LABORATORY SEARCH/EXTRACT TECHNICAL AND USER GUIDE

PATCH LR*5.2*175

Version 5.2

August 1998

Department of Veterans Affairs
Veterans Health Administration
Office of Chief Information Officer

Preface

The Veterans Health Information Systems and Architecture (***VISTA***) Laboratory Search/Extract Patch LR*5.2*175 Technical and User Guide provides assistance for installing, implementing, and maintaining the ***VISTA*** Laboratory Search/Extract Patch LR*5.2*175 software application.

Recommended Users:

Department of Veterans Affairs Medical Center (DVAMC) Information Resource Management (IRM) staff

Laboratory Information Manager (LIM)

Representative from the Microbiology section for the Emerging Pathogens Initiative (i.e., director, supervisor, or technologist)

Total Quality Improvement/Quality Improvement/Quality Assurance (TQI/QI/QA) staff (or person at the facility with similar function)

VISTA Laboratory Search/Extract Patch LR*5.2*175 Technical and User Guide Sections:

Pre-Installation Information: This section contains pre-installation information.

Installation Instructions: This section of the guide provides an example of the **V*IST*A** Laboratory Search/Extract Patch LR*5.2*175 installation process.

Post Installation Instructions: This section provides all the necessary information required for the IRM and LIM staff to implement the software application.

Appendix A - EPI User Guide: The EPI User Guide provides the necessary information for implementing and maintaining the EPI search/extract criteria.

Appendix B - NCH User Guide: The NCH User Guide provides the necessary information for implementing and maintaining the NCH search/extract criteria.

Appendix C - Editing Files, Input Screens, Linking Data, and Request Form: This section provides instructions for editing files, input screens, linking data, and a Workload and Suffixes Codes Request Form.

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Overview

The **V*IST*A** Laboratory Search/Extract Patch LR*5.2*175 is an enhancement to the **V*IST*A** Laboratory Emerging Pathogens Initiative Patch LR*5.2*132 software application. The Laboratory Search/Extract enhancement software supports the following two national initiatives:

1. **Emerging Pathogens Initiative (EPI):** The Department of Veterans Affairs (DVA) Headquarters Infectious Disease Program Office assists with identifying new antibiotic-resistant, otherwise problematic pathogens within the DVA. Using this objective information, plans may be formulated on a national level for intervention strategies and resource needs. Results from the aggregate data may also be shared with the appropriate public health authorities for planning on the national level (i.e., private health care sectors).

2. **National Center for Health Promotion Cholesterol and Pap Screening (NCH):** Pursuant to the Congressional mandates stipulated in its enabling legislation (PL. 102-585, U.S.C. 17, 1704), the Department of Veterans Affairs (DVA) National Center for Health Promotion (NCHP) is tasked with monitoring and improving the prevalence of health promotion screening activities provided to veterans VA-wide. The purpose of the NCH Cholesterol and Pap Screening database is to monitor cholesterol and Pap screening activities at a national level, with the ultimate goal for improving detection and treatment of hyperlipidemia and cervical cancer. The NCH Cholesterol and Pap Screening database will also provide a valuable resource for clinical and health services researchers on screening activities and health outcomes, particularly for high-risk and special emphasis group such as veterans with hyperlipidemia, older veterans, and female veterans.

Mandate

The installation of the **V*IST*A** Laboratory Search/Extract Patch LR*5.2*175 software should be completed in accordance with PL. 102-585, U.S.C. 17, 1704. It is recommended that all VAMCs installed and implemented the software as soon as possible to help facilitate these important initiatives.

Functionality

The **V***IST***A** Laboratory Search/Extract Patch LR*5.2*175 enhancement software application tracks the EPI and NCH ongoing initiatives within the VAMCs without the necessity of any additional data entry. The software will automatically search and extract data from several **V***IST***A** Software databases (e.g., Laboratory, PIMS, and Social Work). The LAB DATA file (#63) (i.e., contains verified lab data results), PTF file (#45), and the PATIENT file (#2) data are used for the defined search/extract criteria.

The **V***IST***A** Laboratory Search/Extract software application automatically generates the data as defined by the EPI and NCH criteria's. The EPI search/extract data is processed on the 15th of each month. The NCH search/extract data is processed daily.

Mail Messages

The **V***IST***A** Laboratory Search/Extract Patch LR*5.2*175 enhancement software application automatically processes the EPI and NCH data producing HL7 formatted mail messages. A Verification Report mail message is then produced for each HL7 formatted mail message. The HL7 formatted mail messages are used for sending the EPI and NCH data to the Austin Automation Center (AAC) database.

The Verification Report mail message is a copy of the HL7 formatted mail messages in a human readable format. The Verification Report allows the users to review the EPI and NCH data and make corrections (e.g., complete social security numbers, valid Date of Births, and Period of Services, etc.) as deemed necessary.

The new Lab Search/Extract Manual Run (Enhanced) [LREPI ENHANCED MANUAL RUN] option enables the user to generate a Verification Report mail message (i.e., human readable format) as often as needed for reviewing the EPI and NCH data. This option will automatically send the NCH data to the AAC database each time the option is manually run.

EPI Mail Messages:

NOTE: See Appendix A for examples of the EPI mail messages.

EPI HL7 formatted Mail Messages

The **V***IST***A** Laboratory Search/Extract software automatically processes the EPI data on the 15th of each month producing HL7 formatted mail messages. A Verification Report mail message is then produced (i.e., in a human readable format) for each HL7 mail message. The EPI HL7 formatted mail messages **must** be **manually** forwarded on the 15th of each month to the AAC database via the Q-EPI.MED.VA.GOV domain. Use the VA MailMan software to manually forward the EPI data to XXX@ Q-EPI.MED.VA.GOV domain.

EPI Verification Report Mail Messages

The EPI Verification Report mail messages are sent to the EPI-REPORT mail group on the 15th of each month. The members of the EPI-REPORT mail group should review the EPI Verification Report and make data corrections (e.g., social security number, date of birth, period of service, etc.) as deemed necessary. The software automatically processes the EPI data corrections on the 15th of each month. **Note:** The EPI Verification Report may be generated as often as needed using the new Lab Search/Extract Manual Run (Enhanced) [LREPI ENHANCED MANUAL RUN] option.

EPI Confirmation Mail Messages

EPI Confirmation mail messages are sent to the sending facility EPI-REPORT mail group **after** the EPI HL7 mail messages has been received by the AAC database.

EPI Processing Report Mail Message

EPI Processing Report mail messages are sent to the sending facility EPI-REPORT mail group at the end of the AAC processing cycle (i.e., the 25th of each month). The EPI Processing Report mail messages confirms that the EPI data has been processed and lists any errors and/or warning codes requiring corrections.

NCH Mail Messages:

NOTE: See Appendix B for examples of the NCH mail messages.

NCH HL7 Formatted Mail Messages

The **V***IST***A** Laboratory Search/Extract software automatically processes the NCH data daily producing HL7 formatted mail messages. A Verification Report mail message is then produced (i.e., in a human readable forma) for each HL7 formatted mail message. The software automatically transmits the NCH HL7 formatted mail messages daily to the AAC database.

NCH Verification Report mail messages

The NCH Verification Report mail messages are generated daily and sent to the LR NCH-Report mail group. The members of the LR NCH-Report mail group may use the Verification Report to review the NCH data and make corrections (e.g., social security number, date of birth, period of service, etc.) as deemed necessary. The new Lab Search/Extract Manual Run (Enhanced) [LREPI ENHANCED MANUAL RUN] option enables the users to generate the NCH Verification Report and to transmit the NCH data corrections to the AAC database as often as needed.

HL7 Message Status List

The HL7 Message Status List contains the status of each transmission sent by the site to the AAC database.

NCH HL7 formatted Acknowledgment mail message

The NCH HL7 formatted Acknowledgment mail message is sent by the AAC to the sending site. This message is translated in a human readable format and sent to the LR NCH Report mail group.

NCH Acknowledgment mail message

The NCH Acknowledgment mail message displays the status of the NCH HL7 formatted mail message transmission to the AAC. The NCH Acknowledgment mail message is sent to the LR NCH-Report mail group.

NCH VA Alert mail message

A NCH VA Alert mail message is sent to the LABORATORY SEARCH/EXTRACT PROTOCOL file (#69.4), Report Mail Group field (#1), after the NCH data has been processed by the AAC.

Enhancements

The **V***IST***A** Laboratory Search/Extract Patch LR*5.2*175 software consists of the following enhancements:

Cytology Search

The Cytology Search/Extract searches the LAB DATA file (#63) based on the criteria defined by the NCH Cholesterol and NCH Pap search criteria in the LAB SEARCH/EXTRACT file (#69.5).

New Option

Lab Search/Extract Manual Run (Enhanced) [LREPI ENHANCED MANUAL RUN] option: This option is used to run the EPI or NCH extracts manually.

Lab Search/Extract Protocol Edit [LREPI PROTOCOL EDIT] option: Use this option to edit the LAB SEARCH/EXTRACT PROTOCOL file (#69.4).

Input Screens

The Emerging Pathogens Parameters Input Screen is **renamed** Laboratory Search/Extract Parameters Input Screen. The Laboratory Search/Extract Parameters Input Screens were enhanced by adding a fifth screen to accommodate the following four new prompts (i.e., Lag Days, Sex, Before Date of Birth, and After Date of Birth).

Mail Groups

Patch LR*5.2*175 automatically installs the LR NCH and LR NCH-Report mail groups during the installation process. The LR NCH and LR NCH-Report mail groups Coordinator(s) may be entered doing the installation process. Other mail groups members **must** be added to the mail groups after the installation process.

LRNCH Protocol

The LRNCH protocol is added to the LAB SEARCH/EXTRACT file (69.5), Protocol field (#12) during patch installation process.

New mail messages

- NCH HL7 formatted mail messages
- NCH Verification Report mail messages
- NCH HL7 formatted Status List
- NCH HL7 formatted (Acknowledgment) mail messages
- NCH Acknowledgment messages
- NCH VA Alert messages

Files

LAB SEARCH/EXTRACT PROTOCOL file (#69.4) New Fields

Send Alert field (#3): Enter 1 for YES to receive an alert when a search is run automatically.

Receive Alert field (#5): Select the user (s) or group responsible for receiving alerts when the search has been executed automatically.

Title field (#4): This field will over-ride the default title for the Verification Report. If this field is left, blank the default title Verification Report will be used.

LAB SEARCH/EXTRACT file (#69.5) New Fields

Lag Days field (#5): This is the number of days that the search should wait after the test was ordered to ensure that the results have been entered in the system. Enter the number of lag days desired. The amounts allowed will very depending on the type.

Sex field (#16): FOR FUTURE USE ONLY

Before Date of Birth field (#17): Patients born after the date entered will not be included in the report. Enter a date to screen out patients born after the date entered.

After Date of Birth field (#18): Persons born before the entered will not be included in the report.

SNOMED Codes field (#8): This is a list of SNOMED codes to be included in the search.

PTF field (#14): This field is used to follow the inpatient PTF information.

Modifications

Listed below are the modifications made to the **V*IST*A** Laboratory Emerging Pathogens Initiative (EPI) Patch LR*5.2*132 software application files, menu, and options. These modifications were made to accomplish the enhancements for the **V*IST*A** Laboratory Search/Extract Patch LR*5.2*175 software application.

Files Renamed

The EMERGING PATHOGENS PROTOCOL file (#69.4) is **renamed** the LAB SEARCH/EXTRACT PROTOCOL file (#69.4).

The EMERGING PATHOGENS file (#69.5) is **renamed** the LAB SEARCH/EXTRACT file (#69.5).

Menu Remaned

The Emerging Pathogens Primary Menu [LREPI EMERGING PATHOGENS MENU] is **renamed** the Lab Search/Extract Primary Menu [LREPI SEARCH EXTRACT MENU].

Options Renamed

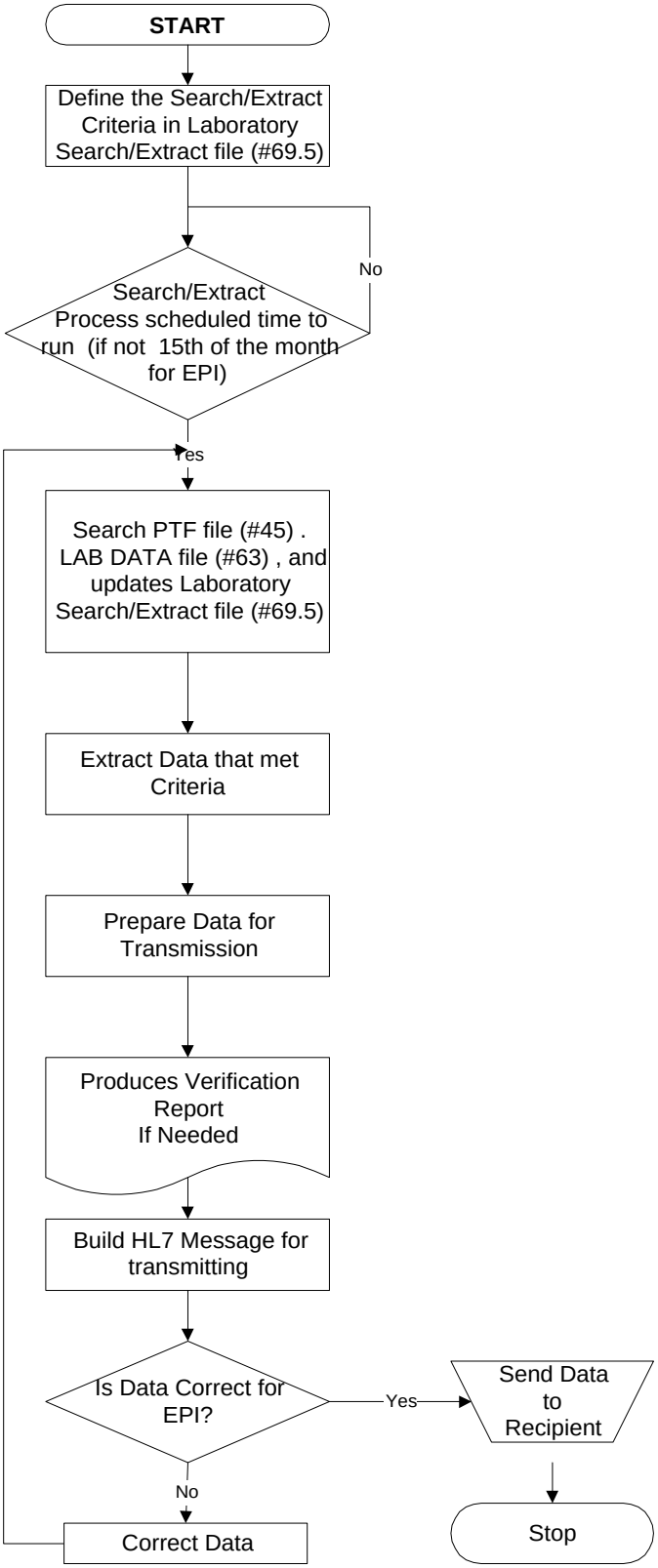
The Emerging Pathogens Parameter Setup [LREPI PARAMETER UPDATE] option is **renamed** the Lab Search/Extract Parameter Setup [LREPI PARAMETER SETUP] option.

The Emerging Pathogens Nightly Task [LREPI NIGHTLY TASK] is **renamed** the Lab Search/Extract Nightly Task [LREPI NIGHTLY TASK].

Option Replaced

The Emerging Pathogens Manual Run [LREPI (EPI) MANUAL RUN] option is **replaced** with the new Lab Search/Extract Manual Run (Enhanced) [LREPI ENCHANCE MANUAL RUN] option.

Laboratory Search/Extract Process Flowchart



Orientation

This section addresses the Laboratory Search/Extract Patch LR*5.2*175 Technical and User Guide computer screen dialogue, symbols, reference manuals, and the electronic and hard copy distributions.

Screen Displays

The Lab Search/Extract Primary [LREPI SEARCH EXTRACT MENU] Menu options are using VA FileMan/ScreenMan forms for editing and displaying data. For detailed instructions using ScreenMan forms please refer to the VA FileMan V. 21.0 User Manual, Section 6 - ScreenMan.

Computer Dialogue

The computer dialogue appears in Courier font, no larger than 10 points.
Example: `Courier font 10 points`

User Response

User entry response appears in boldface type Courier font, no larger than 10 points.
Example: **`Boldface type`**

Return Symbol

User response to computer dialogue is followed by the **<RET>** symbol which appears in Courier font, no larger than 10 points, and bolded.
Example: <RET>

Tab Symbol

User response to computer dialogue is followed by the **<Tab>** symbol that appears in Courier font, no larger than 10 points, and bolded.
Example: <Tab>

Technical and User Guide Distributions

The following information states how to obtain the Laboratory Search/Extract Patch LR*5.2*175 Technical and User Guide electronic and hard copy distributions.

Hard Copy

The Laboratory Search/Extract Patch LR*5.2*175 Technical and User Guide hard copies are distributed by National Center for Documentation (NCD) to all Veteran Affairs Medical Centers (VAMCs).

Electronic Distributions

The Laboratory Search/Extract Patch LR*5.2*175 Technical and User Guide is available on the Intranet in Hyper Text Markup Language (HTML) and Portable Document Format (PDF) at the following Intranet address:
http://152.127.1.95/softserv/clin_nar.row/lab/

ANONYMOUS.SOFTWARE Accounts

The Laboratory Search/Extract Patch LR*5.2*175 Technical and User Guide is also available on the ANONYMOUS SOFTWARE accounts at the Albany, Hines, and Salt Lake City Chief Information Officer Field Offices (CIOFOs) in PDF (i.e., P175TUG.PDF) at the following FTP addresses:

CIOFOs	**FTP Address**
Albany	152.127.1.5 - anonymous.software
Hines	152.129.1.110 - anonymous.software
Salt Lake City	152.131.2.1 - anonymous.software

References

Kernel V. 8.0 Systems Manual
HL7 V. 1.6 Manuals
PIMS V. 5.3 Manuals
VA FileMan V. 21.0 User Manual, Section 6 - ScreenMan
MailMan V. 7.1 Manuals

Pre-Installation Information

Hardware and Operating System Requirements

V*IST***A** software operates on two hardware platforms. The hardware platforms are listed in the mini-computer category, which provides multi-tasking and multi-user capabilities. The hardware platforms systems used are:

Digital Equipment Corporation (DEC) Alpha Series

Digital Equipment Corporation (DEC) Alpha series is using the DEC Open Virtual Memory System (VMS), Version 6.1 or greater, operating system. This platform uses the DEC System Mumps (DSM), Version 6.3 or greater, of American National Standards Institutes (ANSI) of Massachusetts General Hospital Utility Multi-Programming System (MUMPS) also known as 'M' language. MUMPS is a Federal Information Processing Standard (FIPS) language.

Personal Computer (PC) System

Personal Computer (PC) System with 486 or Pentium computer processor chip is using the Microsoft Disk Operating System (MS-DOS). The platform uses Open-M, of the American National Standards Institutes (ANSI) of Massachusetts General Hospital Utility Multi-Programming System (MUMPS) also known as 'M' language. MUMPS is a Federal Information Processing Standard (FIPS) language.

System Performance Capacity

There are no changes in the performance of the system once Patch LR*5.2*175 is installed.

Installation Time

Installation time is less than 2 minutes during off peak hours and less than 5 minutes during peak hours.

Users on the System

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

Staffing Requirements

The following staff is required to successfully install and implement Patch LR*5.2*175 software:

IRM Staff

An IRM staff is required for installing Patch LR*5.2*175, setting up the domains, mail groups, and menu assignments.

Laboratory Staff

It is **highly recommended** that the following person (s) jointly participate in reviewing the parameter descriptions:

Laboratory Information Manager (LIM)

Representative from the Microbiology section for the Emerging Pathogens Initiative (i.e., director, supervisor, or technologist)

Total Quality Improvement/Quality Improvement/Quality Assurance (TQI/QI/QA) staff (or person at the facility with similar function)

Periodic Reviews

The Lab Search/Extract parameter descriptions require an ongoing review process (as directed by (VAHQ) Infectious Disease Program and NHCP Offices). The person(s) participating in the ongoing review process is responsible for ensuring the following requirements are kept current:

Periodic reviews of the ICDM-9 codes
Periodic reviews of the Lab Search/Extract Parameter Setup
Annual review of the NCHP parameter descriptions

Backup Routines

It is highly recommended that a backup of the transport global be performed before installing Patch LR*5.2*175.

Test Sites

The **V*IST*A** Laboratory Search/Extract Patch LR*5.2*175 software application was tested by the following sites:

Test Sites	Test Phases	Platform
Asheville, NC VAMC	Alpha	DEC/Alpha
Brockton/West Roxbury, MA VAMC	Alpha	DEC/Alpha
Durham, NC VAMC	Beta	DEC/Alpha
Lexington, KY VAMC	Beta	DEC/Alpha
Long Beach, CA VAMC	Beta	DEC/Alpha
Muskogee, OK VAMC	Beta	Open M

Kernel Installation and Distribution System (KIDS)

The Laboratory Search/Extract Patch LR*5.2*175 distribution is using KIDS. For further instructions on using KIDS, please refer to the Kernel Version 8.0 Systems Manual.

Database Integration Agreements (DBIA)

The following DBIA were approved for **V*IST*A** Laboratory Search/Extract Patch LR*5.2*175:

DBIA #418 DBIA #1372 DBIA #1888 DBIA #2488

Namespace

The V*IST*A Laboratory Search/Extract Patch LR*5.2*175 namespace is Laboratory's LR.

Routine List

LR175	LREPI1A	LREPIAK	LREPIRN
LR175P	LREPI2	LREPICY	LREPIRM
LREPI	LREPI3	LREPILK	
LREPI1	LREPI4	LREPIRP	

V*IST*A Software Requirements

Packages	Versions (or Greater)
VA FileMan	21 (with patches installed)
Kernel	8.0 (with patches installed)
Laboratory	5.2 (with patches installed)
PIMS	5.3 (with patches installed)
HL7	1.6 (with patches installed)
Social Work	3.0 (with patches installed)
MailMan	7.1 (with patches installed)

Patches Required

Prior to the installation of Patch LR*5.2*175, the following patches **MUST** be installed:

Packages	Patches
MailMan V.7.1	XM*DBA*116 (NCH-Lab Domain)
Health Level Seven V. 1.6	HL*1.6*34
Laboratory V. 5.2	LR*5.2*132
	LR*5.2*157

Health Level Seven (HL7)

The **V*IST*A** Laboratory Search/Extract Patch LR*5.2*175 software uses the **V*IST*A** HL7 software to transmit data to the AAC database. The data resides in the AAC database. The data is use for assisting public health surveillance activities with new health care initiatives.

Domain

The **V*IST*A** Laboratory Search/Extract Patch LR*5.2*175 software application Domain name is XXX@Q-NCH. Sites **must** install Patch XM*DBA*116. See VA MailMan V. 7.1 Manual for instruction on how to set up the domain after the patch has been installed.

Protocols

LRNCH is the Event Driver protocol used for sending the NCH HL7 messages to the Austin Automation Center.

LRNCH SEND CLIENT is the Client server used for sending NCH HL7 mail messages to the Austin Automation Center.

LRNCHAAC is the Subscriber server used for processing the NCH Acknowledgment mail messages received from the Austin Automation Center.

Mail Groups

The Office of the Director (00) at each facility should determine responsible individual(s)/function(s) for the mail groups. The Laboratory Search/Extract Patch LR*5.2*175 creates the following two mail groups during the installation process.

LR NCH: This mail group is used to transmit the NCH HL7 messages derived from the parameters defined in the LAB SEARCH/EXTRACT file (#69.5) to the AAC database.

LR NCH-REPORT: This mail group delivers the Verification Report mail message and Acknowledgment mail messages (i.e., human readable format) to the recipients assigned to this mail group.

Laboratory Search/Extract Menu and Options

The Lab Search/Extract Primary Menu [LREPI SEARCH EXTRACT MENU] is the only menu included with the **V*IST*A** Laboratory Search/Extract software. The menu contains four options. The Lab Search/Extract Nightly Task [LREPI NIGHTLY TASK] is a stand-alone option that is included with the software. There are no locks or security keys associated with the menu or options.

NOTE: The Lab Search/Extract Primary Menu [LREPI SEARCH EXTRACT MENU] options are using VA FileMan screen displays, referred to as ScreenMan.
For detailed instructions on how to use the screens please review the VA FileMan V. 21.0 User Manual, Section 6 ScreenMan.

Lab Search/Extract Primary Menu [LREPI SEARCH EXTRACT MENU]: This is the primary menu that contains the Lab Search/Extract options.

Lab Search/Extract Manual Run (Enhanced) [LREPI ENHANCE MANUAL RUN] option: This option is used to run the EPI and NCH extracts manually.

Antimicrobial Link Update [LREPILK] option: This option allows the user to link the ANTIMICROBIAL SUSCEPIBILTY file (#62.06) with the WKLD CODE file (#64).

NOTE: Please see the Appendix C section of this guide for instructions on "How to Link Antimicrobial Entries to Workload Code Entries" using the Antimicrobial Link Update [LREPILK] option.

Lab Search/Extract Parameter Setup [LREPI PARAMETER SETUP]option: This option allows the users to setup the EPI and NCH parameter search/extract criteria.

Lab Search/Extract Protocol Edit [LREPI PROTOCOL EDIT] option: Use this option to edit the LAB SEARCH/EXTRACT PROTOCOL file (#69.4).

Lab Search/Extract Nightly Task [LREPI NIGHTLY TASK] option: The Lab Search/Extract Nightly Task [LREPI NIGHTLY TASK] option **must** be scheduled to run each night by TaskMan. This option will build a HL7 Message and send it to the defined locations specified by the EPI and NCH protocols.

