RESOURCE AND PATIENT MANAGEMENT SYSTEM

Laboratory Reference

(BLR, LA, LR)

User Manual

Version 5.2 Patch 1041
February 2018

Office of Information Technology
Division of Information Resource Management

Table of Contents

1.0   Introduction

This document lists various changes to the RPMS Lab module that were brought about by IHS Lab Patch LR*5.2*1041.

The majority of the additions/changes to the RPMS Lab Package were made to accommodate RPMS Laboratory Package Enhancement requests.

Laboratory end users can expect to observe the following modifications and corrections in this 2nd quarter release for Fiscal Year 2018.

The field MAX. ORDER FREQ. within the COLLECTION SAMPLE sub node in the Laboratory Test (#60) file was modified.

The field PRINT NAME in the Laboratory Test (#60) file will be modified with the field length is increased from 8 characters to 16 characters.

Users assigned to the new LAB RESULTS CHANGED Mail Group will receive a message each time any Chemistry lab result is changed. The message will consist of the same verbiage that has been stored into the comments section of the Lab test result display.

Two new reports will be available to show a patient's future/current orders as well as all orders the patient has in the LAB ORDER ENTRY file.

With the installation of LR*5.2*1041, there will be a new parameter that can be set, BLR DOB ONLY, that will modify how the Interim Report will print patient information in the header.

Two reports regarding open lab orders with ordering providers who are no longer active will be available in the RPMS Lab package.

A new file and a new report regarding when and who selected the Purge old orders & accessions option will be installed into the RPMS Lab module.

Two VA Patches were also included in LR*5.2*1041.

2.0   MAX. ORDER FREQ. Modification

The field MAX. ORDER FREQ. within the COLLECTION SAMPLE sub node in the Laboratory Test (#60) file will be modified with the installation of LR*54.2*1041.

The number will be increased from 365 days to 3650 days, which allows for ten years. The maximum order frequency applies to a laboratory test.

```
Select VA FileMan Option: ENter or Edit File Entries

INPUT TO WHAT FILE: LABORATORY TEST//
EDIT WHICH FIELD: ALL// COLLECTION SAMPLE   (multiple)
   EDIT WHICH SITE/SPECIMEN SUB-FIELD: ALL// MAX. ORDER FREQ.
   THEN EDIT SITE/SPECIMEN SUB-FIELD:
THEN EDIT FIELD:


Select LABORATORY TEST NAME: GLUCOSE
Select COLLECTION SAMPLE: SST (SERUM)
  MAX. ORDER FREQ.: ?
     Type an integer between 1 and 3650.
  MAX. ORDER FREQ.:
Select COLLECTION SAMPLE:
```

Figure 2-1: Adding the number of days to the Max. Order Freq.

Enter a number between 1 and 3650, to limit the ordering of this test o once per # of days entered within a certain time period. This entry will then the system to remind the ordering person that this has already been ordered and/or performed when using all Lab Test Order options.

3.0   File 60 Print Name Character Limit Extended

The field PRINT NAME in the Laboratory Test (#60) file will be modified with the installation of LR*5.2*1041.

The field length will be increased from 8 characters to 16 characters.

For example, if there were a test named URINE GLUCOSE, the PRINT NAME could also be URINE GLUCOSE after the LR*5.2*1041 installation.

See Section A.1 for further instructions.

```
Select VA FileMan Option: ENter or Edit File Entries

INPUT TO WHAT FILE: LABORATORY TEST//
EDIT WHICH FIELD: ALL// NAME
THEN EDIT FIELD: PRINT NAME
THEN EDIT FIELD:


Select LABORATORY TEST NAME: URINE GLUCOSE
NAME: URINE GLUCOSE//
PRINT NAME: UR.GLUC// ?
     ANSWER MUST BE 1-16 CHARACTERS IN LENGTH
PRINT NAME: UR.GLUC// URINE GLUCOSE

Select LABORATORY TEST NAME:
```

Figure 3-1: Modifying the print name

> **Note**: The print name will display on the Interim Report when the Laboratory Test name exceeds 15 characters. The Electronic Health Record Labs tab for results display the Laboratory Test Name and not the print name.

4.0   BLR Parameters and Mail Groups Option

With the installation of LR*5.2*1041, a new catch-all parameters/mail groups edit menu will be added to the BLRMENU with the PAGM option.

This will allow a Lab user with the LRSUPER security key the ability to edit all Lab Parameters and/or Mail Groups from one menu.

4.1   New PAMG Option on the BLRMENU

The new Edit RPMS Lab Parameters and/or Mail Groups option will be added to the BLRMENU during the installation of LR*5.2*1041.

Figure 4-1 illustrates the BLRMENU with the new PAMG option.

```
     IHS Lab Main Support Menu


   LS     Link Transaction Processor Status
   7421   Will restart the 7421 label routine if turned off.
   INQ    Inquire into the IHS LAB Transaction Log
   FLD    Search Transactions for PCC LINK DISABLE Error
   RSN    Requeue by Sequence Number
   RST    Requeue Transaction by Sort Template
   CPT    Enter/edit IHS Lab CPT File
   FAL    Find ALL PCC Link Errors from Lab
   STP    Stop/restart Lab to PCC Transaction Processor
   MSTR   Enter/edit BLR MASTER CONTROL FILE
   POV    Purpose of Visit Compliance Report
   6249   Display File 62.49 HL7 Segments
   BZY    RPMS Taskman Busy Device Rpt
   CCCD   Create Creatinine Clearance Delta Check
   CGFR   Create CKD-EPI Equation Delta Check
   CLR    Clear BLR errors from error log
   CUM    RPMS Cumulative Menu ...
   DADD   Add Completed Date to Accession Tests
   ETP    LA7 Message Queue Error Messages to Purgeable
   IHSM   RPMS Lab Microbiology Report
   ILUM   RPMS LOINC/UCUM Menu ...
   LABT   Determine if Required RPMS Lab Options Tasked
   LOI    RPMS Lab Package LOINC Percentage Report
   LRAS   Accession IHS Lab Microbiology Report
   LROS   Order/test status by Order Number
   LTRR   Laboratory Test (#60) File's Reference Ranges
   LVP    RPMS Lab Version & Patch Report
   MACC   Mark Multiple Accessions as Not Performed
   MILO   Micro Interim Report by Location
   MMR    Lab Description Abbreviation Report
   NLO    Lab Tests Without LOINC Entries Report
   ORDO   'Open Lab Orders' Reports
   ORPH   Remove Orphans from # 68
   ORPR   BROWSER REPORT ON ORPHANS FROM # 68
   PAMG   Edit IHS Lab Parameters and/or Mail Groups ...
   PDOC   Patient Reminder Document
   PURG   PURGE OLD ORDERS & ACCESSIONS Reports
   PURG   Purge ALL VA Alerts
```

```
      RBE    Clear ALL BLR Errors from Error Log
      REFL   Reference Lab Main Menu ...
      REPL   Replace Lab Order/Test Status ...
      RSNL   Reprint/Reship a Non LEDI Order
      SF60   IHS Search File 60
      SHDR   State Health Dept Report
      TCCR   Test Creatinine Clearance Logic
      TGFR   Test CKD-EPI Equation Logic
             Count Accessioned Tests Using Lab Data File ...
             RPMS Lab Ask-At-Order ...

 Select IHS Lab Main Support Menu Option:
```

Figure 4-1: BLRMENU with PAMG option

If a user selects the PAMG option, the sub-menu looks similar to the following:

```
                          IHS Database LR1041
Date:09/28/17                    RPMS Lab                     Time:2:31 PM
                          Parameters/Mail Groups                 BLRPAMGE
-------------------------------------------------------------------------------
    1    Edit RPMS Lab Parameters ...
    2    RPMS Lab Parameter's Description ...
    3    Edit RPMS Lab Mail Groups ...
    4    Mail Group's Description ...

Select:  (1-4):
```

Figure 4-2: PAGM Option Menu

4.1.1   Edit RPMS Lab Parameters Options

If a user selects Edit RPMS Lab Parameters, the sub-menu looks similar to the following:

```
IHS Database LR1041
Date:09/28/17                          RPMS Lab                Time:2:31 PM
                          Parameters/Mail Groups                 BLRPAMGE
-------------------------------------------------------------------------------
    1    Edit RPMS Lab Parameters ...
    2    RPMS Lab Parameter's Description ...
    3    Edit RPMS Lab Mail Groups ...
    4    Mail Group's Description ...

Select:  (1-4):
```

Figure 4-3: PAGM Option Menu

```
IHS Database LR1041
Date:09/28/17                          RPMS Lab                Time:2:32 PM
                          Parameters                             BLRPAMGE
-------------------------------------------------------------------------------
    1    Edit BLR CC DATA parameter
    2    Edit BLR AGE DETAIL parameter
    3    Edit BLR EMERGENCY ALERT parameter
    4    Edit BLR COLL DT PCC VISIT CREATION parameter
    5    Edit BLR DOB ONLY parameter
```

```
     6     Edit BLR LAB RESULTS CHANGED NOTIFY parameter
     7     Edit BLR QUALITATIVE ALERT parameter
     8     Edit BLR DAYS TO ACCESSION parameter
     9     Edit BLR PT CONFIRM parameter

Select:  (1-9):
```

Figure 4-4: Parameters Edit sub-Menu

Selection of a parameter to edit will take the user to the standard parameter edit menu.

4.1.2   Edit RPMS Lab Mail Groups Options

If a user selects the PAMG option, the sub-menu looks similar to the following:

```
                           IHS Database LR1041
Date:09/28/17                    RPMS Lab                       Time:2:31 PM
                         Parameters/Mail Groups                   BLRPAMGE
-------------------------------------------------------------------------------
     1     Edit RPMS Lab Parameters ...
     2     RPMS Lab Parameter's Description ...
     3     Edit RPMS Lab Mail Groups ...
     4     Mail Group's Description ...

Select:  (1-4):
```

Figure 4-5: PAGM Option Menu

When a user selects Edit RPMS Lab Mail Groups, the sub-menu looks similar to the following:

```
                           IHS Database LR1041
Date:09/28/17                    RPMS Lab                       Time:2:35 PM
                            Mail Groups                           BLRPAMGE
-------------------------------------------------------------------------------
     1     Edit LAB HIGH URGENCY NOTIFICATION Mail Group
     2     Edit LAB RESULTS CHANGED Mail Group
     3     Edit LAB QUALITATIVE ALERT Mail Group
     4     Edit LAB EMERENCY ROOM NOTIFICATION Mail Group
     5     Edit LMI Mail Group
     6     Edit BLR ERROR OVERFLOW WARNING Mail Group
     7     Edit BLR LAB PATIENT MERGE Mail Group
     8     Edit BLRLINK Mail Group
     9     Edit LAB MESSAGING Mail Group
    10     Edit BLR APPLICATION PLUGIN WARNING Mail Group
    11     Edit LAB Mail Group
    12     Edit LAB TECHS Mail Group

Select:  (1-12):
```

Figure 4-6: Mail Groups Edit sub-Menu

Selection of a Mail Group to edit will take the user to the standard Mail Group edit menu.

4.1.3   RPMS Lab Parameter's Description

If a user selects the PAMG option, the sub-menu looks similar to the following:

```
                         IHS Database LR1041
Date:09/28/17                    RPMS Lab                      Time:2:31 PM
                         Parameters/Mail Groups                    BLRPAMGE
------------------------------------------------------------------------------
    1    Edit RPMS Lab Parameters ...
    2    RPMS Lab Parameter's Description ...
    3    Edit RPMS Lab Mail Groups ...
    4    Mail Group's Description ...

Select:  (1-4):
```

Figure 4-7: PAGM Option Menu

When a user selects the RPMS Lab Parameter's Description option, the sub-menu looks similar to the following:

```
                         IHS Database LR1041
Date:09/28/17                    RPMS Lab                      Time:2:35 PM
                        Parameter's Description                    BLRPAMGE
------------------------------------------------------------------------------
    1    BLR CC DATA parameter
    2    BLR AGE DETAIL parameter
    3    BLR EMERGENCY ALERT parameter
    4    BLR COLL DT PCC VISIT CREATION parameter
    5    BLR DOB ONLY parameter
    6    BLR LAB RESULTS CHANGED NOTIFY parameter
    7    BLR QUALITATIVE ALERT parameter
    8    BLR DAYS TO ACCESSION parameter
    9    BLR PT CONFIRM parameter

Select:  (1-9):
```

Figure 4-8: Parameters' Description sub-Menu

Selecting any of the options will display the DESCRIPTION field from the PARAMETER DEFINTION file for that parameter.

