



RESOURCE AND PATIENT MANAGEMENT SYSTEM

IHS PCC Suite

(BJPC)

QMan User Manual

Volume II: Exploring the PCC Database

Version 2.0 Patch 2
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Preface

The purpose of this manual is to provide information specific to the QMan by exploring the PCC database.

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1.0 Introduction

The Volume I manual presented QMan's basic terminology, conventions, and data types. Volume I also gave examples of introductory searches and report generation. If the user is comfortable with the concepts presented in Volume I, it is time to move on and do some serious searching. In this volume, QMan will be used to explore the entire PCC database. The focus will be to examine a lot of different kinds of health information, and the emphasis will be on practice rather than theory.

The information contained in the PCC has arbitrarily been divided into eight functional classes:

- Demographic attributes
- Lab results, measurements, skin tests, and clinical exams
- Diagnoses and problem list entries
- Prescriptions and patient education topics
- Immunizations
- Dental and medical procedures
- Visits and providers
- Hospitalizations and Contract Health Services

For each of these functional classes, a series of scenarios will be presented based on "real world" IHS experience. These scenarios will demonstrate how to use QMan at the user's facility for patient care, research, epidemiology, quality assurance, planning and management. The user is encouraged to try the searches presented below using QMan at his/her own site.

The following information is a review of how to get into QMan from the PCC menu system.

CORE APPLICATIONS

```
MRG    Patient Duplicate Checker and Merge Menu
PCC    Patient Care Component
MFI    MFI Management System
MORE   OTHER APPLICATIONS (XUCORE CONT.)
DOC    Package Documentation Utilities
QMAN   Q-Man (PCC Query Utility)
RM     ROUTINE MANAGER
TEN    Top Ten Diagnoses
```

```
Select Core applications drivers Option: QMAN
```

```
***** WELCOME TO Q-MAN: THE PCC QUERY UTILITY *****

*****
**          WARNING...Q-Man produces confidential patient information.          **
**  View only in private.  Keep all printed reports in a secure area.          **
**          Ask your site manager for the current Q-Man Users Guide.          **
*****

Query utility: IHS Q-MAN Ver. 1.33
Current user: DEMO User
Chart numbers will be displayed for: (your facility)
Access to demographic data: PERMITTED
Access to clinical data: PERMITTED

Press RETURN to continue or '^' to exit:

***** Q-MAN OPTIONS *****

Select one of the following:

    1          SEARCH PCC Database (dialogue interface)
    2          FAST Facts (natural language interface)
    3          SCRIPT Utilities (programmers interface)
    4          VIEW Taxonomies and Search Templates
    9          HELP
    0          EXIT

Your choice: SEARCH//
```

Figure 1-1: Screen sample of getting into QMan from the PCC menu

2.0 Release Notes

BJPC Version 2.0 Patch 2 contains the following modifications and enhancements. The identification number listed in the parentheses (e.g., CR274) refers to the specific change request (CR) requirement.

2.1 Designated Provider Specialty Management (BDP)

The following modifications apply to the BDP application:

- Do Not Display Flag: Added functionality to allow the site to flag a provider category to not be displayed in the Demographic component of the health summary. This was accomplished by adding a new field to the BDP DESG SPEC PROV CATEGORY file called "DISPLAY ON HEALTH SUMMARY." The option called Add Local Provider Categories was renamed Add/Edit Provider Categories and this field was added to the list of data elements to update. (CR295)
- New Specialty Categories: Added three new categories: HIV Case Manager, HIV Provider, and Public Health Nurse. (CR274 and CR102)
- Populate New Specialty Categories: Added a post-init action that copies the existing HIV Case Manager and HIV Provider from the HIV Management System to this package. (CR274)

2.2 PCC Data Entry (APCD)

The following changes apply to the APCD application.

Family History Modifications

- Modified the FHX mnemonic to be a list manager-based interface that allows the user to add, edit, or delete Family History entries.(CR216 and CR320)
- Modified the entry of family history to stuff the ICD narrative if no provider narrative is entered. (CR 324)

2.2.1 Visit Re-Linker Log

Created a log to track all visits modified through the visit re-linker process. These visits have had one or more V File entries moved or re-linked to another visit. A report lists all visits that were modified by the re-linker process, and options are provided to purge the log and to display a visit by its Internal Entry Number (IEN) to make review of the visits easier. This is a prospective change, meaning that only visits affected by the re-linker after the installation date of this version (Version 2.0) of the IHS PCC Suite will be logged and reported. (CR013)

2.2.2 Visit Delete/Merge Log

Created a log to keep track of all deleted or merged visits. A report lists all deleted or merged visits, and an option to purge the log is provided. The visit delete option was modified to prompt for a reason for the visit deletion; this prompt is optional. This is a prospective change, meaning that only visits deleted or merged after the installation date of this version (Version 2.0) of the IHS PCC Suite will be logged and reported.

These options can be found on the following menu under the PCC Supervisor menu: (CR239)

- VRLR List of Visits Modified by the Visit Re-Linker
- PVRL Purge Visit Re-linker Log
- PVDM List of Visits Deleted/Merged
- PUDM Purge Visit Delete/Merge Log
- VIEN Display a Visit by Visit IEN

2.2.3 3M Present on Admission

Added Present on Admission as a prompt in the 3M coder interface. (CR254)

2.2.4 Personal History (PHX)

Added two new fields: Multiple Birth? and Multiple Birth Type to the PHX mnemonic. (CR244)

2.2.5 Problem List Note Narrative Length

Expanded the Note Narrative to 160 characters. (CR323)

2.2.6 Provider Narrative Length

All mnemonics that prompt for provider narrative will accept up to 160 characters for the provider narrative. This has been increased from 80 characters.

2.2.7 Patient Education (PED): Readiness to Learn

Added Readiness to Learn and re-sequenced the prompts according to the Education workgroup recommendations. (CR242)

2.2.8 Asthma Control (ACON)

Added a new mnemonic, ACON, to update and record a patient's asthma control. (CR240)

2.2.9 POV Stage

Disabled the stage prompt for asthma severity when an asthma diagnosis is entered; this function has been moved to the new Problem List Classification. (CR278)

2.2.10 Problem List Classification Field

Added a new field in the BGP ASTHMA DXS taxonomy, Classification, to be prompted for when an asthma diagnosis is entered. Allowable values are 1, 2, 3, or 4, which stand for 1-Intermittent, 2-Mild Persistent, 3-Moderate Persistent, and 4-Severe Persistent. The following mnemonics were updated: PL, PO, and MP. (CR207, CR276)

2.2.11 Reproductive Factors Mnemonics

FP and RF mnemonics have been restructured to prompt for reproductive history with individual fields rather than a string.

2.3 PCC Health Summary (APCH)

The following changes apply to the APCH application.

2.3.1 Patient Wellness Handout Management

Created a new menu for managing patient wellness handouts (PWHs). The user can now select from 14 components to create a customized PWH.

Menu

- PWH - Generate a Patient Wellness Handout
- DEF - Update Default PWH for a Site
- AAP - Print Asthma Action Plan
- MPWT - Create/Modify Patient Wellness Type
- TPWH - Number of PWHs Given to Patients Report

The following PWH components are available:

ACTIVITY LEVEL	HEIGHT/WEIGHT/BMI
ALLERGIES	HIV SCREENING
ASK ME THREE QUESTIONS	IMMUNIZATIONS DUE
BLOOD PRESSURE	IMMUNIZATIONS RECEIVED
CANCER SCREENING	MEDICATIONS
CHOLESTEROL	PATIENT GOALS

DIABETES CARE	QUALITY OF CARE TRANSPARENCY REPORT CARD
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Two standard PWH types are distributed with this version:

- **Adult Regular:** Contains all 14 components
- **Medication Reconciliation:** Contains Medications and Allergies

A PWH log was created. Each time a PWH is generated, the log records the patient to whom the handout was given, the date, the location, and the user who generated the handout. A report has been developed to tally PWH production.

The default wellness handout to be used at a site can be defined by updating that field in the PCC Master control file using option DEF Update Default PWH for a Site.

2.3.2 Health Summary Component (New) for Tallying Patient Wellness Handouts

Created a new component to list the PWHs given to a patient.

2.3.3 Health Summary Component (New) for Patient Wellness Handout

Created a component to display the full PWH for a patient.

2.3.4 Health Summary Component (New) for Meds - Controlled Substances

Created a component to list all prescriptions for controlled substances.

2.3.5 Health Summary Component Modification: Lab

Added the date and time of lab results to both the LAB DATA - MOST RECENT BY DATE and the LABORATORY DATA - MOST RECENT components. (CR171)

2.3.6 Health Summary Component Modification: Medication

Modified the text “on hold” to “active but not yet dispensed.”

2.3.7 Health Summary Component Modification: Family History

Modified the format to sort by the new Relationship field and display the new fields, and renamed the component to FAMILY HEALTH HISTORY. The component now displays the following fields: Relationship (to patient), Relation Description, Status (e.g., Living, Deceased, etc.), Diagnosis, Age at Onset; Multiple Birth (Y/N), and Type (e.g., Twin, etc.). If Status is “deceased,” Age at Death and Cause of Death are displayed. (CR225, CR325)

2.3.8 Health Summary Component Modification: Reproductive Factors

The previous Reproductive Factors (REPFAC) string display (GPLCSATA) has been changed to the following string, which is a concatenation of the new Reproductive History Component fields with each field separated by a semicolon. The entire string will be displayed for any patient who has *at least one value* in any of the Component fields.

Total number of Pregnancies; Full Term; Premature; Abortions, Induced; Abortions, Spontaneous; Ectopic Pregnancies; Multiple Births; Living Children

2.3.9 Reminder (New): Osteoporosis Screening

Added a reminder for osteoporosis screening in women ages 65 and older; the logic is consistent with the Clinical Reporting System (CRS) performance measure. The screening is due every two years. The reminder is turned off in the default package; to see this reminder on a health summary a site must activate the reminder and attach it to the summary types. (CR237)

2.3.10 Reminder (New): Assessment of Function

Added a reminder for assessment of function as an annual screening for patients 65 and older. Assessment of function includes assessing ability for toileting, bathing, shopping, etc. This data is captured in PCC using the EL mnemonic and it populates the V Elder file. The reminder is turned off in the default package; to see this reminder on a health summary, a site must activate the reminder and attach it to the summary types. (CR188)

2.3.11 Reminder Modification: Pap and Mammogram Reminders

Modified the Pap and Mammogram health maintenance reminders to use the next due date in Women's Health only if it is more current than the due date in Health Summary reminders. (CR257)

2.3.12 Reminder Modification: Alcohol Screening

Added a check for Current Procedural Terminology (CPT) codes using the BGP ALCOHOL SCREENING CPTS taxonomy (99408, 99409, G0396, G0397, and H0049) in both PCC and the Behavioral Health module, making the reminder more consistent with the CRS performance measure. (CR109)

2.3.13 Reminder Modification: Adult MMR 2-DOSE Version

Fixed this reminder to look for CPT codes, diagnosis codes, and procedure codes for the measles, mumps, and rubella (MMR) vaccines. (CR109)

2.3.14 Reminder Modification: Diabetes Screening

Changed category to “General.” (CR109)

2.3.15 Reminder Modification: Colorectal Scope/XRAY

Modified logic to reference BGP COLO PROCS and BGP SIG PROCS taxonomies, rather than individual procedure codes. (CR109)

2.3.16 Asthma Action Plan (New Report)

Added the asthma action plan from the asthma register system to the health summary. This menu option can be found under the new PATIENT WELLNESS HANDOUT menu. The action plan has been redesigned according to the Asthma Workgroup specifications and includes new fields added in this PCC version as well as the previous version. (CR281)

2.3.17 Problem List Display

Added classification to the problem list display if it is entered. (CR277)

2.3.18 Supplement Modifications: Asthma

Redesigned the asthma supplement according to the Asthma Workgroup specifications and included new fields added in this PCC version as well as the previous version. (CR289)

2.3.19 Reminders and Best Practice Prompts Text Modifications

Updated the description, logic, display text, and tooltips for all reminders and Best Practice prompts.

2.3.20 Best Practice Prompts Modifications

Updated the logic and text for the following Best Practice prompts:

- ASTHMA: ACTION PLAN
- ASTHMA: ADD/INCREASE INHALED STEROIDS
- ASTHMA: CONTROL CLASSIFICATION
- ASTHMA: FLU SHOT
- ASTHMA: INCREASED RISK FOR EXACERBATION
- ASTHMA: PRIMARY CARE PROVIDER
- ASTHMA: SEVERITY CLASSIFICATION

2.4 PCC Management Reports (APCL)

The following changes apply to the APCL application.

2.4.1 Activity Reports

Modified certain reports to prompt the user for two additional filters, Location of encounter and Clinic, which limit the report to a selected set of locations or clinics. The following reports, listed by discipline group, were updated: (CR205)

- TSPR Time and Patient Services by Provider
- TSSU Time and Patient Services by Service Unit
- PPPR Primary Problem by Provider
- PPLO Primary Problem by Facility
- PPSU Primary Problem by Service Unit
- INPR Number of Individuals seen by Provider
- INSU Number of Individuals seen by Service Unit
- AGE Patient Services by Age and Sex
- TEN Top Ten Primary Diagnoses
- TSCR Time and Services by Provider for Chart Reviews

2.4.2 DEMO PATIENTS Report Filter

All PCC Management reports have been updated to prompt users whether to include a site's Demo/Test patients in their reports.

To use this feature, the site's demo patient search template must be updated to include all of its Demo/Test patients. This option is locked with the security key APCLZ UPDATE DEMO TEMPLATE, which should be assigned to the user or users who manage this list of patients. Choosing the new option, DPST Update the Demo/Test Patient Search Template (under OTH Other PCC Management Reports/Options in the PCC Management Reports menu), adds the Demo/Test patients to the list.

The following prompt now displays when a management report is run:

```
Select one of the following:
  I      Include ALL Patients
  E      Exclude DEMO Patients
  O      Include ONLY DEMO Patients
Demo Patient Inclusion/Exclusion: E//
```

Figure 2-1: The "Demo Patient Inclusion/Exclusion" prompt

Type **E** to exclude any patient who is on the Demo/Test patient list from the report.
Type **I** to include all patients, including the Demo/Test patients, or type **O** to include only the Demo/Test patients. (CR287)

2.4.3 PGEN/VGEN Menus

Updated to allow the user to select one of three menu display options for the Selection, Print, and Sort items: (1) in a predefined order (the original display option); (2) in alphabetical order by item title; or (3) in order by category group. (CR251)

2.4.4 PGEN/VGEN

Added the new Select/Sort/Print options listed below:

- Date of Last Osteoporosis Screen: Added as a PGEN Select, Sort, and Print item because it is a new health maintenance reminder. (CR226)
- Readiness to Learn: Removed as a Health Factor PGEN and VGEN Select, Sort, and Print item, because it is no longer a health factor. (CR242)
- Upcoming Appointments: Added as a PGEN Select and Print item and a VGEN Print and Sort item. When used as a Select item, the user can select the appointment date range and appointment clinics. The report lists only patients who have an appointment in one of those clinics during that date range, and the Print item displays only upcoming or pending appointments. Walk-in and chart requests are excluded from the pending appointment display in the Print item. (CR126)
- Problem List Date of Onset: Added as a PGEN and VGEN Select and Print item. If used as a Select item, the user must enter the beginning and ending date and may specify a particular set of diagnoses. When used as a Print item, the system prints all entries from the problem list with the date of onset, unless this item was also used as a Select item. In this case only the problem list entries matching the selected diagnoses will be printed. (CR072)
- Family History-related: Family History Dx, Family Hx and Relation, Family History Relation, Family Hx Narrative and Family Hx Description (diagnosis, narrative, age at onset, relation) were all added as PGEN and VGEN Select and Print items. (CR Child315)
- Present on Admission (POA): Added as a VGEN Select and Print item. (CR062)
- CPT Modifier: Added as a VGEN Select and Print item.

