



RESOURCE AND PATIENT MANAGEMENT SYSTEM

# **IHS PCC Suite**

(BJPC)

## **QMan User Manual**

Volume II: Exploring the PCC Database

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Office of Information Technology (OIT)  
Division of Information Resource Management  
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## Preface

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

# Table of Contents

<b>1.0</b>	<b>Introduction.....</b>	<b>1</b>
<b>2.0</b>	<b>Release Notes.....</b>	<b>3</b>
2.1	PCC Data Entry (APCD).....	3
2.1.1	Problem Deletion.....	3
2.1.2	Problem-Related Mnemonics: Modified.....	3
2.1.3	Mnemonics: New.....	3
2.1.4	Health Factors: New and Modified.....	4
2.2	PCC Health Summary (APCH).....	4
2.2.1	TOBACCO Health Factor Category.....	4
2.2.2	Date of Death or Cause of Death.....	4
2.2.3	Problem/Medication/Allergy List-Related Items.....	4
2.2.4	Health Maintenance Reminders: Modified.....	5
2.2.5	Demographics-Related Components.....	5
2.3	PCC Management Reports (APCL).....	5
2.3.1	Problem List-Related Displays and Reports.....	5
2.3.2	PGEN/VGEN.....	6
2.3.3	Cause of Death Item in VGEN.....	7
2.3.4	QMAN (AMQQ).....	7
2.3.5	Other.....	7
2.4	General Database (AUPN).....	7
<b>3.0</b>	<b>Demographic Attributes.....</b>	<b>10</b>
3.1	Age.....	11
3.2	Current Community.....	13
3.3	Tribe.....	14
3.4	Blood Quantum.....	15
3.5	Others.....	16
3.5.1	Eligibility.....	16
3.5.2	Date of Death.....	18
3.5.3	Phone Numbers.....	18
3.5.4	Phone Number: Natural Language Interface.....	20
3.5.5	Chart Facility.....	21
3.5.6	Chart Service Unit.....	21
<b>4.0</b>	<b>Measurements, Tests, and Screenings.....</b>	<b>22</b>
4.1	Blood Pressure.....	25
4.2	Vision Screening.....	27
4.3	Serum Glucose.....	28
4.4	Rheumatoid Factor.....	30
4.5	Pregnancy Test.....	31
4.6	Breast Exam.....	32
4.7	Skin Tests.....	34

<b>5.0</b>	<b>Diagnoses and Problem List Entries .....</b>	<b>35</b>
5.1	Diabetes .....	35
5.1.1	Synonyms.....	35
5.1.2	ICD Code.....	36
5.1.3	Range of ICD Codes .....	37
5.1.4	Removing a Diagnosis from a Set .....	37
5.1.5	Inverse Set .....	38
5.1.6	"And'ed" Taxonomies .....	38
5.1.7	Output Options .....	40
5.2	Problem List Narrative .....	43
5.3	ICD Entries .....	46
<b>6.0</b>	<b>Prescriptions and Patient Education .....</b>	<b>49</b>
6.1	Prescription.....	49
6.1.1	Synonyms.....	50
6.1.2	Taxonomies.....	50
6.1.3	Output Options .....	52
6.2	Patient Education.....	52
<b>7.0</b>	<b>Immunizations .....</b>	<b>54</b>
7.1	DPT Example .....	59
7.2	Pneumovax Example.....	60
<b>8.0</b>	<b>Dental and Medical Procedures .....</b>	<b>62</b>
8.1	Extraction.....	62
8.2	Therapeutic Abortions.....	63
<b>9.0</b>	<b>Visits and Providers .....</b>	<b>65</b>
9.1	Providers and Provider Workload .....	65
9.2	Clinic.....	67
9.3	Type.....	69
9.4	Location .....	70
<b>10.0</b>	<b>Hospitalizations and Contract Health Service .....</b>	<b>72</b>
10.1	Date of Admission.....	72
10.2	Vendor.....	73
<b>11.0</b>	<b>Contraception Methods and Pregnancy History.....</b>	<b>75</b>
11.1	Contraceptive Methods.....	75
11.2	Pregnancy History .....	76
	<b>Contact Information .....</b>	<b>79</b>

## 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. Once you are 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 Patient Care Component (PCC) database. The focus will be on examining 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
- Laboratory 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" Indian Health Service (IHS) experience. These scenarios will demonstrate how to use QMan at your facility for patient care, research, epidemiology, quality assurance, planning and management. You are encouraged to try the searches presented below using QMan at your own site.