For example, if the user selects 2, BLR AGE DETAIL, the display screen will look similar to the following:

```
                         IHS Database LR1041
Date:09/28/17                    RPMS Lab                      Time:2:35 PM
SHOWDESC                       BLR AGE DETAIL                      BLRPAMGE
------------------------------------------------------------------------------

 DESCRIPTION:
 If YES it means that the AGE variable needs to have MOS if toddler or DYS
 if newborn or YRS if AGE > 2 years.



    Press RETURN Key:
```

Figure 4-9: Parameter Description

4.1.4   RPMS Mail Group's Description

If a user selects the PAMG option, the sub-menu looks similar to the following:

```
                       IHS Database LR1041
Date:09/28/17                  RPMS Lab                        Time:2:31 PM
                       Parameters/Mail Groups                    BLRPAMGE
--------------------------------------------------------------------------
    1    Edit RPMS Lab Parameters ...
    2    RPMS Lab Parameter's Description ...
    3    Edit RPMS Lab Mail Groups ...
    4    Mail Group's Description ...

Select:  (1-4):
```

Figure 4-10: PAGM Option Menu

When a user selects the Mail Group's Description option, the sub-menu looks similar to the following:

```
                       IHS Database LR1041
Date:09/28/17                  RPMS Lab                        Time:2:35 PM
                       Mail Group's Description
----------------------------------------------------------------------------
    1     LAB HIGH URGENCY NOTIFICATION Mail Group
    2     LAB RESULTS CHANGED Mail Group
    3     LAB QUALITATIVE ALERT Mail Group
    4     LAB EMERENCY ROOM NOTIFICATION Mail Group
    5     LMI Mail Group
    6     BLR ERROR OVERFLOW WARNING Mail Group
    7     BLR LAB PATIENT MERGE Mail Group
    8     BLRLINK Mail Group
    9     LAB MESSAGING Mail Group
    10    BLR APPLICATION PLUGIN WARNING Mail Group
    11    LAB Mail Group
    12    LAB TECHS Mail Group

Select:  (1-12):
```

Figure 4-11: Mail Group's Description sub-Menu

Selecting any of the options will display the DESCRIPTION field from the MAIL GROUP file for that group.

For example, if the user selects 2, LAB RESULTS CHANGED, the display screen will look similar to the following:

```
                       IHS Database LR1041
Date:09/28/17                  RPMS Lab                        Time:2:35 PM
SHOWDESC                  LAB RESULTS CHANGED                    BLRPAMGE
--------------------------------------------------------------------------
 DESCRIPTION:    Mail Group to receive notifications when Lab Results have been
```

```
changed.


   Press RETURN Key:
```

Figure 4-12: Parameter Description

5.0   Changed Lab Results MailMan Messages

With the installation of LR*5.2*1041, users assigned to the new LAB RESULTS CHANGED Mail Group will receive a message each time any Chemistry lab result is changed. The message will consist of the same verbiage that has been stored into the comments section of the Lab Data file.

The messages will only be sent, however, if the new parameter BLR LAB RESULTS CHANGED NOTIFY is set to YES.

See Section A.2 for further instructions.

5.1   New BLR LAB RESULTS CHANGED NOTIFY Parameter Definition

The new BLR LAB RESULTS CHANGED NOTIFY Parameter will be added to the PARAMETER DEFINITION file during the installation of LR*5.2*1041.

5.1.1   BLR LAB RESULTS CHANGED NOTIFY Parameter Modification Option

The BLR LAB RESULTS CHANGED NOTIFY parameter can be modified by the new BLR PARMETERS AND MAIL GROUPS option that will be added to the BLRMENU with the PAMG menu option.

See Section 4.1 for an example BLRMENU listing showing the new PAMG option.

If a user selects the PAGM option, the sub-menu looks similar to the following:

```
                           IHS Database LR1041
Date:09/28/17                        RPMS Lab                       Time:2:31 PM
                           Parameters/Mail Groups                     BLRPAMGE
--------------------------------------------------------------------------------
    1      Edit RPMS Lab Parameters ...
    2      RPMS Lab Parameter's Description ...
    3      Edit RPMS Lab Mail Groups ...
    4      Mail Group's Description ...


Select:  (1-2):
```

Figure 5-1: PAGM Option Menu

Selecting the EDIT RPMS Lab Parameters option will display the Parameters menu.

```
                           IHS Database LR1041
Date:09/28/17                        RPMS Lab                       Time:2:35 PM
                              Parameters                              BLRPAMGE
--------------------------------------------------------------------------------
    1      Edit BLR CC DATA parameter
```

```
     2     Edit BLR AGE DETAIL parameter
     3     Edit BLR EMERGENCY ALERT parameter
     4     Edit BLR COLL DT PCC VISIT CREATION parameter
     5     Edit BLR DOB ONLY parameter
     6     Edit BLR LAB RESULTS CHANGED NOTIFY parameter
     7     Edit BLR QUALITATIVE ALERT parameter
     8     Edit BLR DAYS TO ACCESSION parameter
     9     Edit BLR PT CONFIRM parameter


Select:  (1-9):
```

Figure 5-2: Parameters Edit sub-Menu

Selecting the Edit BLR LAB RESULTS CHANGED NOTIFY parameter option will allow a user with the LRSUPER Security key to modify the parameter. It will display a screen similar to the following:

```
                          2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                    IHS Laboratory                    Time:8:38 AM
                   BLR LAB RESULTS CHANGED NOTIFY Parameter          BLREMERA
                               Modify Value
--------------------------------------------------------------------------------

BLR LAB RESULTS CHANGED NOTIFY (YES/NO)? NO//
```

Figure 5-3: LRCP Results Change notify menu

The only valid responses are either YES or NO. The default response is the current value of the parameter.

If a FileMan exit (by typing a caret (^), or up-hat) is entered, the routine is exited via a screen similar to the following:

```
                          2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                    IHS Laboratory                    Time:8:39 AM
                   BLR LAB RESULTS CHANGED NOTIFY Parameter          BLREMERA
                               Modify Value
--------------------------------------------------------------------------------

BLR LAB RESULTS CHANGED NOTIFY (YES/NO)? NO// ^

    Invalid/No Entry/Quit. Routine Ends.

         Press RETURN Key:
```

Figure 5-4: Exiting the LRCP option

5.2   New Mail Group LAB RESULTS CHANGED

LR*5.2*1041 will add a new Mail Group, LAB RESULTS CHANGED, to the Mail Group dictionary. It is the only Mail Group that will receive the Lab Results Changed MailMan messages.

5.2.1   Mail Group Modifications option

A new option, Edit RPMS Lab Mail Groups is part of the new BLR PARMETERS AND MAIL GROUPS option that will be added to the BLRMENU with the PAMG menu option.

See Section 4.1 for an example BLRMENU listing showing the new PAMG option.

If a user selects the PAGM option, the sub-menu looks similar to the following:

```
                               IHS Database LR1041
Date:09/28/17                        RPMS Lab                       Time:2:31 PM
                              Parameters/Mail Groups                   BLRPAMGE
--------------------------------------------------------------------------------
    1     Edit RPMS Lab Parameters ...
    2     RPMS Lab Parameter's Description ...
    3     Edit RPMS Lab Mail Groups ...
    4     Mail Group's Description ...


Select:  (1-2):
```

Figure 5-5: PAMG Option Menu

Selecting the EDIT RPMS Lab Mail Groups option will display the Mail Groups menu.

```
                               IHS Database LR1041
Date:09/28/17                        RPMS Lab                       Time:2:35 PM
                                 Mail Groups                           BLRPAMGE
--------------------------------------------------------------------------------
    1     LAB HIGH URGENCY NOTIFICATION Mail Group
    2     LAB RESULTS CHANGED Mail Group
    3     LAB QUALITATIVE ALERT Mail Group
    4     LMI Mail Group
    5     BLR ERROR OVERFLOW WARNING Mail Group
    6     BLR LAB PATIENT MERGE Mail Group
    7     BLRLINK Mail Group
    8     LAB MESSAGING Mail Group
    9     BLR APPLICATION PLUGIN WARNING Mail Group
   10     LAB Mail Group
   11     LAB TECHS Mail Group


Select:  (1-11):
```

Figure 5-6: Mail Groups Edit sub-Menu

Selecting the Edit LAB RESULTS CHANGED Mail Group option, the following menu displays:

```
                           2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                        RPMS Lab                       Time:8:44 AM
                              LAB RESULTS CHANGED                      BLREMERA
                            Mail Group Modifications
```

```
                                 MAIN MENU
--------------------------------------------------------------------------------
    1) Add User to Mail Group               2) Delete User From Mail Group
    3) List Users on Mail Group

Select:  (1-3):
```

Figure 5-7: Mail Group Modifications menu

5.2.1.1   Selecting Add User to Mail Group

If Add User to Mail Group is selected, the following menu will display:

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                    IHS Laboratory                  Time:8:45 AM
                          LAB RESULTS CHANGED                      BLREMERA
                         Add User to Mail Group
--------------------------------------------------------------------------------

Select NEW PERSON:
```

Figure 5-8: Adding User menu

A person from the NEW PERSON (#200) file can be selected; for example:

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                    IHS Laboratory                  Time:8:45 AM
                          LAB RESULTS CHANGED                      BLREMERA
                         Add User to Mail Group
--------------------------------------------------------------------------------

Select NEW PERSON: USER3
     1   USER3,USER
     2   USER3,USER JR
CHOOSE 1-2: 1  USER3,USER

    USER3,USER added to LAB HIGH URGENCY NOTIFICATION


        Press RETURN Key:
```

Figure 5-9: Example of adding a user

Pressing Enter will return to the "add user" menu

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                    IHS Laboratory                  Time:8:45 AM
                          LAB RESULTS CHANGED                      BLREMERA
                         Add User to Mail Group
--------------------------------------------------------------------------------

Select NEW PERSON:
```

Figure 5-10: Adding User menu

> After all the users are entered, pressing RETURN at the NEW PERSON prompt will display something similar to the following:

```
                        2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                   IHS Laboratory                   Time:8:45 AM
                        LAB RESULTS CHANGED                       BLREMERA
                        Add User to Mail Group
-------------------------------------------------------------------------------

Select NEW PERSON:

    Exit/No Entry.