2.5 QMAN (AMQQ)

The following changes apply to the AMQQ application:

- Added DV as a synonym for IPV.

- Changed attribute text from PRIMARY PROVIDER to PRIMARY CARE PROVIDER
- Added upcoming appointments as a Print item when printing a list of patients in QMan.
- Corrected the diagnosis display for the IHS Prediabetes Register.
- Added Family History as a search option.
- Updated Health Factor selection to allow the user to enter a category to retrieve a list of its health factors.
- Added the ability to create a delimited output of the QMan results by having the output print to a screen, and then taking a screen capture of the delimited output.
- Added the ability to go directly to VGEN or PGEN's print output from QMan by creating a search template in QMan. When template creation is complete, the user is transferred to PGEN or VGEN.

2.6 General Database (AUPN)

- V Asthma: Added field .14 – Asthma Control. (CR206)
- V Lab: Added field 1502 – FINDINGS to the V LAB file. This field will be populated by the Procedure Workflow Tracking System (BTPW) when the software is deployed. (CR239)
- V Patient Education: Added Readiness to Learn as field 1102. (CR242)
- V Radiology: Added field 1502 – FINDINGS to the V RADIOLOGY file. This field will be populated by the Procedure Workflow Tracking System (BTPW) when the software is deployed. (CR239)
- Personal History: Added field .06 – MULTIPLE BIRTH? to the Personal History File. Patient Multiple Birth?: Yes/No/Unknown. (CR244)
- Personal History: Added field .07 – MULTIPLE BIRTH TYPE to the Personal History file. Multiple Birth Type values: Twin, Unspecified (TU); Identical Twin (IT); Fraternal Twin (FT); Triplet (TR); Other Multiple (OTH). (CR244)
- Problem: Expanded Note narrative to 160 characters. (CR323)
- Provider Narrative: Expanded narrative to 160 characters. (CR258)
- FAMILY HISTORY FAMILY MEMBERS: Created new file with the following fields: (CR 199/CR 322)

.01	RELATIONSHIP
.02	PATIENT
.03	RELATION DESCRIPTION

.04	STATUS
.05	AGE AT DEATH
.06	CAUSE OF DEATH
.07	MULTIPLE BIRTH
.08	MULTIPLE BIRTH TYPE

- **FAMILY HISTORY:** Modified the existing file (CR 199/CR 322):
 - Moved the Status field to the new FAMILY HISTORY FAMILY MEMBER file.
 - Added an asterisk (*) in front of the STATUS field to alert users that it will be going away.
 - Added field .09, which is a pointer to the Family History Family Member file.
 - Inactivated field .07 – Relationship.
 - Added new MULTIPLE BIRTH and MULTIPLE BIRTH TYPE fields. (CR199)
 - Added CAUSE OF DEATH field, which is displayed if the STATUS field is DECEASED. (CR199)
 - Added new AGE AT ONSET and AGE AT DEATH fields with the following choices:

In Infancy	At age 40-49
Before age 20	At age 50-59
At age 20-29	60 and older
At age 30-39	Age Unknown

- Inactivated the numeric Diagnosis Onset Age field.
- Changed field .01 to allow only ICD Diagnosis codes V16*; V17*; V18*; and V19*. (CR245)
- **REPRODUCTIVE FACTORS:** Implemented requested changes to Reproductive Factors fields.
 - Added and/or activated the following new fields: Full Term (previous request); Premature Births (previous request for Preterm Births); Ectopic Pregnancies; Multiple Births.
 - Inactivated Parity and Abortions/Miscarriages/Ectopic Pregnancies fields.
- **V Telehealth:** Created new file with the following fields:

.01	Primary Modality
.02	Patient Name

.03	Visit
.04	Originating Date/Time
.05	Service Date/Time
.06	Secondary Modality
.07	Case ID
.08	Originating Provider
.09	Requesting Provider
.11	Service Delivery
.12	Originating Visit
.13	Status Field
.14	Duration
1101	Comments
1102	Link To Case

2.6.1 Table Changes

- PCC RELATIONSHIPS: Created new table for Family History.
- TELEHEALTH: Created new tables for Modality and Service Category.
- EXAM: Inactivated the following exam codes: (CR241)
 - 2.7 23 - Audiometric Screening
 - 2.8 08 - Heart Exam
 - 2.9 05 - Neck Exam
- HEALTH FACTORS: Modified the Health Factors file to display the category when a lookup is performed on the file, and to allow the user to type the category name to retrieve a list of health factors to choose from. (CR255, CR256, CR217)

Changed the name of the following Health Factors: (CR234)

Old Name	New Name
ASTHMA TRIGGER-AIR POLLUTANTS	AIR POLLUTANTS
ASTHMA TRIGGER-ANIMAL	ANIMAL
ASTHMA TRIGGER-COCKROACHES	COCKROACHES
ASTHMA TRIGGER-DUST MITES	DUST MITES
ASTHMA TRIGGER-EXERCISE	EXERCISE
ASTHMA TRIGGER-MOLD	MOLD

Old Name	New Name
ASTHMA TRIGGER-POLLEN	POLLEN
ASTHMA TRIGGER-TOBACCO SMOKE	TOBACCO SMOKE
BARRIERS TO LEARN-BLIND	BLIND
BARRIERS TO LEARN-DEAF	DEAF
BARRIERS TO LEARN-DOESN'T READ ENGLISH	DOESN'T READ ENGLISH
BARRIERS-FINE MOTOR SKILLS DEFICIT	FINE MOTOR SKILLS DEFICIT
BARRIERS TO LEARN-HARD OF HEARING	HARD OF HEARING
BARRIERS TO LEARNING-INTERPRETER NEEDED	INTERPRETER NEEDED
BARRIERS TO LEARNING-NO BARRIERS	NO BARRIERS
BARRIERS TO LEARNING-VALUES/BELIEFS	VALUES/BELIEFS
BARRIERS TO LEARN-VISUALLY IMPAIRED	VISUALLY IMPAIRED
SELF MONITORING BLOOD GLUCOSE-NO	NO
SELF MONITORING BLOOD GLUCOSE-REFUSED	REFUSED
SELF MONITORING BLOOD GLUCOSE-YES	YES
LEARNING PREFERENCE-DO/PRACTICE	DO/PRACTICE
LEARNING PREFERENCE-READ	READ
LEARNING PREFERENCE-SMALL GROUP	SMALL GROUP
LEARNING PREFERENCE-TALK	TALK
LEARNING PREFERENCE-VIDEO	MEDIA
RUBELLA IMMUNE	IMMUNE
RUBELLA NON-IMMUNE	NON-IMMUNE
RUBELLA STATUS INDETERMINATE	STATUS INDETERMINATE
TB-TX COMPLETE	TX COMPLETE
TB-TX INCOMPLETE	TX INCOMPLETE
TB-TX UNKNOWN	TX UNKNOWN
TB-TX UNTREATED	TX UNTREATED

Added the following Health Factors: (CR234)

Factor	Category
CHANGE IN WEATHER	ASTHMA TRIGGERS
MENSES	ASTHMA TRIGGERS
OTHER TRIGGER	ASTHMA TRIGGERS
STRONG EMOTIONAL EXPRESSION	ASTHMA TRIGGERS
VIRAL INFECTION	ASTHMA TRIGGERS
LESS THAN 6 TH GRADE EDUCATION	ASTHMA TRIGGERS
RETIRED	OCCUPATION
TX IN PROGRESS	TB STATUS

Inactivated the following Health Factors: (CR234)

Factor
BARRIERS TO LEARN-COGNITIVE IMPAIRMENT
DOES NOT SPEAK ENGLISH
EMOTIONAL IMPAIRMENT
BARRIERS-SIGN INTERPRETER NEEDED
READINESS TO LEARN-NOT READY
READINESS TO LEARN-PAIN
READINESS TO LEARN-RECEPTIVE
READINESS TO LEARN-SEVERITY OF ILLNESS
READINESS TO LEARN-UNRECEPTIVE
7-FOOD AND EXERCISE (MAINTAIN)

2.10 Other Changes

2.10.1 Asthma Severity Conversion

Used a conversion to move asthma severity from the V POV file to the Problem List.
(CR207)

2.10.2 Taxonomies

The following national taxonomies were added for use with the Asthma Supplement, Action Plan, and Best Practice Prompts:

- BAT ASTHMA SHRT ACT RELV NDC (reliever)
- BAT ASTHMA SHRT ACT RELV MEDS (reliever)
- BAT ASTHMA SHRT ACT INHLR NDC (reliever)
- BAT ASTHMA SHRT ACT INHLR MEDS (reliever)
- BAT ASTHMA LEUKOTRIENE NDC (controller)
- BAT ASTHMA LEUKOTRIENE MEDS (controller)
- BAT ASTHMA CONTROLLER NDC (controller)
- BAT ASTHMA INHLD STEROIDS NDC (controller)

2.10.3 New APIs for the VA Reminders

Added APIs for the VA Reminders package to retrieve the last of each item. (CR172)

Each call is in the following format:

S X=\$\$linelabel^APCLAPIR(dfn, beginning date, ending date)

where

dfn = Patient DFN

beginning date = internal fileman date to begin searching for the item; if blank, DOB will be used.

ending date = internal fileman date to end searching for the item; if blank, DT (today's date) will be used.

The output of each call is in the following format:

1 or 0^date^item^value^visit ien^file^file ien

where

piece 1 = 1 if item found, 0 if no item found in the date range

piece 2 = date of last item found

piece 3 = text of item found

piece 4 = result

piece 5 = ien of visit on which item was found

piece 6 = file in which item was found (usually a V File)

piece 7 = ien of V File in which entry was found

The following APIs have been added:

Alcohol Screening	\$\$REMALSC^APCLAPIR
Depression Screening	\$\$REMDEPS^APCLAPIR
Assessment of Function	\$\$REMAOF^APCLAPIR
Blood Pressure	\$\$REMBP^APCLAPIR
Breast Exam	\$\$REMBRST^APCLAPIR
Cholesterol	\$\$REMCHOL^APCLAPIR
Dental Exam	\$\$REMDENT^APCLAPIR
Diabetes Screening	\$\$REMGLUC^APCLAPIR
Intimate Partner Violence Screening	\$\$REMIPVS^APCLAPIR
EPSDT Screening	\$\$REMEPSDT^APCLAPIR
Head Circumference	\$\$REMHC^APCLAPIR
Hearing Exam	\$\$REMHEAR^APCLAPIR
Height	\$\$REMHT^APCLAPIR
Influenza Immunization	\$\$REMFLU^APCLAPIR
Mammogram	\$\$REMMAMM^APCLAPIR
Osteoporosis Screening	\$\$REMOSTEO^APCLAPIR
Pap Smear	\$\$REMPAP^APCLAPIR
Pelvic Exam	\$\$REMPEVL^APCLAPIR
Physical Exam	\$\$REMPHYS^APCLAPIR
Pneumovax	\$\$REMPNEU^APCLAPIR
Rectal Exam	\$\$REMRECT^APCLAPIR
Rubella	\$\$REMRUBEL^APCLAPIR
TD	\$\$REMTD^APCLAPIR
Tobacco Screening	\$\$REMTOBS^APCLAPIR
Tonometry	\$\$REMTON^APCLAPIR
Visual Acuity Exam	\$\$REMVAE^APCLAPIR
Weight	\$\$REMWT^APCLAPIR

2.10.4 Family History Data Conversion

Added a post-init routine to perform the following tasks: (CR199 and CR321)

- Convert the relationship and status data from the Family History file and move it to the new Family History Family Member file.
- Stuff a family member of UNKNOWN into the Family member field for all entries that currently have no Relation/Family member entered.

- Convert the existing numeric diagnosis onset age (if any) to the corresponding new Age of Onset codes.

2.10.5 Reproductive History String Conversion

Converted the existing Reproductive History field to new fields. If the existing Reproductive History field is populated with a number, including the “0” option, any existing values in the string are copied to new fields as follows:

- G = Gravida
- P = Full Term
- LC = Living Children
- SA = Spontaneous Abortions
- TA = Therapeutic Abortions

3.0 Demographic Attributes

In the SEARCH CRITERIA screen, the default response for the “What is the subject of your search” prompt is LIVING PATIENT(S). Press Enter to accept the default and to display the subject of the search (PATIENTS) and the additional criteria ALIVE TODAY.

To display attribute categories type three question marks (???) at the prompt “Attribute of LIVING PATIENTS,” as shown below:

```

***** SEARCH CRITERIA *****

What is the subject of your search?  LIVING PATIENT(S) //

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]

Attribute of LIVING PATIENTS:???
```

Figure 3-1: Sample of search criteria screen

The screen displays all of the attribute categories:

```

***** ATTRIBUTE CATEGORIES *****

Select one of the following:

1      DEMOGRAPHICS
2      DENTAL CODES
3      DIAGNOSES
4      EXAMS
5      INPATIENT
6      IMMUNIZATIONS
7      LAB
8      MEASUREMENTS
9      MEDICATIONS
10     PATIENT ED
11     PROCEDURES
12     PROVIDERS
13     SKIN TESTS
14     TREATMENTS
15     VISIT INFO

Your choice: 1  DEMOGRAPHICS

Possible choices:
ADA CODE          MAILING ADDRESS-STATE
AGE              MAILING ADDRESS-STREET
ALIVE            MAILING ADDRESS-ZIP
AREA             MEDICAID PLAN NAME
BIRTH CERTIFICATE NUMBER
```


BMI	MEDICAID POLICY HOLDER
CAUSE OF DEATH	MEDICAID RELATIONSHIP TO INSUR
CHART NUMBERS (SECONDARY)	MEDICAID STATE
CLASSIFICATION/BENEFICIARY	MEDICARE ELIG DATE
CONTRACT SERVICES	MEDICARE NUMBER
CURRENT COMMUNITY	MEDICARE SUFFIX
DATE OF LAST RECORD UPDATE	MEMBERSHIP VERIFIED
DATE RECORD ESTABLISHED	MOTHER
DEAD	NAME
	NUMBER IN HOUSEHOLD
DEATH AGE	OFFICE PHONE NUMBER
DEATH CERTIFICATE NUMBER	PATIENT ED TOPIC
DENTAL OP. SITE	PROBLEM LIST DIAGNOSIS
DISTRICT	PROCEDURE (MEDICAL)
DOB	PROVIDER
DOD	RX
ELIGIBILITY	SERVICE UNIT
EMPLOYMENT STATUS	SEX
HOME PHONE NUMBER	SSN
	TOTAL HOUSEHOLD INCOME
INDIAN BLOOD QUANTUM	TREATMENT
INITIALS	TRIBAL BLOOD QUANTU
MAILING ADDRESS	TRIBAL ENROLLMENT NUMBER
MAILING ADDRESS-CITY	TRIBE OF MEMBERSHIP

Figure 3-2: Sample of attribute categories

At the “Your choice prompt” type the number of the attribute to display. In **Error! Reference source not found.**, the user chose 1 (Demographics) to display a list of possible choices.

