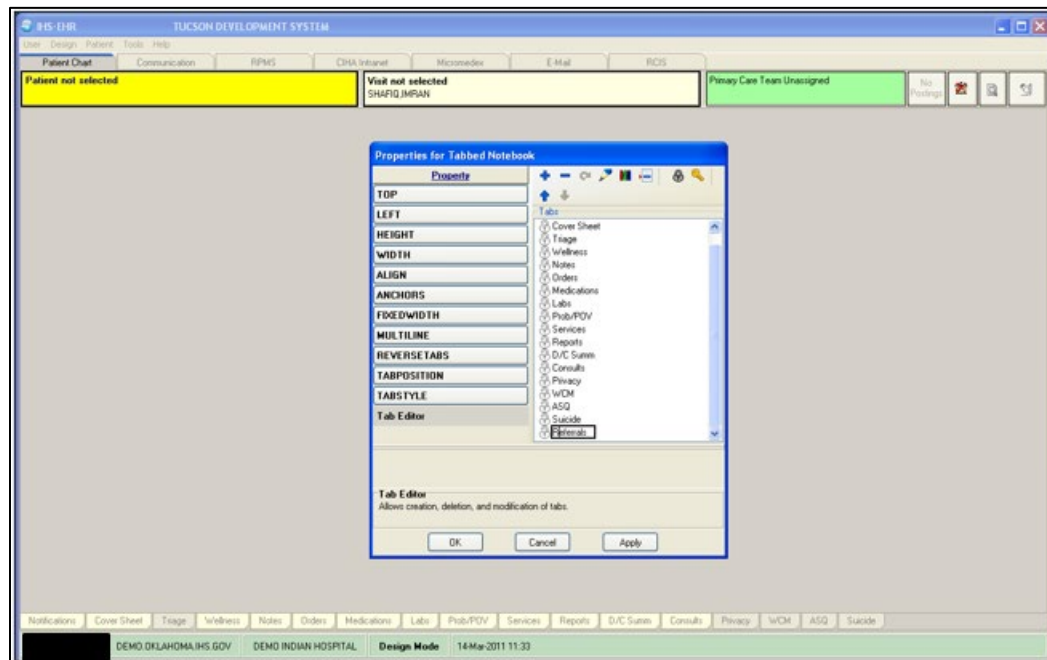
Figure 4-15: EHR Designer Mode-Add tab to Patient Chart

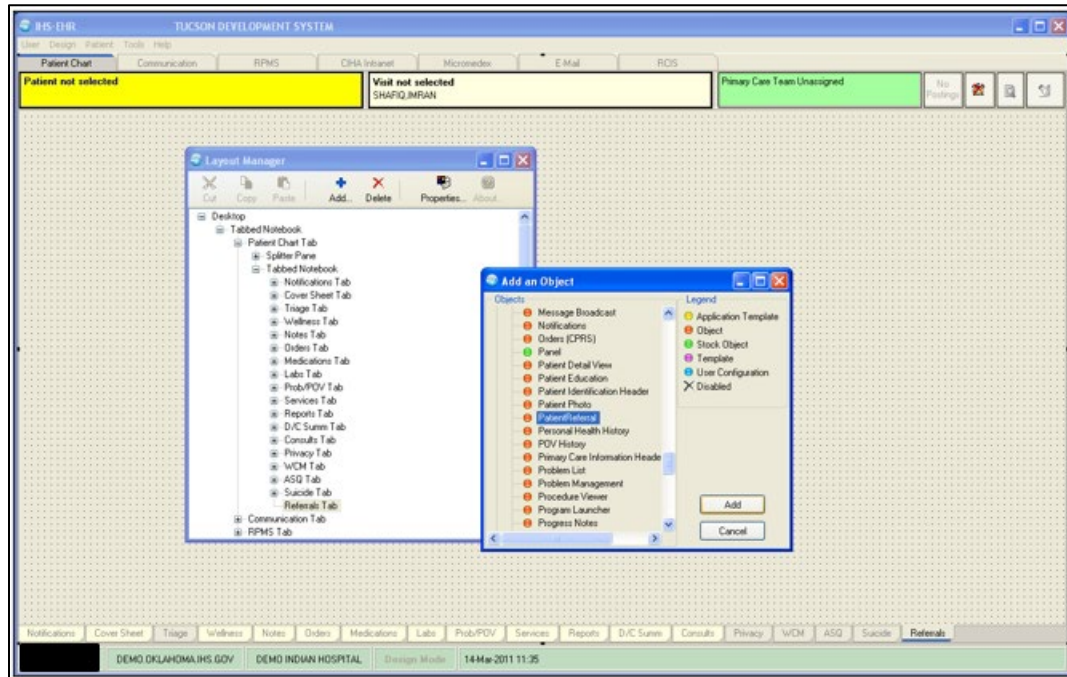13. Add an Object to the new **Referrals** tab and select the **PatientReferral** object (see Steps 7–8).