        Press RETURN Key:

    1 Users added to LAB RESULTS CHANGED

    0 Errors when trying to add users to LAB RESULTS CHANGED


        Press RETURN Key:
```

Figure 5-11: Adding User report

5.2.1.2   Selecting Delete User from Mail Group

```
                        2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                    RPMS Lab                        Time:8:44 AM
                        LAB RESULTS CHANGED                       BLREMERA
                        Mail Group Modifications
                             MAIN MENU
-------------------------------------------------------------------------------
    1) Add User to Mail Group          2) Delete User From Mail Group
    3) List Users on Mail Group

Select:  (1-3): 2
```

Figure 5-12: Mail Group Modifications menu

> If Delete User From Mail Group is selected, the menu will alphabetically display all the current users on the Mail group, similar to the following:

```
                        2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                    RPMS Lab                        Time:8:44 AM
                        LAB RESULTS CHANGED                       BLREMERA
                        Delete User from Mail Group
-------------------------------------------------------------------------------


Select one of the users below:

    1 USER1,USER1
    2 USER2,USER2
    3 USER3,USER3


Enter Number:
```

Figure 5-13: Delete User From Mail Group

Once the user has entered the number, the person listed will be removed from the Mail Group and a message displayed, similar to the following:

```
                            2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                      RPMS Lab                        Time:8:44 AM
                           LAB RESULTS CHANGED                       BLREMERA
                         Delete User from Mail Group
--------------------------------------------------------------------------------


Select one of the users below:

     1 USER1,USER1
     2 USER2,USER2
     3 USER3,USER3


Enter Number: 2

    USER2,USER2 deleted from LAB RESULTS CHANGED Mail Group


        Press RETURN Key:
```

Figure 5-14: Delete User From Mail Group

When the RETURN key is pressed, the display will reflect that the current members of the Mail group, similar to the following:

```
                            2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                      RPMS Lab                        Time:8:44 AM
                           LAB RESULTS CHANGED                       BLREMERA
                         Delete User from Mail Group
--------------------------------------------------------------------------------


Select one of the users below:

     1 USER1,USER1
     2 USER3,USER3


Enter Number:
```

Figure 5-15: Delete User From Mail Group

If RETURN is pressed here, a brief listing will show how many users were removed from the Mail Group, similar to the following:

```
                            2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                      RPMS Lab                        Time:8:44 AM
                           LAB RESULTS CHANGED                       BLREMERA
                         Delete User from Mail Group
--------------------------------------------------------------------------------
```

```
Select one of the users below:

     1 USER1,USER1
     2 USER3,USER3


Enter Number:

    Exit/No Entry.

        Press RETURN Key:

    1 User deleted from LAB RESULTS CHANGED

    0 Errors when trying to delete users from LAB RESULTS CHANGED


        Press RETURN Key:
```

Figure 5-16: Deleted User From Mail Group

5.2.1.3   Selecting List Users on Mail Group

If List Users on Mail Group is selected an option will then prompt the user if they want to list all of the members of the mail group without paging. The default will be NO. It will look similar to the following:

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                     RPMS Lab                        Time:8:44 AM
                         LAB RESULTS CHANGED                        BLREMERA
                          Mail Group Members
--------------------------------------------------------------------------------

One Header Line ONLY? NO//
```

Figure 5-17: List Users on Mail group

Once the prompt has been answered, a report, similar to the following, will display to the screen.

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                     IHS Laboratory                      Page 1
Time:8:51 AM                     LAB RESULTS CHANGED                  BLREMERA
                          Mail Group Members

    DUZ        Name
--------------------------------------------------------------------------------
    2929       USER,TEST 1
    2916       USER,TEST 2
    2859       USER,TEST 3


        3 Members

            Press RETURN Key:
```

Figure 5-18: Mail Group Members listing

5.3   MailMan Message Example

An example MailMan message follows:

```
Subj: Accession CH 1003 1 Lab Results Changed  [#107694] 10/01/17@15:55
10 lines
From: LRDIDLE0  In 'IN' basket.   Page 1
-------------------------------------------------------------------------
_CHLORIDE reported incorrectly as 23 by [2859].
Changed to 93 on Nov 16, 2016@15:55 by [2859].
_CHLORIDE flagged incorrectly as L* by [2859].
Changed to L on Nov 16, 2016@15:55 by [2859].

Patient:TEST,TESTING TEST
     Accession:CH 1003 1
          UID:1062770001

     Results Changed by:USER,TEST [2859]

Enter message action (in IN basket): Ignore//
```

Figure 5-19: Mail Group MailMan message

6.0   Qualitative Critical Alert Flag

With the installation of LR*5.2*1041, RPMS Lab will allow alerts for qualitative flags.

See Section A.3 for further instructions.

6.1   File 60 New Site/Specimen Field

In order to accommodate qualitative values, a new, free-text field, QUALITATIVE VALUES, was created under the Site/Specimen field in File 60. The new field is a multiple, which means it can hold many values.

Please note that the logic of the routine that determines a qualitative flag requires the result must match, exactly, what is entered into the QUALITATIVE VALUES field. For example, if the result is POS, then an entry in the QUALITATIVE VALUES must also be POS.

6.2   New LAB QUALITATIVE ALERT Mail Group and New LAB QUALITATIVE ALERT Parameter

A new Mail Group and a new Parameter will also be installed into the RPMS Lab system during the installation of LR*5.2*1041.

The LAB QUALITATIVE ALERT parameter is a YES/NO parameter that regulates whether MailMan Messages are sent to the new LAB QUALITATIVE ALERT mail group.

The LAB QUALITATIVE ALERT parameter can be modified by the new BLR PARMETERS AND MAIL GROUPS option that will be added to the BLRMENU with the PAMG menu option.

See Section 4.1 for an example BLRMENU listing showing the new PAMG option.

6.2.1   Modify LAB QUALITATIVE ALERT Parameter

If a user selects the PAMG option, the sub-menu looks similar to the following:

```
                          IHS Database LR1041
Date:09/28/17                    RPMS Lab                       Time:2:31 PM
                          Parameters/Mail Groups                   BLRPAMGE
------------------------------------------------------------------------------
     1     Edit RPMS Lab Parameters ...
     2     RPMS Lab Parameter's Description ...
     3     Edit RPMS Lab Mail Groups ...
     4     Mail Group's Description ...

```

```
Select:  (1-4):
```

Figure 6-1: PAGM option Main Menu

When the user selects the Edit RPMS Lab Parameters, the sub-menu will be similar to the following:

```
                          IHS Database LR1041
Date:09/28/17                   RPMS Lab                        Time:3:06 PM
                               Parameters                          BLRPAMGE
--------------------------------------------------------------------------------
    1     Edit BLR CC DATA parameter
    2     Edit BLR AGE DETAIL parameter
    3     Edit BLR EMERGENCY ALERT parameter
    4     Edit BLR COLL DT PCC VISIT CREATION parameter
    5     Edit BLR DOB ONLY parameter
    6     Edit BLR LAB RESULTS CHANGED NOTIFY parameter
    7     Edit BLR QUALITATIVE ALERT parameter
    8     Edit BLR DAYS TO ACCESSION parameter
    9     Edit BLR PT CONFIRM parameter

Select:  (1-9):
```

Figure 6-2: Parameters Edit Sub-Menu

When the user selects the Edit BLR QUALITATIVE ALERT parameter, the modify menu will look similar to the following:

```
                          IHS Database LR1041
Date:09/28/17                 IHS Laboratory                     Time:3:10 PM
                      BLR QUALITATIVE ALERT Parameter               BLREMERA
                             Modify Value
--------------------------------------------------------------------------------

BLR QUALITATIVE ALERT (YES/NO)? NO//
```

Figure 6-3: BLR QUALITATIVE ALERT Edit Sub-Menu

The only selections possible are YES or NO. Once the user has changed the selection, the changed value will be displayed, similar to the following:

```
                          IHS Database LR1041
Date:09/28/17                 IHS Laboratory                     Time:3:10 PM
                      BLR QUALITATIVE ALERT Parameter               BLREMERA
                             Modify Value
--------------------------------------------------------------------------------

BLR QUALITATIVE ALERT (YES/NO)? NO// YES

    BLR QUALITATIVE ALERT Parameter is currently YES

        Press RETURN Key:
```

Figure 6-4: Example of parameter edit

An example LAB QUALITATIVE ALERT message follows:

```
DEMO,AMEN (D1242): Labs resulted - [HCG, Urine]
Accession CH 1001 1 Qualitative Alert
          Enter  "VA to jump to VIEW ALERTS option


You have 50 new messages.  (Last arrival: 10/01/17@19:20)
```

Figure 6-5: Example of LAB QUALITATIVE ALERT message

6.2.2   Modify LAB QUALITATIVE ALERT Mail Group

In order for the users on the new LAB QUALITATIVE ALERT Mail Group to receive messages related to qualitative results, they must be added to the mail group.

To edit the LAB QUALITATIVE ALERT Mail Group, a user must have the LRSUPER Security Key and select the new PAMG option from the BLRMENU. The PAMG main menu will look similar to the following

```
                         IHS Database LR1041
Date:09/28/17                   RPMS Lab                        Time:2:31 PM
                         Parameters/Mail Groups                   BLRPAMGE
-------------------------------------------------------------------------------
    1     Edit RPMS Lab Parameters ...
    2     RPMS Lab Parameter's Description ...
    3     Edit RPMS Lab Mail Groups ...
    4     Mail Group's Description ...


Select:  (1-4):
```

Figure 6-6: PAGM option Main Menu

When the user selects the Edit RPMS Lab Mail Groups, the sub-menu will be similar to the following:

```
                         IHS Database LR1041
Date:09/28/17                   RPMS Lab                        Time:2:49 PM
                         Mail Groups                             BLRPAMGE
-------------------------------------------------------------------------------
    1     LAB HIGH URGENCY NOTIFICATION Mail Group
    2     LAB RESULTS CHANGED Mail Group
    3     LAB QUALITATIVE ALERT Mail Group
    4     LMI Mail Group
    5     BLR ERROR OVERFLOW WARNING Mail Group
    6     BLR LAB PATIENT MERGE Mail Group
    7     BLRLINK Mail Group
    8     LAB MESSAGING Mail Group
    9     BLR APPLICATION PLUGIN WARNING Mail Group
   10     LAB Mail Group
   11     LAB TECHS Mail Group

Select:  (1-11):
```

Figure 6-7: Mail Groups Edit Sub-Menu

When the user selects the Edit LAB QUALITATIVE ALERT Mail Group option, the sub-menu will be similar to the following:

```
                            2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                     RPMS Lab                      Time:8:44 AM
                            LAB QUALITATIVE ALERT                   BLREMERA
                            Mail Group Modifications
                                  MAIN MENU
--------------------------------------------------------------------------------
    1) Add User to Mail Group            2) Delete User From Mail Group
    3) List Users on Mail Group

Select:  (1-3):
```

Figure 6-8: LAB QUALITATIVE ALERT Mail Group Edit menu

6.2.2.1   Selecting Add User to Mail Group

If Add User to Mail Group is selected, the following menu will display:

```
                            2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                    IHS Laboratory                 Time:8:45 AM
                            LAB QUALITATIVE ALERT                   BLREMERA
                            Add User to Mail Group
--------------------------------------------------------------------------------

Select NEW PERSON:
```

Figure 6-9: LAB QUALITATIVE ALERT Mail Group Add User

A person from the NEW PERSON (#200) file can be selected; for example:

```
                            2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                    IHS Laboratory                 Time:8:45 AM
                            LAB QUALITATIVE ALERT                   BLREMERA
                            Add User to Mail Group
--------------------------------------------------------------------------------

Select NEW PERSON: USER3
     1   USER3,USER
     2   USER3,USER JR
CHOOSE 1-2: 1  USER3,USER

    USER3,USER added to LAB HIGH URGENCY NOTIFICATION


        Press RETURN Key:
```

Figure 6-10: Example of adding a user

Pressing Enter will return to the "add user" menu.

```
                            2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                    IHS Laboratory                 Time:8:45 AM
                            LAB QUALITATIVE ALERT                   BLREMERA
                            Add User to Mail Group
```

```
--------------------------------------------------------------------------------

Select NEW PERSON:
```

Figure 6-11: Add User menu

> After all the users are entered, pressing RETURN at the NEW PERSON prompt will
> display something similar to the following:

```
                        2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                  IHS Laboratory                 Time:8:45 AM
                        LAB QUALITATIVE ALERT                    BLREMERA
                        Add User to Mail Group
--------------------------------------------------------------------------------

Select NEW PERSON:

    Exit/No Entry.