3.1 Age

You work at a small service unit. The community health nurse wants to start a developmental screening program for all children under the age of three. She needs to know who the children are and where they live. The two demographic attributes for this search are age and current community. The search displays as shown in the following example.

```

***** SEARCH CRITERIA *****

What is the subject of your search? LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY [SER = .01]

Attribute of LIVING PATIENTS: age
Condition: less than
Age: 3
Computing Search Efficiency Rating

```

```

Subject of search: PATIENTS
  ALIVE TODAY   [SER = .01]
  AGE LESS THAN 3   [SER = 7.33]

Attribute of LIVING PATIENTS: CURRENT COMMUNITY

Enter COMMUNITY: SAN XAVIER          PIMA          ARIZONA          065          0410065
Enter ANOTHER COMMUNITY: SANTA ROSA
  1  SANTA ROSA          PIMA          ARIZONA          034          0410034
  2  SANTA ROSA          SONOMA        CALIFORNIA       858          0649858
  3  SANTA ROSA RANCH. AREA      KINGS         CALIFORNIA       376          06
16376
  4  SANTA ROSA RCH          PIMA          ARIZONA          060          0410060
CHOOSE 1-4: 1
Enter ANOTHER COMMUNITY:

The following have been selected =>

  SAN XAVIER
  SANTA ROSA

Want to save this COMMUNITY group for future use? NO//
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
  ALIVE TODAY   [SER = .01]
  AGE LESS THAN 3   [SER = 7.33]
  CURRENT COMMUNITY (SAN XAVIER/SANTA ROSA)   [SER = 15.67]

Attribute of LIVING PATIENTS:

          ***** Q-MAN OUTPUT OPTIONS *****

Select one of the following:

  1          DISPLAY results on the screen
  2          PRINT results on paper
  3          COUNT 'hits'
  4          KEEP 'hits' in a FM search template
  5          STORE search logic for future use
  6          R-MAN special report generator
  9          HELP
  0          EXIT

Your choice: DISPLAY//

PATIENTS          CHART COMMUNITY          AGE
(Alive)          NUMBER
-----
GREEN,JAMES          101902 SANTA ROSA          2
MILLER,JUSTIN          101944 SANTA ROSA          2
GREEN,KRISTIN          102015 SANTA ROSA          1
JEFFERSON,MARYBE          102016 SANTA ROSA          1
    
```

Total: 4

Figure 3-3: Sample of search based on age

3.2 Current Community

You work at a service unit that is located near a large urban area. Some of your patients live on the reservation and the rest live in town. You want a list of all patients who do not live in the city.

```

What is the subject of your search?  LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]

Attribute of LIVING PATIENTS:  CURRENT COMMUNITY

Enter COMMUNITY:  TUCSON
Enter ANOTHER COMMUNITY:  NULL
I take it you want me to find only those LIVING PATIENTS whose
COMMUNITY is NOT in this taxonomy? YES//
Enter ANOTHER COMMUNITY:
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]
CURRENT COMMUNITY(INVERSE SET)  [SER = .09]

PATIENTS          CHART  COMMUNITY
(Alive)          NUMBER
-----
ADAMS,AMANDA      101500 SIL NAKYA
ADAMS,ANDY        101926 SELLS
ADAMS,BARNEY      101988 SAN SIMON
ADAMS,BRIAN       101981 PAPAGO FARMS
ADAMS,BRUCE       101765 QUIJOTOA
ADAMS,CALVIN      101945 SAN SIMON
<>

```

Figure 3-4: Sample of search based on current community

3.3 Tribe

There is one predominant tribe at your service unit. You want to conduct a mail-in survey of those patients who are not members of the predominant tribe. Note the following example.

```

What is the subject of your search?  LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]

Attribute of LIVING PATIENTS:  TRIBE OF MEMBERSHIP

Enter TRIBE:  TOHONO O'ODHAM NATION OF ARIZO  NA          096
Enter ANOTHER TRIBE:  NULL
I take it you want me to find only those LIVING PATIENTS whose
TRIBE is NOT in this taxonomy?  YES//

Enter ANOTHER TRIBE:
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]
TRIBE OF MEMBERSHIP(INVERSE SET)  [SER = 9]

Attribute of LIVING PATIENTS:
Enter ANOTHER TRIBE:
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]
TRIBE OF MEMBERSHIP(INVERSE SET)  [SER = 9]

Attribute of LIVING PATIENTS:  ADDRESS (MAILING)
Condition:  ALL//
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]
TRIBE OF MEMBERSHIP(INVERSE SET)  [SER = 9]
MAILING ADDRESS EXISTS  [SER = .04]

PATIENTS          CHART  TRIBE          ADDRESS
(Alive)          NUMBER
-----
ADAMS,BRIAN      101981 PASCUA YAQUI TRIBE  1266 TURQUOISE PL.  SASABE,AZ 88776
ADAMS,FRANCIS    101913 NON-INDIAN BENEFIC  P.O. BOX 998  CATALINA,AZ 88776
ANTONE,JUDY ANNE 21099  GILA RIVER PIMA MA  P.O. BOX 234  SACATON,AZ 85775
APKAW,GARRISON K 21183  GILA RIVER PIMA MA  P.O. BOX 1554  SELLS,AZ 85634
APKAW,WAYLON DER 20996  GILA RIVER PIMA MA  P.O. BOX 1213  SACATON,AZ 85247
BEGAY,GERALDINE 21004  CHIPPEWA (OBJIBWAY  908 PUEBLO DR  TUCSON,AZ 85222
BROEN,EVE        101841 CREEK NATION OF OK  467 CHERRY LANE  YUMA,AZ 88776
BROEN,FRANCES   102045 GROS VENTRE-3 AFF  98 FILLMORE LANE  MESA,AZ 88776
<>
    
```

Figure 3-5: Sample of search based on Tribe

3.4 Blood Quantum

The Area Office is concerned with patient eligibility. They ask you to find out how many patients at the service unit have a blood quantum of less than 1/8.

```

What is the subject of your search?  LIVING PATIENTS//

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]

Attribute of LIVING PATIENTS:  BLOOD QUANTUM
1  BLOOD QUANTUM, INDIAN
2  BLOOD QUANTUM, TRIBAL

CHOOSE 1-2: 1
Condition:  LESS THAN
Blood Quantum:  1/8  (always state as a fraction)
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]
INDIAN BLOOD QUANTUM LESS THAN 1/8  [SER = .98]

Attribute of LIVING PATIENTS:
What is the subject of your search?  LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]

PATIENTS          CHART  INDIAN
(Alive)          NUMBER QUANTUM
-----
WINKERBEAN,GENE  102184 NONE
Total: 1

```

Figure 3-6: Sample of searched based on blood quantum

3.5 Others

3.5.1 Eligibility

You are the service unit director at an isolated site. The local health board complains that too many non-beneficiaries are receiving care at your clinic. You want to find out how many patients at the service unit are not eligible for care.

```

What is the subject of your search?  LIVING PATIENTS //

  Subject of search: PATIENTS
    ALIVE TODAY   [SER = .01]

Attribute of LIVING PATIENTS:  ELIGIBILITY

Enter ELIGIBILITY:  ???

You may select one or more of the following =>

  INELIGIBLE
  DIRECT ONLY
  CHS & DIRECT
  PENDING VERIFICATION
Enter ELIGIBILITY:  INELIGIBLE

  Your choice: DISPLAY// 3  COUNT 'hits'

COUNTING....
Total: 6
Search time: 9 SECONDS

```

Figure 3-7: Sample of search based on eligibility

You then check how many patients are eligible for care. Note the following example.

```

What is the subject of your search?  LIVING PATIENTS //

  Subject of search: PATIENTS
    ALIVE TODAY   [SER = .01]

Attribute of LIVING PATIENTS:  ELIGIBILITY

Enter ELIGIBILITY:  DIRECT ONLY
Enter ANOTHER ELIGIBILITY:  CHS & DIRECT
Enter ANOTHER ELIGIBILITY:
  The following have been selected =>

  DIRECT & CHS IF AUTHORIZED
  DIRECT

Want to save this ELIGIBILITY group for future use? NO//
Computing Search Efficiency Rating.....

  Subject of search: PATIENTS
    ALIVE TODAY   [SER = .01]
    ELIGIBILITY (DIRECT & CHS/DIRECT)   [SER = .72]

Attribute of LIVING PATIENTS:

```

```

Your choice: DISPLAY// 3  COUNT 'hits'

COUNTING....
Total: 254
Search time: 15 SECONDS

```

Figure 3-8: Sample of search based on eligibility

3.5.2 Date of Death

The morbidity and mortality committee asks you to review the charts of patients who died before their 30th birthday during a certain time period. Remember to select “patients,” not “living patients,” as the subject of your search.

```

What is the subject of your search?  LIVING PATIENTS // PATIENTS
Attribute of PATIENT: DEATH AGE
Condition: LESS THAN
Age: 30
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
DEATH AGE LESS THAN 30      [SER = 99]

Attribute of PATIENT: DOD
Condition: AFTER
Exact date: 1980 ( 1980)
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
DEATH AGE LESS THAN 30      [SER = 99]
DOD AFTER 1980              [SER = 99]

Attribute of PATIENT:

Your choice: DISPLAY// 1

PATIENTS          CHART  AGE          DEATH DATE
                   NUMBER AT DEATH
-----
WASHINGTON, HOWAR 60116  12          JUN 1, 1987
WATERMAN, CLIFFOR 60142  23          SEP 26, 1987
Total: 2
Press RETURN to continue or '^' to exit:

```

Figure 3-9: Sample of search based on date of death

3.5.3 Phone Numbers

The clinical director wants to start a phone-in appointment system. Some staff members are concerned because they feel that most patients do not have telephones. You are asked to sample the database to determine what proportions of the patients have telephones.

```

What is the subject of your search? LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY [SER = .01]

Attribute of LIVING PATIENTS: PHONE NUMBER
1 PHONE NUMBER (HOME)
2 PHONE NUMBER (OFFICE)
CHOOSE 1-2: 1
Condition: ALL//
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY [SER = .01]
HOME PHONE NUMBER EXISTS [SER = .12]

```

Figure 3-10: Sample of search based on phone number

Choose the output option that will count the number of “hits.”

```

COUNTING....
Total: 1256
Search time: 27 SECONDS

```

Figure 3-11: Sample of search based on phone number

Now determine the number of patients who do not have telephones. Note the following example screen.

```

What is the subject of your search? LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY [SER = .01]

Attribute of LIVING PATIENTS: PHONE NUMBER
1 PHONE NUMBER (HOME)
2 PHONE NUMBER (OFFICE)
CHOOSE 1-2: 1
Condition: ALL// NULL
Computing Search Efficiency Rating.....

Subject of search: PATIENTS

```



```

ALIVE TODAY   [SER = .01]
HOME PHONE NUMBER: NONE EXIST   [SER = .88]

Attribute of LIVING PATIENTS:
Your choice: DISPLAY// 3 COUNT 'hits'

COUNTING....
Total: 114
Search time: 43 SECONDS

```

Figure 3-12: Sample of search based on phone number

3.5.4 Phone Number: Natural Language Interface

One of your patients has an abnormal lab test result, and you need to reach her immediately by phone. Use QMan option 2 FAST Facts (natural language interface) to obtain her phone number.

```

***** Q-MAN OPTIONS *****

Select one of the following:

1          SEARCH PCC Database (dialogue interface)
2          FAST Facts (natural language interface)
3          SCRIPT Utilities (programmers interface)
4          VIEW Taxonomies and Search Templates
9          HELP
0          EXIT

Your choice: SEARCH// 2

Tell me what you want: SHOW ME RAE WATERMAN'S PHONE NUMBER

...HMMM, I'M WORKING AS FAST AS I CAN.

1  WATERMAN,RAE          F 11-10-30 *000102642*   SE 100003
2  WATERMAN,RAE          F 11-03-56 112421124   SE 102772
CHOOSE 1-2: 2

1  PHONE NUMBER (HOME)
2  PHONE NUMBER (OFFICE)
CHOOSE 1-2: 2

PATIENTS          CHART  PHONE (H)
                  NUMBER
-----
WATERMAN,RAE*    102772 602-555-1124

```

```
Total: 1
```

Figure 3-13: Sample of search based on phone number

3.5.5 Chart Facility

The attribute “Chart Facility” identifies patients who have a chart at one of the indicated facilities. Use this attribute to receive information about patients who have a chart at a particular facility (remember, patients might have a chart at other facilities in an area). The Chart Facility attribute screens for patients who have a health record number at the indicated facility. This is a demographic type attribute and does not indicate where the patient visit(s) occurred that can be retrieved via a QMan search.

How would you select patients that have a chart at more than one facility? Create two separate queries within a search, each one with chart facility as the attribute, with each chart facility “anded” together.

```
***** SEARCH CRITERIA *****
What is the subject of your search? LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY [SER = .02]

Attribute of LIVING PATIENTS: CHART
1 CHART FACILITY
2 CHART NUMBERS (SECONDARY)
3 CHART SERVICE UNIT
CHOOSE 1-3: 1

Enter FACILITY LOCATION: SELLS HOSPITAL/CLINIC TUCSON SELLS
Enter ANOTHER FACILITY LOCATION:

The following have been selected =>

SELLS HOSPITAL/CLINIC

Subject of search: PATIENTS
ALIVE TODAY [SER = .02]
CHART LOCATION (SELLS HOSPIT) [SER = -.1]

Attribute of LIVING PATIENTS:
```

Figure 3-14: Sample of search based on the chart facility attribute

3.5.6 Chart Service Unit

Notice in the example above that one of the choices for an attribute when ‘CHART’ was entered was ‘CHART SERVICE UNIT’. When this attribute is selected, QMAN will search for all patients who have a chart number at all facilities located within the selected service unit.

4.0 Measurements, Tests, and Screenings

Users are able to search on all documented measurements:

- 24 HOUR FLUID INPUT
- 24 HOUR FLUID OUTPUT
- ABDOMIAL GIRTH
- ABDOMINAL GIRTH (cms.)
- ANKLE BLOOD PRESSURE
- ASQ - FINE MOTOR
- ASQ - GROSS MOTOR
- ASQ - LANGUAGE
- ASQ - SOCIAL
- ASQ PROBLEM SOLVING
- ASQ QUESTIONNAIRE (MOS)
- ASTHMA SYMPTOM FREE DAYS
- ASTHMA WORK/SCHOOL DAYS MISSED
- AUDIOMETRY
- AUDIT
- AUDIT-C
- BEST PEAK FLOW
- BP
- CEF
- CERVIX DILATATION
- CRAFFT
- DIASTOLIC BP
- EDEMA
- EFFACEMENT
- FEF 25-75
- FETAL HEART TONES
- FEV1/FVC
- FHT
- FLUID BALANCE POS/NEG
- FUNDAL HEIGHT
- FUNDAL HEIGHT (cms.)
- HEAD CIRC.(cms)
- HEAD CIRC.(ins)
- HEARING
- HEIGHT(cms)
- HEIGHT(ins)
- HT-%ILE
- O2
- PAIN

- PF
- PHQ2
- PHQ9
- PRESENTATION
- PULSE
- RESPIRATIONS
- STATION (PREGNANCY)
- SYSTOLIC BP
- TEMPERATURE (F.)
- TONOMETRY
- VISION UNCORRECTED
- VISION(corr.)
- WC
- WEIGHT(kgs)
- WEIGHT(lbs)
- WT-%ILE
- ZRESPIRATIONS

The skin test choices are shown below:

- COCCI READING
- PPD READING

The lab result choices are shown below:

- GLUCOSE
- RHEUMATOIC FACTOR
- SERUM HCG
- URING GLUCOSE,DIPSTICK
- URINE HCG

<p>Please note: You can only use a particular lab test as an attribute when passing data from the VA Lab System to the PCC.</p>
--

The clinical examination choices are as follows:

- ABDOMEN EXAM
- AUDIOMETRIC SCREENING EXAM
- AUDIOMETRIC THRESHOLD EXAM
- BREAST EXAM
- CHEST EXAM
- DEVELOPMENT EXAM (SEX)
- DIABETIC EXAM
- EAR EXAM
- EYE EXAM

- EYE MUSCLE BALANCE EXAM
- GENERAL DEVELOPMENT EXAM
- HEARING EXAM
- HEART EXAM
- HERNIA EXAM
- MOUTH EXAM
- NECK EXAM
- NEUROLOGICAL EXAM
- ORTHO EXAM
- OTO EXAM
- PELVIC EXAM
- RECTAL EXAM
- SCOLIOSIS SCREENING EXAM
- TONOMETRY EXAM
- TYMPANOGRAM EXAM
- VISION EXAM