Laboratory Search/Extract Parameters Input Screen Prompts Definitions

Laboratory Search/Extract Parameters Input Screen Prompts	Laboratory Search/Extract Parameters Input Screen Prompt Definitions
Laboratory Test (s)	Consider these synonymous with, chemistry, serology, hematology, and "blood/serum" tests. Results anticipated to be found here would have had a test done under the chemistry/hematology accession areas, even if physically performed in microbiology and other areas. Select tests from the LABORATORY TEST file (#60).
Indicator	Select the code that will determine how to match lab results. '1' FOR Use Reference Ranges '2' FOR Contains '3' FOR Greater Than '4' FOR Less Than '5' FOR Equal To
Value	Positive, etc. Answer must be 1-15 characters in length. This is a Free Text field.
ICDM-9	ICDM-9 standardized code used nationwide in federal and non-federal/private health care facilities. Select from the ICDM-9 DIAGNOSIS file (#80).
ICDM-9 Description	Title of ICDM-9 diagnosis
Selected Etiology	Consider synonymous with organism, final microbial diagnosis/isolate. Select from the ETIOLOGY FIELD file (#61.2)
Selected SNOMED codes	Answer with SNOMED CODES You may enter a new SNOMED CODE, if you wish. Answer must be 1-15 characters in length.
Antimicrobial Susceptibility	Enter the Antimicrobial that will be used in screening out sensitive Etiologies (e.g., "Vancomycin" for Vancomycin Resistant Enterococcus). Select from the ANTIMICROBIAL SUSCEPTIBILITY file (#62.6).
NLT Code	Displays the associated NLT code if linked. If no NLT Code is displayed use the Antimicrobial Link Update option.
NLT Description	Displays the Description of the linked NLT code.
Topography Selection	Enter a date to screen out patients born before the date entered. Examples of Valid Dates: JAN 20 1957 or 20 JAN 57 or 1/20/57 or 012057 T (for TODAY), T+1 (for TOMORROW), T+2, T+7, etc. T-1 (for YESTERDAY), T-3W (for 3 WEEKS AGO), etc.
Include	Selection of Topography screens all others out except the ones selected. For "ALL" leave blank. Not to be used in conjunction with the exclude Topography selection. Select from the TOPOGRAPHY file (#61).

Laboratory Search/Extract Parameters Input Screen Prompts	Laboratory Search/Extract Parameters Input Screen Prompt Definitions
Exclude	Select the Topography to screen out. Not to be used in conjunction with the Include Topography selection. Select from the TOPOGRAPHY file (#61).
First Encounter:	Limits the output to the first encounter for the patient. Otherwise list all encounters. Choose: '1' FOR YES '0' FOR NO
Follow PTF:	Indicates if the PTF record will be followed until a discharge has been entered. Choose: '1' FOR YES '0' FOR NO
Before Date Of Birth:	Enter a date to screen out patients born before the date entered. Examples of Valid Dates: JAN 20 1957 or 20 JAN 57 or 1/20/57 or 012057 T (for TODAY), T+1 (for TOMORROW), T+2, T+7, etc. T-1 (for YESTERDAY), T-3W (for 3 WEEKS AGO), etc.
After Date Of Birth:	A birthrate to screen patients (i.e., patients DOB after 1/1/1950).
Select SEX:	**FOR FUTURE USE ONLY.**
Run Date:	Date that the last Auto Search/Extract processed.
Protocol:	Defines the protocol used to define the output messages. Select from the LAB SEARCH/EXTRACT PROTOCOL file (#69.4).
Run Cycle:	Enter the date that the last Auto Search/Extract processed.
Lag Days:	Enter the numbers of lag days desired. The number allowed will vary depending on the cycle type.
General Description:	To review or edit the General Description prompt use the **<Tab>** key.

V*IST*A Lab Search/Extract Files Data Dictionaries

The following are examples of the LABORATORY SEARCH/EXTRACT files standard Data Dictionaries:

LABORATORY SEARCH/EXTRACT PROTOCOL file (#69.4)

```
STANDARD DATA DICTIONARY #69.4 -- LAB SEARCH/EXTRACT PROTOCOL   FILE 06/11/98
PAGE 1
STORED IN ^LAB(69.4,  (2 ENTRIES)   SITE: BROCKTON/W.ROXBURY   UCI: VAH,ROU
(VERSION 5.2)

DATA          NAME                  GLOBAL        DATA
ELEMENT       TITLE                 LOCATION      TYPE
-------------------------------------------------------------------------------
This file contains additional search and extract parameters to be used by the
Laboratory Search/Extract software. These parameters are not specific to
entries in LAB SEARCH/EXTRACT file (#69.5), but are specific to the Protocol
(refer to Protocol file #101) being used.


POINTED TO BY: PROTOCOL field (#12) of the LAB SEARCH/EXTRACT File (#69.5)


CROSS
REFERENCED BY: PROTOCOL(B)


69.4,.01      PROTOCOL               0;1 POINTER TO PROTOCOL FILE (#101)
                                    (Required)

              INPUT TRANSFORM:  S DINUM=X
              LAST EDITED:      NOV 08, 1996
              HELP-PROMPT:      Select the Protocol that will be used to build
                                the message.
              DESCRIPTION:      This is the entry in the Protocol file (#101)
                                that will be used to build the HL7 Message.
                                This allows additional parameters to be
                                associated with the protocol.

              NOTES:            XXXX--CAN'T BE ALTERED EXCEPT BY PROGRAMMER

              CROSS-REFERENCE:  69.4^B
                                1)= S ^LAB(69.4,"B",$E(X,1,30),DA)=""
                                2)= K ^LAB(69.4,"B",$E(X,1,30),DA)


69.4,1        Report Mail Group      0;2 POINTER TO MAIL GROUP FILE (#3.8)

              LAST EDITED:      NOV 08, 1996
              HELP-PROMPT:      Select which mail group will receive the
                                verification report.


              DESCRIPTION:      This is the mail group that will receive the
                                verification report.


69.4,2        Message Size           0;3 NUMBER

              INPUT TRANSFORM:  K:+X'=X!(X>999999)!(X<100)!(X?.E1"."1N.N) X
```

```
                LAST EDITED:      DEC 04, 1996
                HELP-PROMPT:      Enter the maximum number of lines a message
                                  may contain (100 to 999999) before it breaks
                                  into another message.
                DESCRIPTION:      This determines how big the HL7 message will
                                  be before it breaks into another message.


69.4,3          Send Alert             0;4 SET

                                  '1' FOR YES;
                LAST EDITED:      JUL 31, 1997
                HELP-PROMPT:      Enter '1' or 'YES' to send an alert when a
                                  search is run automatically. Leave this field
                                  blank if no alert is desired.
                DESCRIPTION:      When this field is set to '1' or 'YES' an
                                  alert is transmitted to the recipients listed
                                  in the RECEIVE ALERTS field when a search is
                                  run automatically for this protocol.


69.4,4          Title                  0;5 FREE TEXT

                INPUT TRANSFORM:  K:$L(X)>40!($L(X)<2) X
                LAST EDITED:      AUG 01, 1997
                HELP-PROMPT:      Enter a new title (2 to 40 characters) for the
                                  Verification report. If this field is left
                                  blank the default title "Verification Report"
                                  will be used.
                DESCRIPTION:      This field will over-ride the default title
                                  for the Verification Report.


69.4,5          Receive Alerts        1;0      VARIABLE POINTER  Multiple #69.45
                DESCRIPTION:      This is the User(s) or Group that will receive
                                  alerts stating the extract has been run.
                                  automatically.


69.45,.01         Receive Alerts          0;1        VARIABLE POINTER
                                       (Multiply asked)

                  FILE  ORDER  PREFIX    LAYGO  MESSAGE
                     200  1    U            n   Responsible User
                     3.8  2    G            n   Responsible Group

                  LAST EDITED:       AUG 05, 1997

                  HELP-PROMPT:       Select the User(s) or Group responsible for
                                     receiving alerts that the search has been
                                     run automatically.
                  DESCRIPTION:       This is the user(s) or Group that will
                                     receive alerts that the search has been run
                                     automatically.
                  CROSS-REFERENCE:   69.45^B
                                     1)= S
                                     ^LAB(69.4,DA(1),1,"B",$E(X,1,30),DA)=""
                                     2)= K ^LAB(69.4,DA(1),1,"B",$E(X,1,30),DA)
                                     3)= Required Index for Variable Pointer


FILES POINTED TO                     FIELDS

MAIL GROUP (#3.8)                    Report Mail Group (#1)
```

```
PROTOCOL (#101)                    PROTOCOL (#.01)

INPUT TEMPLATE(S):

PRINT TEMPLATE(S):
CAPTIONED                                          USER #0

SORT TEMPLATE(S):

FORM(S)/BLOCK(S):
LREPIPROT                       SEP 05, 1997@13:34  USER #0
  LRPROTHEAD                      DD #69.4
  LRPROT1                         DD #69.4
  LRPROT2                         DD #69.45
```

LAB SEARCH/EXTRACT file (#69.5)

```
STANDARD DATA DICTIONARY #69.5 -- LAB SEARCH/EXTRACT FILE     06/11/98  PAGE 1
STORED IN ^LAB(69.5,  (17 ENTRIES)   SITE: BROCKTON/W.ROXBURY   UCI: VAH,ROU
(VERSION 5.2)

DATA          NAME                  GLOBAL        DATA
ELEMENT       TITLE                 LOCATION      TYPE
-------------------------------------------------------------------------------
This file contains search criteria used by the Laboratory Search/Extract
software. This file should only be edited using Lab Search/Extract Parameter
Setup option [LREPI PARAMETER SETUP] provided with this software.


CROSS
REFERENCED BY: NAME(B), REFERENCE NUMBER(C)


69.5,.01      NAME                    0;1 FREE TEXT (Required)

              INPUT TRANSFORM:  K:$L(X)>50!($L(X)<3)!'(X'?1P.E)!(X'?.ANP) X
              LAST EDITED:      DEC 17, 1996
              HELP-PROMPT:      Enter a Name (3 to 50 characters) for the
                                Search/Extract parameter you are defining.
              DESCRIPTION:      This is the name of the Search/Extract
                                parameter you are defining.

              NOTES:            XXXX--CAN'T BE ALTERED EXCEPT BY PROGRAMMER

              CROSS-REFERENCE:  69.5^B
                                1)= S ^LAB(69.5,"B",$E(X,1,30),DA)=""
                                2)= K ^LAB(69.5,"B",$E(X,1,30),DA)


69.5,.05      REFERENCE NUMBER        0;9 NUMBER

              INPUT TRANSFORM: K:+X'=X!(X>999)!(X<1)!(X?.E1"."1N.N)!(X'>99)!$D
                                (^LAB(69.5,"C",X)) X
              LAST EDITED:      NOV 29, 1996
              HELP-PROMPT:      Type a unique number between 100 and 999 to
                                identify this entry. Numbers from 1 to 99 are
                                reserved for future use.
              DESCRIPTION:      This is a unique number used to identify this
                                entry.

                                UNEDITABLE
              NOTES:            XXXX--CAN'T BE ALTERED EXCEPT BY PROGRAMMER

              CROSS-REFERENCE:  69.5^C
                                1)= S ^LAB(69.5,"C",$E(X,1,30),DA)=""
                                2)= K ^LAB(69.5,"C",$E(X,1,30),DA)


69.5,1        ACTIVE                  0;2 SET

                                '1' FOR YES;
                                '0' FOR NO;
              LAST EDITED:      JUN 09, 1998
              HELP-PROMPT:      '1' or 'YES' indicates that this is an active
                                entry.
              DESCRIPTION: This defines if this entry is active or not.
```

```
69.5,2          LAB TEST                1;0 POINTER Multiple #69.52

                DESCRIPTION:        This is the test that is to be searched for
                                    and retrieved.


69.52,.01         LAB TEST              0;1 POINTER TO LABORATORY TEST FILE (#60)
                                            (Multiply asked)

                  INPUT TRANSFORM:    S DIC("S")="I
                                      $P($G(^(0)),U,4)=""CH""!($P($G(
                                      ^(0)),U,4)=""CY"")" D ^DIC K DIC S
                                      DIC=DIE,X= +Y K:Y<0 X
                  LAST EDITED:        FEB 04, 1998
                  HELP-PROMPT:        Enter the lab test that is to be searched
                                      for and retrieved. Consider this synonymous
                                      with chemistry, serology, hematology
                                      "blood/serum" or Cytology tests.
                  DESCRIPTION:        This is the lab test that is to be searched
                                      for and retrieved.

                  SCREEN:             S DIC("S")="I
                                      $P($G(^(0)),U,4)=""CH""!($P($G(
                                      ^(0)),U,4)=""CY"")"
                  EXPLANATION:        Only CH subscripts are selectable.
                  NOTES:              XXXX--CAN'T BE ALTERED EXCEPT BY PROGRAMMER

                  CROSS-REFERENCE:    69.52^B
                                      1)= S
                                      ^LAB(69.5,DA(1),1,"B",$E(X,1,30),DA)=""
                                      2)= K ^LAB(69.5,DA(1),1,"B",$E(X,1,30),DA)


69.52,1           INDICATOR               0;2 SET

                                      '1' FOR Use Reference Ranges;
                                      '2' FOR Contains;
                                      '3' FOR Greater Than;
                                      '4' FOR Less Than;
                                      '5' FOR Equal To;
                  LAST EDITED:        FEB 05, 1997
                  HELP-PROMPT:        Select the code that will determine how to
                                      match lab results.
                  DESCRIPTION:        This indicates if the search for the lab
                                      testis conditional.


69.52,2           INDICATED VALUE         0;3 FREE TEXT

                  INPUT TRANSFORM:    K:$L(X)>30!($L(X)<1) X
                  LAST EDITED:        FEB 05, 1998
                  HELP-PROMPT:        Enter the data to be compared using the
                                      INDICATOR field.
                  DESCRIPTION:        If the search is conditional this defines
                                      the criteria.



69.5,3          ETIOLOGY                2;0 POINTER Multiple #69.53

                DESCRIPTION:            This defines the Etiology to search for.
```

```
69.53,.01    ETIOLOGY              0;1 POINTER TO ETIOLOGY FIELD FILE (#61.2)
                                    (Multiply asked)
LAST EDITED:      AUG 29, 1996
                HELP-PROMPT:      Select the Etiology to search for.
                DESCRIPTION:      This defines the Etiology to search for.
                                  Select the appropriate Etiology.

                CROSS-REFERENCE:  69.53^B
                                  1)= S
                                  ^LAB(69.5,DA(1),2,"B",$E(X,1,30),DA)=""
                                  2)= K ^LAB(69.5,DA(1),2,"B",$E(X,1,30),DA)


69.5,4        ICD9                    3;0 POINTER Multiple #69.54

              DESCRIPTION:            This defines the ICD9 to search for.


69.54,.01       ICD9                    0;1 POINTER TO ICD DIAGNOSIS FILE (#80)
                                       (Multiply asked)

                LAST EDITED:      OCT 11, 1996
                HELP-PROMPT:      Select the ICDM-9 standardized code, used
                                  nationwide in federal and non-federal
                                  /private health care facilities, to be
                                  included in the search.
                DESCRIPTION:      This defines the ICD9 to search for.

                CROSS-REFERENCE:  69.54^B
                                  1)= S
                                  ^LAB(69.5,DA(1),3,"B",$E(X,1,30),DA)=""
                                  2)= K ^LAB(69.5,DA(1),3,"B",$E(X,1,30),DA)


69.5,5        ANTIMICROBIAL SUSCEPTIBILITY 4;0 POINTER Multiple #69.55

              LAST EDITED:      JAN 22, 1997
              DESCRIPTION:      This determines that if any of the Etiologies
                                selected are to be resistant to any
                                Antimicrobials.


69.55,.01       ANTIMICROBIAL SUSCEPTIBILITY 0;1 POINTER TO ANTIMICROBIAL
                SUSCEPTIBILITY FILE (#62.06) (Multiply asked)

                LAST EDITED:      JAN 22, 1997


                HELP-PROMPT:      Enter the Antimicrobial that will be used in
                                   screening out sensitive Etiologies.
                DESCRIPTION:      This determines that if any of the
                                  selected are to be resistant to
                                  Antimicrobials. Select the appropriate
                                  Antimicrobials to screen out the Etiologies.

                CROSS-REFERENCE:  69.55^B 1)= S
                                     ^LAB(69.5,DA(1),4,"B",$E(X,1,30),DA)=""
                                   2)= K ^LAB(69.5,DA(1),4,"B",$E(X,1,30),DA)


69.5,6        INCLUDED SITES          5;0 POINTER Multiple #69.56
```

```
              LAST EDITED:      OCT 04, 1996
              DESCRIPTION:      This determines what Topography to screen for.


69.56,.01       TOPOGRAPHY         0;1 POINTER TO TOPOGRAPHY FIELD FILE (#61)
                                    (Multiply asked)

                LAST EDITED:      OCT 04, 1996
                HELP-PROMPT:      Selection of a Topography screens all others
                                  out except the ones selected. For "ALL"
                                  leave blank. Not to be used in conjunction
                                  with the exclude Topography selection.
                DESCRIPTION:      This determines what Topography to screen
                                  for. Select the appropriate Topography to
                                  include in the extract.

                CROSS-REFERENCE:  69.56^B
                                  1)= S
                                  ^LAB(69.5,DA(1),5,"B",$E(X,1,30),DA)=""
                                  2)= K ^LAB(69.5,DA(1),5,"B",$E(X,1,30),DA)


69.5,7          EXCLUDED SITES       6;0 POINTER Multiple #69.57

              DESCRIPTION:           This determines what Topography to screen
                                     out.


69.57,.01      TOPOGRAPHY          0;1 POINTER TO TOPOGRAPHY FIELD FILE (#61)
                                    (Multiply asked)

                LAST EDITED:      OCT 04, 1996
                HELP-PROMPT:      Select the Topography to screen out. Not to
                                  be used in conjunction with the Include
                                  Topography selection.
                DESCRIPTION:      This determines what Topography to screen
                                  out. Select the appropriate Topography to be
                                  excluded from the extract.

                CROSS-REFERENCE:  69.57^B
                                  1)= S
^LAB(69.5,DA(1),6,"B",$E(X,1,30),DA)=""
                                  2)= K ^LAB(69.5,DA(1),6,"B",$E(X,1,30),DA)


69.5,8          SNOMED CODES         9;0 Multiple #69.58

              DESCRIPTION:      This is a list of SNOMED codes to be included
                                in the search.


69.58,.01       SNOMED CODES          0;1 FREE TEXT (Multiply asked)

                INPUT TRANSFORM:  K:$L(X)>15!($L(X)<1) X
                LAST EDITED:      AUG 20, 1997
                HELP-PROMPT:      Enter any SNOMED codes to be included in the
                                  search. Enter one code per line.
                DESCRIPTION:      This is a list of SNOMED code to be included
                                  in the search.

                CROSS-REFERENCE:  69.58^B
                                  1)= S
                                  ^LAB(69.5,DA(1),9,"B",$E(X,1,30),DA)=""
```

```
                                  2)= K ^LAB(69.5,DA(1),9,"B",$E(X,1,30),DA)


69.5,9          RUN DATE                  0;4 DATE

                INPUT TRANSFORM:  S %DT="ESTX" D ^%DT S X=Y K:Y<1 X
                LAST EDITED:      FEB 06, 1997
                HELP-PROMPT:      Enter the date that the last Auto
                                  Search/Extract processed.
                DESCRIPTION:      The date that the last Auto Search/Extract
                                  processed


69.5,10         CYCLE                     0;5 SET

                                  'M' FOR MONTHLY;
                                  'D' FOR DAILY;
                LAST EDITED:      DEC 03, 1997
                HELP-PROMPT:      Select whether this parameter is to be used
                                  'D'aily or 'M'onthly
                DESCRIPTION:      This field defines how often the this entry is
                                  acted upon by the nightly task.

                CROSS-REFERENCE:  ^^TRIGGER^69.5^10.5
                                  1)= K DIV S DIV=X,D0=DA,DIV(0)=D0 S
                                      Y(1)=$S($D(
                                  ^LAB(69.5,D0,0)):^(0),1:"") S
                                  X=$P(Y(1),U,3),X=X S DIU=X K Y S X=""
                                  X ^DD(69.5,10,1,1,1.4) 1.4)= S
                                  DIH=$S($D(^LAB(69.5,DIV(0),0)):^(0),1:"
                                  "),DIV=X S $P(^(0),U,3)=DIV,DIH=69.5,DIG=10.5
                                   D^DICR:$O(^DD(DIH,DIG,1,0))>0

                                  2)= K DIV S DIV=X,D0=DA,DIV(0)=D0 S
                                  Y(1)=$S($D(^LAB(69.5,D0,0)):^(0),1:"")
                                  S X=$P(Y(1),U,3),X=X S DIU=X K Y S X=""
                                  X ^DD(69.5,10,1,1,2.4)
                                  2.4)= S
                                  DIH=$S($D(^LAB(69.5,DIV(0),0)):^(0),1:
                                  " "),DIV=X S
                                  $P(^(0),U,3)=DIV,DIH=69.5,DIG=10.5 D
                                  ^DICR:$O(^DD(DIH,DIG,1,0))>0
                                  CREATE VALUE)= ""
                                  DELETE VALUE)= ""
                                  FIELD)= LAG DAY
```

```
69.5,10.5      LAG DAYS                0;3 NUMBER

               INPUT TRANSFORM:  S CYC=$P(^LAB(69.5,DA,0),U,5),MAX=$S(CYC="D":99
                                 ,CYC="M":26,1:0) K:+X'=X!(X>MAX)!(X<1)!(X?.E1".
                                 "1N.N) X K MAX,CYC
               LAST EDITED:      SEP 04, 1997
               HELP-PROMPT:      Enter the numbers of lag days desired. The
                                 amount allowed will very depending on the
                                 cycle type.
               DESCRIPTION:      This is the number of days that the search
                                 should wait after the test was ordered to
                                 ensure that the results have been entered in
                                 the system.

               NOTES:            XXXX--CAN'T BE ALTERED EXCEPT BY PROGRAMMER
                                 TRIGGERED by the CYCLE field of the LAB
                                 SEARCH/EXTRACT File


69.5,11        FIRST ENCOUNTER         0;6 SET

                                 '1' FOR YES;
                                 '0' FOR NO;
               LAST EDITED:      DEC 30, 1996
               HELP-PROMPT:      Enter '1' to limit the output to the first
                                 encounter for the patient. '0' will list all
                                 encounters.
               DESCRIPTION:      This determines if after the first encounter
                                 is found and extracted should sequential
                                 encounters be extracted.


69.5,12        PROTOCOL                0;7 POINTER TO LAB SEARCH/EXTRACT PROTOCOL
                                       FILE (#69.4)

               LAST EDITED:      NOV 08, 1996
               HELP-PROMPT:      Select the Protocol to be used to define the
                                 output messages.
               DESCRIPTION:      This defines what protocol is associated with
                                 the parameters.


69.5,13        FOLLOW PTF              0;8 SET

                                 '1' FOR YES;
                                 '0' FOR NO;
               LAST EDITED:      OCT 17, 1996
               HELP-PROMPT:      'YES' or '1' indicates that the PTF record
                                  will be followed until a discharge has been
                                  entered.
               DESCRIPTION:      This determines whether the discharge
                                 information should be updated upon discharge
                                 if a inpatient encounter does not have an
                                 existing discharge.


69.5,14        PTF                     7;0 POINTER Multiple #69.514
                                      (Add New Entry without Asking)

               DESCRIPTION:       This is the PTF file entry to be followed.
```

```
69.514,.01     PTF                    0;1 POINTER TO PTF FILE (#45)

               LAST EDITED:      OCT 17, 1996
               HELP-PROMPT:      Enter the PTF file entry to be followed.
               DESCRIPTION:      This is the PTF file entry to be followed.

               CROSS-REFERENCE:  69.514^B
                                 1)= S
                                 ^LAB(69.5,DA(1),7,"B",$E(X,1,30),DA)=""
                                 2)= K ^LAB(69.5,DA(1),7,"B",$E(X,1,30),DA)


69.514,1       DATE                    0;2 DATE

               INPUT TRANSFORM:  S %DT="E" D ^%DT S X=Y K:Y<1 X
               LAST EDITED:      DEC 31, 1996
               HELP-PROMPT:      Enter the date that the Inpatient discharge
                                 information was included in the report as an
                                 update.
               DESCRIPTION:      This is the date that the Inpatient
                                 discharge information was included in the
                                 report as a update.


69.5,15        Description            8;0   WORD-PROCESSING #69.515

               DESCRIPTION:           This is the general description for the
                                      entry.


69.5,16        SEX                    0;10 SET

                                   'M' FOR MALE;
                                   'F' FOR FEMALE;
                                   'O' FOR OTHER;
               LAST EDITED:        NOV 17, 1997
               HELP-PROMPT:        Enter the sex code to be included in the
                                   search. Leave blank if all types are to be
                                   included.
               DESCRIPTION:        This is the sex code to be included in the
                                   search.  All types will be included if this
                                   field is left blank.


69.5,17        BEFORE DATE OF BIRTH   0;11 DATE

               INPUT TRANSFORM:  S %DT="EX" D ^%DT S X=Y K:Y<1 X
               LAST EDITED:      NOV 17, 1997
               HELP-PROMPT:      Enter a date to screen out patients born after
                                 the date entered.
               DESCRIPTION:      Patients born after the date entered will not
                                 be included in the report.


69.5,18        AFTER DATE OF BIRTH    0;12 DATE

               INPUT TRANSFORM:  S %DT="EX" D ^%DT S X=Y K:Y<1 X
               LAST EDITED:      NOV 17, 1997
               HELP-PROMPT:      A brithrate to screen patients. i.e. patients
                                 DOB after 1/1/1950.
                                 before the date entered.
```

```
              DESCRIPTION:      Persons born before the entered will not be
                                included in the report.


      FILES POINTED TO                      FIELDS

ANTIMICROBIAL SUSCEPTIBILITY (#62.06)      ANTIMICROBIAL
SUSCEPTIBILITY:ANTIMICROBIAL SUSCEPTIBILITY (#.01)

ETIOLOGY FIELD (#61.2)            ETIOLOGY:ETIOLOGY (#.01)

ICD DIAGNOSIS (#80)               ICD9:ICD9 (#.01)

LAB SEARCH/EXTRACT PROTOCOL
                    (#69.4)       PROTOCOL (#12)

LABORATORY TEST (#60)             LAB TEST:LAB TEST (#.01)

PTF (#45)                         PTF:PTF (#.01)

TOPOGRAPHY FIELD (#61)            INCLUDED SITES:TOPOGRAPHY (#.01)
                                  EXCLUDED SITES:TOPOGRAPHY (#.01)



INPUT TEMPLATE(S):

PRINT TEMPLATE(S):
CAPTIONED                                        USER #0

SORT TEMPLATE(S):

FORM(S)/BLOCK(S):

LREPI                          OCT 07, 1996@10:13  USER #0
  LREPIHEAD                      DD #69.5
  LREPI2                         DD #69.52
  LREPI3                         DD #69.54
  LREPI1                         DD #69.5
  LREPI11                        DD #69.5
  LREPI4                         DD #69.53
  LREPI5                         DD #69.55
  LREPI6                         DD #69.5
  LREPI12                        DD #69.58
  LREPI7                         DD #69.5
  LREPI8                         DD #69.56
  LREPI9                         DD #69.57
  LREPI13                        DD #69.5
  LREPI10                        DD #69.5
```

Installation Instructions

The **V***IST***A** Laboratory Search/Extract Patch LR*5.2*175 is using the Kernel Installation and Distribution System (KIDS).