        Press RETURN Key:

    1 Users added to LAB RESULTS CHANGED

    0 Errors when trying to add users to LAB RESULTS CHANGED


        Press RETURN Key:
```

Figure 6-12: Adding User report

6.2.2.2   Selecting Delete User From Mail Group

```
                        2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                     RPMS Lab                     Time:8:44 AM
                        LAB QUALITATIVE ALERT                    BLREMERA
                        Mail Group Modifications
                             MAIN MENU
--------------------------------------------------------------------------------
    1) Add User to Mail Group           2) Delete User From Mail Group
    3) List Users on Mail Group

Select:  (1-3): 2
```

Figure 6-13: Mail Group Edit menu

> If Delete User From Mail Group is selected, the menu will alphabetically display all
> the current users on the Mail group, similar to the following:

```
                        2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                     RPMS Lab                     Time:8:44 AM
                        LAB QUALITATIVE ALERT                    BLREMERA
                        Delete User from Mail Group
--------------------------------------------------------------------------------


Select one of the users below:
```

```
     1 USER1,USER1
     2 USER2,USER2
     3 USER3,USER3


Enter Number:
```

Figure 6-14: Delete User From Mail Group

> Once the user has entered the number, the person listed will be removed from the Mail Group and a message displayed, similar to the following:

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                    RPMS Lab                        Time:8:44 AM
                         LAB QUALITATIVE ALERT                      BLREMERA
                         Delete User from Mail Group
-------------------------------------------------------------------------------


Select one of the users below:

     1 USER1,USER1
     2 USER2,USER2
     3 USER3,USER3


Enter Number: 2

    USER2,USER2 deleted from LAB RESULTS CHANGED Mail Group


        Press RETURN Key:
```

Figure 6-15: Delete User From Mail Group

> When the RETURN key is pressed, the display will reflect that the current members of the Mail group, similar to the following:

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                    RPMS Lab                        Time:8:44 AM
                         LAB QUALITATIVE ALERT                      BLREMERA
                         Delete User from Mail Group
-------------------------------------------------------------------------------


Select one of the users below:

     1 USER1,USER1
     2 USER3,USER3


Enter Number:
```

Figure 6-16: Delete User From Mail Group

> If RETURN is pressed here, a brief listing will show how many users were removed from the Mail Group, similar to the following:

```
                        2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                     RPMS Lab                     Time:8:44 AM
                         LAB QUALITATIVE ALERT                   BLREMERA
                       Delete User from Mail Group
--------------------------------------------------------------------------------


Select one of the users below:

     1 USER1,USER1
     2 USER3,USER3


Enter Number:

     Exit/No Entry.

          Press RETURN Key:

     1 User deleted from LAB RESULTS CHANGED

     0 Errors when trying to delete users from LAB RESULTS CHANGED


          Press RETURN Key:
```

Figure 6-17: Deleted User From Mail Group

6.2.2.3   Selecting List Users on Mail Group

If List Users on Mail Group is selected an option will then prompt the user if they want to list all of the members of the mail group without paging. The default will be NO. It will look similar to the following:

```
                        2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                     RPMS Lab                     Time:8:44 AM
                         LAB QUALITATIVE ALERT                   BLREMERA
                          Mail Group Members
--------------------------------------------------------------------------------

One Header Line ONLY? NO//
```

Figure 6-18: List Users on Mail group

Once the prompt has been answered, a report, similar to the following, will display to the screen.

```
                        2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                     IHS Laboratory                    Page 1
Time:8:51 AM                  LAB QUALITATIVE ALERT                 BLREMERA
                          Mail Group Members


    DUZ        Name
--------------------------------------------------------------------------------
    2929       USER,TEST 1
    2916       USER,TEST 2
    2859       USER,TEST 3
```

```
        3 Members

            Press RETURN Key:
```

Figure 6-19: Mail Group Members listing

6.3   MailMan Message Example

An example MailMan message follows:

```
Subj: Accession SO 16 371 Qualitative Alert  [#107764] 12/09/16@15:37  9 lines
From: LRVER4  In 'IN' basket.   Page 1
--------------------------------------------------------------------------
Accession SO 16 371 has a result that has triggered a Qualitative Alert.

    Patient: DEMO,TEST

    Test: _HIV SCREEN 4TH GEN [2001503]

        Result:R

    DATE/TIME:12/09/2016 3:37 PM

Enter message action (in IN basket): Ignore//
```

Figure 6-20: Mail Group MailMan message

7.0   Reminder Document for Patient

With the installation of LR*5.2*1041, two new reports will be available to show a patient's future/current orders as well as all orders the patient has in the LAB ORDER ENTRY file.

See Section A.4 for further instructions.

7.1   New PDOC Option on BLRMENU

The new PDOC option, Patient Reminder Document, will be added to the BLRMENU during the post install phase of the LR*5.2*1041 install.

An example BLRMENU listing showing the new PDOC option follows:

```
IHS Lab Main Support Menu


   LS     Link Transaction Processor Status
   7421   Will restart the 7421 label routine if turned off.
   INQ    Inquire into the IHS LAB Transaction Log
   FLD    Search Transactions for PCC LINK DISABLE Error
   RSN    Requeue by Sequence Number
   RST    Requeue Transaction by Sort Template
   CPT    Enter/edit IHS Lab CPT File
   FAL    Find ALL PCC Link Errors from Lab
   STP    Stop/restart Lab to PCC Transaction Processor
   MSTR   Enter/edit BLR MASTER CONTROL FILE
   POV    Purpose of Visit Compliance Report
   6249   Display File 62.49 HL7 Segments
   BZY    IHS Taskman Busy Device Rpt
   CCCD   Create Creatinine Clearance Delta Check
   CDVC   Edit BLR COLL DT PCC VISIT CREATION Parameter
   CGFR   Create CKD-EPI Equation Delta Check
   CLR    Clear BLR errors from error log
   CUM    IHS CUMULATIVE MENU ...
   DADD   Add Completed Date to Accession Tests
   EAPE   Edit BLR EMERGENCY ALERT Parameter
   EDCC   BLR CC DATA Parameter Edit
   EMGP   Edit LAB HIGH URGENCY NOTIFICATION Mail Group


           Press 'RETURN' to continue, '^' to stop:
   ETP    LA7 Message Queue Error Messages to Purgeable
   IHSM   IHS Lab Microbiology Report
   ILUM   IHS LOINC/UCUM MENU ...
   LABT   Determine if Required RPMS Lab Options Tasked
   LOI    IHS Lab Package LOINC Percentage Report
   LRAS   Accession IHS Lab Microbiology Report
   LROS   Order/test status by Order Number
   LTRR   Laboratory Test (#60) File's Reference Ranges
   LVP    IHS Lab Version & Patch Report
   MACC   Mark Multiple Accessions as Not Performed
   MILO   Micro Interim Report by Location
   MMR    Lab Description Abbreviation Report
   NLO    Lab Tests Without LOINC Entries Report
   ORPH   Remove Orphans from # 68
```

```
        PDOC    Patient Reminder Document
        ORPR    BROWSER REPORT ON ORPHANS FROM # 68
        POCA    Edit BLR AGE DETAIL Parameter
        RBE     Clear ALL BLR Errors from Error Log
        REFL    Reference Lab Main Menu ...
        REPL    Replace Lab Order/Test Status Report ...
        SF60    IHS Search File 60
        SHDR    State Health Dept Report
        TCCR    Test Creatinine Clearance Logic


                  Press 'RETURN' to continue, '^' to stop:
        TGFR    Test CKD-EPI Equation Logic
                Count Accessioned Tests Using Lab Data File ...
                IHS Lab Ask-At-Order ...

 Select IHS Lab Main Support Menu Option:
```

Figure 7-1: BLRMENU example with new PDOC option

7.2   Selecting PDOC option

Once the PDOC option is selected, the following menu displays:

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                    RPMS Lab                         Time:6:51 AM
                         Patient Reminder Document                    BLRDOCRM
                         MAIN MENU
-------------------------------------------------------------------------------
    1) Future/Current Orders              2) All Orders


Select:  (1-2):
```

Figure 7-2: Patient Reminder Document Main Menu

7.2.1   Future/Current Orders option

If the Future/Current Orders option is selected, the following menu displays:

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17            Patient Reminder Document                Time:7:19 AM
-------------------------------------------------------------------------------

Select PATIENT:
```

Figure 7-3: Patient Reminder Document Future/Current Orders option

The user will then have to select a patient from the PATIENT file. For example,

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17            Patient Reminder Document                Time:7:19 AM
-------------------------------------------------------------------------------

Select PATIENT:TEST,PATIENT 1
                                      F 03-31-1987 XXX-XX-5324       121939
```

Figure 7-4: Selecting Patient

Then the user will have to select the output device. In this example, the current terminal is selected.

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                 Patient Reminder Document              Time:7:19 AM
--------------------------------------------------------------------------------

Select PATIENT:TEST,PATIENT 1
                                      F 03-31-1987 XXX-XX-1234        123456
DEVICE: HOME//   VIRTUAL TERMINAL    Right Margin: 80//
Figure 7 5: Selecting Output Device

The Report will then print.  For example:

                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                 Patient Reminder Document                    Page 1
Time:7:38 AM            TEST,PATIENT [40172]   HRCN:123456              BLRDOCRM

        Estimated
Order #  Date/Time Collect    Test Description        Urgency  Ordering Provider
--------------------------------------------------------------------------------
2921     01/23/2017  3:08 PM  CBC W/Auto DIFF (OIT)   ROUTINE  USER,PHYSICIAN
2901     01/11/2017  9:32 AM  CBC W/Auto DIFF (OIT)   ASAP     USER,PHYSICIAN
2920     01/09/2017  3:08 PM  CBC W/Auto DIFF (OIT)   ROUTINE  USER,PHYSICIAN
2900     12/28/2016  9:32 AM  CBC W/Auto DIFF (OIT)   ASAP     USER,PHYSICIAN
2919     12/26/2016  3:08 PM  CBC W/Auto DIFF (OIT)   ROUTINE  USER,PHYSICIAN
2899     12/14/2016  9:32 AM  CBC W/Auto DIFF (OIT)   ASAP     USER,PHYSICIAN
2918     12/12/2016  3:08 PM  CBC W/Auto DIFF (OIT)   ROUTINE  USER,PHYSICIAN
2898     11/30/2016  9:32 AM  CBC W/Auto DIFF (OIT)   ASAP     USER,PHYSICIAN


        8 Orders.

Press RETURN Key:
```

Figure 7-5: Example report

Note that if an order was entered without a time component, no time will be displayed.

7.2.2   All Orders option

Once the PDOC option is selected, the following menu displays:

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                      RPMS Lab                          Time:6:51 AM
                          Patient Reminder Document                    BLRDOCRM
                              MAIN MENU
--------------------------------------------------------------------------------
   1) Future/Current Orders            2) All Orders


Select:  (1-2):
```

Figure 7-6: Patient Reminder Document Main Menu

If the All Orders option is selected, the following menu displays:

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                  Patient Orders Document              Time:7:19 AM
--------------------------------------------------------------------------------

Select PATIENT:
```

Figure 7-7: Patient Reminder Document All Orders option

The user will then have to select a patient from the PATIENT file. For example,

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                  Patient Orders Document              Time:7:19 AM
--------------------------------------------------------------------------------

Select PATIENT:TEST,PATIENT 1
                                    F 03-31-1987 XXX-XX-5324        121939
```

Figure 7-8: Selecting Patient

Then the user will have to select the output device. In this example, the current
terminal is selected.