4.1 Blood Pressure

A pediatrician on your staff is interested in hypertension in the teenage population. You want to find all teenagers who come to your clinic who have had abnormal blood pressure readings during a certain time period. See the following example.

```

What is the subject of your search?  LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]

Attribute of LIVING PATIENTS:  AGE
Condition:  BETWEEN,AGES (inclusive)
Start with (and include) AGE:  13
End with (and include) AGE:  20
Computing Search Efficiency Rating.....
.....

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]
AGE BETWEEN,AGES (inclusive) 13 and 20      [SER = 7.33]

Attribute of LIVING PATIENTS:
Attribute of LIVING PATIENTS:  BP
1  BP DIASTOLIC
2  BP SYSTOLIC
3  BP(systolic and diastolic)
CHOOSE 1-3:  3
If you want to limit the search to certain values, enter the word 'VALUE'.
SUBQUERY: Analysis of multiple BPS
First condition/attribute of "BP":  OVER

```

```

SYSTOLIC BP
Value limiting condition for BP: GREATER THAN//
Value: 139

DIASTOLIC BP
Value limiting condition for BP: GREATER THAN//
Value: 89

When I analyze the result =>

    1) Both systolic and diastolic BPs must meet your criteria
    2) Either systolic or diastolic BP must meet your criteria

Your choice (1-2): 1// 2

Next condition/attribute of "BP": BETWEEN
    1 BETWEEN DATES (inclusive)
    2 BETWEEN,BP RANGE (inclusive)
CHOOSE 1-2: 1
Exact starting date: 5/7/90 (MAY 07, 1990)
Exact ending date: 5/7/91 (MAY 07, 1991)

    Subject of subquery: BP
    S>139 or D>89
    BETWEEN MAY 7,1990 and MAY 7,1991

Next condition/attribute of "BP":
Computing Search Efficiency Rating.....

    Subject of search: PATIENTS
    ALIVE TODAY [SER = .01]
    AGE BETWEEN,AGES (inclusive) 13 and 20 [SER = 7.33]
    Subject of subquery: BP
    S>139 or D>89
    BETWEEN MAY 7,1990 and MAY 7,1991

Attribute of LIVING PATIENTS:
Your choice: DISPLAY// 1 DISPLAY results on the screen

You have 2 options for listing BPS =>

    1) For ea. patient, list all BPS which match your
       criteria
    2) List all PATIENTS with BPS meeting your criteria,
       but do not list the individual values of ea. BP
Your choice (1 or 2): 1// 2

...EXCUSE ME, LET ME PUT YOU ON 'HOLD' FOR A SECOND...

Please note: Patients whose names are marked with an "*" may have aliases.

```

Figure 4-1: Sample screens of search based on blood pressure

A list of patients that are found as a result of the record search display on the user's screen.

4.2 Vision Screening

The elementary school nurse calls you because she is concerned about children who might need eyeglasses. You need a list of all children between the ages of 5 and 12 with refractive errors. Note the following example.

```

What is the subject of your search?  LIVING PATIENTS //

  Subject of search: PATIENTS
    ALIVE TODAY  [SER = .01]

Attribute of LIVING PATIENTS:  VIS
  1  VISION EXAM
  2  VISION(corr.)
  3  VISION(uncorr.)
  4  VISIT
CHOOSE 1-4:  3

SUBQUERY: Analysis of multiple VISIONS
First condition/attribute of "VISION":  WORSE THAN
Visual acuity:  20/40

When I analyze the results =>

  1) Vision in BOTH eyes must meet your criteria
  2) Vision in AT LEAST ONE eye must meet your criteria

Your choice (1-2):  1//  2

Next condition/attribute of "VISION":
Computing Search Efficiency Rating.....

  Subject of search: PATIENTS
    ALIVE TODAY  [SER = .01]
      Subject of subquery: VISION(uncorr.)
        R>20/40 or L>20/40

Attribute of LIVING PATIENTS:  AGE
Condition:  BETWEEN, AGES (inclusive)
Start with (and include) AGE:  5
End with (and include) AGE:  12
Computing Search Efficiency Rating.....

  Subject of search: PATIENTS
    ALIVE TODAY  [SER = .01]
      Subject of subquery: VISION(uncorr.)
        R>20/40 or L>20/40
        AGE BETWEEN, AGES (inclusive) 5 and 12  [SER = 7.33]

Attribute of LIVING PATIENTS:

```

PATIENTS (Alive)	CHART NUMBER	AGE	VISION(unc.) R & L		DATE OF VU
CARPENTER, CLAREN	101601	12	20/70	20/70	JAN 29, 1990
CARPENTER, CLAREN	101601	12	20/50	20/50	NOV 1, 1985
GREEN, LANA	101568	10	20/200	20/200	JUN 12, 1989
Total: 3					

Figure 4-2: Sample screens

4.3 Serum Glucose

The Area Diabetes Coordinator wants to do a study on patients who are poorly controlled. You want a list of patients who have visited the clinic from 1988 through 1990 who have blood sugar readings over 300.

```

What is the subject of your search?  LIVING PATIENTS //

  Subject of search: PATIENTS
    ALIVE TODAY  [SER = .01]

Attribute of LIVING PATIENTS:  GLUC
  1  GLUCOSE
  2  GLUCOSE,DIPSTICK URINE
CHOOSE 1-2:  1
The following tests will be included in the query =>

  SERUM GLUCOSE  60 - 123 mg/dL  [critical: <40 and >300]
  PLASMA GLUCOSE  60 - 123 mg/dL  [critical: <40 and >300]

SUBQUERY: Analysis of multiple GLUCOSES

First condition/attribute of "GLUCOSE":  OVER
Value:  300
Next condition/attribute of "GLUCOSE":

Computing Search Efficiency Rating.....
....

  Subject of search: PATIENTS
    ALIVE TODAY  [SER = .01]
      Subject of subquery: GLUCOSE
        GREATER THAN 300

Attribute of LIVING PATIENTS:
Next condition/attribute of "GLUCOSE":  BETW
  1  BETWEEN DATES (inclusive)
  2  BETWEEN,NUMERIC (inclusive)
CHOOSE 1-2:  1

```


Exact starting date: 1/1/88 (JAN 01, 1988)
 Exact ending date: 12/31/90 (DEC 31, 1990)

Subject of subquery: GLUCOSE
 GREATER THAN 300
 BETWEEN JAN 1,1988 and DEC 31,1990

Next condition/attribute of "GLUCOSE":

Computing Search Efficiency Rating.....

Subject of search: PATIENTS
 ALIVE TODAY [SER = .01]
 Subject of subquery: GLUCOSE
 GREATER THAN 300
 BETWEEN JAN 1,1988 and DEC 31,1990

Attribute of LIVING PATIENTS:

***** Q-MAN OUTPUT OPTIONS *****

Select one of the following:

- 1 DISPLAY results on the screen
- 2 PRINT results on paper
- 3 COUNT 'hits'
- 4 KEEP 'hits' in a FM search template
- 5 STORE search logic for future use
- 6 R-MAN special report generator
- 9 HELP
- 0 EXIT

Your choice: DISPLAY// 1 DISPLAY results on the screen

You have 3 options for listing GLUCOSE RESULTS =>

- 1) For ea. patient, list all RESULTS
- 2) For ea. patient, list all RESULTS and EXPANDED LAB REPORT
- 3) List all PATIENTS with RESULTS you specified, but DO NOT list individual RESULTS or EXPANDED LAB REPORT (FASTEST OPTION!!)

Your choice (1-3): 1// 2

PATIENTS (Alive)	CHART NUMBER	GLUCOSE mg/dL		GLUCOSE DATE
THATCHER, VERNON	100003	301 H*	60-123	JUN 13, 1988
BURR, YVETTE*	100164	351 H*	60-123	OCT 11, 1989
BURR, YVETTE*	100164	322 H*	60-123	DEC 23, 1988
BURR, YVETTE*	100164	336 H*	60-123	JUL 15, 1988
BURR, YVETTE*	100164	322 H*	60-123	JUN 8, 1988
LINCOLN, CONSTAN*	100318	301 H*	60-123	MAR 23, 1988
GRANT, DOREEN*	100321	374 H*	60-123	DEC 8, 1989
GRANT, DOREEN*	100321	301 H*	60-123	MAY 4, 1988
GRANT, DOREEN*	100321	302 H*	60-123	MAR 2, 1988

```
COOLIDGE,YVONNE* 100329 301 H* 60-123      JUN 7,1989
<>
```

Figure 4-3: Sample screens

4.4 Rheumatoid Factor

You're concerned that your patients have an abnormally high rate of rheumatoid arthritis. You want to do a chart review and search the records by looking for patients having a rheumatoid factor that is abnormal.

```
What is the subject of your search? LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY [SER = .01]

Attribute of LIVING PATIENTS: RHEUMATOID FACTOR

SUBQUERY: Analysis of multiple RHEUMATOID FACTORS

First condition/attribute of "RHEUMATOID FACTOR": OVER
Titre: 1:10
Next condition/attribute of "RHEUMATOID FACTOR":

Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY [SER = .01]
Subject of subquery: RHEUMATOID FACTOR
GREATER THAN 1:10

Attribute of LIVING PATIENTS:

At this point, we select display option 1, and are presented with three choices:

1) For ea. patient, list all RESULTS
2) For ea. patient, list all RESULTS and EXPANDED LAB REPORT
3) List all PATIENTS with RESULTS you specified, but DO NOT list
individual RESULTS or EXPANDED LAB REPORT (FASTEST OPTION!!)

Your choice (1-3): 1// 1

PATIENTS          CHART RHEUMAT          RHEUMAT DATE
(Alive)          NUMBER
-----
GRANT,AUDREY*    100175 1:32          JAN 15,1988
REAGAN,SAMANTHA 100219 1:128          SEP 18,1987
```

```

CARPENTER,HANNAH 100150 1:1024      JAN 13,1988
Total: 3

```

Figure 4-4: Sample of rheumatoid factor

4.5 Pregnancy Test

You are interested in studying teenage pregnancy. You want to find all teenagers who became pregnant. This is an example of an attribute measured with a positive or negative value.

```

What is the subject of your search?  LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]

Attribute of LIVING PATIENTS:  HCG
1  HCG,SERUM
2  HCG,URINE
CHOOSE 1-2:  2

HCG

SUBQUERY: Analysis of multiple URINE HCGS

First condition/attribute of "URINE HCG":  IS
Value:  POS

Next condition/attribute of "URINE HCG":

Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]
Subject of subquery: URINE HCG
Result is POS

Attribute of LIVING PATIENTS:  AGE
Condition:  BETWEEN,AGES (inclusive)
Start with (and include) AGE:  12
End with (and include) AGE:  19
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]
Subject of subquery: URINE HCG
Result is POS
AGE BETWEEN,AGES (inclusive) 12 and 19  [SER = 7.33]

```

Figure 4-5: Sample of pregnancy test

4.6 Breast Exam

Breast cancer is a major concern at your service unit. You want to track all patients who have had abnormal breast exams after 1985. Breast exam is another attribute with a positive or negative finding.

```

What is the subject of your search? LIVING PATIENTS //

Computing Search Efficiency Rating.....

  Subject of search: PATIENTS
    ALIVE TODAY  [SER = .01]

Attribute of LIVING PATIENTS: BREAST EXAM

SUBQUERY: Analysis of multiple BREAST EXAMS

First condition/attribute of "BREAST EXAM": POS
Next condition/attribute of "BREAST EXAM": AFTER
Exact date: 1/1/85 (JAN 01, 1985)

      Subject of subquery: BREAST EXAM
      EQUALS POS
      AFTER JAN 1,1985

Next condition/attribute of "BREAST EXAM":
Computing Search Efficiency Rating.....

  Subject of search: PATIENTS
    ALIVE TODAY  [SER = .01]
    Subject of subquery: BREAST EXAM
    EQUALS POS
    AFTER JAN 1,1985

```

Figure 4-6: Sample of breast exam

At the “You have 2 options for listing BREAST EXAMS” prompt, select option 1. The system displays a list of patients. See the following example.

```

You have 2 options for listing BREAST EXAMS =>

  1) For ea. patient, list all BREAST EXAMS which match your
     criteria
  2) List all PATIENTS with BREAST EXAMS meeting your criteria,
     but do not list the individual values of ea. BREAST EXAM

Your choice (1 or 2): 1// 2

PATIENTS          CHART  BREAST  SEX
                  NUMBER EXAM
-----

```

```

MILLER, SALLY*      100010 +      FEMALE
THATCHER, KATE*    100028 +      FEMALE
JEFFERSON, WENDY*  100279 +      FEMALE
BROEN, NORMA       100312 +      FEMALE
WASHINGTON, CHRI*  100640 +      FEMALE
BROEN, PAULA*      100693 +      FEMALE
THATCHER, DALE     100877 +      FEMALE
JEFFERSON, LORRAI  100916 +      FEMALE
KETCHUP, SYDNEY    102177 +      FEMALE
REAGAN, ERMAN*     102203 +      FEMALE
RUBBLE, MARCIA     102653 +      FEMALE
COOLIDGE, HEIDI    102818 +      FEMALE
JEFFERSON, LYNNE*  102904 +      FEMALE
ADAMS, ROSE*       103060 +      FEMALE
COOLIDGE, GERTRU*  103149 +      FEMALE
Total: 15
Attribute of LIVING PATIENTS:

```

Figure 4-7: Sample of breast exam

4.7 Skin Tests

The TB Control Officer is interested in finding the patients who have had a positive PPD in the past three years. A positive PPD is one that was 10 or more millimeters in size. We are looking for the size of the reading in this instance. For any of the skin tests, enter a number; do not ask for a positive or negative finding. Note the following example.

```

What is the subject of your search?  LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]

Attribute of LIVING PATIENTS:  PPD READING

SUBQUERY: Analysis of multiple PPD READINGS

First condition/attribute of "PPD READING":  OVER
Value: 9
Next condition/attribute of "PPD READING":

Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]
Subject of subquery: PPD READING
GREATER THAN 9

Attribute of LIVING PATIENTS:

```

Figure 4-8: Sample of skin test

At the “You have 2 options for listing PPD READINGS” prompt, select option 1 to display a list of patients. See the example below:

```
You have 2 options for listing PPD READINGS =>

  1) For ea. patient, list all PPD READINGS which match your
     criteria
  2) List all PATIENTS with PPD READINGS meeting your criteria,
     but do not list the individual values of ea. PPD READING

Your choice (1 or 2): 1//

...HMMM, JUST A MOMENT PLEASE...

Please note:  Patients whose names are marked with an "*" may have aliases.
```

Figure 4-9: Sample of skin test

5.0 Diagnoses and Problem List Entries

5.1 Diabetes

You are starting a diabetes clinic, and you need a list of all patients who have diabetes. At the “Attribute of Living Patients” prompt, type either **DX** or **DIAGNOSIS** or **POV** or **PURPOSE OF VISIT** rather than **Diabetes**. It is usually most convenient to enter **DX** because it is brief. At the next prompt enter the specific diagnosis.

```

What is the subject of your search?  LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]

Attribute of LIVING PATIENTS:  DX      or

Attribute of LIVING PATIENTS:  POV     or

Attribute of LIVING PATIENTS:  PURPOSE OF VISIT

```

Figure 5-1: Sample of diabetes list

5.1.1 Synonyms

Let’s look at some of the ways you can enter the diagnosis of diabetes. Use various abbreviations as shown in the following example:

```

Enter DX:  DM

Enter DX:  AODM
250.00 (DIABETES UNCOMPL TYPE II/NIDDM)
DIABETES MELLITUS WITHOUT MENTION OF COMPLICATION/TYPE II/NONINSULIN
DEPENDENT/ADULT-ONSET

OK?  Y//

```

Figure 5-2: Sample of synonyms

The narrative can be entered as shown in the following example.

```

Enter DX:  DIABETES MELL( DIABETES|DIABETIC MELL/MELLITUS )
.....

The following matches were found:

1: 250.01 (DIABETES UNCOMPL TYPE I/IDDM)

```

```

DIABETES MELLITUS WITHOUT MENTION OF COMPLICATION/TYPE I/INSULIN
DEPENDENT/JUVENILE

2: 250.11 (DIAB KETOACIDOSIS TYPE I/IDDM)
DIABETES MELLITUS WITH KETOACIDOSIS/TYPE I/INSULIN DEPENDENT/JUVENILE

3: 250.21 (DIAB HYPEROSM COMA TYPE I/IDDM)
DIABETES MELLITUS WITH HYPEROSMOLAR COMA/TYPE I/INSULIN
DEPENDENT/JUVENILE

4: 250.31 (DIABETES COMA NEC TYPE I/IDDM)
DIABETES MELLITUS WITH OTHER COMA/TYPE I/INSULIN DEPENDENT/JUVENILE

5: 250.41 (DIAB RENAL MANIF TYPE I/IDDM)
DIABETES MELLITUS WITH RENAL MANIFESTATIONS/TYPE I/INSULIN
DEPENDENT/JUVENILE

Select 1-30:

```

Figure 5-3: Sample of synonyms

QMan goes into the diabetes diagnosis lookup and lists the possible ICD codes for diabetes to choose from. In this example, 30 choices of ICD code are given. (The total number of possible choices available based on your entry is indicated by the last number in the ‘Select 1-30:’ prompt; this is true only in the diagnosis lookup.) Press the Enter key to display all of the possible choices. The codes are listed as though on a revolving index. If the Enter key is pressed repeatedly without entering a choice, the choices will repeat. The user should be familiar with the ICD codes ahead of time.