NOTE: For further instructions on using KIDS, please refer to the Kernel V. 8.0 Systems Manual, Chapter 26, pages 393-409.

1. Use the 'INSTALL/CHECK MESSAGE' option on the PackMan menu. This option will load the KIDS package in this message onto your system.

2. Review your mapped set. If the routines are mapped, they should be removed from the mapped set at this time.

3. The patch has now been loaded into a Transport global on your system. You now need to use KIDS to install the Transport global. On the KIDS menu, under the Installation menu, use the following options:

   Print Transport Global
   Compare Transport Global to Current System
   Verify Checksums in Transport Global
   Backup a Transport Global

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

5. Installation time is less than 2 minutes during off peak hours and less than 5 minutes during peak hours.

6. Installation of this patch requires no additional memory space.

7. From the Installation Menu of the KIDS menu, run the option Install Package(s) Select the package LR*5.2*175 and proceed with the install.

8. If any routines were unmapped as part of step 2, they should be returned to the mapped set once the installation has run to completion.

9. Delete routine LR175 and LR175P.

10. Remove the Emerging Pathogens Manual Run [LREPI (EPI) MANUAL RUN] option.

Example: Terminal screen dialogue seen during the KIDS install (dates shown in the example will **not** be the same as those in the released version).

```
Select Programmer Options Option: KID  Kernel Installation & Distribution
System<RET>

Select Kernel Installation & Distribution System Option: INstallation<RET>

Select Installation Option: MAILMan Menu<RET>

VA MailMan 7.1 service for DOE.DAVID_R@JDV.ISC-DALLAS.VA.GOV

You last used MailMan: 01 Jun 98 14:12

You have 1 new message.

Select MailMan Menu Option: NEW messages and responses<RET>

Subj: LR*5.2*175     [#15320] 9 Jun 1998 16:50 EST   6046 Lines

From: <"NPM [#27200849]"@FORUM.VA.GOV>   in 'IN' basket.   Page 1  **NEW**

-------------------------------------------------------------------------------

$TXT Created by DOE DAVID R at BROCKTON.VA.GOV (KIDS) on TUESDAY, 06/09/98 at
16:15

===============================================================================

Run Date: JUN 09, 1998                     Designation: LR*5.2*175

Package : LR - LAB SERVICE                    Priority: Mandatory

Version : 5.2                                   Status: Under Development

===============================================================================

Subject: HEALTH PROMOTIONS ENHANCE TO EPI

Category:

  - Routine

  - Enhancement (Mandatory)

  - Other
Select MESSAGE Action: IGNORE (in IN basket)//X<RET>

Select PackMan function: 6  INSTALL/CHECK MESSAGE<RET>

Line 3  Message #13928486     Unloading KIDS Distribution   LR*5.2*175

     LR*5.2*175
```

```
Want to Continue with Load? YES//<RET>

Loading Distribution.

   LR*5.2*175

Will first run the Environment Check Routine, LR175

Select PackMan function:<RET>

Select MESSAGE Action: IGNORE (in IN basket)// ^ <RET>

 Ignored

Select MailMan Menu Option:<RET>

Select Installation Option: INstall Package(s)<RET>

Select INSTALL NAME:    LR*5.2*175        Loaded from Distribution
7/10/98@14:31:58

     => LR*5.2*175

This Distribution was loaded on Jul 10, 1998@14:31:58 with header of

LR*5.2*175

It consisted of the following Install(s):

LR*5.2*175

   LR*5.2*175

Will first run the Environment Check Routine, LR175

Environment Check is Ok ---

Install Questions for LR*5.2*175

Incoming Files:

   69.4      LAB SEARCH/EXTRACT PROTOCOL
*BUT YOU ALREADY HAVE 'EMERGING PATH' PROTOCOL' AS File #69.4!
Shall I write over your EMERGING PATH' PROTOCOL File? YES//<RET>

   69.5      LAB SEARCH/EXTRACT
*BUT YOU ALREADY HAVE 'EMERGING PATHOGENSS'AS File #69.5!
Shall I write over your EMERGING PATHOGENSS File? YES//<RET>

Incoming Mail Groups:
```

```
Enter the Coordinator for Mail Group 'LR NCH': DOE BLOW         BD

Enter the Coordinator for Mail Group 'LR NCH-REPORT': DOE BLOW         BD

Want to DISABLE Scheduled Options, Menu Options, and Protocols? YES//NO<RET>

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// [Enter your site printer's name]<RET>

Adding Protocal 'LRNCH' to the LAB SEARCH/EXTRACT File (69.5)

Updating Routine file

 Updating KIDS files

LR*5.2*175 Installed.
               Jul 10, 1998@14:33:47.

 Install Message sent #13928998
------------------------------------------------------------------------------

  100%                 25             50             75
Complete


Install Completed
```

Post Installation Instructions

It is highly recommended that the Laboratory Search/Extract Patch LR*5.2*175 post installation instructions are done in the following order:

DSM/Alpha and Open M Sites

If you have disabled journaling, you may now re-enable journaling. If using a mapped system, rebuild the map set now.

IRM - Step #1: Ensure that **XXX@Q-NCH** domain is defined as instructed by VA MailMan V.7.1, Patch XM*DBA*116.

IRM – Step #2: Add designated members to the LR NCH and LR NCH-Report mail groups.

> **NOTE:** The Office of the Director should designate the recipients of these mail groups.

Example: LR NCH mail group setup

```
NAME: LRNCH       TYPE: public
ALLOW SELF ENROLLMENT?: NO                                  REFERENCE COUNT: 56
LAST REFERENCED: MAY 01, 1998 RESTRICTIONS: UNRESTRICTED
COORDINATOR: DOE BLOW
MEMBER: [Enter Member's Name]
MEMBER: [Enter Member's Name]
DESCRIPTION:   LRNCH Mail group
REMOTE MEMBERS:XXX@Q-NCH
```

Example: LR NCH-Report mail group setup

```
NAME: LRNCH-REPORT       TYPE: public
ALLOW SELF ENROLLMENT?: NO REFERENCE COUNT: 56
LAST REFERENCED: MAY 01, 1998 RESTRICTIONS: UNRESTRICTED
COORDINATOR: DOE BLOW
MEMBER: [Enter Member's Name]
MEMBER: [Enter Member's Name]
DESCRIPTION: LR NCH-REPORT Mail group
```

IRM - Step #3: Assign the Lab Search/Extract Primary [LREPI SEARCH EXTRACT MENU] menu to the designated user(s).

NOTE: It is highly recommended that a LIM, TQI/QA/QI, and a representative from the Microbiology section for EPI (e.g., director, supervisor, or technologist) be assigned the Lab Search/Extract Primary [LREPI SEARCH EXTRACT MENU] menu. These individuals should be responsible for initially setting up the NCH parameters and performing periodic reviews to ensure that the parameters remain current.

LIM - Step #4: Use the Lab Search/Extract Parameter Setup [LREPI PARAMETER SETUP] option to set up the NCH Cholesterol and Pap smear parameters (e.g., in Appendix B). Lab test names for Cholesterol and Pap smears may differ at each site.

Note: The user assigned the Lab Search/Extract Primary Menu [LREPI SEARCH EXTRACT MENU] should be designated to set up the parameters.

To verify that the fields in the LAB SEARCH/EXTRACT file (#69.5) are correctly defined, do a VA FileMan inquiry of the file. The fields should be defined in File (#69.5) as shown in the example below.

Example: NCH Cholesterol setup

```
NAME: NCH CHOLESTEROL                          ACTIVE: NO<RET>
LAG DAYS: 10<RET>                              RUN DATE: JUN 22, 1998
CYCLE: DAILY<RET>                              PROTOCOL: LRNCH<RET>
FOLLOW PTF: YES<RET>                           REFERENCE NUMBER: 50
LAB TEST: CHOLESTEROL<RET>
LAB TEST: HDL CHOLESTEROL<RET>
LAB TEST: TRIGLYCERIDE<RET>
LAB TEST: LDL CHOLESTEROL<RET>
LAB TEST: HEALTH FAIR-CHOLESTEK PANEL<RET>
```

Example: NCH Pap Smear setup

```
NAME: NCH PAP SMEAR                        ACTIVE: NO
LAG DAYS: 10                               RUN DATE: JUN 22, 1998
CYCLE: DAILY                               PROTOCOL: LRNCH
FOLLOW PTF: YES                            REFERENCE NUMBER: 51
SEX: FEMALE
LAB TEST: PAP SMEAR
TOPOGRAPHY: VAGINAL CYTOLOGIC MATERIAL
TOPOGRAPHY: CERVICAL CYTOLOGIC MATERIAL
```

IRM - Step #5: Set up the EPI and LRNCH protocols using the Lab Search/Extract Protocol Edit [LREPI PROTOCOL EDIT] option.

Example: EPI Protocol Setup

```
Protocol Parameters Setup Definition
-------------------------------------------------------------------------------

PROTOCOL: LREPI

Title: Emerging Pathogens Initiative (EPI)         Message Size: 32000

Report Mail Group: EPI-REPORT

Send Alert: YES

Send Alert To

DOE,Jane
```

Example: LRNCH Protocol Setup

```
Protocol Parameters Setup Definition
-------------------------------------------------------------------------------

PROTOCOL: LRNCH

Title: National Center for Health Promotion         Message Size: 32000

Report Mail Group: LR NCH-REPORT

Send Alert: YES

Send Alert To

DOE,Jane
```

IRM - Step #6: Start the Lower Level Protocol of the HL7 V. 1.6 background job.

Example:

```
 Select Systems Manager Menu Option:    HL7 Main<RET>Menu

   1      V1.5 OPTIONS
   2      V1.6 OPTIONS ...
   3      Activate/Inactivate Application
   4      Print/Display Menu ...
   5      Purge Message Text File Entries

Select HL7 Main Menu Option: 2<RET>V1.6 OPTIONS

   1      Communications Server
   2      Interface Workbench
   3      Message Requeuer


Select V1.6 OPTIONS Option: 1<RET>  Communications Server
```

```
   1      Edit Communication Server parameters
   2      Manage incoming & outgoing filers ...
   3      Monitor incoming & outgoing filers
   4      Start LLP
   5      Stop LLP
   6      Systems Link Monitor
   7      Logical Link Queue Management ...
   8      Report

Select Communications Server Option: 4<RET>  Start LLP

This option is used to launch the lower level protocol for the appropriate
device. Please select the node with which you want to communicate.

Select HL LOGICAL LINK NODE: LRNCH<RET>
The LLP was last shutdown on JAN 30, 1997 12:06:19.

Select one of the following:
          F         FOREGROUND
          B         BACKGROUND
          Q         QUIT

Method for running the receiver: B//<RET> ACKGROUND
Job was queued as 131225.
```

IRM - Step #7: Schedule the Lab Search/Extract Nightly Task [LREPI NIGHTLY TASK] option to run nightly.

Example:
```
Select OPTION to schedule or reschedule: LREPI NIGHTLY TASK<RET>
Lab Search/Extract Nightly Task

         ...OK? Yes//<RET> (Yes)

      (R)
Edit Option Schedule
    Option Name: LREPI NIGHTLY TASK
    Menu Text: Lab Search/Extract Nightly Task   TASK ID: 2298854
------------------------------------------------------------------------------

  QUEUED TO RUN AT WHAT TIME: APR 29,1998@01:45<RET>

DEVICE FOR QUEUED JOB OUTPUT:<RET>

 QUEUED TO RUN ON VOLUME SET: ROU<RET>

      RESCHEDULING FREQUENCY: 1D<RET>

             TASK PARAMETERS:<RET>

            SPECIAL QUEUEING:<RET>
```

Trouble Shooting

1. If a NCH HL7 mail message is sent to the AAC but a NCH Verification Report mail message was **not** sent to the users please check the following:

   - Check the LR NCH and LR NCH-Report mail group memberships.
   - Check the member's name in the MAIL GROUP file (#3.8), Remote field (#12) in the LR NCH mail group for incorrect member names.
   - Ensure that the LABORATORY SEARCH/EXTRACT PROTOCOL file (#69.4), Report Mail Group field (#1) entry contains LR NCH-Report.

2. If no VA Alert mail messages are sent, please check for the following:

   - Ensure that the LABORATORY SEARCH/EXTRACT PROTOCOL file (#69.4), Send Alert field (#3) is set to "YES".

3. If the Lab Search/Extract Nightly Task [LREPI NIGHTLY TASK] option job does not generate a NCH HL7 mail message and Verification Report mail message but the new Lab Search/Extract Manual Run (Enhanced) [LREPI (EPI) ENHANCED MANUAL RUN] option does, please check the following:

   - Ensure that the LABORATORY SEARCH/EXTRACT file (#69.5), Active field (#1) entry for the NCH Cholesterol and NCH Pap smear Search/Extract is set to "NO".

Health Level Seven (HL7) Protocol

The **V*IST*A** Laboratory Search/Extract Patch LR*5.2*175 software application uses the **V*IST*A** Laboratory, PIMS, and Social Work databases for the EPI and NCH search/extract criteria. The **V*IST*A** HL7 software is used to transmit the data to the AAC database.

3. General Specifications

3.1 Communication Protocol
The electronic **V*IST*A** MailMan software application is used as the communications protocol for sending the EPI and NCH HL7 mail messages between **V*IST*A** database and AAC database.

3.2 Application Processing Rules
The HL7 protocol itself describes the basic rules for application processing by the sending and receiving systems. The HL7 Version 2.2 protocol is used. The ORU message is sent using the HL7 batch protocol.

3.3 Message
The following HL7 mail message is used to support the exchange of data.

ORU OBSERVATIONAL RESULTS UNSOLICITED

3.4 Segments
The following HL7 segments are used to support the exchange of data.

DG1	Diagnosis	OBX	Observation Results
MSH	**MESSAGE HEADER**	**PID**	**PATIENT IDENTIFICATION**
NTE	Notes and Comments	PV1	Patient Visit
OBR	Observation Request		

3.5 Fields
The HL7 fields on the following page are used to support the exchange of data for each of the segments listed in the 3.4 Segments.

SEGMENT	FIELD SEQUENCE NUMBER	FIELD ELEMENT NAME	USER/HL7 DEFINED
DG1	1	Set ID-Diagnosis (Sequence #)	HL7
	3	Diagnosis Code (Code(id) ^Text (St.) ^ Name of coding system (st)	HL7
MSH	1	Field Separator	HL7
	2	Encoding Characters	HL7
	3	Sending Application	HL7
	4	Sending Facility	HL7
	5	Receiving Application	HL7
	6	Receiving Facility	HL7
	7	Date/Time of Message	HL7
	8	Security	HL7
	9	Message Type	HL7
	10	Message Control ID	HL7
	11	Processing ID	HL7
	12	Version ID	HL7
OBR	1	Set ID-Observation Request (Seq #)	HL7
	4	Universal Service ID (identifier^ text ^ name of coding system ^ alt id ^ alt text ^ alt coding system)	HL7
	7	Observation Date/Time	HL7
	15	Specimen Source (Specimen source code (CE) ^^ text (TX))	HL7 (Table 0070)
	26	Parent Results (OBX observation id of parent ^OBX sub ID	HL7
NTE	1	Set ID Notes and Comments (Seq #)	HL7
	3	Comment	HL7
OBX	1	Set Id-Observational Simple (seq. #)	HL7
	2	Value Type	HL7
	3	Observation Identifier (identifier ^ text ^ name of coding system ^ alt id ^ alt text ^ alt coding system)	HL7
	4	Sub Id	HL7
	5	Observation Value (Result)	HL7
	6	Units (Units)	HL7
	8	Abnormal Flags	HL7 (Table 0078)
	15	Date/Time of the Observation (Verified Date/Time)	HL7
PID	2	Patient ID (External ID)	HL7
	3	Patient ID (Internal ID)	HL7
	5	Patient Name	HL7
	7	Date of Birth	HL7
	8	Sex	HL7 (Table 0001)
	10	Race	HL7 (Table VA07)
	11	Address (Homeless)	HL7
	19	SSN	HL7
	27	Veteran's Military Status Period Of Service	HL7 (Table Va011)
PV1	1	Set ID - Patient Visit	HL7
	2	Patient Class	HL7
	36	Discharge Disposition	HL7
	44	Admit Date/Time (Event Date/Time)	HL7
	45	Discharge Date/Time	HL7

4.0 Transaction Specifications

4.1 General

The **V***IST***A** software sends an ORU observation result type HL7 message whenever one or more of the defined initiatives are identified.

4.2 Specific Transaction

A. Identified Encounter

When EPI and NCHP-CPSdb data are identified an ORU message is sent to the AAC. These ORU messages consist of the following segments:

Example: EPI ORU Message

```
ORU   OBSERVATIONAL RESULT UNSOLICITED
MSH   Message Header
NTE   Notes and Comments
PID   Patient Identification
PV1   Patient Visit
NTE   Notes and Comments
DG1   Diagnosis
OBR   Observation Report
OBX   Results

MSH|~|\&|EPI-XXX|170|EPI-XXX|170|19961018113521||ORU~R01|107|P|2.2|||||USA
NTE||REPORTING DATE FROM 19850101 TO 19961018
PID|1|052-16-7946~0~M10|5~5~M10||NAGEF~IULO||19220912|M||7|||||||||052167946
PV1|1|O|||||||||||||||||||||||||||||||||||||||||||19950315151907
NTE|1|Vanc-Res Enterococcus
DG1|1|I9|451.19^DEEP PHLEBITIS-LEG NEC^I9
DG1|2|I9|511.9^PLEURAL EFFUSION NOS^I9
DG1|3|I9|670.02^MAJOR PUERP INF-DEL P/P^I9
DG1|4|I9|331.0^ALZHEIMER'S DISEASE^I9
DG1|5|I9|500.^COAL WORKERS' PNEUMOCON^I9
OBR|1|||^CHEMISTRY TEST^VANLT|||19950315151907||||||||SER^^SERUM
OBX|1|ST|84330.0000^Glucose Quant^VANLT^175^GLUCOSE1^VA60||25|mg/dL|70-125|L*
NTE|2|2^Hepatitis C antibody
OBR|2|||^CHEMISTRY TEST^VANLT|||19950315151907||||||||SER^^SERUM
OBX|1|ST|84330.0000^Glucose Quant^VANLT^175^GLUCOSE1^VA60||25|mg/dL|70-125|L*
PID|2|023-45-6666~8~M10|7~7~M10||BURT~SHERRY||19591229|F||7|||||||||023456666
PV1|1|O|||||||||||||||||||||||||||||||||||||||||||19950315152721
NTE|1|1^Vanc-Res Enterococcus
OBR|1|||87999.0000^MICRO CULTURE^VANLT|||198612100835||||||||^^BLOOD
OBX|1|CE|87993.0000^BACTERIOLOGY CULTURE^VANLT|1|^ESCHERICHIA COLI
OBR|2|||^ANTIBIOTIC MIC^VANLT||||198612100835||||||||^^BLOOD||||||||||||87993.0000^1
OBX|1|ST|81812.0000^Neomycin^VANLT^18^NEOMYCN^VA62.06|||||R
OBX|2|ST|^^^35^BACTRCN^VA62.06|||||R
OBX|3|ST|81852.0000^Penicillin^VANLT^23^PENICLN^VA62.06|||||R
OBX|4|ST|81676.0000^Clindamycin^VANLT^3^CLINDAM^VA62.06|||||S
OBX|5|ST|81307.0000^Gentamicin^VANLT^33^GENTMCN^VA62.06|||||R
OBX|6|ST|81656.0000^Chloramphenicol^VANLT^10^CHLORAM^VA62.06|||||R
OBX|7|ST|81946.0000^Tetracycline NOS^VANLT^27^TETRCLN^VA62.06|||||R
```

Example: NCH ORU Mail Message

```
MSH^~|\&^NCH-LAB^525^NCH-
LAB^525^19980416021403^^ORU~R01^1741793^P^2.2^^^NE^AL^USA|
NTE^^~REPORTING DATE FROM 19980415 TO 19980415~2
PID^50^023-16-
1010~4~M10^69836~2~M10^^BOWIE~ARTHUR~F.^^19230609^M^^6^~02132^^^^
^^^^023161010^^^^^^^^2
PV1^1^O^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^19980414075625
NTE^1^50~NCH CHOLESTEROL
OBR^1^^^81121.0000~CHEMISTRY
TEST~VANLT^^^19980414075625^^^^^^^^SER~~SERUM^^^R/
CH 0414 333
OBX^1^ST^82466.0000~Cholesterol Total~VANLT~183~CHOLESTEROL~VA60^^227^mg/dl^"
S
EE TEST DESC"-^^^^^^^19980414100054
OBX^2^ST^83013.0000~Cholesterol HDL~VANLT~244~HDL
CHOLESTEROL~VA60^^pending^mg/
dl^30-65^^^^^^^19980414100054
OBX^3^ST^82350.0000~Calculation~VANLT~901~LDL
CHOLESTEROL~VA60^^pending^mg/dl^"
SEE TEST DESC"-^^^^^^^19980414100054
OBX^4^ST^84480.0000~Triglycerides w o
extract~VANLT~205~TRIGLYCERIDE~VA60^^230^
mg/dl^35-200^H^^^^^^19980414100054
PID^51^034-54-
0927~4~M10^73453~2~M10^^JANCZEWSKI~KAREN~E.^^19620728^F^^7^~02332
^^^^^^^^034540927^^^^^^^^X
PV1^1^O^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^19980414101934
NTE^1^50~NCH CHOLESTEROL
OBR^1^^^81121.0000~CHEMISTRY
TEST~VANLT^^^19980414101934^^^^^^^^SER~~SERUM^^^R/
CH 0414 439
OBX^1^ST^82466.0000~Cholesterol Total~VANLT~183~CHOLESTEROL~VA60^^169^mg/dl^
SEE TEST DESC -^^^^^^^19980414115804
OBX^2^ST^83013.0000~Cholesterol HDL~VANLT~244~HDL
CHOLESTEROL~VA60^^pending^mg/
dl^30-65^^^^^^^19980414115804
OBX^3^ST^82350.0000~Calculation~VANLT~901~LDL
CHOLESTEROL~VA60^^pending^mg/dl^"
SEE TEST DESC"-^^^^^^^19980414115804
OBX^4^ST^84480.0000~Triglycerides w o
extract~VANLT~205~TRIGLYCERIDE~VA60^^72^m
g/dl^35-200^^^^^^^19980414115804
PID^52^014-30-
6640~4~M10^74913~4~M10^^FALLON~PAUL~X.^^19400125^M^^7^~02021^^^^^
^^^014306640^^^^^^^^5
PV1^1^O^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^19980414112550
NTE^1^50~NCH CHOLESTEROL
OBR^1^^^81121.0000~CHEMISTRY
TEST~VANLT^^^19980414112550^^^^^^^^SER~~SERUM^^^R/
CH 0414 530
OBX^1^ST^82466.0000~Cholesterol Total~VANLT~183~CHOLESTEROL~VA60^^257^mg/dl^"
S
EE TEST DESC"-^^^^^^^19980414141943
PID^53^058-42-9046~8~M10^75677~2~M10^^HYLAND
JR.~RICHARD~M.^^19490720^M^^6^~145
85^^^^^^^^058429046^^^^^^^^7
PV1^1^I^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^19980413164159
NTE^1^50~NCH CHOLESTEROL
OBR^1^^^81121.0000~CHEMISTRY
TEST~VANLT^^^19980414060010^^^^^^^^SER~~SERUM^^^R/
CH 0414 306
OBX^1^ST^82466.0000~Cholesterol Total~VANLT~183~CHOLESTEROL~VA60^^169^mg/dl^
```

```
SEE TEST DESC-^^^^^^^19980414094610
OBX^2^ST^83013.0000~Cholesterol HDL~VANLT~244~HDL
CHOLESTEROL~VA60^^pending^mg/
dl^30-65^^^^^^^19980414094610
OBX^3^ST^82350.0000~Calculation~VANLT~901~LDL
CHOLESTEROL~VA60^^pending^mg/dl^"
SEE TEST DESC"-^^^^^^^19980414094610
OBX^4^ST^84480.0000~Triglycerides w o
extract~VANLT~205~TRIGLYCERIDE~VA60^^184^
mg/dl^35-200^^^^^^^19980414094610
```

Table VA011 - Period of Service

Value	Description
0	KOREAN
1	WORLD WAR I
2	WORLD WAR II
3	SPANISH AMERICAN
4	PRE-KOREAN
5	POST-KOREAN
6	OPERATION DESERT SHIELD
7	VIETNAM ERA
8	POST-VIETNAM
9	OTHER OR NONE
A	ARMY--ACTIVE DUTY
B	NAVY, MARINE--ACTIVE DUTY
C	AIR FORCE--ACTIVE DUTY
D	COAST GUARD--ACTIVE DUTY
E	RETIRED, UNIFORMED FORCES
F	MEDICAL REMEDIAL ENLIST
G	MERCHANT SEAMEN--USPHS
H	OTHER USPHS BENEFICIARIES
I	OBSERVATION/EXAMINATION
J	OFFICE OF WORKERS COMP.
K	JOB CORPS/PEACE CORPS
L	RAILROAD RETIREMENT
M	BENEFICIARIES-FOREIGN GOV
N	HUMANITARIAN (NON-VET)
O	CHAMPUS RESTORE
P	OTHER REIMBURS. (NON-VET)
Q	OTHER FEDERAL - DEPENDENT
R	DONORS (NON-VET)
S	SPECIAL STUDIES (NON-VET)
T	OTHER NON-VETERANS
U	CHAMPVA--SPOUSE, CHILD
V	CHAMPUS
W	CZECHOSLOVAKIA/POLAND SVC
X	PERSIAN GULF WAR
Y	CAV/NPS
Z	MERCHANT MARINE