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                  Patient Orders Document              Time:7:19 AM
--------------------------------------------------------------------------------

Select PATIENT:TEST,PATIENT 1
                                    F 03-31-1987 XXX-XX-1234        123456
DEVICE: HOME//   VIRTUAL TERMINAL    Right Margin: 80//
```

Figure 7-9: Selecting Output Device

The Report will then print. For example:

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                  Patient Orders Document                    Page 1
Time:7:38 AM            TEST,PATIENT [40172]   HRCN:123456            BLRDOCRM


        Estimated
Order # Date/Time Collect    Test Description       Urgency  Ordering Provider
--------------------------------------------------------------------------------
2921    01/23/2017  3:08 PM  CBC W/Auto DIFF (OIT)  ROUTINE  USER,PHYSICIAN
2901    01/11/2017  9:32 AM  CBC W/Auto DIFF (OIT)  ASAP     USER,PHYSICIAN
2920    01/09/2017  3:08 PM  CBC W/Auto DIFF (OIT)  ROUTINE  USER,PHYSICIAN
2900    12/28/2016  9:32 AM  CBC W/Auto DIFF (OIT)  ASAP     USER,PHYSICIAN
2919    12/26/2016  3:08 PM  CBC W/Auto DIFF (OIT)  ROUTINE  USER,PHYSICIAN
2899    12/14/2016  9:32 AM  CBC W/Auto DIFF (OIT)  ASAP     USER,PHYSICIAN
2918    12/12/2016  3:08 PM  CBC W/Auto DIFF (OIT)  ROUTINE  USER,PHYSICIAN
2898    11/30/2016  9:32 AM  CBC W/Auto DIFF (OIT)  ASAP     USER,PHYSICIAN
858     11/29/2016           CALCIUM                ROUTINE  USER,PHYSICIAN
857     11/29/2016           GLUCOSE                ROUTINE  USER,PHYSICIAN
849     11/08/2016           GLUCOSE                ROUTINE  USER,PHYSICIAN
                             CALCIUM                ROUTINE  USER,PHYSICIAN
838     10/12/2016           GLUCOSE                ROUTINE  USER,PHYSICIAN
```

```
837        10/12/2016               GLUCOSE                   ROUTINE   USER,PHYSICIAN
833        09/30/2016               BASIC MET PANEL           ROUTINE   USER,PHYSICIAN
825        09/28/2016  7:29 AM  BASIC MET PANEL           ROUTINE   USER,PHYSICIAN
815                              BASIC MET PANEL           ROUTINE   USER,PHYSICIAN
803        09/22/2016  6:36 AM  BASIC MET PANEL           ROUTINE   USER,PHYSICIAN
795        09/15/2016  7:00 AM  GLUCOSE                   ROUTINE   USER,PHYSICIAN


           18 Orders.


Press RETURN Key:
```

Figure 7-10: Example report

Note that if an order was entered without a time component, no time will be displayed.

8.0   Interim Report Option to Display Date of Birth Only

With the installation of LR*5.2*1041, there will be a new parameter that can be set, BLR DOB ONLY, that will modify how the Interim Report will print patient information in the header.

If set to YES, only the Date of Birth (DOB) will be printed on the Interim Report. If it is not set (or set to NO), the DOB and the Current Age of the patient (if no Date of Death) will be printed.

See Section A.5 further instructions.

8.1   New PAMG Option on the BLRMENU

The BLR DOB ONLY parameter can either be modified via the XPAR MENU or by the new BLR PARMETERS AND MAIL GROUPS option that will be added to the BLRMENU with the PAMG menu option.

See Section 6.1 for an example BLRMENU listing showing the new PAGM option.

If a user selects the PAMG option, the sub-menu looks similar to the following:

```
                         IHS Database LR1041
Date:09/28/17                    RPMS Lab                      Time:2:31 PM
                         Parameters/Mail Groups                    BLRPAMGE
-------------------------------------------------------------------------------
    1    Edit RPMS Lab Parameters ...
    2    RPMS Lab Parameter's Description ...
    3    Edit RPMS Lab Mail Groups ...
    4    Mail Group's Description ...

Select:  (1-4):
```

Figure 8-1: PAMG Option Menu

8.1.1   Edit RPMS Lab Parameters Options

If a user selects Edit RPMS Lab Parameters, the sub-menu looks similar to the following:

```
                         IHS Database LR1041
Date:09/28/17                    RPMS Lab                      Time:2:32 PM
                           Parameters                            BLRPAMGE
-------------------------------------------------------------------------------
    1    Edit BLR CC DATA parameter
    2    Edit BLR AGE DETAIL parameter
    3    Edit BLR EMERGENCY ALERT parameter
    4    Edit BLR COLL DT PCC VISIT CREATION parameter
    5    Edit BLR DOB ONLY parameter
    6    Edit BLR LAB RESULTS CHANGED NOTIFY parameter
```

```
     7      Edit BLR QUALITATIVE ALERT parameter
     8      Edit BLR DAYS TO ACCESSION parameter
     9      Edit BLR PT CONFIRM parameter



Select:  (1-9):
```

Figure 8-2: Parameters Edit sub-Menu

8.1.2   Selecting Edit BLR DOB ONLY parameter option

Once the Edit BLR DOB ONLY parameter option is selected from the Edit RPMS
Lab Parameters Option, the following menu displays:

```
                             2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                     IHS Laboratory                     Time:12:44 PM
                             BLR DOB ONLY Parameter                       BLREMERA
                                  Modify Value
--------------------------------------------------------------------------------

BLR DOB ONLY (YES/NO)? NO// YES

BLR DOB ONLY Parameter is currently YES

        Press RETURN Key:
```

Figure 8-3: Selection of Edit BLR DOB ONLY Parameter option

The only input values accepted are YES or NO.

If set to YES, only the Date of Birth (DOB) will be printed on the Interim Report. If
it is not set (or set to NO), the DOB and the Current Age of the patient (if no Date of
Death) will be printed.

8.2   Interim Report Header

If the parameter is set to YES, the Interim Report header will only display the Date of
Birth of the Patient. An example follows:

```
Printed at:                                                        page 1
      2013 DEMO HOSPITAL (CMBA)  5300 HOMESTEAD  ALBUQUERQUE, NM 87110

TEST,BARBARA                                 Date/Time Printed: 02/23/17@12:50
    HRCN: 99999     SEX:F  DOB:Jan 01, 1990                    LOC:LAB ONLY
```

Figure 8-4: BLR DOB ONLY Parameter set to YES example

If the parameter is not set or is NO, both the Date of birth and the patient's current age
(as of the printing of the report) will print in the header. An example follows:

```
Printed at:                                                        page 1
      2013 DEMO HOSPITAL (CMBA)  5300 HOMESTEAD  ALBUQUERQUE, NM 87110
```

```
TEST,BARBARA                                   Date/Time Printed: 02/23/17@12:51
     HRCN:99999      SEX:F  DOB:Jan 01, 1990  CURRENT AGE:27     LOC:LAB ONLY
```

Figure 8-5: BLR DOB ONLY Parameter set to NO example

9.0   Open Lab Order with Non-Active Providers

With the installation of LR*5.2*1041, two reports regarding open lab orders with ordering providers who are no longer active will be available in the RPMS Lab package.

See Section A.6 for further instructions.

9.1   ORDO Option on BLRMENU

The new BLROLOR option, 'Open Lab Orders' Reports, will be added to the BLRMENU with the ORDO synonym during the post install phase of the LR*5.2*1041 install.

An example BLRMENU listing showing the new ORDO option follows:

```
                     IHS Lab Main Support Menu

    LS     Link Transaction Processor Status
    7421   Will restart the 7421 label routine if turned off.
    INQ    Inquire into the IHS LAB Transaction Log
    FLD    Search Transactions for PCC LINK DISABLE Error
    RSN    Requeue by Sequence Number
    RST    Requeue Transaction by Sort Template
    CPT    Enter/edit IHS Lab CPT File
    FAL    Find ALL PCC Link Errors from Lab
    STP    Stop/restart Lab to PCC Transaction Processor
    MSTR   Enter/edit BLR MASTER CONTROL FILE
    POV    Purpose of Visit Compliance Report
    6249   Display File 62.49 HL7 Segments
    BZY    RPMS Taskman Busy Device Rpt
    CCCD   Create Creatinine Clearance Delta Check
    CDVC   Edit BLR COLL DT PCC VISIT CREATION Parameter
    CGFR   Create CKD-EPI Equation Delta Check
    CLR    Clear BLR errors from error log
    CUM    RPMS Cumulative Menu ...
    DADD   Add Completed Date to Accession Tests
    DOBP   Edit BLR DOB ONLY Parameter
    EAPE   Edit BLR EMERGENCY ALERT Parameter
    EDCC   Edit BLR CC DATA Parameter


             Press 'RETURN' to continue, '^' to stop:
    EMGP   Edit LAB HIGH URGENCY NOTIFICATION Mail Group
    ETP    LA7 Message Queue Error Messages to Purgeable
    IHSM   RPMS Lab Microbiology Report
    ILUM   RPMS LOINC/UCUM Menu ...
    LABT   Determine if Required RPMS Lab Options Tasked
    LCRP   Edit BLR LAB RESULTS CHANGED NOTIFY Parameter
    LOI    RPMS Lab Package LOINC Percentage Report
    LRAS   Accession IHS Lab Microbiology Report
    LROS   Order/test status by Order Number
    LTRR   Laboratory Test (#60) File's Reference Ranges
    LVP    RPMS Lab Version & Patch Report
    MACC   Mark Multiple Accessions as Not Performed
    MILO   Micro Interim Report by Location
    MMR    Lab Description Abbreviation Report
```

```
       NLO    Lab Tests Without LOINC Entries Report
       ORDO   'Open Lab Orders' Reports
       ORPH   Remove Orphans from # 68
       ORPR   BROWSER REPORT ON ORPHANS FROM # 68
       PAMG   Edit IHS Lab Parameters and/or Mail Groups ...
       PDOC   Patient Reminder Document
       POCA   Edit BLR AGE DETAIL Parameter
       PURG   PURGE OLD ORDERS & ACCESSIONS Reports


               Press 'RETURN' to continue, '^' to stop:
       PURG   Purge ALL VA Alerts
       RBE    Clear ALL BLR Errors from Error Log
       REFL   Reference Lab Main Menu ...
       REPL   Replace Lab Order/Test Status ...
       RESC   Edit LAB RESULTS CHANGED Mail Group
       RSNL   Reprint/Reship a Non LEDI Order
       SF60   IHS Search File 60
       SHDR   State Health Dept Report
       TCCR   Test Creatinine Clearance Logic
       TGFR   Test CKD-EPI Equation Logic
              Count Accessioned Tests Using Lab Data File ...
              RPMS Lab Ask-At-Order ...

Select IHS Lab Main Support Menu Option:
```

Figure 9-1: Example BLRMENU with ORDO option

9.2   Selecting ORDO option

Once the ORDO option is selected from the BLRMENU, the following menu
displays:

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                     RPMS Lab                      Time:10:00 AM
                         Open Lab Orders Reports                     BLROLOR
                               MAIN MENU
--------------------------------------------------------------------------------
    1) Report by Order Number              2) Report by Ordering Provider


Select: (1-2):
```

Figure 9-2: PURGE OLD ORDERS & ACCESSIONS Reports menu

9.2.1   Report by Order Number

If the Report By Order Number Report option is selected, the produced report lists
only those non-accessioned orders with an inactive ordering provider. The report will
look similar to the following:

```
                         2013 DEMO HOSPITAL (CMBA)
Date:09/28/17              Non-Accessioned Orders                     Page 1
Time:10:00 AM             With Non-Active Providers                   BLROLOR
                             Order Number Sort

              ==== Ordering Provider =====  ========== Patient ===========
```

```
Order #  Ord Dt    IEN      Name                    IEN        Name
-------------------------------------------------------------------------------
31       02/08/17  6196     DEMO,DOCTOR             40172      TEST,AMANDA LYNN


    117 Orders analyzed.

        1 Order with Non-Active Provider.

    Press RETURN Key:
```

Figure 9-3: Report By Order Number

9.2.2   Report by Ordering Provider

If the Report by Ordering Provider option is selected, the produced report will list non-accessioned orders, sorted by the inactive ordering providers. The report will look similar to the following:

```
                            2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                 Non-Accessioned Orders                      Page 1
Time:10:00 AM                 With Non-Active Providers                   BLROLOR
                              Ordering Provider Sort


                    ==== Ordering Provider =====  ========== Patient ===========
Order #  Ord Dt    IEN      Name                    IEN        Name
-------------------------------------------------------------------------------
31       02/08/17  6196     DEMO,DOCTOR             40172      TEST,AMANDA LYNN


    117 Orders analyzed.

        1 Order with Non-Active Provider.

    Press RETURN Key:
```

Figure 9-4: Report by Ordering Provider

10.0 'Purge Old Orders & Accessions' Report

With the installation of LR*5.2*1041, a new file and a new report regarding when and who selected the Purge old orders & accessions option will be installed into the RPMS Lab module.

10.1 New PURGE OLD ORDERS & ACCESSIONS (#90475.8) File

A new FileMan file has been created that will store the appropriate information regarding when and who selected the Purge old orders & accessions option to run.

The Standard FileMan listing for the new PURGE OLD ORDERS & ACCESSIONS (#90475.8) FILE looks like the following:

```
STANDARD DATA DICTIONARY #90475.8 -- PURGE OLD ORDERS & ACCESSIONS FILE
                                        FEB 23,2017@09:06:02  PAGE 1
STORED IN ^BLRPURGU(  (5 ENTRIES)   SITE: LR1034 Database   UCI: LR1034,LR1034 (
VERSION 5.2)

DATA            NAME                  GLOBAL        DATA
ELEMENT         TITLE                 LOCATION      TYPE
-------------------------------------------------------------------------------
This file will store the date/time and the DUZ of the user who has selected the
'Purge old orders & accessions' option.