Figure 4-16: EHR Design Mode-Add PatientReferral object to Referrals tab

14. Select **Align–All in the PatientReferral** properties to expand the component inside the **Referrals** tab (See Figure 4-13)

15. Save the design to the Provider template. The Provider template is generally titled **%Provider**.
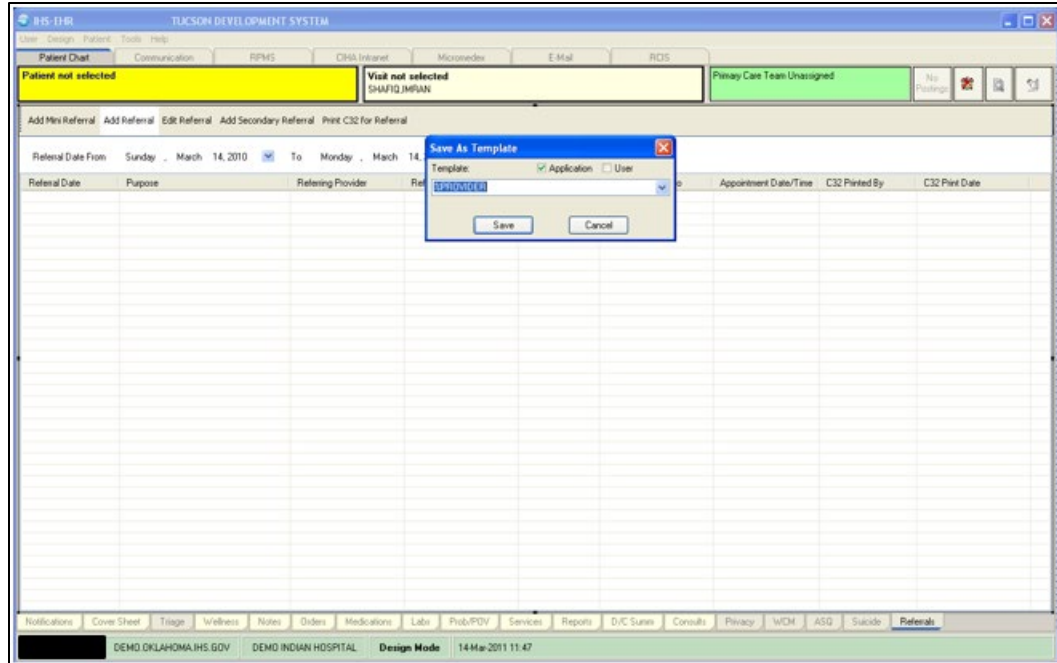
Figure 4-17: EHR Designer Mode-Save As screen for Provider template

4.3   Installation Verification

1. Log in to EHR as a Provider.

2. The **RCIS** tab should show referrals authored by the currently logged-in provider (see below).
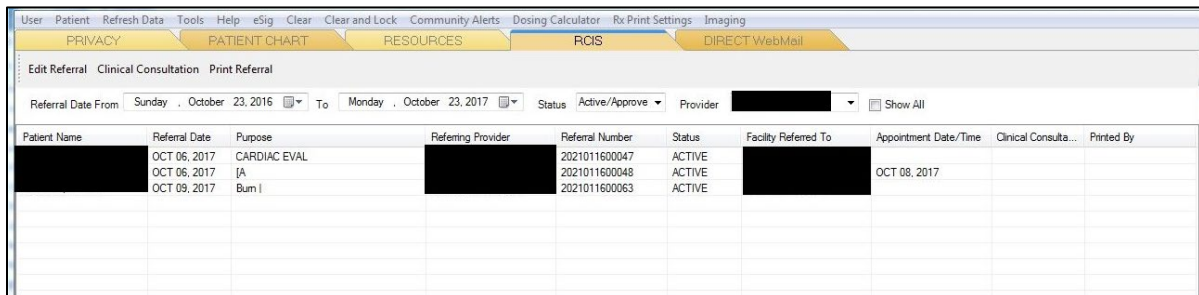

Figure 4-18: **RCIS** tab window

3. Go to the **Patient Chart** tab.

4. Select a patient.

5. The **Referrals** tab under Patient Chart should display the referrals for the patient as shown below.

Figure 4-19: Referrals tab under Patient Chart

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