Table 0070 - Specimen Source Codes

Abbreviations	Descriptions	Abbreviations	Descriptions	Abbreviations	Descriptions
ABS	Abscess	FLU	Body fluid, unsp	SER	Serum
AMN	Amniotic fluid	GAS	Gas	SKN	Skin
ASP	Aspirate	GAST	Gastric fluid/contents	SKM	Skeletal muscle
BPH	Basophils	GEN	Genital	SPRM	Spermatozoa
BIFL	Bile fluid	GENC	Genital cervix	SPT	Sputum
BBL	Blood bag	GENV	Genital vaginal	SPTT	Sputum tracheal aspirate
BLDC	Blood capillary	HAR	Hair	STON	Stone (use CALC)
BPU	Blood product unit	IHG	Inhaled Gas	STL	Stool = Fecal
BLDV	Blood venous	IT	Intubation tube	SWT	Sweat
BON	Bone	ISLT	Isolate	SNV	Synovial fluid (Joint fluid)
BRTH	Breath (use EXHLD)	LAM	Lamella	TEAR	Tears
BRO	Bronchial	WBC	Leukocytes	THRT	Throat
BRN	Burn	LN	Line	THRB	Thrombocyte (platelet)
CALC	Calculus (=Stone)	LNA	Line arterial	TISS	Tissue
CDM	Cardiac muscle	LNV	Line venous	TISG	Tissue gall bladder
CNL	Cannula	LIQ	Liquid NOS	TLGI	Tissue large intestine
CTP	Catheter tip	LYM	Lymphocytes	TLNG	Tissue lung
CSF	Cerebral spinal fluid	MAC	Macrophages	TISPL	Tissue placenta
CVM	Cervical mucus	MAR	Marrow	TSMI	Tissue small intestine
CVX	Cervix	MEC	Meconium	TISU	Tissue ulcer
COL	Colostrum	MBLD	Menstrual blood	TUB	Tube NOS
CBLD	Cord blood	MLK	Milk	ULC	Ulcer
CNJT	Conjunctiva	MILK	Breast milk	UMB	Umbilical blood
CUR	Curettage	NAIL	Nail	UMED	Unknown medicine
CYST	Cyst	NOS	Nose (nasal passage)	URTH	Urethra
DIAF	Dialysis fluid	ORH	Other	UR	Urine
DOSE	Dose med or substance	PAFL	Pancreatic fluid	URC	Urine clean catch
DRN	Drain	PAT	Patient	URT	Urine catheter
DUFL	Duodenal fluid	PRT	Peritoneal fluid ascites	URNS	Urine sediment
EAR	Ear	PLC	Placenta	USUB	Unknown substance
EARW	Ear wax (cerumen)	PLAS	Plasma	VOM	Vomitus
ELT	Electrode	PLB	Plasma bag	BLD	Whole blood
ENDC	Endocardium	PLR	Pleural fluid (thoracentesis fld)	BDY	Whole body
ENDM	Endometrium	PMN	Polymorphonuclear neutrophils	WAT	Water
EOS	Eosinophils	PPP	Platelet poor plasma	WICK	Wick
RBC	Erythrocytes	PRP	Platelet rich plasma	WND	Wound
EYE	Eye	PUS	Pus	WNDA	Wound abscess
EXHLD	Exhaled gas (breath)	RT	Route of medicine	WNDE	Wound exudate
FIB	Fibroblasts	SAL	Saliva	WNDD	Wound drainage
FLT	Filter	SEM	Seminal fluid	XXX	To be specified in another part of the message
FIST	Fistula				

Table VA07 - Race

Value	Description
1	HISPANIC, WHITE
2	HISPANIC, BLACK
3	AMERICAN INDIAN OR ALASKA NATIVE
4	BLACK, NOT OF HISPANIC ORIGIN
5	ASIAN OR PACIFIC ISLANDER
6	WHITE NOT OF HISPANIC ORIGIN
7	UNKNOWN

Table 0001 - Sex

Value	Description
F	FEMALE
M	MALE
O	OTHER

Table 0078 - Abnormal flags

Value	Description
L	Below low normal
H	Above high normal
LL	Below lower panic limits
HH	Above upper panic limits
For microbiology sensitivities only	
S	Sensitive
R	Resistant
I	Intermediate
MS	Moderately sensitive
VS	Very sensitive

APPENDIX - A
EPI USER GUIDE

EPI User Guide

The EPI User Guide provides all the necessary information, instructions, illustrations, and examples required for the EPI coordinators, Laboratory personnel, and other users to implement and maintain the Laboratory Search/Extract software. This information **must** be adhered to as recommended to assure a successful implementation and utilization of the software.

Purpose

The VAHQ Infectious Disease Program Office Emerging Pathogens Initiative is to identify new antibiotic-resistant, otherwise problematic pathogens. Using this objective information, plans may be formulated on a national level for intervention strategies and resource needs. Results of aggregate data may also be shared with appropriate public health authorities for planning on the national level for the non-VA and private health care sectors. The **V*IST*A** Laboratory Search/Extract software tracks Emerging Pathogens for DVA and the national level without the necessity for additional site data entry.

EPI Objective:

Emerging Pathogens (as defined by VAHQ) act as triggers for data acquisition for the **V*IST*A** Laboratory Search/Extract software. The software then retrieves relevant, predetermined, and patient-specific data for transmission to the AAC database repository. Once at that location, the data are analyzed using a SAS based statistical software. VAHQ Reports may then be generated for appropriate use and distribution at the national level.

- Identify Emerging Pathogens
- Extract specific data associated with the Emerging Pathogen
- Transmit data to AAC
- Create national Statistical Analysis System (SAS) data sets for Infectious Diseases Program Office access
- Intermittent periodic review **must** be done as determined by the sites. The Verification Report is **not** used to determine Laboratory or ICDM-9 collected data totals or validation (i.e., X numbers of cases of positive tests for Hepatitis C or X positive culture results for Streptococcus, Group A).

EPI Data Transmission

EPI HL7 formatted Mail Messages

The **V*IST*A** Laboratory Search/Extract software automatically processes the EPI data on the 15th of each month producing HL7 formatted mail messages. A Verification Report mail message is then produced (i.e., in a human readable format) for each HL7 mail message. The EPI HL7 formatted mail messages **must** be **manually** forwarded on the 15th of each month to the AAC database via the Q-EPI.MED.VA.GOV domain. Use the VA MailMan software to manually forward the EPI data to XXX@ Q-EPI.MED.VA.GOV domain.

EPI Verification Report Mail Messages

The EPI Verification Report mail messages are sent to the EPI-REPORT mail group on the 15th of each month. The members of the EPI-REPORT mail group should review the EPI Verification Report and make data corrections (e.g., social security number, date of birth, period of service, etc.) as deemed necessary. The software automatically processes the EPI data corrections on the 15th of each month. **Note:** The EPI Verification Report may be generated as often as needed using the new Lab Search/Extract Manual Run (Enhanced) [LREPI ENHANCED MANUAL RUN] option.

EPI Confirmation Mail Messages

EPI Confirmation mail messages are sent to the sending facility EPI-REPORT mail group **after** the EPI HL7 mail messages has been received by the AAC database.

EPI Processing Report Mail Message

EPI Processing Report mail messages are sent to the sending facility EPI-REPORT mail group at the end of the AAC processing cycle (i.e., the 25th of each month). The EPI Processing Report mail messages confirms that the EPI data has been processed and lists any errors and/or warning codes requiring corrections.

Austin Automation Center Database Processing

The Austin Automation Center (AAC) created two file structures, both in Statistical Analysis System (SAS) file format. These two file structures are used primarily as a source of data for the Infectious Diseases Program Office. The data is available to the Infectious Diseases Program Office to be manipulated and used for analysis and reporting.

The two file structures are referred to as the "Numerators" and "Denominators" because of their planned utilization.

Numerator file:

The Numerator file contains an accumulation of data sent by all DVA medical centers. It contains twelve individual months worth of data and is updated monthly. Each month the oldest month data is removed from the Numerator file and the latest month's data is added.

Upon receipt of the DVA medical centers monthly input, AAC transmits an acknowledgment message back to the sending DVA medical centers. The acknowledgment message identifies any "problem transmissions". The "problem transmissions" records any discrepancies in the field format or the actual field value. AAC identifies the data as invalid records or just warning the DVA medical center that the record has some discrepancies. However, the data is **not** being rejected. Both the "problem transmissions" and the "accepted records" are documented on a Processing Report that is transmitted from the AAC to the DVA medical centers. The "Processing Report" itemizes all transmissions received by AAC, document the records status as either being accepted or rejected (with the reason code identified), and a warning stating that something is unusual about the value of one or more fields (with the warning reason code identified). An example of the "Tables of Reject and Warning codes" are located in the Appendix - B section of this guide.

The Numerator file information is specific to unique patients with a VAHQ designated Emerging Pathogen. The Emerging Pathogens are flagged through the **V*IST*A** software process. The Numerator file data are collected and transmitted to AAC monthly by the DVA facilities medical centers.

Denominator file:

The Denominator file provides the Infectious Diseases Program Office, data elements for each DVA medical center. The source of these data elements is the corporate medical database residing in AAC. The individual files that these data elements are extracted from are the National Patient Care (NPC), Inpatient Treatment File (PTF), Automated Management Information System (AMIS), and Cost Distribution Report (CDR) systems.

The data elements are:

- Unique SSN served (inpatient and outpatient together)
- Total # of discharges
- Total unique SSN discharges
- Inpatient hospital days
- Inpatient ICU days
- Unique SSN encounters for both inpatient and outpatient

A "running 12 month" accumulation is required (i.e., there will always be one year's worth of monthly counts) with the oldest month dropped off each cycle and a new one added.

NOTE: The need to track individual station data and to consolidate by parent station has not been specified. At this time we are only gathering by individual station number.

Lab Search/Extract Protocol Edit [LREPI PROTOCOL EDIT] option

The new Lab Search/Extract Protocol Edit [LREPI PROTOCOL EDIT] option is located on the Lab Search/Extract Primary Menu [LREPI SEARCH EXTRACT MENU]. This new option is used for editing the EPI protocol.

Example: EPI Protocol Parameters Setup Definition

```
Protocol Parameters Setup Definition
------------------------------------------------------------------------------

PROTOCOL: LREPI

Title: Emerging Pathogens Initiative (EPI)         Message Size: 32000

Report Mail Group: EPI-REPORT

Send Alert: YES

Send Alert To

DOE,Jane
```

EPI Descriptions and Input Examples

This section contains the 14 Emerging Pathogens descriptions and input examples that the **V*IST*A** Laboratory Search/Extract software is tracking. The following EPI descriptions **must** be reviewed for compliance (as specified by the VAHQ Infectious Disease Program Office) before defining the Lab Search/Extract Parameters Setup.

Candida
Clostridium difficile
Creutzfeldt-Jakob Disease
Cryptosporidium
Dengue
E. coli O157:H7
Hepatitis C Antibody Pos
Legionella
Leishmanaisis
Malaria
Pen- Res Pneumococcus
Streptococcus-Group A
Tuberculosis
Vanc-Res Enterococcus

NOTE: It is **highly recommended** that the following person(s) jointly participate in the review process for the 14 EPI descriptions:

Laboratory Information Manager (LIM)

Total Quality Improvement/Quality Improvement/Quality Assurance (TQI/QI/QA) staff (or person at the site with similar function)

Representative from the Microbiology section for the Emerging Pathogens Initiative (i.e., director, supervisor, or technologist)

The 14 Emerging Pathogens parameter descriptions will require an ongoing review process (as specified by the VAHQ Infectious Disease Program Office). The person(s) participating in the ongoing review process is responsible for ensuring the following requirements are kept current:

Periodic reviews of the ICDM-9 codes

Periodic reviews of the Lab Search/Extract Parameter Setup [LREPI PARAMETER SETUP] for the EPI

Annual review of the 14 Emerging Pathogens descriptions (as specified by the VAHQ Infectious Disease Program Office)

Laboratory Search/Extract Parameters Input Screen

The following examples displays how to use the Laboratory Search/Extract Parameters Input Screen for defining the emerging pathogens parameters. Some of the Input Screen examples show partially pre-populated fields. The ETIOLOGY FIELD file (#61.2) site specific data is used to partially pre-populate the fields in the LAB SEARCH/EXTRACT file (#69.5). However, further data entries are required for site specific data. Additional data entries can be added or deleted to meet your site-specific needs.

NOTE: The Lab Search/Extract Primary [LREPI SEARCH EXTRACT MENU] Menu options are using VA FileMan screens displays, referred to as ScreenMan. For detailed instructions on how to use the screens please review the VA FileMan V. 21.0 User Manual, Section 6 ScreenMan.

NOTE: There are a number of different ways that sites have chosen to enter results into the **V*IST*A** database. As long as the results are in a retrievable format (straight from the **V*IST*A** database without additional manual input needed), how it is entered is **not** of significance to the Emerging Pathogen Initiative. However, two preferred methods make it easy to capture the data. Please reference the Helpful Hints section of this guide for the two methods.

NOTE: Please be consistent with site specific data spelling or alternate spelling to assure accurate data capture.

Candida (Reference #8)

Fungal infections are rising in significance especially in severely ill patients. The same is true for bloodstream infections acquired in the hospital, especially those associated with intravenous lines. Fungal bloodstream infections are increasing in prevalence.

As a marker of bloodstream infections, the fungus *Candida* (and *Torulopsis*) has been chosen as an initial indicator organism. This organism may **not** be a prevalent or significant entity at your site, however, its presence is more likely to be indicative of serious or true infection than other organisms. The fungus *Candida* (and *Torulopsis)* may commonly be isolated from the blood in association with IV lines. Additionally, this yeast is more likely to be associated with nosocomial acquisition than other organisms (i.e., *Staphylococcus aureus* and coagulase negative *Staphylococcus)*, which can cause a number of community acquired syndromes **not** at all related to IV lines.

All episodes of *Candida* (*Torulopsis,* yeast) isolation from blood or a blood source (central line, IV catheter tip, etc.) are being tracked. The **V***IST***A** Laboratory Search/Extract software has provided a partial pre-populated list of (etiologies/organisms) that fit the description for *Candida* (*Torulopsis,* yeast) to choose. These (etiologies/organisms) should be used, in addition to any site specific (etiologies/organisms) which may also fit the description.

Example:

```
                        Lab Search/Extract Primary Menu


   ENH    Lab Search/Extract Manual Run (Enhanced)
   LK     Antimicrobial Link Update
   UP     Lab Search/Extract Parameter Setup
          Lab Search/Extract Protocol Edit

Select Lab Search/Extract Primary menu Option: UP<RET> Lab Search/Extract
Parameter Setup

Select LAB SEARCH/EXTRACT NAME: ?<RET>
 Answer with LAB SEARCH/EXTRACT NAME, or REFERENCE NUMBER
 Do you want the entire 16-Entry LAB SEARCH/EXTRACT List? Y  (Yes)<RET>
Choose from:
   CANDIDA
   CLOSTRIDIUM DIFFICILE
   CREUTZFELDT-JAKOB DISEASE
   CRYPTOSPORIDIUM
   DENGUE
   E. COLI 0157:H7
   HEPATITIS C ANTIBODY POS
   LEGIONELLA
   LEISHMANIASIS
   MALARIA
   NCH CHOLESTEROL
   NCH PAP SMEAR
   PEN-RES PNEUMOCOCCUS
   STREPTOCOCCUS GROUP A
   TUBERCULOSIS
   VANC-RES ENTEROCOCCUS

Select LAB SEARCH/EXTRACT NAME: Candida <RET>
```

```
           LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 1 of 5

NAME: Candida                                              ACTIVE:   YES
_____________________________________________________________________________

Laboratory Test(s)               Indicator                          Value
<RET>


ICDM-9                            ICDM-9 Description
<RET>



_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                     Press <PF1>H for help               Insert
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 2 of 5

NAME: CANDIDA                                                  ACTIVE:     YES
_____________________________________________________________________________
Selected Etiology                          Selected Snomed Codes
Examples:CANDIDA
         CANDIDA GUILLIERMONDII
         CANDIDA KRUSEI
         CANDIDA PARAPSILOSIS
         CANDIDA PSEUDOTROPICALIS
         CANDIDA SKIN TEST ANTIGEN
         CANDIDA STELLATOIDEA
         CANDIDA TROPICALIS
         CANDIDA, NOS
<RET>
Note: During the post Init, the ETIOLOGY FIELD file (#61.2) was searched to
pre-populate the Etiology field (#3) in the EMERGING PATHOGENS file (#69.5).
Listed above are examples of etiology entries which may have been populated
from your site's file. Additional etiologies may be added or deleted at the
Selected Etiology prompt to meet your site specific needs.

Note: If spelling differences occur within your ETIOLOGY FIELD file (#61.2),
be consistent with your local file and spell the results here, as it is
spelled in your file (even if it is spelled differently in the example). We
are concerned more importantly with data recovery.

Antimicrobial Susceptibility      NLT Code       NLT Description
<RET>
_____________________________________________________________________________

Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN        Page 3 of 5

NAME: Candida                                                  ACTIVE:      YES
_____________________________________________________________________________

                           Topography Selection

Include                                    Exclude
Blood<RET>                                 <RET>
Bloodstream<RET>
Catheter Tip<RET>

Note: These are only suggestions. Please add accordingly to your site definition.




_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                  Press <PF1>H for help    Insert
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN        Page 4 of 5
NAME: Candida                                          ACTIVE:       YES
_____________________________________________________________________________

FIRST ENCOUNTER:<RET>                          Follow PTF:YES<RET>

BEFORE DATE OF BIRTH:<RET>                     AFTER DATE OF BIRTH:<RET>

Select SEX:<RET>




_____________________________________________________________________________
Exit     Save     Refresh

COMMAND: E<RET>                                  Press <PF1>H for help   Insert
Save changes before leaving form (Y/N)?Y<RET>
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 5 of 5
NAME:Candida                                             ACTIVE:    YES
_____________________________________________________________________________

Run Date:<RET>                             Protocol:LREPI<RET>

Run Cycle:MONTHLY<RET>                     Lag Days:15<RET>

General Description:<TAB>




_____________________________________________________________________________
Exit     Save     Refresh

COMMAND: E<RET>                                  Press <PF1>H for help   Insert
Save changes before leaving form (Y/N)?Y<RET>
```

Clostridium difficile (Reference #4)

Disease associated with the presence of *Clostridium difficile* enterotoxin A can cause significant morbidity, as well as mortality. It is of importance, as its predominant acquisition seems to occur nosocomially. Presence of Clostridial toxin (either enterotoxin A or cytotoxin L) by assay (whether it be EIA, latex agglutination, cytotoxicity of cell culture ± neutralization, or culture of organism with subsequent colony testing) is the best indicator that an inflammatory diarrheal disease is due to presence of *Clostridium difficile*.

Laboratory Services are quite varied as to how they identify the presence of *Clostridium difficile*. Some labs are set up to identify *C. difficile* as the final microbiological (bacterial) etiology of a culture, even if a culture method was not used. Other labs use a final etiology of "see comment" and then enter the results in a free text format. Still others enter the text under a hematology or chemistry format where a reference range and "positive" and "negative" result values can be entered. Wherever the facility lab places the results which are used to demonstrate the presence of toxin-producing *C. difficile*, we need to be able to track them (that means it **must** occur as a retrievable "positive" or "negative" result, or as a "bacterial etiology"). Results in a "Comments" or "Free-text" section are **not** acceptable.

There are a number of different ways that sites have chosen to enter *Clostridium difficile* toxin assay results into the **V***IST***A** database. As long as the toxin assay results are in a retrievable format (straight from the **V***IST***A** database without additional manual input needed), how it is entered is **not** of significance to the Emerging Pathogen Initiative. However, there are two preferred methods that make it easy to capture the data. Please reference the Appendix - B section of this guide for the two methods.

Example:

```
                        Lab Search/Extract Primary Menu


   ENH    Lab Search/Extract Manual Run (Enhanced)
   LK     Antimicrobial Link Update
   UP     Lab Search/Extract Parameter Setup
          Lab Search/Extract Protocol Edit

Select Lab Search/Extract Primary menu Option: UP<RET> Lab Search/Extract
Parameter Setup

Select LAB SEARCH/EXTRACT NAME: ?<RET>
 Answer with LAB SEARCH/EXTRACT NAME, or REFERENCE NUMBER
 Do you want the entire 16-Entry LAB SEARCH/EXTRACT List? Y  (Yes)<RET>
Choose from:
   CANDIDA
   CLOSTRIDIUM DIFFICILE
   CREUTZFELDT-JAKOB DISEASE
   CRYPTOSPORIDIUM
   DENGUE
   E. COLI 0157:H7
   HEPATITIS C ANTIBODY POS
   LEGIONELLA
   LEISHMANIASIS
   MALARIA
   NCH CHOLESTEROL
   NCH PAP SMEAR
   PEN-RES PNEUMOCOCCUS
   STREPTOCOCCUS GROUP A
   TUBERCULOSIS
   VANC-RES ENTEROCOCCUS

Select LAB SEARCH/EXTRACT NAME: CLOSTRIDIUM DIFFICILE <RET>
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 1 of 5

NAME: CLOSTRIDIUM DIFFICILE                                ACTIVE:    YES
_____________________________________________________________________________

Laboratory Test(s)                    Indicator                Value
Clostridium<RET> difficile toxin      Contains<RET>            Pos<RET>
```

Note: This example is only a suggestion. Please add accordingly to your site definition.

```
ICDM-9                                ICDM-9 Description
<RET>

_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                              Press <PF1>H for help    Insert
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 2 of 5
NAME: CLOSTRIDIUM DIFFICILE                                ACTIVE:    YES
_____________________________________________________________________________
Selected Etiology                              Selected Snomed Codes
Clostridium difficile toxin positive<RET>
```

Note: This is only a suggestion. Please add accordingly to your site definition.

```
Antimicrobial Susceptibility         NLT Code       NLT Description
<RET>
_____________________________________________________________________________
Exit     Save     Next Page     Refresh
COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
         LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 3 of 5
NAME: CLOSTRIDIUM DIFFICILE                                 ACTIVE:     YES
_____________________________________________________________________________
                          Topography Selection

Include <RET>                                      Exclude <RET>

_____________________________________________________________________________
Exit     Save     Next Page     Refresh
COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 4 of 5
NAME: CLOSTRIDIUM DIFFICILE                              ACTIVE: YES
_____________________________________________________________________________

First Encounter:<RET>                          Follow PTF: YES<RET>

BEFORE DATE OF BIRTH:<RET>                     AFTER DATE OF BIRTH:<RET>

Selected SEX:<RET>



_____________________________________________________________________________
Exit     Save     Refresh

COMMAND: E<RET>                                        Press <PF1>H for help
```

```
           LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 5 of 5
NAME: CLOSTRIDIUM DIFFICILE                                ACTIVE:     YES
_____________________________________________________________________________

Run Date:<RET>                              Protocol:LREPI<RET>

Run Cycle:MONTHLY<RET>                      Lag Days:15<RET>

General Description:<TAB>



_____________________________________________________________________________
Exit     Save     Refresh


COMMAND: E<RET>                                  Press <PF1>H for help   Insert
Save changes before leaving form (Y/N)?Y<RET>
```

Creutzfeldt-Jakob Disease (CJD) (Reference #13)

Creutzfeldt-Jakob Disease (CJD*)* disease is a rare illness associated with prions. The DVA has chosen to follow this entity because of historic problems with certain blood products used in the private and public health care sectors. The data will be one of a number of ways used to identify changes in trends of incidence of this illness. This task is remarkably complex because of the long incubation period of CJD. There are no specific tests for diagnosis other than central nervous system histology combined with clinical presentation. As such, this entity is followed through ICDM-9 coding.

Example:

```
                        Lab Search/Extract Primary Menu



   ENH     Lab Search/Extract Manual Run (Enhanced)
   LK      Antimicrobial Link Update
   UP      Lab Search/Extract Parameter Setup
           Lab Search/Extract Protocol Edit

Select Lab Search/Extract Primary menu Option: UP<RET> Lab Search/Extract
Parameter Setup

Select LAB SEARCH/EXTRACT NAME: ?<RET>
 Answer with LAB SEARCH/EXTRACT NAME, or REFERENCE NUMBER
 Do you want the entire 16-Entry LAB SEARCH/EXTRACT List? Y  (Yes)<RET>
Choose from:
   CANDIDA
   CLOSTRIDIUM DIFFICILE
   CREUTZFELDT-JAKOB DISEASE
   CRYPTOSPORIDIUM
   DENGUE
   E. COLI 0157:H7
   HEPATITIS C ANTIBODY POS
   LEGIONELLA
   LEISHMANIASIS
   MALARIA
   NCH CHOLESTEROL
   NCH PAP SMEAR
   PEN-RES PNEUMOCOCCUS
   STREPTOCOCCUS GROUP A
   TUBERCULOSIS
   VANC-RES ENTEROCOCCUS

Select LAB SEARCH/EXTRACT NAME: CREUTZFELDT-JAKOB DISEASE <RET>
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN     Page 1 of 5
NAME:CREUTZFELDT-JAKOB DISEASE                              ACTIVE:    YES
_____________________________________________________________________________
Laboratory Test(s)                    Indicator                         Value
<RET>



ICDM-9                                ICDM-9 Description
046.1                                 JAKOB-CREUTZFELDT DIS
<RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh
COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN       Page 2 of 5
NAME: CREUTZFELDT-JAKOB DISEASE                           ACTIVE:    YES
_____________________________________________________________________________
Selected Etiology                      Selected Snomed Codes<RET>



Antimicrobial Susceptibility     NLT Code     NLT Description
<RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh
COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
       LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN        Page 3 of 5
NAME: CREUTZFELDT-JAKOB DISEASE                             ACTIVE:      YES
_____________________________________________________________________________
                           Topography Selection

Include                                  Exclude
<RET>                                    <RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh
COMMAND: N<RET>                               Press <PF1>H for help        Insert
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 4 of 5
NAME: CREUTZFELDT-JAKOB DISEASE                          ACTIVE:     YES
_____________________________________________________________________________
First Encounter: <RET>                          Follow PTF: YES<RET>
BEFORE DATE OF BIRTH: <RET>                     AFTER DATE OF BIRTH: <RET>
Select SEX: <RET>



_____________________________________________________________________________
Exit     Save     Refresh
COMMAND: E<RET>                                  Press <PF1>H for help    Insert
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN       Page 5 of 5
NAME: CREUTZFELDT-JAKOB DISEASE                            ACTIVE:     YES
_____________________________________________________________________________
Run Date:<RET>                              Protocol:LREPI<RET>
Run Cycle:MONTHLY<RET>                      Lag Days:15<RET>
General Description:<TAB>



_____________________________________________________________________________
Exit     Save     Refresh
COMMAND: E<RET>                                  Press <PF1>H for help   Insert
Save changes before leaving form (Y/N)?Y<RET>
```

Cryptosporidium (Reference #9)

The parasite *Cryptosporidium parvum* is a cause of water-borne diarrheal disease. It has gained recent prominence after evaluation of the outbreak in the greater Milwaukee area in 1993 which is estimated to have affected <400,000 persons. In addition to affecting HIV-infected persons and young children, information exists which demonstrates that the chronically ill, elderly are also a higher risk group than the general population. Microbiology laboratory data (parasitology for most laboratories) as well as ICDM-9 coding is used to track this disease, both are narrowly defined parameters.

