RESOURCE AND PATIENT MANAGEMENT SYSTEM

Diabetes Management System
(BDM)

User Manual

Version 2.0
June 2007

Office of Information Technology (OIT)
Division of Information Resource Management
Albuquerque New Mexico

PREFACE

This manual has been developed for physicians, mid-level practitioners, nurses, case managers, and diabetes coordinators responsible for the care of Native Americans with diabetes or conditions predisposing them for development of diabetes. It provides instructions for:

- Setup and maintenance of the RPMS Diabetes Management System including:
  - Taxonomies of Medications, Lab Tests, Health Factors, and Education Topics.
  - Identifying patients with a diagnosis of diabetes or pre-diabetes for local registers.
  - Identifying those health care providers who will be allowed to use the system for monitoring patients with diabetes or pre-diabetes.
  - Modifying flow sheets for the care of patients with diabetes.
- Setting up automatic notification for patients newly diagnosed with diabetes, pre-diabetes conditions, or diabetic complications.
- Entry of data items into the Patient Care Component (PCC) for optimizing patient care and reporting capabilities.
- Performing an electronic Diabetes or Pre-Diabetes Audit.
- Generating a variety of reports for patient and program management.

Note: RPMS software including the Diabetes Management System is subject to periodic updates based on IHS Diabetes Standards of Care. This manual provides documentation for those standards in effect as of August 2006.

TABLE OF CONTENTS

1.0 Introduction 1

2.0 Orientation 4

2.1 System Requirements 7
2.2 Security Keys 7

3.0 IHS Diabetes Register 9

3.1 IHS Pre-Diabetes Register 11

4.0 Register Maintenance 14

4.1 Taxonomy Setup 14
4.1.1 Taxonomies and Members 16
4.1.1.1 Diagnosis Taxonomies 16
4.1.1.2 Health Factor Taxonomies 17
4.1.1.3 Education Topic Taxonomies 17
4.1.1.4 Drug Taxonomies 18
4.1.1.5 Lab Test Taxonomies 20
SDM Provider Taxonomies 22
4.1.1.6 DM Audit LOINC Code Taxonomies 22
4.1.2 Taxonomy Setup Option (TM) 25
4.2 Flow Sheet Setup (FS) 31
4.2.1 Reviewing Flow Sheet Components 32
4.2.2 Deleting a Component 33
4.2.3 Designing a New Diabetes Flow Sheet 33
4.2.4 Defining Items 35
4.3 User Setup (US) 39
4.4 Add Patients from Template (AP) 41
4.5 Complications List (CL) 41
4.6 Add/Edit DMS Letters (LM) 43
4.6.1 Choosing a Word Editing Editor 47
4.7 Edit Primary Care Provider (PCP) 49
4.8 Switch to New DMS DX Names (SW) 50

5.0 Entering/Deleting Patients from the Register 52

5.1 Entering Patients Manually 52
5.2 Transferring Patients from a QMan-Generated Search Template 54
5.3 Adding Patients Using REG Mnemonic 60
5.4 Deleting Patients from the Register 61
5.5 Periodic Addition of New Cases to Your Register 62

6.0 Patient Management 65

6.1 Edit Register Data 65
6.2 Add Complications 68
6.3 Add Case Comments 72
6.4 Health Summary 73

6.5 Last Visit 74
6.6 Other PCC Visit 74
6.7 Medications 74
6.8 Diabetes Medications 74
6.9 Review Appointments 74
6.10 Audit Status 74
6.11 Flow Sheet 74
6.12 Case Summary 75
6.13 Edit Problem List 76
6.14 Lab Profile 79
6.15 Diabetes Lab Profile 79
6.16 Patient Registration Data 79
6.17 Patient Face Sheet 79
6.18 Send Mail Message 79
6.19 Make a referral 80
6.20 Adding Diagnosis 80
6.21 Print Letter 82

7.0 Switch to Another Diabetes Register (SR) 83

8.0 Browse Health Summary (BHS) 84

9.0 Report Generation 93

9.1 Follow-up Needed 93
9.2 List Patient Appointments 96
9.3 Register Reports 97
9.3.1 Case Summary, Individual 97
9.3.2 Case Summary, Multiple 97
9.3.3 Master List 98
9.3.4 Patient and Statistical Reports 98
9.3.5 Register Patient General Retrieval (Lister) 99

10.0 Retrieval of Clinical Data from the PCC 104

10.1 PCC Management Reports 104
10.2 QMan 106
10.2.1 Using Register as the Subject of a Search 106
10.2.2 Using a Template of Patients with Diabetes as an Attribute 109
10.2.3 More Complex QMan Search for Multiple Attributes 111
10.2.4 Special QMan Outputs 113

11.0 Diabetes Program Audit 114

11.1 Check Taxonomies for the 2006 DM Audit (D6TC) 115
11.2 Update/Review Taxonomies for 2006 DM Audit (D6TU) 116
11.3 Run 2006 Diabetes Program Audit (DM06) 120
11.4 Run the 2006 Audit w/predefined set of Pts (EAUD) 122
11.5 Check Taxonomies for the 2006 Pre-Diabetes Audit (PDTC) 128
11.6 Update/Review Taxonomies for 2006 PreDiab Audit (PDTU) 129
11.7 Run 2006 Pre-Diabetes/Metabolic Syndrome Audit (PR06) 131

11.8 Generation of a Patient Template for Use in the Audit Report 137
11.9 Patients with No Diagnosis of DM on Problem List (PLDX) 140
11.10 DM Register Patients with No Recorded DM Date of Onset (NDOO) ... 141
11.11 List Patients on a Register with an Appointment (APCL) 142
11.12 DM Register Patients and Select Values in 4 Months (DMV) 142
11.13 Display a Patient's Diabetes Care Summary (DPCS) 143
11.14 Print Health Summary for DM Patients with Appointments (HSRG) 144
11.15 SMBG Self Monitoring of Blood Glucose Follow up Report 144

12.0 Health Summary Tools for Diabetes Care 146

12.1 Diabetes Standard Summary 146
12.2 Diabetes Patient Care Summary 147
12.3 Pre-Diabetes Patient Care Summary 150
12.4 Health Maintenance Reminders 152
12.5 Other Health Summary Components 152

13.0 Update Diabetes Patient Data (DMU) 154

14.0 Recording Diabetes-Related Data in the PCC 165

14.1 Purpose of Visit 165
14.2 Problem List 167
14.3 Laboratory Tests 167
14.4 Health Factors 168
14.5 Examinations 170
14.6 Education Topics 171
14.7 Entry of Other Diabetes-Related Data into the PCC 172
14.8 Patient Refusals of Service 173
14.9 Medical Contraindications 173
14.10 No Response to Followup 173
14.11 Use of Customized PCC Forms for Diabetes Clinic Visits 173

15.0 Specific RPMS Rules of Behavior 175

15.1 Specific RPMS Rules of Behavior 175
15.1.1 All RPMS Users 175
15.1.1.1 Access 176
15.1.1.2 Logging On To the System 176
15.1.1.3 Information Accessibility 177
15.1.1.4 Accountability 177
15.1.1.5 Confidentiality 178
15.1.1.6 Integrity 178
15.1.1.7 Passwords 179
15.1.1.8 Backups 179
15.1.1.9 Reporting 180
15.1.1.10 Session Time Outs 180
15.1.1.11 Hardware 180
15.1.1.12 Awareness 181
15.1.1.13 Remote Access 181

15.1.2 RPMS Developers 182
15.1.3 Privileged Users 183

16.0 Glossary 185

Diabetes Audit Logic Module 191

Appendices..... 272

1.0 Introduction

Within Indian and Alaska Native populations, diabetes exacts a great toll in both mortality and morbidity. The Diabetes Management System (DMS) of the IHS Resource and Patient Management System (RPMS) provides a unique capability for improving the care and management of patients with this significant health problem.

The Diabetes Management System is continually reviewed and the tools used for patient and program management updated to reflect current standards of care for patients with diabetes or conditions predisposing patients to develop this disease. The Diabetes Management System is patient-centered and designed to be a case management tool for providers responsible for the care of those patients. In addition, it provides the capability to monitor the overall effectiveness of a diabetes program using an automated audit system. It has been designed as a supplement to the Case Management System and PCC Management Reports which have been used together in the past to meet these needs.

Long-standing features of the Diabetes Management System include:

- A Diabetes Register using the PCC Case Management System.
- A Diabetes Flow Sheet included on the PCC Health Summary.
- Monitoring and prompting of health maintenance reminders on the Health Summary.
- Standard nomenclature for recording diabetes exams and education on PCC forms.
- An automated Diabetes Program Audit report.
- Case Management System report options.
- Access to all PCC clinical data.
- E-mail bulletins identifying newly diagnosed diabetic patients or those with new complications.

In addition, the patient-focused system provides for the following:

- Automatic installation of the IHS Diabetes Register if it has not already been installed at a site.
- Installation of the IHS Pre-Diabetes Register if it has not already been installed at a site.
- Patient-focused case review and reporting.
- Simplified population of taxonomies of medications, laboratory tests, education topics, and health factors required by the Diabetes Management System.
- An automated Diabetic Program Audit report that can be generated for an individual patient, a template of patients, the entire IHS Diabetes Register at a facility, or for a random sample of patients from the register.

- An automated Pre-Diabetes Program Audit report that can be generated for an individual patient, a template of patients, the entire IHS Pre-Diabetes Register at a facility, or for a random sample of patients from the register.
- A Diabetes Patient Care Summary.
- Entry of a Register as the Subject for QMan searches.
- A PCC data entry option that allows update of Diabetes-related data as needed by Diabetes program staff.
- A menu of follow-up reports for identifying patients with unmet standards of care.

New features introduced in 2006 include:

- Modified options for reviewing and updating required taxonomies.
- PCC Data Entry mnemonics:
    - WC for documenting Waist Circumference, and
    - REG to add patients to a Case Management Register of a provider's choice.
- An Electronic Audit (EAUD) option that selects register patients for the National Standard IHS Diabetes Audit and the National Pre-Diabetes Audit based on Government Performance Result Act (GPRA) criteria. This facilitates comparison between Clinical Reporting System (CRS) Diabetes-related indicators and the traditional Diabetes Audit.
- A Pre-Diabetes Patient Care Summary Sheet on the PCC Health Summary.
- The most significant enhancement to version 2.0 is the incorporation of the new Graphical User Interface (GUI) capability – Visual Diabetes Management System.

  This distribution of the Diabetes Management System (BDM) contains Version 2.0 of Diabetes Management System and the Graphical User Interface (GUI) front end to the system. You can install just the backend (i.e. the "roll and scroll") version 2.0 of the package or you can install both. There is no requirement to install the GUI front end. Version 2.0 of BDM should be installed at all sites regardless of whether the site opts to install and use the GUI portion of the package.

- Additional General Retrieval Items.
- Enhanced Letter Insert Capability with text explaining the reason for each diabetic care item.
- Report of patients performing self blood glucose monitoring.
- Bulletins for patients with glucose values indicating Impaired Fasting Glucose and Impaired Glucose Tolerance.

The system capitalizes on data contained in the PCC and minimizes redundant data entry for local Diabetes Coordinators. Detailed instructions for implementing and utilizing the Diabetes Management System's features are included in this manual.

2.0 Orientation

Throughout this manual, sample computer dialogues are included to illustrate the performance of various steps. Within these dialogues, computer-generated text appears in gray-shaded boxes. User responses in the dialogue appear in **bold** type (*Figure 2-1*).

You will be required to press the Enter key for accepting default values and entering data. Within the sample computer dialogues that appear in this manual, the Enter key will be indicated as [ENT] (*Figure 2-1*).

```
Select Taxonomy Maintenance Option: BUL  Enter Bulletin For A Taxonomy
Select TAXONOMY NAME: NEW DIABETICS          DIABETIC TAXONOMY
Select MAIL GROUP: DIABETES TEAM
  Are you adding 'DIABETES TEAM' as a new MAIL GROUP (the 15TH)? No// Y
(Yes) [ENT]
   MAIL GROUP COORDINATOR: USER,DAVID K        DKR
  Are you adding 'DIABETES TEAM' as a new MAIL GROUP (the 1ST for this
BULLETIN)
? No// Y  (Yes) [ENT]
Select MEMBER: USER,DAVID K          DKR
Are you adding 'ROSS,DAVID K' as a new MEMBER (the 1ST for this MAIL GROUP)?
No// Y  (Yes) [ENT]
Select MEMBER: USER,BETSY
```

Figure 2-1: Sample computer screen

List Manager (ListMan)

This version of the Diabetes Management System uses a screen display called List Manager to display options for review and entry of data. Data is displayed in a "window" type screen. Menu options for editing, displaying, or reviewing the data are displayed in the bottom portion of the window.

Even though you may be using a personal computer as an RPMS terminal, the mouse may not be used for pointing and clicking to select a menu option. Additional menu options for displaying, printing, or reviewing the data may be displayed by typing **??** at the "Select Option" prompt. Entering the symbol or letter mnemonic for an action at the Select Action prompt will result in the indicated action.

> **Note**: In the example Screen Display on the next page (*Figure 2-2*); two question marks (**??**) have been entered at the Select Action prompt to display the list of secondary options available to the user.

```
Register Data              Sep 16, 1999 15:14:01       Page:  1 of 1

       PATIENT: PATIENT,SALLY                                AGE: 53
       ADDRESS: 777 N. 33RD ST.,ALBUQUERQUE,NM,88776        DOB: 01/01/1950
         PHONE: 602-555-0003                                HRN: 100010
PRIM CARE PROV: CURTIS,CLAYTON                              RES: SANTA ROSA
        STATUS: ACTIVE
WHERE FOLLOWED:
 REGISTER PROV:                          CASE MGR: ROSS,DAVID
       CONTACT:
    ENTRY DATE: MAY 30,2002                          LAST EDITED: APR 14,2003
     DIAGNOSIS: TYPE 2                               ONSET DATE: JUN 1966
      COMPLICATIONS: RETINOPATHY                     ONSET DATE: JUN 1,2002

- Previous Screen            QU Quit           ?? for More Actions

1  Edit Register Data 8  DIABETES Medications  15 DIABETES Lab Profile
2  Complications      9  Review Appointments   16 Pat. Registration Data
3  Comments           10 Audit Status          17 Pat. Face Sheet
4  Health Summary     11 Flow Sheet            18 Send Mail Message
5  Last Visit         12 Case Summary          19 (Make a Referral)
6  Other PCC Visit    13 Edit Problem List     20 Diagnosis
7  Medications        14 Lab Profile           21 Print Letter
Select Action: Quit//  ??

The following actions are also available:
+    Next Screen          FS   First Screen     SL   Search List
-    Previous Screen      LS   Last Screen      ADPL Auto Display(On/Off)
UP   Up a Line            GO   Go to Page       QU   Quit
DN   Down a Line          RD   Re Display Screen
>    Shift View to Right  PS   Print Screen
<    Shift View to Left   PL   Print List

Enter RETURN to continue or '^' to exit:
```

Figure 2-2: Sample ListMan screen

Key(s)	Action
+	In a display that fills more than one page, entering "**+**" at `Select Action` causes the next full screen to be displayed
-	If you have reviewed several screens in a display, you may return to the previous screen(s) by entering "**-**" at `Select Action`.
↑	Pressing ↑ at `Select Action` causes the screen display to move back one line at a time.
↓	Pressing ↓ at `Select Action` causes the screen display to move forward one line at a time.
→	Pressing → at `Select Action` causes the screen display to move to the right.
←	Pressing ← at `Select Action` causes the screen display to move to the

Key(s)	Action
	left.
FS	In a multi-page display entering **FS** at `Select Action` returns you to the First Screen of the display.
LS	In a multi-page display, entering **LS** at `Select Action` takes you to the Last Screen in the display.
GO	If you know which page of a multi-screen display you wish to review, entering **GO** at `Select Action` allows you to go directly to that screen.
RD	Entering **RD** at `Select Action` permits you to Re-Display the screen.
PS	Entering **PS** allows you to Print what is currently displayed on the Screen to a selected device.
PL	Entering **PL** allows you to Print an entire single or multi-screen display (called a List) to a selected device.
SL	Entering **SL** prompts you to enter a word that you wish to Search for in the List. Pressing the **Enter** key after selection of the word will cause the screen to shift to display the entry containing that word. For example, if you were many pages into a patient's Face Sheet and wanted to know the patient's age, you could choose SL, AGE, and press the Enter key to return to the age entry.
ADPL	Auto Display (On/Off): Selecting this option allows the user to either display or not display the list of menu options in the window at the bottom of the screen.
QU	Entering **QU** at `Select Action` closes the screen and returns you to the menu.

Note: All other RPMS conventions are applicable:

For certain types of data fields, primarily those that utilize lists of possible entries such as facilities, diagnoses, communities, or patients, pressing the spacebar, followed by the Enter key will insert the last entry used for that field.

The Caret: Use the caret also known as the up-hat (^) (Shift-6), a special control character, to exit from a particular activity or data entry sequence. Typing the caret at any prompt will usually take you back to the proceeding prompt or menu level. Use the caret also to exit from long data displays such as vendor lists that usually involve many screens.

Any time a possible answer is followed by //, pressing the Enter key will default to the entry displayed. If an alternative response is desired it must be typed after the //.

Example:

```
Enter new result? Y// [ENT]
             New Result:  153
           Enter new result? Y// N [ENT]
        Enter new patient?  Y//
```

Figure 2-3: Accepting a default entry

Help can be obtained at any data entry caption by typing **?**, **??**, or **???**.

Typing **???** at the prompt for `Selecting a Menu Option` will display a brief summary of each of the options in that menu.

2.1 System Requirements

In order to install and use the Diabetes Management System as illustrated in this manual, the following software must be installed:

- Kernel v8.0 through patch 1014
- FileMan v22 through patch 1003
- PCC Management Reports (APCL) v3.0 through patch 19
- PCC Data Entry (APCD) v2.0 through patch 9
- Health Summary (APCH) v2.0 through patch 9
- Taxonomy System v5.1 through patch 9
- QMan v2.0 through patch 19
- See the Installation Guide for special system requirements for installation of Visual DMS.

2.2 Security Keys

System users will require the following Security Keys:

Diabetes Management System:
BDMZMENU

BDMZ REGISTER MAINTENANCE

BDMZ SWITCH OLD DX ENTRIES

Case Management System:
ACMZMENU

PCC Management Reports:
APCLZMENU
APCLZ TAXONOMY SETUP

QMan
AMQQZMENU
AMQQZCLIN
AMQQZRPT

Health Summary (Generate Multiple Health Summaries)
APCHSMGR

Automatic notification of the case manager or diabetes coordinator of all newly diagnosed cases of diabetes or patients with glucose values indicative of impaired fasting glucose or impaired glucose tolerance enhances effective use of the Diabetes Management System. VA FileMan can be used for setting up the Diabetes Mail group and identifying members of the mail group who should receive the bulletins. A brief overview of setting up notification bulletins for patients newly diagnosed with diabetes, diabetic complications, or abnormal glucose values is provided in **Error! Reference source not found. Error! Reference source not found.**.

3.0 IHS Diabetes Register and Pre-Diabetes Register

The standard **IHS Diabetes Register** and the standard **IHS Pre-Diabetes Register** are tools for maintaining a list of your patients with diabetes or pre-diabetes, their disease type, complications, family members, and case review dates. Both registers facilitate the addition, inactivation, and removal of patients from the list; entry of data to be monitored for patients on the list; printing of case summaries; generation of reports; and retrieval of virtually all clinical data entered into the PCC for patients on the register.

The Standard **IHS Diabetes Register** is installed automatically with installation of the Diabetes Management System (BDM Version 1.0) if not already present. It provides a core set of data items with predefined lists and standard definitions. It also permits you to establish your own lists and definitions in support of these data items. The IHS Diabetes Register helps to simplify the process of creating a Case Management-based register but you are in no way limited to this core set of data items and the lists that accompany them. Remember that you always have access to all existing PCC demographic and clinical data without keeping these items in the Diabetes Register.

The Standard **IHS Pre-Diabetes Register** can be automatically installed using the Case Management System Version 2.0, Patch #6. If a Pre-Diabetes Register already exists, the user is provided with directions on how to update the existing register with the IHS standards. It provides a core set of data items with predefined lists and standard definitions. It also permits you to establish your own lists and definitions in support of these data items. The IHS Pre-Diabetes Register helps to simplify the process of creating a Case Management-based register but you are in no way limited to this core set of data items and the lists that accompany them.

> **Note:** Remember that you always have access to all existing PCC demographic and clinical data without keeping these items in the Diabetes Register.

You may wish to create additional registers. Using the *Create Register* option in the Case Management System, you may create new registers or change the name of the existing register, perhaps to maintain multiple registers for communities or facilities within a single service unit. However, in order for the Diabetes Management software to work with a register, the word ***DIABETES*** must be in the name of the register. If you change the name of an existing register, you will be asked if you wish to re-index files. You must answer *YES*.

The following data items are automatically included in the IHS Diabetes Register:

Patient Status	Complications
Active	CVA (Stroke)
Inactive	End Stage Renal Disease
Transient	High Risk Foot
Unreviewed	Hypertension
Deceased	Laser Tx for Retinopathy
Non-IHS	Major Amputation(s)
Lost to follow-up	Microalbuminuria
Noncompliant	Minor Amputation(s)
	Myocardial Infarction
Diagnosis	Retinopathy
Gestational DM	
Type 1	**Onset Date:** (for Complication)
Impaired Glucose Tolerance	
Type 2	**Primary Provider:** (display only)
Onset Date: (for Diagnosis)	**Register Provider:**
Entry Date: Date entered in Register	**Case Mgr:**
	Last Review Date:
Last Edited Date:	**Next Review Date:**
Contact:	
Where followed:	

The main advantage of using the IHS Diabetes Register is its link to all of the data in the PCC. This link eliminates redundant entry of visit-related data; for example, lab values, measurements, patient education topics, and health factors. Also, the IHS Register provides for standardization of data elements.

Upon installation of the Diabetes Management System, the Case Management System is no longer required for entry of the Diabetes-related data items in the list above. However, if you elect to maintain data elements that are not contained in the list above, you must enter those data elements using the data entry option in the Case Management System.

3.1 IHS Pre-Diabetes Register

The installation of the new IHS Pre-Diabetes Register takes place within the Case Management System Version 2.0. Patch #6 includes the installation instructions for this register. Please note the following example screen.

```
                    ************************************
                    **      CASE MANAGEMENT SYSTEM      **
                    ************************************
                                VERSION 2.0
                                 SELLS HOSP

                                 MAIN MENU

   CR     Create/Modify Register Structure
   AU     Add Authorized Users
   BL     Build Supporting Lists
   DL     Display Supporting Lists ...
   AD     Add/Delete Patients ...
   DE     Data Entry
   RG     Report Generation ...
   RD     Resource Directory ...
   QM     Q-Man (PCC Query Utility)
   DEL    Delete Entire Register
   LTR    Manage Recall Letters ...
   PDM    Install Pre-Diabetes Register
          Install IHS Diabetes Register


Select Case Management System menu option:  PDM   Install Pre-Diabetes
Register

This option will guide the User through the following:"

        A = Installing the IHS National Pre-Diabetes Register"
            if you currently are not using a Pre-Diabetes Register."

      OR

        B = Converting an existing Case Management-based register to the "IHS
            Pre-Diabetes Register, renaming your register and adding the
            following Elements:

"Register Data, Case Review Dates, Diagnoses, Complications,
 Diagnostic Criteria, and Risk Factors included in the IHS  standard."

      Answer NO if you have an existing Pre-Diabetes Register."

      Answer YES if want the IHS National Pre-Diabetes Register
      installed."
```

Figure 3-1: Sample installation

The following data items are automatically included in the IHS Pre-Diabetes Register:

Patient Status	Complications
Active	Hyperlipidemia
Inactive	Hypertension - NOS
Transient	Obesity - NOS
Unreviewed	Morbid Obesity
Deceased	Polycystic Ovaries
Non-IHS	Proteinuria
	Acquired Acanthosis Nigricans
Lost to follow-up	
Noncompliant	**Diagnostic Criteria**
	Pre-Diabetes
	75 Gram OGTT 140-199 mg/dl
	FPG 100-125 mg/dl
Diagnosis	**Metabolic Syndrome**
	Men – Waist Circumference >4 0
Impaired Fasting Glucose (IFG)	Women – Waist Circumference >35
Impaired Glucose Tolerance (IGT)	TG > 150 mg/dl
	HDL < 40 mg/dl – Men
Other Abnormal Glucose	HDL < 50 mg/dl – Women
	BP > 130/85 mm Hg
	FPG > 100 mg/dl
	Onset Date: (for Complication)
	Primary Provider: (display only)
	Register Provider:
Onset Date: (for Diagnosis)	
Entry Date:	**Case Mgr:**
Date entered in Register	
	Last Review Date:
Last Edited Date:	
	Next Review Date:
Contact:	
	Risk Factors:
	BMI > 25
	Family HX - Type 2 Diabetes
	Hx of Gestational Diabetes Mother - Gestational Diabetes Polycystic Ovary Disease
Where followed:	

The main advantage of using the IHS Pre-Diabetes Register is its link to all of the data in the PCC. This link eliminates redundant entry of visit-related data; for example, lab values, measurements, patient education topics, and health factors. Also, the IHS Register provides for standardization of data elements.

Upon installation of the Pre-Diabetes Management System, the Case Management System is no longer required for entry of the Diabetes-related data items in the list above. However, if you elect to maintain data elements that are not contained in the list above, you must enter those data elements using the data entry option in the Case Management System.

4.0 Register Maintenance

The Register Maintenance option of the Main Menu is used for customizing the Diabetes Management System to meet the needs of your program. Before you begin using the Diabetes Register, you must define members of the Diabetes Team who will be using the register, identify the patients who will be included in the register, and set up lists of medications, exams, lab tests, complications and other parameters you will be using to monitor the patients in your population with diabetes. This must be done at the facility level because of variations in terminology and file entries at various facilities.

Each of the options within the Register Maintenance Menu will be described in this section and examples will be given on how to use the option.

- To Select the Register Maintenance menu, type **RM** at the "`Select Diabetes Management System Option:`" prompt.

```
   THIS SYSTEM CONTAINS CONFIDENTIAL PATIENT INFORMATION COVERED
   BY THE PRIVACY ACT.  UNAUTHORIZED USE OF THIS DATA IS ILLEGAL

        ************************************************
        **           DIABETES MANAGEMENT SYSTEM           **
        ************************************************
                             VERSION 2.0
                             DEMO HOSPITAL
                      CURRENT USER: DEMO USER

                              MAIN MENU

   PM      Patient Management
   RP      Reports ...
   RM      Register Maintenance ...
   DEL     Delete Patient from the Register
   LM      ADD/EDIT DMS Letters
   SR      Switch to another DIABETES Register
   BHS     Browse Health Summary
   DA      Diabetes QA Audit Menu ...
   DMU     Update Diabetes Patient Data
   HS      Generate Health Summary
   MHS     Generate Multiple Health Summaries
   QMAN    Q-Man (PCC Query Utility)

Select Diabetes Management System Option:  RM
```

Figure 4-1: Selecting the RM option

4.1 Taxonomy Setup

The Taxonomy Setup option has been locked with a security key, APCLZ TAXONOMY SETUP, to prevent unauthorized alteration of taxonomies used for national program reports. Many of the DM AUDIT taxonomies are also used for data lookup by the Clinical Reporting System (CRS).

Taxonomies are groupings of functionally related data elements. Taxonomies identify, for various PCC computer programs including the Audit and Supplement programs, specific codes, code ranges, or terms that need to be used by those programs. For data elements like diagnoses and procedures, a *taxonomy* simply identifies the codes that a program should look for. For data elements like medications and lab tests, taxonomies are used to mitigate the variations in terminology that exist in RPMS tables from one facility to another.

Taxonomy Types

There are two different types of taxonomies distributed with the Diabetes Management System: software-populated ("hard-coded") and user-populated.

For data elements like diagnoses, procedures or lab tests identified by Logical Observation and Identifier National Codes (LOINC codes), the taxonomy simply identifies the standard codes for which Diabetes-related reports should look. These codes are hard-coded by the programmer into several ***software defined taxonomies*** that are distributed with PCC Management Reports (APCL) software. These taxonomies can only be updated by the software programmer.

Site-populated taxonomies are used to mitigate the variations in terminology for other types of data elements that vary from one facility to another, including medications and lab tests. This means, for example, that one site's Microalbumin data can be compared to another site, even though the same term is not used for the Microalbumin lab test. Or, one site's beta-blocker data can be compared to another site, even though the same names are not used for beta-blocker drugs.

For example, one site's Lab table might contain the term *FBS* while another site's table may contain the term *Glucose, Fasting* for the same test. PCC programs have no means for dealing with variations in spelling, spacing, and punctuation. Rather than attempting to find all potential spellings of a particular lab test, the application would look for a pre-defined taxonomy name that is installed at every facility. The *contents* of the taxonomy are determined by the facility. In this example, the application would use the "DM AUDIT GLUCOSE TESTS TAXONOMY." The individual facility will enter all varieties of spelling and punctuation for Glucose Tests used at that particular facility.

Codes and terms contained in a taxonomy are referred to as "members" of the taxonomy.

This section deals with establishment and maintenance of all taxonomies required by the 2006 Diabetes Audit, Pre-Diabetes Audit, the Diabetes Supplement and the Pre-Diabetes Supplement of the Health Summary. Section 4.1.1 Taxonomies and Members, lists the required taxonomies and identifies the required or potential members of each taxonomy, and Section 0 describes the mechanism for entering and modifying the members of each taxonomy. Those taxonomies requiring review are in bold type.

4.1.1 Taxonomies and Members

All of the Diabetes-related taxonomies identified in sections 4.1.1.1 through 0 will be present on your RPMS system upon completion of the installation of the patch establishing the 2006 Diabetes Audit Package. Some taxonomies will contain members because they were already in use at your facility, or because the 2006 Audit patch automatically added members. Others will require you to add members. For those that already contain members, you must review the members and make sure that they correspond to the lists of members identified below for each taxonomy.

4.1.1.1 Diagnosis Taxonomies

The following table contains taxonomy names and code information.

Taxonomy Name	Members ICD Dx Codes
SURVEILLANCE DIABETES	250.00-250.93
SURVEILLANCE HYPERTENSION	401.0-405.99
SURVEILLANCE TUBERCULOSIS	010.00-018.96 137.0-137.4 795.5 V12.01
DM AUDIT PROBLEM SMOKING DXS	305.1-305.13 V15.82
DM AUDIT SMOKING RELATED DXS	305.1-305.13 V15.82
DM AUDIT PROBLEM HTN DIAGNOSES	401.0-405.99
DM AUDIT PROBLEM DIABETES DX	250.00-250.93
DM AUDIT TYPE II DXS	All 250 codes with a 5th digit of 0 or 2
DM AUDIT TYPE I DXS	All 250 codes with a 5th digit of 1 or 3

Figure 4-2: Table of diagnosis taxonomy information

4.1.1.2 Health Factor Taxonomies

Individual sites may have added Health Factors to their local RPMS Health Factor Table. If so, any locally developed health should be considered for inclusion in the taxonomies identified in the following table.

Taxonomy Name	Members
DM AUDIT TOBACCO HLTH FACTORS	NON-TOBACCO USER CURRENT SMOKER CURRENT SMOKELESS PREVIOUS SMOKER PREVIOUS SMOKELESS TOBACCO SMOKER IN HOME SMOKE FREE HOME CURRENT SMOKER & SMOKELESS CESSATION-SMOKELESS CESSATION-SMOKER EXPOSURE TO ENVIRONMENTAL TOBACCO SMOKE HEALTH FACTORS CEREMONIAL USE
DM AUDIT CESSATION HLTH FACTOR	Cessation-Smokeless Cessation-Smoker
DM AUDIT TB HEALTH FACTORS	TB - Tx Complete TB - Tx Incomplete TB - Tx Unknown TB - Tx Untreated

Figure 4-3: Table of health factor taxonomy information

4.1.1.3 Education Topic Taxonomies

Individual sites may have added Education Topics to their local RPMS Education Topic Table. If so, any locally developed topics should be considered for inclusion in the taxonomies identified in the following table.

Taxonomy Name	Members
DM AUDIT DIET EDUC TOPICS	Enter DM-Diet, DM-Nutrition, DMC-Nutrition, DMC-N-Sessions 1-8, plus any locally-developed education topics related to diabetes nutrition.
DM AUDIT EXERCISE EDUC TOPICS.	Enter DM-Exercise and DMC-Exercise plus any locally-developed education topics related to diabetes exercise.