5.1.2 ICD Code

A specific ICD code can be entered at the “Enter DX” prompt.

```

Enter DX: 250.00    250.00    DIABETES UNCOMPL TYPE II/NIDDM
...OK? YES//

```

Figure 5-4: Sample of ICD code

5.1.3 Range of ICD Codes

At the “Enter DX” prompt, a range of ICD codes can be entered. In the example below the range is from 250.00-250.51.

```

Enter DX: 250.00-250.51
250.00    DIABETES UNCOMPL TYPE II/NIDDM
...OK? YES//
250.51    DIAB OPHTHAL MANIF TYPE I/IDDM
...OK? YES//

```

Figure 5-5: Sample of ICD code range

QMan confirms the beginning and the end of the range, and then displays an inclusive list of all the diagnoses within the specified range.

```

ICD codes in this range =>

250.00  DIABETES UNCOMPL TYPE II/NIDDM
250.01  DIABETES UNCOMPL TYPE I/IDDM
250.10  DIAB KETOACID TYPE II/NIDDM
250.11  DIAB KETOACIDOSIS TYPE I/IDDM
250.20  DIAB HYPEROS COM TYPE II/NIDDM
250.21  DIAB HYPEROSM COMA TYPE I/IDDM
250.30  DIAB COMA NEC TYPE II/NIDDM
250.31  DIABETES COMA NEC TYPE I/IDDM
250.40  DIAB RENAL MANIF TYPE II/NIDDM
250.41  DIAB RENAL MANIF TYPE I/IDDM
250.50  DIAB OPPTH MANIF TYPE II/NIDDM
250.51  DIAB OPPTHAL MANIF TYPE I/IDDM

Press return to continue
ICD Code Range(s) Selected So Far =>

1)  250.00 - 250.51

```

Figure 5-6: Sample of ICD code range

5.1.4 Removing a Diagnosis from a Set

If a range of ICD codes for a diagnosis are entered and one diagnosis code from the middle of the range is not needed, QMAN can exclude the unnecessary code from the indicated range.

```

ICD Code Range(s) Selected So Far =>

1)  250.00 - 250.51

```

Figure 5-7: Sample of removing a diagnosis from a set

For example, to exclude ICD code 250.31 from the range already indicated, type a minus sign (-) followed by the code(s) to exclude at the “Enter ANOTHER DX” prompt:

```

Enter ANOTHER DX: -250.31  250.31          DIABETES COMA NEC TYPE I/IDDM
...OK? YES//

ICD Code Range(s) Selected So Far =>

1)  250.00 - 250.30
2)  250.40 - 250.51

```

Figure 5-8: Sample of removing a diagnosis from a set

QMan displays the two ranges of codes that have been created by excluding a code from the middle of the initial ICD range of codes.

5.1.5 Inverse Set

Another very powerful thing to do in QMAN is to invert the diagnosis set. Suppose you wish to identify the patients who don't have a diagnosis of diabetes. After entering all the codes in your taxonomy, type the word **NULL**. This forms an exclusionary search.

```
ICD Code Range(s) Selected So Far =>
1) 250.00 - 250.51
Enter ANOTHER DX: NULL
I take it you want me to search for only those LIVING PATIENTS who DO NOT have
any DXS in this taxonomy? YES//
SUBQUERY: Analysis of multiple DIAGNOSES
```

Figure 5-9: Sample of inverse set

5.1.6 "And'ed" Taxonomies

Now suppose that you want to find all patients who have diagnoses of diabetes and hypertension to determine the effect of the diseases on their kidneys. Note the following example.

```
What is the subject of your search? LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY [SER = .01]

Attribute of LIVING PATIENTS: DX

Enter DX: 250.00-250.51
250.00 DIABETES UNCOMPL TYPE II/NIDDM
...OK? YES//
250.51 DIAB OPHTHAL MANIF TYPE I/IDDM
...OK? YES//
ICD codes in this range =>

250.00 DIABETES UNCOMPL TYPE II/NIDDM
250.01 DIABETES UNCOMPL TYPE I/IDDM
250.10 DIAB KETOACID TYPE II/NIDDM
250.11 DIAB KETOACIDOSIS TYPE I/IDDM
250.20 DIAB HYPEROS COM TYPE II/NIDDM
250.21 DIAB HYPEROSM COMA TYPE I/IDDM
250.30 DIAB COMA NEC TYPE II/NIDDM
250.31 DIABETES COMA NEC TYPE I/IDDM
250.40 DIAB RENAL MANIF TYPE II/NIDDM
250.41 DIAB RENAL MANIF TYPE I/IDDM
250.50 DIAB OPHTH MANIF TYPE II/NIDDM
250.51 DIAB OPHTHAL MANIF TYPE I/IDDM

Press return to continue
ICD Code Range(s) Selected So Far =>
```

```
1) 250.00 - 250.51
Enter ANOTHER DX:
```

Figure 5-10: Sample screen

Instead of entering another diagnosis here, press Enter to return to the “Attribute of LIVING PATIENTS” prompt.

```
Want to save this DX group for future use? NO//
SUBQUERY: Analysis of multiple DIAGNOSES

First condition/attribute of "DIAGNOSIS":
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY [SER = .01]
DIAGNOSIS (250.01/250.11...) [SER = 20.84]
```

Figure 5-11: Sample screen

At the “Attribute of Living Patient” prompt type **DX** (diagnosis) to enter this attribute and press Enter. At the “Enter DX” prompt, type **HTN** (hypertension) and enter the diagnosis.

```
Attribute of LIVING PATIENTS: DX
Enter DX: HTN
401.9 (HYPERTENSION NOS)
UNSPECIFIED ESSENTIAL HYPERTENSION

OK? Y//
ICD Code Range(s) Selected So Far =>

1) 401.9

Enter ANOTHER DX:
SUBQUERY: Analysis of multiple DIAGNOSES

First condition/attribute of "DIAGNOSIS":
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY [SER = .01]
DIAGNOSIS (250.01/250.11...) [SER = 20.84]
DIAGNOSIS (401.9) [SER = 24.37]

Attribute of LIVING PATIENTS:
```

Figure 5-12: Sample screen

5.1.7 Output Options

After choosing to display the report to the screen, three choices are given to list the diagnosis:

```
You have 3 options for listing DIAGNOSES =>

1) For ea. patient, list all IC9 CODES
2) For ea. patient, list all IC9 CODES and PROVIDER NARRATIVES
3) List all PATIENTS with IC9 CODES you specified, but DO NOT list
   individual IC9 CODES or PROVIDER NARRATIVES (FASTEST OPTION!!)

Your choice (1-3): 1// 1
```

Figure 5-13: Sample output options

The first choice lists all IC9 Codes, and the second choice lists all IC9 codes and provider narratives. The second choice displays the most information. The third choice is the fastest option.

PATIENTS (Alive)	CHART NUMBER	DX/ICD9 #	DATE OF POV	DX/ICD9 #

GAMMA,RAE*	100003	401.9	MAR 18,1991	+
GAMMA,RAE*	100003	401.9	MAR 8,1991	+
GAMMA,RAE*	100003	401.9	JAN 9,1991	+
GAMMA,RAE*	100003	401.9	DEC 17,1990	+
GAMMA,RAE*	100003	401.9	DEC 4,1990	+
GAMMA,RAE*	100003	401.9	NOV 28,1990	+
GAMMA,RAE*	100003	401.9	OCT 19,1990	+
GAMMA,RAE*	100003	401.9	OCT 9,1990	+
GAMMA,RAE*	100003	401.9	AUG 21,1990	+
GAMMA,RAE*	100003	401.9	AUG 20,1990	+
GAMMA,RAE*	100003	401.9	JUL 24,1990	+
GAMMA,RAE*	100003	401.9	JUN 19,1990	+
GAMMA,RAE*	100003	401.9	NOV 18,1987	+
GAMMA,RAE*	100003	401.9	SEP 2,1987	+
GAMMA,RAE*	100003	401.9	FEB 6,1987	+
GAMMA,RAE*	100003	401.9	JUN 4,1986	+
GAMMA,RAE*	100003	401.9	NOV 13,1985	+
OMICRON,MAND	100006	401.9	JUN 18,1991	+
<>				

Figure 5-14: Sample output options

Note: In keeping with the ‘rule of last’, the ICD code for hypertension is given because it was the diagnosis that was entered last. The plus signs (+) in the last column merely indicate that the patients listed also had diagnoses of diabetes.

By now you might be tired of entering all the ICD9 codes, or the ICD9 range of codes, or all the diagnoses for diabetes. To save time, enter the information once and save the findings as a taxonomy.

Once a taxonomy is defined, the system prompts for sub-query conditions. For example, suppose you wish to identify the patients who do not have a diagnosis of diabetes, but have had a blood glucose of over 200 after January 1, 1987. Note the example on following screens.

```

What is the subject of your search?  LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]

Attribute of LIVING PATIENTS:  GLUC
1  GLUCOSE
2  GLUCOSE
3  GLUCOSE,DIPSTICK URINE
CHOOSE 1-3:  1

SUBQUERY: Analysis of multiple GLUCOSES

First condition/attribute of "GLUCOSE":  OVER
Value:  200

Next condition/attribute of "GLUCOSE":  AFTER
Exact date:  1/1/87  (JAN 01, 1987)

Subject of subquery: GLUCOSE
GREATER THAN 200
AFTER JAN 1,1987

Next condition/attribute of "GLUCOSE":

Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]
Subject of subquery: GLUCOSE
GREATER THAN 200
AFTER JAN 1,1987

Attribute of LIVING PATIENTS:
Attribute of LIVING PATIENTS:  DX

Enter DX: 250.00-250.51
ICD Code Range(s) Selected So Far =>

```

```

1) 250.00 - 250.51

Enter ANOTHER DX: NULL
I take it you want me to search for only those LIVING PATIENTS who DO NOT have
any DXS in this taxonomy? YES//

Enter ANOTHER DX:

First condition/attribute of "DIAGNOSIS": AFTER
Exact date: 1/1/87
Next condition/attribute of "DIAGNOSIS":

Subject of search: PATIENTS
  ALIVE TODAY [SER = .01]
  Subject of subquery: GLUCOSE
  GREATER THAN 200
  AFTER JAN 1,1987
DIAGNOSIS(INVERSE SET) [SER = -1]
  Subject of subquery: DIAGNOSIS
  AFTER JAN 1,1987

```

Figure 5-15: Sample of output options

Remember the rule of last. The system will not display every blood glucose reading because that attribute was not entered last.

5.2 Problem List Narrative

You want to find all patients who have diabetes on their active problem list. Do not enter DX as the attribute because that will only display the purpose of visit; it will not display the problem list diagnosis. At the “Attribute of LIVING PATIENTS” prompt, type **PROBLEM LIST DIAGNOSIS** and press Enter. See the following example.

```

What is the subject of your search? LIVING PATIENTS //

Subject of search: PATIENTS
  ALIVE TODAY [SER = .01]

Attribute of LIVING PATIENTS: PROBLEM LIST DIAGNOSIS

Enter DX: 250.00-250.51
250.00      DIABETES UNCOMPL TYPE II/NIDDM
  ...OK? YES// (YES)
  250.51      DIAB OPHTHAL MANIF TYPE I/IDDM
  ...OK? YES//
ICD codes in this range =>

250.00  DIABETES UNCOMPL TYPE II/NIDDM
250.01  DIABETES UNCOMPL TYPE I/IDDM
250.10  DIAB KETOACID TYPE II/NIDDM
250.11  DIAB KETOACIDOSIS TYPE I/IDDM
250.20  DIAB HYPEROS COM TYPE II/NIDDM

```

```

250.21  DIAB HYPEROSM COMA TYPE I/IDDM
250.30  DIAB COMA NEC TYPE II/NIDDM
250.31  DIABETES COMA NEC TYPE I/IDDM
250.40  DIAB RENAL MANIF TYPE II/NIDDM
250.41  DIAB RENAL MANIF TYPE I/IDDM
250.50  DIAB OPHTH MANIF TYPE II/NIDDM
250.51  DIAB OPHTHAL MANIF TYPE I/IDDM

```

Press return to continue
Enter ANOTHER DX:

Want to save this DX group for future use? NO//
SUBQUERY: Analysis of multiple PROBLEM LIST DIAGNOSES

First condition/attribute of "PROBLEM LIST DIAGNOSIS":
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY [SER = .01]
PROBLEM LIST DIAGNOSIS (250.01/250.11...) [SER = 8.25]

Attribute of LIVING PATIENTS:

You have 3 options for listing DIAGNOSES =>

- 1) For ea. patient, list all ICD9 CODES
- 2) For ea. patient, list all ICD9 CODES and PROBLEM LIST ENTRIES
- 3) List all PATIENTS with ICD9 CODES you specified, but DO NOT list individual ICD9 CODES or PROBLEM LIST ENTRIES (FASTEST OPTION!!)

Your choice (1-3): 1// 2

PATIENTS CHART PROBLEM LIST ENTRY
(Alive) NUMBER

```

-----
BETA,BROOKE*        100424 SE1(A)  DIABETES MELLITUS, I [250.01]
BETA,BROOKE*        100424 SE1(A)  DIABETES MELLITUS, I [250.01]
BETA,BROOKE*        100424 SE1(A)  DIABETES MELLITUS, I [250.01]
GAMMAAAA,RAE*       100003 SX2(A)  DIABETES MELLITUS TYPE II, ORAL MED [250.00]
RHORHOR,DIANE*      100018 2(A)    TYPE II DIABETES [250.00]
THETATHETAA,WALL   100026 SE2(A)  DIABETES MELLITUS, TYPE II, ORAL MED [250.00]
THETABBB,KATE*      100028 SE1(A)  DIABETES MELLITUS, TYPE II, ORAL MEDS [250.00]
LLAMBDAAAA,JOAN*    100050 SE4(A)  DIABETES MELLITUS, II, ORAL AGENT [250.00]
THETABBB,ELIZAB*   100072 SE1(A)  DIABETES MELLITUS, II, ORAL MEDS [250.00]
THETAVV,MARTHA*     100085 SE3(A)  DIABETES MELLITUS, TYPE II, ORAL MED [250.00]
THETADDDD,LAURA*   100089 SE9(A)  DIABETES MELLITUS TYPE II [250.00]
THETATHETAB,BARN   100092 SE1(A)  DIABETES MELLITUS, TYPE II ORAL MED [250.00]
THETATHETAB,BARN   100092 SE1(A)  DIABETES MELLITUS, TYPE II ORAL MED [250.00]
KAPPAAA,KELSEY      100119 SE3(A)  DIABETES MELLITUS, TYPE II, INSULIN [250.00]

```

```

LLAMDAD,CONNIE    100143 SE3(A)  DIABETES MELLITUS, TYPE II, ORAL MED [250.00]
RHORHORHORHOR,SY 100158 SE3(A)  DM, TYPE II, DIET [250.00]
GAMMAGAMMA,ELAIN 100161 SR2(A)  DIABETES MELLITUS, TYPE II DIET [250.00]
<>

```

Figure 5-16: Sample of problem list narrative

At the “Your choice (1-3)” prompt, type 2 to display the problem list number, provider narrative, and associated ICD code.