NOTE: Microsporidiosis is a similar disease, however, the EPI do **not** currently wish to follow this disease process. Microsporidian etiologies should **not** be entered.

Example:

```
                        Lab Search/Extract Primary Menu


   ENH    Lab Search/Extract Manual Run (Enhanced)
   LK     Antimicrobial Link Update
   UP     Lab Search/Extract Parameter Setup
          Lab Search/Extract Protocol Edit

Select Lab Search/Extract Primary menu Option: UP<RET> Lab Search/Extract
Parameter Setup

Select LAB SEARCH/EXTRACT NAME: ?<RET>
 Answer with LAB SEARCH/EXTRACT NAME, or REFERENCE NUMBER
 Do you want the entire 16-Entry LAB SEARCH/EXTRACT List? Y  (Yes)<RET>
Choose from:
   CANDIDA
   CLOSTRIDIUM DIFFICILE
   CREUTZFELDT-JAKOB DISEASE
   CRYPTOSPORIDIUM
   DENGUE
   E. COLI 0157:H7
   HEPATITIS C ANTIBODY POS
   LEGIONELLA
   LEISHMANIASIS
   MALARIA
   NCH CHOLESTEROL
   NCH PAP SMEAR
   PEN-RES PNEUMOCOCCUS
   STREPTOCOCCUS GROUP A
   TUBERCULOSIS
   VANC-RES ENTEROCOCCUS

Select LAB SEARCH/EXTRACT NAME: CRYPTOSPORIDIUM <RET>
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN     Page 1 of 5

NAME: CRYPTOSPORIDIUM                                      ACTIVE:       YES
_____________________________________________________________________________

Laboratory Test(s)                        Indicator                  Value
<RET>



ICDM-9                                      ICDM-9 Description
007.8                                       PROTOZOAL INTEST DIS N
<RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                             Press <PF1>H for help    Insert
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 2 of 5

NAME: CRYPTOSPORIDIUM                                        ACTIVE:    YES
_____________________________________________________________________________

Selected Etiology                           Selected Snomed Codes
Cryptosporidium<RET>
```

Note: If Cryptosporidium is reported under parasitology, add Cryptosporidium species at the Etiology prompt.

```
Antimicrobial Susceptibility         NLT Code       NLT Description
<RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                             Press <PF1>H for help    Insert
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN       Page 3 of 5
NAME: CRYPTOSPORIDIUM                                      ACTIVE:    YES
_____________________________________________________________________________

Topography Selection

Include                                  Exclude
<RET>                                    <RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
            LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 4 of 5
NAME: CRYPTOSPORIDIUM                                          ACTIVE:  YES
_____________________________________________________________________________

First Encounter:<RET>                        Follow PTF: YES<RET>

BEFORE DATE OF BIRTH:<RET>                   AFTER DATE OF BIRTH:<RET>

Select SEX:<RET>


Exit     Save     Refresh
COMMAND: E<RET>                                      Press <PF1>H for help
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 5 of 5
NAME: CRYPTOSPORIDIUM                                        ACTIVE:  YES
_____________________________________________________________________________

Run Date:                                    Protocol: LREPI<RET>

Run Cycle:MONTHLY<RET>                      Lag Days:15<RET>

General Description:<TAB>




_____________________________________________________________________________
Exit    Save     Refresh

COMMAND: E<RET>                                 Press <PF1>H for help   Insert
Save changes before leaving form (Y/N)?Y<RET>
```

Dengue (Reference #12)

The mosquito-borne disease of Dengue Hemorrhagic Fever is a rare but re-emerging infection, especially in the Caribbean. The VA has seen cases of Dengue Hemorrhagic Fever over the last several years. Most of these cases have been in Dengue endemic areas served by the VA. However, as our society becomes more mobile, and the area of Dengue endemnity expands, more cases are likely to occur. Because microbiologic culture is not routinely done and serology can be difficult to track, initially ICDM-9 coded diagnoses is used to track this entity.

Example:

```
                        Lab Search/Extract Primary Menu



   ENH    Lab Search/Extract Manual Run (Enhanced)
   LK     Antimicrobial Link Update
   UP     Lab Search/Extract Parameter Setup
          Lab Search/Extract Protocol Edit

Select Lab Search/Extract Primary menu Option: UP<RET> Lab Search/Extract
Parameter Setup

Select LAB SEARCH/EXTRACT NAME: ?<RET>
 Answer with LAB SEARCH/EXTRACT NAME, or REFERENCE NUMBER
 Do you want the entire 16-Entry LAB SEARCH/EXTRACT List? Y  (Yes)<RET>
Choose from:
   CANDIDA
   CLOSTRIDIUM DIFFICILE
   CREUTZFELDT-JAKOB DISEASE
   CRYPTOSPORIDIUM
   DENGUE
   E. COLI 0157:H7
   HEPATITIS C ANTIBODY POS
   LEGIONELLA
   LEISHMANIASIS
   MALARIA
   NCH CHOLESTEROL
   NCH PAP SMEAR
   PEN-RES PNEUMOCOCCUS
   STREPTOCOCCUS GROUP A
   TUBERCULOSIS
   VANC-RES ENTEROCOCCUS

Select LAB SEARCH/EXTRACT NAME: DENGUE <RET>
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN     Page 1 of 5
NAME: DENGUE                                                  ACTIVE: YES
_____________________________________________________________________________

Laboratory Test(s)                  Indicator                Value
<RET>




ICDM-9                                 ICDM-9 Description
061.                                   DENGUE
065.4                                  MOSQUITO-BORNE HEM FEVER
<RET>

_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
             LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 2 of 5
NAME: DENGUE                                                   ACTIVE:  YES
_____________________________________________________________________________

Etiology                            Selected Snomed Codes
<RET>




Antimicrobial Susceptibility     NLT Code     NLT Description
<RET>

_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
            LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 3 of 5
NAME: DENGUE                                                  ACTIVE:  YES
_____________________________________________________________________________

                          Topography Selection

Include                                  Exclude
<RET>                                    <RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                Press <PF1>H for help    Insert
```

```
            LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 4 of 5
NAME: DENGUE                                                  ACTIVE:  YES
_____________________________________________________________________________

First Encounter: <RET>                       Follow PTF: YES <RET

BEFORE DATE OF BIRTH:<RET>                   AFTER DATE OF BIRTH:<RET>

Select SEX:<RET>


_____________________________________________________________________________
Exit     Save     Refresh

COMMAND: E<RET>                                      Press <PF1>H for help
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 5 of 5
NAME: DENGUE                                              ACTIVE     YES
_____________________________________________________________________________

Run Date:<RET>                           Protocol:LREPI<RET>

Run Cycle:MONTHLY<RET>                   Lag Days:15<RET>

General Description:<TAB>



_____________________________________________________________________________
Exit    Save     Refresh

COMMAND: E<RET>                                Press <PF1>H for help   Insert
Save changes before leaving form (Y/N)?Y<RET>
```

E. coli O157:H7 (Reference #10)

Escherichia coli serotype O157 (*E. coli* O157) has gained prominence as a food-borne illness with potentially life threatening complications coming from the associated Hemolytic Uremic Syndrome. Not all sites routinely culture for the presence of *E. coli* O157 in stool specimens submitted for culture. In addition, *E. coli* O157 is not a microbiologic (bacterial) etiology pre-existing in the most recent - national microbiology lab package. In order to nationally track cultures positive for this organism, each site will need to make an etiology specific for *E-coli* O157 (e.g. *Escherichia coli* O157, *E. coli* O157, *E. coli* serotype O157, etc.). Some sites have already done this and will **not** need to generate a new entry.

NOTE: Entering *Escherichia coli* or *E. coli* from the bacterial etiology and then entering "serotype O157" or "O157", under the "Comments" or "Free Text" section is **not** acceptable, as it will **not** allow the data to be retrieved nationally.

All subsequent positive cultures for this organism **must** then be entered under the new etiology.

Other serotypes of *E. coli* will also cause disease, but we will not currently track these as O157 causes by far, the majority of cases of interest for the national database.

The EPI criteria is dependent on your site. If your site already has an etiology that will select positive cultures for *E. coli* O157, then enter that etiology. However, if your site had to enter a new etiology to accommodate the EPI criteria, be sure to enter this new etiology here.

Example:

```
                        Lab Search/Extract Primary Menu



   ENH    Lab Search/Extract Manual Run (Enhanced)
   LK     Antimicrobial Link Update
   UP     Lab Search/Extract Parameter Setup
          Lab Search/Extract Protocol Edit

Select Lab Search/Extract Primary menu Option: UP<RET> Lab Search/Extract
Parameter Setup

Select LAB SEARCH/EXTRACT NAME: ?<RET>
 Answer with LAB SEARCH/EXTRACT NAME, or REFERENCE NUMBER
 Do you want the entire 16-Entry LAB SEARCH/EXTRACT List? Y  (Yes)<RET>
Choose from:
   CANDIDA
   CLOSTRIDIUM DIFFICILE
   CREUTZFELDT-JAKOB DISEASE
   CRYPTOSPORIDIUM
   DENGUE
   E. COLI 0157:H7
   HEPATITIS C ANTIBODY POS
   LEGIONELLA
   LEISHMANIASIS
   MALARIA
   NCH CHOLESTEROL
   NCH PAP SMEAR
   PEN-RES PNEUMOCOCCUS
   STREPTOCOCCUS GROUP A
   TUBERCULOSIS
   VANC-RES ENTEROCOCCUS

Select LAB SEARCH/EXTRACT NAME: E. COLI 0157:H7 <RET>
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 1 of 5
NAME: E. COLI 0157:H7                                          ACTIVE:   YES
_____________________________________________________________________________

Laboratory Test(s)                  Indicator                        Value
<RET>


ICDM-9                               ICDM-9 Description
<RET>

_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                          Press <PF1>H for help
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 2 of 5
NAME: E. COLI 0157:H7                                          ACTIVE:   YES
_____________________________________________________________________________

Selected Etiology
Example: Escherichia coli O157<RET>

Note: Entering Escherichia coli or E. coli from the bacterial etiology and
then entering "serotype O157" or "O157", under the Comments section or in
free text is not acceptable as it will not allow the data to be retrieved
nationally).


Antimicrobial Susceptibility          NLT Code       NLT Description
<RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                          Press <PF1>H for help
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 3 of 5
NAME: E. COLI 0157:H7                                          ACTIVE:  YES
_____________________________________________________________________________

                          Topography Selection

Include                                        Exclude
<RET>                                          <RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 4 of 5
NAME: E. COLI 0157:H7                                          ACTIVE:  YES
_____________________________________________________________________________

First Encounter:<RET>                    Follow PTF:YES<RET>

BEFORE DATE OF BIRTH:<RET>                AFTER DATE OF BIRTH:<RET>

Select SEX:<RET>


_____________________________________________________________________________
Exit     Save     Refresh

COMMAND: E<RET>                                      Press <PF1>H for help
```

```
         LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 5 of 5
NAME: E. COLI 0157:H7                                      ACTIVE     YES
_____________________________________________________________________________

Run Date:<RET>                           Protocol:LREPI<RET>

Run Cycle:MONTHLY<RET>                   Lag Days:15<RET>

General Description:<TAB>



_____________________________________________________________________________
Exit    Save     Refresh

COMMAND: E<RET>                                 Press <PF1>H for help   Insert
Save changes before leaving form (Y/N)?Y<RET>
```

Hepatitis C Antibody Positive (Reference #2)

Hepatitis C is much more prevalent than originally thought at least in certain key patient sub-populations. As new and more sensitive assays come into use, we seem to find more evidence of this pathogen. We are looking for evidence of exposure to Hepatitis C in patients as demonstrated by Hepatitis C antibody positivity. The need for confirmatory testing or demonstration of active disease is not currently necessary in gathering data for this program. Different facilities may use different assays for this test. What we are looking for is evidence of presence of antibody to Hepatitis C, whether it be recorded as "weakly positive", "strongly positive", "positive", or "present". If other phrases are used to describe a test result, one should be able to differentiate the results upon entry into the program. As an example, the words, "present" "and "not present" would not allow retrieval of only positive cases as both phrases contain the word, "present".

Example:

```
                        Lab Search/Extract Primary Menu


   ENH    Lab Search/Extract Manual Run (Enhanced)
   LK     Antimicrobial Link Update
   UP     Lab Search/Extract Parameter Setup
          Lab Search/Extract Protocol Edit

Select Lab Search/Extract Primary menu Option: UP<RET> Lab Search/Extract
Parameter Setup

Select LAB SEARCH/EXTRACT NAME: ?<RET>
 Answer with LAB SEARCH/EXTRACT NAME, or REFERENCE NUMBER
 Do you want the entire 16-Entry LAB SEARCH/EXTRACT List? Y  (Yes)<RET>
Choose from:
   CANDIDA
   CLOSTRIDIUM DIFFICILE
   CREUTZFELDT-JAKOB DISEASE
   CRYPTOSPORIDIUM
   DENGUE
   E. COLI 0157:H7
   HEPATITIS C ANTIBODY POS
   LEGIONELLA
   LEISHMANIASIS
   MALARIA
   NCH CHOLESTEROL
   NCH PAP SMEAR
   PEN-RES PNEUMOCOCCUS
   STREPTOCOCCUS GROUP A
   TUBERCULOSIS
   VANC-RES ENTEROCOCCUS

Select LAB SEARCH/EXTRACT NAME: HEPATITIS C ANTIBODY POS <RET>
```

```
              LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN   Page 1 of 5
NAME: HEPATITIS C ANTIBODY POS                                  ACTIVE: YES
_____________________________________________________________________________

Laboratory Test(s)                    Indicator                 Value
HEPATITIS C ANTIBODY<RET>             Contains<RET>             Pos<RET>

Note: Enter the appropriate test for your site, and how the results are
reported.


ICDM-9                                ICDM-9 Description
<RET>
_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
              LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN   Page 2 of 5
NAME: HEPATITIS C ANTIBODY POS                                  ACTIVE: YES
_____________________________________________________________________________

Selected Etiology                             Selected Snomed Codes
<RET>


Antimicrobial Susceptibility          NLT Code       NLT Description
<RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 3 of 5
NAME: HEPATITIS C ANTIBODY POS                                 ACTIVE: YES
_____________________________________________________________________________

                           Topography Selection

Include                                  Exclude
<RET>                                    <RET>




_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                Press <PF1>H for help    Insert
```

```
           LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN   Page 4 of 5
NAME: HEPATITIS C ANTIBODY POS                                 ACTIVE: YES
_____________________________________________________________________________

First Encounter:<RET>                        Follow PTF:YES<RET>

BEFORE DATE OF BIRTH:<RET>                  AFTER DATE OF BIRTH:<RET>

Select SEX:<RET>



_____________________________________________________________________________
Exit     Save     Refresh

COMMAND: E<RET>                                      Press <PF1>H for help
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 5 of 5
NAME: HEPATITIS C ANTIBODY POS                              ACTIVE     YES
_____________________________________________________________________________

Run Date:<RET>                           Protocol:LREPI<RET>

Run Cycle:MONTHLY<RET>                   Lag Days:15<RET>

General Description:<TAB>



_____________________________________________________________________________
Exit    Save     Refresh

COMMAND: E<RET>                                Press <PF1>H for help
Save changes before leaving form (Y/N)?Y<RET>
```

Legionella (Reference #7)

Since the American Legion Convention in Philadelphia in the 1970's, Legionnaires' Disease has been an illness of keen interest to the DVA. Because diagnosis is complex, we have chosen to review for presence of *Legionella* in culture and in ICDM-9 DIAGNOSIS file (#80). We will not look at *Legionella* direct fluorescent antibody positivity because of the potential high false positivity of this test. Likewise, serology is not easy to interpret or easily extracted from **V***IST***A** for our purposes and will **not** be included as a marker in this first iteration of the EPI program. Because it is not yet approved, the newer test of *Legionella* urinary antigen will not be used either. The Selected Etiology screen display has been partially pre-populated.

Example:

```
                        Lab Search/Extract Primary Menu



   ENH    Lab Search/Extract Manual Run (Enhanced)
   LK     Antimicrobial Link Update
   UP     Lab Search/Extract Parameter Setup
          Lab Search/Extract Protocol Edit

Select Lab Search/Extract Primary menu Option: UP<RET> Lab Search/Extract
Parameter Setup

Select LAB SEARCH/EXTRACT NAME: ?<RET>
 Answer with LAB SEARCH/EXTRACT NAME, or REFERENCE NUMBER
 Do you want the entire 16-Entry LAB SEARCH/EXTRACT List? Y  (Yes)<RET>
Choose from:
   CANDIDA
   CLOSTRIDIUM DIFFICILE
   CREUTZFELDT-JAKOB DISEASE
   CRYPTOSPORIDIUM
   DENGUE
   E. COLI 0157:H7
   HEPATITIS C ANTIBODY POS
   LEGIONELLA
   LEISHMANIASIS
   MALARIA
   NCH CHOLESTEROL
   NCH PAP SMEAR
   PEN-RES PNEUMOCOCCUS
   STREPTOCOCCUS GROUP A
   TUBERCULOSIS
   VANC-RES ENTEROCOCCUS

Select LAB SEARCH/EXTRACT NAME: LEGIONELLA<RET>
```

```
              LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN   Page 1 of 5
NAME: LEGIONELLA                                                 ACTIVE: YES
_____________________________________________________________________________

Laboratory Test(s)              Indicator                    Value
<RET>



ICDM-9                           ICDM-9 Description
482.80                           LEGIONNARIE'S DISEASE
<RET>

_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
              LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN   Page 2 of 5
NAME: LEGIONELLA                                                 ACTIVE: YES
_____________________________________________________________________________

Selected Etiology
Examples:LEGIONELLA BOZEMANII
         LEGIONELLA DUMOFFII
         LEGIONELLA GORMANII
         LEGIONELLA JORDANIS
         LEGIONELLA LONGBEACHAE
         LEGIONELLA MICDADEI
         LEGIONELLA OAKRIDGENSIS
         LEGIONELLA PNEUMOPHILIA
         LEGIONELLA SP
         LEGIONELLA WADSWORTHII
<RET>
Note: During the post Init, the ETIOLOGY FIELD file (#61.2) was searched to
pre-populate the Etiology field (#3) in the EMERGING PATHOGENS file (#69.5).
Listed above are examples of etiology entries which may have been populated
from your site's file. Additional etiologies may be added or deleted at the
Selected Etiology prompt to meet your site-specific needs.

Note: If spelling differences occur within your ETIOLOGY FIELD file (#61.2) be
consistent with your local file and spell the results here, as it is spelled
in your file (even if it is spelled differently in the example). We are
concerned more importantly with data recovery.


Antimicrobial Susceptibility            NLT Code       NLT Description
<RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh


COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 3 of 5
NAME: LEGIONELLA                                          ACTIVE:   YES
_____________________________________________________________________________

                          Topography Selection

Include                                        Exclude
<RET>                                          <RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 4 of 5
NAME: LEGIONELLA                                          ACTIVE:  YES
_____________________________________________________________________________

First Encounter:<RET>                      Follow PTF: YES<RET>

BEFORE DATE OF BIRTH:<RET>                 AFTER DATE OF BIRTH:<RET>

Select SEX:<RET>


_____________________________________________________________________________
Exit     Save     Refresh

COMMAND: E<RET>                                       Press <PF1>H for help
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 5 of 5
NAME: E. LEGIONELLA                                       ACTIVE  YES
_____________________________________________________________________________

Run Date:<RET>                             Protocol:LREPI<RET>

Run Cycle:MONTHLY<RET>                     Lag Days:15<RET>

General Description:<TAB>



_____________________________________________________________________________
Exit    Save     Refresh

COMMAND: E<RET>                                 Press <PF1>H for help     Insert
Save changes before leaving form (Y/N)?Y<RET>
```

Leishmaniasis (Reference #14)

Leishmaniasis is a significant tropical disease that can cause serious complications. It is of interest to the Department of Veterans Affairs as Leishmania has caused illness among military personnel for many years. In addition, the Persian Gulf War occurred in an area of the world where the parasite is endemic. Because no simple, straightforward serology exists and no standard culture techniques exist, we have chosen to follow this entity through ICDM-9 diagnosis codes.

Example:

```
                        Lab Search/Extract Primary Menu



   ENH    Lab Search/Extract Manual Run (Enhanced)
   LK     Antimicrobial Link Update
   UP     Lab Search/Extract Parameter Setup
          Lab Search/Extract Protocol Edit

Select Lab Search/Extract Primary menu Option: UP<RET> Lab Search/Extract
Parameter Setup

Select LAB SEARCH/EXTRACT NAME: ?<RET>
 Answer with LAB SEARCH/EXTRACT NAME, or REFERENCE NUMBER
 Do you want the entire 16-Entry LAB SEARCH/EXTRACT List? Y  (Yes)<RET>
Choose from:
   CANDIDA
   CLOSTRIDIUM DIFFICILE
   CREUTZFELDT-JAKOB DISEASE
   CRYPTOSPORIDIUM
   DENGUE
   E. COLI 0157:H7
   HEPATITIS C ANTIBODY POS
   LEGIONELLA
   LEISHMANIASIS
   MALARIA
   NCH CHOLESTEROL
   NCH PAP SMEAR
   PEN-RES PNEUMOCOCCUS
   STREPTOCOCCUS GROUP A
   TUBERCULOSIS
   VANC-RES ENTEROCOCCUS

Select LAB SEARCH/EXTRACT NAME: LEISHMANIASIS <RET>
```

```
            LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN   Page 1 of 5
NAME: LEISHMANIASIS                                            ACTIVE: YES
_____________________________________________________________________________
Laboratory Test(s)                  Indicator                   Value
<RET>



ICD9                                  ICD9 Description
085.0                                 VISCERAL LEISHMANIASIS
085.1                                 CUTAN LEISHMANIAS URBAN
085.2                                 CUTAN LEISHMANIAS ASIAN
085.3                                 CUTAN LEISHMANIAS ETHIOP
085.4                                 CUTAN LEISHMANIAS AMER
085.5                                 MUCOCUTAN LEISHMANIASIS
085.9                                 LEISHMANIASIS NOS
<RET>

_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                              Press <PF1>H for help    Insert
```

```
            LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 2 of 5
NAME: LEISHMANIASIS                                            ACTIVE: YES
_____________________________________________________________________________
Selected Etiology                                  Selected Snomed Codes
<RET>



Antimicrobial Susceptibility          NLT Code       NLT Description
<RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                              Press <PF1>H for help    Insert
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 3 of 5
NAME: LEISHMANIASIS                                          ACTIVE: YES
_____________________________________________________________________________

                           Topography Selection

Include                                  Exclude
<RET>                                    <RET>




_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                Press <PF1>H for help    Insert
```

```
           LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN     Page 4 of 5
NAME: LEISHMANIASIS                                          ACTIVE:   YES
_____________________________________________________________________________

First Encounter:<RET>                          FOLLOW PTF:YES<RET>

BEFORE DATE OF BIRTH:<RET>                   AFTER DATE OF BIRTH:<RET>

Select SEX:<RET>



_____________________________________________________________________________
Exit     Save     Refresh

COMMAND: E<RET>                                      Press <PF1>H for help
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 5 of 5
NAME: E. LEISHMANIASIS                                       ACTIVE  YES
_____________________________________________________________________________

Run Date:<RET>                                 Protocol:LREPI<RET>

Run Cycle:MONTHLY<RET>                         Lag Days:15<RET>

General Description:<TAB>




_____________________________________________________________________________
Exit    Save     Refresh

COMMAND: E<RET>                                Press <PF1>H for help    Insert
Save changes before leaving form (Y/N)?Y<RET>
```

Malaria (Reference #11)

The plasmodial parasite is responsible for the blood-borne disease of malaria. Malaria can cause acute as well as chronic, relapsing disease. Occasionally, U.S. troops are deployed in malaria endemic areas. This placement could potentially put troops at risk for acquiring this disease. For the Emerging Pathogens Initiative program, we are interested in tracking patients with malaria, either acute or chronic, relapsing, and in either inpatient or outpatient status. No standardized serologic test allows for easy identification. Since not all sites consistently code and record malarial parasites seen histologically or on blood smears (not all of these interpretations are done through the Pathology and Laboratory Service), we have currently decided to track malaria based on ICDM-9 coding.