Taxonomy Name	Members
DM AUDIT OTHER EDUC TOPICS	Enter all DM and DMC education topics contained in your local table except those entered in the Diet and exercise Taxonomies described above.

Figure 4-4: Table of education topic taxonomy information

4.1.1.4 Drug Taxonomies

Following is a list of drugs for possible inclusion in required DM Drug Taxonomies. Since not all formularies are identical, it is likely that you will not have some of the drugs listed in your RPMS Drug File. For facilities that do not have a pharmacy, or in which the pharmacy does not use the RPMS Outpatient Pharmacy Package, addition of drugs to the Drug File is required before a particular drug can be included in the Taxonomy. In addition, when new drugs are used at your facility or drugs are purchased from a different manufacturer, the taxonomy must be updated to include the new drug as the new drug may have a different NDC number. Be sure to include all strengths and dosage units for each drug. When adding the drug, type only a few characters of the name and let the computer perform the lookup to capture all possible forms of the name. When asked if you want to include all drugs in the same class, answer **NO** and continue adding drugs one at a time until finished with the taxonomy.

Taxonomy Name	Members Generic Drug Name(Brand Name)
DM AUDIT ACE INHIBITORS	Benazepril (Lotensin) Captopril (Capoten) Enalapril (Vasotec) Fosinopril (Monopril) Lisinopril (Prinivil, Zestril) Moexipril (Univasc) Perindopril (Aceon) Quinapril (Accupril) Ramipril (Altace) Trandolapril (Mavik) Also include Angiotensin II Receptor Blockers (ARB) in this Taxonomy Candesartan (Atacand) Eprosartan (Teveten) Irbsesartan (Avapro) Losartan (Cozaar, Hyzaar) Telmisartan (Micardis) Valsartan (Diovan)
DM AUDIT ACARBOSE DRUGS	Acarbose (Precose) Miglitol (Glyset)
DM AUDIT ASPIRIN DRUGS	Any Aspirin (ASA)or Aspirin containing product. (Verasa, Rubrasa)

Taxonomy Name	Members Generic Drug Name(Brand Name)
DM AUDIT ANTIPLATELET THERAPY	Any non-aspirin anti-platelet product including Heparin and Warfarin (Coumadin) Cilistazol (Pletal) Clopidogrel (Plavix) Dipyridamole (Persantine) Ticlopidine (Ticlid) Aspirin + Dipyridamole (Aggrenox)
DM AUDIT INSULIN DRUGS	Any Insulin product in Drug File – Insulin, REG, NPH, Lente, Ultralente, Lispro (Humalog), Insulin Glargine (Lantus), Insulin Aspart (Novolog), Novolin, Novopen
DM AUDIT METFORMIN DRUGS	Metformin (Glucophage) Metformin & Glipizide (Metaglip) Metformin & Glyburide (Glucovance) Metformin & Rosiglitazone(Avandamet)
DM AUDIT SULFONYLUREA DRUGS	Acetohexamide (Dymelor) Chlorpropamide (Diabinese) Glimepiride (Amaryl) Glipizide (Glucotrol) Glyburide(Diabeta,Micronase,Glynase) Nateglinide (Starlix) Repaglinide (Prandin) Tolazamide (Tolinase) Tolbutamide (Orinase) Metformin & Glipizide (Metaglip) Metformin & Glyburide (Glucovance)
DM AUDIT SELF MONITOR DRUGS	Glucose Test Strips and Monitors of all types (Advantage, One-Touch, Precision, Chemstrip, Accuchek) Lancet
DM AUDIT GLITAZONE DRUGS	Troglitazone (Rezulin) Pioglitazone (Actos) Rosiglitazone (Avandia) Rosiglitazone & Metformin(Avandamet)
DM AUDIT STATIN DRUGS	Atorvastatin (Lipitor) Fluvastatin (Lescol) Lovastatin (Mevacor, Altocor, Advicor) Pravastatin (Pravachol) Simvastatin (Zocor)

Taxonomy Name	Members Generic Drug Name(Brand Name)
DM AUDIT LIPID LOWERING DRUGS	Ezetimibe (Zetia) Cholestyramine (Questran Prevalite, Locholest) Colestipol (Colestid) Colesevelam (Welchol) Clofibrate (Atromid-S) Gemfibrozil (Lopid) Fenofibrate (Tricor) Niacin (Niacor, Niaspan, Advicor)

Figure 4-5: Table of drug taxonomy information

Show this list to your medical staff and/or pharmacists to determine if there are any omissions that need to be included. However, if a physician or pharmacist tells you that a drug on the list is not used at this facility, try entering it anyway. Your drug taxonomies need to include all DM related drugs, even if the drug is no longer used at your facility because the DM Audit looks at the past year or date range entered. An example of this would be Troglitazone (Rezulin), which has been removed from the market by the FDA, but still needs to be checked by the DM Audit for those patients for whom it was prescribed during the audit period.

4.1.1.5 Lab Test Taxonomies

The potential members of Lab Taxonomies listed below often vary in spelling, spacing, and terminology at different facilities. You should involve your Laboratory Department in identifying the specific tests used at your facility. The terms listed below in the Members column are test names and partial spellings of test names that are suggested for entry to try to find all appropriate tests for inclusion. After entering and selecting a test name, you will be asked to enter Site/Specimen. Ignore that question by pressing the **Enter** key.

Many sites designate inactive lab tests by adding one of the following characters at the beginning of the test name: "z," "Z,""xx," "X," or "*." Search for these characters in your lab file and include these tests in your site-populated taxonomies because these tests may have been in use during the time frame of a report.

Taxonomy Name	Members
DM AUDIT ALT TAX	ALT SGPT
DM AUDIT AST TAX	AST SGOT
DM AUDIT CHOLESTEROL TAX	Cholesterol Screen,Cholesterol Total Cholesterol
DM AUDIT CREATININE TAX	Creatinine Serum Creatinine

Taxonomy Name	Members
DM AUDIT GLUCOSE TESTS TAX	Glucose Fasting Glucose Finger Stick Glucose Whole Blood Glucose Blood Sugar Capillary Glucose Accuchek Lifescan
DM AUDIT HGB A1C TAX	A1C Hgb A1C Hemoglobin A1C Glycosylated Hgb A1cNow
DM AUDIT LDL CHOLESTEROL TAX	LDL LDL Cholesterol Direct LDL LDL (Calc)
DM AUDIT MICROALBUMINURIA TAX	Microalbuminuia Micral Urine Albumin Microalbumin, Urine Microalbumin Random
DM AUDIT TRIGLYCERIDE TAX	Triglyceride
DM AUDIT URINALYSIS TAX	Urinalysis Urinalysis HLD Urine Dipstick Urine (Dipstick) UA or U/A UA Dipstick or U/A Dipstick UA Complete or U/A Complete
DM AUDIT URINE PROTEIN TAX	Urine Protein Urine Protein Screen Urine Protein (Spot) Protein Level, Urine Quant Urine Protein
DM AUDIT A/C RATIO TAX (new 2005)	Microalbumin/Creatinine Ratio A/C Ratio Albumin/Creatinine Ratio A:C M-Alb/Creatinine A/C

Taxonomy Name	Members
DM AUDIT FASTING GLUCOSE TESTS TAX (new 2005)	Fasting Glucose Glucose, Fasting FBS
DM AUDIT 75G 2 HR GLUCOSE (new 2005)	Glucose, 2 Hr P 75GM 2 HR GTT 75G 2Hr Glucose

Figure 4-6: Table of lab text taxonomy information

SDM Provider Taxonomies

Note: This is not used in the 2006 Audit

Providers at your facility who are practicing Staged Diabetes Management (SDM) should be entered in this taxonomy. Include mid-level providers through physicians.

Taxonomy Name	Members
DM AUDIT SDM PROVIDERS	Enter providers who are practicing Staged Diabetes Management

Figure 4-7: Table of SDM provider taxonomy information

4.1.1.6 DM Audit LOINC Code Taxonomies

Note: Although there are a number of BGP (GPRA) LOINC Code taxonomies, only those that are also used by the Diabetes Program, are listed below.

Taxonomy Name	Members
BGP LDL LOINC CODES	12773-8 13457-7 13459-3 14155-6 14814-8 14815-5 15122-5 16615-7 16616-5 17782-4 17846-7 18261-8 18262-6 2089-1 22748-8

Taxonomy Name	Members
	2574-2 3046-0 9346-8
BGP HDL LOINC CODES	12771-2 12772-0 14646-4 14813-0 15121-7 16616-5 17845-9 18263-4 2085-9 2095-8 2573-4 26015-8 26016-6 26017-4 27340-9 3044-5 32309-7 9322-9 9830-1 9832-7 9833-5
BGP TRIGLYCERIDE LOINC CODES	12951-0 14445-1 14446-9 14447-7 14448-5 14449-3 14450-1 14927-8 1644-4 2096-6 22731-4 2571-8 28554-4 29766-3 3043-7

Taxonomy Name	Members
	3044-5 3045-2 3046-0 3047-8 3048-6 30524-3 30570-6 9619-8
BGP HGBA1C LOINC	17855-8 17856-6 4547-6 4548-4 4549-2
BGP TOTAL CHOLESTEROL LOINC	14647-2 2093-3 32308-9 5932-9 9342-7
DM AUDIT A/C RATIO LOINC	14585-4 14958-3 14959-1 20621-9 30000-4 30001-2 32294-1 9318-7
DM AUDIT MICROALBUMIN LOINC	11218-5 14956-7 14957-5 30003-8
DM AUDIT URINALYSIS LOINC	24355-0 24356-8 24357-6 24365-9
DM AUDIT URINE PROTEIN LOINC	12842-1 20454-5 21482-5 26034-9 27298-9

Taxonomy Name	Members
	2887-8 2888-6 32209-9 35663-4 5804-0
DM AUDIT ESTIMATED GFR LOINC	12195-4 2164-2 33914-3 35591-7 35592-5
DM AUDIT 75GM 2HR LOINC	14995-5 1518-0 1519-8
DM AUDIT FASTING GLUC LOINC	14770-2 14771-0 14996-3 1549-5 1552-9 1554-5 1556-0 1557-8 1558-6 17865-7 35184-1

Figure 4-8: Table of LOINC Code taxonomy information

4.1.2 Taxonomy Setup Option (TM)

Taxonomy Setup is a menu option which allows the user to review, add, or remove items from the Taxonomies of medications, exams, diagnosis, health factors, education topics, dental exams, medical procedures, problem list diagnosis, ADA Codes and lab tests that will be used in monitoring patients in your Diabetes Program.

The steps for Taxonomy Setup are as follows:

1. Type **RM** to select the Register Maintenance option.
2. Type **TS** to select the Taxonomy Setup option.
3. Type **S** at the "`Select Action:`" prompt to identify the Type of taxonomy for review or updating.

4. Type **S** at the "Select Action:" prompt to identify the specific taxonomy to be reviewed or updated.

5. Type **A** to add new items to the taxonomy or **R** to remove inappropriate items from the taxonomy.

6. When prompted for the data items for inclusion in this taxonomy, type the first few letters of the name of the lab test, drug, education topic, or health factor. If there is more than one match for that data name, select the number preceding the current choice.

7. Type **Q** when taxonomy updating has been completed

The steps are shown in detail below for updating DM EDUCATION TOPICS taxonomy. The steps for populating taxonomies for each category are the same and are described below. The tables in Section 4.1.1 Taxonomies and Members (see the subsections), may be used for suggested members of each taxonomy.

- To select the Taxonomy Setup option, type **TM** at the **"**Select Register Maintenance Option:" prompt from the Register Maintenance Menu.

```
         THIS SYSTEM CONTAINS CONFIDENTIAL PATIENT INFORMATION COVERED
         BY THE PRIVACY ACT.  UNAUTHORIZED USE OF THIS DATA IS ILLEGAL

              **************************************************
              **           DIABETES MANAGEMENT SYSTEM           **
              **************************************************
                                  VERSION 2.0
                                   DEMO HOSP
                             CURRENT USER: DEMO USER

                           REGISTER MAINTENANCE - DKR DIABETES
       TM      Taxonomy Setup
       FS      Flow Sheet Setup
       US      User Setup
       AP      Add Patients from Template
       CL      Complications List
       LM      ADD/EDIT DMS Letters
       PCP     Edit Primary Care Provider
       SW      Switch to new DMS DX names


Select Register Maintenance Option: TM
```

Figure 4-9: Selecting the TM option

You will see a listing of the categories of taxonomies that may be reviewed or edited.

```
TAXONOMY UPDATE               Jun 27, 2005 09:59:46    Page: 1 of  1
ADD OR EDIT TAXONOMIES

TAXONOMY TYPE                      FILE NAME                FILE
1)  PROVIDER/PERSON                NEW PERSON               200
2)  PRIMARY CARE PROVIDER          NEW PERSON               200
3)  PROVIDER CLASS                 PROVIDER CLASS           7
4)  DRUG                           DRUG                     50
5)  LAB TEST                       LABORATORY TEST          60
6)  CPT CODE                       CPT                      81
7)  ICD DIAGNOSIS                  ICD DIAGNOSIS            80
8)  ICD PROCEDURE                  ICD OPERATION/PROCEDURE  80.1
9)  TRIBE                          TRIBE                    99999.03
10)  COMMUNITY                     COMMUNITY                999999.05
11)  LOCATION/FACILITY             LOCATION                 9999999.06
12)  EDUCATION TOPICS              EDUCATION TOPICS         9999999.09
13)  ADA CODES                     ADA CODES                9999999.31
14)  HEALTH FACTORS                HEALTH FACTORS           9999999.64
15)  LOINC CODES                   LAB LOINC                95.3

  Enter ?? for more actions

S    Select Taxonomy Type              Q    Quit
Select Action: Quit//
```

Figure 4-10: Selecting a Taxonomy Type

You will need to review the taxonomy categories of DRUG, LAB TEST, EDUCATION TOPICS, ADA CODES, and HEALTH FACTORS for the Diabetes program.

- To select the Taxonomy Category for review, type **S** at the "`Select Action:`" prompt to Select Taxonomy Type.

Selecting Taxonomy Type **12** will display the DM AUDIT EDUCATION TOPICS taxonomies for review.

```
TAXONOMY UPDATE               Jun 27, 2005 10:55:10      Page:   1 of    1
ADD OR EDIT DRUG TAXONOMIES

TAXONOMY NAME                          DESCRIPTION                      FILE

1) DM AUDIT DIABETES EDUC TOPICS  DM AUDIT DIABETES EDUC TOPICS   9999999.09
2) APCL DM NUTRITION TOPICS       PHOENIX IMS #9                  9999999.09
3) DM AUDIT DIET EDUC TOPICS      DM AUDIT DIET EDUC TOPICS       9999999.09
4) DM AUDIT EXERCISE EDUC TOPICS  DM AUDIT EXERCISE EDUC TOPICS   9999999.09
5) DM AUDIT OTHER EDUC TOPICS     DM AUDIT OTHER EDUC TOPICS      9999999.09
6) DM AUDIT SMOKING CESS EDUC     DM AUDIT SMOKING CESS EDUC      9999999.09
7) BGP GPRA EX EDUC TOPICS        BGP GPRA EX EDUC TOPICS         9999999.09

       Enter ?? for more actions



S    Select Taxonomy      A    Add a New Taxonomy   Q    Quit
Select Action:+// S
```

Figure 4-11: Selecting a Taxonomy for Update

In the same manner, selecting Taxonomy Type 4 will display DM AUDIT DRUG taxonomies for review, Taxonomy Type 5 will display DM AUDIT LAB TEST taxonomies, Taxonomy Type 14 will display DM AUDIT HEALTH FACTORS taxonomies, and Taxonomy Type 13 will display ADA CODE taxonomies.

- Type **S** to Select a taxonomy for review. In this example, Taxonomy 3, DM AUDIT DIET EDUC TOPICS has been chosen. Those items currently in the taxonomy are displayed with options to Add new items, Remove inappropriate items, or Quit when taxonomy updates are complete.

Note: all of the Education taxonomies will require updating to include the new Diabetes Curriculum codes (DMC).

```
DIABETES TAXONOMY UPDATE      Apr 17, 2005 17:10:59      Page:  1 of    1
Updating the DM AUDIT DIET EDUC TOPICS taxonomy


1)  DM-DIET
2)  DM-NUTRITION
3)  DMC-NUTRITION


        Enter ?? for more actions



A    Add Taxonomy Item    R    Remove an Item
Select Action:+// A Add Taxonomy Item
```

Figure 4-12: Adding a taxonomy item

When Add Taxonomy Item is chosen, you will be prompted to Select EDUCATION TOPICS NAME. Enter either DM or DMC to see a list of all topics in either the old DM education series or the new DMC series. The topics will display in groups of 5 and the enter key must be pressed in order to see the next group of 5 topics. A topic may be added to the list by typing the number preceding that topic and pressing the Enter key.

```
Select EDUCATION TOPICS NAME: DMC
    1   DMC-ACUTE COMPLICATIONS       DMC-AC
    2   DMC-BEHAVIORAL GOALS (MAKING HEALTHY CHANGES)       DMC-BG
    3   DMC-BLOOD SUGAR MONITORING, HOME       DMC-BGM
    4   DMC-CHRONIC COMPLICATIONS (PREVENTION & TREATMENT)       DMC-CC
    5   DMC-DIABETES MEDICINE - INSULIN       DMC-IN
Press <RETURN> to see more, '^' to exit this list, OR
CHOOSE 1-5: [ENT]
    6   DMC-DISEASE PROCESS       DMC-DP
    7   DMC-EXERCISE       DMC-EX
    8   DMC-FOOT CARE       DMC-FTC
    9   DMC-KNOWING YOUR NUMBERS (ABC)       DMC-ABC
    10  DMC-MEDICATIONS       DMC-M
Press <RETURN> to see more, '^' to exit this list, OR
CHOOSE 1-10: [ENT]
    11  DMC-MIND, SPIRIT AND EMOTION       DMC-MSE
    12  DMC-NUTRITION       DMC-N
    13  DMC-PRE-PREGNANCY COUNSELING       DMC-PPC
    14  DMC-N-AL  NUTRITION (SESSION 7: GUIDELINES FOR THE USE OF
ALCOHOL)DMC-N-AL
    15  DMC-N-CC  NUTRITION (SESSION 2: INTRODUCTION TO CARBOHYDRATE
COUNTING)   DMC-N-CC
Press [ENT] to see more, '^' to exit this list, OR
CHOOSE 1-15: 14 [ENT]
```

Figure 4-13: Adding items to a taxonomy

This process must be continued number by number until each education topic in that category has been added to the taxonomy list. When the taxonomy update has been completed, the list may be reviewed for completeness.

```
DIABETES TAXONOMY UPDATE      Apr 17, 2005 17:10:59      Page:  1 of    1

Updating the DM AUDIT DIET EDUC TOPICS taxonomy


1)  DM-DIET
2)  DM-NUTRITION
3)  DMC-NUTRITION
4)  NUTRITION (SESSION 7: GUIDELINES FOR THE USE OF ALCOHOL)
5)  NUTRITION (SESSION 2: INTRODUCTION TO CARBOHYDRATE COUNTING)
6)  NUTRITION (SESSION 8: GUIDELINES FOR CHOOSING A HEALTHY DIET)
7)  NUTRITION (SESSION 3: INTRODUCTION TO EXCHANGE LISTS)
8)  NUTRITION (SESSION 4: INTRODUCTION TO FOOD SHOPPING)
9)  NUTRITION (SESSION 5: INTRODUCTION TO HEALTHY COOKING)
10)  NUTRITION (SESSION 1: INTRODUCTION TO FOOD LABELS)
11)  NUTRITION (SESSION 6: GUIDELINES FOR EATING AWAY FROM HOME)


         Enter ?? for more actions


A    Add Taxonomy Item    R    Remove an Item
Select Action:+// A Add Taxonomy Item
```

Figure 4-14: Reviewing members of an updated taxonomy

When the updating of a single taxonomy has been completed, type **Q** and then press the **Enter** key at the "`Select action:`" prompt to leave that taxonomy. The next taxonomy requiring review and updating may then be selected and updated.

Hints for Taxonomy Updates:

- Be sure to add any locally developed education topics to the Education Topic taxonomies.
- If you have not already done so, be sure that the STATIN drugs have been removed from the LIPID LOWERING DRUGS TAX and added to the DM AUDIT STATIN DRUGS TAX.
- Also, be sure that the Aspirin drugs are in the DM AUDIT ASPIRIN DRUG TAX and all other anti-platelet drugs are included in the DM AUDIT ANTI-PLATELET DRUG TAX.
- Drug taxonomies require extra care to ensure that each drug in that category has been added to the taxonomy. There may be two or more drugs with what appear to be the same name and same strength. However, each of these drugs will need to be added to the taxonomy as they may be from different manufacturers and have different NDC numbers.
- DM AUDIT FASTING GLUCOSE TESTS, DM AUDIT A/C RATIO, and DM AUDIT 75 G 2 HR GLUCOSE were new taxonomies in 2005. To assist in determining appropriate tests for these taxonomies, especially to

differentiate between tests that should be included in the DM AUDIT MICROALBUMIN TEST taxonomy versus the DM AUDIT A/C RATIO taxonomy the following test definitions may be useful.

FASTING GLUCOSE: Units: mg/dL
Reference Range: 70-100
This is only for use after an 8 hour fast.

GLUCOSE, 2HR P 75G: Units: mg/dL
Reference Range: <140

This test requires measurement of glucose two hours after the administration of a 75 g dose of glucose (glucola).

MICROALBUMIN: Units: mg/L
Reference Range: <29
< 29 No Microalbuminuria
>29 Microalbuminuria

ALBUMIN/CREATININE RATIO: (A/C RATIO) Units: mg/g
Reference Range: <30

<30 No Microalbuminuria
30-300 Microalbuminuria
>300 Proteinuria

4.2 Flow Sheet Setup (FS)

The Flow Sheet Setup option allows selection of those diabetes-related measurements or values to be displayed in a table format either in a stand-alone report or as an attachment to a Health Summary.

A Flow Sheet table is designed to print on a single sheet of paper 80 columns wide. It will be divided into columns with a header over each column. You will need to determine what type of data you want to display in each column, how you want each column labeled and what data items you wish to be displayed in each column.

Overview of Process

1. Print the Flow Sheet (or a health summary displaying a flowsheet) for an existing diabetes patient.
2. Flow Sheets may be modified or added to the system using the RPMS Health Summary Maintenance Menu or the Diabetes Management System.
3. When using the Diabetes Management System, select FS from the Register Maintenance Main Menu.

4. A list of the current Flow Sheets available in your system will be displayed.
5. You will be given options to ADD a new Flow Sheet or Select an existing Flow Sheet.
6. Select the existing Diabetes Flow Sheet.
7. Then select the menu option to Review the components of the Diabetes Flow Sheet.

The following sample shows an example of an original diabetes Flow Sheet.

```
**** CONFIDENTIAL PATIENT INFORMATION - SEP 23,1999 3:47 PM  [DKR] ****
**** PATIENT,RAE #100003  (DMS DIABETIC FLOW SHEET SUMMARY)  pg 1 ****

PATIENT,RAE    DOB: NOV 10,1973
DEMO HOSPITAL HEALTH RECORD NUMBER: 100003
777 N. 33RD ST.,TOMBSTONE,AZ,88776

------------------- DIABETES FLOW SHEET (max 2 years) ------------------

DIABETIC FLOW SHEET
                  DM Labs      Foot Chk.   DM Meds           Pt Ed
  ---------------------------------------------------------------------

  09/23/99  :               :           :                :DM-COMPLIC
            :               :           :                :ATIONS (G)
  ---------------------------------------------------------------------
  08/26/99  :GLUCOSE=145 H  :           :                :
```

Figure 4-15: Example of an original diabetes Flow Sheet

4.2.1 Reviewing Flow Sheet Components

The design for the original Diabetes Flow sheet is demonstrated by using the option for Reviewing Flow Sheet Components for the Diabetes Flow Sheet. In reviewing the Diabetes Flow Sheet on the next page, you will note that it consists of four columns, each of which is identified as a NO. (The number identifies the placement of that data element on the Flow Sheet, e.g., 1 means that data element will be in column 1 on the Flow Sheet.) The first column contains lab results, has a label of DM Labs, and is 15 spaces wide. The only labs chosen to display are cholesterol, LDL cholesterol, HDL, Hemoglobin A1C, glucose, glucose, other, triglyceride, and urine protein. The second column contains examinations, has a label of Foot Chk., and is 10 spaces wide. It contains only one exam, the Diabetic Foot Check.

```
FLOW SHEET Components        Sep 23, 1999 14:51:19      Page: 1 of 2

DIABETIC FLOW SHEET

    Flow Sheet Components
    NO.  ORDER  TYPE                  LABEL                  WIDTH
    ---  -----  -------------------   --------------------   -----
    1     10    LAB RESULT            DM Labs                 15
                CHOLESTEROL
                LDL CHOLESTEROL
                HDL
                HEMOGLOBIN A1C
                GLUCOSE
                GLUCOSE, OTHER
                TRIGLYCERIDE
                URINE PROTEIN
    2     20    EXAMINATION           Foot Chk.               10
                DIABETIC FOOT CHECK
    3     25    MEDICATION            DM Meds                 25
                INSULIN LENTE U-100 (PORK)

+         - Prev Screen  QU Quit  ?? More Actions

1    EDIT Component                     3    REVIEW Component Members
2    DELETE Component
Select ACTION: Next Screen// 3
```

Figure 4-16: Reviewing Flow Sheet components

4.2.2 Deleting a Component

1. In order to edit the existing Diabetes Flow Sheet, type **2** at the "`Select Action:`" prompt.

2. Remove each of the four components on the Diabetes Flow Sheet.

```
+         - Prev Screen  QU Quit  ?? More Actions

1    EDIT Component                     3    REVIEW Component Members
2    DELETE Component
Select ACTION: Next Screen// 2
```

Figure 4-17: Deleting a component

4.2.3 Designing a New Diabetes Flow Sheet

The original Diabetes Flow Sheet often became lengthy and hard to read. A new Diabetes Flow Sheet may be designed as follows by choosing the option to ADD a new Component once the original components have been removed. In the example, the Diabetes Flow Sheet is redesigned to display Weight, Blood Pressure, Hgb A1C, Glucose, Cholesterol, Creatinine, Urine Protein, and Triglyceride.

```
FLOW SHEET Components   Dec 30, 1999 15:19:59      Page:  1 of  1

DIABETIC FLOW SHEET

    Flow Sheet Components
    NO.  ORDER  TYPE                 LABEL                 WIDTH
    ---  -----  -------------------  --------------------  -----

                    - Prev Screen  QU Quit  ?? More Actions

1    EDIT Component                     3    REVIEW Component Members
2    DELETE Component
Select ACTION: Quit//  1
```

Figure 4-18: Designing a new Diabetes Flow Sheet

On the subsequent screen to enter new components, you will be prompted to enter:

1. The order the item should appear in the display (which column).
2. The data type of the item. Typing **?** will allow you to review the data types available to use on the Flow Sheet.
3. The label or header to be used at the top of each column.
4. The width of the column.

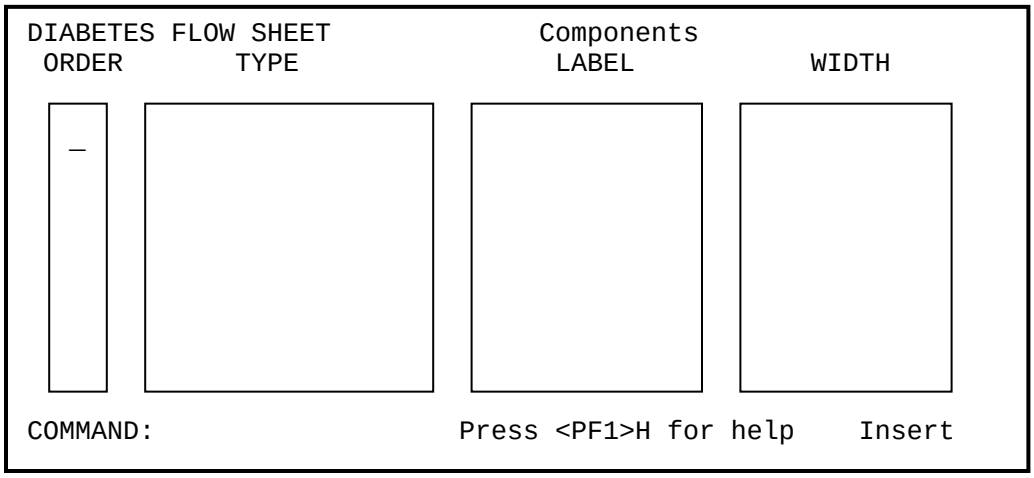

Figure 4-19: Designing a new Diabetes Flow Sheet (steps 1-4)

Example

1. Type **1** for the order (of display) of the first component at the blinking cursor.
    a. Press the Tab key to move to the Data Item "Type" field.
    b. Type the first data type as **Measurement**.
    c. Press the Tab key to move to the "Label" field.
    d. Type **WT** to indicate this column will be Weight.

e. Press the Tab key to move to the "Width" field.
f. Type a value of **10** for the width of this field.

2. Press the Tab key to return to the order of the next component and type **2**.
   a. Press the Tab key to move to the Data Item "Type" field.
   b. Type **Measurement** again to indicate the data type for Blood Pressure.
   c. Press the **Tab** key to move to the "Label" field.
   d. Type **BP** as a header for this column.
   e. Press the **Tab** key to move to the "Width" field.
   f. Type a value of **10** for the width of the field.

3. Press the Tab key to return to the order of the next component and type **3**.
   a. Press the Tab key to move to the Data Item Type field.
   b. Type **Lab** to indicate the data type for Hgb A1C.
   c. Press the Tab key to move to the LABEL field.
   d. Type **A1C** as a header for this column.
   e. Press the Tab key to move to the WIDTH field.
   f. Enter a value of **10** for the width of the field.

4. Continue this process until all eight components have been defined for the modified Diabetes Flow Sheet.

```
DIABETIC FLOW SHEET                Components
 ORDER        TYPE                   LABEL          WIDTH
 1      MEASUREMENT          WT                     10
 2      MEASUREMENT          BP                     10
 3      LAB RESULT           A1C                    10
 4      LAB RESULT           GLUCOSE                10
 5      LAB RESULT           CHOL                   10
 6      LAB RESULT           CREAT                  10
 7      LAB RESULT           UR PROT                10
 8      LAB RESULT           TRIG                   10

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

Figure 4-20: Designing a new Diabetes Flow Sheet (example)

5. To exit this screen, you must press the **F1** key followed by the **E** key.

4.2.4 Defining Items

The next step in the process of Flow Sheet development is to identify the data to be displayed under each Label. It is recommended that only a single data type or member be selected for each component of the Flow Sheet.

1. Begin by selecting option 3, *Review component members*, by typing **3** at the "Select Action:" prompt.

2. Begin with the first column or component by typing **1** at the "Which Flow Sheet Component(s):" prompt.

```
DIABETES FLOW SHEET

     Flow Sheet Components
     NO.  ORDER  TYPE                LABEL                WIDTH
     ---  -----  ------------------  -------------------  -----
     1     1     MEASUREMENT         WT                    10
     2     2     MEASUREMENT         BP                    10
     3     3     LAB RESULT          A1C                   10
     4     4     LAB RESULT          GLUCOSE               10
     5     5     LAB RESULT          CHOL                  10
     6     6     LAB RESULT          CREAT                 10
     7     7     LAB RESULT          UR PROT               10
     8     8     LAB RESULT          TRIG                  10

                    - Prev Screen  QU Quit  ?? More Actions

1    EDIT Component                    3    REVIEW Component Members
2    DELETE Component
Select ACTION: Quit//  3

Which Flow Sheet Component(s):  (1-8):  1
```

Figure 4-21: Defining Flow Sheet items (steps 1-2)

3. Type **1** at the "Select Action:" prompt to add members for each component of the Flow Sheet. This process is similar to how you added members to the taxonomies of drugs and medications in the taxonomy setup section.

```
Component Members      Jan 25, 2000 10:38:24        Page:  1 of  1


MEASUREMENT
---------------------------

                    - Prev Screen  QU Quit  ?? More Actions

1    ADD Member           2    DELETE Member
Select ACTION: Quit// 1
```

Figure 4-22: Defining Flow Sheet items (step 3)

4. The first measurement in the example given will be WT. Type **WT** at the "Which Measurement:" prompt. When WT is added it will be displayed in

the list of component members under the component MEASUREMENT. Only the one measurement of WT will be displayed for this component.