As a quality assurance test you want to find all patients who were seen for diabetes, but do not have diabetes on their problem list. To find a diagnosis that is listed on the problem list type PROBLEM LIST DIAGNOSIS at the “Attribute of LIVING PATIENT” prompt and press Enter. Do not enter “DX” or “diagnosis” at this prompt because the system will only display the POV.

```

What is the subject of your search? LIVING PATIENTS //
  Subject of search: PATIENTS
    ALIVE TODAY    [SER = .01]

Attribute of LIVING PATIENTS: DX

```

Figure 5-17: Sample of problem list narrative

To identify all of the patients who were seen for diabetes, enter a synonym or ICD code range for diabetes in response to the DX prompt. To recall a previously created taxonomy for patients with a diagnosis of diabetes, type the left bracket at the prompt. See Figure 5-18.

```

Enter DX: [DIABETES          ALL DIABETICS]

Members of DIABETES Taxonomy =>

250.00 - 250.51

Enter ANOTHER DX:
Want to save this DX group for future use? NO//

SUBQUERY: Analysis of multiple DIAGNOSES

First condition/attribute of "DIAGNOSIS":
Computing Search Efficiency Rating.....

  Subject of search: PATIENTS
    ALIVE TODAY    [SER = .01]
    DIAGNOSIS (250.01/250.11...) [SER = 20.84]

```

Figure 5-18: Sample of problem list narrative

Now you want to identify which of those diabetic patients do not have a problem list diagnosis of diabetes. See the example below.

```

Attribute of LIVING PATIENTS: PROBLEM LIST DIAGNOSIS
Enter DX: 250.00-250.51
  250.00      DIABETES UNCOMPL TYPE II/NIDDM
    ...OK? YES//
  250.51      DIAB OPHTHAL MANIF TYPE I/IDDM
    ...OK? YES//
ICD codes in this range =>

250.00  DIABETES UNCOMPL TYPE II/NIDDM
250.01  DIABETES UNCOMPL TYPE I/IDDM
250.10  DIAB KETOACID TYPE II/NIDDM
250.11  DIAB KETOACIDOSIS TYPE I/IDDM
250.20  DIAB HYPEROS COM TYPE II/NIDDM
250.21  DIAB HYPEROSM COMA TYPE I/IDDM
250.30  DIAB COMA NEC TYPE II/NIDDM
250.31  DIABETES COMA NEC TYPE I/IDDM
250.40  DIAB RENAL MANIF TYPE II/NIDDM
250.41  DIAB RENAL MANIF TYPE I/IDDM
250.50  DIAB OPHTH MANIF TYPE II/NIDDM
250.51  DIAB OPHTHAL MANIF TYPE I/IDDM

Press return to continue

Enter ANOTHER DX: NULL
I take it you want me to search for only those LIVING PATIENTS who DO NOT have
any DXS in this taxonomy? YES//
Enter ANOTHER DX:

SUBQUERY: Analysis of multiple PROBLEM LIST DIAGNOSES

First condition/attribute of "PROBLEM LIST DIAGNOSIS":

Computing Search Efficiency Rating.....
  Subject of search: PATIENTS
    ALIVE TODAY      [SER = .01]
    DIAGNOSIS (250.01/250.11...) [SER = 20.84]
    PROBLEM LIST DIAGNOSIS(INVERSE SET) [SER = 8.25]

Attribute of LIVING PATIENTS:
...HMMM, I'M WORKING AS FAST AS I CAN...

Please note:  Patients whose names are marked with an "*" may have aliases.

PATIENTS          CHART  DX/ICD9      PROBLEM LIST ENTRY
(Alive)           NUMBER #
-----
GAMMAGAMMA,PATR* 100292 +      -
GAMMABB,JOSEPH   100401 +      -
GAMMAGAMMA,LESLI 100621 +      -

```

PIPIPI, DANA	101062	+	-
RHORHOR, ALEXANDR	101729	+	-
GAMMA, KAIA	101743	+	-
RHOOOO, ISAAC	103048	+	-
BETAAAA, LORI ANN	345	+	-
GAMMAGAMMA, JEFFR	100604	+	-
SBETA, FAY*	100065	+	-
GAMMAGAMMB, MALC	100069	+	-

Figure 5-19: Sample of problem list narrative

5.3 ICD Entries

You are studying the prevalence of diabetes in your community and you want to find all patients who have either a *purpose of visit* of diabetes and/or a *problem list entry* of diabetes. At the “Attribute of LIVING PATIENTS” prompt, type **ICD**. ICD covers **both** the purpose of visit and the problem list diagnosis. This is how you do prevalence studies.

```

What is the subject of your search?  LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]

Attribute of LIVING PATIENTS:  ICD (PROBLEM OR POV)

Enter DX: 250.00-250.51

250.00          DIABETES UNCOMPL TYPE II/NIDDM
...OK? YES//   (YES)
250.51          DIAB OPHTHAL MANIF TYPE I/IDDM
...OK? YES//

ICD codes in this range =>

250.00  DIABETES UNCOMPL TYPE II/NIDDM
250.01  DIABETES UNCOMPL TYPE I/IDDM
250.10  DIAB KETOACID TYPE II/NIDDM
250.11  DIAB KETOACIDOSIS TYPE I/IDDM
250.20  DIAB HYPEROS COM TYPE II/NIDDM
250.21  DIAB HYPEROSM COMA TYPE I/IDDM
250.30  DIAB COMA NEC TYPE II/NIDDM
250.31  DIABETES COMA NEC TYPE I/IDDM
250.40  DIAB RENAL MANIF TYPE II/NIDDM
250.41  DIAB RENAL MANIF TYPE I/IDDM
250.50  DIAB OPHTH MANIF TYPE II/NIDDM
250.51  DIAB OPHTHAL MANIF TYPE I/IDDM

Press return to continue
ICD Code Range(s) Selected So Far =>

1) 250.00 - 250.51

Enter ANOTHER DX:
Want to save this DX group for future use? NO//   (NO)
Computing Search Efficiency Rating.....

```

```

Subject of search: PATIENTS
  ALIVE TODAY [SER = .01]
  ICD (PROBLEM OR POV) (250.01/250.11...) [SER = .08]

Attribute of LIVING PATIENTS:

PATIENTS          CHART  ICD
(Alive)          NUMBER
-----
DELTA AAA, ELIZAB* 100072 +
DELTABB, MARTHA*  100085 +
KAPPAAA, HORTENC* 100113 +
THETA AAA, YOLANDA 100123 +
BETA, YVETTE*     100164 +
GAMMAGAMMA, PATR* 100292 +
GAMMA, DOREEN*    100321 +
DELTA A, KIMBERLY* 100394 +
EPSILON, JOSEPH   100401 +
BETA, BROOKE*     100424 +
THETA AAA, INGRID 100543 +
GAMMAGAMMA, LESLI 100621 +
GAMMABB, PEARL    100704 +
GAMMAGAMMA, DREW* 100717 +
OMICRONN, MARY J* 100725 +
BETABB, YVETTE    100736 +
RHOEHOO, ROBERTA 100751 +
GAMMABB, LEAH     100900 +
<>

```

Figure 5-20: Sample of ICD entries

6.0 Prescriptions and Patient Education

6.1 Prescription

You want to find all patients who are on hydrochlorothiazide diuretics. Note the example below.

```

What is the subject of your search?  LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]

Attribute of LIVING PATIENTS:  RX

Enter RX:  HCTZ
  1  HCTZ  HYDROCHLOROTHIAZIDE  50MG
  2  HCTZ  HYDROCHLOROTHIAZIDE  50MG TAB 30S
  3  HCTZ  HYDROCHLOROTHIAZIDE  25MG TAB      N/F
  4  HCTZ  HYDROCHLOROTHIAZIDE  50MG TAB 60S
  5  HCTZUD HYDROCHLOROTHIAZIDE  50MG TAB UD
CHOOSE 1-5:  1  HYDROCHLOROTHIAZIDE  50MG
Enter ANOTHER RX:  HCTZ
  1  HCTZ  HYDROCHLOROTHIAZIDE  50MG
  2  HCTZ  HYDROCHLOROTHIAZIDE  50MG TAB 30S
  3  HCTZ  HYDROCHLOROTHIAZIDE  25MG TAB      N/F
  4  HCTZ  HYDROCHLOROTHIAZIDE  50MG TAB 60S
  5  HCTZUD HYDROCHLOROTHIAZIDE  50MG TAB UD
CHOOSE 1-5:  2  HYDROCHLOROTHIAZIDE  50MG TAB 30S
Enter ANOTHER RX:  HCTZ
  1  HCTZ  HYDROCHLOROTHIAZIDE  50MG
  2  HCTZ  HYDROCHLOROTHIAZIDE  50MG TAB 30S
  3  HCTZ  HYDROCHLOROTHIAZIDE  25MG TAB      N/F
  4  HCTZ  HYDROCHLOROTHIAZIDE  50MG TAB 60S
  5  HCTZUD HYDROCHLOROTHIAZIDE  50MG TAB UD
CHOOSE 1-5:  3  HYDROCHLOROTHIAZIDE  25MG TAB
Enter ANOTHER RX:  HCTZ
  1  HCTZ  HYDROCHLOROTHIAZIDE  50MG
  2  HCTZ  HYDROCHLOROTHIAZIDE  50MG TAB 30S
  3  HCTZ  HYDROCHLOROTHIAZIDE  25MG TAB      N/F
  4  HCTZ  HYDROCHLOROTHIAZIDE  50MG TAB 60S
  5  HCTZUD HYDROCHLOROTHIAZIDE  50MG TAB UD
CHOOSE 1-5:  4  HYDROCHLOROTHIAZIDE  50MG TAB 60S
Enter ANOTHER RX:  HCTZ
  1  HCTZ  HYDROCHLOROTHIAZIDE  50MG
  2  HCTZ  HYDROCHLOROTHIAZIDE  50MG TAB 30S
  3  HCTZ  HYDROCHLOROTHIAZIDE  25MG TAB      N/F
  4  HCTZ  HYDROCHLOROTHIAZIDE  50MG TAB 60S
  5  HCTZUD HYDROCHLOROTHIAZIDE  50MG TAB UD
CHOOSE 1-5:  5  HYDROCHLOROTHIAZIDE  50MG TAB UD
Enter ANOTHER RX:

The following have been selected =>

HYDROCHLOROTHIAZIDE  50MG
HYDROCHLOROTHIAZIDE  50MG TAB 30S

```

```

HYDROCHLORTHIAZIDE 25MG TAB
HYDROCHLOROTHIAZIDE 50MG TAB 60S
HYDROCHLOROTHIAZIDE 50MG TAB UD

Want to save this RX group for future use? NO//
SUBQUERY: Analysis of multiple RXS

First condition/attribute of "RX":
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY [SER = .01]
RX (HYDROCHLOROT/HYDROCHLOROT...) [SER = 22.96]

Attribute of LIVING PATIENTS:

You have 3 options for listing RxS =>

1) For ea. patient, list all RxS
2) For ea. patient, list all RxS and Quant/SIGs
3) List all PATIENTS with RxS you specified, but DO NOT list
   individual RxS or Quant/SIGs (FASTEST OPTION!!)

Your choice (1-3): 1// 1

```

Figure 6-1: Sample of prescription

6.1.1 Synonyms

In the previous example, 'HCTZ' or 'HYDROCHLOROTHIAZIDE' can be used interchangeably. Similarly, many prescriptions are available in a variety of formulations under more than one name. For example, ibuprofen is the generic name for Motrin, Nuprin, and Advil. Acetaminophen is the generic name for Tylenol. These are examples of interchangeable names that can be entered at prompts.

6.1.2 Taxonomies

Now conduct the same search using taxonomies that have already been created.

```

What is the subject of your search? LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY [SER = .01]

Attribute of LIVING PATIENTS: DX

Enter DX: [DIABETES ALL DIABETICS]

Members of DIABETES Taxonomy =>
250.00 - 250.51

```

```

Enter ANOTHER DX:
Want to save this DX group for future use? NO//
SUBQUERY: Analysis of multiple DIAGNOSES

First condition/attribute of "DIAGNOSIS":
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY [SER = .01]
DIAGNOSIS (250.01/250.11...) [SER = 20.84]

Attribute of LIVING PATIENTS: RX

Enter RX: [HCTZ]
Members of HCTZ Taxonomy =>

HYDROCHLOROTHIAZIDE 50MG
HYDROCHLOROTHIAZIDE 50MG TAB 30S
HYDROCHLOROTHIAZIDE 25MG TAB
HYDROCHLOROTHIAZIDE 50MG TAB 60S
HYDROCHLOROTHIAZIDE 50MG TAB UD

Enter ANOTHER RX:

The following have been selected =>

HYDROCHLOROTHIAZIDE 50MG
HYDROCHLOROTHIAZIDE 50MG TAB 30S
HYDROCHLOROTHIAZIDE 25MG TAB
HYDROCHLOROTHIAZIDE 50MG TAB 60S
HYDROCHLOROTHIAZIDE 50MG TAB UD

Want to save this RX group for future use? NO//
SUBQUERY: Analysis of multiple RXS

First condition/attribute of "RX":
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY [SER = .01]
DIAGNOSIS (250.01/250.11...) [SER = 20.84]
RX (HYDROCHLOROT/HYDROCHLOROT...) [SER = 22.96]

Attribute of LIVING PATIENTS:

```

Figure 6-2: Sample of taxonomies

6.1.3 Output Options

Previously generated taxonomies can save a lot of time in your search. Keep in mind, however, that taxonomies are attribute-specific. A taxonomy that was created for the attribute of diagnosis (DX) or purpose of visit (POV) cannot be used for problem list diagnosis.

```

You have 3 options for listing RxS =>

    1) For ea. patient, list all RxS
    2) For ea. patient, list all RxS and Quant/SIGs
    3) List all PATIENTS with RxS you specified, but DO NOT list
       individual RxS or Quant/SIGs (FASTEST OPTION!!)

Your choice (1-3): 1//
...EXCUSE ME, JUST A MOMENT PLEASE...

Please note:  Patients whose names are marked with an "*" may have aliases.

```

Figure 6-3: Sample of output options

6.2 Patient Education

The Service Unit Director wants to hire a patient educator to conduct diabetes education classes. You are asked to provide some data to estimate what the new educator's workload might be. In this case the attribute is patient education.

```

What is the subject of your search?  LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY  [SER = .01]

Attribute of LIVING PATIENTS:  PATIENT ED TOPIC

Enter TOPIC: ???

