CPRS QUERY
(HEPATITIS C REPORTS)

INSTALLATION / IMPLEMENTATION GUIDE

April 2003

Department of Veterans Affairs
VistA System Design & Development

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Preface

Patch OR*3*153 implements the CPRS Query Tool (Hepatitis C Reports).

The CPRS Query Tool provides users with the ability to build custom reports and view predefined reports containing clinical information for a select list of patients. This application is an enhancement to the Hepatitis C registry project. The CPRS Query Tool application will assist health care providers in following up on clinical interventions as well as providing an aggregate view of patient information to track health care outcomes.

To use the CPRS Query Tool, a user can choose a predefined report (such as abnormal results) or create a custom query. A predefined report can be selected by clicking on the desired report. Once a report is selected, the user adds criteria to retrieve only the records for a specific group of patients for a selected time period. To create a custom query, the user selects the search items (such as orders/results), then selects the criteria. The query can be saved and reused.

TIU*1.0*150, which was released April 8, 2003, provides a new API for patch OR*3*153. It introduces two new routines and should have no impact on other modules of either TIU or CPRS.

The CPRS Query (Hepatitis C Reports) Installation Guide provides assistance for installing and implementing the CPRS Query/Hepatitis C Reports software.

Software and Manual Retrieval
OR*3.0*153 is distributed as a Packman message via Forum.

A ZIP file that contains the GUI Executable and the documentation files is available on the following Office of Information Field Offices (OIFOs) ANONYMOUS SOFTWARE directories.

OIFO	FTP Address	Directory
Albany	REDACTED	anonymous.software
Hines	REDACTED	anonymous.software
Salt Lake City	REDACTED	anonymous.software

OR_30_153.ZIP contains:
   CPRSQUERY.EXE
   OR_30_153IG.PDF   Installation Guide
   OR_30_153UM.PDF User Manual

V*IST*A Intranet

Documentation for this product is also available on the intranet at the following address:
http://vista.med.va.gov/vdl/
This address takes you to the VistA Documentation Library (VDL), which has a listing of all the clinical software manuals. Click on the CPRS Query link and it will take you to the CPRS Query documentation.

You can access the Hepatitis C Case Registry home page at the following address:
http://vista.med.va.gov/ clinicalspecialties/.

Pre-Installation Information

The following information contains recommendations and requirements for the installation of the CPRS Query Tool.

IRM Staff

Programmer access is required for installing CPRS Query Tool.

Hardware and Operating Systems Requirements

CPRS Query Tool software runs on the standard hardware platforms used by the Department of Veterans Affairs Healthcare facilities. These systems consist of Alpha Clusters running VMS (version 7.2-1 minimum) and DSM (version 7.2.1 VA1) or an Alpha 1000A running Windows NT (service pack 6) and Cache M operating system (version 3.2.31.1).

Workstation Requirements

Software Requirements
- VistA's Remote Procedure Call (RPC) Broker Version 1.1 or greater software **must** be properly installed and configured on the workstation.
- Microsoft Word (97 or higher)
- Microsoft Windows 98 SE (2nd edition, Windows 2000, or NT 4.0 (with service pack 6)

Workstation Hardware Requirements and Guidelines
- Color VGA monitor (set at 24 bit)
- Video card and a software driver capable of a minimum 800x600 dpi and 16-bit color display **must** be installed and properly configured.
- Printer, mouse, and keyboard
- 166 mzh processor with at least, 64 mb RAM
- 10 mb free hard drive space

For more detailed information about PC workstation and server requirements, see Appendix B of the CPRS Installation Guide (page 83):
http://vista.med.va.gov/VistA_Lib/Clinical/Comp_Patient_Recrd_Sys_(CPRS)/_Toc4529
69918

System Performance Capacity

There are no significant changes in the performance capacity of the VistA operating system once the CPRS Query Tool software is installed. The software should not create any appreciable global growth or network transmission problems. There are no memory constraints.

Software Installation Time

The estimated installation time is less than 3 minutes during off peak hours.

Users on the System

Users may remain on the system and no options need to be placed out of service.

Backup Routines

A backup of the transport global before installing the software is recommended.