```
Select MEASUREMENT to add to the MEASUREMENT component of the
DIABETIC FLOW SHEET Flow Sheet

Which MEASUREMENT: WT
```

Figure 4-23: Defining Flow Sheet items (step 4)

5. Quit by pressing the Enter key at the "`Select Action: Quit//`" prompt.

6. Choose to review Flow Sheet component 2. Add a single member of BP.

7. Continue with this process to add members for each of the eight Flow Sheet Components.

8. As the components and their members are defined, not all of the data can be displayed on one screen. Therefore press the **Enter** key at the "`Select Action: Next Screen//`" prompt to display the rest of the components and members. The "+" and "-" signs may be used to move between the first and second screens of the display, as well.

9. When the process is completed, display the Diabetes Flow Sheet once more to ensure that all components, labels, and members have been defined correctly. Also, display a health summary for a patient known to have diabetes to ensure that the flow sheet is displayed correctly. If the column widths are too wide, the data on the flow sheet will "wrap" and it will be difficult to read. This may be corrected by changing one or more of the column widths to a smaller number.

```
FLOW SHEET Components      Jan 25, 2000 11:30:14     Page: 1 of  2


DIABETES FLOW SHEET

     Flow Sheet Components
     NO.  ORDER  TYPE                  LABEL                  WIDTH
     ---  -----  -------------------   --------------------   -----
     1     1     MEASUREMENT           WT                      10
                 HEIGHT
     2     2     MEASUREMENT           BP                      10
                 BLOOD PRESSURE
     3     3     LAB RESULT            A1C                     10
                 HEMOGLOBIN A1C
     4     4     LAB RESULT            GLUCOSE                 10
                 GLUCOSE
     5     5     LAB RESULT            CHOL                    10
                 CHOLESTEROL
     6     6     LAB RESULT            CREAT                   10
                 CREATININE

+         - Prev Screen  QU Quit  ?? More Actions


1    EDIT Component                      3    REVIEW Component Members
2    DELETE Component
Select ACTION: Next Screen//
```

Figure 4-24: Defining Flow Sheet items (step 9)

10. The resulting Flow Sheet will be similar to *Figure* .

```
** CONFIDENTIAL PATIENT INFORMATION -- JAN 25,2000 11:40 AM  [DKR] **
** PATIENT,RAE #100003  (DMS DIABETIC FLOW SHEET SUMMARY)  pg 1 *******

PATIENT,RAE    DOB: NOV 10,1973
DEMO HOSPITAL HEALTH RECORD NUMBER: 100003
777 N. 33RD ST.,TOMBSTONE,AZ,88776

------------------------- FLOW SHEETS (max 1 year) -------------------------
-

DIABETIC FLOW SHEET
              WT    BP      A1C   GLUCOSE CHOL  CREA   UR PROT  TRIG
 ------------------------------------------------------------------------
 05/10/05  : 235  :145/80 : 9.2H :      :      : .3   : NEGAT :
           :      :       :      :      :      :      : IVE   :
 ------------------------------------------------------------------------
 11/03/04  : 240  :150/85 : 9.5H :  n/r :  250H:      :       : 310H
```

Figure 4-25: Resulting flow sheet

Note: If a laboratory test has been ordered but no results are available for display, "n/r" will appear under the appropriate header for that date. See the Glucose column in the above sample flow sheet.

4.3 User Setup (US)

User Setup allows you to identify those members of the diabetes team who will be allowed access to the register. For security reasons, only those users with Manager Authority can add other authorized users or modify register components. A sample dialog for adding authorized users is provided.

Adding a New User to DMS

1. Type **US** at the "`Select Register Maintenance Option:`" prompt from the Register Maintenance menu.

2. Type **1** (Add/Delete DMS Users) at the "`Which one:`" prompt.

3. Type the user's name at the "`Select NEW DMS User:`" prompt. The process of adding/deleting occurs in a single step. If the system detects that the person is not currently an authorized user, it adds them immediately.

4. Type **YES** or **NO** at the "`Remove USER as a user of the Diabetes Management System?`" prompt, where *USER* is the user's name you typed in step 3.

5. Type **YES** or **NO** at the "`Allow USER Register Manager Authority?`" prompt, where *USER* is the user's name you typed in step 3.

6. This process can be repeated until all authorized users of the register have been entered.

```
         **           DIABETES MANAGEMENT SYSTEM           **
         ************************************************
                          VERSION 2.0
                         DEMO HOSPITAL
                  CURRENT USER: DEMO USER
                       REGISTER MAINTENANCE


   TM     Taxonomy Setup
   FS     Flow Sheet Setup
   US     User Setup
   AP     Add Patients from Template
   CL     Complications List
   LM     ADD/EDIT DMS Letters
   PCP    Edit Primary Care Provider
   SW     Switch to new DMS DX names


Select Register Maintenance Option: US  User Setup

     Select one of the following:

          1         Add/Remove DMS User
          2         List Current DMS Users

Which one: 1  Add/Remove DMS User

Select NEW DMS User: USER,BENJAMIN P          BPC

USER,BENJAMIN P is an Authorized User
of the Diabetes Management System.

Remove USER,BENJAMIN P as a user
of the Diabetes Management System? NO// [ENT]

Allow USER,BENJAMIN P's REGISTER MANAGER AUTHORITY? NO// Y
```

Figure 4-26: Adding a new user to DMS

Listing Current DMS Users

1. Type **US** at the "`Select Register Maintenance Option:`" prompt from the Register Maintenance menu.

2. Type **2** (List Current DMS Users) at the "`Which one:`" prompt.

3. The system will display a list of current DMS users (*Figure* 27).

```
     Current DMS Authorized Users  Manager Authority
     ----------------------------  -----------------
     USER,BENJAMIN P               YES
     USER,BETSY                    YES
```

Figure 4-27: Listing the current DMS users

4.4 Add Patients from Template (AP)

This option allows you to add patients with a diagnosis of diabetes to the Diabetes Register as a group. It may also be used to periodically add a template of patients newly diagnosed with diabetes. *This process will not result in duplication of patients already in the Register.*

Adding to the template

1. Type **AP** at the "`Select Register Maintenance Option:`" prompt.

```
   TM     Taxonomy Setup
   FS     Flow Sheet Setup
   US     User Setup
   AP     Add Patients from Template
   CL     Complications List
   LM     ADD/EDIT DMS Letters
   PCP    Edit Primary Care Provider
   SW     Switch to new DMS DX names

Select Register Maintenance Option: AP
```

Figure 4-28: Adding to the template (step 1)

2. Type the name of the template of patients, which is to be added to the register at the "`Which Search Template:`" prompt.

3. Type **YES** or **NO** at the "`Is that what you want?`" prompt. If you typed YES, the patients will be added in an Active Status.

```
Which SEARCH TEMPLATE: DKR NEW DM DX
             (Jan 25, 2000)       User #605 File #9000001


          There are 2 patients in this SEARCH TEMPLATE.

          The following transfer has been selected:

          From SEARCH TEMPLATE: DKR NEW DM DX
            To CMS register:  IHS DIABETES
          Transfer Status:    A - ACTIVE

          Is that what you want? No// Y  (Yes)
```

Figure 4-29: Adding to the template (steps 2-3)

4.5 Complications List (CL)

This option is used to identify those complications of diabetes, which you wish to track for your Diabetes Register population. Remember that common complications are added automatically when the Diabetes Management System is installed.

Accessing the CL Option

1. Type **CL** at the "`Select Register Maintenance Option:`" prompt.

```
   TM     Taxonomy Setup
   FS     Flow Sheet Setup
   US     User Setup
   AP     Add Patients from Template
   CL     Complications List
   LM     ADD/EDIT DMS Letters
   PCP    Edit Primary Care Provider
   SW     Switch to new DMS DX names

Select Register Maintenance Option: CL
```

Figure 4-30: Accessing the CL option

2. The system will display a list of complications.

```
Complications List Entries Sep 24, 1999 10:07:09  Page: 1 of  1

Complications
    NO.  Complication
    ---  ------------------------------
    1    CVA (STROKE)
    2    END STAGE RENAL DISEASE
    3    FIXED PROTEINURIA
    4    HIGH RISK FOOT
    5    HYPERTENSION
    6    LASER TX FOR RETINOPATHY
    7    MAJOR AMPUTATION(S)
    8    MINOR AMPUTATION(S)
    9    MYOCARDIAL INFARCTION
    10   RETINOPATHY

               - Previous Screen   QU Quit   ?? for More Actions

1  Edit Complication      2  Add Complication
Select Action: Quit//2  [ENT]
```

Figure 4-31: List of complications

Adding a Complication

1. Type **2** at the "Select Action:" prompt.

2. Type the name of the complication which you would like to add

Editing a Complication

If you have made a typographical error or wish to reword a complication, you may use this option. This option may also be used to cause complications to be triggered automatically to the register patient's complication list via normal data entry processes.

To implement this functionality, the appropriate ICD-9 codes must be assigned to each complication in a specified register. Instructions are provided below if this functionality is desired.

1. Type **1** at the "Select Action:" prompt.

2. Enter the number of the complication you would like to edit.

3. In the following example, codes have been added for End Stage Renal Disease and Diabetic Retinopathy. Begin by identifying the complication, which will be linked to ICD-9 code(s).

```
COMPLICATION: END STAGE RENAL DISEASE
Select ICD DIAGNOSES: 585.   585.        CHRONIC RENAL FAILURE
         ...OK? Yes//[ENT]   (Yes)
  Are you adding '585.' as a new ICD DIAGNOSES (the 1ST for this CMS
COMPLICATION LIST ENTRY)? No// [ENT] Y  (Yes)
Select ICD DIAGNOSES:
REGISTER:  IHS DIABETES// IHS DIABETES

COMPLICATION: RETINOPATHY
Select ICD DIAGNOSES: 250.51  250.51        DM OPHTH/T-I/IDDM,NS UNCONT
COMPLICATION/COMORBIDITY
         ...OK? Yes// [ENT]  (Yes)
  Are you adding '250.51' as a new ICD DIAGNOSES (the 1ST for this CMS
COMPLICATION LIST ENTRY)? No//[ENT] Y  (Yes)
Select ICD DIAGNOSES: 250.52  250.52        DM OPHTH MANIF/T-II/NIDDM,UNC
COMPLICATION/COMORBIDITY
         ...OK? Yes// [ENT]Y  (Yes)
  Are you adding '250.52' as a new ICD DIAGNOSES (the 2ND for this CMS
COMPLICATION LIST ENTRY)? No// Y [ENT] (Yes)
Select ICD DIAGNOSES: 362.01  362.01        DIABETIC RETINOPATHY NOS
         ...OK? Yes//[ENT] Y  (Yes)
  Are you adding '362.01' as a new ICD DIAGNOSES (the 3RD for this CMS
COMPLICATION LIST ENTRY)? No// [ENT] Y  (Yes)
Select ICD DIAGNOSES: 362.02  362.02        PROLIF DIAB RETINOPATHY
         ...OK? Yes// [ENT]  (Yes)
  Are you adding '362.02' as a new ICD DIAGNOSES (the 4TH for this CMS
COMPLICATION LIST ENTRY)? No//[ENT] Y  (Yes)
```

Figure 4-32: Editing a complication

When a provider subsequently records a complication for a register patient in the Purpose of Visit section of a PCC Ambulatory Encounter Record, it is coded by the data entry clerk. If the POV used is a code linked to a complication, that complication is automatically added to the complication list of the patient in the Register.

See Appendix C for possible complication codes to use.

4.6 Add/Edit DMS Letters (LM)

Use this option to develop custom letters. A personalized letter may be sent to an individual patient using the Patient Management (PM) Menu option. In addition, using the Reports Follow-up (RP) option, you may generate letters to a group of patients with the same follow-up needs. This option will allow you to edit an existing letter, add a new letter, delete a letter type, or list letter inserts.

The *Education Text Follow up Inserts* will print the follow up item needed and then will automatically print the associated Education for that follow up item. Using the Insert Item, FOLLOW UP, will just print the follow up items due and not the associated education text.

You can insert each text follow up individually or for each follow up item needed you can use the item |TEXT FOLLOW UP|

- To access the Add/Edit DMS letter option, type **LM** at the "Select Register Maintenance Option:" prompt.

```
   TM     Taxonomy Setup
   FS     Flow Sheet Setup
   US     User Setup
   AP     Add Patients from Template
   CL     Complications List
   LM     ADD/EDIT DMS Letters
   PCP    Edit Primary Care Provider
   SW     Switch to new DMS DX names

Select Register Maintenance Option: LM
```

Figure 4-33: Selecting the LM option

- The system will display the available options at the bottom of the screen.

```
DMS Letters                Sep 24, 1999 10:21:57         Page:    1 of  1

NO.  LETTER
---  ------------------------------
1     DIABETES LETTER 1




              - Previous Screen   QU Quit   ?? for More Actions

1  EDIT Letter            3  DELETE Letter
2  ADD Letter             4  List Letter Inserts
Select Action: Quit//  4
```

Figure 4-34: Available options for the LM option

Before attempting to review or develop any custom letters it is highly recommended that you determine what kind of word-processing editor was assigned to you when you were set up as a user in RPMS. Please review section 4.6.1 of this manual to set your text editor to screen editor instead of line editor. After making this alteration, when you encounter the word-processing field for developing letter text, a window should open and text may be entered in the open window. The list of word-processing commands available for developing a letter is included in **Error! Reference source not found.**.

Begin by selecting option 4, List Letter Inserts. The Letter inserts- First Name, Last Name, Address, Provider Name, Chart, Date, Follow up, and Education Follow up can be inserted automatically by the system when the letter is generated. Letter inserts may be entered by text (upper case must be used) or number. This option provides you with basic instructions on how to use these within the body of a letter. See the example on the next page.

```
NO.  INSERT
---  --------------------
1    FIRST NAME
2    LAST NAME
3    ADDRESS
4    PROVIDER NAME
5    FOLLOW UP
6    CHART
7    DATE
8    EDUCATE
9    FOOT EXAM EDUCATION
10   EYE EXAM EDUCATION
11   DENTAL EXAM EDUCATION
12   FLU SHOT EDUCATION
13   PNEUMO EDUCATION
14   TETANUS EDUCATION
15   PPD EDUCATION
16   A1C HEMOGLOBIN EDUCATION
17   CREATININE EDUCATION
18   URINE TEST EDUCATION
19   LIPID PANEL EDUCATION
20   PAP SMEAR EDUCATION
21   TEXT FOLLOW UP
22   NUTRITION EDUCATION
23   EXERCISE EDUCATION
24   MICROALBUMIN EDUCATION

You can include any of the INSERTS listed above by entering the NO.
surrounded by the '|' character.  For example, to include the patient's name
and address you can add 2 lines to your letter such as:
|1| |2| (or you can use |FIRST NAME| |LAST NAME|)
|3| (or you can use |ADDRESS|)

This will add 1 line for the name and multiple lines for street, city, etc.

Please note that you can only use inserts from the list above.

Select Action: Quit//  [ENT]
```

Figure 4-35: Basic instructions for editing a letter

The option, EDIT letter, allows you to review the structure of a letter. In the example on the next page, option 1 EDIT was selected to show the structure of Diabetes Letter 1. Note that the letter inserts 1, 2, and 3 were used to put the patient's name and address in the header as well as the patient's first name in the greeting. The body of the letter was typed and where follow-up needs are to be displayed, the letter insert 5 was used to indicate the system was to generate those entries into the letter. If letter

insert 4, PROVIDER NAME, is used in the salutation, the name of the provider identified as the patient's primary provider will be inserted.

If you plan to develop a number of letters and some of them will be lengthy, you may find it easier to use a personal computer on which a standard word processing program like MS Word can be run in one window while RPMS is running in another window. The letters can be developed in Word and the text copied and pasted into the open word processing field in the RPMS application. Technical assistance can be provided if you wish to use this technique for letter development.

Note: There are no security locks on letters. It is highly recommended that one user not alter another user's letters.

```
==[ WRAP ]==[ INSERT ]=============<  >==============[ <PF1>H=Help ]====

|DATE|


|FIRST NAME| |LAST NAME|
|ADDRESS|

Dear |FIRST NAME|:

I have recently reviewed your records and note that you have missed your
last three appointments.  The records indicate that you are overdue for
a number of healthcare items which are important in ensuring that you are not
developing any complications associated with your diabetes.  Please call Mary
Smith, our Clinic Diabetes Coordinator, to schedule an appointment during the
month of October.  Her telephone number is 743-7865.
The records show that you have the following healthcare needs:

|TEXT FOLLOW UP|

Sincerely,
|PROVIDER NAME|

Press F1 followed by E to exit this screen.
<======T=======T=======T=======T=======T=======T=======T======T=======>
```

Figure 4-36: Sample letter setup

The above letter setup resulted in the following letter:

```
MAY 20, 2003


RAE PATIENT
777 N. 33RD ST.
TOMBSTONE, AZ  88776


Dear RAE:

I have recently reviewed your records and note that you have missed your last
three appointments.  The records indicate that you are overdue for a number
of healthcare items which are important in ensuring that you are not
developing any complications associated with your diabetes.  Please call Mary
Smith, our Clinic Diabetes Coordinator, to schedule an appointment during the
month of October.  Her telephone number is 555-7865.

The records show that you have the following healthcare needs:

      CREATININE               *NO* CREATININE on record.

A CREATININE level is done at least yearly and is included as a part of a
group of tests run on one blood sample that helps indicate the health of your
kidneys, liver and other organs.  This information helps guide your medical
provider to recommend the most effective treatment to help keep you healthy
and lower your risk of complications caused by diabetes.

      INFLUENZA                *NO* INFLUENZA on record.

A FLU SHOT is recommended yearly for all people with diabetes and is usually
given starting in September.  People do not become infected with flu from flu
shots - though they can have a mild fever or muscle aches for a day or two as
the body clears the vaccine.

      PNEUMO                   *NO* PNEUMO on record.

PNEUMONIA VACCINATION is recommended at least once for people with diabetes
to help prevent pneumonia - a Booster is often given at age 65 if it has been
more than 5 years since your last pneumonia vaccination.


Sincerely,

BENJAMIN USER
```

Figure 4-37: Sample letter

4.6.1 Choosing a Word Editing Editor

It is highly recommended that you review an existing letter before attempting to develop a new one. The example letters shown in this section use VA Screen Editor. If you currently are using VA Line Editor, you will be unable to develop the custom letters as described in this section. The following depicts what you will see when entering a word processing field, your default editor has been set to the RPMS line editor. You may change to the full screen editor as follows.

```
1>
```

Figure 4-38: Line Editor screen

1. At any prompt for a menu option, type **TBOX**. ToolBox is a secondary menu option that all users have but do not normally see on their screen. See *Figure*39 User's Toolbox.

2. Type **EDIT** at the "`Select User's Toolbox Option:`" prompt. The system will open a window.

```
   DE     Behavioral Health Data Entry Menu ...
   RPTS   Reports Menu ...
   MUTL   Manager Utilities ...

Select Behavioral Health Information System Option: TBOX  User's Toolbox


          Display User Characteristics
          Edit User Characteristics
          Electronic Signature code Edit
          Menu Templates ...
          Spooler Menu ...
          Switch UCI
          TaskMan User
          User Help

Select User's Toolbox Option: Edit User Characteristics
```

Figure 4-39: Using TBOX

3. Press the down arrow key (↓) to move to the "`Preferred Editor`" field

4. Type **SC** at the "`Preferred Editor:`" field and then press the **Enter** key to see the editor change to SCREEN EDITOR – VA FILEMAN.

5. Continue to press the down arrow until the cursor reaches the "COMMAND:" prompt.

6. Type **S** at the "`Command:`" prompt and then press the **Enter** key.

7. Type **E** at the "`Command:`" prompt and then press the **Enter** key to save and exit the screen. The Edit User Characteristics screen and fields are shown in *Figure*40.

```
                    EDIT USER CHARACTERISTICS
NAME: PATIENT,SAMANTHA A                                  PAGE 1 OF 1
_____________________________________________________________________________

                  INITIAL: SAS                          PHONE:
                NICK NAME:                       OFFICE PHONE:
                                                  VOICE PAGER:
                                                DIGITAL PAGER:

    ASK DEVICE TYPE AT SIGN-ON: DON'T ASK
                   AUTO MENU: YES, MENUS GENERATED
                 TYPE-AHEAD: ALLOWED
              TEXT TERMINATOR:
             PREFERRED EDITOR: SCREEN EDITOR - VA FILEMAN

Want to edit VERIFY CODE (Y/N):
_____________________________________________________________________________
     Exit     Save     Refresh

Command:  Press E and answer "YES" when asked whether you wish to save
changes.

COMMAND: S [ENT]      Press <PF1>H for help    Insert
         E [ENT]
```

Figure 4-40: Setting Screen Editor

4.7 Edit Primary Care Provider (PCP)

If the Primary Care Provider listed on the Patient Management Screen is no longer the Primary Care Provider for a patient, the provider may be changed or deleted. This menu option may also be used to enter a Primary Care Provider for a patient on the register.

Deleting or Editing a PCP

1. Type **PCP** at the "`Select Register Maintenance Option:`" prompt.

2. Type the name or chart number of the patient at the "`Select Patient:`" prompt.

3. Type the name of a new designated provider at the "`Primary Care Provider:`" prompt.

4. If the patient no longer has a Primary Care Provider, an existing entry may be deleted by typing **@** at the "`Primary Care Provider:`" prompt. Type **YES** at the "`SURE YOU WANT TO DELETE?`" prompt to confirm deletion.

```
Select Register Maintenance Option: PCP  Edit Primary Care Provider

Select Patient: PATIENT,SALLY      F 01-01-1950 000350003    SE 100010

PRIMARY CARE PROVIDER: CURTIS,CLAYTON// @
SURE YOU WANT TO DELETE? YES
```

Figure 4-41: Editing PCP information (steps 1-4)

5. The patient informaiton will then reflect the change in PCP.

```
Register Data           Jun 06, 2003 10:11:32          Page:  1 of    1
       PATIENT: PATIENT,SALLY                            AGE: 53
       ADDRESS: 777 N. 33RD ST.,ALBUQUERQUE,NM,88776    DOB: 01/01/1950
         PHONE: 602-555-0003                            HRN: 100010
PRIM CARE PROV:                                         RES: SANTA ROSA
        STATUS: NON-IHS
WHERE FOLLOWED: DEMO HOSP
 REGISTER PROV:                         CASE MGR: MARTIN,GRETCHEN
       CONTACT: PATIENT,FOREST
    ENTRY DATE: DEC 2,1998                        LAST EDITED: JUN 6,2003
     DIAGNOSIS: TYPE 2                               ONSET DATE: JUN 1966
COMPLICATIONS: END STAGE RENAL DISEASE               ONSET DATE: AUG 1987
               HYPERTENSION
               MYOCARDIAL INFARCTION
```

Figure 4-42: Editing PCP information (step 5)

4.8 Switch to New DMS DX Names (SW)

The terminology for the classification of Diabetes has changed over the years. If the original Diabetes Register was set up under the Case Management System, a variety of terms may have been used to enter diagnoses for patients on the register. To ensure that the reports run from the Diabetes Management System and QMan accurately identify patients by diagnosis, the original diagnoses need to be standardized to one of the four diagnoses in the Diabetes Management System: Type 1, Type 2, Gestational Diabetes, or Impaired Glucose Tolerance.

To Switch to new DMS DX names

1. Type **SW** at the "`Select Register Maintenance Option:`" prompt.

```
   TM     Taxonomy Setup
   FS     Flow Sheet Setup
   US     User Setup
   AP     Add Patients from Template
   CL     Complications List
   LM     ADD/EDIT DMS Letters
   PCP    Edit Primary Care Provider
   SW     Switch to new DMS DX names


Select Register Maintenance Option: SW
```

Figure 4-43: Using the SW option (step 1)

2. Type **1**, **2**, **3**, or **4** to identify the new DX which will be substituted for the old term at the "`Which DX:`" prompt. In the following example (*Figure* 44 and *Figure* 45), the old diagnosis terms will be switched to TYPE 2.

```
Select the DMS DIAGNOSIS

     Select one of the following:

          1         TYPE 1
          2         TYPE 2
          3         GESTATIONAL DM
          4         IMPAIRED GLUCOSE TOLERANCE
Which DX: 2 TYPE 2
```

Figure 4-44: Using the SW option (step 2)

3. Identify the old term that will be converted by typing the old DX exactly as it appears in the CMS Register including upper and lower case letters at the "`CMS Diagnosis List Entry:`" prompt.

```
Current CMS DIAGNOSIS LIST ENTRIES that will be changed to:
     TYPE 2

     NO.  NAME
     ---  ------------------------------
Choose from:
   DIABETES
   DIABETES TYPE 1
   DIABETES TYPE 2
   GESTATIONAL DM
   IMPAIRED GLUCOSE TOLERANCE
   TYPE 1
   TYPE 2



CMS DIAGNOSIS LIST ENTRY: DIABETES TYPE 2
```

Figure 4-45: Using the SW option (step 3)

4. You will be asked if you really want to convert the old entries to the new. Type **YES** to complete the conversion for that term. The process may be repeated for each of the old diagnostic terms.

> **Note**: Current practice suggests that setting up separate and distinct registers for patients with a diagnosis of Impaired Glucose Tolerance or Gestational Diabetes may be a better approach than maintaining these patients in the same register as those who have been diagnosed with Diabetes.

5.0 Entering/Deleting Patients from the Register

There are four ways to add patients to the Diabetes Register:

- Enter patients manually, one at a time
- Transfer patients from a QMan-generated search template[1]
- Transfer patients from a File Manager file[2]
- Add patients to the register using the Data Entry mnemonic, REG

1. QMan is a menu option in Diabetes Management. However, you will need three additional security keys to use QMan for Diabetes Management. See your Site Manager for assignment of the security keys: AMQQZMENU, AMQQZCLIN, and AMQQZRPT.

2. Transfer of patients from a File Manager file is seldom, if ever, required. It involves using FileMan to do a search for a file of patients with diabetes, creating a template of those patients, and then using the menu option for transferring this template of patients into the Diabetes Management System. If this functionality is required, please seek technical assistance from your local or area Information Systems personnel.

Each of the standard methods for entering patients into the Diabetes Register is described in sections 5.1 through 5.5.

5.1 Entering Patients Manually

Enter the chart number or name (Last Name, First Name) of the patient to be added to the register. If the patient is not currently a member of the register you will be prompted to add the patient. See the example in *Figure 5-1*:

```
   PM     Patient Management
   RP     Reports ...
   RM     Register Maintenance ...
   DEL    Delete Patient from the Register
   LM     ADD/EDIT DMS Letters
   SR     Switch to another DIABETES Register
   BHS    Browse Health Summary
   DA     Diabetes QA Audit Menu ...
   DMU    Update Diabetes Patient Data
   HS     Generate Health Summary
   MHS    Generate Multiple Health Summaries
   QMAN   Q-Man (PCC Query Utility)

Select Diabetes Management System Option: PM  Patient Management

Select PATIENT NAME: PATIENT,BARRY
                                          M 05-05-1989 054270542    SE
101624
     PATIENT,BARRY is not on
     the IHS DIABETES Register

Add this client to the Register? NO// Y
```

Figure 5-1: Entering patients manually

As soon as the Enter key has been pressed, the following screen will be displayed (*Figure 5-2*) and you may begin to display, edit, or print data on this patient.

```
Register Data          May 21, 2003 15:57:10          Page:  1 of 1

       PATIENT: PATIENT,BARRY                          AGE: 68
       ADDRESS: 123 CHERRY LANE,TEMPE,AZ,88776         DOB: 05/04/1935
         PHONE: 602-555-0445                           HRN: 101422
PRIM CARE PROV:                                        RES: AJO
        STATUS: ACTIVE
WHERE FOLLOWED:
 REGISTER PROV:                        CASE MGR:
       CONTACT:
    ENTRY DATE: MAY 30,2002                        LAST EDITED:
     DIAGNOSIS: (NO DIAGNOSIS ON FILE FOR THIS PATIENT)
 COMPLICATIONS: (NO COMPLICATIONS LISTED FOR THIS PATIENT)

- Previous Screen            QU Quit          ?? for More Actions

1 Edit Register Data  8 DIABETES Medications 15 DIABETES Lab Profile
2 Complications       9 Review Appointments  16 Pat. Registration Data
3 Comments            10 Audit Status        17 Pat. Face Sheet
4 Health Summary      11 Flow Sheet          18 Send Mail Message
5 Last Visit          12 Case Summary        19 (Make a Referral)
6 Other PCC Visit     13 Edit Problem List   20 Diagnosis
7 Medications         14 Lab Profile         21 Print Letter
Select Action: Quit//
```

Figure 5-2: Entering patients manually, screen 2

5.2 Transferring Patients from a QMan-Generated Search Template

This two-step process allows you to 1) quickly identify all diabetes patients who are active at your facility, based on PCC data, and 2) load them into your IHS Diabetes Register. For active IHS User population statistics, patients are generally considered to be active if they have had one or more visits for diabetes in the past three years. For the purposes of the Diabetes program, more stringent criteria more closely resembling GPRA criteria may be desired.

Each facility may have different criteria for identifying the patients who will be added to the template. In the following example, the search criteria used are that the patient had at least one diagnosis of diabetes (codes 250-250.93), lived in the service unit area (GPRA taxonomy of communities), and had at least two visits to core medical clinics (01,06,10,12,13,20,24,28,57,70,80,89) in the last three years. This may result in patients inadvertently added to the register because of miscoding but they can be easily recognized by age or chart review and removed.

> **Note:** Your facility may already have a taxonomy of communities in the service area used in GPRA reports. The site manager would know the name of this taxonomy.

GPRA criteria for screening visits based on clinic are more complex than presented in this example. See the CRS Version 6.1 User Manual for definitions of core medical clinics.

The specific QMan dialogue to accomplish this search follows. User responses and instructions are in bold type.

```
*****  SEARCH CRITERIA  *****

Subject:  LIVING PATIENTS
Attribute of Living Patients:  DX
Enter DX:  250.00-250.93
      250.00    Diabetes Uncompl Type II/NIDDM   Okay?: YES

      250.93      Diab W Compl NOS Type I/IDDM     Okay?:  YES
ICD codes in this range =>
      [QMan lists all codes between 250.00 and 250.93]
Enter Another DX: [ENT]
Want to save this group for future use?  NO
First condition of Diagnosis:  SINCE
Exact Date:  (Enter the date 3 years ago)
Next condition of Diagnosis:  AT LEAST
Value:  1
Next condition of Diagnosis:  [ENT]
Attribute of Living Patients: COMMUNITY[ENT]
Community: GPRA COMMUNITIES [ENT]
      Members of GPRA Taxonomy =>

ADAIR
AFTON
BARTLESVILLE
BIXBY
BROKEN ARROW
CATOOSA
CHELSEA
CLAREMORE
JAY
LOCUST GROVE
MIAMI
PRYOR
SAPULPA

Enter ANOTHER COMMUNITY: [ENT]

The following have been selected =>

    ADAIR
    AFTON
    BARTLESVILLE
    BIXBY
    BROKEN ARROW
    CATOOSA
    CHELSEA
    CLAREMORE
    JAY
    LOCUST GROVE
    MIAMI
    PRYOR
    SAPULPA

Want to save this COMMUNITY group for future use? No//   (No)
Computing Search Efficiency
Rating.........................................
```

```
.........


  Subject of search: PATIENTS
     ALIVE TODAY
     CURRENT COMMUNITY (ADAIR/AFTON...)