Example:

```
                        Lab Search/Extract Primary Menu



   ENH     Lab Search/Extract Manual Run (Enhanced)
   LK      Antimicrobial Link Update
   UP      Lab Search/Extract Parameter Setup
           Lab Search/Extract Protocol Edit

Select Lab Search/Extract Primary menu Option: UP<RET> Lab Search/Extract
Parameter Setup

Select LAB SEARCH/EXTRACT NAME: ?<RET>
 Answer with LAB SEARCH/EXTRACT NAME, or REFERENCE NUMBER
 Do you want the entire 16-Entry LAB SEARCH/EXTRACT List? Y  (Yes)<RET>
Choose from:
   CANDIDA
   CLOSTRIDIUM DIFFICILE
   CREUTZFELDT-JAKOB DISEASE
   CRYPTOSPORIDIUM
   DENGUE
   E. COLI 0157:H7
   HEPATITIS C ANTIBODY POS
   LEGIONELLA
   LEISHMANIASIS
   MALARIA
   NCH CHOLESTEROL
   NCH PAP SMEAR
   PEN-RES PNEUMOCOCCUS
   STREPTOCOCCUS GROUP A
   TUBERCULOSIS
   VANC-RES ENTEROCOCCUS

Select LAB SEARCH/EXTRACT NAME: MALARIA <RET>
```

```
     LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN          Page 1 of 5
NAME: MALARIA                                                ACTIVE: YES
_____________________________________________________________________________
Laboratory Test(s)                  Indicator                  Value
<RET>



ICDM-9                       ICDM-9 Description
084.0                        FALCIPARUM MALARIA
084.1                        VIVAX MALARIA
084.2                        QUARTAN MALARIA
084.3                        OVALE MALARIA
084.4                        MALARIA NEC
084.5                        MIXED MALARIA
084.6                        MALARIA NOS
084.7                        INDUCED MALARIA
084.8                        BLACKWATER FEVER
084.9                        MALARIA COMPLICATED NEC
<RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                              Press <PF1>H for help    Insert
```

```
       LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 2 of 5
NAME: MALARIA                                               ACTIVE: YES
_____________________________________________________________________________
Selected Etiology                              Selected Snomed Codes
<RET>



Antimicrobial Susceptibility          NLT Code       NLT Description
<RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                              Press <PF1>H for help    Insert
```

```
      LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN   Page 3 of 5
NAME: MALARIA                                                ACTIVE: YES
_____________________________________________________________________________

                           Topography Selection

Include                                  Exclude
<RET>                                    <RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                Press <PF1>H for help    Insert
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 4 of 5
NAME: MALARIA                                                  ACTIVE: YES
_____________________________________________________________________________

First Encounter:<RET>                          FOLLOW PTF:YES<RET>

BEFORE DATE OF BIRTH:<RET>                    AFTER DATE OF BIRTH:<RET>

Selected SEX:<RET>

Exit     Save     Refresh

COMMAND: E<RET>                                      Press <PF1>H for help
```

```
           LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 5 of 5
NAME: MALARIA                                                ACTIVE  YES
_____________________________________________________________________________

Run Date:<RET>                           Protocol:LREPI<RET>

Run Cycle:MONTHLY<RET>                   Lag Days:15<RET>

General Description:<TAB>


_____________________________________________________________________________
Exit    Save     Refresh

COMMAND: E<RET>                                      Press <PF1>H for help
Save changes before leaving form (Y/N)?Y<RET>
```

Penicillin- Resistant Pneumococcus (Reference #3)

The emergence of antibiotic resistance in microbial agents is of great interest and concern for health care. Penicillin (PCN) was once the mainstay of therapy for *Streptococcus pneumoniae* infections but resistance to this agent is becoming more prominent. Different therapeutic strategies need to be developed once the prevalence of PCN-resistant *S. pneumoniae* reaches a critical threshold in a community. In order to monitor this, we are looking for the presence of any resistance in the pneumococci (either "moderate/intermediate" or "frank/high" level resistance). As such, any *S. pneumoniae* which is not fully susceptible to PCN on PCN susceptibility testing should be recorded.

Example:

```
                        Lab Search/Extract Primary Menu



   ENH    Lab Search/Extract Manual Run (Enhanced)
   LK     Antimicrobial Link Update
   UP     Lab Search/Extract Parameter Setup
          Lab Search/Extract Protocol Edit

Select Lab Search/Extract Primary menu Option: UP<RET> Lab Search/Extract
Parameter Setup

Select LAB SEARCH/EXTRACT NAME: ?<RET>
 Answer with LAB SEARCH/EXTRACT NAME, or REFERENCE NUMBER
 Do you want the entire 16-Entry LAB SEARCH/EXTRACT List? Y  (Yes)<RET>
Choose from:
   CANDIDA
   CLOSTRIDIUM DIFFICILE
   CREUTZFELDT-JAKOB DISEASE
   CRYPTOSPORIDIUM
   DENGUE
   E. COLI 0157:H7
   HEPATITIS C ANTIBODY POS
   LEGIONELLA
   LEISHMANIASIS
   MALARIA
   NCH CHOLESTEROL
   NCH PAP SMEAR
   PEN-RES PNEUMOCOCCUS
   STREPTOCOCCUS GROUP A
   TUBERCULOSIS
   VANC-RES ENTEROCOCCUS

Select LAB SEARCH/EXTRACT NAME: PEN-RES PNEUMOCOCCUS <RET>
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 1 of 5
NAME: PEN-RES PNEUMOCOCCUS                                   ACTIVE: YES
_____________________________________________________________________________
Laboratory Test(s)                  Indicator                       Value
<RET>



ICDM-9                              ICDM-9 Description
<RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: <RET>                               Press <PF1>H for help    Insert
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 2 of 5
NAME: PEN-RES PNEUMOCOCCUS                                   ACTIVE: YES
_____________________________________________________________________________
Selected Etiology                              Selected Snomed Codes

NOTE: You may enter a new ETIOLOGY, if you wish.
STREPTOCOCCUS PNEUMONIAE         12
  Are you adding 'STREPTOCOCCUS PNEUMONIAE' as
    a new ETIOLOGY (the 1ST for this EMERGING PATHOGENS)?Y<RET>


Antimicrobial Susceptibility      NLT Code       NLT Description
Penicillin<RET>
Are you adding ' Penicillin ' as
    a new Antimicrobial Susceptibility (the 1ST for this EMERGING PATHOGENS)?Y
<RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: <RET>                               Press <PF1>H for help    Insert
```

```
      LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN     Page 3 of 5
NAME: PEN-RES PNEUMOCOCCUS                                    ACTIVE: YES
_____________________________________________________________________________

                          Topography Selection

Include                                          Exclude
<RET>                                            <RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh
COMMAND: N<RET>                                  Press <PF1>H for help    Insert
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 4 of 5
NAME: PEN-RES PNEUMOCOCCUS                                   ACTIVE: YES
_____________________________________________________________________________

First Encounter:<RET>                          FOLLOW PTF:YES<RET>

BEFORE DATE OF BIRTH:<RET>                    AFTER DATE OF BIRTH:<RET>

Selected SEX:<RET>



Exit     Save     Refresh
COMMAND: E<RET>                                       Press <PF1>H for help
```

```
           LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 5 of 5
NAME: PEN-RES PNEUMOCOCCUS                                   ACTIVE  YES
_____________________________________________________________________________

Run Date:<RET>                              Protocol:LREPI<RET>

Run Cycle:MONTHLY<RET>                      Lag Days:15<RET>

General Description:<TAB>



_____________________________________________________________________________
Exit    Save     Refresh
COMMAND: E<RET>                                  Press <PF1>H for help      Insert
Save changes before leaving form (Y/N)?Y<RET>
```

Streptococcus-Group A (Reference #6

Streptococcus-Group A can be associated with or cause significant disease such as severe fasciitis and streptococcal toxic shock syndrome. We are especially interested to find out how much severe/deep seated disease the VA is experiencing, but other disease entities are of interest also. To this end, we are looking for all episodes of culture positivity for *Streptococcus*-Group A, regardless of site and regardless of inpatient or outpatient status of the person from whom the specimen is obtained. We are aware that some sites may use rapid screenings for *Streptococcus*-Group A, especially from pharyngeal sources. These rapid screens may be difficult to capture, so we are not asking for them on this first iteration of the EPI program.

Example:

```
                        Lab Search/Extract Primary Menu



   ENH    Lab Search/Extract Manual Run (Enhanced)
   LK     Antimicrobial Link Update
   UP     Lab Search/Extract Parameter Setup
          Lab Search/Extract Protocol Edit

Select Lab Search/Extract Primary menu Option: UP<RET> Lab Search/Extract
Parameter Setup

Select LAB SEARCH/EXTRACT NAME: ?<RET>
 Answer with LAB SEARCH/EXTRACT NAME, or REFERENCE NUMBER
 Do you want the entire 16-Entry LAB SEARCH/EXTRACT List? Y  (Yes)<RET>
Choose from:
   CANDIDA
   CLOSTRIDIUM DIFFICILE
   CREUTZFELDT-JAKOB DISEASE
   CRYPTOSPORIDIUM
   DENGUE
   E. COLI 0157:H7
   HEPATITIS C ANTIBODY POS
   LEGIONELLA
   LEISHMANIASIS
   MALARIA
   NCH CHOLESTEROL
   NCH PAP SMEAR
   PEN-RES PNEUMOCOCCUS
   STREPTOCOCCUS GROUP A
   TUBERCULOSIS
   VANC-RES ENTEROCOCCUS

Select LAB SEARCH/EXTRACT NAME: STREPTOCOCCUS-GROUP A <RET>
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 1 of 5
NAME: STREPTOCOCCUS-GROUP A                                  ACTIVE: YES
_____________________________________________________________________________
Laboratory Test(s)                  Indicator                  Value
<RET>



ICDM-9                                 ICDM-9 Description
<RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh
COMMAND: N<RET>                                Press <PF1>H for help    Insert
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN     Page 2 of 5
NAME: STREPTOCOCCUS-GROUP A                                   ACTIVE: YES
_____________________________________________________________________________
Selected Etiology                                  Selected Snomed Codes
STREPTOCOCCUS-GROUP A<RET>



Antimicrobial Susceptibility          NLT Code       NLT Description
<RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh
COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 3 of 5
NAME: STREPTOCOCCUS-GROUP A                                  ACTIVE: YES
_____________________________________________________________________________

                           Topography Selection

Include                                        Exclude
<RET>                                          <RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh
COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN   Page 4 of 5
NAME: STREPTOCOCCUS-GROUP A                                   ACTIVE: YES
_____________________________________________________________________________

First Encounter:<RET>                       FOLLOW PTF:YES<RET>

BEFORE DATE OF BIRTH:<RET>                  AFTER DATE OF BIRTH:<RET>

Select SEX:<RET>

_____________________________________________________________________________
Exit     Save     Refresh

COMMAND: E<RET>                                      Press <PF1>H for help
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 5 of 5
NAME: STREPTOCOCCUS-GROUP A                                ACTIVE  YES
_____________________________________________________________________________

Run Date:<RET>                              Protocol:LREPI<RET>

Run Cycle:MONTHLY<RET>                      Lag Days:15<RET>

General Description:<TAB>


_____________________________________________________________________________
Exit    Save     Refresh

COMMAND: E<RET>                                Press <PF1>H for help     Insert
Save changes before leaving form (Y/N)?Y<RET>
```

Tuberculosis (Reference #5)

Mycobacterium tuberculosis infection is an important public health concern. Recent increases in incidence of disease, and occurrence of multiply-drug resistant strains in outbreak situations along with the increased susceptibility of HIV-infected persons for this disease has generated renewed interest in this entity. Since the national data show that 80-85% of all reported active tuberculosis cases are culture positive (with acid fast bacilli smear-only positive cases increasing the reporting by 2-5% more) we have decided to use culture positivity for *Mycobacterium tuberculosis* to track tuberculosis infections in the current iteration of the EPI software package. Information regarding susceptibility will be tracked as well. For the national EPI program, there will be no need to enter specific antimycobacterial agents to be tracked; it will be done automatically. ICDM-9 coding is complex and confusing for many cases of tuberculosis and therefore will **not** be used.

Example:

```
                        Lab Search/Extract Primary Menu


   ENH    Lab Search/Extract Manual Run (Enhanced)
   LK     Antimicrobial Link Update
   UP     Lab Search/Extract Parameter Setup
          Lab Search/Extract Protocol Edit

Select Lab Search/Extract Primary menu Option: UP<RET> Lab Search/Extract
Parameter Setup

Select LAB SEARCH/EXTRACT NAME: ?<RET>
 Answer with LAB SEARCH/EXTRACT NAME, or REFERENCE NUMBER
 Do you want the entire 16-Entry LAB SEARCH/EXTRACT List? Y  (Yes)<RET>
Choose from:
   CANDIDA
   CLOSTRIDIUM DIFFICILE
   CREUTZFELDT-JAKOB DISEASE
   CRYPTOSPORIDIUM
   DENGUE
   E. COLI 0157:H7
   HEPATITIS C ANTIBODY POS
   LEGIONELLA
   LEISHMANIASIS
   MALARIA
   NCH CHOLESTEROL
   NCH PAP SMEAR
   PEN-RES PNEUMOCOCCUS
   STREPTOCOCCUS GROUP A
   TUBERCULOSIS
   VANC-RES ENTEROCOCCUS

Select LAB SEARCH/EXTRACT NAME: TUBERCULOSIS<RET>
```

```
     LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN     Page 1 of 5
NAME: TUBERCULOSIS                                          ACTIVE: YES
_____________________________________________________________________________
Laboratory Test(s)                    Indicator                     Value
<RET>


ICDM-9                                ICDM-9 Description
<RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh
COMMAND: N<RET>                              Press <PF1>H for help    Insert
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 2 of 5
NAME:TUBERCULOSIS                                          ACTIVE:YES
_____________________________________________________________________________
Selected Etiology                          Selected Snomed Codes
Mycobacterium tuberculosis<RET>


Antimicrobial Susceptibility       NLT Code       NLT Description
<RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh
COMMAND: N<RET>                              Press <PF1>H for help    Insert
```

```
           LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN   Page 3 of 5
NAME: TUBERCULOSIS                                           ACTIVE:YES
_____________________________________________________________________________
                           Topography Selection

Include                                    Exclude
<RET>                                      <RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh
COMMAND: N<RET>                              Press <PF1>H for help    Insert
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 4 of 5
NAME: TUBERCULOSIS                                          ACTIVE: YES
_____________________________________________________________________________

First Encounter:<RET>                          FOLLOW PTF:YES<RET>

BEFORE DATE OF BIRTH:<RET>                    AFTER DATE OF BIRTH:<RET>

Select SEX:<RET>


_____________________________________________________________________________
Exit     Save     Refresh

COMMAND: E<RET>                                      Press <PF1>H for help
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 5 of 5
NAME: TUBERCULOSIS                                        ACTIVE  YES
_____________________________________________________________________________

Run Date:<RET>                              Protocol:LREPI<RET>

Run Cycle:MONTHLY<RET>                      Lag Days:15<RET>

General Description:<TAB>


_____________________________________________________________________________
Exit    Save     Refresh

COMMAND: E<RET>                              Press <PF1>H for help     Insert
Save changes before leaving form (Y/N)?Y<RET>
```

Vancomycin-Resistant Enterococcus (VRE) (Reference #1)

Vancomycin-Resistant Enterococcus (VRE) is a pathogen of increasing importance. Not only can it cause significant disease, but also it can be spread within facilities. It is important to capture all positive cultures for VRE (not just disease). As such, all positive cultures for VRE will be reported.

Note: This includes cultures positive for prevalence and surveillance review, including specimens of stool and rectal swabs.

Vancomycin-resistant *Enterococcus faecalis* and *E. faecium* are most common, but we wish to look at all vancomycin resistant enterococci whether speciated or not. Therefore, it is important to be sure to list all the places in the Micro Lab package where *Enterococcus* are found, either as *Enterococcus*, *E. (sp.),* Group D-*Streptococcus*, *E. faecalis*, *E. faecium*, *E. durans*, *E. gallinarum*, *E. casseliflavus*, etc.

NOTE: Only a partial pre-populated Etiology list is shown in the screen display example at the Selected Etiology prompt. Please be sure to review the entire Etiology list. If you have other etiology results at your site, they can be added to this Etiology list. Again, if alternate spellings are present in your site's ETIOLOGY FIELD file (#61.2), be certain those spellings assure capture of all data points possible.

Example:

```
                        Lab Search/Extract Primary Menu


   ENH    Lab Search/Extract Manual Run (Enhanced)
   LK     Antimicrobial Link Update
   UP     Lab Search/Extract Parameter Setup
          Lab Search/Extract Protocol Edit

Select Lab Search/Extract Primary menu Option: UP<RET> Lab Search/Extract
Parameter Setup

Select LAB SEARCH/EXTRACT NAME: ?<RET>
 Answer with LAB SEARCH/EXTRACT NAME, or REFERENCE NUMBER
 Do you want the entire 16-Entry LAB SEARCH/EXTRACT List? Y  (Yes)<RET>
Choose from:
   CANDIDA
   CLOSTRIDIUM DIFFICILE
   CREUTZFELDT-JAKOB DISEASE
   CRYPTOSPORIDIUM
   DENGUE
   E. COLI 0157:H7
   HEPATITIS C ANTIBODY POS
   LEGIONELLA
   LEISHMANIASIS
   MALARIA
   NCH CHOLESTEROL
   NCH PAP SMEAR
   PEN-RES PNEUMOCOCCUS
   STREPTOCOCCUS GROUP A
   TUBERCULOSIS
   VANC-RES ENTEROCOCCUS

Select LAB SEARCH/EXTRACT NAME: VANC-RES ENTEROCOCCUS <RET>
```

```
         LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN   Page 1 of 5
NAME: VANC-RES ENTEROCOCCUS                                    ACTIVE: YES
_____________________________________________________________________________
Laboratory Test(s)             Indicator                          Value
<RET>


ICDM-9                            ICDM-9 Description
<RET>

_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                              Press <PF1>H for help    Insert
```

```
     LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN       Page 2 of 5

NAME: VANC-RES ENTEROCOCCUS                                  ACTIVE: YES
_____________________________________________________________________________

Selected Etiology                                Selected Snomed Codes
Examples:Enterococcus
         Enterococcus  (Strept. faecalis-Group D)
         Streptococcus faecalis      Enterococcus durans
         Streptococcus faecium       Streptococcus sp. Group D
         Enterococcus avium
         Enterococcus avium - (Group D)
         Enterococcus casseliflavus
         Enterococcus faecalis
         Enterococcus gallinarum
         Enterococcus malodoratus    Enterococcus
         Enterococcus hirae          solitarius
         Enterococcus mundtii        Enterococcus
         Enterococcus raffinosus     pseudoavium
         Enterococcus sp.            Enterococcus faecium
         Enterococcus species        Enterococcus durans
<RET>
Note: During the post Init, the ETIOLOGY FIELD file (#61.2) was searched to
pre-populate the Etiology field (#3) in the EMERGING PATHOGENS file (#69.5).
Listed above are examples of etiology entries which may have been populated
from your site's file. Additional etiologies may be added or deleted at the
Selected Etiology prompt to meet your site specific needs.

Note: If spelling differences occur within your ETIOLOGY FIELD file (#61.2) be
consistent with your local file and spell the results here, as it is spelled
in your file (even if it is spelled differently in the example). We are
concerned more importantly with data recovery.


Antimicrobial Susceptibility      NLT Code       NLT Description
VANCOMYCIN<RET>



_____________________________________________________________________________
Exit     Save     Next Page     Refresh


COMMAND: N<RET>                                Press <PF1>H for help    Insert
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN   Page 3 of 5
NAME: VANC-RES ENTEROCOCCUS                                 ACTIVE: YES
_____________________________________________________________________________

                          Topography Selection

Include                                  Exclude
<RET>                                   <RET>

_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
       LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 4 of 5
NAME: VANC-RES ENTEROCOCCUS                                    ACTIVE: YES
_____________________________________________________________________________

First Encounter:<RET>                          FOLLOW PTF:YES<RET>

BEFORE DATE OF BIRTH:<RET>                     AFTER DATE OF BIRTH:<RET>

Select SEX:<RET>


_____________________________________________________________________________
Exit     Save     Refresh

COMMAND: E<RET>                                 Press <PF1>H for help    Insert
Save changes before leaving form (Y/N)?Y<RET>
```

```
           LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN    Page 5 of 5
NAME: VANC-RES ENTEROCOCCUS                                  ACTIVE  YES
_____________________________________________________________________________

Run Date:<RET>                          Protocol:LREPI<RET>

Run Cycle:MONTHLY<RET>                  Lag Days:15<RET>

General Description:<TAB>



_____________________________________________________________________________
Exit    Save     Refresh

COMMAND: E<RET>                                 Press <PF1>H for help     Insert
Save changes before leaving form (Y/N)?Y<RET>
```

Conclusion

Once you have finished entering the information as directed by the national Infectious Diseases Program Office, these fields should **not** again be changed except for the following conditions:

1. As requested nationally via the Veterans Affairs Headquarters (VAHQ) Infectious Disease Program Office to update, modify, add, or delete data from the existing files used by the Laboratory Search/Extract software or an addition of a new entity to be tracked.

2. The yearly review must ensure that the entry is acceptable and to update the EPI files with any changes in etiology, lab tests or results parameters that may have occurred locally at the site during the previous year.

Annually the EPI national program materials should be reviewed by the VAMCs and updated. It is suggested that this review occur in February of each year. If no changes have occurred in lab practices, etiologies, sites, or results parameters leave the information as is until the next review period. If changes did occur, then enter them as appropriate in order to capture the data requested for each EPI national entity (disease/organism) to be tracked.

As entities (diseases/organisms) are no longer to be tracked nationally ("dropped from the list"), or a new entity is to be tracked ("added to the list"), revision will be forwarded to the sites to assist in updating your site files.

EPI Helpful Hints:

Clostridium difficile

There are two preferred methods that will make it easy to capture data for Clostridium difficile criteria (i.e., as well as several other methods which sites may already employ). **Note:** As long as the designated parameter results being tracked are in a retrievable field (i.e., **not** a "Free Text" or "Comment" field) the method the site chooses is an individual decision.

Preferred Method: The first preferred method is to have the site define an etiology of **"Clostridium difficile toxin positive"**. This allows a topography specimen of accession area **"feces/stool"** to be accessioned through the Microbiology accession area. Then, if the stool specimen were indeed positive for *Clostridium difficile* toxin, by any of the known methods of testing, the etiology would be **"Clostridium difficile toxin positive."** To accomplish this method would require sites to enter three new local etiologies:

- **Clostridium difficile toxin positive**
- **Clostridium difficile toxin negative**
- **Clostridium difficile toxin indeterminant**

These would be different from a culture isolate being positive for *Clostridium difficile,* in that they actually are etiologies/results based on toxin testing. This leaves the etiology of *Clostridium difficile* for actual culture positive specimens for the organism *Clostridium difficile*. The Lab Search/Extract Parameter Setup, the site parameter by which the software will capture a patient diagnosed with proven *Clostridium difficile*-associated colitis, will be by placing "**Clostridium difficile toxin positive**" etiology into the selected etiology entry screen. This has the advantage of being more consistent with other data entry practices in the Microbiology sections of most laboratories.

Preferred Method: The second preferred method is having the data in retrievable form would be to enter/accession the specimen for *Clostridium difficile* toxin assay under the chemistry/serology format (regardless of where the test is physically done) with the results being a choice of "positive", "negative", or "indeterminate". This would allow one to enter *"Clostridium difficile* toxin" assay as the test for the EPI software to search in the chemistry/serology format. The result would be retrievable for EPI under a chemistry/serology lab test of "*Clostridium difficile* toxin" with the indicator "contains" and the value of "pos", as noted in the sample page. If your site does not routinely do *Clostridium difficile* toxin assay testing this way, a different method of accessioning the specimen to get it in chemistry/serology format would be needed.

However, the Chemistry/Serology format would give additional flexibility in placing interpretational guidelines for the test results in the "Comments" field. For the EPI, "positive" or "negative" results can **not** be located in a "Free Text" or "Comments" field as these are **not** retrievable.

Some VAMCs accession the stool specimen for the *Clostridium difficile* toxin assay under the Microbiology format. An etiology is not given under the final culture result, but written into free text or comments section stating the *Clostridium difficile* toxin assay test result. This is not in a retrievable format and therefore not acceptable for the EPI creteria.

Some VAMCs still use cytotoxin assays of cell culture, which are again entered in a "Free Text" or "Comment" field. This again is not acceptable unless it is accessioned and recorded under the chemistry/serology format as a straightforward lab test result of "positive" or "negative" or "indeterminate".

Some VAMCs choose to report *Clostridium difficile* toxin assay positivity under the Microbiology application. As an etiology/culture result of *Clostridium difficile* (even though culture, was not actually done) this is not a true measure of what is actually being tested (as most sites do not culture the organism but just run the toxin assay test). However, if your site uses this means to represent *Clostridium difficile* toxin assay positivity and there are no exceptions (such as the site reporting an actual positive culture of (*Clostridium difficile* which is toxin assay negative), then this would be acceptable though less desirable for EPI purposes.

Validating EPI Data Capture

Once the Lab Search/Extract Parameter is setup, the Laboratory Search/Extract software automatically generates an Verification Report message around the 15th of each month. The Emerging Pathogen Verification Report should be used to compare the EPI data capture to site-specific data capture. This comparison also helps determine if the Lab Search/Extract Parameter for the EPI criteria is accurately defined. It is recommended that the Lab Search/Extract Manual Run [LREPI (EPI) MANUAL RUN] option be run to evaluate 1-3 months of data (i.e., as determined by the sites).

The Microbiology Laboratory staff, Laboratory Manager, TQI/QI/QA, or other person (i.e., as determined by the sites) may already have data of isolated "organisms of interest". Several of the nationally defined emerging pathogens may well corresponds with the existing data. Therefore, a quick comparison can be done using the Emerging Pathogens Verification Report message. This comparison also ensures that the Laboratory Search/Extract software is appropriately capturing the EPI cases and numbers

For tests such as Hepatitis C, most Laboratory Managers should be able to generate reports (with patient names) that includes "positive" tests results to use for comparison. Additionally, the Health Information Management Section at each site should be able to generate a report of ICDM-9 Diagnoses by date. This ICDM-9 Diagnoses by date Report helps determine if the 14 VAHQ defined Emerging Pathogens data captures concurs with the EPI criterion (i.e., Cryptosporidium-007.8, Legionnaire's disease--482.80, malaria--084, 084.0, 084.1, 084.2, 084.3, 084.4, 084.5, 084.6, 085.7, 084.8, 084.9, dengue-061, 065.4, Creutzfeldt-Jakob--046.1, and Leishmaniasis--085, 085.0, 085.1, 085.2, 085.3, 085.4, 085.5, 085.9).

Be aware that a number of these emerging pathogens **do not** occur at a high frequency. Sites with previously known cases of emerging pathogens, such as TB, should run the Lab Search/Extract Manual Run [LREPI (EPI) MANUAL RUN] option for the entire month to verify that the TB culture was isolated and to see if it is captured. Additionally, "test patients" known to have these lab results can also be run.