Namespace

The CPRS Query Tool software namespace: OR.

Required Patches

Before the installation of Hepatitis C Reports, the following patches must be installed.

Application Name	Patches
OERR	OR*3*136
TIU	TIU*1.0*150
Hepatitis C Registry ROR	ROR*1.0*3.0

Routine List

```
ORMGMRC          ORMLR            ORMRA            ORQRY
ORQRY01          ORRHCO           ORRHCQ           ORRHCR
ORRHCT           ORRHCU           ORY153
```

Post-Install Routine
POST^ORY153 does the following:
1. Exports parameter "ORHEPC ABNORMAL START" at the Package level.
2. Updates Abnormal Report default start date to the value of "ORHEPC ABNORMAL START."
3. Sets Consult display group for the "Consult Status Report."
4. Sets Imaging display group for the "Scheduled/Due Activity Report."
5. For test sites, adds new patient IFN subscript to "ARS" xref in file #100.

File and Global Information

New files this patch installs:

File #	Name	Root Global	Global Protection	Journaling	Global Growth
102.21	CPRS Query Definition	^ORD(102.21,	@	Yes	Yes
102.22	CPRS Query Constraint	^ORD(102.22,	@	Yes	No
102.23	CPRS Query Edit Control	^ORD(102.23,	@	Yes	No
102.24	CPRS query display fields	^ORD(102.24,	@	Yes	No

Test Sites

CPRS Query (Hepatitis C Reports) was tested at the following sites:

Test Sites	Alpha	Beta
Milwaukee, WI		✖
Northern California	✖	✖
Palo Alto, CA	✖	✖
San Diego, CA		✖

Installation Instructions

1. Retrieve the Zip file (OR_30_153.ZIP) and unzip it.
   The ZIP file contains the GUI Executable and the documentation files:
   OR_30_153IG.PDF   Installation Guide
   OR_30_153UM.PDF User Manual

2. Use PackMan's Install/Check Message option to load OR*3.0*153 into KIDS from a Forum message.

```
Select MESSAGE Action: x
Select PacMan function: I
     1   INSTALL SELECTED ROUTINE(S)
     2   INSTALL/CHECK MESSAGE
CHOOSE 1-2: 2   INSTALL/CHECK MESSAGE
```

3. Use the KIDS Installation option to install the patch.
   Answer NO to the following questions :
   Want KIDS to Rebuild Menu Trees Upon Completion of Install?
   Want KIDS to INHIBIT LOGONs during the install?
   Want to DISABLE Scheduled Options, Menu Options, and Protocols?

Installation Example

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

You have PENDING ALERTS
          Enter  "VA to jump to VIEW ALERTS option

Select Kernel Installation & Distribution System Option: INSTALlation

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

Select Installation Option: INSTALl Package(s)
Select INSTALL NAME: OR*3.0*153     Loaded from Distribution  4/18/03@10:13:15
     => OR*3.0*153

This Distribution was loaded on Apr 18, 2003@10:13:15 with header of
   OR*3.0*153
   It consisted of the following Install(s):
     OR*3.0*153
Checking Install for Package OR*3.0*153

Install Questions for OR*3.0*153
```

```
Incoming Files:

   100      ORDER  (Partial Definition)
Note:  You already have the 'ORDER' File.

   102.21   CPRS QUERY DEFINITION   (including data)

   102.22   CPRS QUERY CONSTRAINT   (including data)

   102.23   CPRS QUERY EDIT CONTROL   (including data)

   102.24   CPRS QUERY DISPLAY FIELDS   (including data)

   8989.51  PARAMETER DEFINITION   (including data)
Note:  You already have the 'PARAMETER DEFINITION' File.
I will REPLACE your data with mine.

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


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

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

DEVICE: HOME//   ANYWHERE


                              OR*3.0*153
─────────────────────────────────────────────────

 Install Started for OR*3.0*153 :
               Apr 18, 2003@12:07:57

Build Distribution Date: Apr 04, 2003

 Installing Routines:
               Apr 18, 2003@12:07:57

 Installing Data Dictionaries:
               Apr 18, 2003@12:07:57

Installing Data:
               Apr 18, 2003@12:07:56

 Installing PACKAGE COMPONENTS:
Installing REMOTE PROCEDURE

 Installing OPTION
               Apr 18, 2003@12:07:57

 Running Post-Install Routine: POST^ORY153

Task #313902 started to rebuild ^OR(100,"ARS").