Attribute of LIVING PATIENTS: VISIT

SUBQUERY: Analysis of multiple VISITS


First condition of "VISIT": CLINIC

Enter CLINIC: [CORE MEDICAL CLINICS

Members of CORE MEDICAL CLINIC Taxonomy =>

GENERAL
DIABETIC
INTERNAL MEDICINE
PEDIATRIC
WELL CHILD
FAMILY PRACTICE
WOMEN'S HEALTH SCREENING
URGENT CARE
EVENING CLINIC
IMMUNIZATION

Enter ANOTHER CLINIC: [ENT}

The following have been selected =>
    GENERAL
DIABETIC
INTERNAL MEDICINE
PEDIATRIC
WELL CHILD
FAMILY PRACTICE
WOMEN'S HEALTH SCREENING
URGENT CARE
EVENING CLINIC
IMMUNIZATION
DIABETIC

Want to save this CLINIC group for future use? No// [ENT]  (No)

Next condition of "VISIT": DURING THE PERIOD
Exact starting date: 6/1/02  (JUN 01, 2002)
Exact ending date: 6/1/05  (JUN 01, 2005)


        Subject of subquery: VISIT
        CLINIC (DIABETIC/INTERNAL MED...)
        BETWEEN BETWEEN JUN 1,2002 and JUN 1,2005@23:59:59

Next condition of "VISIT": AT LEAST
```

```
Enter the value which goes with AT LEAST _ EXIST; e.g., AT LEAST _ EXIST 3,
AT LEAST _ EXIST 10, etc.
Value: 2


        Subject of subquery: VISIT
        CLINIC (DIABETIC/INTERNAL MED...)
        BETWEEN BETWEEN JUN 1,2002 and JUN 1,2005@23:59:59
        AT LEAST 2 EXIST

Next condition of "VISIT": [ENT]

Computing Search Efficiency Rating....


  Subject of search: PATIENTS
     ALIVE TODAY
     CURRENT COMMUNITY (ADAIR/AFTON...)
     DIAGNOSIS (250.01/250.11...)
        Subject of subquery: VISIT
        CLINIC (DIABETIC/INTERNAL MED...)
        BETWEEN BETWEEN JUN 1,2002 and JUN 1,2005@23:59:59
        AT LEAST 2 EXIST


Attribute of LIVING PATIENTS: [ENT]

*** Q-Man Output Options ***
Select one of the following:
  1  DISPLAY results on the screen
  2  PRINT results on paper
  3  COUNT 'hits'
  4  STORE results of a search in a FM search template
  5  SAVE search logic for future use
  6  R-MAN special report generator
  9  HELP
  0  EXIT
Your choice:  4 - Store Results of Search in FileMan Template

Enter the name of the search template:  PTS FOR IHS DM REGISTER

Are you adding 'PTS FOR IHS DM REGISTER' as a new sort template?  YES
Description:  [ENT]

Want to run this task in background?  NO
```

Figure 5-3: Transferring Patients from a QMan-Generated Search Template

QMan will then display each patient that matches the specified criteria as it stores the patients in the template called PTS FOR IHS DM REGISTER. When finished, the number of patients stored is displayed.

A site setting up the register for the first time may choose to include or exclude different attributes in selecting patients to transfer. For example, by selecting the additional attribute of Community, you may limit the patients in the register only to the communities in your service population. Another way of delimiting the group of

patients to be included in the template is to select DX of 250-250.93 as an attribute with no time limitations, and then selecting VISIT with limiting conditions of clinics and time frames. Other sites may choose to restrict the patients in the template even more by selecting a QMan attribute of Classification and limiting the Class to Indian/Alaska Native.

For the next step of loading the patients into your register, exit QMan and return to the Diabetes Management System main menu.

1. Type **RM** the "`Select Diabetes Management System Option:`" prompt in the Register Maintenance menu option.

2. Type **AP** at the "`Select Register Maintenance Option:`**"** prompt.

```
REGISTER MAINTENANCE


   TM     Taxonomy Setup
   FS     Flow Sheet Setup
   US     User Setup
   AP     Add Patients from Template
   CL     Complications List
   LM     ADD/EDIT DMS Letters
   SW     Switch to new DMS DX names
Select Register Maintenance Option: AP  Add Patients from Template
```

Figure 5-4: Transferring Patients from a QMan-Generated Search Template (steps 1-2)

3. Type **PTS FOR IHS DIABETES REGISTER** at the "`Which Search Template:`" prompt. If the transfer is approved the system will then move all of the patients from the search template into the IHS Diabetes Register and assign them the status of ACTIVE.

```
              Select SEARCH TEMPLATE to transfer
              patients to the Diabetes Register


Which SEARCH TEMPLATE: PTS FOR IHS DIABETES REGISTER
                            (Sep 20, 1999)      User #605 File #9000001


         There are 77 patients in this SEARCH TEMPLATE.



         The following transfer has been selected:

         From SEARCH TEMPLATE: PTS FOR IHS DIABETES REGISTER
           To CMS register:  IHS DIABETES
         Transfer Status:    A - ACTIVE
         Is that what you want? No// Y

         Transfer of patients is complete.
         All patients should be reviewed and all
         patient data updated in the IHS DIABETES register
```

Figure 5-5: Transferring Patients from a QMan-Generated Search Template (step 3)

When this process is complete, you should review the patients transferred into the register to determine their appropriateness. You may delete patients or change their status to Inactive, Transient, Unreviewed, Deceased, Lost to Followup, Non-IHS, or Noncompliant using the Edit Register Data option under the Patient Management menu.

5.3 Adding Patients Using REG Mnemonic

If a provider notes that a patient is not on the Diabetes Register or a related register he/she may alert PCC Data Entry staff to add that patient to the appropriate register. The provider must identify the register to which they wish the patient added. For example, if a provider wished a patient added to the IHS DIABETES Register he/she would record: **REG- IHS DIABETES** in the Chief Complaint section of the PCC Encounter Form. Data entry staff may then use the mnemonic, REG, to add the patient to the specified register.

> **Note**: The REG mnemonic is distributed as Not Allowed in PCC Data Entry patch 8. In order to use this mnemonic the Data Entry Supervisor will need to use the menu option, **MNE Update PCC Mnemonic's Allowed/Not Allowed**, to allow use of this mnemonic.

When using the REG mnemonic, the data entry staff will need to select which type of register will be updated. The Diabetes Registers are Case Management registers. A sample dialogue of using the REG mnemonic is displayed below.

```
MNEMONIC: REG [ENT]      Add Patient to a Register     ALLOWED     NON-
VISIT/VISIT MNEMONIC
The following is a list of registers this patient can be added to.
If you choose a CASE MANAGEMENT REGISTER you will be prompted to
enter which of the 36 CMS registers to add the patient to.

 1) IMMUNIZATION REGISTER
 2) ASTHMA REGISTER
 3) WOMEN'S HEALTH REGISTER
 4) CASE MANAGEMENT REGISTER

Enter the REGISTER you wish to add WATERMAN,BECKY to: (1-99999): //4[ENT]
Enter the name of the CASE MANAGEMENT Register: IHS DIABETES [ENT]

         Adding WATERMAN,BECKY
             to the IHS DIABETES REGISTER CMS Register.

WATERMAN,BECKY has been added to the IHS DIABETES REGISTER Register.
```

Figure 5-6: Sample dialogue of using the REG mnemonic

5.4 Deleting Patients from the Register

This option may be used to remove a patient from the register if he/she is no longer active, is deceased, or has moved. The recommendation is to use this option only to remove patients from the register if they do not have a diagnosis of diabetes. Other patients may be moved into a different STATUS category as opposed to deleting them. Deleting a patient from the register results in the loss of any data that may have been stored in the register for that patient including diagnosis, date of onset, complications, date of onset of complications, date added to the register.

To delete a patient from the register, type **DEL** at the "`Select Diabetes Management System Option:`" prompt. When prompted, type the chart number or name of the patient to be deleted from the register. You will be warned that all data on that patient will be removed from the IHS Diabetes Register. If you are certain, type **YES**. The dialogue will indicate that deletion of that patient from the IHS Diabetes Register is complete.

```
MAIN MENU


   PM     Patient Management
   RP     Reports ...
   RM     Register Maintenance ...
   DEL    Delete Patient from the Register
   LM     ADD/EDIT DMS Letters
   SR     Switch to another DIABETES Register
   BHS    Browse Health Summary
   DA     Diabetes QA Audit Menu ...
   DMU    Update Diabetes Patient Data
   HS     Generate Health Summary
   MHS    Generate Multiple Health Summaries
   QMAN   Q-Man (PCC Query Utility)

Select Diabetes Management System Option: DEL [ENT]
```

Figure 5-7: Deleting patient's from the register

5.5 Periodic Addition of New Cases to Your Register

After your register is installed and your initial group of patients has been entered, you may enter newly diagnosed cases using the manual entry process described. It is critical that the local Diabetes Coordinator is notified as new patients are diagnosed or move into the service area. There are several mechanisms to identify patients newly diagnosed with diabetes but no mechanism exists for adding patients automatically to the register. The four methods of identification are described below.

Referral Copy of PCC Form

When a health-care provider diagnoses a new case of diabetes, diagnoses a new complication, or is aware that the patient being seen for diabetes is new to the facility, the provider should indicate a referral to the Diabetes Coordinator in the lower right-hand section of the PCC Encounter Form and forward the referral (yellow) copy of the form to the Diabetes Coordinator. Medical records staff should be alert to these referrals and forward the yellow copy to the Diabetes Coordinator if the provider of service has not already done so. The provider may also make a notation on the PCC Encounter form for data entry staff to add this patient to the Diabetes Register. This may be accomplished by the Data Entry operator using the REG mnemonic for a Case Management Register.

Notation on Health Summary or Case Summary

Some facilities use the PCC Health Summary and/or the Case Management System Case Summary as "turn-around" documents. Following review of the Health Summary or Case Summary, the provider may make notations on the Summary regarding new diabetes cases or new diabetes complications and forward the Summary to the Diabetes Coordinator for updating the register.

QMan Search

Using QMan, you can print a list of newly diagnosed cases or new complications since your last update of the register. The list should be reviewed by the Diabetes

Coordinator and appropriate entries made in the register. The following QMan dialogue (*Figure 5-8*) is used to find new cases or complications. User responses and instructions are in bold type.

```
                *****  SEARCH CRITERIA  *****


   Subject: LIVING PATIENTS
   Attribute of Living Patients:      DX
   ENTER DX:  250.00-250.93
Enter Another DX:  [ENT]
Want to save this group for future use?  YES
Enter name for this taxonomy:  DM & COMPLICATIONS CODES
First condition of Diagnosis:  FIRST
How many?  1
Next condition of Diagnosis:  SINCE
Exact Date:  (Enter date you last updated register with new cases and/or
complications.)
Next condition of Diagnosis:  [ENT]
Attribute of Living Patients: [ENT]

*** Q-Man Output Options ***
Select one of the following:
  1  DISPLAY results on the screen
  2  PRINT results on paper
  3  COUNT 'hits'
  4  STORE results of a search in a FM search template
  5  SAVE search logic for future use
  6  R-MAN special report generator
  9  HELP
  0  EXIT
Your choice:  2 - Print Results
Device:  (Enter printer device number.)
```

Figure 5-8: QMan search

After you have printed the results of your QMan search, you can review charts and manually add the patients on your list to the Diabetes Register using the PM Patient Management menu option.

MailMan Bulletin

Each time a diagnosis of diabetes or one of the standard complications is entered into the PCC, a program will determine if this is a new case or new complication for the patient at your facility. If it is new, a Bulletin will be generated in the RPMS MailMan System announcing the new case. See the example in *Figure 5-9*.

```
Subj: DM NEW CASE  [#6732] 19 May 03 13:10  20 Lines
From: POSTMASTER  in 'IN' basket.   Page 1  **NEW**
------------------------------------------------------------------------
     Patient Name: TEST,PATIENT            SSN: 222-22-2222
     Chart No.: HC 27689   DOB: 10/12/1953

     This patient was seen on APR 28, 2003@14:04 at IHS FACILITY
     with the following diagnosis:

     ICD9 Code: 250.02  ICD Description: DM UNCOMPL/T-II/NIDDM,UNCONTR
     Provider Stated: DM TYPE 2 - UNCONTROLLED
     Patient's Community: IHS COMMUNITY
     Patient's Service Unit: IHS SERVICE UNIT
     Patient's Tribe: NON-INDIAN BENEFICIARY
     Tribal Blood Quantum: NONE


     Patient's Health Records:
This is the first time that this patient has been seen for the diabetes
diagnosis listed above.  Please take appropriate follow up action.


Select MESSAGE Action: IGNORE (in IN basket)/ /
```

Figure 5-9: MailMan bulletin

The Bulletin, or Mail Message, will be automatically routed to the local Diabetes Coordinator. Each time the Coordinator signs on to RPMS, the Coordinator will be notified that new mail messages are waiting to be read. If you are not already using MailMan within your facility, you will need to discuss this capability with your Site Manager.

Note: See *Appendix A: Bulletin System for Notification of Newly Diagnosed Patients* for directions on setting up this automatic notification system.

6.0 Patient Management

The IHS Diabetes Register has been designed to minimize the data entry required for maintenance. One key to achieving this goal is to optimize the use of data entered through the PCC process. Another key is to limit the non-PCC data maintained in the register to as few items as possible and to items that require infrequent updating after initial entry into the register.

All data items are entered or modified on the Patient Screen that is displayed when the main menu option, **PM Patient Management** is selected. To initiate an interactive session, enter the patient name or chart number.

```
   PM     Patient Management
   RP     Reports ...
   RM     Register Maintenance ...
   DEL    Delete Patient from the Register
   LM     ADD/EDIT DMS Letters
   SR     Switch to another DIABETES Register
   BHS    Browse Health Summary
   DA     Diabetes QA Audit Menu ...
   DMU    Update Diabetes Patient Data
   HS     Generate Health Summary
   MHS    Generate Multiple Health Summaries
   QMAN   Q-Man (PCC Query Utility)
Select Diabetes Management System Option: PM

Select PATIENT NAME: PATIENT,BARRY
```

Figure 6-1: Selecting the PM option

6.1 Edit Register Data

If the patient is a new addition to the register, only demographic data from registration will display as shown in *Figure 6-2*. Register data may be added or updated using option 1 Edit Register Data.

```
Register Data            May 21, 2003 12:17:06        Page:  1 of  1

       PATIENT: PATIENT,BARRY                                AGE: 40
       ADDRESS: P.O. BOX 123,AJO,AZ,88776                    DOB: 05/09/1963
         PHONE: 602-555-0010                                 HRN: 100005
PRIM CARE PROV:                                              RES: COWLIC
        STATUS: ACTIVE
WHERE FOLLOWED:
 REGISTER PROV:                          CASE MGR:
       CONTACT:
    ENTRY DATE: MAY 30,2002                          LAST EDITED:
     DIAGNOSIS: (NO DIAGNOSIS ON FILE FOR THIS PATIENT)
 COMPLICATIONS: (NO COMPLICATIONS LISTED FOR THIS PATIENT)

     - Previous Screen             QU Quit          ?? for More Actions

1 Edit Register Data 8  DIABETES Medications 15 DIABETES Lab Profile
2 Complications      9  Review Appointments  16 Pat. Registration Data
3 Comments           10 Audit Status         17 Pat. Face Sheet
4 Health Summary     11 Flow Sheet           18 Send Mail Message
5 Last Visit         12 Case Summary         19 (Make a Referral)
6 Other PCC Visit    13 Edit Problem List    20 Diagnosis
7 Medications        14 Lab Profile          21 Print Letter
Select Action: Quit// 1
```

Figure 6-2: Editing register data

Very few data items are included in the register itself. These items should be entered when you add patients to the register and modified as needed. When you select **1 Edit Register Data**, the following screen (*Figure 6-3*) will display with certain items highlighted.

```
Register Data             Sep 21, 1999 13:38:17         Page:  1of 1

PATIENT: PATIENT,BARRY                    AGE: 40
ADDRESS: P.O. BOX 123,AJO,AZ,88776                DOB: 05/09/1963
PHONE:   602-555-001                              HRN: 100005
PRIM CARE PROV:                                   RES: TEST COMMUNITY
STATUS: ACTIVE
REGISTER PROV:                            CASE MGR:
WHERE FOLLOWED:
CONTACT:
ENTRY DATE: MAY 30,2002                   LAST EDITED:
LAST REVIEW:                               NEXT REVIEW:

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

Figure 6-3: Editing register data, screen 2

You may enter data into each field beginning with the STATUS field. Pressing the Enter key after recording data or pressing the **Tab** key will move you through the fields to be edited.

Typing a **?** at each field will display the choices or the type of data to be entered. Status choices are displayed in the following table:

Status

A	Active	Patients who receive their primary health care at your facility and who have had care at your facility within the last year.
I	Inactive	Patients not seen within the last two years.
T	Transient	Patients seen at your clinic within the past year but who do not receive their primary diabetic care at your facility, but only visit your clinic periodically for medications, or other services.
U	Unreviewed	Patients on the register who have not had a chart audit and medical review.
D	Deceased	Patients who are deceased. Note that this status will be automatically updated if a date of death is recorded in registration. However, if a patient's status is changed to deceased in the register, the patient registration file is not automatically updated.
N	Non-IHS	Non-Indian patients who receive their diabetic care at your facility.
L	Lost to Follow-up	Patients seen at your facility within the past two years but who have not had a visit in the last year.
N	Noncompliant	Patients with repeated documented refusals of recommended services.

Note: Most of the register reports include only active patients.

WHERE FOLLOWED: (Optional) If the service unit has one or more field clinics, health clinics, or health stations, it may be of value identifying the facility where the patient routinely goes for health care.

REGISTER PROV: (Optional) The provider that has been assigned (has assumed responsibility) for a patient's Diabetes care. The Register Provider is not necessarily the same person as the patient's Primary Care Provider. The provider may be entered by entering Last Name, First Name.

CASE MGR: (Optional) The nurse or health care provider that has been assigned or has assumed responsibility for managing a patient's health care.

CONTACT: (Optional) Type Name of Contact. This is a free text entry of 1-30 characters to identify an alternative contact if a patient does not have a telephone.

ENTRY DATE: This date is entered automatically when the patient is added to the register. You may override this date with a date from your records.

LAST REVIEW: (Optional) This date can be entered in the format of T, T-x, or xx/xx/xx.

LAST EDITED: This field is filled automatically by the system with the date you or another authorized system user last entered or modified any data.

NEXT REVIEW: (Optional) Enter the date you next want to review this case in the format of T+x or xx/xx/xx.

DIAGNOSIS: Note that in 2006, Diagnosis and Date of Onset can no longer be added or edited using the option to Edit Register Data. Patient Management Item 20, Diagnosis can now be used to add or edit diagnosis and/or date of onset.

ONSET DATE: Note that in 2006, Diagnosis and Date of Onset can no longer be added or edited using the option to Edit Data. Patient Management Item 20, Diagnosis can now be used to add or edit diagnosis and/or date of onset.

If you wish to return to a field to modify the data, you may type "**^"** followed by the name of that field or caption to return. When all data has been entered to your satisfaction, at "COMMAND:" type **S** then press the **Enter** key to save your entries. Then type **E,** and then press the **Enter** key to exit the edit Register Data option.

6.2 Add Complications

To add or modify complications for a patient, choose **2 Complications** from the menu screen. You will be given the choice of editing an existing complication, adding a new complication, or deleting a complication.

> **Note:** Remember that if Complications have been linked to ICD-9 codes when the complication list was updated under Register Maintenance, complications need not be entered manually for each patient on the register.

```
Register Data            Sep 21, 1999 14:20:36       Page: 1 of 1

     PATIENT: PATIENT,BARRY                    AGE: 36
     ADDRESS: P.O. BOX 123,AJO,AZ,88776           DOB: 05/09/1963
       PHONE: 602-555-0010                        HRN: 100005
      STATUS: ACTIVE                              RES: COWLIC
WHERE FOLLOWED: SANTA MARIA
REGISTER PROV: PROVIDER,BENJAMIN P        CASE MGR:MANAGER,SUSAN
     CONTACT: MARIA PATIENT, WIFE
  ENTRY DATE: SEP 21,1999                LAST EDITED: SEP 21,1999

DIAGNOSIS: TYPE 2                         DATE OF DX: AUG 1999
COMPLICATIONS: (NO COMPLICATIONS LISTED FOR THIS PATIENT)

     - Previous Screen             QU Quit          ?? for More Actions

1 Edit Register Data 8  DIABETES Medications 15 DIABETES Lab Profile
2 Complications      9  Review Appointments  16 Pat. Registration Data
3 Comments           10 Audit Status          17 Pat. Face Sheet
4 Health Summary     11 Flow Sheet            18 Send Mail Message
5 Last Visit         12 Case Summary          19 (Make a Referral)
6 Other PCC Visit    13 Edit Problem List     20 Diagnosis
7 Medications        14 Lab Profile           21 Print Letter

Select Action: Quit// 2
```

Figure 6-4: Adding complications, screen 1

In the patient example given, no complications are currently listed. So, two complications will be added, fixed proteinuria and retinopathy.

```
Complications          Sep 21, 1999 14:32:44          Page:  1 of  0

Complications
    NO.  Complication                    ONSET DATE
    ---  ------------------------------  ----------

- Previous Screen             QU Quit          ?? for More Actions

1  Edit Complication    2   Add Complication     3  Delete Complication
Select Action: Quit// 2
```

Figure 6-5: Adding complications, screen 2

You will be given the choice of entering one or more of the following complications, as shown in the following example.

> **Note**: This display is the Complication List created under Register Maintenance.

```
1    CVA (STROKE)
2    END STAGE RENAL DISEASE
3    FIXED PROTEINURIA
4    HIGH RISK FOOT
5    HYPERTENSION
6    LASER TX FOR RETINOPATHY
7    MAJOR AMPUTATION(S)
8    MINOR AMPUTATION(S)
9    MYOCARDIAL INFARCTION
10   RETINOPATHY
```

Figure 6-6: Adding complications, screen 3

When prompted for "Which COMPLICATION(S):" (1-10): enter the number or numbers of the complications, separated by commas.

For example, "Which COMPLICATION(S):" (1-10): 3, 10 [ENT] results in the addition of fixed proteinuria and retinopathy to the list of complications for this patient.

To add Onset Date and other details for each complication, choose option, **1 Edit Complication.**

```
Complications            Sep 21, 1999 14:45:37         Page: 1 of  0

Complications
    NO.  Complication                    ONSET DATE
    ---  ------------------------------  ----------
    1    FIXED PROTEINURIA
    2    RETINOPATHY

- Previous Screen            QU Quit           ?? for More Actions

1  Edit Complication    2   Add Complication     3  Delete Complication
Select Action: Quit// 1
```

Figure 6-7: Adding complications, screen 4

You will be prompted to choose the number of the complication you wish to edit. A window will display with prompts for DATE OF ONSET, STATUS, and COMMENTS. Use the Tab key to move between fields. To display the list of Complication Statuses, at the caption, STATUS: type **?**. A list of eleven choices will be displayed for you to select from. Complication status is *not* a required entry.

- A No Risk
- B Low Risk
- C Moderate Risk
- D High Risk
- E Early Signs

- F Imminent Onset
- G Mild Involvement
- H Moderate Involvement
- I Severe Involvement
- J Condition Present
- K End Stage

```
PATIENT: GREENJEANS,BARRY
 COMPLICATION: FIXED PROTEINURIA
DATE OF ONSET: 05/00/99
      STATUS: J

    (Press ENTER to edit COMMENTS, Press TAB to skip.)
    COMMENTS: [ENT]

Exit     Save     Refresh

Enter a command or '^' followed by a caption to jump to a specific field.

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

Figure 6-8: Adding complications, screen 5

If you wish to make comments, the Enter key must be pressed at the Comment field to open another window for free text comment entry. When all comments have been entered, pressing the **F1** (PF1) key followed by **E** will close the comment window. To exit the Edit Complication window, type **S** (Save) the press the **Enter** key followed by typing **E** (Exit), and then pressing the **Enter** key. An example of a comment entry is displayed in the following example.

```
==[ WRAP ]==[ INSERT ]======< COMMENTS >======[ <PF1>H=Help ]====
Trace protein on urine dipstick 5/6/99.  Microalbumin 30 mg/dL on same
specimen.

When comments are complete, press F1 followed by the E key to exit from this
screen.
Note:  Help for using this word processor can be displayed by typing F1
followed by the H key.  For your convenience, the word processing commands
are included in Appendix C of this manual.

<======T=======T=======T=======T=======T=======T=======T======= T=======T=>
```

Figure 6-9: Adding complications, screen 6

The Complication screen will then reflect the Onset Date but neither the status nor comments. Type **QU** or press the **Enter** key to exit the option Complications.

```
Complications
    NO.  Complication                    ONSET DATE
    ---  ------------------------------  ----------
    1    FIXED PROTEINURIA               MAY 1999
    2    RETINOPATHY

     - Previous Screen            QU Quit           ?? for More Actions

1  Edit Complication    2  Add Complication    3  Delete Complication
Select Action: Quit// [ENT]
```

Figure 6-10: Adding complications, screen 7

6.3 Add Case Comments

Free text case comments may be added to the register indicating either nursing care plans, or patient history, or other information relevant to a patient's care. Select option **3 Comments**.

```
Register Data             Sep 21, 1999 15:48:20       Page: 1 of  1

     PATIENT: PATIENT,BARRY                          AGE: 36
     ADDRESS: P.O. BOX 123,AJO,AZ,88776              DOB: 05/09/1963
       PHONE: 602-555-0010                           HRN: 100005
      STATUS: ACTIVE
WHERE FOLLOWED: SANTA ROSA                           RES: COWLIC
REGISTER PROV: PROVIDER,BENJAMIN P        CASE MGR: MANAGER,SUSAN
     CONTACT: MARIA PATIENT, WIFE
  ENTRY DATE: SEP 21,1999                 LAST EDITED: SEP 21,1999
     DIAGNOSIS: TYPE 2                     DATE OF DX: AUG 1999
 COMPLICATIONS: FIXED PROTEINURIA         ONSET DATE: MAY 1999
                RETINOPATHY

- Previous Screen            QU Quit           ?? for More Actions

1 Edit Register Data 8 DIABETES Medications   15 DIABETES Lab Profile
2 Complications      9 Review Appointments    16 Pat. Registration Data
3 Comments           10 Audit Status          17 Pat. Face Sheet
4 Health Summary     11 Flow Sheet            18 Send Mail Message
5 Last Visit         12 Case Summary          19 (Make a Referral)
6 Other PCC Visit    13 Edit Problem List     20 Diagnosis
7 Medications        14 Lab Profile           21 Print Letter
Select Action: Quit// 3
```

Figure 6-11: Adding case comments, screen 1

To add comments, you must select option 1 Edit Comments. A window will open displaying the patient's name. In order to enter free text comments, the Enter key must be pressed at the caption, COMMENTS: to open a word-processing field.

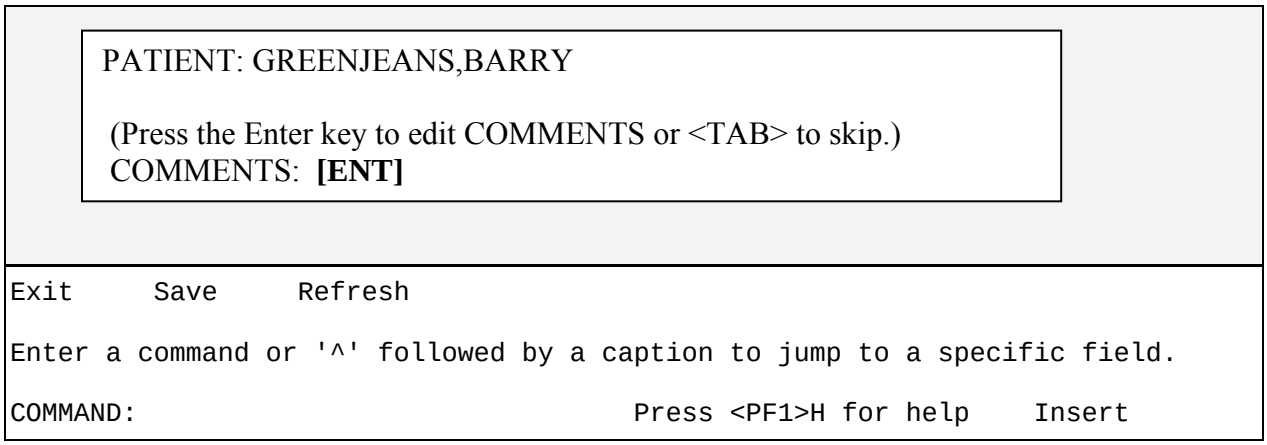

Figure 6-12: Adding case comments, screen 2

Enter free text comments just as you would using any word processor. The lines will wrap automatically. By pressing **F1** followed by the **H** key, you may display all the options for editing text using this word processor.

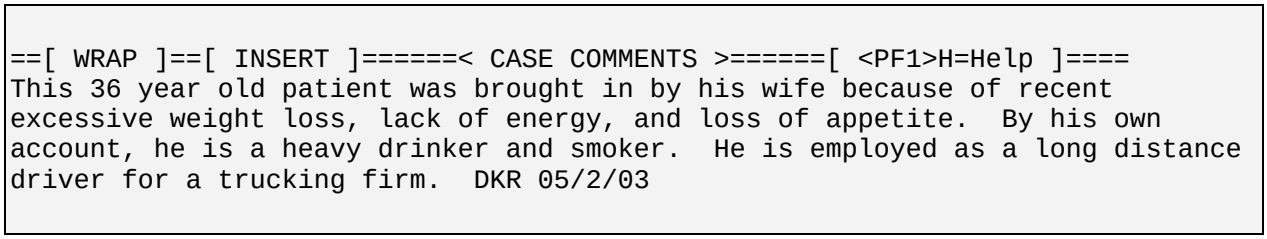

Figure 6-13: Adding case comments, screen 3

Neither the date of the comment entry nor the identity of the person entering the text is stored with a comment. Therefore, it is recommended that any comment entry be accompanied by date and initials. When all comments have been entered, pressing the **F1** key (PF1) followed by **E** will close the word processing window. You may save and exit from the comment option by typing **S** and then pressing the **Enter** key followed by typing **E** and then pressing the **Enter** key. Exit the comment window by typing **Q** to Quit or pressing the **Enter** key**.**

> **Note**: the Case Summary is the only option that allows display of case comments entered via this menu option.

6.4 Health Summary

The Health Summary for the patient may be displayed by selecting **4 Health Summary**. You will be prompted for Health Summary Type and may select any of the standard IHS distributed Health Summaries or a custom site-developed Health Summary. All of the secondary menu options discussed in this manual may be used for searching, displaying, or printing data from this health summary.

6.5 Last Visit

The last visit the patient has made to your healthcare facility may be displayed by selecting **5 Last Visit**. All visit-related data for that date will be displayed including purpose of visit, providers, measurements, exams, and labs.

6.6 Other PCC Visit

If you know the date of another visit the patient has made to your healthcare facility and wish to view details of that visit, choose **6 Other PCC Visit**. You will be prompted to enter the date of the visit to display. Note that other Visit dates may be identified by using the menu option to *Browse* the Health Summary and reviewing the component, Outpatient/Field Visits. This option is often useful in identifying problems with audit data.

6.7 Medications

If you wish to review the list of all medications that have been prescribed for a patient, select **7 Medications**. All medications on file for that patient along with the dates issued and last filled will be displayed.

6.8 Diabetes Medications

If you wish to only review Diabetes Medications prescribed for a patient, select **8 Diabetes Medications**. If no diabetes medications have been prescribed for a patient it will be indicated. Be aware that if the appropriate taxonomies identifying diabetes medications have not been set up under Register Maintenance, no diabetes medications will be displayed.

6.9 Review Appointments

If you wish to review future appointments for a patient, select **9 Review Appointments**. This option will display future appointments only if the RPMS Scheduling Package is used at your facility.

6.10 Audit Status

The status of compliance with the IHS Diabetes Standards of Care can be monitored at any time for a single patient by selecting **10 Audit Status**. You will be prompted to enter a date. This date will be considered the ending date of the audit period. For most data items, all data for the period one year prior to this date will be reviewed. This allows the provider to determine which standards of diabetes care have not been met prior to the date of this visit. Future dates may be used.

6.11 Flow Sheet

If you wish to display only the flow sheet for a patient, select **11 Flow Sheet**. Type the name of the desired flow sheet. Typing **??** will display a list of available flow sheets. If the required data exists, it will be displayed on the flow sheet. Usually, the desired flow sheet will be the Diabetes Flow Sheet.

```
*** CONFIDENTIAL PATIENT INFORMATION - SEP 21,1999 5:00 PM [DKR]***
*** PATIENT,RAE #100003 (DMS DIABETIC FLOW SHEET SUMMARY) pg 1*****

PATIENT,RAE    DOB: NOV 10,1973
DEMO HOSPITAL HEALTH RECORD NUMBER: 100003
777 N. 33RD ST.,TOMBSTONE,AZ,88776
```

```
------------------ DIABETES FLOW SHEET (max 2 years) -------------------

DIABETES FLOW SHEET
            WT    BP     A1C   GLUCOSE   CHOL    CREA    UR PROT  TRIG
-----------------------------------------------------------------------
10/01/99:      :      :11.2   :         :       :        :        :n/r
-----------------------------------------------------------------------
08/26/99:      :      :       :145H     :       :1.2     : N      :n/r
```

Figure 6-14: Sample of a Flow Sheet

6.12 Case Summary

The Case Summary for a patient may be displayed by selecting option **12 Case Summary**. You will be prompted as to whether you want to also display the PCC Health Summary. The display of the Case Summary may require several screens, therefore the display and print options described on pages 4-5 may be used. Typing **??** will display the choices.

> **Note**: The Case Summary is the only menu option that allows display of case comments.