              DD ACCESS: @
              RD ACCESS: @
              WR ACCESS: @
             DEL ACCESS: @
           LAYGO ACCESS: @
           AUDIT ACCESS: @


CROSS
REFERENCED BY: PURGE DATE/TIME(B), USER(C)

   CREATED ON: NOV 14,2016 by DEVELOPER,RPMS LAB

90475.8,.01   PURGE DATE/TIME        0;1 DATE (Required)

              INPUT TRANSFORM: S %DT="ESTR" D ^%DT S X=Y K:Y<1 X
              LAST EDITED:     NOV 15, 2016
              CROSS-REFERENCE: 90475.8^B
                               1)= S ^BLRPURGU("B",$E(X,1,30),DA)=""
                               2)= K ^BLRPURGU("B",$E(X,1,30),DA)


90475.8,1     USER                   0;2 POINTER TO NEW PERSON FILE (#200)
                                (Required)

              LAST EDITED:     NOV 15, 2016
              CROSS-REFERENCE: 90475.8^C
                               1)= S ^BLRPURGU("C",$E(X,1,30),DA)=""
                               2)= K ^BLRPURGU("C",$E(X,1,30),DA)
```

```
90475.8,2   DIVISION              0;3 POINTER TO INSTITUTION FILE (#4)
                                  (Required)

            LAST EDITED:     NOV 15, 2016


    FILES POINTED TO                      FIELDS

INSTITUTION (#4)              DIVISION (#2)

NEW PERSON (#200)            USER (#1)



INPUT TEMPLATE(S):

PRINT TEMPLATE(S):

SORT TEMPLATE(S):

FORM(S)/BLOCK(S):
```

Figure 10-1: Standard FileMan Listing of PURGE OLD ORDERS & ACCESSIONS (#90475.8) file

10.2   Data Storage Process

After LR*5.2*1041 has been installed, each time a user selects the Purge old orders & accessions option, the date/time and the DUZ of the user selecting that option is automatically stored into the PURGE OLD ORDERS & ACCESSIONS (#90475.8) file. It can then be reported upon.

> **Note**: When generating these reports, it is possible you may not generate any data to display or print. If the option to 'Purge old orders & accessions' was not run, you will not have any data to produce the reports.

DO NOT purge old orders & accessions to generate these reports.

10.3   New PURG Option on Supervisor menu

The new report can be accessed by the new BLRPURGU option, PURGE OLD ORDERS & ACCESSIONS Reports, that will be added to the Supervisor Menu with the PURR synonym during the post install phase of the LR*5.2*1041 install.

An example Supervisor Menu listing showing the new PURR option follows:

```
       Supervisor menu

   PURR   PURGE OLD ORDERS & ACCESSIONS Reports ...
          Add/edit QC name &/or edit test means
          Change Load/Work list type.
          Changes in verified lab data
```

```
            Cumulative menu ...
            Documentation for lab options
            Edit atomic tests
            Edit control placement on load/work list
            Edit controls added to the accessions each day
            Edit cosmic tests
            Edit the default parameters Load/Work list.
            Edit the Load/Work list profile
            Infection warning edit
            Inquiry to LAB TEST file
            Lab interface menu ...
            Lab liaison menu ...
            Lab statistics menu ...
            Listing of Laboratory Menus/Options
            Manually accession QC, Environmental, etc.
            Purge old orders & accessions
            Set a new starting accession number
            Supervisor reports ...

Select Supervisor menu option:
```

Figure 10-2: Example Supervisor menu showing new PURR option

10.3.1   Non-Standard Supervisor Menu

If a site has a non-standard Supervisor Menu (i.e., the LRSUPERVSIOR option is not being used) the site must add the new option, PURGE OLD ORDERS & ACCESSIONS Reports, to the appropriate menu option with the PURR synonym manually.

10.4   Selecting PURR option

Once the PURR option is selected from the Supervisor Menu, the following menu displays:

```
                        2013 DEMO HOSPITAL (CMBA)
Date:09/28/17                    RPMS Lab                      Time:9:29 AM
                 Purge old orders & accessions Utilities         BLRPURGU
                              MAIN MENU
------------------------------------------------------------------------------
   1) Main Report                          2) Report by User

Select:  (1-2):
```

Figure 10-3: PURGE OLD ORDERS & ACCESSIONS Reports menu

10.4.1   Main Report

If the Main Report option is selected, the report lists the date/time and the user(s) who have selected the Purge old orders & accessions option. It is sorted by reverse date/time order. The report will look similar to the following:

```
                        2013 DEMO HOSPITAL (CMBA)
Date:09/28/17           Purge Old Orders & Accessions              Page 1
```

```
Time:9:30 AM       File 69.9 Grace Period For Orders: 730 Days        BLRPURGU
                              Reverse Date Listing


Purge Date/Time     DUZ        Name                   Division  Division Description
-----------------------------------------------------------------------------
11/30/2016@07:16    6045       DEVELOPER,RPMS LAB     2582      2013 DEMO HOSPITAL
11/15/2016@08:38    6357       LAB,TESTER U           2582      2013 DEMO HOSPITAL
11/15/2016@08:04    6045       DEVELOPER,RPMS LAB     2582      2013 DEMO HOSPITAL
11/15/2016@07:55    6045       DEVELOPER,RPMS LAB     2582      2013 DEMO HOSPITAL
11/15/2016@07:55    1          ADAM,ADAM              2582      2013 DEMO HOSPITAL



    5 'Purge Old Orders & Accessions' entries.
```

Figure 10-4: PURGE OLD ORDERS & ACCESSIONS Main Report

10.4.2   Report By User

If the Report By User option is selected, the produced report will list the date/time when the Purge old orders & accessions option was selected, grouped by User.

```
                        2013 DEMO HOSPITAL (CMBA)
Date:09/28/17             Purge Old Orders & Accessions                    Page 1
Time:9:30 AM       File 69.9 Grace Period For Orders: 730 Days        BLRPURGU
                              User Sorted Listing


Purge Date/Time     DUZ        Name                   Division  Division Description
-----------------------------------------------------------------------------
11/15/2016@07:55    1          ADAM,ADAM              2582      2013 DEMO HOSPITAL
11/30/2016@07:16    6045       DEVELOPER,RPMS LAB     2582      2013 DEMO HOSPITAL
11/15/2016@08:04    6045       DEVELOPER,RPMS LAB     2582      2013 DEMO HOSPITAL
11/15/2016@07:55    6045       DEVELOPER,RPMS LAB     2582      2013 DEMO HOSPITAL
11/15/2016@08:38    6357       LAB,TESTER U           2582      2013 DEMO HOSPITAL


    5 'Purge Old Orders & Accessions' entries.
```

Figure 10-5: PURGE OLD ORDERS & ACCESSIONS Sorted By User report

11.0 Interim Report Date of Death (DoD) on Referral Patients

The Interim Report did not report Date of Death correctly for Referral Patients. The LRRP1 routine was modified to correctly display Date of Death for Referral Patients and is included in LR*5.2*1041.

11.1 Referral Patient

A Referral Patient with a Date of Death will look similar to the following in the Referral Patient (#67) file:

```
NAME: TEST,TEST                          SEX: MALE
  DOB: 02/29/64                          MARITAL STATUS: MARRIED
  RACE: WHITE                            RELIGION: CATHOLIC
  IDENTIFIER: TUC                        DATE OF DEATH: JUN 01, 2016
  LABORATORY REFERENCE: 60
```

Figure 11-1: Example Referral Patient with Date Of Death

11.2 Interim Report Header Showing Referral Patient Date Of Death

The Interim Report header will be similar to the following for referral patients that have a Date of Death:

```
Printed at:                                                    page 1
      IHS Database LR1039 (2582)  5300 HOMESTEAD  ALBUQUERQUE, NM 87110

TEST,TEST                                 Date/Time Printed: 02/23/17@08:57
    HRCN:          SEX:M  DOB:Feb 29, 1964  DIED:Jun 01, 2016  LOC:LAB ONLY
```

Figure 11-2: Interim Report Header example with Referral Patient with Date Of Death

12.0   EHR All Tests By Date Report

A bug was detected in the BLR7OGMP routine that produces the "All Tests By Date" report in EHR: if a UNITS field for a test began with a number, the units field would not be displayed in the report.

This bug has been corrected and now, if a test has UNITS, they will display.

13.0   LOINC Codes Not Populating PCC Files

A bug was detected in the BLRLINK3 routine that was interfering with the correct retrieval of LOINC codes and storing incorrect LOINC codes into the various PCC Lab Files (V LAB, etc.).

The bug has been corrected and LOINC codes are now storing correctly.

See Section A.7 for further instructions.

13.1   Inquire into the BLR IHS Lab Transaction Log

The IHS Lab Transaction Log file serves as a holding place for all laboratory data that will potentially be passed to the Patient Care Component (PCC). A transaction is initiated at the time a laboratory order is placed and its status is subsequently updated to accessioned, resulted, or deleted, depending upon activity initiated from the Laboratory package.

The Inquire into the IHS Lab Transaction Log for the resulted cosmic test, including its individual resulted atomic tests, will be similar to the following display:

```
Inquire into the IHS LAB Transaction Log

Select IHS LAB TRANSACTION LOG SEQUENCE NUMBER: POCT 17 95
     1   POCT 17 95   9350
     2   POCT 17 95   9351
     3   POCT 17 95   9352
     4   POCT 17 95   9353
     5   POCT 17 95   9354
CHOOSE 1-5: 1   9350


IHS LAB TRANSACTION LOG LIST                    DEC 11,2017  09:56    PAGE 1
--------------------------------------------------------------------------------
SEQUENCE NUMBER: 9350                   LRFILE: 2
  PATIENT POINTER VALUE: 8791           PANEL/TEST POINTER: LIPID -POCT
  LAB MODULE: GENERAL                   DUZ(2): 2906
  I/O CATEGORY: OUT PATIENT             STATUS FLAG: RESULTED
  ENTRY DATE/TIME: SEP 26, 2017@16:41:44
  ASSOCIATED V FILE: V LAB              IEN OF V FILE ENTRY: 4292874
  LAB TEST LIST COST: 6.29
  CLINIC STOP CODE POINTER: LABORATORY SERVICES
  CPT LAB CODE POINTER: LIPID PANEL
  BILLING CPT STRING: 80061|94.00|||90|
  CLINICAL INDICATOR: 3013049012        ORDER DATE: SEP 26, 2017@16:41:43
  ORDER SEQUENCE NUMBER: 9              ORDER NUMBER: 312
  ORDERING PROVIDER POINTER: ROMANCITO,KAREN
  ORDERING LOCATION POINTER: LAB OIT (HOSP)
  COLLECTION DATE/TIME: SEP 26, 2017@13:18
  ACCESSION NUMBER: POCT 17 95          COLLECTION SAMPLE POINTER: SERUM (SST)
  COMPLETE DATE: SEP 26, 2017@13:19:42
  PROVIDER NARRATIVE: Diabetes mellitus type 2 without retinopathy
  SNOMED: 3013049012                    ICD: E11.9
  SITE/SPECIMEN POINTER: SERUM
```