The following information is a review of how to open 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 opening QMan from the PCC menu

## 2.0 Release Notes

BJPC v2.0 p5 contains the following modifications and enhancements.

### 2.1 PCC Data Entry (APCD)

The following changes apply to the APCD application.

#### 2.1.1 Problem Deletion

Problems can no longer be deleted from the Problem List. Instead, they will be updated with a status of Deleted. The status values are now Active, Inactive, or Deleted.

#### 2.1.2 Problem-Related Mnemonics: Modified

- PL—Two action items have been added to the list manager display when using the PL mnemonic: NP—No Active Problems, and LR—Problem List Reviewed.
- All Problem List-related mnemonics (PO, APO, IPO, PPV, NO, RNO, MNN, MPO, RPO) prompt the operator for the provider who made the problem list update and the date the update was made.
- PO, MPO, and PL: Modified the Problem Add and Modify mnemonics (PO, MPO) and the PL mnemonic when used to add or modify a problem to prompt for the three new E code fields when the problem diagnosis is an injury diagnosis. When adding a problem, the fields will only be prompted for if the diagnosis is an injury diagnosis; however, when modifying a problem, they will always be prompted for so that they can be deleted if needed.
- PL and RPO: Problems can no longer be deleted from the Problem List; instead, they will be updated with a status of Deleted. The status values are now Active, Inactive, or Deleted.

#### 2.1.3 Mnemonics: New

The following Clinical Action Review Item mnemonics were added:

- PLR—Problem List Reviewed
- ALR—Allergy List Review
- MLR—Medication List Review
- NAP—No Active Problems
- NAM—No Active Medications
- NAA—No Active Allergies

## 2.1.4 Health Factors: New and Modified

- The TOBACCO category has been reorganized into three categories: TOBACCO (SMOKING), TOBACCO (SMOKELESS–CHEWING/DIP), and TOBACCO (EXPOSURE).
- Inactivated the following Health Factors: TOBACCO (category), CURRENT SMOKER & SMOKELESS, and NEVER USED TOBACCO
- Renamed the following Health Factors:
  - CURRENT SMOKER is now CURRENT SMOKER, STATUS UNKNOWN
  - PREVIOUS SMOKER is now PREVIOUS (FORMER) SMOKER
  - PREVIOUS SMOKELESS is now PREVIOUS (FORMER) SMOKELESS
- Added six new Health Factors
  - CURRENT SMOKER, EVERY DAY
  - CURRENT SMOKER, SOME DAY
  - NEVER SMOKED
  - SMOKING STATUS UNKNOWN
  - SMOKELESS TOBACCO, STATUS UNKNOWN
  - NEVER USED SMOKELESS TOBACCO

## 2.2 PCC Health Summary (APCH)

The following modifications apply to the APCH application.

### 2.2.1 TOBACCO Health Factor Category

If the health summary type had TOBACCO in the definition of which health factors would display on the health summary, the health summary type was changed to include the three new categories: TOBACCO (SMOKING), TOBACCO (SMOKELESS–CHEWING/DIP), and TOBACCO (EXPOSURE).

### 2.2.2 Date of Death or Cause of Death

When there is data in *either* the Date of Death *or* Cause of Death field in the patient's file, both fields display on the health summary.