The purpose of this validation is **not** to require extra paperwork for QI monitors and long term document files. The validation should be done at the initial implementation of the Laboratory Search/Extract software to ensure accurate data capture. Thereafter, a review should be done once every 4-6 months to ensure that Lab Search/Extract Parameter Setup [LREPI (EPI) PARAMETER UPDATE] option entries for the EPI criteria remains accurate. Parameter updates may be required if a new lab test/result is to be implemented for one of the Emerging Pathogens Initiative.

Emerging Pathogens Verification Report Message

The following is an example of the Emerging Pathogens Verification Report mail message. The EPI software automatically transmits the EPI data to the AAC on the 15th of each month. The AAC processes the on the 25th of each month

Example:

```
Emerging Pathogens Verification Report  [#60004] Page 1
------------------------------------------------------------------------------

REPORTING DATE FROM  12-01-1996  TO  12-31-1996    Message Seq # 1  Auto


JOHN DOEDOE XXX-XX-XXXX 07-07-1913    M   WORLD WAR II      45205
Outpatient  Accession Date  12-11-1996@1025

*********  STREPTOCOCCUS GROUP A  *********

12-11-1996@1025  BACT 96 10383  MICRO CULTURE  LEG
     1    12-13-1996   STREPTOCOCCUS BETA HEMOLYTIC, GROUP A
     2    12-13-1996   STAPHYLOCOCCUS (COAGULASE NEGATIVE)

ORG # 1  12-11-1996@1025  ANTIBIOTIC MIC  LEG

ORG # 2  12-11-1996@1025  ANTIBIOTIC MIC  LEG


JOHN DOEDOE XXX-XX-XXXX    01-08-1923    M   WORLD WAR II      45239
Inpatient   Admission Date  12-19-1996@1125

*********4  CLOSTRIDIUM DIFFICILE *********
12-25-1996@1415  MSER 96 418  CHEMISTRY TEST
FECES

Clostridium Difficile Toxin  12-27-1996@1403
POSITIVE

JOHN DOE  ###-##-####    11-05-1910    M   WORLD WAR II      45255
Inpatient   Admission Date  12-03-1996@1908
            Discharge Date  12-09-1996@1151  Discharge Disposition  REGULAR

250.01         DIABETES MELLI W/0 COMP TYP I

276.8          HYPOPOTASSEMIA

427.31         ATRIAL FIBRILLATION

428.0          CONGESTIVE HEART FAILURE

482.30         PNEUM. UNSPEC. STREPTOCOCCUS

*********6  STREPTOCOCCUS GROUP A  *********

12-04-1996  BACT 96 10187  MICRO CULTURE  SPUTUM
     1    12-06-1996   STREPTOCOCCUS BETA HEMOLYTIC, GROUP A
     2    12-06-1996   STAPHYLOCOCCUS AUREUS
ORG # 1  12-04-1996  ANTIBIOTIC MIC  SPUTUM
ORG # 2  12-04-1996  ANTIBIOTIC MIC  SPUTUM
```

Can be verified using standard result reviews for "CH" subscripted tests (e.g., LRRSP, LRRP3, LRSORD, LRSORA, LRGEN)

PTF data can be verified using several different PTF options:
DG PTF ICD DIAGNOSIS SEARCH
DG PTF SUMMARY DIAG/OP OUTPUT
DG PTF COMPREHENSIVE INQUIRY
(most require DGPTFSUP key)

```
     Penicillin                     R
     Clindamycin                    S
     Vancomycin                     S
     TETRCLN                        S
     TRMSULF                        S
     Erythromycin                   S
     Oxacillin                      S
     Cephalothin                    S
     Ciprofloxacin                  S
     AMPICILLIN-SULBACTAM           S


JOHN DOE  ###-##-####    02-23-1920    M   PRE-KOREAN      45150
Inpatient   Admission Date  11-18-1996@2213

*********8  CANDIDA  *********

12-11-1996@0100  BLD 96 3914  MICRO CULTURE  BLOOD
     1    12-15-1996   CANDIDA ALBICANS

ORG # 1  12-11-1996@0100  ANTIBIOTIC MIC  BLOOD


JOHN DOE  ###-##-####    12-23-1949    M   VIETNAM ERA      45206
Outpatient  Accession Date  12-20-1996@1309

*********2  HEPATITIS C ANTIBODY POS  *********

12-20-1996@1309  RIA 1220 68  CHEMISTRY TEST  SERUM
     Hepatitis C Ab  01-03-1997@1347   STRONG POSITIVE    -


JOHN DOE  ###-##-####    07-06-1919    M   WORLD WAR II      41074
Outpatient  Accession Date  12-19-1996@1007

*********1  VANC-RES ENTEROCOCCUS  *********

12-19-1996@1007  BACT 96 10618  MICRO CULTURE  URINE
     1    12-23-1996   PSEUDOMONAS AERUGINOSA
     2    12-23-1996   ENTEROCOCCUS FAECIUM

ORG # 1  12-19-1996@1007  ANTIBIOTIC MIC  URINE
     Gentamicin                     S
     Cefazolin                      R
     Ampicillin                     R
     Tobramycin                     S
     TRMSULF                        R
     Amikacin                       S
     Cefoxitin                      R
     Cefotaxime                     I
     Nitrofurantoin                 R
     Cefoperazone                   S
     Mezlocillin                    S
```

Microbiology subscripted organisms and susceptibilities can be reviewed using LRMIPSZ, LRMIPC, LRMIPLOG, LRGEN, LRRSP, and LRRP3.

Protocols

LREPI: This event driver protocol defines the associated parameters needed to build the HL7 Message used to send data to the AAC.

LREPI CLIENT: This subscriber protocol defines the parameter required by the HL7 application that determines where to send the HL7 formatted message containing the EPI data.

Domain

The EPI software Domain name is Q-EPI-MED.GOV. Sites **must** install Patch XM*DBA*103. See VA MailMan V. 7.1 manual for instruction on how to set up the domain after the patch has been installed.

EPI Mail Groups

The EPI software application has two mail groups. These mail groups are use too electronically transmit data (i.e., HL7 format messages) to the AAC and to receive messages from the AAC. Listed below are recommendations for membership and suggestions for managing the EPI mail groups.

Office of the Director (00)

It is highly recommended that the Office of the Director (00) at each VAMC initially designate the member(s) responsible for overseeing the two EPI mail groups.

The EPI mail group member(s) is responsible for transmitting the EPI data to the AAC.

The **EPI-Report** mail group member(s) will receive the Emerging Pathogens Verification Report Messages, Confirmation Messages and the Processing Report transmitted by the AAC. This individual(s) will also assist in the EPI data validation, data corrections, and re-transmitting the EPI data to the AAC.

NOTE: It is highly recommended that a TQI/QI/QA staff, Laboratory Information Manager (LIM), Microbiology director or supervisor, Infection Control Practitioners, or Hospital Epidemiologist), or individual(s) with similar functions be a member(s) of the mail groups. This member(s) is responsible for making EPI data corrections due to the numerous files from which the data is obtained (e.g., PTF, PIMS, Health Information Management, Laboratory, etc.). Once the corrections are made, it is the responsibility of the EPI mail group member(s) to re-transmit the EPI data to the AAC. These members may also be of assistance with the verification and periodic validation processes.

EPI Mail Groups

The following information explains the functionality of each mail group.

EPI:

This mail group is used for the transmission of EPI HL7 messages derived from the parameters defined in the LAB SEARCH/EXTRACT file (#69.5) to the AAC.

- Transmit EPI data from the VAMCs (i.e., in HL7 format as defined by the Laboratory Search/Extract software) to the AAC.

EPI-Report:

This mail group is used to deliver the Verification Report message (i.e., created in human readable formatted) which is used to review the data sent to the AAC.

Receives the EPI Verification Report that is generated at each VAMC around the 15th of each month The EPI Verification Report is automatically generated monthly from the HL7 formatted mail message (i.e., in a human readable format). The EPI Verification Report can be generated manually using the Lab Search/Extract Manual Run (Enhanced) [LREPI ENHANCED MANUAL RUN] option and re-run whenever deemed necessary.

Receive the Confirmation Messages

Receive Processing Report from AAC. This report displays any errors that occurred and if a message is unacceptable for receiving by the AAC.

Adding Mail Groups

Add the EPI mail groups to the HL7 APPLICATION PARAMETER file (#771) using VA FileMan V. 21.0:

Example:

```
Select OPTION: ENTER OR EDIT FILE ENTRIES <RET>

INPUT TO WHAT FILE: HL7 APPLICATION PARAMETER file (#771) <RET>
                                          (7 entries)
EDIT WHICH FIELD: ALL// [Enter Facility Name field]<RET>

THEN EDIT FIELD:<RET>

Select HL7 APPLICATION PARAMETER NAME: EPI <RET>          ACTIVE

FACILITY NAME: [Enter your facility name or facility number] <RET>

Select HL7 APPLICATION PARAMETER NAME: EPI-Report<RET>          ACTIVE

FACILITY NAME: [Enter your facility name or facility number] <RET>
```

Starting the Lower Level Protocol of the HL7 V. 1.6 Background Job

Example:

```
Select Systems Manager Menu Option:     HL7 Main<RET> Menu

   1      V1.5 OPTIONS ...
   2      V1.6 OPTIONS ...
   3      Activate/Inactivate Application
   4      Print/Display Menu ...
   5      Purge Message Text File Entries


Select HL7 Main Menu Option: 2<RET>  V1.6 OPTIONS

   1      Communications Server ...
   2      Interface Workbench
   3      Message Requeuer


Select V1.6 OPTIONS Option: 1<RET>  Communications Server

   1      Edit Communication Server parameters
   2      Manage incoming & outgoing filers ...
   3      Monitor incoming & outgoing filers
   4      Start LLP
   5      Stop LLP
   6      Systems Link Monitor
   7      Logical Link Queue Management
   8      Report
```

```
Select Communications Server Option: 4<RET>  Start LLP

This option is used to launch the lower level protocol for the
Appropriate device.  Please select the node with which you want
to communicate

Select HL LOGICAL LINK NODE: EPI<RET>
The LLP was last shutdown on JAN 30, 1997 12:06:19.


Select one of the following:

          F         FOREGROUND
          B         BACKGROUND
          Q         QUIT

Method for running the receiver: B//<RET> ACKGROUND
Job was queued as 131225.
```

EPI HL7 Format Mail Message

The EPI data is transmitted via an HL7 format mail message to the AAC. The HL7 format mail message should to be transmitted to the AAC by the 15th of each month. Forward the HL7 format mail message to the XXX@Q-EPI domain.

Example:

```
Subj: HL7 Message FEB 10,1997@15:56:29 from Station XXX STATION XXX  [#63430]
10 Feb 97 15:56  262 Lines
From: POSTMASTER (Sender: ANYBODY)  in 'IN' basket.   Page 1
---------------------------------------------------------------------------

MSH|~^\&|EPI-LAB||EPI-LAB||19970210155618||ORU~R01|483|P|2.2|||NE|NE|USA

NTE||R~REPORTING DATE FROM 19960101 TO 19970131~1

PID|1|064-54-
3435~4~M10|17~8~M10||DUCK~DONALD||19840426|M||7|~|||||||064543435

PV1|1|O|||||||||||||||||||||||||||||||||||19960312123902

NTE|1|1~VANC-RES ENTEROCOCCUS

OBR|1|||81121.0000~CHEMISTRY
TEST~VANLT|||19960312123902|||||||SER~~SERUM|||CH
 0312 14

OBX|1|ST|~~~183~CHOLESTEROL~VA60||190|mg/dL|$S(AGE<50:135,1:120)-
288|||||||1996
0328145221

Select MESSAGE Action: IGNORE (IN basket)// FORWARD<RET>

Send mail to: XXX@Q-EPI <RET>.MED.VA.GOV    via FOC-AUSTIN.VA.GOV
```

EPI Confirmation Message

An EPI Confirmation mail message is sent to the sending site EPI-Report mail group after the EPI HL7 formatted mail message has been received by the AAC database.

EPI Processing Report

A Processing Report mail message is sent to the sending facility EPI-Report mail group at the end of the AAC processing cycle (i.e., the 25th of each month). The EPI Processing Report mail message confirms that the EPI data has been processed and lists any errors and/or warning codes requiring corrections.

Example: EPI Processing Report

```
Subj: EPI/LRK #970451447950300  [#1425971] 14 Feb 97 14:55 CST  50 Lines
From: <POSTMASTER@FOC-AUSTIN.VA.GOV>  in 'IN' basket.   Page 1  **NEW**
------------------------------------------------------------------------------

2EPI0001 LRK.
 STATION  XXX          EPI PROCESSING REPORT      REPORT DATE  1997/02/11
PAGE 01

  PROCESS DATE    SSN       ENCOUNTER DATE   MESSAGE  ERROR CODES
    19970131   000000190    19970131132151     001     NO ERRORS
    19970131   003466370    19961002160512     001     500
    19970131   012225556    19970121121609     001     NO ERRORS
    19970131   026368799    19961229043131     001     NO ERRORS
    19970131   061187860    19960917165748     001     NO ERRORS
    19970131   062267678    19970131125821     001     NO ERRORS
    19970131   062385860    19961230185116     001     NO ERRORS
    19970131   062385860    19970107162010     001     NO ERRORS
    19970131   075684002    19970109103417     001     NO ERRORS
    19970131   084501279    19970128090146     001     NO ERRORS
    19970131   097549144    19970108132918     001     NO ERRORS
    19970131   099302298    19970108082142     001     NO ERRORS
    19970131   099345601    19970113114752     001     NO ERRORS
    19970131   103166277    19970122095702     001     NO ERRORS
    19970131   110541525    19970106225241     001     NO ERRORS
    19970131   113328446    19970114143128     001     NO ERRORS
    19970131   133425965    19970131105820     001     NO ERRORS
    19970131   135205512    19960607174229     001     NO ERRORS
    19970131   138384641    19970114082310     001     NO ERRORS
    19970131   186185119    19960220155121     001     NO ERRORS
    19970131   193609042    19970129172826     001     NO ERRORS
    19970131   202364130    199701141902       001     NO ERRORS
    19970131   218565414    19961011133221     001     500
    19970131   229749494    19970123203635     001     NO ERRORS
    19970131   250461267    19970121115616     001     NO ERRORS
    19970131   253769911    19970115085841     001     NO ERRORS
    19970131   254783854    19970118162650     001     NO ERRORS
    19970131   259387083    19961028154210     001     NO ERRORS
```

EPI Table of Reject and Warning Codes

Example:

ERROR NUMBER	FIELD NAME	EDIT DESCRIPTION	ERROR MESSAGE
000 Series Miscellaneous			
001	Message Control ID	Must not be blank	Message control ID was blank
002	Batch Sending Facility	Sending Station not valid. (Refer to table AA001)	Invalid Batch Sending Facility.
003	Segment Name	PID Segment missing. Do not edit for the existence of PID when NTE segments are present.	PID Segment missing.
004	Segment Name	PV1 Segment missing. Do not edit for the existence of PV1 when NTE segments are present.	PV1 Segment missing.
005	Segment Name	Invalid Segment name.	Invalid HL7 Segment name.
006	Message Creation Date	Must a valid date.	Message Creation Date is invalid.
007	Message Creation Time	Must a valid time.	Message Creation Time is invalid.
100 Series NTE Totals Segment			
100	Action Ind	Currently not being used.	Currently not being used.
105	Totals Total Count	Must be numeric, if Action Ind is 'T '.	NTE Totals Total Count was not numeric.
110	Negative Input Ind	Must be 'N', if Action Ind is not 'T '.	Negative Input Ind was not 'N'.
200 Series PID Segment			
200	Patient Name	Required. Must be alpha numeric. Must not be all numeric. Must not be all blanks.	Patient Name is missing, or not alphanumeric, or all numeric, or all blanks.
205	Patient Date of Birth	Not required. Must be less than the processing year.	Date of Birth is after the Date of transmission. (Also see W03, W04, and W05)
210	Patient Sex	Not required. Must be blank or match table. (Refer to table 0001)	Sex code is not blank or a valid code. (Refer to table 0001)
215	Patient Race	Not required. Must be blank or a valid code. (Refer to table VA07)	Race code is not blank or a valid code. (Refer to table VA07)
220	Patient Address	Must be blank or 'H'.	Patient Address is not blank or 'H'.

ERROR NUMBER	FIELD NAME	EDIT DESCRIPTION	ERROR MESSAGE
224	Patient Zip Code	Not required. Must be Blank or numeric. If numeric, first five digits must not be all zeros. If last four digits exist, then must be numeric.	Address Zip Code is missing or not numeric.
235	Social Security Number	Required. Last byte must be 'P' or blank.	Pseudo SSN is not 'P' or blank.
236	Social Security Number	Required. Must be numeric. Must be greater than zeros.	Social Security Number is missing, or not numeric, or is equal to zeros.
240	Period of Military Service	Must be a valid code. (Refer to table VA011)	Period of Service was invalid. (Refer to table VA011).
300 Series OBR Segment			
300	Universal Service ID	Must be a valid code.	Invalid Universal Service ID
305	Observation Date	Must be numeric date. Must be avalid date. Must be less than processing date.	Observation Date is invalid date or after the date of transmission
307	Observation Time	Not required Must be blank or numeric. If numeric, must be a valid time.	Observation Time is invalid.
310	Specimen Source Code	Not required. If not blank, must be a valid code.	Invalid Specimen Source Code (also see W07)
315	Parent Observation ID	Not required. Must be blank or a valid code.	Invalid Parent Observation ID.
400 Series PV1 Segment			
400	Patient Class	Required. Must be 'I', 'O', or 'U'.	Patient Class is not 'I', 'O', or 'U'.
410	Discharge Date	Not required. Must be blank or a valid date. Must be less than or equal to processing date.	Discharge Date is invalid or after date of transmission.
411	Discharge Time	Not required. Time must be blank or a valid time.	Discharge Time is invalid
420	Admit Date/Time	Required. Must be numeric. date. Must be less than or equal to processing date.	Admit Date is invalid or after date of transmission.
421	Admit Date/Time	Required. Time must be numeric. Must be a valid time.	Admit Time is invalid.

ERROR NUMBER	FIELD NAME	EDIT DESCRIPTION	ERROR MESSAGE
500 Series DG1 Segment			
500	Diagnosis Code	Required. Must be a valid code.	Invalid Diagnosis Code.
600 Series OBX Segment			
600	Observation Nat Lab Num.	If not blank, must be a valid code.	Invalid Observation Nat Lab Num. (Also see W09)
605	Final Result Date	Must be blank or a valid date. Must be numeric date. Must be a less than or equal to the processing date.	Final Result. Date is invalid or after the date of transmission.
W00 Series Warnings			
W03	Patient Date of Birth	Must not be all spaces.	Patient Date of Birth is all spaces. (Also see 205)
W04	Patient Date of Birth	Year must not be all zeros.	Patient Date of Birth Year is all zeros. (see also 205)
W05	Patient Date of Birth	Must be a valid date.	Patient Date of Birth is not in a valid date format. (Also see 205)
W07	Specimen Source Code	Blanks in code.	Specimen Source code is blank. (see also 310)
W09	Observation Nat Lab Num.	Blanks in code.	Observation Nat Lab Num is blank. (Also see 600)

APPENDIX B
NCH USER GUIDE

NCH User Guide

The NCH User Guide provides all the necessary information, instructions, illustrations, and examples required to implement and maintain the **V*IST*A** Laboratory Search/Extract software application.

Overview

National Center for Health Promotion Cholesterol and Pap Screening (NCH): Pursuant to the Congressional mandates stipulated in its enabling legislation (PL. 102-585, U.S.C. 17, 1704), the Department of Veterans Affairs (DVA) National Center for Health Promotion (NCHP) is tasked with monitoring and improving the prevalence of health promotion screening activities provided to veterans VA-wide. The purpose of the NCH Cholesterol and Pap Screening database is to monitor cholesterol and Pap screening activities at a national level, with the ultimate goal for improving detection and treatment of hyperlipidemia and cervical cancer. The NCH Cholesterol and Pap Screening database will also provide a valuable resource for clinical and health services researchers on screening activities and health outcomes, particularly for high-risk and special emphasis group such as veterans with hyperlipidemia, older veterans, and female veterans.

The NCH database is an ongoing initiative. When completed, the NCH database shall consist of a serial (i.e., annual) patient-level database of Cholesterol and Pap Screening procedures conducted in DVA facilities nationally.

At minimum, the NCH database records the following characteristics of the screening procedures:

1. Records the DVA facility where the procedure was conducted.

2. Records the Social Security Number (SSN) of the patient.

3. Records the date the screening procedure was conducted or the date the specimen taken.

4. Records the type of test provided.

5. Records the result of the screening procedure.

Mandate

The installation of the **V*IST*A** Laboratory Search/Extract Patch LR*5.2*175 software should be completed in accordance with PL. 102-585, U.S.C. 17, 1704. It is recommended that all VAMCs installed and implemented the software as soon as possible to help facilitate these important initiatives.

NCH Database Access

Access to the NCH database is currently restricted to the NCHP staff. Upon completion of the NCH Cholesterol and Pap Screening initiative the NCHP office will initiate a data-sharing protocol that ensures adherence to the Privacy Act (5 U.S.C.552a).

Impact

Clinicians and clerks in the Laboratory Service are the primarily users of the software. Front-line managers, VISN directors, clinical managers, and health researchers may also have the need to use the software. Telecommunications issues are paramount. The **V*IST*A** Laboratory Search/Extract software automatically generates and transmits the NCH data to the AAC database daily.

National Roll-Up

The NCH database is stored at the AAC. The database is compiled in SAS format (i.e., serialized by year). Some NCH database routine reports are generated by the AAC. The NCHP may also generate routine and specialized reports as deemed necessary and appropriate. Data elements included in the national roll-up are proportion of unique patients screened by age, type of test and by date range.

The Denominator file criteria is developed by the NCHP for prevalence ratios for screening activities by the DVA facilities and VISNs. The volume of data expected is very large. It is estimated that the number of records in the NCH database may approach 500,000 annually. Funding is provided by the NCHP to the AAC for NCH database storage and report generation.

NCH Search and Extract Criteria

The **V*IST*A** Laboratory Search/Extract Patch LR*5.2*175 software extracts the NCH data directly from the **V*IST*A** database. The patient social security number, accession date, and time are used as the unique identifier for the search/extract criteria. The **V*IST*A** Laboratory Search/Extract software does **not** add any additional data to the patient medical record. However, because the unique identifier is appended to the record. The NCH data can be linked to the patient record if deemed appropriate. All NCH data extracted by the **V*IST*A** Laboratory Search/Extract Patch LR*5.2*175 are already routinely collected. No new equipment or staffing is necessary to use the **V*IST*A** Laboratory Search/Extract software.

Recommended Users

It is **highly recommended** that the following person(s) jointly participate in reviewing the parameter descriptions:

Laboratory Information Manager (LIM)

Total Quality Improvement/Quality Improvement/Quality Assurance (TQI/QI/QA) staff (or person at the site with similar function)

Representative from the Microbiology section for the Emerging Pathogens Initiative (i.e., director, supervisor, or technologist)

Periodic Reviews

The NCH parameter descriptions require an ongoing review process (as specified by the NHCP). The person (s) participating in the ongoing review process is responsible for ensuring the following requirements are current:

Periodic reviews of the ICDM-9 codes

Periodic reviews of the Lab Search/Extract Parameter Setup

Annual review of the NCHP parameter descriptions

NCH Data Transmission

NCH HL7 formatted mail messages

The **V***IST***A** Laboratory Search/Extract software automatically processes the NCH data daily producing HL7 formatted mail messages. A Verification Report mail message is then produced for each HL7 mail message. The Verification Report is a copy of the HL7 formatted mail messages in a human readable format.

The NCH HL7 formatted mail messages are daily transmitted automatically by the **V***IST***A** Laboratory Search/Extract software to the AAC database.

NCH Verification Report mail message

The NCH Verification Report is sent to the LR NCH-Report mail group. The members of the LR NCH-Report mail group may use this Verification Report to review the NCH data and make correction as deemed necessary (e.g., social security number, valid date of births, period of service, etc.).

The new Lab Search/Extract Manual Run (Enhanced) [LREPI ENHANCED MANUAL RUN] option can be used to generate the NCH Verification Report and to transmit NCH data corrections to the AAC database.

NOTE: See Appendix B for an example of the NCH Verification Report mail message.

NCH Acknowledgment mail message

The NCH Acknowledgment mail message displays the status of the NCH HL7 formatted mail message transmission to the AAC. The NCH Acknowledgment mail message is sent to the sending facility LR NCH-Report mail group.

NCH VA View Alert mail message

A NCH VA Alert mail message is sent to the LABORATORY SEARCH/EXTRACT PROTOCOL file (#69.4), Report Mail Group field (#1), after the NCH data has been processed by the AAC.

Cholesterol Screening

Cholesterol Screening is a critical mechanism in the detection and treatment of hyperlipidemia and coronary artery disease, particularly in high-risk patients. Hyperlipidemia is defined as an undesirable level of plasma lipids. The major lipids are cholesterol and triglycerides. Evidence suggests that elevated total cholesterol, elevated low-density lipoprotein cholesterol, and reduced high-density lipoprotein cholesterol contribute to the development of coronary artery disease. Treatment of hyperlipidemia involves primary and secondary prevention along with pharmacological intervention.

The NCH database is use to assists VA clinicians, Planners, and Researchers in the prevention and treatment of hyperlipidemia by providing estimates of screening rate, age- and sex-adjusted hyperlipidemia prevalence, and actual values for total low-density and high-density lipoprotein cholesterol. The VHA Health Promotion and Disease Prevention Handbook (VHA Handbook 1101.8) recommends that males ages 35 to 65 and females ages 45 to 65 be screened for hyperlipidemia every five years.

Laboratory Services have tended to identify cholesterol screening using the following test names:

Cholesterol
Triglyceride
HDL Cholesterol
LDL Cholesterol

Cholesterol Screening for Hyperlipidemia

Hyperlipidemia is a major risk factor for cardiovascular disease. Cholesterol Screening detects abnormal blood lipid levels; and subsequent interventions to normalize these levels are effective strategies in the prevention of coronary artery disease. Abnormal blood lipids that are associated with cardiovascular disease are elevated total cholesterol, triglycerides and low density lipoprotein (LDL) levels, and reduced high density lipoprotein (HDL) levels.