```
Select IHS LAB TRANSACTION LOG SEQUENCE NUMBER: POCT 17 95
     1   POCT 17 95  9350
     2   POCT 17 95  9351
     3   POCT 17 95  9352
     4   POCT 17 95  9353
     5   POCT 17 95  9354
CHOOSE 1-5: 2  9351

IHS LAB TRANSACTION LOG LIST                 DEC 11,2017  09:57    PAGE 1
-----------------------------------------------------------------------------
SEQUENCE NUMBER: 9351                    LRFILE: 2
  PATIENT POINTER VALUE: 8791            PANEL/TEST POINTER: CHOLESTEROL (POCT)
  LAB MODULE: GENERAL                    DUZ(2): 2906
  I/O CATEGORY: OUT PATIENT              PARENT POINTER: 9350
  STATUS FLAG: RESULTED                  ENTRY DATE/TIME: SEP 26, 2017@16:41:44
  ASSOCIATED V FILE: V LAB               IEN OF V FILE ENTRY: 4292875
  LAB TEST LIST COST: 2.26
  CLINIC STOP CODE POINTER: LABORATORY SERVICES
  ORDER DATE: SEP 26, 2017@16:41:43    ORDER SEQUENCE NUMBER: 9
  ORDER NUMBER: 312
  ORDERING PROVIDER POINTER: ROMANCITO,KAREN
  ORDERING LOCATION POINTER: LAB OIT (HOSP)
  COLLECTION DATE/TIME: SEP 26, 2017@13:18
  ACCESSION NUMBER: POCT 17 95           COLLECTION SAMPLE POINTER: SERUM (SST)
  COMPLETE DATE: SEP 26, 2017@13:19:42  LOINC CODE: 2093
  RESULT: 430                            RESULT N/A FLAG: H
  UNITS: mg/dL                           SITE/SPECIMEN POINTER: SERUM
  VERIFIER POINTER: ROMANCITO,KAREN     REFERENCE LOW: 97
  REFERENCE HIGH: 230

Select IHS LAB TRANSACTION LOG SEQUENCE NUMBER: POCT 17 95
     1   POCT 17 95  9350
     2   POCT 17 95  9351
     3   POCT 17 95  9352
     4   POCT 17 95  9353
     5   POCT 17 95  9354
CHOOSE 1-5: 3  9352

IHS LAB TRANSACTION LOG LIST                 DEC 11,2017  09:58    PAGE 1
-----------------------------------------------------------------------------
SEQUENCE NUMBER: 9352                    LRFILE: 2
  PATIENT POINTER VALUE: 8791            PANEL/TEST POINTER: TRIGLYCERIDE (POCT)
  LAB MODULE: GENERAL                    DUZ(2): 2906
  I/O CATEGORY: OUT PATIENT              PARENT POINTER: 9350
  STATUS FLAG: RESULTED                  ENTRY DATE/TIME: SEP 26, 2017@16:41:44
  ASSOCIATED V FILE: V LAB               IEN OF V FILE ENTRY: 4292876
  LAB TEST LIST COST: 2.26
  CLINIC STOP CODE POINTER: LABORATORY SERVICES
  ORDER DATE: SEP 26, 2017@16:41:43    ORDER SEQUENCE NUMBER: 9
  ORDER NUMBER: 312
  ORDERING PROVIDER POINTER: ROMANCITO,KAREN
  ORDERING LOCATION POINTER: LAB OIT (HOSP)
  COLLECTION DATE/TIME: SEP 26, 2017@13:18
  ACCESSION NUMBER: POCT 17 95           COLLECTION SAMPLE POINTER: SERUM (SST)
  COMPLETE DATE: SEP 26, 2017@13:19:42  LOINC CODE: 2571
  RESULT: 300                            RESULT N/A FLAG: H
  UNITS: mg/dL                           SITE/SPECIMEN POINTER: SERUM
  VERIFIER POINTER: ROMANCITO,KAREN     REFERENCE LOW: 40
  REFERENCE HIGH: 170

Select IHS LAB TRANSACTION LOG SEQUENCE NUMBER: POCT 17 95
     1   POCT 17 95  9350
```

```
        2    POCT 17 95   9351
        3    POCT 17 95   9352
        4    POCT 17 95   9353
        5    POCT 17 95   9354
CHOOSE 1-5: 4   9353


IHS LAB TRANSACTION LOG LIST                    DEC 11,2017  09:59    PAGE 1
-------------------------------------------------------------------------------
SEQUENCE NUMBER: 9353                     LRFILE: 2
  PATIENT POINTER VALUE: 8791
  PANEL/TEST POINTER: LDL CHOLESTEROL (POCT)
  LAB MODULE: GENERAL                     DUZ(2): 2906
  I/O CATEGORY: OUT PATIENT               PARENT POINTER: 9350
  STATUS FLAG: RESULTED                   ENTRY DATE/TIME: SEP 26, 2017@16:41:44
  ASSOCIATED V FILE: V LAB                IEN OF V FILE ENTRY: 4292877
  LAB TEST LIST COST: 4.25
  CLINIC STOP CODE POINTER: LABORATORY SERVICES
  ORDER DATE: SEP 26, 2017@16:41:43    ORDER SEQUENCE NUMBER: 9
  ORDER NUMBER: 312
  ORDERING PROVIDER POINTER: ROMANCITO,KAREN
  ORDERING LOCATION POINTER: LAB OIT (HOSP)
  COLLECTION DATE/TIME: SEP 26, 2017@13:18
  ACCESSION NUMBER: POCT 17 95            COLLECTION SAMPLE POINTER: SERUM (SST)
  COMPLETE DATE: SEP 26, 2017@13:19:42  LOINC CODE: 13457
  RESULT: 60                              UNITS: mg/dL
  SITE/SPECIMEN POINTER: SERUM            VERIFIER POINTER: ROMANCITO,KAREN
  REFERENCE LOW: 50                       REFERENCE HIGH: 210

Select IHS LAB TRANSACTION LOG SEQUENCE NUMBER: POCT 17 95
        1    POCT 17 95   9350
        2    POCT 17 95   9351
        3    POCT 17 95   9352
        4    POCT 17 95   9353
        5    POCT 17 95   9354
CHOOSE 1-5: 5   9354


IHS LAB TRANSACTION LOG LIST                    DEC 11,2017  09:59    PAGE 1
-------------------------------------------------------------------------------
SEQUENCE NUMBER: 9354                     LRFILE: 2
  PATIENT POINTER VALUE: 8791
  PANEL/TEST POINTER: HDL CHOLESTEROL (POCT)
  LAB MODULE: GENERAL                     DUZ(2): 2906
  I/O CATEGORY: OUT PATIENT               PARENT POINTER: 9350
  STATUS FLAG: RESULTED                   ENTRY DATE/TIME: SEP 26, 2017@16:41:44
  ASSOCIATED V FILE: V LAB                IEN OF V FILE ENTRY: 4292878
  CLINIC STOP CODE POINTER: LABORATORY SERVICES
  ORDER DATE: SEP 26, 2017@16:41:43    ORDER SEQUENCE NUMBER: 9
  ORDER NUMBER: 312
  ORDERING PROVIDER POINTER: ROMANCITO,KAREN
  ORDERING LOCATION POINTER: LAB OIT (HOSP)
  COLLECTION DATE/TIME: SEP 26, 2017@13:18
  ACCESSION NUMBER: POCT 17 95            COLLECTION SAMPLE POINTER: SERUM (SST)
  COMPLETE DATE: SEP 26, 2017@13:19:42  LOINC CODE: 2085
  RESULT: 60                              UNITS: mg/dL
  SITE/SPECIMEN POINTER: SERUM            VERIFIER POINTER: ROMANCITO,KAREN
  REFERENCE LOW: 30                       REFERENCE HIGH: 60
```

Figure 13-1: BLR IHS Lab Transaction Log display

14.0   Anatomic Pathology GS Option Modification

Within the Anatomic Pathology sub-module of RPMS Lab, the main menu looks similar to the following:

```
                        ANATOMIC PATHOLOGY MENU

    D       Data entry, anat path ...
    E       Edit/modify data, anat path ...
    I       Inquiries, anat path ...
    L       Log-in menu, anat path ...
    P       Print, anat path ...
    R       SNOMED field references ...
    S       Supervisor, anat path ...
    V       Verify/release menu, anat path ...
    C       Clinician options, anat path ...
    W       Workload, anat path ...

 Select Anatomic pathology Option:
```

Figure 14-1: Anatomic Pathology Data Entry Main Menu

If a user selects the D option, the data entry sub-menu looks similar to the following:

```
                         Data entry, anat path

    AU      Data entry for autopsies ...
    BS      Blocks, Stains, Procedures, anat path
    CO      Coding, anat path ...
    GD      Clinical Hx/Gross Description/FS
    GM      FS/Gross/Micro/Dx
    GS      FS/Gross/Micro/Dx/SNOMED Coding
    GI      FS/Gross/Micro/Dx/ICD9CM Coding
    OR      Enter old anat path records
    SR      Supplementary Report, Anat Path
    SS      Spec Studies-EM;Immuno;Consult;Pic, Anat Path