 Updating Routine file...

 The following Routines were created during this install:
     ORD2
     ORD21
```

```
          ORD210
          ORD211
          ORD212
          ORD22
          ORD23
          ORD24
          ORD25
          ORD26
          ORD27
          ORD28
          ORD29

 Updating KIDS files...

 OR*3.0*153 Installed.
                  Apr 18, 2003@12:07:57

 Install Message sent #93397
_____
```

100%	25	50	75
Complete			
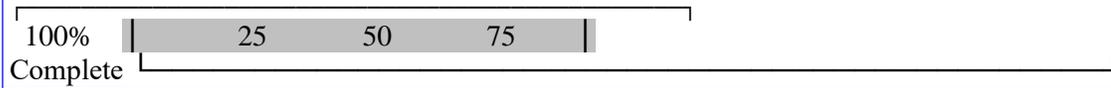
Implementation

Steps for setting up the CPRS QUERY GUI

1. Make sure the VistA servers are listed in the HOSTS file. If necessary, modify the HOSTS file of each client (PC) to set the appropriate mappings between names and IP addresses. The HOSTS file is located as follows:

Version of Windows OS	File (Location and Name)
Windows 95	C:\WINDOWS\HOSTS
Windows NT 3.51	C:\WINDOWS\SYSTEM32\DRIVERS\ETC\HOSTS
Windows NT 4.0, Windows 2000	C:\WINNT\SYSTEM32\DRIVERS\ETC\HOSTS

Example of a Windows 95 HOSTS file

```
# Copyright (c) 1994 Microsoft Corp.
#
# This is a sample HOSTS file used by Microsoft TCP/IP for Chicago
#
# This file contains the mappings of IP addresses to host names. Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host name.
# The IP address and the host name should be separated by at least one
# space.
#
# Additionally, comments (such as these) may be inserted on individual
# lines or following the machine name denoted by a '#' symbol.
#
# For example:
#
#      102.54.94.97     rhino.acme.com          # source server
#       38.25.63.10     x.acme.com              # x client host
#
#
```

a. Move the cursor to the end of the last line displayed in the file.

b. Press the <Enter> key to create a new line.

c. On the new line, enter the desired IP address beginning in the first column, as described in the example above. As recommended, add an appropriate IP address for the DHCPSERVER host name as the next entry below 127.0.0.1.

After typing the IP address, type at least one space, and enter the host name that corresponds to that IP address. As recommended, type in DHCPSERVER as the next entry below "loopback."

For example, the entry for a server at your site with an IP address of 10.5.21.66 would look like this:

```
127.0.0.1    localhost     # loopback  <---existing entry
10.5.21.66   DHCPSERVER    # HepC <---added entry
```

 d. Repeat steps a - c until you have entered all of the IP addresses and corresponding host names you wish to enter.

 e. When your entries are complete, use Notepad's **File | Save** command to save the HOSTS file.

☞ Do not save the HOSTS file with an extension; delete the .sam!

 f. Close the HOSTS file.

☞ The HOSTS file location on NT 4.0 Client is different from on WIN95. The Hepatitis C executable attempts — using RPC Broker — to log in to the default VistA server when Hepatitis C executes. RPC Broker cannot find the HOSTS file, so it uses the default.

For more information, see the *RPC Broker V.1.1 Systems Manual*.

2. Open the OR_30_153.zip file that contains the CPRSQuery.exe, OR3_0._153IG.PDF and OR3_0._153UM.PDF files.

3. Copy the CPRSQuery.exe to the workstations or put the files in a shared directory on the network.

4. Create desktop shortcut icons and enter the HOSTS address in the Properties
 S=(IP address) P=(port # of local server)
 Example:
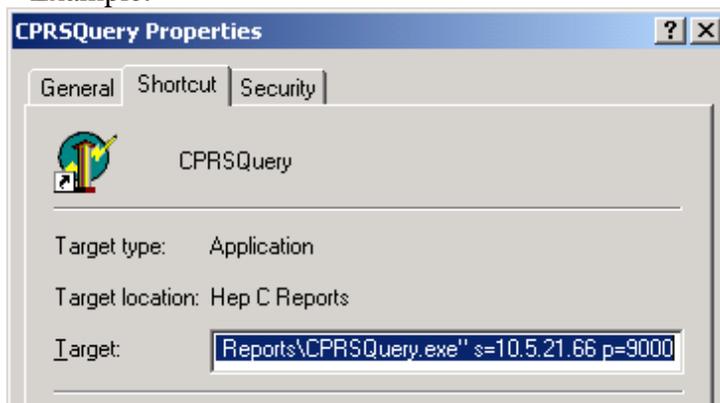
5. Start the CPRS QUERY application by double-clicking on CPRS QUERY desktop shortcut icon you just created.

6. Ensure that CPRS QUERY (Hepatitis C Reports) users are allocated the correct user security keys.

Required Menus, Keys, and Parameters

ORRCM REPORTING Required Menu Option.
In order to use the CPRS Query Tool, the menu option ORRCM REPORTING must be assigned to the user.

ROR VA HEPC USER Required key to see the "Registry" tab.
To see the Registry tab when selecting patients, the ROR VA HEPC USER key must be assigned to the user.

TIU/ASU Business Rules
Business Rules in TIU/ASU authorize specific users or groups of users to perform specified actions on documents in particular statuses. A set of business rules is exported with TIU/ASU; sites can edit or add to these.
When you search for documents in CPRS Query, the TIU business rules are applied. Users may not see a document on their list or the content of the document in the detailed display if the business rules do not allow access to the document.

PARAMETER: ORHEPC ABNORMAL START Abnormal Result Enabled Date
Upon installation, this parameter is set at the PACKAGE level to the date the patch was installed. It may also be set at the SYSTEM level locally. Sites can change this parameter by using the General Parameter Tools, available on the CPRS Configuration (IRM) menu, or from programmer mode: XPAR MENU TOOLS/EP (Edit Parameter Values) option.

The Abnormal Results (field 72) field is added to the Orders file (100) with this patch. This field will be defined as YES for any order that is identified as an abnormal result as defined by the following criteria:
 Consults = Existence of Significant Findings
 Lab = Critical high or low value
 Radiology = Primary Diagnostic Code assigned to the exam report has 'Generate
 Abnormal Alert' set to YES in file #78.3
When a user queries the abnormal result report, the available abnormal report start date will refer to the value of this parameter. Therefore, any data prior to the date set in the ORHEPC ABNORMAL START parameter will NOT be included in the report query.

Glossary

Terms relevant to the Hepatitis C Registry

Term or Acronym	Description
DFN	File Number—the local/facility patient record number (patient file internal entry number)
Extract Data Definition	This is a set of file and field numbers that identify the data that should be extracted during the extraction process.
Extract Process	This process is run after the update process. This function goes through patients on the local registry and, depending on their status, extracts all available data for the patient, since the last extract was run. The extract transmits any collected data for the patient to the national database via HL7.
HL7	Health Level 7
Hepatitis C Rx	A defined list of Hepatitis C medications, see Appendix A of the Clinical Case Registries V. 1.0, Hepatitis C User Manual.
ICD-9	International Classification of Diseases, version 9 A numeric code used for identifying patient diagnoses associated with inpatient and outpatient care.
ICN	Integration Control Number, or national VA patient record number
Local Registry	This is the local file of patients that have either passed the selection rules and therefore been added automatically or been added manually by a designated Hepatitis C supervisor.
Local Registry Update	This process adds new patients (that have had data entered since the last update was run and pass the selection rules) to the local registry.
National Case Registry	All sites running the Hepatitis C Case registry transmit their data to this central data registry.
Selection Rules	A predefined set of rules that define a Hepatitis C patient. See Appendix A of the Clinical Case Registries V. 1.0, Hepatitis C User Manual for selection rules.
PTF	Patient Treatment File—refers to the VistA Inpatient File in the Local Registry Report, under "Reason Added"