```
Browse on Screen            Sep 22, 1999 10:39:51     Page:  1 of 2

    ********** CONFIDENTIAL PATIENT INFORMATION  **********
    ***************  IHS DIABETES REGISTER  ******************
      CLIENT:  PATIENT,BARRY                        CHART:  100005
         DOB: MAY 9,1963                              AGE: 36 YRS
     CONTACT: MARIA PATIENT, WIFE                COMMUNITY: COWLIC
      STATUS: ACTIVE                           CASE PRIORIT: HIGH
REGISTER PRVD: PROVIDER,BENJAMIN P               INIT ENTRY: SEP 21,1999
CASE MANAGER: NONE ASSIGNED                      WHERE FLWD: SANTA ROSA
PUB HLTH NRS: NONE ASSIGNED

    ************************  COMPLICATIONS ************************
    COMPLICATION                    ONSET DATE    STATUS
    --------------------------      ----------    --------------------
    FIXED PROTEINURIA               05/00/99       J - CONDITION PRSNT
    RETINOPATHY

    **********************    REGISTER DIAGNOSES
**************************
    DIAGNOSIS                           DX DATE             SEVERITY
    ------------------------------      --------            ---------------

+         Enter ?? for more actions

Select Action:Next Screen//
```

Figure 6-15: Case summary screen

6.13 Edit Problem List

The PCC problem list may be updated by selecting option **13 Edit Problem List**. This option allows you to add, modify, or delete a problem and accompanying notes. In the example given, a new active problem of Diabetes Type 2 will be added with two notes, Appointment for Diabetes Education and Weekly Fasting Glucose.

When option 13 is chosen you will be prompted to enter where the problem list update occurred and the date of the update. Then the following (*Figure 6-16*) screen will be displayed:

```
Problem List Update        Sep 22, 1999 11:03:51        Page: 1 of 1
------------------------------------------------------------------------
Patient Name: PATIENT,BARRY  DOB: MAY 09, 1963  Sex: M  HRN: 100005
------------------------------------------------------------------------
   1) Problem ID:   SE1    DX: 280.8   Status: ACTIVE   Onset:
      Provider Narrative:  ANEMIA DUE TO DEFICIENT INTAKE OF IRON

   2) Problem ID:   SE2    DX: V62.3   Status: INACTIVE Onset:
      Provider Narrative:  SPECIAL EDUCATION TESTING
Enter ?? for more actions                                        >>>
AP   Add Problem        IP   Inactivate Problem   RN   Remove Note
EP   Edit Problem       DD   Detail Display       HS   Health Summary
DE   Delete Problem     NO   Add Note             FA   Face Sheet
AC   Activate Problem   MN   Edit Note            Q    Quit
Select Action: +// AP
```

Figure 6-16: Problem list

To add a new problem, choose the option **AP Add Problem**. You will be prompted for the problem diagnosis, provider narrative, date of onset, a problem number will be auto assigned (user may change the number to group related problems together), class (Personal or Family History), status (Active or Inactive), and the opportunity to enter any notes associated with this problem.

```
Adding a new problem for PATIENT,BARRY.

Enter Problem Diagnosis: DM

250.00 (DM UNCOMPL/T-II/NIDDM,NS UNCON)
DIABETES MELLITUS WITHOUT MENTION OF COMPLICATION/TYPE II/NON-INSULIN
DEPENDENT/ADULT-ONSET,OR UNSPECIFIED TYPE,NOT STATED AS UNCONTROLLED

 OK? Y// [ENT]

  PROVIDER NARRATIVE: DM TYPE 2  DM TYPE 2
  DATE OF ONSET: 5/99  (MAY 1999)
  NMBR: 3// [ENT]
  CLASS:  [ENT]
  STATUS: A// [ENT]
```

Figure 6-17: Editing the problem list

```
Add a new Problem Note for this Problem? N// YES

Adding DEMO HOSPITAL Note #1
NOTE NARRATIVE: Appointment for DM education.


Problem Notes:
     DEMO HOSPITAL
          Note#1 Sep 22, 1999 Appointment for DM education.

Add a new Problem Note for this Problem? N// Y  YES

Adding DEMO HOSPITAL Note #2
NOTE NARRATIVE: Weekly fasting glucose.

Add a new Problem Note for this Problem? N// [ENT]
```

Figure 6-18: Adding a new problem

The resulting display reflects the addition of the new problem to the problem list with the attached notes. If no further modifications of the problem list are needed, type **Q** then press the **Enter** key to return to the main Patient Management menu.

```
Problem List Update        Sep 22, 1999 11:15:53       Page:  1 of  1
------------------------------------------------------------------------------
Patient Name: PATIENT,BARRY  DOB: MAY 09, 1963  Sex: M   HRN: 100005
------------------------------------------------------------------------------
   1) Problem ID:   SE1    DX: 280.8   Status: ACTIVE   Onset:
      Provider Narrative:  ANEMIA DUE TO DEFICIENT INTAKE OF IRON

   2) Problem ID:   SE3    DX: 250.00  Status: ACTIVE   Onset: May 1999
      Provider Narrative:  DM TYPE 2
        Notes:
           SE Note#1 Sep 22, 1999  Appointment for DM education.
           SE Note#2 Sep 22, 1999  Weekly fasting glucose.

   3) Problem ID:   SE2    DX: V62.3   Status: INACTIVE Onset:
      Provider Narrative:  SPECIAL EDUCATION TESTING


Enter ?? for more actions                                          >>>

AP   Add Problem          IP   Inactivate Problem   RN   Remove Note
EP   Edit Problem         DD   Detail Display       HS   Health Summary
DE   Delete Problem       NO   Add Note             FA   Face Sheet
AC   Activate Problem     MN   Edit Note            Q    Quit
Select Action: +// Q
```

Figure 6-19: Update a problem list

In the same manner, the other options – EP, DE, AC, IP, DD, NO, MN, and RN may be used to modify the problem list. For more complete directions on maintenance of the Problem List, see the RPMS PCC Data Entry Operator Manual Version 2.0.

6.14 Lab Profile

Selecting option **14 Lab Profile** will cause all lab data for the last 30 visits within a maximum time frame of one year to display. If no data is displayed, it is most likely due to the fact that no lab work was performed or no lab data has been entered into the RPMS system within the last year.

6.15 Diabetes Lab Profile

Selecting option **15 Diabetes Lab Profile** will cause only diabetes related lab data to display – glucose, cholesterol, triglyceride, LDL cholesterol, HDL cholesterol, Microalbumin, Hemoglobin A1C, and urine protein for the last 6 visits. In order for the appropriate data to display, taxonomies of Lab Tests must be defined in Lab Test Taxonomy Setup under Register Maintenance.

6.16 Patient Registration Data

At some sites a decision has been made to allow Case Managers or other providers to update registration data if they have been assigned the appropriate security keys. Selecting option **16 Pat. Registration Data** will allow update of any patient registration data. At other sites where only registration personnel are allowed to modify registration data, this option will display the registration demographic information. This is a multi-page display and the enter key must be pressed each time you wish to review the next screen.

6.17 Patient Face Sheet

Selecting option **17 Pat. Face Sheet** displays the demographic and eligibility information for a patient. This is a multi-page display and the enter key must be pressed each time you wish to review the next screen.

6.18 Send Mail Message

If in reviewing or updating a patient record, you wish to update or alert a colleague of an action to be taken, select option **18 Mail Message**. This provides for a direct entry into the local Mailman system. You will be prompted for the subject of your message, the text you want entered, and recipient(s) of your message. Below (*Figure 6-20*) is an example of using this option. Note that the Full Screen Editor is used in this example. However, many RPMS system users will be using the Line-editor. The process of sending a message is exactly the same. However, each line of the message will be preceded by a number and the user will be offered the opportunity after entry of the message to edit the message by line number.

```
Send Mail Message
Subject: BARRY PATIENT
==[ WRAP ]==[ INSERT ]==< BARRY PATIENT >===[ <PF1>H=Help ]====
Brian,
This patient was brought in by his wife today and appears to be in the
early stages of renal failure due to Type 2 DM.  I would like you to
schedule an appointment with him as soon as possible for general diabetes and
nutrition education.  His phone number is 555-5693.
Thanks,
Doris

Enter F1 followed by the E key to exit this screen.
Send mail to: USER,DAVID K// USER,BRIAN
      Last used MailMan: 26 Feb 99 21:08
And send to:  [ENT]

Select TRANSMIT option: Transmit now// [ENT]
```

Figure 6-20: Sending a mail message

When the designated recipient(s) of the mail message next signs on to the RPMS system they will be alerted to the fact that they have 1 new mail message.

6.19 Make a referral

This option is not implemented at this time. It will allow direct access to the Referred Care Information System for the provider of care to make a referral at the time of the case review.

6.20 Adding Diagnosis

To add or modify diagnosis for a patient, choose **20 Diagnosis** from the menu screen. You will be given the choice of editing an existing diagnosis, adding a new diagnosis, or deleting a diagnosis.

```
Register Data            Sep 21, 1999 14:20:36       Page: 1 of 1

     PATIENT: PATIENT,BARRY                    AGE: 36
     ADDRESS: P.O. BOX 123,AJO,AZ,88776           DOB: 05/09/1963
       PHONE: 602-555-0010                        HRN: 100005
      STATUS: ACTIVE                              RES: COWLIC
WHERE FOLLOWED: SANTA MARIA
REGISTER PROV: PROVIDER,BENJAMIN P        CASE MGR:MANAGER,SUSAN
     CONTACT: MARIA PATIENT, WIFE
  ENTRY DATE: SEP 21,1999                LAST EDITED: SEP 21,1999

DIAGNOSIS: IMPAIRED GLUCOSE TOLERANCE              DATE OF DX: AUG 1999
COMPLICATIONS: (NO COMPLICATIONS LISTED FOR THIS PATIENT)

     - Previous Screen             QU Quit          ?? for More Actions

1 Edit Register Data 8  DIABETES Medications 15 DIABETES Lab Profile
2 Complications      9  Review Appointments  16 Pat. Registration Data
3 Comments           10 Audit Status         17 Pat. Face Sheet
4 Health Summary     11 Flow Sheet           18 Send Mail Message
5 Last Visit         12 Case Summary         19 (Make a Referral)
6 Other PCC Visit    13 Edit Problem List    20 Diagnosis
7 Medications        14 Lab Profile          21 Print Letter

Select Action: Quit// 20
```

Figure 6-21: Adding complications, screen 1

In the patient example given, IMPAIRED GLUCOSE TOLERANCE is currently listed. So another diagnosis will be added, TYPE 2.

```
Complications          Sep 21, 1999 14:32:44          Page:  1 of  0

Diagnosis
    NO.  Diagnosis                          ONSET DATE
    ---  -------------------------------  ----------
    1    IMPAIRED GLUCOSE TOLERANCE        AUG 1999

- Previous Screen             QU Quit          ?? for More Actions

1  Add Diagnosis    2   Edit Diagnosis     3  Delete Diagnosis
Select Action: Quit// 1
```

Figure 6-22: Adding complications, screen 2

You will be given the choice of entering one or more of the following diagnoses. (*Figure 6-6*):

> **Note**: This display is the Diagnosis List created under Register Maintenance.

```
      1   IMPAIRED GLUCOSE TOLERANCE
      2    GESTATIONAL DM
      3    TYPE 1
      4    TYPE 2
```

Figure 6-23: Diagnosis, screen 3

When prompted for `Which DIAGNOSIS` (1-4):, enter the number.

To add Onset Date and other details for each diagnosis, choose option, **2 Edit.**

You will be prompted to choose the number of the diagnosis you wish to edit. A window will display with prompts for DATE OF ONSET, SEVERITY. Use the Tab key to move between fields. To display the list of Diagnosis Severity, at the caption, SEVERITY: type **?**. A list of four choices will be displayed from which you may select. Diagnosis Severity is *not* a required entry.

- N NORMAL
- M MILD
- MO MODERATE
- S SEVERE

```
Diagnosis
    NO.  Diagnosis                        ONSET DATE
    ---  -------------------------------  ----------
    1    IMPAIRED GLUCOSE TOLERANCE       AUG 1999
    2    TYPE 2                           AUG 15, 2006


     - Previous Screen             QU Quit            ?? for More Actions

1  Add Diagnosis    2  Edit Diagnosis    3  Delete Diagnosis
Select Action: Quit// [ENT]
```

Figure 6-7: Diagnosis, screen 4

6.21 Print Letter

A custom letter to the patient can be generated by choosing menu option **21 Print Letter**. Developing letters suitable for different situations can be performed by using the **ADD/EDIT DMS Letters** under the Register Maintenance Menu Option described on page 14 of this manual.

When the option Print Letter is selected, you will be prompted with a list of custom Diabetes Management Letters. Select the number of the letter you wish to print and enter the device number of the printer you wish to use.

7.0 Switch to Another Diabetes Register (SR)

A number of facilities have found it useful to develop and maintain a number of Diabetes Registers. In a multi-facility service unit, the diabetes program staff may build registers of diabetic patients based upon where the patients normally receive their care. In addition, numerous facilities are now choosing to separate patients with impaired glucose tolerance or pre-diabetes into their own register as well as those with gestational diabetes into their own register. In building any new Diabetes Register, it is imperative that the word "DIABETES" be included in the name of the register. To facilitate moving easily between registers, the option, **SR Switch to another DIABETES Register,** has been developed. The user who wishes to switch between registers must be an authorized user of any register to which he/she wishes access. When selecting this option, the user may select from the list of registers for which he/she is an authorized user.

8.0 Browse Health Summary (BHS)

Most providers in Indian/Urban/Tribal Facilities are familiar with the Health Summary, an abstract of relevant clinical and demographic data contained in the PCC database for a patient. The option to *Browse a Health Summary*, as opposed to *Generate a Health Summary* allows the user to use the +,-, ↑, or ↓ keys to scan up and down the health summary. All of the menu options listed on pages 3-4 of this manual may be used to view, search, or print the health summary. A number of standard health summary types including the Adult Regular and Diabetes Standard were originally distributed with the Health Summary Package. Some facilities have developed their own custom summaries. A well-formatted sample Diabetes Standard Summary is shown in the following example.

```
******* CONFIDENTIAL PATIENT INFORMATION -- 2/21/2005 10:32 AM  [CMI] *******
********** CARSON,KRISTIN #100018    (ADULT REGULAR SUMMARY)  pg 1 **********

---------------------------- DEMOGRAPHIC DATA ----------------------------

PATIENT KRISTIN                     DOB: FEB 12,1955 50 YRS  FEMALE  no blood
type
CHEROKEE NATION OF OKLAHOMA
                                   MOTHER'S MAIDEN NAME: PATIENT,LORRAINE
(H) 555-555-0038                   FATHER'S NAME: PATIENT,VERNON
SALINA (30 JEFFERSON PLACE,PRYOR,OK,74361)

LAST UPDATED: OCT 4,2003           ELIGIBILITY: CHS & DIRECT

NOTICE OF PRIVACY PRACTICES REC'D BY PATIENT?
                    DATE RECEIVED BY PATIENT:
                  WAS ACKNOWLEDGEMENT SIGNED?

HEALTH RECORD NUMBERS:  100018  CIMARRON HOSPITAL
                        100019  W.W.HASTINGS
DESIGNATED PROVIDER: <none identified>
ON CMS REGISTER(S):  IHS DIABETES REGISTER

----------------------- ALLERGIES (FROM PROBLEM LIST) -----------------------

                    ***** HX OF ALLERGY TO AMOXICILLIN *****
                    *****    HX OF PCN ALLERGY-RASH    *****

--------------- MEASUREMENT PANELS (max 5 visits or 2 years) ---------------

           HT   WT      BP      BMI       %RW          VU              VC
11/23/03       213    120/66   35.4      163%
10/04/03   65  213    146/65   35.4      163%
08/09/03       206    140/69   34.3      158%
04/22/03   65  212    123/65   35.3      163%
04/17/03       207    132/70   34.4      159%
04/15/01                                          20/26-20/40
02/07/99                                                        20/20-
20/20

--------------------------- REPRODUCTIVE HISTORY ---------------------------

G1P1LC1 (obtained 10/30/99)  LMP 12/19/00 (obtained 12/26/00)
CONTRACEPTION: MENOPAUSE (obtained 04/19/98)

------------------------------ ACTIVE PROBLEMS ------------------------------

             ENT.    MODIFIED
CIMH2       07/27/97 07/27/97 HX OF ALLERGY TO AMOXICILLIN
CIMH3       10/26/97 10/26/97 NIDDM
CIMH4       10/26/97 10/26/97 HX OF PCN ALLERGY-RASH
CIMH5       04/19/98 04/15/01 DIABETES STAGE 0 BDR
CIMH5CIMH1                     04/15/01 -  STAGE 0 - DM FOOT RISK
CIMH6       02/07/99 02/07/99 CANTHI SKIN IRRITATION
CIMH7       12/19/00 12/19/00 PAP A.S.C.U.S. - RULE OUT DYSPLASIA
CIMH8       05/21/01 05/21/01 EYE RISK STAGE 0
```

```
--------------------------- HISTORY OF SURGERY ---------------------------

03/24/02  BRIDGES,ELMER   LAP CHOLECYSTECTOMY
08/07/01  BANKS,HORTENCE  FSBG F 171
08/07/01  THOMPSON,SAMANT FSBG F 171
05/21/01                  FBS 164
02/20/01                  FBS 230
12/19/00  KENNEDY,HECTOR  COLPOSCOPY
12/19/00  KENNEDY,HECTOR  ECC
12/19/00  KENNEDY,HECTOR  CERVICAL BIOPSY DONE

----------------------------- HEALTH FACTORS -----------------------------

~~ Tobacco use ~~
10/04/03  CURRENT SMOKER

--------------------- CURRENT MEDICATIONS (max 2 years) ---------------------

Chronic Medications
10/04/03  (C) ASCORBIC ACID 500MG TAB #200 (100 days)
                TAKE 1 TABLET 2 TIMES EACH DAY AS DIRECTED
                Most recent issue date:  2/11/2002
                # times prev filled: 2   8/9/2003 4/22/2003
10/04/03  (C) NITROGLYCERIN 0.4MG S.L.  #100 (100 days)
                DISSOLVE 1 TABLET UNDER TONGUE IF NEEDED FOR CHEST PAIN . MAY
               REPEAT IN 5 ~
                Most recent issue date:  2/11/2002
10/04/03  (C) ASPIRIN 325MG TAB #50 (100 days)
                TAKE 1/2 TABLET DAILY AS DIRECTED ~
                Most recent issue date:  2/11/2002
                # times prev filled: 2   8/9/2003 4/22/2003
10/04/03  (C) CAPTOPRIL 50MG TAB #200 (100 days)
                TAKE 1 TABLET 2 TIMES EACH DAY ON AN EMPTY STOMACH FOR HIGH
               BLOOD PRESSURE
                Most recent issue date:  2/11/2002
                # times prev filled: 2   8/9/2003 4/22/2003
10/04/03  (C) INSULIN REG U-100 (HUMAN) #30 (120 days)
                INJECT 10 UNITS EVERY MORNING , 5 UNITS AT NOON & 10 UNITS
QP~
                Most recent issue date:  2/11/2002
                # times prev filled: 2   8/9/2003 4/22/2003
10/04/03  (C) INSULIN NPH U-100 (HUMAN) #60 (109 days)
                INJECT 40 UNITS UNDER THE SKIN EVERY MORNING AND 15 UNITS
               EVERY EVENING ~
                Most recent issue date:  2/11/2002
                # times prev filled: 2   8/9/2003 4/22/2003
10/04/03  (C) CALCIUM CARBONATE 1250 MG #100 (100 days)
                TAKE 1 TABLET DAILY FOR CALCIUM
                Most recent issue date:  2/11/2002
                # times prev filled: 2   8/9/2003 4/22/2003
10/04/03  (C) VITAMIN E 400IU CAP #200 (100 days)
                TAKE 1 CAPSULE 2 TIMES EACH DAY AS ANTIOXIDANT
                Most recent issue date:  2/11/2002
                # times prev filled: 2   8/9/2003 4/22/2003
10/04/03  (C) GLIPIZIDE XL 10MG TAB #200 (100 days)
```

```
                TAKE 1 TABLET 2 TIMES EACH DAY FOR DIABETES
                Most recent issue date:  2/11/2002
                # times prev filled: 2   8/9/2003 4/22/2003
10/04/03  (C) ESTROGENS, ESTERIFIED 0.625MG TAB #100 (100 days)
                TAKE 1 TABLET DAILY FOR ESTROGENS
                Most recent issue date:  2/11/2002
                # times prev filled: 2   8/9/2003 4/22/2003
10/04/03  (C) METFORMIN XR 500MG TAB #400 (100 days)
                TAKE 2 TABLETS 2 TIMES EACH DAY FOR DIABETES
                Most recent issue date:  2/11/2002
                # times prev filled: 2   8/9/2003 4/22/2003
10/04/03  (C) MEDROXYPROGESTERONE 10MG   #50 (100 days)
                TAKE 1/2 TABLET DAILY FOR HORMONE REPLACEMENT
                Most recent issue date:  2/11/2002
                # times prev filled: 2   8/9/2003 4/22/2003

Other Medications
Last Fill Date
11/23/03      ROSIGLITAZONE 8MG TAB #15 (30 days)
                TAKE 1/2 TABLET DAILY FOR DIABETES
                Most recent issue date:  4/2/2002
10/28/03      HYDROCODONE/APAP 5/500 #20 (3 days)
                TAKE 1 TABLET EVERY 4 TO 6 HOURS IF NEEDED FOR PAIN
               ...CAUTION... MAY CAUSE DROWSINESS ** AVOID ALCOHOL **
                Most recent issue date:  3/7/2002
                # times prev filled: 1   6/4/2003
08/09/03      CLINDAMYCIN 150MG CAP #45 (15 days)
                TAKE 1 CAPSULE 3 TIMES A DAY UNTIL ALL TAKEN FOR INFECTION
                Most recent issue date:  12/17/2001
04/18/03      PROPOXYPHENE HCL 65MG CAP #20 (1 days)
                TAKE 1 OR 2 CAPSULES EVERY 4 HOURS IF NEEDED FOR PAIN **
AVOID
               ALCOHOL ** ...CAUTION... MAY CAUSE DROWSINESS
                Most recent issue date:  8/26/2001

-------------- SCHEDULED ENCOUNTERS (max 10 visits or 90 days) --------------


--------------- IN HOSPITAL VISITS (max 10 visits or 2 years) ---------------


- OUTPATIENT/FIELD VISITS (Excludes CHR visits) (max 10 visits or 2 years) -

11/23/03  CIM HOSP     DE       NC
10/28/03  CIM HOSP     DENTAL   NONRESTORABLE PERIODONTAL DISEASE #21, 23-26
10/04/03  CIM HOSP     GEN      DM UNCONTROLLED
                                HTN UNCONTROLLED
                                CHEST PAIN
                                SMOKER, (+) PLANS TO QUIT
                        DE       REFILL RX FOR SBGM SUPPLIES
                                 TYPE 2 DM UNCONTROLLED
                                 CN GRANT
09/07/03  CIM HOSP     DENTAL   MAILED LETTER; PT NEEDS 2 UNITS IN GREEN FOR
                                  XX OF LOWERS.
08/09/03  CIM HOSP     GEN      DM 2; UNCONTROLLED
                                ACUTE SINUSITIS
```

```
                                HTN; UNCONTROLLED
                                ERT
06/04/03  CIM HOSP     DENTAL   IRREVERSIBLE PULPITIS
04/22/03  CIM HOSP     LAB      LAB ONLY
                                DIABETES MELLITUS 2
                       DENTAL   DENTAL/ORAL HEALTH VISIT
                       DIA      DM DIET AND EXERCISE EDUCATION
                                DM
                                EXERCISE EDUCATION
                       OPTOMETR DIABETIC EYE EXAMINATION
                                DM
                       DE       TYPE 2 DM; UNCONTROLLED
                                ESSENTIAL HTN; CONTROLLED
                                MAJOR DEPRESSION COMPLICATING TREATMENT OF DM
04/18/03  CIM HOSP     PHARMACY NEW MED
                                R FOOT SPRAIN
04/17/03  CIM HOSP     ER       R FOOT SPRAIN

----------------- REFERRED CARE (max 10 visits or 2 years) -----------------

                         <<<  RCIS ACTIVE REFERRALS  >>>

No Referred Care Referral records on file.

---------- MOST RECENT PATIENT EDUCATION (max 5 visits or 2 years) ----------

11/23/03  CIM HOSP     DM-MEDICATIONS - (IND)       - GOOD UNDERSTANDING
                       DM-INFORMATION - (IND)       - GOOD UNDERSTANDING
                       DM-FOLLOW UP - (IND)       - GOOD UNDERSTANDING
                       DM-COMPLICATIONS - (IND)       - GOOD UNDERSTANDING
                       DM-LIFESTYLE ADAPTATIONS - (IND)       - GOOD
UNDERSTANDING

-------------------------- EDUCATIONAL ASSESSMENT --------------------------

Most recent Health Factor recorded.

   Learning Preference:  LEARNING PREFERENCE-VIDEO  Jun 28, 2005

    Readiness to Learn:  READINESS TO LEARN-UNRECEPTIVE  Jun 28, 2005

  Barriers to Learning:  BARRIERS TO LEARNING-NO BARRIERS  Jun 28, 2005

---------- PATIENT REFUSALS FOR SERVICE (max 10 visits or 2 years) ----------

   Jun 23, 2005  SCREENING MAMMOGRAM   (RADIOLOGY EXAM)
     Refusal Type:  REFUSED SERVICE
   Jun 22, 2005  ECG SUMMARY   (EKG)
     Refusal Type:  REFUSED SERVICE

--------- MOST RECENT RADIOLOGY STUDIES (max 10 visits or 5 years) ---------

ANKLE 3 OR MORE VIEWS (04/17/03)  RESULT:  <none recorded>
   IMPRESSION:   Unremarkable radiographic evaluation of the right ankle.

MAMMOGRAM BILAT       (11/20/00)  RESULT:  <none recorded>
```

```
   IMPRESSION:
---------------- MOST RECENT LABORATORY DATA (max 2 years) ----------------
COMPREHENSIVE METABOLIC PANEL     10/04/03                                A
  GLUCOSE                         10/04/03  274 (H)   mg/dL   70-110       R
  UREA NITROGEN                   10/04/03  8         mg/dL   7-18         R
CREATININE                        10/04/03  0.9       mg/dL   .6-1.3       R
  BUN/CREA                        10/04/03  9                              R
  SODIUM                          10/04/03  132 (L)   mmol/L   136-145     R
  POTASSIUM                       10/04/03  4.0       mmol/L   3.5-5.1     R
  CHLORIDE                        10/04/03  96 (L)    mmol/L   98-107      R
CO2                               10/04/03  22.8      mmol/L   21-32       R
  ANION GAP                       10/04/03  17                             R
  CALCIUM                         10/04/03  8.9       mg/dL    8.5-10.5    R
  PROTEIN,TOTAL                   10/04/03  7.9       g/dL     6.4-8.2     R
  A/G RATIO                       10/04/03  1 (L)                          R
LIVER PROFILE                     10/04/03                                 R
  ALBUMIN                         10/04/03  3.6       g/dL     3.4-5       R
  ALKALINE PHOSPHATASE            10/04/03  94        U/L      30-100      R
SGOT                              10/04/03  15        U/L      15-37       R
  SGPT                            10/04/03  76 (H)    U/L      30-65       R
  LDH                             10/04/03  111       U/L      100-190     R
  BILIRUBIN, TOTAL                10/04/03  0.38      mg/dL    0-1         R
  GGT                             10/04/03  70        U/L      5-85        R
 LIPID PROFILE                    11/23/03                                 R
  CHOLESTEROL                     11/23/03  235 (H)   mg/dL    0-200       R
  TRIGLYCERIDE                    11/23/03  1029 (H)  mg/dL    30-200      R
   HDL                            11/23/03  canc      mg/dL    35-150      R
   LDL                            11/23/03  canc                           R
  CHOL/HDL                        11/23/03  canc                           R
A1cnow                            11/23/03  10.0 (H)                       R
ALBUMIN, MICRO                    04/22/03  POS
URINALYSIS                        10/04/03                                 R
  URINE COLOR                     10/04/03  YELLOW                         R
  URINE CLARITY                   10/04/03  CLEAR                          R
  SPECIFIC GRAVITY                10/04/03  1.025                          R
  URINE UROBILINOGEN              10/04/03  0.2       EU/dL    .2-1        R
  URINE BLOOD                     10/04/03  NEGATIVE  mg/dL    NEG-        R
  URINE BILIRUBIN                 10/04/03  NEGATIVE                       R
  URINE KETONES                   10/04/03  TRACE                          R
  URINE GLUCOSE                   10/04/03  500       mg/dL    0-          R
  URINE PROTEIN                   10/04/03  NEGATIVE  mg/dL    NEG-        R
  URINE PH                        10/04/03  5.0                            R
  URINE NITRITE                   10/04/03  NEGATIVE                       R
  URINE LEUKOCYTE ESTERASE        10/04/03  NEGATIVE                       R

------------------------ MOST RECENT EXAMINATIONS ------------------------
DIABETIC EYE EXAM             (04/02/00)
BREAST EXAM                   (11/20/00)
RECTAL EXAM                   (11/20/00)
PELVIC EXAM                   (12/19/00)
DIABETIC EXAM                 (04/02/00)
TONOMETRY                     (04/02/00)
DIABETIC FOOT EXAM, COMPLETE  (04/02/00)

------------------------------ IMMUNIZATIONS ------------------------------
   IMMUNIZATION FORECAST:
```

```
    * Immunization Forecasting disabled (see Site Parameters). #314

   IMMUNIZATION HISTORY:

   Td-ADULT           22-Oct-1991 36 YRS     Undesig Locations

   INFLUENZA          06-May-1997 42 YRS     Cimarron Hospital    E2715HA
   INFLUENZA          12-Jul-1998 43 YRS     Cimarron Hospital    01186P
   INFLUENZA          19-Jun-2000 45 YRS     Cimarron Hospital    E20098GA
   INFLUENZA          21-Jul-2001 46 YRS     Cimarron Hospital    E24809GA
   INFLUENZA          24-May-2002 47 YRS     Salina Clinic

   PNEUMO-PS          26-Oct-1997 42 YRS     Cimarron Hospital    MSD 1558A

------------------------------ ALL SKIN TESTS ------------------------------

PPD            06/19/00  0 mm CIM HOSP
               06/19/00  0 mm SALINA COMM.