### 2.2.3 Problem/Medication/Allergy List-Related Items

- Problems–Active and Problems–Inactive components: Added the date of the last problem list review, problem list update, date of the last documented “No Active Problems,” and the name of the provider who updated the list.

- All Medication components: Added the date of the last medication review, last medication update, and last documented “No Active Medications.”
- Allergies/Adverse Reactions components: Added date of last allergy list review, provider doing the review, and last documented “No Active Allergies.”
- The following Health Summary-related reports/displays ignore all problems with a status of “Deleted”:
  - Allergies from the Problem List component
  - Patient Wellness Handout when checking to see if diabetes is on the problem list
  - Asthma Supplement when determining if asthma is on the problem list.
  - Various Health Maintenance reminders when checking to see if a particular problem is on the problem list.
  - The 1999 through 2008 Diabetes Audits

#### 2.2.4 Health Maintenance Reminders: Modified

The TOBACCO SCREENING Health Maintenance Reminder was modified to include any of the three new tobacco categories: TOBACCO (SMOKING), TOBACCO (SMOKELESS–CHEWING/DIP), and TOBACCO (EXPOSURE).

#### 2.2.5 Demographics-Related Components

Added a Patient’s preferred Language and preferred method of receiving reminders to the Demographic Section of the health summary.

### 2.3 PCC Management Reports (APCL)

The following changes apply to the APCL application.

#### 2.3.1 Problem List-Related Displays and Reports

Modified the following displays/reports to ignore problems with a status of Deleted:

- PWA: List All Patients with Allergies/NKA on Problem List
- SALP: List Patients seen in N years with Problem List Allergies
- NALP: List Patients with Allergies entered in a Date Range
- PL: Problem List Update
- “Report Patients with No Diagnosis on the Problem List” (Diabetes report)

### 2.3.2 PGEN/VGEN

- The following data elements have been added to PGEN as search items:
  - Ethnicity
  - Preferred Language
  - Preferred Reminder Method
  - Date PL Last Reviewed
  - Date PL Last Updated
  - No Active Problems (Date Last)
  - PL Review Provider (Last)
  - Prov No Active Prob (Last)
  - Date Med Last Reviewed
  - Date Med Last Updated
  - No Active Meds (Date Last)
  - Med Review Provider (Last)
  - Med Update Provider (Last)
  - Prov No Active Med (Last)
  - Date Allergy List Reviewed
  - Allergy List Rev Prov
- The following data elements have been added to VGEN as search items:
  - Ethnicity
  - Preferred Language
  - Preferred Reminder Method
  - Problem List Reviewed?
  - Problem List Updated
  - No Active Problems?
  - Prov Rev Prob List
  - Prov Updating PL
  - Prov Updating NAP
  - Med List Reviewed?
  - Medication List Updated?
  - No Active Medications?
  - Prov Rev Med List
  - Prov Updating Med List
  - Prov Updating NAM
  - Allergy List Reviewed?

- Prov Rev Allergy List

### 2.3.3 Cause of Death Item in VGEN

The Cause of Death item on the Patient Selection Menu in VGEN now displays the ICD9 code *and* the description on the report.

### 2.3.4 QMAN (AMQQ)

- The following tobacco-related Health Factor categories have been added to QMAN as search items:
  - TOBACCO (SMOKING)
  - TOBACCO (SMOKELESS–CHEWING/DIP)
  - TOBACCO (EXPOSURE)
- The following search items were added:
  - Ethnicity
  - Preferred Language
  - Preferred Reminder Method
- Modified QMAN queries involving the Problem List to ignore problems with a status of Deleted.
- The Cause of Death attribute in QMAN displays the ICD9 code *and* the description on the report.

### 2.3.5 Other

- Removed the Diabetes Program Audit submenu from PCC Management Reports. That menu is now a part of the Diabetes Management System Application (BDM).
- Added a new set of options under PCC Management Reports that allow the site to export their ILI surveillance data and selected laboratory result data to the EPI Program in HL7 format. This addition supports meaningful use. The options are locked with a key–APCSZ EPI EXPORTS and should only be run when requested to do so by the EPI Program. The options are:
  - HLIL Export my H1N1/ILI data
  - HLLB Export Lab Data

## 2.4 General Database (AUPN)

The following changes apply to AUPN.