```

Figure 6-4: Sample of patient education

To see choices for the “Choose From” prompt, type three question marks (???) and press Enter. The following example shows prompts for the topic DM.

```

Enter TOPIC: DM
    1  DM-COMPLICATIONS
    2  DM-DIET

```

```

3  DM-DISEASE PROCESS
4  DM-EXERCISE
5  DM-FOLLOW UP
6  DM-FOOT CARE
7  DM-LIFESTYLE ADAPTATIONS
8  DM-MEDICATIONS
CHOOSE 1-8: 2
Enter ANOTHER TOPIC: DM
CHOOSE 1-8: 6
Enter ANOTHER TOPIC: DM
CHOOSE 1-8: 1
Enter ANOTHER TOPIC:

The following have been selected =>

    DM-DIET
    DM-FOOT CARE
    DM-COMPLICATIONS

Want to save this TOPIC group for future use? NO//
SUBQUERY: Analysis of multiple PATIENT ED TOPICS

First condition/attribute of "PATIENT ED TOPIC": AFTER
Exact date: 1/1/90

Next condition/attribute of "PATIENT ED TOPIC":
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY [SER = .01]
PATIENT ED TOPIC (DM-DIET/DM-FOOT CARE...) [SER = 26.76]
  Subject of subquery: PATIENT ED TOPIC
  AFTER JAN 1,1990

Attribute of LIVING PATIENTS:

You have 2 options for listing PATIENT ED TOPICS =>

1) For ea. patient, list all PATIENT ED TOPICS which match your
   criteria
2) List all PATIENTS with PATIENT ED TOPICS meeting your criteria,
   but do not list the individual values of ea. PATIENT ED TOPIC

```

Figure 6-5: Sample prompts

7.0 Immunizations

Users can search on any documented immunization:

- ACTHIB
- ADENOVIRUS, NOS
- ADENOVIRUS, TYPE 4
- ADENOVIRUS, TYPE 7
- ANTHRAX
- BCG
- BOTULINUM ANTITOXIN
- CHOLERA
- CMVIG
- DENGUE FEVER
- DT [PEDS]
- DTAP, 5 PERTUSSIS ANTIGENS
- DTAP, NOS
- DTAP-HIB
- DTP
- DTP-HIB
- DTP-HIB-HEP B
- DTP/DTaP/DT/Td/TT [ALL TYPES]
- DTaP
- DTaP [ALL PEDS]
- DTaP-Hep B-IPV
- DTaP-Hib-IPV
- DTaP-IPV
- HANTAVIRUS
- HBIG
- HEP A [ALL TYPES]
- HEP A, ADULT
- HEP A, PED/ADOL, 2 DOSE
- HEP A, PED/ADOL, 3 DOSE
- HEP A, PEDIATRIC, NOS
- HEP A-HEP B
- HEP B PED
- HEP B [ALL TYPES]
- HEP B, ADOLESCENT/HIGH RISK IN
- HEP B, DIALYSIS
- HEP B,ADULT
- HEP C
- HEP E
- HEPATITIS A VACCINE

- HEPATITIS B VACCINE
- HERPES SIMPLEX 2
- HIB HIBTITER
- HIB PEDVAXHIB
- HIB PROHIBIT
- HIB PROJECT
- HIB [ALL TYPES]
- HIB, NOS
- HIB-HEP B
- HIV
- HMS IMMUNIZATION
- HPV QUADRIVALENT
- HPV, bivalent
- IG
- IG, NOS
- IGIV
- INFLUENZA VACCINE
- INFLUENZA VACCINE [ALL TYPES]
- INFLUENZA, H5N1
- INFLUENZA, INTRANASAL
- INFLUENZA, SPLIT (INCL. PURIFI
- INFLUENZA, WHOLE
- IPV
- JAPANESE ENCEPHALITIS
- JUNIN VIRUS
- LEISHMANIASIS
- LEPROSY
- LYME
- MALARIA
- MEASLES IMMUNIZATION
- MEASLES IMMUNIZATIONS [ALL TYP
- MELANOMA
- MENING
- MENINGOCOCCAL A,C,Y,W-135 DIPH
- MENINGOCOCCAL C CONJUGATE
- MENINGOCOCCAL VACCINE [ALL TYP
- MENINGOCOCCAL, NOS
- MENOMUNE
- MMR
- MMRV
- MR
- MUMPS IMMUNIZATION
- MUMPS IMMUNIZATIONS [ALL TYPES

- MUMPS IMMUNIZATIONS [ALL TYPES]
- NO VACCINE ADMINISTERED
- Novel Influenza-H1N1-09, Nasal
- Novel influenza-H1N1-09
- Novel influenza-H1N1-09, all f
- Novel influenza-H1N1-09, prese
- OPV
- OTHER
- PARAINFLUENZA-3
- PERTUSSIS
- PLAGUE
- PNEUMO-CONJ
- PNEUMO-VAC
- PNEUMOCOCCAL
- PNEUMOCOCCAL VACCINES [ALL TYP
- PNEUMOCOCCAL, NOS
- POLIO
- POLIO [ALL TYPES]
- Pneumococcal, PCV-13
- Q FEVER
- RABIES VACCINE
- RABIES, INTRADERMAL INJECTION
- RABIES, INTRAMUSCULAR INJECTIO
- RESERVED - DO NOT USE3
- RHEUMATIC FEVER
- RIFT VALLEY FEVER
- RIG
- ROTAVIRUS
- ROTAVIRUS, MONOVALENT
- ROTAVIRUS, NOS
- ROTAVIRUS, PENTAVALENT
- RSV-IGIV
- RSV-MAb
- RUBELLA IMMUNIZATION
- RUBELLA IMMUNIZATIONS [ALL TYP
- RUBELLA IMMUNIZATIONS[ALL TYPE
- RUBELLA/MUMPS
- SMALLPOX
- SMALLPOX, DILUTED
- STAPHYLOCOCCUS BACTERIO LYSATE
- TD (ADULT)
- TD (ADULT) PRESERVATIVE FREE
- TETANUS TOXOID

- TETANUS TOXOID, NOS
- TICK-BORNE ENCEPHALITIS
- TIG
- TST, NOS
- TST-OT TINE TEST
- TST-PPD INTRADERMAL
- TST-PPD TINE TEST
- TULAREMIA VACCINE
- TYPHOID, NOS
- TYPHOID, ORAL
- TYPHOID, PARENTERAL
- TYPHOID, PARENTERAL, AKD (U.S.
- TYPHOID, VICPS
- Td [ADULT]
- Td/TT [ALL ADULT TYPES]
- Tdap
- VACCINIA IMMUNE GLOBULIN
- VARICELLA
- VARICELLA VACCINE [ALL TYPES]
- VEE, INACTIVATED
- VEE, LIVE
- VEE, NOS
- VZIG
- VZIG-IND
- XXHIB [ALL TYPES]
- YELLOW FEVER
- ZOSTER

7.1 DPT Example

The public health nurse is concerned that one of the villages might have a very low DPT immunization rate and would like some concrete data to back up her suspicions.

```

What is the subject of your search?  LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]

Attribute of LIVING PATIENTS:  CURRENT COMMUNITY

Enter COMMUNITY:  SELLS
Enter ANOTHER COMMUNITY:

The following have been selected =>

```

```

SELLS

Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]
CURRENT COMMUNITY (SELLS)[SER = 3.55]

Attribute of LIVING PATIENTS: AGE
Condition: OVER
Age: 1
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]
CURRENT COMMUNITY (SELLS)[SER = 3.55]
AGE GREATER THAN 1 [SER = .06]

Attribute of LIVING PATIENTS: DPT
  1DPT
  2DPT/DT/TT [ALL PED. TYPES]
  3DPT/DT/Td/TT [ALL TYPES]
CHOOSE 1-3: 1

Select series (1-5, BOOSTER, COMPLETE, ALL, UNSPECIFIED): ALL// 3

Next condition/attribute of "DPT": NULL

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]
CURRENT COMMUNITY (SELLS)[SER = 3.55]
AGE GREATER THAN 1 [SER = .06]
DPT: NONE EXIST[SER = -.1]

```

Figure 7-1: Sample of DPT

This forms the search logic for this inquiry. There aren't any special output options for this immunization.

7.2 Pneumovax Example

The public health nurse is doing follow-ups on elderly patients who have received their pneumovax vaccine during the last six months.

```

What is the subject of your search?  LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]

Attribute of LIVING PATIENTS:  PNEUMOCOCCAL VACCINE

Note that you do not have to enter the word 'immunization'; you can enter the name
of the immunization directly.

First condition/attribute of "PNEUMOVAX":  AFTER
Exact date:  T-182

Next condition/attribute of "PNEUMOVAX":

```

Figure 7-2: Sample of pneumovax

This vaccine is not in a group or a series, so you are not presented with any additional choices as you are for DPT or some other immunizations.

```

Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]
Subject of subquery: PNEUMOVAX
AFTER JAN 15,1991

Next attribute of LIVING PATIENTS:

You have 2 options for listing PNEUMOVAXS =>

  1) For ea. patient, list all PNEUMOVAXS which match your
  criteria
  2) List all PATIENTS with PNEUMOVAXS meeting your criteria,
  but do not list the individual values of ea. PNEUMOVAX

Your choice (1 or 2): 1//

```

Figure 7-3: Sample of pneumovax

The Area Office has a preventive medicine initiative and they would like to know all patients over the age of 65 who have **not** received the pneumovax vaccination.

```

What is the subject of your search?  LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]

Attribute of LIVING PATIENTS:  pneuMOCOCCAL VACCINE

First condition/attribute of "PNEUMOVAX":  NULL

```

```
Subject of search: PATIENTS
ALIVE TODAY[SER = .01]
PNEUMOVAX: NONE EXIST[SER = -.1]

Attribute of LIVING PATIENTS: AGE
Condition: OVER
Age: 65

Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]
PNEUMOVAX: NONE EXIST[SER = -.1]
AGE GREATER THAN 65 [SER = 24]

Attribute of LIVING PATIENTS:
```

Figure 7-4: Sample of pneumovax

8.0 Dental and Medical Procedures

8.1 Extraction

The dentist wants to know how many extractions were done in the last six months on patients who have diabetes.

```

What is the subject of your search? LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]

Attribute of LIVING PATIENTS: DX

Enter DX: [DIABETES ALL DIABETICS]

Members of DIABETES Taxonomy =>

250.00 - 250.51

Enter ANOTHER DX:

Want to save this DX group for future use? NO//

SUBQUERY: Analysis of multiple DIAGNOSES

First condition/attribute of "DIAGNOSIS":
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]
DIAGNOSIS (250.01/250.11...) [SER = 20.84]

Attribute of LIVING PATIENTS: ADA CODE

Enter ADA CODE: EXTRACTION
 1EXTRACTION FOR CARIES 7111 EXTRACTION FOR CARIES
 2EXTRACTION FOR ORTHO 7113 EXTRACTION FOR ORTHO
 3EXTRACTION FOR PERIO 7112 EXTRACTION FOR PERIO
 4EXTRACTION SINGLE TOOTH (ANY R 7110 EXTRACTION SINGLE TOOTH (A
NY REASON)
CHOOSE 1-4: 3 7112
Enter ANOTHER ADA CODE:

The following have been selected =>

 7112

SUBQUERY: Analysis of multiple ADA CODES

First condition/attribute of "ADA CODE": AFTER

```



```

Exact date: T-182 (JAN 15, 1991)

Next condition/attribute of "ADA CODE":
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]
DIAGNOSIS (250.01/250.11...) [SER = 20.84]
ADA CODE (7112) [SER = 3]
Subject of subquery: ADA CODE
AFTER JAN 15,1991

Attribute of LIVING PATIENTS:

You have 3 options for listing ADA CODES =>

  1) For ea. patient, list all ADA CODES
  2) For ea. patient, list all ADA CODES and SERVICE DESCRIPTIONS
  3) List all PATIENTS with ADA CODES you specified, but DO NOT list
    individual ADA CODES or SERVICE DESCRIPTIONS (FASTEST OPTION!!)

Your choice (1-3): 1//

```

Figure 8-1: Sample of extraction

8.2 Therapeutic Abortions

In order to comply with Federal regulations, the Service Unit Director would like to know how many therapeutic abortions were performed at his facility in the last 12 months. In this case the attribute entered is OPERATION or PROCEDURE.

```

What is the subject of your search? LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]

Attribute of LIVING PATIENTS: OPERATION

Enter PROCEDURE: THERAPEUTIC ABORTION( ABORTION THERAPEUTIC )
.
69.51 (ASPIRAT CURET-PREG TERMI)
ASPIRATION CURETTAGE OF UTERUS FOR TERMINATION OF PREGNANCY

OK? Y//

ICD Code Range(s) Selected So Far =>

1) 69.51

Enter ANOTHER PROCEDURE:

```

```
SUBQUERY: Analysis of multiple PROCEDURES

First condition/attribute of "PROCEDURE": AFTER
Exact date: T-365 (JUL 16, 1990)

Next condition/attribute of "PROCEDURE":
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]
PROCEDURE (MEDICAL) (69.51) [SER = 26.76]
Subject of subquery: PROCEDURE (MEDICAL)
AFTER JUL 16,1990

Attribute of LIVING PATIENTS:

You have 3 options for listing PROCEDURES =>

  1) For ea. patient, list all ICD CODES
  2) For ea. patient, list all ICD CODES and PROVIDER NARRATIVES
  3) List all PATIENTS with ICD CODES you specified, but DO NOT list
    individual ICD CODES or PROVIDER NARRATIVES (FASTEST OPTION!!)

Your choice (1-3): 1// 1

...HMMM, I'M WORKING AS FAST AS I CAN...

Please note: Patients whose names are marked with an "*" may have aliases.
```

Figure 8-2: Sample of therapeutic abortions

The system displays a list of patients that are found as a result of the record search.

This search also displays the number of patients who have had therapeutic abortions (TAS) as well as the range of visit dates during which the TAs occurred. To display the number of TAs, enter the attribute "THERAPEUTIC ABORTION." See Section 11.2 for more detailed information about pregnancy history.

9.0 Visits and Providers

```

Your choice: 15 VISIT INFO

Possible choices:
AFTER
BEFORE
BETWEEN
CLINIC
DATE OF VISIT
DATE VISIT CREATED
LOCATION OF ENCOUNTER
POV
PROVIDER
RELATIVE AGE
SERVICE CATEGORY
THIRD PARTY BILLED
VISIT DATE LAST MODIFIED
VISIT TYPE

```

Figure 9-1: Sample of visit information

9.1 Providers and Provider Workload

The Service Unit is conducting a productivity study. You are asked to provide information on how many colds were treated by the pharmacist as a primary provider. In this case, the subject of the search is “visit” and the attribute of the visit is diagnosis (DX). Note the example below.

```

What is the subject of your search? LIVING PATIENTS // VISIT
Attribute of VISIT: DX

Enter DX: URI
465.9 (ACUTE URI NOS)
ACUTE UPPER RESPIRATORY INFECTIONS OF UNSPECIFIED SITE

OK? Y//

ICD Code Range(s) Selected So Far =>

1) 465.9

Enter ANOTHER DX:
Computing Search Efficiency Rating.....

Subject of search: VISIT
POV (465.9)[SER = 1.33]

Attribute of VISIT:

***** PROVIDER-RELATED CRITERIA *****

You can either specify one or more providers by NAME, or.....

```

you can specify one or more PROVIDER ATTRIBUTES (affiliation, specialty, etc.) to be used as selection criteria.

Select one of the following:

- 1NAME(S) of providers
- 2ATTRIBUTE(S) of providers

Your choice: NAME(S)// 2

Attribute of PROVIDER: **DISCIPLINE**

Enter CLASS: **PHARM**

- 1PHARMACIST
- 2PHARMACY PRACTITIONER

CHOOSE 1-2: 1

Enter ANOTHER CLASS: **PHARM**

- 1PHARMACIST
- 2PHARMACY PRACTITIONER

CHOOSE 1-2: 2

Enter ANOTHER CLASS:

The following have been selected =>

- PHARMACIST
- PHARMACY PRACTITIONER

Want to save this CLASS group for future use? NO//

Attribute of PROVIDER:

When I check the providers from each encounter, you can limit my analysis to the PRIMARY provider only, SECONDARY providers, or ALL providers.