----------------------- HEALTH MAINTENANCE REMINDERS -----------------------

                           LAST        NEXT

BLOOD PRESSURE             11/23/03  11/22/05
WEIGHT                     11/23/03  MAY BE DUE NOW (WAS DUE 11/22/04)

PAP SMEAR                  11/20/00  MAY BE DUE NOW (WAS DUE 11/20/03)
IMMUNIZATIONS DUE * Immunization Forecasting disabled (see Site Parameters).
#34

MAMMOGRAM                  11/20/00  MAY BE DUE NOW (WAS DUE 11/20/01)

INFLUENZA                  05/24/02  MAY BE DUE NOW (WAS DUE 05/24/03)
TD-ADULT                   10/22/91  MAY BE DUE NOW (WAS DUE 10/19/01)

SCREEN FOR ALCOHOL USE               MAY BE DUE NOW
SCREEN FOR TOBACCO USE     10/04/03  MAY BE DUE NOW (WAS DUE 10/03/04)

DOMESTIC VIOLENCE/IPV SCR            MAY BE DUE NOW




------------------------- FLOW SHEETS (max 2 years) -------------------------

DIABETIC FLOW SHEET
              GLU    A1C   CHOL    LDL    HDL   PROT   M/ALB  TRIG   CREAT
  ---------------------------------------------------------------------------
  11/23/03  :      :10.0  :235 H :canc  :canc  :      :      :1029  :
            :      :H     :      :      :      :      :      :H     :
  ---------------------------------------------------------------------------
  10/04/03  :274 H :10.1  :170   :67.8  :38    :NEGAT :      :321 H :0.9
            :      :H     :      :      :      :IVE   :      :      :
  ---------------------------------------------------------------------------
  04/22/03  :284 H :11.7  :      :      :      :NEGAT :POS   :      :0.8
```

```
           :      :H     :      :      :      :IVE   :      :      :
  ------------------------------------------------------------------------
DIABETES PATIENT CARE SUMMARY                 Report Date:  Feb 21, 2005
Patient Name:  CARSON,KRISTIN    HRN: 100018
Age:  50      Sex:  F         Date of DM Onset:
Dob:  Feb 12, 1955            DM Problem #: CIMH3
                              Primary Care Provider:
Last Height:  65 inches       Oct 04, 2003
Last Weight:  213 lbs         Nov 23, 2003  BMI: 35.4
Tobacco Use:  CURRENT SMOKER  Oct 04, 2003

HTN Diagnosed:  Yes
ON ACE Inhibitor/ARB in past 6 months: No
Aspirin Use/Anti-platelet (in past yr):  No

Last 3 BP:  120/66     Nov 23, 2003
            146/65     Oct 04, 2003
            140/69     Aug 09, 2003

In past 12 months:                          Is Depression on the Problem List?
                                            Yes - Problem List 308.3
Diabetic Foot Exam:   No    Apr 02, 2000
Diabetic Eye Exam:    No    Apr 02, 2000
Dental Exam:          No
(Females Only)
Last Pap Smear documented in PCC/WH: Nov 20, 2000
                WH Cervical TX Need:
Mammogram: Nov 20, 2000  MAY BE DUE NOW (WAS DUE 11/20/01)

SMBG: No Evidence in the past year

DM Education Provided (in past yr):
   Last Dietitian Visit:   Apr 22, 2003  DM DIET AND EXERCISE EDUCATION
      <No Education Topics recorded in past year>

Immunizations:
Flu vaccine since August 1st:  No   May 24, 2002
Pneumovax ever:                Yes  Oct 26, 1997
Td in past 10 yrs:             No   Oct 22, 1991
Last Documented PPD:      0     Jun 19, 2000
Last TB Status Health Factor:
EKG: Patient Refused ECG SUMMARY Jun 28, 2003


Laboratory Results (most recent):
HbA1c:                    10.0          Nov 23, 2003
Next most recent HbA1c:   10.1          Oct 04, 2003
Nephropathy Assessment
  Urine Protein:          NEGATIVE      Oct 04, 2003
  Microalbuminuria:       POS           Apr 22, 2003
  Creatinine:             0.9           Oct 04, 2003
  Estimated GFR:
Total Cholesterol:        235           Nov 23, 2003
  LDL Cholesterol:        canc          Nov 23, 2003
  Next most recent LDL values:
                          67.8          Oct 04, 2003
```

```
HDL Cholesterol:        canc            Nov 23, 2003
Triglycerides:          1029            Nov 23, 2003
```

Figure 8-1: Sample of browsing the Health Summary

Assistance may be sought from your site manager and your Area Diabetes Coordinator in formatting your Health Summary to display the components especially developed for Diabetes care.

9.0 Report Generation

Numerous reports can be generated from the IHS Diabetes Register through the Diabetes Management System's Report Generation feature. These reports contain a combination of demographic data, clinical data from the PCC, and register data that you have entered.

To generate reports of your register data, use the **RP** Reports option on the Diabetes Management System main menu. The reports listed in *Figure 9-1* are available.

```
                    REPORTS MENU


 FU     Follow-up Needed
 LP     List Patient Appointments
 RR     Register Reports ...

Select Reports Option:  FU
```

Figure 9-1: Sample of selecting the FU options

9.1 Follow-up Needed

The Follow-up Needed report option allows you to identify members of the register who are delinquent in receiving or have never had exams, procedures, patient education, immunizations, vaccines, or lab tests identified by the Diabetes program. A report of those patients identified as requiring follow-up may be generated, custom letters may be generated, or both a report and letters may be generated. You may choose to generate the report for all members of the register, only Active patients, Inactive patients, Transient patients, Unreviewed patients, Non-IHS patients, Noncompliant, or Deceased patients. The report may be generated for all members of the register, a template of patients, or patients with specific diagnoses. In addition, the report may be sorted by community, where the patients are followed, or by their register provider. In the following example (*Figure 9-2*), a report on active patients in the register who do not have current PAP smears on record will be generated by selecting **FU** Follow-up Needed.

```
DIABETES REGISTER - FOLLOW-UP NEEDED REPORTS
       (Patients due now or within the next 30 days.  All follow-up)
       (services are annual unless otherwise noted below.)

       1      ALL Exams/Procedures-----------------------------
         11   Foot Exam                12   Eye Exam
         14   Pap Smear                18   Dental Exam
       2      ALL Patient Education----------------------------
         21   Nutrition                22   Exercise
         23   General Info
       3      ALL Immunizations/Vaccines-----------------------
         31   Flu Shot                 32   Pneumovax
         33   Td               (Q10Y)  34   PPD
       4      ALL Lab Tests------------------------------------
         41   LDL Cholesterol          42   HDL Cholesterol
         43   Cholesterol              44   Triglyceride
         45   Creatinine               46   Hemoglobin A1c
         48   UA/Urine Prot            49   Microalbumin

       Type 'ALL' to include ALL Follow-up
        Which Report: 14

     Select one of the following:

          1         Use Register Members
          2         Use A Search Template

Which Group: Use Register Members// [ENT]

Select the Patient Status for this report

     Select one of the following:

          A         Active
          I         Inactive
          T         Transient
          U         Unreviewed
          D         Deceased
          N         Non-IHS
          NON       Noncompliant
          Z         All Register Patients

Which patients: Active// [ENT]
Select the Diabetes Diagnosis for this report

     Select one of the following:

          1         Type 1
          2         Type 2
          3         Type 1 & Type 2
          4         Gestational DM
          5         Impaired Glucose Tolerance
          6         All Diagnoses

Which Diagnosis: All Diagnoses// 2  Type 2
```

Note: If a Register Diagnosis has not been assigned to all patients, you must choose 6 All Diagnoses for an accurate report.

```
Include list of patient's
upcoming appointments? NO// [ENT]

Print the Follow-up Report/Letters by

     Select one of the following:

          1         Community
          2         Primary Provider
          3         Where Followed

Which one: Community// 3  Where Followed


Which Location Where Followed: [ENT]

Location Where Followed Selected:

          ALL

     Select one of the following:

          1         Follow-up Report
          2         Follow-up Letter
          3         Both

Which one: Follow-up Report// [ENT]

DEVICE: HOME//
```

Press the Enter key to select ALL Locations Where Followed

Enter name or number of printer

Figure 9-2: Using the FU option

The resulting report displays the patients, chart numbers, and date of last Pap smear. Only those patients who have not had a Pap smear in the last eleven months or are due for a Pap smear in the next 30 days are displayed. The report is sorted alphabetically by patient name within each community. Each of the follow-up reports can be limited to patients within a specific community or followed by a specific primary provider. In order to better coordinate the patients' care, an option to display future appointments is also included in the report.

```
FOLLOW-UP REPORT        May 22, 2003 07:28:53     Page:    1 of    8

     DKR DIABETES Register - Active Patients
     Follow-up Report: PAP SMEAR                        Page: 1
     (For Patients due now or within the next 30 days)
     REPORT DATE: MAY 22,2003

COMMUNITY       PATIENT              HRN    STATUS
--------------- ------------------ ------ ------------------
AJO         PATIENT,JILL            101476  *NO* PAP SMEAR on record.
AJO         PATIENT,AMANDA          101422  last PAP SMEAR MAY 16,1995
AKCHIN      PATIENT,ALLISON         101387  last PAP SMEAR AUG 29,1995
ANEGAM      PATIENT,JENNIFER        101321  last PAP SMEAR OCT 10,1996
ANEGAM      PATIENT,DARLENE         101240  last PAP SMEAR JUL 13,1998
ARTESA      PATIENT,LAURA           100089  last PAP SMEAR AUG 21,1996
ARTESA      PATIENT,MAUDE           100047  last PAP SMEAR DEC 11,1996
BIG FIELDS PATIENT,LRAINE           100266  last PAP SMEAR AUG 13,1994
```

Figure 9-3: Using the FU option, screen 2

This option could be used again to generate a letter to each of these patients indicating that they are overdue for a Pap smear. When you choose the option to print a letter, you are prompted to select one of the letters set up in Register Maintenance. A custom letter could be designed for each of the follow-up Diabetic Care needs identified by this report.

9.2 List Patient Appointments

This option permits the diabetes coordinator to review appointments for all patients entered in the Diabetes Register to ensure that the appropriate scheduling has occurred. This option only works if the facility is using the RPMS Scheduling Package. Select the option **LP List Patient Appointments**. Enter the beginning date for appointment review and the ending date.

```
REPORTS MENU


   FU     Follow-up Needed
   LP     List Patient Appointments
   RR     Register Reports ...

Select Reports Option: LP  List Patient Appointments

Beginning Date:  10/1/1999
Ending Date...:  10/31/1999

DEVICE: HOME// Device Number
```

Figure 9-4: Listing patient appointments

The resulting report appears as follows:

```
DIABETES MANAGEMENT SYSTEM - PATIENT APPOINTMENTS
         REPORT DATE....: SEPT 15,1999
         APPTS BEGINNING: OCT 1,1999
         APPTS ENDING...: OCT 31,1999

PATIENT              CLINIC                APPT DATE/TIME
-------------------- --------------------- --------------------
PATIENT,BARRY     DIABETIC CLINIC       OCT 12,1999 at 10:00
PATIENT,RAE         INTERNAL MEDICINE (P  FEB 4,2000  at 08:15
```

Figure 9-5: Listing patient appointments, screen 2

9.3 Register Reports

By selecting **RR Register Reports** you can choose to display or print register data in a number of different ways.

```
  REPORTS MENU

   CS     Individual Patient Summary
   MS     Multiple Patient Summaries
   ML     Master List
   PR     Patient and Statistical Reports
   GEN    Register Patient General Retrieval (Lister)
Select Register Reports Option:  CS
```

Figure 9-6: Register Reports

9.3.1 Case Summary, Individual

The Case Summary displays or prints all data contained in the Diabetes Management System for a single patient. For the IHS Diabetes Register, this includes demographic information, register status data, diabetes diagnosis, complications, review dates, and any case comments that have been entered. The Case Summary also includes the patient's PCC Problem List. To produce an individual Case Summary, select the Individual Case Summary menu option and enter the patient's name or chart number. The Case Summary is generated instantaneously. You have the option of including a PCC Health Summary at the end of the Case Summary. For this report, you may retrieve data for all patients on the Diabetes Register regardless of status.

9.3.2 Case Summary, Multiple

This option allows you to produce Case Summaries (described above) for all patients or a subset of patients in your IHS Diabetes Register. After selecting the option, you will be asked to specify a sorting order for the Case Summaries. You may sort by Patient (alphabetical order), Community of Residence, Facility where Followed, Case Manager, or Next Review Date. After selecting the sort order, you will specify whether to retrieve data for everyone in the register or for a subset of patients. For example, if you select Community for the sort order, you can print all patients in the register grouped by community or you can choose a specific community in order to print only those patients within that particular community. Likewise, if you select Next Review Date as your sort order, you can specify a time period and list only

those patients whose next review date falls in that range or list all patients in the register in the order of their next review date. This option retrieves only active patients. All other patients are excluded. You may save your report results in a search template for later data retrievals.

9.3.3 Master List

The Diabetes Management Master List produces a list of all active patients and displays their Chart Number, Case Manager, Public Health Nurse, and Next Review Date. You may sort the list by Patient Name (alphabetical order), Age, Community of Residence, Case Manager, Public Health Nurse, Sex, Status*, or Facility where Followed. You may also sort by a combination of these register items; for example, alphabetical order by Patient Name by Community. The report output may be stored in a search template to be used for additional data retrievals.

> **Note:** Inactive, Transient, Unreviewed, Deceased, Lost to Follow-up, Non-IHS, and Noncompliant patients are included when the Master List is sorted by Status. If you choose to sort patients by Status, you may list patients for one or more of the status categories. This is the only report in Diabetes Management, other than Individual Case Summary and General Retrieval that displays patients who are not classified as Active.

9.3.4 Patient and Statistical Reports

This report option produces patient lists or counts. It includes reports for the following six categories:

> **Note**: Only ACTIVE patients are included in this report.

- Register Data
- Case History
- Case Review Date
- Complications
- Diagnoses
- Family Members

Most reports can be sorted by Patient Name, Community, Facility where Followed, Age, Sex, or a combination of these factors. Additionally, you can be very selective in specifying which patients to retrieve. For example, you can select to retrieve only patients with a specific diagnosis or complication and then sort the list by any of the factors above. By indicating the patients you want to retrieve and the sorting variables, you can generate a very specific report; for instance, all patients with major amputations that live in Santa Fe and are between the ages of 40 and 50.

When you request these reports, you will be asked whether you want a Patient or Statistical report. By responding with **P**, for patient, the system will generate a patient listing. A response of **S**, for statistical, will result in a display of counts without a patient listing.

You will also be asked whether you want to store the output from the report in a search template. If you respond **YES**, you will be asked to enter a name for the template. The name may be up to 30 characters in length. After naming the template, the report will be generated and the patients will be stored in a template for use in QMan retrievals, as specified in the Retrieval of Clinical Data section of this manual. In the sample dialogue below (*Figure 9-7*), a report is generated for all patients with Type 2 diabetes and stored as a search template for further queries.

> **Note:** All patients in the register must have an assigned diagnosis to generate an accurate report.

```
PR    Patient and Statistical Reports
      3)    DIAGNOSIS
               3)   DIAGNOSIS
Do you want to sort by a particular DIAGNOSIS?  No// Y
Which DIAGNOSIS?: TYPE 2
Within DIAGNOSIS, want to sort by another attribute? No// [ENT]
'P'atient or 'S'tatistical report? ==>    P
Store Report Result as Search Template?  NO// Y
Search Template:  TYPE 2 DM PTS
Are you adding 'TYPE 2 DM PTS' as a new SORT TEMPLATE? No// Y
DEVICE:  HOME (or printer number)
```

Figure 9-7: Patient and statistical report option

9.3.5 Register Patient General Retrieval (Lister)

This report produces a list of patients on the Diabetes Register by the criteria that you choose. The report format is extremely flexible because you are able to specify the selection criteria, the data items to be printed, and the sorting order. You may print a detailed patient list or just counts of those patients that match the criteria you have selected. The first page of the report output is a summary page that displays the selection criteria, print items, and sort variable that you have requested.

> **Note:** Only the items selected as a Component Item of your register will appear as a choice of selection.

After selecting the report option, you may enter the name of a previously defined report or press the **Enter** key to bypass the first prompt. Then, in three separate steps, you will be asked to identify your selection criteria, data items to print for each patient, and the sorting order. All of the selections are listed below (*Figure 9-8*). You may save the selected variables for future use by entering YES when prompted to save them and then naming the report template.

If you design a report that is 80 characters or fewer in width, it can be displayed on the screen or printed. If your report is 81 to 132 characters wide, it must be printed on a printer capable of producing 132 character lines or a printer set up for condensed print.

Selection Criteria

```
REGISTER:  IHS DIABETES
The Patients displayed can be SEARCHED based on any of the following
criteria:

1)  Patient Name         16)  Medicaid Eligibility  31)  Intervention Due DT
2)  Patient Sex          17)  Priv Ins Elibibility  32)  Intervent Result DT
3)  Patient DOB          18)  Primary Care Provide  33)  Care Plan
4)  Patient Age          19)  Register Status       34)  Care-Plan Comment
5)  Patient DOD          20)  Initial Entry Date    35)  Complications
6)  Mlg Address-State    21)  Inactivation Date     36)  Complication Onset D
7)  Mlg Address-Zip Code 22)  Case Priority         37)  Complication Comment
8)  Living Patients      23)  Case Manager          38)  Diagnoses
9)  Chart Facility       24)  PHN                   39)  Date of Onset
10)  Patient Community   25)  Last Review Date      40)  Recall Date
11)  Patient Tribe       26)  Next Review Date      41)  Risk Factors
12)  Eligibility Status  27)  Where PT Followed     42)  Medications
13)  Class/Beneficiary   28)  Date Last Edited      43)  Diagnostic Criteria
14)  Cause of Death      29)  Register Provider
15)  Medicare Eligibility30)  Interventions

         <Enter a list or a range.  E.g. 1-4,5,20 or 10,12,20,30>
         <<HIT RETURN to conclude selections or bypass screens>>

      Select Patients based on which of the above:  (1-34):
```

Figure 9-8: Register Patient General Retrieval (Lister)

After pressing enter to use all the patients in the register or entering specific selection criteria, you can choose to do one of the following:

T	Total Count Only
S	Sub-counts and Total Count
D	Detailed Patient Listing
F	Delimited Export File

If the delimited export file option is chosen, a file name will be assigned by the system. This file will be written and reside on the main RPMS server. Make a note of the file name as you will have to request that this file be emailed, FTP'd, or returned to you on a floppy disk, CD, or USB device by your site manager. If you choose to continue, you may select from the list of fields to be included in the file.

The resulting file may be imported into Excel, ACCESS, SAS, or a variety of PC-based programs used for data analysis.

```
     Choose Type of Report: D// F  Delimited Export File


I am going to create a file called ACM612.5 which will reside in
the C:\EXPORT directory.
Actually, the file will be placed in the same directory that the data export
globals are placed.  See your site manager for assistance in finding the file
after it is created.  PLEASE jot down and remember the following file name:
               **********    ACM612.5    **********

The records that are generated will be '^' delimited.  The fields
will be the fields you select in the next screen and will be in the order
that you select them.

Do you want to continue?? Y// [ENT]

REGISTER:  DKR DIABETES
                        PRINT Data Items Menu
The following data items can be selected to be output to a '^' delimited
file.
Choose the data items in the order you want them to be output.

1)  Patient Name          12)  Home Phone            23)  Inactivation Date
2)  Patient Chart #       13)  Mother's Name         24)  Case Priority
3)  Patient Sex           14)  Patient Community     25)  Case Manager
4)  Patient SSN           15)  Patient Tribe         26)  PHN
5)  Patient DOB           16)  Eligibility Status    27)  Last Review Date
6)  Patient Age           17)  Class/Beneficiary     28)  Next Review Date
7)  Patient DOD           18)  Cause of Death        29)  Where PT Followed
8)  Mlg Address-Street    19)  Patient's Last Visit  30)  Date Last Edited
9)  Mlg Address-State     20)  Primary Care Provide  31)  Client Contact
10)  Mlg Address-City     21)  Register Status       32)  Register Provider
11)  Mlg Address-Zip Code 22)  Initial Entry Date

       <Enter a list or a range.  E.g. 1-4,5,18 or 10,12,18,30>
       <<HIT RETURN to conclude selections or '^' to exit>>
Select print item(s):  (1-28): 1,2,3,5,8,10,12,21,25

    Items selected for flat file output:
            Patient Name
            Patient Chart #
            Patient Sex
            Patient DOB
            Mailing Address-Street
            Mailing Address-City
            Home Phone
            Register Status
            Case Manager
```

Figure 9-9: Register Patient General Retrieval (Lister), screen 2

```
If no additional print items are selected, the file may be sorted by:


     1)  Patient Name                    14)  Last Review Date
     2)  Patient Age                     15)  Next Review Date
     3)  Patient Community               16)  Date Last Edited
     4)  Patient Sex                     17)  Case Priority
     5)  Patient Tribe                   18)  Case Manager
     6)  Patient Chart #                 19)  PHN
     7)  Primary Care Provider (PCC)     20)  Where PT Followed
     8)  Classification/Beneficiary      21)  Register Provider
     9)  Eligibility Status              22)  Inactivation Date
     10)  Cause of Death                 23)  Initial Entry Date
     11)  Patient DOB                    24)  Mlg Address-Zip Code
     12)  Patient DOD                    25)  Mlg Address-State
     13)  Register Status
```

Figure 9-10: Register Patient General Retrieval (Lister), screen 3

If you don't select a sort criterion the file will be sorted alphabetically by Patient Name.

Assistance may be sought for importing this flat file delimited by the ^ character into a PC-based software program from Area Diabetes Consultants.

If the option to print a Total Count is chosen, the total number of patients meeting the search criteria is displayed. If the option for Sub-counts and Total Counts is chosen, you will be prompted to indicate how you would like to have the counts sorted. For example if you would like to do a count of your diabetic register patients sorted by community, you could press the Enter key on the search screen, and then select Community on the Sort Screen. The resulting report would display total and sub-counts as below (*Figure 9-11*).

```
            CASE MANAGEMENT PATIENT LISTING                 Page 1
                 IHS DIABETES REGISTER
            PATIENT SUB-TOTALS BY:  Patient Community
-------------------------------------------------------------

Patient Community:
          AJO                                        3
          AKCHIN                                     2
          ANEGAM                                     3
          ARIZONA UNK                                1
          ARTESA                                     2
          BIG FIELDS                                 6
          CHARCO 27                                  3
          CHOULIC                                    3
          CHUICHU                                    3
          COBABI                                     1
```

Figure 9-11: Register Patient General Retrieval (Lister), screen 4

If the option for a detailed patient listing is chosen, you will prompted to identify which data items you would like printed and how you would like them sorted. Print items include:

```
1)  Patient Name          12)  Home Phone           23)  Inactivation Date
2)  Patient Chart #       13)  Mother's Name        24)  Case Priority
3)  Patient Sex           14)  Patient Community    25)  Case Manager
4)  Patient SSN           15)  Patient Tribe        26)  PHN
5)  Patient DOB           16)  Eligibility Status   27)  Last Review Date
6)  Patient Age           17)  Class/Beneficiary    28)  Next Review Date
7)  Patient DOD           18)  Cause of Death       29)  Where PT Followed
8)  Mlg Address-Street    19)  Patient's Last Visit 30)  Date Last Edited
9)  Mlg Address-State     20)  Primary Care Provide 31)  Client Contact
10)  Mlg Address-City     21)  Register Status      32)  Register Provider
11)  Mlg Address-Zip Code 22)  Initial Entry Date
```

Figure 9-12: Print items

Note: Only one sort criterion may be used.

Sort Criteria are included in the following example.

```
    1)  Patient Name                  14)  Last Review Date
    2)  Patient Age                   15)  Next Review Date
    3)  Patient Community             16)  Date Last Edited
    4)  Patient Sex                   17)  Case Priority
    5)  Patient Tribe                 18)  Case Manager
    6)  Patient Chart #               19)  PHN
    7)  Primary Care Provider (PCC)   20)  Where PT Followed
    8)  Classification/Beneficiary    21)  Register Provider
    9)  Eligibility Status            22)  Inactivation Date
    10)  Cause of Death               23)  Initial Entry Date
    11)  Patient DOB                  24)  Mlg Address-Zip Code
    12)  Patient DOD                  25)  Mlg Address-State
    13)  Register Status
```

Figure 9-13: Sort Criteria

Note: The numbers of the Select, Sort, and Print items will correspond to the actual data item structure of the diabetes register that you have created. The data items will be limited to those you have included in your register and those available from the PCC database.

For more information about using this report option, please refer to the Case Management (Version 2.0) User's Manual.

10.0 Retrieval of Clinical Data from the PCC for Patients in the IHS Diabetes Register

Both PCC Management Reports and QMan can be used to retrieve a variety of data on patients in the IHS Diabetes Register.

10.1 PCC Management Reports

The most useful tool in PCC Management Reports for following your patients with diabetes is the Body Mass Index (BMI) Reports. You may run the reports on all the patients in your register or selected groups based on creation of search templates using the Patient and Statistical Report option or QMan. In the following example a BMI report will be run on the template of TYPE 2 DM PTS created on page 83 of this manual. Begin by selecting the BMI menu option from the main PCC Management Report Menu.

```
                      DEMO HOSPITAL


   PLST   Patient Listings ...
   RES    Resource Allocation/Workload Reports ...
   INPT   Inpatient Reports ...
   QA     Quality Assurance Reports ...
   DM     Diabetes Program QA Audit ...
   APC    APC Reports ...
   PCCV   PCC Ambulatory Visit Reports ...
   BILL   Billing Reports ...
   BMI    Body Mass Index Reports ...
   ACT    Activity Reports by Discipline Group ...
   CNTS   Dx & Procedure Count Summary Reports ...
   IMM    Immunization Reports ...
   DR     PCC Patient Data Retrieval Utility
   RT     Report Template Utility ...
   STS    Search Template System ...
   QMAN   Q-Man (PCC Query Utility)
   FM     FileMan (General) ...
   TB     Tuberculosis Report

Select PCC Management Reports Option:  BMI
```

Figure 10-1: PCC management reports

There are several different report options for displaying Body Mass Index but for the purpose of this example, a list of patients with their height, weight and BMI sorted by BMI will be displayed. Therefore, the option, Listing of Patients with Height/Weight/BMI (LPAT) has been chosen.

```
           *****  RISK FOR OVERWEIGHT PREVALENCE REPORT  *****

                                PATIENT LIST
This report will produce a listing of all patients of the age and sex
that you specify.  The report will list their weight, height and BMI.


 Select one of the following:

          S         Search Template of Patients
          P         Search All Patients

Select List : Search Template of Patients [ENT]

Enter Visit SEARCH TEMPLATE name:    TYPE 2 DM PTS
                          (Sep 27, 1999)       User #605 File #9000001

     Select one of the following:

          M         Males
          F         Females
          B         Both

Report should include: B// [ENT]

Do you wish to include ONLY Indian/Alaska Native Beneficiaries? N// Y

Enter a Range of Ages (e.g. 5-12) [HIT RETURN TO INCLUDE ALL RANGES]:
[ENT]

No age range entered.  All ages will be included.

Select one of the following

          R         Report (Printed or Browsed)
          S         Sort Template

Type of Output: R//[ENT]

 Select one of the following:

          P         Patient Name
          A         Age of Patient
          B         BMI
Sort the report by: P// B

Do you wish to suppress patient identifying data (name,chart #)? N// [ENT]
DEVICE: HOME// Enter Printer number
```

Figure 10-2: PCC management reports, screen 2

The resulting report is displayed in *Figure 10-3*.

```
DKR                          DEMO HOSPITAL                              Page 1
                  OVERWEIGHT/OBESITY PREVALENCE REPORT
                            PATIENT LISTING

                Report includes: MALES & FEMALES / ALL AGES
                Report Includes: INDIAN/ALASKA NATIVES ONLY
                Search Template of Patients: DM TYPE 2 PTS
                                                                 >=     >=
                                        DATE OF                 NHANES NHANES
PATIENT NAME    HRN #  HEIGHT WEIGHT WEIGHT  AGE SEX  BMI     85TH%  95TH%
-------------------------------------------------------------------------
PATIENT,BARR    100005 63.8  222.1  01/24/97 33  M   39.6      N      Y
PATIENT,SALLY   100000 64.0  333.0  08/07/98 47  F   58.9      N      Y
```

Figure 10-3: PCC management reports, screen 3

10.2 QMan

QMan, the PCC query tool, provides virtually unlimited access to PCC clinical data for patients contained in your IHS Diabetes Register. Many of the follow-up reports formerly requiring QMan to generate are now available through the Follow-up Report menu option of the Diabetes Management System. In using QMan, all of the patients in your register may be used as the subject of your query by entering REGISTER as the subject and IHS Diabetes (or the name of your local diabetes register) when prompted for a register. You may also use QMan for retrieving clinical data on specific subsets of the patients in your register. These subsets of patients are referred to as cohorts or search templates.

You may use the Master List or Patient and Statistical Reports option to create templates of patients. Both of these options are accessed from the Register Reports menu in the Diabetes Management System. Using these report-generating options, you can create a template of all patients in your register, all active patients, patients in selected age groups or communities, patients with selected diagnoses or complications, or patients in other categories of interest to you.

> **Note**: It is extremely important to remember that if sorting by diagnosis, each patient in the register must have been assigned a diagnosis or the resulting report will be invalid.

The process for generating these templates is described on pages 82-83.

Formal QMan training for Diabetes Coordinators is essential to optimize use of the link between the Diabetes Register and the PCC. Instructions on using QMan will not be provided in this manual. The remainder of this section provides QMan dialogue for producing three QMan outputs. These outputs are representative of the many QMan searches of PCC clinical data that are available to you.

10.2.1 Using Register as the Subject of a Search

In this example, a list of the last Hemoglobin A1C for each patient in the register will be created. User responses and instructions are in bold type.

1. Type **REGISTER** at the "`What is the subject of your search:`" prompt.

2. Type the name of your register at the "`Which CMS Register:`" prompt.

3. Type the status of the patients at the "`Which Patients:`" prompt.

4. Type the Diabetes Diagnosis of the patients for this report at the "`Which Diagnosis:`" prompt.

Remember, you may only select a specific diagnosis if all of your patients have been assigned a register diagnosis.

5. Type the desired attribute at the "`Attribute of IHS Diabetes Register:`" prompt.

```
What is the subject of your search?  LIVING PATIENTS // REGISTER
Which CMS REGISTER: IHS DIABETES
      Select the Patient Status for this report

         1     Active
         2     Inactive
         3     Transient
         4     Unreviewed
         5     Deceased
         6     Non-IHS
         7     All Register

Which patients: 1// [ENT]

Select the Diabetes Diagnosis for this report

    Select one of the following:

         1         Type 1
         2         Type 2
         3         Type 1 & Type 2
         4         Gestational DM
         5         Impaired Glucose Tolerance
         6         All Diagnoses

Which Diagnosis: All Diagnoses//

Attribute of IHS DIABETES REGISTER: A1C
```

Figure 10-4: Using Register as the Subject of a Search (steps 1-4)

6. Type the first condition at the "`First condition of "attribute":`" prompt.

7. Type the value at the "`Value:`" prompt.

8. Type another condition or press the **Enter** key to continue at the "`Next condition of "attribute":`" prompt

9. Type a selection from the QMan Output Options at the "Your Choice:" prompt.

10. If a clinical attribute was chosen, choose between values of the clinical attribute, an extended display of the values, or unduplicated patients by typing a number for the selection at the "`Your Choice:`" prompt.

```
      SUBQUERY: Analysis of multiple HEMOGLOBIN A1CS
                First condition of "HEMOGLOBIN A1C": LAST
                Enter the value which goes with LAST; e.g., LAST 3, LAST 10,
                etc.
                Value: 1
                Next condition of "HEMOGLOBIN A1C": [ENT]

     Select one of the following:

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

Your choice: DISPLAY// 1

You have 3 options for listing HEMOGLOBIN A1C RESULTS =>

     1) List every RESULTS meeting search criteria.
     2) List every RESULTS and EXPANDED LAB REPORT meeting search
        criteria.
     3) List all PATIENTS with RESULTS you specified, but DO NOT list
        individual RESULTS or EXPANDED LAB REPORT (FASTEST OPTION!!)
        (Displays UNDUPLICATED list of PATIENTS)
Your choice (1-3): 1// [ENT]
```

Figure 10-5: Using Register as the Subject of a Search (steps 5-9)

A section of the resulting report appears in the following example:

```
PATIENTS            DEMO  A1C       A1C DATE
                    NUMBER %
-------------------------------------------------
PATIENT,SALLY*    100010    13.3 H    JAN 12,1997
PATIENT,BARRY     100035    10.8 H    SEP 22,1999
PATIENT,RUTH      100383    6.5       DEC 1,1997
PATIENT,MEGAN     100557    4.5       JUL 13,1998
PATIENT,BARBARA   100643    7.8 H     DEC 1,1997
PATIENT,MAXINE    100771    10.0 H    DEC 1,1997
PATIENT,DARLENE   101240    8.4 H     JUL 13,1998
PATIENT,ROSE      101599    6.0       JUL 13,1998
PATIENT,BARRY     101860    7.2 H     DEC 1,1997
```

Figure 10-6: Using Register as the Subject of a Search, sample report

10.2.2 Using a Template of Patients with Diabetes as an Attribute

In this example, a search will be made using the template, Type 2 DM Patients, as an attribute and a query will be made to determine which of them have not been seen in the dental clinic in the last year. To use a template of patients as an attribute, begin by identifying your search subject as LIVING PATIENTS. When you are prompted for an attribute of the patients, enter the left bracket symbol followed by the name of your template: [TYPE 2 DM PTS. You will then be given four options related to your template. Select option 1 to indicate that the patients to be searched must be members of your template.

The following QMan dialogue (*Figure 10-7* through *Figure 10-9*) will produce the list of patients who have not been seen in the Dental Clinic in the last year. User responses and instructions are in bold type.

1. Type subject of your search at the "`What is the subject of your search:`" prompt.

2. Type the attribute at the "`Attribute:`" prompt.

3. Type a number for the selection list at the "`Your Choice:`" prompt.

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

Attribute: [TYPE 2 DM PTS
Select one of the following =>

   1) LIVING PATIENTS must be a member of the TYPE 2 DM PTS
      cohort
   2) LIVING PATIENTS must NOT be a member of the TYPE 2 DM PTS
      cohort
   3) Select a random sample of the TYPE 2 DM PTS cohort
   4) Count the number of entries in the TYPE 2 DM PTS cohort

Your choice (1-4): 1// [ENT]
```

Figure 10-7: Using a Template of Patients with Diabetes as an Attribute (steps 1-3)

4. Type an attribute at the next "`Attribute:`" prompt.

5. Type the first condition of the attribute, **During** at the "`First Condition/Attribute of VISIT:`" prompt.

6. Type the date or the date one year ago at the "`Exact Date:`" prompt.

7. Type the next condition at the "`Next Condition/Attribute of Visit:`" prompt.

8. Type the name of the clinic, Dental, at the "`Clinic:`" prompt.

9. Type the name of another clinic or press the **Enter** key to continue at the next "`Enter Clinic:`" prompt.

10. Type the next condition **NULL** at the "`Next Condition/Attribute of Visit:`" prompt. Null means that the patient has not had a dental clinic visit in the past year.