Example: Lab Search/Extract Parameter Setup for NCH Cholesterol

```
                        Lab Search/Extract Primary Menu



   ENH     Lab Search/Extract Manual Run (Enhanced)
   LK      Antimicrobial Link Update
   UP      Lab Search/Extract Parameter Setup
           Lab Search/Extract Protocol edit

Select Lab Search/Extract Primary menu Option: UP<RET> Lab Search/Extract
Parameter Setup

Select LAB SEARCH/EXTRACT NAME: ?<RET>
 Answer with LAB SEARCH/EXTRACT NAME, or REFERENCE NUMBER
 Do you want the entire 16-Entry LAB SEARCH/EXTRACT List? Y  (Yes)<RET>
Choose from:
   CANDIDA
   CLOSTRIDIUM DIFFICILE
   CREUTZFELDT-JAKOB DISEASE
   CRYPTOSPORIDIUM
   DENGUE
   E. COLI 0157:H7
   HEPATITIS C ANTIBODY POS
   LEGIONELLA
   LEISHMANIASIS
   MALARIA
   NCH CHOLESTEROL
   NCH PAP SMEAR
   PEN-RES PNEUMOCOCCUS
   STREPTOCOCCUS GROUP A
   TUBERCULOSIS
   VANC-RES ENTEROCOCCUS

Select LAB SEARCH/EXTRACT NAME: NCH CHOLESTEROL<RET>
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 1 of 5
NAME: NCH Cholesterol                                          ACTIVE:   YES
_____________________________________________________________________________
Laboratory Test(s)              Indicator                            Value
CHOLESTEROL
TRIGLYCERIDE
HDL CHOLESTEROL
LDL CHOLESTEROL
<RET>


ICDM-9                            ICDM-9 Description
<RET>

_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                     Press <PF1>H for help                Insert
```

```
        LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN       Page 2 of 5
NAME: NCH Cholesterol                                       ACTIVE:    YES
_____________________________________________________________________________
Selected Etiology                          Selected Snomed Codes




Antimicrobial Susceptibility      NLT Code       NLT Description
<RET>
_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 3 of 5
NAME: NCH Cholesterol                                        ACTIVE:    YES
_____________________________________________________________________________

                          Topography Selection

Include                                  Exclude



_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                 Press <PF1>H for help    Insert
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 4 of 5
NAME: NCH Cholesterol                                      ACTIVE:  YES
_____________________________________________________________________________

FIRST ENCOUNTER:<RET>                          Follow PTF:YES<RET>

BEFORE DATE OF BIRTH:<RET>                     AFTER DATE OF BIRTH:<RET>

Select SEX:<RET>




_____________________________________________________________________________
Exit     Save     Refresh

COMMAND: E<RET>                                  Press <PF1>H for help   Insert
Save changes before leaving form (Y/N)?Y<RET>
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 5 of 5
NAME: NCH Cholesterol                                      ACTIVE:   YES
_____________________________________________________________________________

Run Date:<RET>                              Protocol:LRNCH<RET>

Run Cycle:DAILY<RET>                        Lag Days:10<RET>(Site Specific)

General Description:<Tab>




_____________________________________________________________________________
Exit     Save     Refresh

COMMAND: E<RET>                                  Press <PF1>H for help   Insert
Save changes before leaving form (Y/N)?Y<RET>
```

Papanicolaou (Pap) Screening

Pap Screening is intended to detect cervical dysplasia and cancer at the earliest time possible. Cervical cancer is a disease associated with considerable morbidity and mortality. Approximately 16,000 new cases of cervical cancer are detected in the United States each year with nearly 5,000 deaths.

Pap Smear for Cervical Cancer

Currently, the U. S. Preventive Service Task Force and the VHA Health Promotion and Disease Prevention Handbook (VHA Handbook 1101.8) recommend that Pap testing ensure with the onset of sexual activity. Pap testing should be repeated every three years with a possible top age limit for testing at 65, although evidence for this age limit is equivocal.

Example: Lab Search/Extract Parameter Setup for NCH Pap smear

```
                        Lab Search/Extract Primary Menu


   ENH     Lab Search/Extract Manual Run (Enhanced)
   LK      Antimicrobial Link Update
   UP      Lab Search/Extract Parameter Setup
           Lab Search/Extract Protocol edit

Select Lab Search/Extract Primary menu Option: UP<RET> Lab Search/Extract
Parameter Setup

Select LAB SEARCH/EXTRACT NAME: ?<RET>
 Answer with LAB SEARCH/EXTRACT NAME, or REFERENCE NUMBER
 Do you want the entire 16-Entry LAB SEARCH/EXTRACT List? Y  (Yes)<RET>
Choose from:
   CANDIDA
   CLOSTRIDIUM DIFFICILE
   CREUTZFELDT-JAKOB DISEASE
   CRYPTOSPORIDIUM
   DENGUE
   E. COLI 0157:H7
   HEPATITIS C ANTIBODY POS
   LEGIONELLA
   LEISHMANIASIS
   MALARIA
   NCH CHOLESTEROL
   NCH PAP SMEAR
   PEN-RES PNEUMOCOCCUS
   STREPTOCOCCUS GROUP A
   TUBERCULOSIS
   VANC-RES ENTEROCOCCUS

Select LAB SEARCH/EXTRACT NAME: NCH PAP SMEAR<RET>
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN   Page 1 of 5
NAME: NCH PAP SMEAR                                          ACTIVE:   YES
_____________________________________________________________________________

Laboratory Test(s)              Indicator                          Value
PAP SMEAR
<RET>


ICDM-9                            ICDM-9 Description
<RET>                            <RET>


_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                     Press <PF1>H for help               Insert
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 2 of 5
NAME: NCH PAP SMEAR                                            ACTIVE:    YES
_____________________________________________________________________________
Selected Etiology                          Selected Snomed Codes


Antimicrobial Susceptibility      NLT Code       NLT Description
<RET>
_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                Press <PF1>H for help    Insert
```

```
LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 3 of 5
NAME: NCH PAP SMEAR                                      ACTIVE:    YES
_____________________________________________________________________________

                          Topography Selection

Include                                  Exclude



_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND: N<RET>                                Press <PF1>H for help    Insert
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 4 of 5
NAME: NCH PAP SMEAR                                          ACTIVE:   YES
_____________________________________________________________________________

FIRST ENCOUNTER:NO<RET>                          Follow PTF:YES<RET>

BEFORE DATE OF BIRTH:<RET>                      AFTER DATE OF BIRTH:<RET>

Select SEX:<RET>




_____________________________________________________________________________
Exit     Save     Refresh

COMMAND: E<RET>                                  Press <PF1>H for help   Insert
Save changes before leaving form (Y/N)?Y<RET>
```

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN      Page 5 of 5
NAME: NCH PAP SMEAR                                          ACTIVE:   YES
_____________________________________________________________________________

Run Date:<RET>                          Protocol:LRNCH<RET>

Run Cycle:DAILY<RET>                    Lag Days:10<RET>(Site Specific)

General Description:<Tab>




_____________________________________________________________________________
Exit     Save     Refresh

COMMAND: E<RET>                                  Press <PF1>H for help   Insert
Save changes before leaving form (Y/N)?Y<RET>
```

NCH Mail Messages

The following are examples of mail messages and reports that are produced by the V*IST*A Laboratory Search/Extract Patch LR*5.2*175.

NCH HL7 Formatted Mail Message

The V*IST*A Laboratory Search/Extract software automatically transmits the NCH HL7 formatted mail messages daily to the AAC database.

Example: NCH HL7 formatted mail messages transmission to the AAC database

```
MSH|~^\&|NCH-LAB|525|NCH-
AAC|200|19980505160420||ORU~R01|1810579|6|2.2|||NE|AL|USA
NTE||R~REPORTING DATE FROM 19980422 TO 19980422~1
PID|1|034-10-
5466~9~M10|69604~5~M10||LADNER~KENNETH||19141027|M||6|~01603||||||
||034105466||||||||2
PV1|1|O|||||||||||||||||||||||||||||||||19980422080566
NTE|1|50~NCH CHOLESTEROL
OBR|1|||81121.0000~CHEMISTRY
TEST~VANLT|||19980422080566|||||||SER~~SERUM|||R/
CH 0422 340
OBX|1|ST|82466.0000~Cholesterol Total~VANLT~183~CHOLESTEROL~VA60||165|mg/dl|"
SEE TEST DESC"-|||||||19980423140447OBX|2|ST|83013.0000~Cholesterol
HDL~VANLT~244~HDL CHOLESTEROL~VA60||30|mg/dl|30-65|||||||19980423140447
OBX|3|ST|82350.0000~Calculation~VANLT~901~LDL CHOLESTEROL~VA60||109c|mg/dl|"
```

NCH Verification Report mail message

The NCH Verification Report mail message may be sent to the LR NCH Report mail group. Members of the LR NCH Report mail may choose to review the NCH data and make corrections (e.g., social security number, valid date of births, period of service, etc.) as deemed appropriate. The new Lab Search/Extract Manual Run (Enhanced) [LREPI ENHANCED MANUAL RUN] option automatically transmits the NCH data corrections to the AAC database.

Example: NCH Verification Report mail message.

```
MailMan message for DOE,DAVID R  LAB PROGRAMMER

Printed at BROCKTON.VA.GOV  05 May 98 16:06

Subj: National Center for Health Promotion  [#13326619] 05 May 98 16:04
21 Lines

From: POSTMASTER  in 'IN' basket.   Page 1

-------------------------------------------------------------------------------

REPORTING DATE FROM  04-22-1998  TO  04-22-1998    Message Seq # 1  manual

KEN Daffy    431-07-5914    10-27-1925    M   WORLD WAR II      01603
Outpatient  Accession Date  04-22-1998@0805

*********  50  NCH CHOLESTEROL  *********

04-22-1998@0805  R/CH 0422 340  CHEMISTRY TEST  SERUM
     CHOLESTEROL  04-23-1998@1404   165  mg/dl  " SEE TEST DESC"-
     HDL CHOLESTEROL  04-23-1998@1404   30  mg/dl  30-65
     LDL CHOLESTEROL  04-23-1998@1404   109c  mg/dl  " SEE TEST DESC"-
     TRIGLYCERIDE  04-23-1998@1404   160  mg/dl  35-200
TOTAL 82466.0000  CHOLESTEROL  1
TOTAL 82466.0000  PATIENTS WITH CHOLESTEROL  1
TOTAL   TRIGLYCERIDE  1
TOTAL   PATIENTS WITH TRIGLYCERIDE  1
TOTAL 83013.0000  HDL CHOLESTEROL  1
TOTAL 83013.0000  PATIENTS WITH HDL CHOLESTEROL  1
TOTAL 82350.0000  LDL CHOLESTEROL  1
TOTAL 82350.0000  PATIENTS WITH LDL CHOLESTEROL  1
```

NCH HL7 Mail Message Status List

The HL7 Message Status List contains the status of each transmission sent by the site to the AAC database.

Example: HL7 Message Status List

```
HL7 MESSAGE STATUS LIST                JUL  8,1998  14:02  PAGE 1
---------------------------------------------------------------

NAME: APPLICATION LEVEL ERROR           CODE: ALE
 DESCRIPTION:   An error occurred while the application was processing the
message. The Error Message field of the Message Text file provides a
description of the error.

NAME: AWAITING ACKNOWLEDGEMENT          CODE: AA
 DESCRIPTION:   The message has been sent, but has not yet been acknowledged
as having been processed by the receiving application.

NAME: AWAITING PROCESSING               CODE: AP
 DESCRIPTION:   The message is awaiting processing by the receiving
application.

NAME: BEING GENERATED                   CODE: BG
 DESCRIPTION:   The message is in the process of being generated and stored in
 the Message Text file by the Messaging System.

NAME: ERROR DURING GENERATION           CODE: EDG
 DESCRIPTION:   An error occurred during the generation of the message.

NAME: ERROR DURING PROCESSING           CODE: EDP
 DESCRIPTION:   An error occurred during the processing of the message.

NAME: ERROR DURING TRANSMISSION         CODE: EDT
 DESCRIPTION:   An error occurred during the transmission of the message.

NAME: PENDING TRANSMISSION              CODE: PT
 DESCRIPTION:   The message is waiting to be transmitted.

NAME: SUCCESSFULLY COMPLETED            CODE: SC
 DESCRIPTION:  One of the following actions was accomplished for the message:

The message was successfully generated. The message was successfully sent and
no acknowledgment is required. The message was successfully sent and
acknowledged.
```

NCH HL7 Formatted (Acknowledgment) mail message

The following is an example of the NCH HL7 formatted Acknowledgment mail message received from the AAC.

Example: NCH HL7 formatted Acknowledgment mail message.

```
DATE/TIME ENTERED: MAY 18, 1998@22:13:27
  SERVER APPLICATION: NCH-AAC           TRANSMISSION TYPE: INCOMING

  MESSAGE ID: 1855276                   PARENT MESSAGE: MAY 17,
1998@02:08:05
  PRIORITY: IMMEDIATE                   RELATED EVENT PROTOCOL: LRNCH
 MESSAGE TEXT:
 MSH^~|\&^NCH-AAC^200^NCH-
LAB^525^19980518210822^^ACK~^1855276^P^2.2^^^NE^AL|
 MSA^AA^1855276
 DSP^0001^999999999::000
 DSP^0001^006309421:19980512125558:000 3
 DSP^0001^009381088:19980514103659:000
```

NCH Acknowledgment mail message

The NCH Acknowledgment mail message displays the status of the NCH HL7 formatted Acknowledgment mail message in a human readable format. The NCH Acknowledgment mail message is sent to the LR NCH-Report mail group. If the NCH Acknowledgment mail message displays an error, make corrections (e.g., social security number, valid date of births, period of service, etc.) as deemed necessary. Use the new Lab Search/Extract Manual Run (Enhanced) [LREPI ENHANCED MANUAL RUN] option to automatically transmit the NCH data corrections to the AAC database.

Example: NCH Acknowledgment mail messages in a human readable format.

```
Subj: Acknowledgment message from NCH.  [#13202750] 22 Apr 98 16:36  3 Lines
From: DOE,DAVID K  in 'IN' basket.   Page 1
---------------------------------------------------------------

Flash... This is an acknowledgment message from NCH
Message #: 1 From the status file 771.6 message is categorized as:
Message: 1746675 AWAITING PROCESSING @ Apr 22, 1998@16:32:48


Subj: Acknowledgement message from Austin. [#13224503] 24 Apr 98 11:32 3 Lines
From: POSTMASTER - POSTMASTER (Sender: DOE,DAVID R - LAB PROGRAMMER) in 'LAB
SEARCH' basket.   Page 1
---------------------------------------------------------------------------

Flash... This is an acknowledgement message from NHC
Message #: 1 From the status file 771.6 message is categorized as:
Message: 1733492 ERROR DURING TRANSMISSION @ Apr 14, 1998@09:15:44


Subj: Acknowledgement message from NHC.  [#13128237] 14 Apr 98 19:31  3 Lines
From: DOE,DAVID R - LAB PROGRAMMER  in 'LAB SEARCH' basket.   Page 1
---------------------------------------------------------------------------

Flash... This is an acknowledgement message from NHC
Message #: 1 From the status file 771.6 message is categorized as:
Message: 1711986 SUCCESSFULLY COMPLETED @ Apr 08,
```

NCH VA Alert

A NCH VA Alert mail message is sent to the LABORATORY SEARCH/EXTRACT PROTOCOL file (#69.4), Report Mail Group field (#1) after NCH transmissions has been processed by the AAC.

Example: NCH VA Alert mail message from the AAC

```
 1.I  National Center for Health Promotion Was processed at JUN 30, 1998@03:
 2.I  National Center for Health Promotion Was processed at JUN 29, 1998@03:
 3.I  National Center for Health Promotion Was processed at JUN 28, 1998@02:
 4.I  National Center for Health Promotion Was processed at JUN 27, 1998@02:
 5.I  National Center for Health Promotion Was processed at JUN 26, 1998@03:

Select from 1 to 5 or enter ?, A I, F, P, M, R, or ^ to exit: A

Processed Alert Number 1
    National Center for Health Promotion Was processed at JUN 30,
1998@03:08:20


Processed Alert Number 2
    National Center for Health Promotion Was processed at JUN 29,
1998@03:11:13


Processed Alert Number 3
    National Center for Health Promotion Was processed at JUN 28,
1998@02:33:00


Processed Alert Number 4
    National Center for Health Promotion Was processed at JUN 27,
1998@02:25:11


Processed Alert Number 5
    National Center for Health Promotion Was processed at JUN 26,
1998@03:19:22
```

APPENDIX-C
EDITING FILES, LINKING DATA, EDITING SCREENS, REQUEST FORM

Editing Files/Screens, Linking Data, Request Form

This section contains instructions for, editing files, linking data, and a Workload and Suffix Code Request Form (that can be reproduced).

Editing TOPOGRAPHY file (#61)

Specific HL7 codes **must** be added to the TOPOGRAPHY file (#61). The HL7 Code field (#08) in this file is used to add the entries. Specific HL7 codes that **must** be added to File #61 is located in the HL7 section of this guide, Table 0070 (Specimen Source Codes). The following is an example of how to add the specific HL7 codes to the TOPOGRAPHY file (#61) using VA FileMan - Enter Or Edit File Entries [ ] option.

Example: How to add specific HL7 codes to TOPOGRAPHY file (#61)

```
Select OPTION:    ENTER OR EDIT FILE ENTRIES

INPUT TO WHAT FILE: TOPOGRAPHY FIELD// <RET>
EDIT WHICH FIELD: ALL// .08  HL7 CODE
THEN EDIT FIELD: <RET>


Select TOPOGRAPHY FIELD NAME: ? <RET>
 Answer with TOPOGRAPHY FIELD NAME, or SNOMED CODE, or ABBREVIATION, or
     SYNONYM
 Do you want the entire 8575-Entry TOPOGRAPHY FIELD List? NO<RET>
     You may enter a new TOPOGRAPHY FIELD, if you wish
     ANSWER MUST BE 2-80 CHARACTERS IN LENGTH
Select TOPOGRAPHY FIELD NAME:    AMNIOTIC FLUID        8Y300
HL7 CODE: ? <RET>
     Answer must be 2-4 characters in length.


Enter the two to four character code from the left column:

ABS       ABCs
AMN       Amniotic fluid
ASP       Aspirate
BPH       Basophils
ABLD      Blood arterial
BBL       Blood bag
BON       Bone
BRTH      Breath
BRO       Bronchial
BRN       Burn
Enter RETURN to continue or '^' to exit: ^

HL7 CODE: AMN<RET>
```

How to Link Antimicrobial Entries to Workload Codes Entries

The post INIT links as many of the ANTIMICROBIAL SUSCEPTIBILITY file (#62.06) entries to the WKLD CODE file (#64) entries that are identified in your site files. However, the ANTIMICROBIAL SUSCEPTIBILITY file (#62.06) entries that were **not** linked (i.e. no match found) to the WKLD CODE file (#64) will require linking. The Antimicrobial Link Update [LREPILK] option contains the following three options that are used to identify and link the entries that were **not** linked by the post INIT.

Using the Antimicrobial Link Update [LREPILK] options

Example:

```
Select Lab Search/Extract Primary Menu<RET>

   ENH    Lab Search/Extract Manual Run (Enhanced)
   LK     Antimicrobial Link Update
   UP     Lab Search/Extract Parameter Setup
          Lab Search/Extract Protocol Edit

Select Lab Search/Extract Primary Menu Option: LK <RET>  Antimicrobial Link
Update

This option will allow you to link file '62.06 ANTIMICROBIAL
SUSCEPTIBILITY' file with file '64 WKLD CODE.

     Select one of the following:

          A         AUTO
          M         MANUAL
          S         SEMI-AUTO
```

How to link entries using the AUTO option

The AUTO option identifies and attempts to link entries that are not currently linked. This option also display linked and non linked entries.

Example:

```
Enter response: A<RET>UTO
AMIKACN                       <----Linked---->    Amikacin
AMPICLN                       <----Linked---->    Ampicillin
CLINDAM                       <----Linked---->    Clindamycin
POLYMYXIN B                   <----Not Linked---->No Match Found
RIFAMPIN                      <----Linked---->    Rifampin
```

How to add and delete entries to a file using the MANUAL option

The MANUAL option will create or edit the links. Selections are from entries in the ANTIMICROBIAL SUSCEPTIBILITY file (#62.06).

Example:

```
Enter response: M<RET>ANUAL
Select ANTIMICROBIAL SUSCEPTIBILITY NAME: PENICLIN<RET>        PENICILLIN
NATIONAL VA LAB CODE: Substance P// PEN<RET>
     1   PENFIELD AND CONE STAIN          88010.0000
     2   PENICILLIN  Penicillin        81852.0000
     3   PENTAZOCINE  Pentazocine        81854.0000
     4   PENTOBARBITAL  Pentobarbital        81856.0000
CHOOSE 1-4: 2  Penicillin<RET>
Select ANTIMICROBIAL SUSCEPTIBILITY NAME: VANCMCN<RET>          VANCOMYCIN
NATIONAL VA LAB CODE: Shell Vial Technique// VANCOMYCIN<RET>  Vancomycin
 81485.0000<RET>
Select ANTIMICROBIAL SUSCEPTIBILITY NAME: Ampicillin/sulbactam<RET>
Ampicillin/subalctam
NATIONAL VA LAB CODE: Ampicillin// @<RET>
   SURE YOU WANT TO DELETE? Y  (Yes)<RET>
Select ANTIMICROBIAL SUSCEPTIBILITY NAME:
```

How to add entries using the SEMI-AUTO option.

The SEMI-AUTO option looks for entries that are not currently linked and prompts the user to select the corresponding entry in the WKLD CODE file (#64).

Example:

```
Enter response: S<RET>EMI-AUTO

AMIKACN        AMIKACIN
NATIONAL VA LAB CODE: AMIK<RET>ACIN  Amikacin        81098.0000
Continue YES/<RET>

AMPICLN        AMPICILLIN
NATIONAL VA LAB CODE: AMP<RET>
     1   AMP CYCLIC           81029.0000
     2   AMPHETAMINE  Amphetamine        81528.0000
     3   AMPHOTERICIN B  Amphotericin B        81530.0000
     4   AMPICILLIN  Ampicillin        81532.0000
CHOOSE 1-4: 4  Ampicillin
Continue YES// <RET>

CLINDAM        CLINDAMYCIN
NATIONAL VA LAB CODE: CLINDAMYCIN  Clindamycin        81676.0000
Continue YES// <RET>

CARBCLN        CARBENICILLIN
NATIONAL VA LAB CODE:
Continue YES// NO <RET>
```

How to Delete an Entry from the Laboratory Search/Extract Parameters Input Screen

Use the tab key to move the cursor. Highlight the entry that is to be deleted, select the "@" symbol, then press enter/return. You will then receive a deletion warning asking if you are sure.

Example: Deleting an Entry

```
       LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN     Page 2 of 5

NAME: CANDIDA                                                ACTIVE:   YES
_____________________________________________________________________________
Selected Etiology

CANDIDA PARAPSILOSIS <Tab>
CANDIDA PSEUDOTROPICALIS <Tab>
CANDIDA SKIN TEST ANTIGEN     @ <Ret>
CANDIDA STELLATOIDEA


Antimicrobial Susceptibility      NLT Code       NLT Description
<Tab>



_____________________________________________________________________________
Exit     Save     Next Page     Refresh

COMMAND:                                Press <PF1>H for help
WARNING: DELETIONS ARE DONE IMMEDIATELY!
           (EXITING WITHOUT SAVING WILL NOT RESTORE DELETED RECORDS.)
Are you sure you want to delete this entire Subrecord (Y/N)? y <Ret>
```

How to add an entry using the Laboratory Search/Extract Parameters Input Screen

Use the tab key to move the cursor. Highlight a blank line where the entry is to be added.

Example:

```
          LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN     Page 2 of 5

NAME: CANDIDA                                                  ACTIVE:   YES
_____________________________________________________________________________
Selected Etiology
 CANDIDA
 CANDIDA GUILLIERMONDII
 CAN <Ret>

Antimicrobial Susceptibility      NLT Code       NLT Description
<Tab>




_____________________________________________________________________________

1      CAN  CANDIDA ALBICANS      4081
2      CANARYPOX VIRUS        3604
3      CANDICIDIN         7328
4      CANDIDA, NOS         4080
5      CANDIDA GUILLIERMONDII         4082
Choose 1-5 or '^' to quit: 1 <Ret>
```

```
       LABORATORY SEARCH/EXTRACT PARAMETERS INPUT SCREEN     Page 2 of 5

NAME: CANDIDA                                                ACTIVE:    YES
_____________________________________________________________________________
Selected Etiology
 CANDIDA GUILLIERMONDII
 CANDIDA KRUSEI
 CANDIDA ALBICANS       <- The entry will appear after answering yes
                           to the adding a new ETIOLOGY prompt.
Antimicrobial Susceptibility      NLT Code       NLT Description
<Tab>



_____________________________________________________________________________

CAN  CANDIDA ALBICANS
  Are you adding 'CANDIDA ALBICANS' as a new ETIOLOGY? Y <Ret>
```

Additional Workload and Suffixes Codes Request Form

This Request Form may be reproduced and used for requesting additional Workload and Suffixes codes. Please submit the Request Form to the address located at bottom of form.

Additional Workload and Suffixes Codes Request Form

Site Name:_____ Site Number:_____ Date:_____

Contact Person:_____ Commercial PH#_____ EXT_____

FTS PH#:_____ EXT_____

Procedure Name _____ Lab Section _____
Abbreviations: _____

Procedure Name _____ Lab Section _____
Abbreviations: _____

Procedure Name _____ Lab Section _____
Abbreviation: _____

Method: _____ Lab Section _____
Abbreviation: _____

Method: _____ Lab Section _____
Abbreviation: _____

Method: _____ Lab Section _____
Abbreviation: _____

Instrument Name: _____ Manufacturer's Name: _____

Instrument Name: _____ Manufacturer's Name: _____

Instrument Name: _____ Manufacturer's Name: _____

Instrument Name: _____ Manufacturer's Name: _____

Instrument Name: _____ Manufacturer's Name: _____

Submit Request Forms to: *Frank Stalling, P&LMS Informatics Manager*
1901 North Highway 360, Suite 351
Grand Prairie, Texas 75050