Select one of the following:

- 1PRIMARY provider only
- 2SECONDARY providers only
- 3ALL providers

Your choice: ALL// 1 PRIMARY provider only

Subject of search: VISIT

POV (465.9)[SER = 1.33]

PROVIDER ATTRIBUTES AS SPECIFIED [SER = -.1]

```

Attribute of VISIT:

VISIT NO.VISIT DATE DX  PRIMARY
AND TIMEPROVIDER
-----

4004  JAN 14,1986@10:22+MCGHEE,ROGER
6183  JAN 22,1988@12:12+WOODFORD,MICHAEL
7009  JUL  4,1986@10:04  +PHARMACIST,IHS
12631 DEC 29,1986@13:00+PHARMACIST,IHS
14645 JAN 17,1990@14:45+MYERS,JIM
20897 FEB  6,1986@13:00  +MYERS,JIM

```

Figure 9-2: Sample of provider screens

9.2 Clinic

Dr. Logan wants to know how many patient visits he has had in the emergency room in the past 12 months.

```

What is the subject of your search?  LIVING PATIENTS // VISIT
Attribute of VISIT:  CLINIC

Enter CLINIC:  EMERGENCY MEDICINE 30
Enter ANOTHER CLINIC:

The following have been selected =>

    EMERGENCY MEDICINE

Computing Search Efficiency Rating.....

Subject of search: VISIT
CLINIC (EMERGENCY ME)[SER = .92]

Attribute of VISIT:  PROV
***** PROVIDER-RELATED CRITERIA *****

You can either specify one or more providers by NAME, or....
You can specify one or more PROVIDER ATTRIBUTES (affiliation, specialty etc)
to be used as selection criteria.

Select one of the following:

1NAME(S) of providers
2ATTRIBUTE(S) of providers

```

```

Your choice: NAME(S)//

Enter PROVIDER: LOGAN,DAVID
Enter ANOTHER PROVIDER:

The following have been selected =>

LOGAN,DAVID

When I check the providers from each encounter, you can limit my analysis
to the PRIMARY provider only, SECONDARY providers, or ALL providers.

Select one of the following:

1PRIMARY provider only
2SECONDARY providers only
3ALL providers

Your choice: ALL// 1 PRIMARY provider only

Computing Search Efficiency Rating.....

Subject of search: VISIT
CLINIC (EMERGENCY ME)[SER = .92]
PROVIDER ATTRIBUTES AS SPECIFIED [SER = 1.64]

Attribute of VISIT: AFTER
Exact date: T-365 (JUL 16, 1990)

Computing Search Efficiency Rating.....

Subject of search: VISIT
CLINIC (EMERGENCY ME)[SER = .92]
PROVIDER ATTRIBUTES AS SPECIFIED [SER = 1.64]
AFTER JUL 16,1990 [SER = 99]

Attribute of VISIT:

Your choice: DISPLAY// 3 COUNT 'hits'

COUNTING....
Total: 0
Search time: 13 SECONDS

Press RETURN to continue or '^' to exit:

```

Figure 9-3: Sample of clinic

9.3 Type

The Service Unit Director wants to know how many visits were non-IHS visits.

```

What is the subject of your search? LIVING PATIENTS // VISIT
Attribute of VISIT: TYPE OF VISIT

Enter VISIT TYPE: ???

You may select one or more of the following =>

    IHS
    CONTRACT
    TRIBAL
    OTHER
    638 PROGRAM
    VA
Enter VISIT TYPE: IHS
Enter ANOTHER VISIT TYPE: NULL
I take it you want me to find only those VISITS whose
VISIT TYPE is NOT in this taxonomy? YES//

Enter ANOTHER VISIT TYPE:
Computing Search Efficiency Rating.....

Subject of search: VISIT
VISIT TYPE(INVERSE SET)[SER = .37]

Attribute of VISIT:

VISIT NO.VISIT DATE VISIT TYPE
AND TIME
-----
70708 JAN 1,1937@12:00 638 PROGRA
70532 DEC 8,1960@12:00 OTHER
48118 DEC 27,1984CONTRACT
47532 JAN 2,1985 CONTRACT
27627 JAN 3,1985 CONTRACT
18868 JAN 11,1985CONTRACT
12572 JAN 13,1985CONTRACT
12576 JAN 13,1985CONTRACT
12574 JAN 17,1985CONTRACT
12575 JAN 17,1985CONTRACT
46246 JAN 17,1985CONTRACT
5154 JAN 20,1985CONTRACT
5157 JAN 20,1985CONTRACT
3889 JAN 22,1985CONTRACT
57328 JAN 23,1985CONTRACT
57343 JAN 23,1985CONTRACT
15424 JAN 25,1985CONTRACT
15425 JAN 25,1985CONTRACT
<>

```

Figure 9-4: Sample of type

9.4 Location

The Service Unit Director wants to know how many patients were seen at one of your field clinics in the last month.

```

What is the subject of your search? LIVING PATIENTS // VISIT
Attribute of VISIT: AFTER
Exact date: T-30
Computing Search Efficiency Rating.....

Subject of search: VISIT
AFTER JUN 16,1991 [SER = 99]

Attribute of VISIT: LOCATION OF ENCOUNTER

Enter ENCOUNTER LOCATION: SAN XAVIER HEALTH CENTERTUCSONS
ELLS 11
Enter ANOTHER ENCOUNTER LOCATION:

The following have been selected =>

    SAN XAVIER

Computing Search Efficiency Rating.....

Subject of search: VISIT
AFTER JUN 16,1991 [SER = 99]
LOCATION OF ENCOUNTER (SAN XAVIER)[SER = 49]

Attribute of VISIT:

VISIT NO.VISIT DATE ENCOUNTER
AND TIME LOCATION
-----
70739 JUL 1,1991@14:22 SAN XAVIER
70748 JUL 8,1991@13:00 SAN XAVIER
70749 JUL 8,1991@13:00 SAN XAVIER
Total: 3

Press RETURN to continue or '^' to exit:

```

Figure 9-5: Sample of location

10.0 Hospitalizations and Contract Health Service

10.1 Date of Admission

The contract care officer wants a summary of all admissions to a certain hospital in the last 12 months.

```

What is the subject of your search? LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]

Attribute of LIVING PATIENTS: CHS

Enter VENDOR: TMC FAMILY MEDICAL CENTER1860481730 TUCSON
Enter ANOTHER VENDOR:

The following have been selected =>

    TMC FAMILY MEDICAL CENTER

SUBQUERY: Analysis of multiple CONTRACT SERVICES

First condition/attribute of "CONTRACT SERVICES": AFTER
Exact date: T-365 (JUL 16, 1990)

Next condition/attribute of "CONTRACT SERVICES":

Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]
CONTRACT SERVICES (TMC FAMILY M) [SER = 26.76]
Subject of subquery: CONTRACT SERVICES
AFTER JUL 16,1990

Attribute of LIVING PATIENTS:

You have 3 options for listing CONTRACT SERVICES =>

    1) For ea. patient, list all VENDORS
    2) For ea. patient, list all VENDORS and CHS SUMMARY
    3) List all PATIENTS with VENDORS you specified, but DO NOT list
       individual VENDORS or CHS SUMMARY (FASTEST OPTION!!)

Your choice (1-3): 1// 2

PATIENTSCHART CHS SUMMARY
(Alive) NUMBER
-----

```

```

WATERMAN,RAE* 100003 #624 MAR 8,1991 TMC FAMILY M $4000
WATERMAN,RAE* 100003 #622 JAN 3,1991 TMC FAMILY M $3000
WATERMAN,RAE* 100003 #621 SEP 25,1990 TMC FAMILY M (20 days) $50000
KENNEDY,HORTENC* 100113 #620 NOV 21,1990 TMC FAMILY M $999999.99
BUSH,CALVIN100148 #619 NOV 11,1990 TMC FAMILY M (20 days) $99999.33
Total: 5
Press RETURN to continue or '^' to exit:

```

Figure 10-1: Sample of date of admission

10.2 Vendor

The infection control officer needs a list of all the patients admitted to the hospital within the last year.

```

What is the subject of your search? LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]

Attribute of LIVING PATIENTS: INPATIENT ADMISSION
SUBQUERY: Analysis of multiple HOSPITAL ADMISSIONS

First condition/attribute of "HOSPITAL ADMISSION": AFTER
Exact date: T-365 (JUL 16, 1990)

Next condition/attribute of "HOSPITAL ADMISSION":

Computing Search Efficiency Rating....

Subject of search: PATIENTS
ALIVE TODAY[SER = .01]
Subject of subquery: HOSPITAL ADMISSION
AFTER JUL 16,1990

Attribute of LIVING PATIENTS:

You have 3 options for listing ADMISSIONS =>

  1) For ea. patient, list all ADMITTING DATES
  2) For ea. patient, list all ADMITTING DATES and DISCHARGE INFO
  3) List all PATIENTS with ADMITTING DATES you specified, but DO NOT list
    individual ADMITTING DATES or DISCHARGE INFO (FASTEST OPTION!!)

Your choice (1-3): 1// 2

PATIENTSCHART DISCHARGE SUMMARY

```

```
(Alive) NUMBER
-----
BUSH,CALVIN100148 DEC 22,1990=>JAN 2,1991 (11 days) INTERNAL M
Case,Lower 123456 JAN 27,1991=>JAN 28,1991 (1 days) GENERAL ME
FLINTSTONE,MARTI 103009 NOV 20,1990=>NOV 21,1990 (1 days) NEWBORN
FLINTSTONE,MARTI 103009 NOV 20,1990=>NOV 21,1990 (1 days) PEDIATRICS
FLINTSTONE,MARTI 103009 NOV 10,1990=>NOV 17,1990 (7 days) NEWBORN
GRANT,DOREEN* 100321 SEP 3,1990=>SEP 4,1990 (1 days) OBSTETRICS
JEFFERSON,BEATRI 100289 JUN 13,1991=>JUN 17,1991 (4 days) GENERAL ME
RUBBLE,BETH* 100823 NOV 6,1990=>NOV 7,1990 (1 days) GENERAL MEDI
WATERMAN,RAE* 100003 NOV 10,1990=>NOV 21,1990 (11 days) GYNECOLOG
WATERMAN,RAE* 100003 OCT 18,1990=>OCT 29,1990 (11 days) GENERAL M
WATERMAN,RAE* 100003 SEP 5,1990=>SEP 6,1990 (1 days) INTERNAL MED
WATERMAN,RAE* 100003 AUG 20,1990=>AUG 21,1990 (1 days) OBSTETRICS
WATERMAN,RAE* 100003 AUG 19,1990=>AUG 20,1990 (1 days) OBSTETRICS
Total: 13
Press RETURN to continue or '^' to exit:
```

Figure 10-2: Sample of vendor

11.0 Contraception Methods and Pregnancy History

11.1 Contraceptive Methods

Perform a search on females between the ages of 15 and 25 and print out their method of contraception.

```

***** SEARCH CRITERIA *****

What is the subject of your search? LIVING PATIENTS //

Subject of search: PATIENTS
ALIVE TODAY[SER = .02]

Attribute of LIVING PATIENTS: CONTRACEPTION METHOD

Enter METHOD: ???

You may select one or more of the following =>

EDUCATION ONLY
ORAL CONTRACEPTIVES
INTRAUTERINE DEVICE
SURGICAL STERILIZATION
BARRIER METHODS
PARTNER STERILIZED
NATURAL TECHNIQUES
MENOPAUSE
NONE
OTHER
HORMONAL IMPLANT
Enter METHOD: ANY

Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY[SER = .02]
CONTRACEPTION METHOD ANY VALUE INCLUDING NULL[SER = .99]

Attribute of LIVING PATIENTS: AGE
Condition: BETWEEN,AGES (inclusive)
Start with (and include) AGE: 15
End with (and include) AGE: 25
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY[SER = .02]
CONTRACEPTION METHOD ANY VALUE INCLUDING NULL[SER = .99]
AGE BETWEEN,AGES (inclusive) 15 and 25 [SER = 5.25]

Attribute of LIVING PATIENTS: SEX
CHOOSE FROM:
M MALE

```

```

F FEMALE
Value: F FEMALE
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY[SER = .02]
CONTRACEPTION METHOD ANY VALUE INCLUDING NULL[SER = .99]
AGE BETWEEN,AGES (inclusive) 15 and 25 [SER = 5.25]
SEX IS FEMALE [SER = 1.17]

Attribute of LIVING PATIENTS:

PATIENTSCHART AGE SEX CONTRACEPTION
(Alive) NUMBER METHOD
-----
*****1111 25FEMALE ORAL CONTRACEPTIVES
*****22222 25FEMALE EDUCATION ONLY
*****33333 25FEMALE ORAL CONTRACEPTIVES
*****44444 25FEMALE NONE
*****5555 25FEMALE BARRIER METHOD
*****6666 25FEMALE NONE
*****7777 25FEMALE ORAL CONTRACEPTIVES
*****8888 25FEMALE ORAL CONTRACEPTIVES
*****99999 25FEMALE SURGICAL STERILIZATIO
*****8889 25FEMALE NONE
*****88889 25FEMALE ORAL CONTRACEPTIVES
*****78787 25FEMALE EDUCATION ONLY
*****1112 25FEMALE INTRAUTERINE DEVICE
*****22223 25FEMALE NONE
*****4445 25FEMALE-
*****8899 25FEMALE ORAL CONTRACEPTIVES
*****8877 25FEMALE NONE
*****6565 25FEMALE SURGICAL STERILIZATION
Total: 18
Press RETURN to continue or '^' to exit:

```

Figure 11-1: Sample of contraceptive methods

11.2 Pregnancy History

A toxic waste dump has been discovered adjacent to the community water supply. A public health nurse wants to investigate the number of women in the community who have experienced a spontaneous abortion.

```

***** SEARCH CRITERIA *****

What is the subject of your search? LIVING PATIENTS //LIVING PATIENTS

Subject of search: PATIENTS
ALIVE TODAY[SER = .08]

Attribute of LIVING PATIENTS: CURRENT COMMUNITY

Enter COMMUNITY: ANYTOWN MARICOPAARIZONA
Enter ANOTHER COMMUNITY:

```

```

The following have been selected =>

  ANYTOWN

Computing Search Efficiency Rating.

Subject of search: PATIENTS
ALIVE TODAY[SER = .08]
CURRENT COMMUNITY (ANYTOWN)[SER = 49]

Attribute of LIVING PATIENTS: SEX
CHOOSE FROM:
  M MALE
  F FEMALE
Value: F FEMALE
Computing Search Efficiency Rating.....

Subject of search: PATIENTS
ALIVE TODAY[SER = .08]
CURRENT COMMUNITY (ANYTOWN)[SER = 49]
SEX IS FEMALE [SER = 1.17]

Attribute of LIVING PATIENTS: SPONTANEOUS ABORTION
Condition: GREATER THAN
Value: 0

Subject of search: PATIENTS
ALIVE TODAY[SER = .08]
CURRENT COMMUNITY (ANYTOWN)[SER = 49]
SEX IS FEMALE [SER = 1.17]
SAB GREATER THAN 0 [SER = -.1]

Attribute of LIVING PATIENTS:

PATIENTSCHART  COMMUNITYSEX  SAB
(Alive) NUMBER
-----
ALPHHAAA,RAE  1111ANYTOWN FEMALE 3
BETAAA, SALLY 2222ANYTOWN FEMALE 1
DELTA, SAMAN  3333ANYTOWN FEMALE 1
RHO, CINDY 4444ANYTOWN FEMALE 1
CHI, CAPE RAE 5555ANYTOWN FEMALE 2
Total: 5
Press RETURN to continue or '^' to exit:

NOTE: Other attributes related to pregnancy history are:
GRAVIDA
LIVE CHILDREN
PARITY
THERAPEUTIC ABORTION

```

Figure 11-2: Sample of pregnancy history

12.0 Contact Information

If you have any questions or comments regarding this distribution, please contact the OIT Help Desk by:

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

Fax: (505) 248-4363

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Email: support@ihs.gov