 Select Data entry, anat path Option:
```

Figure 14-2: Anatomic Pathology Data Entry sub-Menu

The GS option, FS/Gross/Micro/Dx/SNOMED Coding, has been modified so that it can only be selected by those users with the LRAPSUPER Security Key. Other users will not even see the option.

15.0   Reference Laboratory Interface Enhancements

15.1   Introduction

There are several enhancements made to the Reference Laboratory Interface by IHS Lab Patch LR*5.2*1041.

15.2   Tasked Restart of The Reference Lab Interface

An enhancement was made to both the BLR REFLAB RESTART TRANSMITTER and BLR REFLAB RESTART RECEIVER. The task now checks to see if the transmitter or receiver are running before attempting to stop and restart.

15.3   RLDI And RPMS Navigation

A fix was made to this option so that user variables would not be lost after running this option, causing the user to have to re-login.

15.4   Electronic Order Cannot Be Generated Without a Valid Account Number

A fix was made so that a Reference Lab order cannot be generated without the account number being stored in the BLR REFERENCE LAB ORDER/ACCESSION file.

16.0   LR*5.2*1041 Components

The following is a listing of the various files, options, routines, etc. that are included in the IHS LR*5.2*1041 Lab Patch.

16.1   Files

The following table lists the files included LR*5.2*1041.

File #	File Description
60	LABORATORY TEST
90475.8	PURGE OLD ORDERS & ACCESSIONS

16.2   Mail Groups

The following table lists the Mail Groups included LR*5.2*1041.

Name	Description
LAB QUALITATIVE ALERT	RPMS Lab Mail Group to receive messages regarding tests that have a result that matches a Qualitative flag (see the ABNORMAL FLAG field under the Site/Specimen in file 60).
LAB RESULTS CHANGED	Mail Group to receive notifications when Lab Results have been changed.

16.3   Options

The following table lists the options included LR*5.2*1041.

Name	BLRMENU Option	Menu Text
BLR PARMETERS AND MAIL GROUPS	PAGM	Edit RPMS Lab Parameters and/or Mail Groups
BLR PATIENT REMINDER DOCUMENT	PDOC	Patient Reminder Document
BLROLOR	ORDO	'Open Lab Orders' Reports
BLRPURGU	PURG	PURGE OLD ORDERS & ACCESSIONS Reports
LRAPDGS	GS	FS/Gross/Micro/Dx/SNOMED Coding

16.4   Parameter Definitions

The following table lists the parameters included LR*5.2*1041.

Name	Description
BLR DOB ONLY	If set to YES, only the patient's Date-of-Birth will be displayed in the Interim Report's header and not the DoB and patient's Current Age.
BLR LAB RESULTS CHANGED NOTIFY	If set to YES, whenever a "CH" subscripted Lab Result is changed, a MailMan message will be sent to the LAB RESULTS CHANGED Mail Group.
BLR QUALITATIVE ALERT	If YES, a test with a result that matches the File 60 Site/Specimen ABNORMAL FLAG entry will generate an alert and an e-mail message to members of the LAB QUALITATIVE ALERT Mail Group.

16.5   Routines

The following table lists the routines included LR*5.2*1041.

Name	Description
BLR7OGMP	Lab Interim Report for EHR
BLRDOCRM	Patient Reminder Document
BLRLINK3	CONT. OF BLR
BLRLNKU1	IHS Laboratory PCC Visit Creation Utility
BLROLOR	Open Lab Orders Report
BLRPAMGE	BLR Parameters And Mail Group Edits
BLRPRE41	IHS Lab Patch LR*5.2*1041 Pre/Post Routine
BLRPURGU	Purge Old Orders & Accessions Utilities
BLRQUALU	RPMS LAB QUALitative Utilities
BLRUTIL7	MISC IHS LAB UTILITIES (Cont)
LRDIDLE0	Create audit trail of changed values
LRMIPSU	MICRO PATIENT REPORT
LROC	ORDER LIST CLEAN-UP
LRORDST	SET THE ORDER AND ACCESSION
LRRP1	PRINT THE DATA FOR INTERIM REPORTS
LRVER4	LAB ROUTINE DATA VERIFICATION
LRWRKLS1	LRWRKLST CONT.
LRWRKLST	LONG ACCESSION LIST

16.6 Vista Blood Establishment Computer Software (VBECS) Routines

The VA's VBECS Blood Bank sub-module is not part of RPMS Lab due to FDA regulatory restrictions. However, an earlier VA Lab Patch installed several VBECS routines into the RPMS namespace.

Certain procedures within the EHR have been modified to react to the presence of VBECS routines and will fail within RPMS.

Due to these considerations, it has been determined that the inadvertently installed routines will be removed from RPMS. This will be accomplished via the installation of the LR*5.2*1041 patch.

This section is informational only as there is no action required by Lab personnel.

16.7 VA Patches

The following table lists the VA Patches included LR*5.2*1041. The patches are not utilized by RPMS Lab and this listing is for informational purposes only.

Name	Description
LA*5.2*82	UPDATE PROCEDURES FOR SNOMED CT LABORATORY MAPPINGS. This a VA patch describing how the VA deals with updating their SNOMED codes. It is only included to ensure the Patch Numbering Schema in RPMS Lab stays in synch with the VA.
LR*5.2*455	UPDATE DATA EXTRACT LOGIC FOR DSS DSS is not utilized within RPMS Lab and, as such, this patch is included only to ensure the Patch Numbering Schema in RPMS Lab stays in synch with the VA.

16.7.1 LA*5.2*82 VA Patch

The VA patch notes file states:

This patch is an informational patch containing the procedures for updating the SNOMED CT (Systemized Nomenclature of Medicine Clinical Terms) laboratory mappings.

The RPMS Lab Package does not utilize the VA's mapping schema and, as such, this patch is only included to ensure the VA's Patch Number schema is maintained. Note that there are no routines, files, etc. included in this patch.

16.7.2   LR*5.2*455 VA Patch

The VA patch notes file states:

The logic for storing test results in the Decision Support Software (DSS) laboratory results (LAR) extract is being modified.

The RPMS Lab Package does not utilize the DSS module and, as such, this patch is only included to ensure the VA's Patch Number schema is maintained.

16.7.2.1   File

The following table lists the file included LR*5.2*455.

File #	File Description
64.036	LAB DSS LAR EXTRACT

16.7.2.2   Routines

The following table lists the routine included LR*5.2*455.

Name	Description
LRCAPDAR	LAB DSS RESULTS EXTRACT (LAR)

Appendix A: Test Scripts

Software changes should be tested in the manner that you use the feature/function in your environment. If, for example, lab results are viewed and printed in the EHR, the EHR should be included in your testing. The test scripts below are meant to provide a place for you to begin creating your own test script.

A.1   File 60 Print Name Character Limit Extended

The field PRINT NAME in the Laboratory Test (#60) file will be modified with the installation of LR*5.2*1041. The field length will be increased from 8 characters to 16 characters.

Access VA FileMan, ENTER or EDIT a Lab Test file.

1. Select a LABORATORY TEST.

2. Review PRINT NAME.

3. Modify PRINT NAME up to 16 characters.

4. Order and Accession this LABORATORY TEST.

5. Review the Lab Label print.

6. Result the Accession.

7. Review the Interim Report (IR) in RPMS Lab Package for the display of Test name.

> **Note**:   The Print Name will display on the IR report when the Laboratory Test name exceeds 15 characters.

8. Review the EHR Labs Tab for results.

> **Note**:   EHR Labs Tab for results display the Laboratory Test Name and not the Print Name.

9. You may review the Cumulative Report as needed.

> **Note**:   The cumulative report will always display up to 7 characters and does not display the Print Name from File 60.

10. Repeat as needed.

☐PASS ☐FAIL ☐ N/A

A.2   Change Lab Results MailMan Messages

With the installation of LR 1041, users assigned to the new LAB RESULTS CHANGED Mail Group will receive a message each time any Chemistry lab results is changed within RPMS Lab Package. NOTE: Lab tests using the CH SUBSCRIPT only applies.

Set up to receive Mailman messages for the Lab Result changes.

Step 1: BLR Menu -Turn on the parameter

Access RPMS Lab Package.

1. Select the BLR- IHS Lab Main Support Menu

2. Confirm that the new PAMG option was added to the BLRMENU.

3. Select PAMG.

4. Select the submenu #1 Edit RPMS Lab Parameters …

5. Select the submenu #6 Edit BLR LAB RESULTS CHANGED NOTIFY parameter.

6. You will be prompted with the following:

    BLR LAB RESULTS CHANGED NOTIFY (YES/NO)? NO//

7. Set to YES.

Step 2: MailMan setup

8. Select the BLR- IHS Lab Main Support Menu.

9. Select PAMG.

10. Select the submenu #3 Edit RPMS Lab Mail Groups …

11. Select the submenu #2 LAB RESULTS CHANGED Mail Group.

12. You will be prompted to select one of the following:

    a.   Add User to Mail Group.

    b.   Delete User From Mail Group.

    c.   List Users on Mail Group.

13. Select Add User to Mail Group.

14. Add selected users.

Step 3: Test

15. Order, accession and result a lab test.

16. Modify the result by using the option

    EM   Enter/verify/modify data (manual).

17. Modify the result and verify.

18. Capture the MailMan message.

19. Repeat as needed.

☐PASS ☐FAIL ☐ N/A

A.3   Qualitative Critical Alert Flag

Determine which lab test result will be suitable for a qualitative result that needs to be flagged.

Step 1: VA Fileman

1. Access VA Fileman #60, selected a lab test or panel that includes a lab test that requires a   qualitative result.

2.   Capture the lab tests to recall.

Cosmic Lab Test:_____

Atomic 1: _____Qualitative Value_____

Atomic 2: _____

or

Atomic Lab Test: _____

Qualitative Value_____

3. In the test file, <ENTER> down to SITE/SPECIMEN field, select your site/specimen and <ENTER> down to the QUALITATIVE VALUE field.

> **Note**:   The Qualitative Value field is after the LOINC code field-
>   add LOINC code or you may type a caret (^) to the
>   Qualitative Value field.

4. Enter the qualitative result, for example, type POS for a "Positive" result.

> **Note**:   You may add "P", "R", "REACTIVE", etc.

Step 2: BLR Menu -VA Alert setup.

Access RPMS Lab Package.

5. Select the BLR- IHS Lab Main Support Menu.

6. Select PAMG.

7. Select the submenu #1 Edit RPMS Lab Parameters …

8. Select the submenu #7 Edit BLR LAB QUALITATIVE ALERT parameter.

9. You will be prompted with the following:

    BLR QUALITATIVE ALERT (YES/NO)? NO//

10. Set to YES.

Step 3: BLR Menu -Mailman messages setup.

11. Select the BLR- IHS Lab Main Support Menu.

12. Select PAMG.

13. Select the submenu #3 Edit RPMS Lab Mail Groups …

14. Select the submenu #3 LAB QUALITATIVE ALERT Mail Group.

15. You will be prompted to select one of the following:

    a. Add User to Mail Group.
    b. Delete User From Mail Group.
    c. List Users on Mail Group.

16. Select Add User to Mail Group.

17. Add selected users.

Step 4: Test

18. Order and accession your selected lab test(s).

19. Result the lab test as "POS", for example.

20. You may perform this test using the EHR point of care Button.

21. Repeat as needed.

☐PASS ☐FAIL ☐ N/A

A.4   Reminder document for patient

The reminder document for patient will have two new reports to show a patient's future and current orders.

Access RPMS Lab Package.

1.   Select the BLR- IHS Lab Main Support Menu

2.   Confirm that the new PDOC option was added to the BLRMENU.

3.   Select PDOC.

4.   Select #1 Future/Current Orders.

5.   Select a patient.

6.   Generate the report, print to HOME or a Device printer.

7.   Review report, provide your feedback.

8.   Next, select #2 All Orders.

9.   Select a patient.

10. Generate the report, print to HOME or a Device printer.

11. Review report.

> **Note**:   The two reports are generated to print from the RPMS Lab Package. A similar report from the EHR order file will not be generated.

☐PASS ☐FAIL ☐ N/A

A.5   Interim Report Option to Display Date of Birth Only

With the installation of LR*5.2*1041, there will be a new parameter that can be set, BLR DOB ONLY, that will modify how the Interim Report will patient information in the header.

Access RPMS Lab Package.

1.   Select the BLR- IHS Lab Main Support Menu.

2. Confirm that the new PAMG option was added to the BLRMENU.

3. Select PAMG.

4. Select the submenu #1 Edit RPMS Lab Parameters …

5. Then, select #5 BLR DOB ONLY parameter.

6. You will be prompted with the following:

   BLR DOB ONLY (YES/NO)? NO//

7. Set to YES.

8. Display the Interim Report of a Demo Patient or a selected Patient.

9. Review report, provide your feedback.

10. Access BLR ->PAMG ->#1 ->#5 and change YES back to NO.

11. Display the Interim Report of a Demo Patient or a selected Patient.

12. Review report.

> **Note**:   EHR patient data display will not be affected

☐PASS ☐FAIL ☐ N/A

A.6   Open Lab Orders with Non-Active Providers

With the installation of LR 1041, two reports regarding open lab orders with ordering providers who are no longer active will be available in the RPMS Lab Package.

Access RPMS Lab Package.

1. Select the BLR- IHS Lab Main Support Menu.

2. Confirm that the new ORDO option was added to the BLRMENU.

3. Select ORDO.

4. Select #1 Report by Order Number.

5. Generate the report, print to HOME or a Device printer.

6. Review report, provide your feedback.

7. Next, select #2 Report by Ordering Provider.

8. Generate the report, print to HOME or a Device printer.

9. Review report.

☐PASS ☐FAIL ☐ N/A

A.7   LOINC terms incorrectly pulling

A bug was detected in the BLRLINK3 routine that was interfering with the correct retrieval of LOINC codes and storing incorrect LOINC codes into the various PCC Lab Files.

RPMS and EHR POC activity:

To complete this test script, it is required to have a point of care lab test that is a panel/cosmic with atomic/children tests- each having a LOINC code.

1. Access RPMS fileman #60, selected a point of care lab test that is a panel/cosmic.

2. Capture the lab tests as follows.

Cosmic:_____

Atomic 1: _____LOINC code_____

Atomic 2: _____LOINC code_____

Atomic 3: _____LOINC code_____

Atomic 4: _____LOINC code_____

3. Check to see if the point of care panel is added in the BLR BEHO POC CONTROL file in VA Fileman.

4. Access EHR, access the POC button, order and result the selected point of care lab test.

5. Review results on EHR Labs tab and RPMS IR.

6. Access PCC and select your patient.

    a. Look for the LOINC codes in PCC.

7. Access INQ (LR -> BLR -> INQ), enter accession number. Example: POCT 17 95

    a. Look for the LOINC codes.

☐PASS ☐FAIL ☐ N/A

Glossary

FileMan

The database management system for the VA's VistA system and IHS' RPMS system.

Acronym List

Acronym	Term Meaning
IHS	Indian Health Service
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).

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