- V UPDATED/REVIEWED: Created new file with the following fields:

- Clinical Action
- Patient Name
- Visit
- Date/Time Entered
- Entered By
- Deleted/Entered in Error
- Deleted/Entered in Error By
- Reason Deleted
- Reason If Other
- Event Date and Time
- Ordering Provider
- Clinic
- Encounter Provider
- Parent Assessment
- External Key
- Outside Provider Name
- Ordering Location
- V HEALTH FACTOR: Converting the following data:
  - If a visit had the CURRENT SMOKER & SMOKELESS health factor recorded, the new health factors of CURRENT SMOKER, STATUS UNKNOWN, and CURRENT SMOKELESS were automatically appended to the visit if those health factors were not already documented on the visit.
  - If the a visit had the NEVER USED TOBACCO health factor recorded, then the NEVER SMOKED and NEVER USED SMOKELESS TOBACCO health factors were automatically appended to the visit.
  - If the visit had the NON-TOBACCO USER health factor documented, then the NEVER SMOKED and NEVER USED SMOKELESS TOBACCO health factors were automatically appended to the visit.
- PROBLEM: Added three ICD E Code fields to the PROBLEM file:
  - .16 E Code
  - .17 E Code 2
  - .18 E Code 3
- Added/Modified the following fields in the PROBLEM file:
  - .12 STATUS: Added DELETED as a choice
  - 2.01 PROBLEM DELETED BY: New field
  - 2.02 DATE/TIME PROBLEM DELETED: New field
  - 2.03 REASON PROBLEM DELETED: New field

- 2.04 REASON IF OTHER: New field

### 3.0 Demographic Attributes

In the SEARCH CRITERIA screen, the default response to 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 “Attribute of LIVING PATIENTS” prompt, 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	PREFERRED METHOD OF
RECEIVING REMINDERS	
	PREFERRED LANGUAGE
	PROBLEM LIST DIAGNOSIS
DISTRICT	PROCEDURE (MEDICAL)
DOB	PROVIDER
DOD	RX
ELIGIBILITY	SERVICE UNIT
ETHNICITY	
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 the example above, 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 nonbeneficiaries 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 laboratory test result, and you need to reach her immediately by phone. Use QMan Option 2 FAST Facts (natural language interface) to obtain the 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 laboratory result choices are shown below:

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

**Note:** You can only use a particular laboratory test as an attribute when passing data from the VA Lab System to the PCC.

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 found as a result of the record search display on your 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          CHART  AGE  VISION(unc.)  DATE OF VU
(Alive)          NUMBER          R & L
-----
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          CHART  GLUCOSE          GLUCOSE
DATE
(Alive)           NUMBER mg/dL
-----
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. In this example, look for the size of the reading. 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

**Note:** Any queries involving Problem List entries do not include problems with a Deleted status.

### 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 searches 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 Enter 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. You 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 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
```

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.

To avoid entering all the ICD9 codes, or the ICD9 range of codes, or all the diagnoses for diabetes, enter the information once and save the findings as a taxonomy.

Once a taxonomy is defined, the system prompts for subquery 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 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 perform 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 +
THETAAA, YOLANDA 100123 +
BETA, YVETTE* 100164 +
GAMMAGAMMA, PATR* 100292 +
GAMMA, DOREEN* 100321 +
DELTA, KIMBERLY* 100394 +
EPSILON, JOSEPH 100401 +
BETA, BROOKE* 100424 +
THETAAA, 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
    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]
        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 with 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
*****2222 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

## 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

**Web:** <http://www.ihs.gov/GeneralWeb/HelpCenter/Helpdesk/index.cfm>

**Email:** [support@ihs.gov](mailto:support@ihs.gov)