11. Type the next condition or press the **Enter** key to continue at the "`Next Condition/Attribute of Visit:`" prompt.

12. Type the next attribute or press the **Enter** key to continue at the "`Next Attribute:`" prompt.

13. Type the number for the selection of QMan Output Options at the "`Your Choice:`" prompt.

```
Attribute:  VISIT
First Condition/Attribute of VISIT:  SINCE
Exact Date:  T-365
Next Condition/Attribute of VISIT:  CLINIC
Enter Clinic:  DENTAL
Enter Clinic:  [ENT]
Next Condition/Attribute of VISIT:  NULL
Next Condition/Attribute of VISIT:  [ENT]
Next Attribute:  [ENT]

* * Q-Man Output Options * *
Select one of the following:
  1 DISPLAY results on the screen
  2 PRINT results on paper
  3 COUNT 'hits'
  4 STORE results of a search in a FM search template
    [ETC.]

Your Choice:  DISPLAY// 1
```

Figure 10-8: Using a Template of Patients with Diabetes as an Attribute (steps 4-13)

QMan will now display those patients in your cohort who have not visited the dental clinic in the past year. A "**-**"in the Visit column indicates that no visit to the dental clinic within the designated time frame has occurred.

```
PATIENTS         DEMO  VISIT
(Alive)          NUMBER
-------------------------------------------------------------

PATIENT,RAE*      100003 -
PATIENT,SALLY*    100010 -
PATIENT ,BARRY    100035 -
Total: 3
```

Figure 10-9: Using a Template of Patients with Diabetes as an Attribute, sample

10.2.3 More Complex QMan Search for Multiple Attributes

At times QMan can be used for fairly sophisticated retrievals like following liver function tests on patients in the register taking drugs known to have a hepatotoxic effect.

In this example, the entire register can be used as the subject, RX can be used as an attribute, and AST, ALT, GGT, or LDH can be used as additional attributes. It is difficult to perform QMan searches for multiple clinical attributes because of a limiting factor in display called "Rule of Last". Because of this limitation only the value of the last clinical attribute listed will actually display. Therefore, lab values for more than one lab test cannot be displayed in a single query. In the following example (*Figure 10-10*), prescriptions of Glipizide issued during the last six months and SGOT values during that time frame will be displayed.

```
What is the subject of your search?  LIVING PATIENTS // REGISTER
Which CMS REGISTER: IHS DIABETES
Select the Patient Status for this report
      Select one of the following:

          A         Active
          I         Inactive
          T         Transient
          U         Unreviewed
          D         Deceased
          Z         All Register Patients
Which patients: Active// [ENT]
Attribute of IHS DIABETES REGISTER: RX

Enter RX: GLIPIZ
     1   GLIPIZIDE 10MG TAB
     2   GLIPIZIDE 5MG TAB
CHOOSE 1-2: 1
Enter ANOTHER RX: GLIP
     1   GLIPIZIDE 10MG TAB
     2   GLIPIZIDE 5MG TAB
CHOOSE 1-2: 2
Enter ANOTHER RX: [ENT]

The following have been selected =>

     GLIPIZIDE 5MG TAB
     GLIPIZIDE 10MG TAB
Want to save this RX group for future use? No// [ENT]
 SUBQUERY: Analysis of multiple RXS

First condition of "RX": Since
Exact Date: T-180

Attribute of IHS DIABETES REGISTER: AST
 SUBQUERY: Analysis of multiple AST
 First condition of "AST": SINCE
 Exact Date:      T-180
 Next Condition of "AST":  ANY
Attribute of IHS DIABETES REGISTER: [ENT]
Select one of the following:

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

Your choice: DISPLAY// 2
```

If more than one formula and concentration for a drug exists, additional entries may be added one at a time by selecting the next entry on the displayed list each time Enter ANOTHER RX is displayed.

(forces results or lack of results to display)

Figure 10-10: More Complex QMan Search for Multiple Attributes

The report of patients in the register taking Glipizide during the last six months and their AST values during that time frame appears as follows:

```
PATIENTS         DEMO  RX                  AST     AST DATE
                 NUMBER                     U/L
-------------------------------------------------------------------

PATIENT,SALLY*    100010 +                    347   SEP 6,1999
PATIENT,SALLY*    100010 +                    150   FEB 9,1999
PATIENT,MEGAN     100557 +                    -     -
PATIENT,DARLENE   101240 +                    -     -
PATIENT,ROSE      101599 +                    38    SEP 11,1999
Total: 5
```

Figure 10-11: More Complex QMan Search for Multiple Attributes, report sample

VGEN in the PCC Management Reports option for Quality Assurance Reports can also be useful when trying to combine multiple clinical attributes without the limitations of QMan displays. In the above example, the list of patients taking Glipizide drugs could have been saved in a template. This template of patients could then be used in VGEN to display all four of the laboratory values of interest during the desired time frame.

10.2.4 Special QMan Outputs

In addition to providing lists of your search results, QMan can also produce age-group reports, mailing labels, health summaries, or ASCII output to use on a personal computer for statistical analysis or graphics displays. To use these features, select option 6, R-Man Special Report Generator, when presented with QMan Output Options.

Refer to QMan Volume 3 for specific directions on how to obtain these outputs.

11.0 Diabetes Program Audit

Each year since 1986, the IHS Diabetes Program has conducted a medical records review of a sample of patients from the local diabetes registry. The audit measures 80-90 different items, some reflecting the process of diabetes care, and others reflecting diabetes outcomes. The **DA Diabetes Audit** option in the Diabetes Management System allows you to either partially or fully automate the process of compiling the official IHS Diabetes Quality Assurance Audit Report. This section of the Diabetes Management System manual contains instructions for running the report, definitions and criteria for each audit item, a sample report, and directions for generating a patient template for use in the audit process.

Please note that the examples given in this manual reflect the 2006 IHS Diabetes Standards of Care and audit tools of 2006.

- To access the Diabetes QA Audit menu, type **DA** at the "`Select Diabetes Management System Option:`" prompt in the Diabetes Management System main menu.

```
      ************************************************
      **           DIABETES MANAGEMENT SYSTEM           **
      ************************************************
                        VERSION 1.0
                      DEMO HOSPITAL
                CURRENT USER: DEMO USER

                         MAIN MENU


  PM     Patient Management
  RP     Reports ...
  RM     Register Maintenance ...
  DEL    Delete Patient from the Register
  LM     ADD/EDIT DMS Letters
  SR     Switch to another DIABETES Register
  BHS    Browse Health Summary
  DA     Diabetes QA Audit Menu ...
  DMU    Update Diabetes Patient Data
  HS     Generate Health Summary
  MHS    Generate Multiple Health Summaries
  QMAN   QMan (PCC Query Utility)

 Select Diabetes Management System Option:  DA
```

Figure 11-1: Selecting the DA option

The DM06 menu may be found either in PCC Management Reports under the DM Diabetes QA Audit Menu option or under the DA Diabetes QA Audit Menu option of the Diabetes Management System.

- Select DM06 to access the 2006 menu options.

```
                    ***************************************
                    **       PCC Management Reports      **
                    **   2006 Diabetes Audit Report Menu  **
                    ***************************************
                                 Version 3.0

                              CIMARRON HOSPITAL


  DM06   Run 2006 Diabetes Program Audit
  D6TC   Check Taxonomies for the 2006 DM Audit
  D6TU   Update/Review Taxonomies for 2006 DM Audit
  EAUD   Run the 2006 Audit w/predefined set of Pts
          ---------------------------------------
  PR06   Run 2006 PreDiabetes/Metabolic Syndrome Audit
  PDTC   Check Taxonomies for the 2006 Pre-Diabetes Audit
  PDTU   Update/Review Taxonomies for 2006 PreDiab Audit

Select 2006 Diabetes Program Audit Option:
```

Figure 11-2: 2006 Diabetes Audit Menu

11.1 Check Taxonomies for the 2006 DM Audit (D6TC)

Begin the 2006 audit process by selecting D6TC to review the taxonomies required for the 2006 audit.

Select 2006 Diabetes Program Audit Option: D6TC Check Taxonomies for the 2006 Diabetes Audit

```
Checking for Taxonomies to support the 2006 Audit.
Please enter the device for printing.

DEVICE: HOME//  <enter>

Checking for Taxonomies to support the 2006 Audit...


In order for the 2005 Diabetes Audit to find all necessary data, several
taxonomies must be established.  The following taxonomies are missing or have
no entries:
A/C RATIO Lab Taxonomy [DM AUDIT A/C RATIO TAX] has no entries
SDM providers Taxonomy [DM AUDIT SDM PROVIDERS] has no entries
End of taxonomy check.  HIT RETURN:
```

Figure 11-3: Check Taxonomies for the 2006 DM Audit

Note that even though only two taxonomies have been displayed as having no entries, ALL LAB, MEDICATION, EDUCATION and HEALTH FACTOR taxonomies should be reviewed and updated before attempting to run the 2006 audit. Consult Pharmacy and Laboratory staff to ensure that the correct tests and medications are added to the taxonomies.

DM AUDIT SDM PROVIDERS is not used for the 2006 audit so do not be concerned if there are no entries.

The DM AUDIT A/C RATIO TAX is a new taxonomy for 2006. It was added to differentiate between laboratory tests that measure urine microalbumin when results are reported in mg/L and tests for Microalbumin/Creatinine Ratio when results are measured in mg/g Creatinine. Assistance of your laboratory staff may be required to be sure that both the original DM AUDIT MICROALBUMINURIA TAX and the new DM AUDIT A/C RATIO TAX are correctly populated.

11.2 Update/Review Taxonomies for 2006 DM Audit (D6TU)

This is a new menu option that has been designed to assist the user in updating the taxonomies required for the audit. The option to Edit or Add taxonomies has been removed. When the D6TU option is chosen, all taxonomies required for the 2006 audit are displayed with only two choices – Display the current contents of that taxonomy or Select that taxonomy for editing. There are actually 39 taxonomies that are available for reviewing or editing. The additional taxonomies that do not appear on the first screen may be displayed one at a time by using the (↓) on the keyboard or pressing **+** [ENT] to display the entire second screen. The category of taxonomy is displayed on the far right side of each taxonomy name. Taxonomies with a category of ICD DIAGNOSIS do not need to be updated.

```
2005 DM AUDIT TAXONOMY UPDATE Apr 17, 2006 16:50:15          Page:    1 of
3
TAXONOMIES TO SUPPORT 2006 DIABETES AUDIT REPORTING
* Update Taxonomies

1)  SURVEILLANCE DIABETES         Diabetes Diagnoses Codes        ICD DIAGNOS
2)  SURVEILLANCE HYPERTENSION     Hypertension Diagnoses Codes    ICD DIAGNOS
3)  SURVEILLANCE TUBERCULOSIS     Tuberculosis Diagnoses Codes    ICD DIAGNOS
4)  DM AUDIT DEPRESSIVE DISORDERS Depressive Disorders Diagnoses  ICD DIAGNOS
5)  DM AUDIT DIET EDUC TOPICS     Diabetes Diet Education Topics  EDUCATION T
6)  DM AUDIT EXERCISE EDUC TOPICS Diabetes Excercise Education T  EDUCATION T
7)  DM AUDIT OTHER EDUC TOPICS    Other Diabetes Education Topic  EDUCATION T
8)  DM AUDIT SMOKING CESS EDUC    Smoking Cess Education Topics   EDUCATION T
9)  DM AUDIT TOBACCO HLTH FACTORS Tobacco Health Factors          HEALTH FACT
10)  DM AUDIT PROBLEM SMOKING DXS Smoking related diagnoses for   ICD DIAGNOS
11)  DM AUDIT PROBLEM HTN DIAGNOSES  Hypertension Diagnoses       ICD DIAGNOS
12)  DM AUDIT PROBLEM DIABETES DX    Diabetes Diagnoses           ICD DIAGNOS
13)  DM AUDIT SMOKING RELATED DXS   Smoking related diagnoses for ICD DIAGNOS
14) DM AUDIT CESSATION HLTH FACTOR Smoking Cessation Health Facto HEALTH FACT
15)  DM AUDIT SELF MONITOR DRUGS   Self Monitoring Drugs Taxonomy  DRUG
16)  DM AUDIT TB HEALTH FACTORS   TB Status Health Factors        HEALTH FACT

+         Enter ?? for more actions

S    Select Taxonomy      D    Display a Taxonomy
Select Action:+// Select Action:+// D   Display a Taxonomy

Which Taxonomy:  (1-39): 5
```

Figure 11-4: Displaying Types of Taxonomies

- Type **D** at the "Select Action" prompt to identify a taxonomy to be displayed. The contents of the DM AUDIT DIET EDUC TOPICS taxonomy are displayed below by selecting **5**.

```
DM AUDIT DIET EDUC TOPICS

Items currently defined to this taxonomy:
    DM-DIET
    DM-NUTRITION
    NUTRITION (SESSION 1: INTRODUCTION TO FOOD LABELS)
    NUTRITION (SESSION 2: INTRODUCTION TO CARBOHYDRATE COUNTING)
    NUTRITION (SESSION 3: INTRODUCTION TO EXCHANGE LISTS)
    NUTRITION (SESSION 4: INTRODUCTION TO FOOD SHOPPING)
    NUTRITION (SESSION 5: INTRODUCTION TO HEALTHY COOKING)
    NUTRITION (SESSION 6: GUIDELINES FOR EATING AWAY FROM HOME)
    NUTRITION (SESSION 7: GUIDELINES FOR THE USE OF ALCOHOL)
    NUTRITION (SESSION 8: GUIDELINES FOR CHOOSING A HEALTHY DIET)
    DMC-NUTRITION

Press enter to continue:
```

Figure 11-5: Displaying items in DM AUDIT DIET EDUC TOPICS taxonomy

- Type **Q** to close the display screen after the current contents of a taxonomy have been reviewed.

Note that all of the Education taxonomies will require updating to include the new Diabetes Curriculum codes (DMC). The taxonomy update process is similar to that used for previous audits.

- Type **S** to select the taxonomy to be updated and enter the number of the taxonomy. The current contents of the taxonomy will be displayed and you may add or remove entries from that taxonomy.

```
DIABETES TAXONOMY UPDATE      Apr 17, 2006 17:10:59      Page:  1 of    1
Updating the DM AUDIT DIET EDUC TOPICS taxonomy


1)  DM-DIET
2)  DM-NUTRITION
3)  DMC-NUTRITION
4)  NUTRITION (SESSION 7: GUIDELINES FOR THE USE OF ALCOHOL)
5)  NUTRITION (SESSION 2: INTRODUCTION TO CARBOHYDRATE COUNTING)
6)  NUTRITION (SESSION 8: GUIDELINES FOR CHOOSING A HEALTHY DIET)
7)  NUTRITION (SESSION 3: INTRODUCTION TO EXCHANGE LISTS)
8)  NUTRITION (SESSION 4: INTRODUCTION TO FOOD SHOPPING)
9)  NUTRITION (SESSION 5: INTRODUCTION TO HEALTHY COOKING)
10)  NUTRITION (SESSION 1: INTRODUCTION TO FOOD LABELS)
11)  NUTRITION (SESSION 6: GUIDELINES FOR EATING AWAY FROM HOME)


         Enter ?? for more actions

A    Add Taxonomy Item    R    Remove an Item
Select Action:+// A Add Taxonomy Item
```

Figure 11-6: Adding items to a taxonomy

- Type **A** to Add a new taxonomy item to the current taxonomy. You will be prompted to Select EDUCATION TOPICS NAME: Enter either DM or DMC to see a list of all topics in either the old DM education series or the new DMC series. The topics will display in groups of 5 and the enter key must be pressed in order to see the next group of 5 topics. A topic may be added to the list by typing the number preceding that topic and pressing the **Enter** key.

```
Select EDUCATION TOPICS NAME: DMC
    1   DMC-ACUTE COMPLICATIONS       DMC-AC
    2   DMC-BEHAVIORAL GOALS (MAKING HEALTHY CHANGES)       DMC-BG
    3   DMC-BLOOD SUGAR MONITORING, HOME       DMC-BGM
    4   DMC-CHRONIC COMPLICATIONS (PREVENTION & TREATMENT)       DMC-CC
    5   DMC-DIABETES MEDICINE - INSULIN       DMC-IN
Press <RETURN> to see more, '^' to exit this list, OR
CHOOSE 1-5: <enter>
    6   DMC-DISEASE PROCESS       DMC-DP
    7   DMC-EXERCISE       DMC-EX
    8   DMC-FOOT CARE       DMC-FTC
    9   DMC-KNOWING YOUR NUMBERS (ABC)       DMC-ABC
    10  DMC-MEDICATIONS       DMC-M
Press <RETURN> to see more, '^' to exit this list, OR
CHOOSE 1-10: <enter>
    11  DMC-MIND, SPIRIT AND EMOTION       DMC-MSE
    12  DMC-NUTRITION       DMC-N
    13  DMC-PRE-PREGNANCY COUNSELING       DMC-PPC
    14  DMC-N-AL  NUTRITION (SESSION 7: GUIDELINES FOR THE USE OF
ALCOHOL)DMC-N-AL
    15  DMC-N-CC  NUTRITION (SESSION 2: INTRODUCTION TO CARBOHYDRATE
COUNTING)   DMC-N-CC
Press <RETURN> to see more, '^' to exit this list, OR
CHOOSE 1-15: 14 <enter>
```

Figure 11-7: Selecting a new taxonomy item to add to a taxonomy

This process must be continued number by number until each education topic in that category has been added to the taxonomy list.

- Type **Q** at the "Select action:" prompt **w**hen the updating of a single taxonomy has been completed. The next taxonomy requiring review and updating may then be selected and updated. This manual provides suggested data items to be included in each taxonomy and suggestions for successful taxonomy population.

Once the taxonomies have been updated, the DM 2006 audit may be run. There are two options for running the 2006 audit:

```
    DM06    Run 2006 Diabetes Program Audit
    EAUD    Run the 2006 Audit w/predefined set of Pts
```

Figure 11-8: Options for 2006 DM Audit

The DM06 option must be used for the official audit. The EAUD option is a tool to compare the data on the DM Audit to that on the CRS/GPRA Report for Diabetes-Related Indicators.

Each option is described separately.

11.3 Run 2006 Diabetes Program Audit (DM06)

This option is the equivalent of previous years' electronic audits when registers, templates, status, primary care providers, and communities may all be selected by the individual running the audit. The official 2006 Diabetes Audit should be run using this option. To run the 2006 Diabetes Program Audit:

1. Select DM06
2. Enter the Official Diabetes Register Name
3. Identify whether your program has received Special Diabetes Program for Indian (SDPI) grant monies.
4. If your program has received grant monies, enter the program grant number.
5. Enter the audit date. All data in the year preceding this date will be reviewed. Be sure to check with data entry staff to ensure that all patient encounter records have been entered through this date.
6. A date in the future may be used as the audit date to identify patients who may have specific care needs before the official audit date.
7. Determine whether the audit will be run for a specific register, a template of patients, or one or more individual patients.
8. If *Register* is selected, enter the name of the register to be audited. If a template is selected, enter the name of the template. If one or more individual patients are to be audited, enter them by last name, first name or chart number.
9. Identify the status of the patient(s) to be included in the audit.
10. Determine whether you want to limit the audit to a particular primary care provider. This can only be done if patients are assigned to a designated or primary care provider at your facility.
11. Determine whether you want to limit the audit to patients who live in a particular community.
12. If you have selected a register or template to audit, determine whether you will audit all the patients in the register or template, or a random sample.
13. If a random sample has been selected, identify how many patients will be included in the audit. A suggested number of patients to be included in the random sample can be determined from the chart distributed in the 2006 audit instructions. (See directions for sample size calculation in Appendix F.) Diabetes program staff recommend that at least 400 charts be audited for large programs (>1000 patients in the Diabetes Register) and that all active patients be audited for smaller programs.)

14. Determine what format is to be used for the audit output –

    a. Individual audit sheet for each person.

    b. A cumulative audit summary report.

    c. An EPI INFO file.

    d. Both individual sheets as well as a cumulative audit. This option is most often chosen by facilities where the data in RPMS will need to be supplemented by manual chart reviews.

If the EPI INFO file option is chosen, supply a unique name, that is 5-8 characters in length, for the EPI INFO file. Be sure to queue the report as shown below to run after hours or during a time when fewer users are using the RPMS system.

```
Enter Print option: 1// 2  Create EPI INFO file
Enter the name of the FILE to be Created (3-8 characters): DM_AUD06 [ENT]

I am going to create a file called dm_aud05.rec which will reside in
the C:\EXPORT directory on your RPMS server.
It is the same directory that the data export globals are placed.
See your site manager for assistance in finding the file
after it is created.  PLEASE jot down and remember the following file name:
              **********    dm_aud06.rec    **********
It may be several hours (or overnight) before your report and flat file are
finished.

The records that are generated and placed in file dm_aud05.rec
are in a format readable by EPI INFO.  For a definition of the format
please see your user manual.
Is everything ok?  Do you want to continue? Y// [ENT]
Won't you queue this ? Y// [ENT]
Requested Start Time: NOW//T@2000 [ENT]
```

Figure 11-9: Creatine an Epi Info file

Make arrangements to retrieve the file from your RPMS site manager as an email attachment, or on a CD, USB drive, or floppy disk.

Note: Instructions for loading the RPMS-generated Epi Info file into Epi Info and running reports can be found at www.dmaudit.com .

Changes for the 2006 audit that you will notice:

1. PAP smear has been dropped.

2. Last 3 glucose tests have been dropped.

3. The logic for whether a urinalysis was done and whether proteinuria was present has been modified.

4. V04.81 as a diagnosis check for Influenza vaccine given has been added.

5. Chart Reviews have been eliminated from the check for Nutrition Education.

6. Two new audit items – *Is Depression on the PCC Problem list?* and if not, *Has depression screening been done?*, have been added.

7. Self Monitoring of Blood Glucose has been dropped.

A complete explanation for each of the audit data elements can be reviewed by choosing the menu option DAL Display Audit Logic for the 2006 audit year. Audit Logic is also included in Appendix F of this manual.

11.4 Run the 2006 Audit w/predefined set of Pts (EAUD)

This option was developed to standardize the method in which patients are selected to be audited and duplicate figures generated for Diabetes-related indicators on the CRS 2006 reports. *Do not use this option for your official 2006 Diabetes Audit.* The 2006 Electronic Diabetes Audit is run for a set of patients, defined as 'Active Diabetic Patients', by the Clinical Reporting system (GPRA). As an option, you may also specify that the patients must be an active member of the Diabetes register.

The definition used to select Active Diabetic Patients is the following:

1. Must reside in a community specified in the official GPRA community taxonomy.

2. Must be alive on the audit date.

3. Indian/Alaska Natives Only - based on Classification of 01.

4. Must have two visits to medical clinics in the three years prior to the audit date. At least one visit must be from: 01 General, 06 Diabetic, 10 GYN, 12 Immunization, 13 Internal Med, 20 Pediatrics, 24 Well Child, 28 Family Practice, 57 EPSDT, 70 Women's Health, 80 Urgent, or 89 Evening Clinics.

5. The patient must have been diagnosed with diabetes at least one year prior to the audit date.

6. The patient must have had at least two visits during the year prior to the Audit date, AND at least two DM-related visits ever.

The steps for running the E Audit are similar to the DM06 Audit:

1. Select **EAUD**.

2. Enter the Official Diabetes Register Name

3. Identify whether your program has received Special Diabetes Program for Indian (SDPI) grant monies.

4. If your program has received grant monies, enter the program grant number.

5. Enter the audit date. All data in the year preceding this date will be reviewed.

6. A date in the future may be used as the audit date to identify patients who may have specific care needs before the official audit date.

7. Identify the name of the GPRA taxonomy of communities used by your facility.

8. Determine whether only *Active* patients in the register will be included in the audit

9. Determine what format is to be used for the audit output –

    a. Individual audit sheet for each person.

    b. A cumulative audit.

    c. An EPI INFO file.

    d. Both individual and cumulative audit.

The outputs from the EAUD option are identical to those generated from the DM06 option. The only difference is in the selection criteria for the patients audited.

```
     ASSESSMENT OF DIABETES CARE, 2005         DATE AUDIT RUN: Mar 01, 2005
AUDIT DATE: Mar 01, 2005      FACILITY NAME: CIMARRON HOSPITAL
AREA: 50    SU: 52            FACILITY: 01      # PTS ON DM REGISTER: 1745
Does you community receive SDPI grant funds?  Don't know

TRIBAL AFFIL: 022 CHEROKEE NATION OF O   COMMUNITY: 4049658 SALINA
REVIEWER: CMI    CHART #: 100018      DOB: Feb 12, 1955           SEX: FEMALE
PRIMARY CARE PROVIDER:

DATE OF DIABETES DIAGNOSIS:             Lipid Lowering Agent:  None
 CMS Register:
 Problem List: Mar 2003                 IMMUNIZATIONS
 1st DX recorded in PCC: Jun 03, 1997   Flu vaccine (past yr): No
Diabetes Type: 2  Type 2                Pneumovax Ever: Yes - Oct 26, 1997
 CMS Register:                          Td in past 10 yrs: No
 Problem List: 250.00                   PPD Status: NEG
 PCC POV's:    Type 2                   If PPD Pos, INH Tx Complete:

TOBACCO USE: 1  Current User            If PPD Neg, Last PPD date: Jun 19,
2000
 Referred for (or provided) Cessation
 Counseling: Yes-4/22/2004              Date of Last EKG:

VITAL STATISTICS                        LABORATORY DATA
Height: 65.00 inches Oct 04, 2004       HbA1c (most recent): 10.0
Last Weight: 213 lbs Nov 23, 2004        Date Obtained: Nov 23, 2004
  BMI: 35.4                             HbA1c (next most recent): 10.1
HTN (documented DX): Yes
Last 3 Blood Pressures (in past yr):
  120/66  Nov 23, 2004                  MOST RECENT SERUM VALUE (in the
  146/65  Oct 04, 2004                  past 12 months):
  140/69  Aug 09, 2004                Creatinine: 0.9 mg/dl 10/4/2004
                                      Total Cholesterol: 235 mg/dl 11/23/2004
EXAMINATIONS (in past year)           HDL Cholesterol: canc mg/dl 11/23/2004
Foot exam-complete:                   LDL Cholesterol: 67.8 mg/dl 10/4/2004
  No                                  Triglycerides: 1029 mg/dl 11/23/2004
Eye exam (dilated/fundus):
  Yes - Optometrist/Opthalmalogist Visit Urinalysis or A/C Ratio:
Dental exam:                             Yes  10/4/2004 Urinalysis
  Yes-Dental Clinic visit-Apr 22, 2004   Proteinuria:
                                          No NEGATIVE 10/4/2004 URINE PROTEIN
EDUCATION (in past year)                Microalbuminuria:
Diet Instruction: Yes (RD & Non RD - Other)Pos POS 4/22/2004 ALBUMIN, MICRO
Exercise Instruction: Yes
DM Education (Other): Yes               Self monitoring of blood glucose
                                         documented in chart:  No
DM THERAPY
Select all that currently apply         Supplemental Section
    1 Diet & Exercise Alone             Does pt have depression as an active
 X  2 Insulin                            problem?  No
 X  3 Sulfonylurea
 X  4 Metformin                         If 'No', has pt been screened for
    5 Acarbose                           depression in the past year?
 X  6 Glitazones                          No
    9 Unknown/Refused
ACE Inhibitor/ARB Use: Yes               Local Option question:
```

CMI Apr 17, 2005 Page 1

*** HEALTH STATUS OF DIABETIC PATIENTS ***
CIMARRON HOSPITAL
Reporting Period: Mar 01, 2004 to Mar 01, 2005

300 patients were reviewed	n	Percent
Gender		
Female	182	61%
Male	118	39%
Age		
<15 yrs	2	1%
15-44 yrs	53	18%
45-64 yrs	151	50%
65 yrs and older	94	31%
Diabetes Type		
Type 1	10	3%
Type 2	287	96%
Unknown	3	1%
Duration of Diabetes		
Less than 10 years	76	25%
10 years or more	45	15%
Diagnosis date not recorded	179	60%
Weight Control (BMI) - does not add up to 100%		
Overweight or Obese (BMI>85%ile)	211	70%
Obese (BMI>95%ile)	165	55%
BMI could not be calculated	40	13%
Blood Sugar Control - uses last HGB A1C value		
HbA1c <7.0	99	33%
HbA1c 7.0-7.9	42	14%
HbA1c 8.0-8.9	39	13%
HbA1c 9.0-9.9	16	5%
HbA1c 10.0-10.9	12	4%
HbA1c 11.0 or higher	10	3%
Undocumented	82	27%
Blood Pressure Control - based on mean of last 3 bp's		
<120/<70	14	5%
120/70 - 130/80	41	14%

131/81 - <140/<90	75	25%
140/90 - <160/<95	83	28%
160/95 or higher	16	5%
BP category Undetermined	71	24%
Tobacco use		
Current Tobacco User	61	20%
Counseled - Yes	30	49%

Counseled - No	31	51%	
Not a current tobacco user	230	77%	
Tobacco use not documented	9	3%	
DIABETES TREATMENT			
Diet and Exercise Alone	112	37%	
Insulin (monotherapy)	18	6%	
Oral Med (monotherapy)			
Sulfonylurea	40	13%	
Metformin	31	10%	
Acarbose	0	0%	
Troglitazone	2	1%	
Combination of Oral Meds	61	20%	
Combination of Oral Meds+Insulin	36	12%	
Unknown/Refused	0	0%	
ANTI-PLATELET THERAPY			
Aspirin	156	52%	
Other Anti-platelet Rx	5	2%	
Both ASA & Other Rx	2	1%	
None	137	46%	
Refused	0	0%	
ACE INHIBITOR (OR ARB) USE			
Use in pts with overt proteinuria	21	66%	
Use in pts with known hypertension	176	75%	
LIPID LOWERING AGENT USE			
Use in pts with total chol >=240	7	58%	
Use in pts with LDL chol > 130	12	43%	
Of the 87 pts taking a lipid agent:			
Statin drug prescribed:	69	79%	
Non-statin drug prescribed:	10	11%	
Statin AND non-statin prescribed:	8	9%	
EXAMS - Yearly			(% refused)
Foot Exam - Neuro & Vasc	174	58%	(0%)
Eye Exam - Dilated	173	58%	(0%)
Dental Exam	157	52%	(0%)
Pap Smear (Females Only)	0	0%	(0%)
DIABETES-RELATED EDUCATION - Yearly			(% refused)
Diet Instruction	209	70%	(0%)
Exercise Instruction	263	88%	(0%)
Other Diabetes Education	218	73%	(0%)
Any of the above topics	263	88%	
IMMUNIZATIONS			(% refused)
Flu Vaccine - yearly	179	60%	(0%)
Pneumovax - once	145	48%	(0%)
Tetanus/Diptheria (q 10 yrs)	124	41%	(0%)
LABORATORY EXAMS			
Urinalysis in the past 12 months	211	70%	

Proteinuria present	32	11%
Proteinuria absent	177	59%
Proteinuria result unknown	2	1%
Proteinuria test not done	89	30%
Of the 177 without proteinuria:		
Microalbuminuria present	78	44%
Microalbuminuria absent	61	34%
Microalbuminuria not tested	38	21%
Creatinine obtained in the past 12 months	233	78%
Creatinine >= 2.0 mg/dl	10	3%
Creatinine < 2.0 mg/dl	223	74%
Unable to determine result	0	0%
Creatinine not tested/unknown	67	22%
Total Cholesterol obtained in the past 12 months	143	48%
Desirable (<200 mg/dl)	90	30%
Borderline (200-239 mg/dl)	41	14%
High (240 mg/dl or more)	12	4%
Unable to determine result	0	0%
Not tested	157	52%
LDL Cholesterol obtained in the past 12 months	143	48%
LDL <100 mg/dl	58	19%
LDL 100-129 mg/dl	46	15%
LDL 130-160 mg/dl	24	8%
LDL >160	7	2%
Unable to determine result	8	3%
Not tested	160	53%
HDL Cholesterol obtained in the past 12 months	140	47%
HDL <35 mg/dl	32	11%
HDL 35-45 mg/dl	58	19%
HDL 46-55 mg/dl	31	10%
HDL >55	19	6%
Unable to determine result	0	0%
Not tested	160	53%
Triglycerides obtained in the past 12 months	144	48%
TG <150 mg/dl	63	21%
TG 150-199 mg/dl	29	10%
TG 200-400 mg/dl	44	15%
TG >400 mg/dl	8	3%
Unable to determine result	0	0%
Not tested	156	52%
EKG		
Performed in past 3 years	59	20%
Performed in past 5 years	117	39%
Ever performed	132	44%
Tuberculosis Status		
PPD +,INH treatment complete	3	1%

```
       PPD +, untreated/incomplete or tx unknown        16         5%
       PPD -, placed since DM dx                        29        10%
       PPD -, placed before DM dx or date unknown       56        19%
       PPD status unknown                              196        65%
       PPD -, date of Dx or PPD date unknown             0         0%
       PPD Refused                                       0

Self monitoring of blood glucose documented
       Yes                                             125        42%
       No                                              175        58%
       Refused                                           0         0%

DEPRESSION identified as an active dx
      Yes                                                1        20%
      No                                                 4        80%

      Of the 4 pts without an active dx
      of depression, proportion screened
      for depression in past year:
            Screened                                     0         0%
            Not Screened                                 4       100%
            Refused Screening                            0         0%
```

Figure 11-10: Sample of E-audit

11.5 Check Taxonomies for the 2006 Pre-Diabetes Audit (PDTC)

Three new options have been added to the DM06 menu for 2006 to assist with management of patients with "Pre-Diabetes." A new register for patients with Pre-Diabetes was distributed during 2006 for patients with symptoms or diagnoses that indicate risk for development of diabetes. *This is an optional audit and is not required by the national programs during 2006.*

There is no diagnosis or ICD-9 code for pre-diabetes. It is a general term accepted for patients who have a diagnosis of impaired fasting glucose (ICD-9 code 790.21), impaired glucose tolerance (ICD-9 code 790.22), or Dysmetabolic Syndrome (ICD-9 code 277.7), all of whom are at greater risk for developing diabetes.

The tools already in the Diabetes Management System may be used for managing these patients if the word, DIABETES, is included in the name of the register holding these patients. The additional taxonomies and an audit developed specifically for monitoring the care of these patients may be used regardless of whether the patients are included on a register.

The first step in the Pre-Diabetes Audit patch is to select the option, PDTC Check Taxonomies for the 2006 Pre-Diabetes Audit.

```
  DM06   Run 2006 Diabetes Program Audit
  D6TC   Check Taxonomies for the 2006 DM Audit
  D6TU   Update/Review Taxonomies for 2006 DM Audit
  EAUD   Run the 2005 Audit w/predefined set of Pts
         ----------------------------------------
  PR06   Run 2005 Pre-Diabetes/Metabolic Syndrome Audit
  PDTC   Check Taxonomies for the 2006 Pre-Diabetes Audit
  PDTU   Update/Review Taxonomies for 2006 PreDiab Audit

Select 2005 Diabetes Program Audit Option: PDTC  Check Taxonomies for the
2005 Pre-Diabetes Audit


Checking for Taxonomies to support the 2006 Pre-Diabetes Audit.
Please enter the device for printing.

DEVICE: HOME// [ENT]  Virtual

Checking for Taxonomies to support the 2006 Pre-Diabetes Audit...

In order for the 2005 Pre-Diabetes Audit to find all necessary data, several
taxonomies must be established.  The following taxonomies are missing or have
no entries:

DM AUDIT FASTING GLUCOSE TESTS
DM AUDIT 75GM 2HR GLUCOSE

End of taxonomy check.  HIT RETURN:
```

Figure 11-11: Sample of checking taxonomies for pre-diabetes audit

11.6 Update/Review Taxonomies for 2006 PreDiab Audit (PDTU)

Your laboratory may not currently have tests that are identified as a Fasting Glucose or a Glucose drawn 2 hours after a 75 Gram glucose dose. So the initial step in setting up these taxonomies may require a discussion with your laboratory staff to be sure that there is a standard protocol for ordering and naming these tests. Once the tests are in place, PDTU Update/Review Taxonomies for 2006 PreDiab Audit may be selected to view and update the taxonomy contents. You will notice that all the other taxonomies that identify data for the 2006 Diabetes Audit are displayed as well as the two new taxonomies. Again, scrolling down one line at a time using the (↓)or + [ENT] to display the second page may be required to display all of the taxonomies in the list.

- Type **S** at the "`Select action:`" prompt to select a taxonomy for updating. Identify by number the taxonomy to be updated.

```
PRE-DIABETES TAXONOMY UPDATE  Apr 18, 2006 11:42:04        Page:    1 of    2
TAXONOMIES TO SUPPORT PRE-DIABETES/METABOLIC SYNDROME REPORTING
* Update Taxonomies
+
12)  DM AUDIT SULFONYLUREA DRUGS     Sulfonylurea Drug Taxonomy      DRUG
13)  DM AUDIT METFORMIN DRUGS        Metformin Drug Taxonomy         DRUG
14)  DM AUDIT ACARBOSE DRUGS         Acarbose Drug Taxonomy          DRUG
15)  DM AUDIT LIPID LOWERING DRUGS   Lipid Lowering Drug Taxonomy    DRUG
16)  DM AUDIT STATIN DRUGS           Statin Drug Taxonomy            DRUG
17)  DM AUDIT TROGLITAZONE DRUGS     Troglitzaone Drug Taxonomy      DRUG
18)  DM AUDIT ACE INHIBITORS         ACE Inhibitor Drug Taxonomy     DRUG
19)  DM AUDIT ASPIRIN DRUGS          Aspirin Drug Taxonomy           DRUG
20)  DM AUDIT ANTI-PLATELET DRUGS    Anti-Platelet Drug Taxonomy     DRUG
21)  DM AUDIT FASTING GLUCOSE TESTS  Fasting Glucose Tests Taxonomy  LAB TEST
22)  DM AUDIT CHOLESTEROL TAX        Cholesterol Lab Taxonomy        LAB TEST
23)  DM AUDIT LDL CHOLESTEROL TAX    LDL Cholesterol Lab Taxonomy    LAB TEST
24)  DM AUDIT HDL TAX                HDL Lab Taxonomy                LAB TEST
25)  DM AUDIT TRIGLYCERIDE TAX       Triglyceride Lab Taxonomy       LAB TEST
26)  DM AUDIT 75GM 2HR GLUCOSE       75 gm 2hr glucose test Taxonom  LAB TEST


Enter ?? for more actions


S    Select Taxonomy      D    Display a Taxonomy   Q    Quit
Select Action:+// S Select Taxonomy

Which Taxonomy:  (1-26): 21
```

Figure 11-12: Example of selecting a taxonomy

- Type **A** to use the Add a member option to identify the lab test(s) to be included in this taxonomy.

```
PRE-DIAB TAXONOMY UPDATE      Apr 18, 2006 11:48:09          Page:    1 of
1
Updating the DM AUDIT FASTING GLUCOSE TESTS taxonomy


1)  FASTING GLUCOSE
2)  GTT, FASTING

Enter ?? for more actions



Select Action:+// A Add taxonomy item
```

Figure 11-13: Example of using the add a member option

Add each test identified by your laboratory staff as being an appropriate member of the taxonomy. When all tests have been added, type **Q** to exit the current taxonomy. Repeat the process for the DM AUDIT 75GM 2HR GLUCOSE taxonomy.

Once all the taxonomies have been reviewed and updated, the Pre-Diabetes Audit may be run.

11.7 Run 2006 Pre-Diabetes/Metabolic Syndrome Audit (PR06)

The steps for running the Pre-Diabetes Audit are listed below.

1. Select *PR06*.
2. Enter the Official Pre-Diabetes Register Name
3. Enter the audit date. All data in the year preceding this date will be reviewed.
4. A date in the future may be used as the audit date to identify patients who may have specific care needs before the official audit date.
5. Determine whether the audit will be run for a specific register, a template of patients, or one or more individual patients.
6. If *Register* is selected, enter the name of the register to be audited. If a template is selected, enter the name of the template. If one or more individual patients are to be audited, enter them by last name, first name or chart number.
7. Identify the status of the patient(s) to be included in the audit.
8. Determine whether you want to run the audit by a particular primary care provider. This can only be done if patients are assigned to a designated or primary care provider at your facility.
9. Determine whether you want to limit the audit to patients who live in a particular community.
10. If you have selected a register or template to audit, determine whether you will audit all the patients in the register or template or a random sample.
11. If a random sample has been selected, identify how many patients will be included in the audit.
12. Determine what format is to used for the audit output:
    a. Individual audit sheet for each person.
    b. A cumulative audit.
    c. Both individual sheets as well as a cumulative audit. This option allows identification of the individual patients included in the audit if a random sample has been chosen.

An example of an individual Pre-Diabetes Audit is displayed in the example. Notice that Waist Circumference will be displayed if it has been recorded and coded by Data Entry staff using the WC mnemonic.

You do not need to have a Pre-Diabetes Register in order to run the Pre-Diabetes Audit. You may enter the official IHS Diabetes Register when prompted for a Register name. Patients who have already been diagnosed with Diabetes will be identified as follows if a Pre-Diabetes Audit is run.

```
CLASSIFICATION (all that apply):
1 IFG - No
2 IGT - No
3 METABOLIC SYNDROME - No
OTHER ABNORMAL GLUCOSE (790.29) - No
CMS Register DX:
PLEASE NOTE:  Diabetes is on the Problem list for this patient
PLEASE NOTE:  Diabetes has been used as a diagnosis in PCC: May 28, 1997
```

Figure 11-14: Example of screen preparing for pre-diabetes audit

Do not be too disappointed in initial results of this audit. Because of lack of standardization of laboratory tests and diagnostic codes and narratives for pre-diabetes conditions, it may be some time before this audit can be used reliably for tracking patients at risk for development of diabetes.

```
          ASSESSMENT PRE-DIABETES/METABOLIC SYNDROME CARE, FY 2005

AUDIT DATE: Mar 1, 2005                          REVIEWER: CMI
FACILITY NAME: CIMARRON HOSPITAL                 AREA: 50  SU: 52  FACILITY: 01
# PTS ON PRE-DIABETES REGISTER: 1745

TRIBAL AFFIL: 022 CHEROKEE NATION OF O   COMMUNITY: 4073955 WAGONER
CHART #: 168923      DOB: Sep 23, 1943        SEX: FEMALE
PRIMARY CARE PROVIDER:

CLASSIFICATION (all that apply):
1 IFG - No
2 IGT - No
3 METABOLIC SYNDROME - Yes
  Last POV in PCC: 277.7  Date: Jan 11, 2005
  First POV in PCC: 277.7  Date: Sep 09, 2004
OTHER ABNORMAL GLUCOSE (790.29) - No
CMS Register DX:

Height: 66.0 inches May 07, 2004
Last 3 Weights:
Waist Circumference:  40 in              ACE Inhibitor Use: No
Last 3 Blood Pressures:                  Aspirin/Anti-Platelet Therapy: None
 140/65  Sep 06, 2004
 146/81  May 07, 2004                   Lipid Lowering Agent:  None
 131/65  May 07, 2004
HTN (documented DX): Yes                 Date of Last EKG: May 30, 2003

EDUCATION (in past year)
Diet Instruction: Yes (RD)
Exercise Instruction: No                 LABORATORY DATA
                                        Fasting Glucose (most recent):
TOBACCO USE: 2  Not a Current User           176 mg/dl 9/6/2004
Referred for (or provided)              75 gm 2 hour glucose (most recent):
Cessation Counseling: No
DM THERAPY
Select all that currently apply          MOST RECENT SERUM VALUE IN THE PAST
X  1 Unknown/Refused/None                12 MONTHS
   2 Metformin                          Total Cholesterol: 228 mg/dl 9/6/2004
   3 Acarbose                           HDL Cholesterol: 62 mg/dl 9/6/2004
   4 Glitazones                         LDL Cholesterol: 130.8 mg/dl 9/6/2004
   5 Other: Sulfonylurea,               Triglycerides: 176 mg/dl 9/6/2004
       Glyburide, glipizide, etc)
```

Figure 11-15: Example of screen showing pre-diabetes audit Display Audit Logic (DAL)

If unexpected results are obtained when running the electronic audit from RPMS, it is often helpful to review the programming logic to determine how data is evaluated for determination of a "YES" or "NO" answer for a given data point. You may then determine whether data is being entered correctly at your facility to be reflected in the audit. The data included in the audit may change from year to year as may the logic. Therefore, when reviewing the audit logic, you must first select the year you are using for the electronic audit.

1. Begin by typing **DAL** at the "Select Diabetes QA Audit Menu Option:" prompt in the DA Diabetic QA Audit menu.

2. Type the name of the audit year at the "Select PCC Man Reports DM Audit Text Audit Year:" prompt.

```
   DM06   2006 Diabetes Program Audit ...
   DM05   2005 Diabetes Program Audit ...
   DM03   2003 Diabetes Program Audit ...
   DM01   2001 Diabetes Program Audit ...
   DM20   2000 Diabetes Program Audit ...
   DM99   1999 Diabetes Program Audit ...
   DM96   1996 Diabetes Program Audit ...
   TS     Taxonomy Setup
   FS     Flow Sheet Setup
   PLDX   Patients w/no Diagnosis of DM on Problem List
   NDOO   DM Register Pts w/no recorded DM Date of Onset
   DAL    Display Audit Logic
   APCL   List Patients on a Register w/an Appointment
   DMV    DM Register Patients and Select Values in 4 Months
   DPCS   Display a Patient's DIABETES CARE SUMMARY
   HSRG   Print Health Summary for DM Patients W/Appt
   SMBG   Self Monitoring of Blood Glucose Follow up Report
Select Diabetes QA Audit Menu Option:  DAL

Select the Audit Year


Select PCC MAN REPORTS DM AUDIT TEXT AUDIT YEAR: 2006
    1   2006 DIABETES
    2   2006 PRE-DIABETES
CHOOSE 1-2:
```

Figure 11-16: Displaying audit logic (steps 1-2)

3. Choose 1 to display the logic for the 2006 Diabetes Audit or 2 to display the logic for the 2006 Pre-Diabetes Audit.

4. A screen of audit items is displayed and you may select the number in front of the data element for which you would like to review the audit logic.

5. Note that the number of data elements cannot all be displayed on one screen. The ↑ and ↓ arrows may be used to review the additional data elements.

6. To select an item, type **S** at the "Select Action:" prompt.

7. To display the logic for the Diabetic Eye Exam, for example, type **21** at the "Which item:" prompt.

```
1)  AUDIT DATE           20)  FOOT EXAM - COMPLETE  39)  CREATININE
2)  FACILITY NAME        21)  DIABETIC EYE EXAM     40)  TOTAL CHOLESTEROL
3)  AREA                 22)  DENTAL EXAM           41)  HDL CHOLESTEROL
4)  SERVICE UNIT         23)  DIET INSTUCTION       42)  LDL CHOLESTEROL
5)  FACILITY CODE        24)  EXERCISE INSTRUCTION  43)  TRIGLYCERIDES
6)  #OF PATIENTS ON DM R 25)  DM EDUCATION (OTHER)  44)  URINALYSIS
7)  REVIEWER             26)  DM THERAPY            45)  PROTEINURIA
8)  CHART #              27)  ACE INHIBITOR         46)  MICROALBUMINURIA
9)  DOB                  28)  ASPIRIN/ANTI-PLATELE  47)  SELF MONITORING OF B
10)  GENDER              29)  LIPID LOWERING AGENT  48)  TRIBAL AFFILIATION
11)  PRIMARY CARE PROVIDE30)  FLU VACCINE           49)  COMMUNITY
12)  DATE OF DIABETES DIA31)  PNEUMOVAX EVER        50)  SDPI GRANT FUNDS
13)  TYPE OF DIABETES    32)  TD IN PAST 10 YEARS   51)  COUNSEL
14)  TOBACCO USE         33)  PPD STATUS            52)  TOBACCO CESSATION CO
15)  REFERRED FOR CESSATI34)  IF PPD POS, INH TX C  53)  DEPRESSION ON PROBLE
16)  HEIGHT              35)  IF PPD NEG, LAST PPD  54)  DEPRESSION SCREENING
17)  WEIGHT              36)  TB STATUS (TB CODE)
18)  BMI                 37)  EKG

+         Enter ?? for more actions

S    Select Item          A    Display All Items    Q    Quit
Select Action: +//S

Which item(s):  (1-56): 21
```

Figure 11-17: Displaying audit logic (step 3)

8. The logic is displayed in the follows in *Figure 11-9*8. The +,-, and ↑, and ↓ keys may be used to browse through additional text that is not displayed on the first page.

```
OUTPUT BROWSER          May 28, 2003 12:13:12     Page: 1 of 2
DM AUDIT LOGIC DESCRIPTIONS


                       DIABETIC EYE EXAM
Has a diabetic eye exam been done?
The logic used in determining if a diabetic eye exam has been done is as
follows:
The system looks for the last documented Diabetic Eye Exam in the
patient's computer record.  If that exam was done in the year prior to the
date of audit then a Yes will display.  No further processing is done.

If no exam is found then all visits in the time period are scanned for
documentation of CPT code 92012, 92250, 92014, 92015, 92004 or 92002.

If none of theses CPT codes are found, then all PCC Visits in the year prior
to the end of the audit are scanned for a non-DNKA, non-Refraction visit to
an Optometrist or Opthalmologist (24, 79, 08) or an Optometry or Opthalmology
Clinic (17, 18, 64 or A2). If found, then a yes and an indication of what was
found is displayed. If none of the above is found,then the refusals file is
checked for documentation of a patient refusal or no response to followup of
a diabetic eye exam.  If found, a note
+         Enter ?? for more actions                                     >>>
+    NEXT SCREEN          -    PREVIOUS SCREEN      Q    QUIT

Select Action: +//
```

Figure 11-98: Audit logic

The cumulative audit currently displays refusals of service for examinations, education topics, and immunizations. An individual audit may show, in addition, refusals for measurements, laboratory tests, medications, PPD, EKG, In order to display these refusals on the audit, the refusals must be documented by the provider and data must be recorded in a specific manner in PCC. Situations in which medical care can not be rendered because of contra-indications or patients who fail to respond to followup also require special documentation and data entry mnemonics. In general, refusals for service are displayed in the refusal column on the audit while medical contraindications and lack of followup are tallied in the "NO" category on the cumultative audit. Refer to sections 14.8, 14.9, and 14.10 for documentation on recording patient refusals, failure to respond to followup, or medical contraindications in PCC.

The same process may be used to view logic for data items on the 2005 Pre-Diabetes Audit. When using the menu option, **DAL Display Audit Logic**, Select 2. PRE-DIABETES. Logic may be displayed for any of the listed items by typing **S** indicating that you will be selecting an item, and then identifying the number of the item you wish to review.

```
DM AUDIT ITEM DESCRIPTION     Jul 01, 2005 10:56:09       Page:  1 of    1
DM Logic Display

1)  AUDIT DATE          13)  PRIMARY CARE PROVIDE  25) ACE INHIBITOR
2)  REVIEWER            14)  CLASSIFICATION        26) ASPIRIN/ANTI-PLATELE
3)  FACILITY NAME       15)  HEIGHT                27) LIPID LOWERING AGENT
4)  AREA                16)  WEIGHT                28) EKG
5)  SERVICE             17)  WAIST CIRCUMFERENCE   29) FASTING GLUCOSE
6)  FACILITY COD        18)  LAST 3 BP'S           30) 75 GM 2 HOUR GLUCOSE
7)  #OF PATIENTS ON PRE 19)  HYPERTENSION DOCUMEN  31) TOTAL CHOLESTEROL
8)  TRIBAL AFFILIATION  20)  DIET INSTUCTION       32)  HDL CHOLESTEROL
9)  COMMUNITY           21)  EXERCISE INSTRUCTION  33)  LDL CHOLESTEROL
10)  CHART #            22)  TOBACCO USE           34)  TRIGLYCERIDES
11)  DOB                23)  REFERRED FOR CESSATI
12)  GENDER             24)  DM THERAPY


Enter ?? for more actions


 S    Select Item          A    Display All Items    Q    Quit
Select Action: +// S [ENT]
```

Figure 11-19: Sample of selecting an item on the DAL Display Audit Logic menu

11.8 Generation of a Patient Template for Use in the Audit Report

The Diabetes Program QA Audit can be performed for a list of individual patients (identified by name or chart number), for all of the patients in a register, for a random sample of that register, or for a template of patients that you have saved from a previous retrieval. Two methods for generating and saving a cohort of patients for use in the Audit Report are described below.

At sites with a large Diabetes Register, you may wish to use a random sample of your active type 2 patients when running the Audit Report. This may be accomplished in two different ways. If you have a register of active patients with type 2 diabetes patients in a Case Management Register, you may enter this register name directly when identifying how you will be running the audit – by register, template, or individual patient. You will then be prompted whether you wish to audit the entire register or a random sample of patients in the register. Select a random sample and specify the size of the random sample based on the standard table provided with the audit instructions. (See **Error! Reference source not found.**)

Alternatively, you may wish to use QMan to generate a random sample of your register patients to be audited. This approach is sometimes preferred as it provides a means of identifying the patients used in the audit. To accomplish this requires a two-step process. The first step is to use QMan to generate a template of all of the Active Type 2 Diabetic Patients in your register. See sample dialogue *Figure 11*-20:

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

Which CMS REGISTER: IHS DIABETES

Select the Patient Status for this report

          1     Active
          2     Inactive
          3     Transient
          4     Unreviewed
          5     Deceased
          6     Non-IHS
          7     All Register Patients

Which Status(es):  (1-7): 1// 1

Select the Diabetes Diagnosis for this report

     Select one of the following:

          1         Type 1
          2         Type 2
          3         Type 1 & Type 2
          4         Gestational DM
          5         Impaired Glucose Tolerance
          6         All Diagnoses

Which Diagnosis: All Diagnoses// 2 Type 2..


Attribute of IHS DIABETES REGISTER: [ENT]


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


     Select one of the following:

Your choice: DISPLAY// 4  STORE results of a search in a FM search template

Fileman users please note =>
This template will be attached to IHS' PATIENT file (#9000001)

Enter the name of the SEARCH TEMPLATE: TYPE 2 DM PTS
```

Note: Patients must have a Register Diagnosis.

Figure 11-20: Generation of a Patient Template for Use in the Audit Report

Respond YES when asked if you are adding this new template. Bypass the `Description` prompt by pressing the **Enter** key**.** When asked if you want to run this job in the background, respond **NO**. QMan will generate your sample template, called TYPE 2 PTS, which can then be taken to the second step to generate a random sample.

The second step uses QMan to generate a random sample of patients in the template created in the first step.

In QMan, select the Search mode and use LIVING PATIENTS as your subject. When prompted for an Attribute of Living Patients, enter [TYPE 2 DM PTS.

QMan will retrieve your template and present you with four options.

1. LIVING PATIENTS must be a member of the TYPE 2 DM PTS cohort
2. LIVING PATIENTS must NOT be a member of the TYPE 2 DM PTS cohort
3. Select a random sample of the TYPE 2 DM PTS cohort
4. Count the number of entries in the TYPE 2 DM PTS cohort

Select option 3 to generate a random sample of your cohort. You will then be asked whether you want a specific number of entries in your sample or a percentage of your cohort. Select option 1 and enter the number of patients to include in your sample.

When prompted for another QMan attribute, press the **Enter** key to bypass the prompt. You will then be given a choice of QMan Output Options. Select 4–Store Search Results in a FileMan Template. Enter SAMPLE OF TYPE 2 PTS as your template name and respond **YES** when asked if you are adding this new template. Bypass the *Description* prompt by pressing the **Enter** key**.** When asked if you want to run this job in the background, respond **NO**. QMan will generate your sample template, called SAMPLE OF TYPE 2 PTS, which can then be used in the Diabetes Program Audit Report.

With experience, some users have become more sophisticated in picking appropriate patients for the audit. They may add exclusionary attributes when developing the original template such as a Visit during the audit time frame. Other users actually transfer the random sample of patients into a new register designed exclusively for the audit. If this approach is taken, a larger random sample than normal is selected and saved into a template. This template is then transferred into a new Diabetes register that will be used for the audit. The advantage of this approach is that individual patients may be reviewed and removed from the audit register if it is found that they do not meet audit criteria. Rules for selecting patients for the audit should be reviewed with the Area Diabetes Consultant before any special selection criteria are implemented.

> **Note**: The audit sample should reflect the standards of care for all the patients in the register and should not reflect special efforts on the part of the Diabetes team to audit only "ideal" patients.

Individual patients may also be added to or deleted from a template of patients selected for the audit by using the Search Template System.

11.9 Patients with No Diagnosis of DM on Problem List (PLDX)

Several new options, including *PLDX Patients w/no Diagnosis of DM on Problem List*, have been added to the Diabetic QA Audit menu. This option allows you to identify patients who do not have a problem list diagnosis of diabetes and who, potentially, will not display the diabetes Flow Sheet and the diabetes patient care supplement on the health summary. When selecting the option, you will be first prompted to choose between patients on the register who do not have a diagnosis of diabetes or those with a specified number of diagnoses of diabetes but who do not have an active problem of diabetes. If you select the register, you will be prompted to identify the name of the register and the status of the patients you would like reviewed.

```
This report will list patients who do not have Diabetes on their Problem List
but who are on a Diabetes Register or who have had at least N diagnoses of
diabetes.


     Select one of the following:

          R         Those who are members of a Register
          D         Those with at least N Diabetes Diagnoses

List which subset of patients: R// [ENT]

Enter the Name of the Register: IHS DIABETES
Do you want to select register patients with a particular status? Y// [ENT]
Which status: A//[ENT] ACTIVE
```

Figure 11-21: Patients w/No Diagnosis of DM on Problem List

The resulting report will display alphabetically all active patients on the register who do not have an active problem of diabetes along with the date of the last diabetes diagnosis and the total number of diabetes diagnosis.

```
       ********** CONFIDENTIAL PATIENT INFORMATION **********
DKR                                                          Page 1
                                DEMO HOSP
         PATIENTS WITH NO DIAGNOSIS OF DIABETES ON PROBLEM LIST
                     Patients on the DKR DIABETES Register

PATIENT NAME          HRN    DOB               LAST DM DX      # OF DM DXS
-------------------------------------------------------------------------
PATIENT,AMANDA        101500 Sep 19, 1985  F   Jan 01, 1997    1
PATIENT,BARNEY        101988 Aug 08, 1996  M   Jun 18, 2001    1
PATIENT,BRANDON       101867 May 06, 1996  M   Jun 18, 2001    1
PATIENT,GRANT         101857 Jan 30, 1995  M   Jun 18, 2001    1
PATIENT,GREG          101738 May 16, 1992  M   Jun 18, 2001    1
PATIENT,JENNIFER      100044 Jul 19, 1938  F   Jan 13, 1997    1
```

Figure11-22: Patients w/No Diagnosis of DM on Problem List, report sample

11.10 DM Register Patients with No Recorded DM Date of Onset (NDOO)

When calculating the duration of diabetes for the cumulative audit, the earliest of the date of onset from the diabetes register or the problem list date of onset is used. Duration of diabetes is calculated from that date to the date of the audit. If neither the date of onset in the register nor the date of onset in the problem list is recorded, the duration of diabetes is not calculated. A report to identify those patients on the register who do not have a date of onset recorded may be run by selecting the menu option, **NDOO DM Register Pts w/no recorded DM Date of Onset**.

```
                          DEMO HOSP
                         USER,JOHN P

This report will list patients who are on the Diabetes Register who do not
have a date of diagnosis recorded in either the Register or on the problem
list.


Enter the Name of the Register: IHS DIABETES
Do you want to select register patients with a particular status? Y// ES
Which status: A// [ENT] ACTIVE
DEVICE: HOME// PRINTER NAME OR NUMBER
```

Figure 11-23: DM Register Pts w/no recorded DM Date of Onset

The resulting report not only lists those patients with no date of onset recorded but also identifies whether the patients have a diagnosis of diabetes on the active problem list.

```
         ********** CONFIDENTIAL PATIENT INFORMATION **********
DKR                                                          Page 1
                            DEMO HOSP
  DIABETES REGISTER PATIENTS WITH NO RECORDED DATE OF ONSET OF DIABETES
                  Patients on the IHS DIABETES Register

PATIENT NAME       HRN    DOB          LAST DM DX      #DM DXS DM ON PL
-------------------------------------------------------------------------
PATIENT,AMY LYNN   100257 Apr 18, 1951  F   Jan 18, 1997    23        YES
PATIENT,ARNOLD     100133 May 05, 1940  M   Dec 15, 1996    18        YES
PATIENT,LEROY      100449 Mar 17, 1967  M   Jan 11, 1997    3         NO
PATIENT,NORMA      100312 Feb 02, 1925  F   Jan 03, 2002    56        NO
PATIENT,NORMA      100387 Feb 06, 1931  F   Jan 11, 2002    40        YES
PATIENT,BARNEY     100297 Jun 15, 1947  M   Jan 11, 1997    23        YES
PATIENT,FAY        101096 Aug 07, 1925  F   Jul 27, 1999    48        YES
PATIENT,JOE        101298 Aug 09, 1968  M   Feb 07, 1997    8         NO
```

Figure 11-24: DM Register Patients with no recorded DM Date of Onset, report sample

Once these patients are identified, the charts may be reviewed or the patients queried to determine the date or estimated date of onset. An actual date, a month and a year, or just a year may be used as a date of onset when updating register data.

11.11 List Patients on a Register with an Appointment (APCL)

The option, **APCL List Patients on a Register with an Appointment,** may be run at any facility using the RPMS Scheduling Package. It offers an opportunity for the Diabetes Coordinator to identify patients who will be coming to the facility for either Diabetic or other healthcare needs. You will be asked to enter the name of the register, the date range of the appointments and the clinic names if selecting a set of clinics.

```
Enter the Name of the Register: IHS DIABETES

Enter Beginning Appointment Date:  6/1  (JUN 01, 2003)
Enter Ending Appointment Date:  6/6  (JUN 06, 2003)

     Select one of the following:

          A         ANY Clinic
          S         One or more selected Clinics

Include patients with Appointments to: A//[ENT] ANY CLINIC
DEVICE: HOME//
```

Figure 11-25: List Patients on a Register with an Appointment

The resulting report may be reviewed as follows:

```
   DKR                        May 29, 2003                          Page 1

      PATIENTS ON THE IHS DIABETES REGISTER WITH AN APPOINTMENT
           Appointment Dates: Jun 01, 2003 to Jun 06, 2003
                          CLINICS: ANY

HRN    PATIENT NAME             CLINIC NAME          DATE          TIME
-------------------------------------------------------------------------
11823  PATIENT,RAMONA          OPTOMETRY            Jun 05, 2002 8:30
38657  PATIENT,ALBERTA         DENTAL               Jun 04, 2002 1:40
30291  PATIENT BULL,JOHN       OPC-DR. SMITH        Jun 03, 2002 12:10
30291  PATIENT BULL,JOHN       DM ED-CURTIS         Jun 05, 2002 10:00
7124   PATIENT,ARETHRA         RADIOLOGY-MAMMOGRAM  Jun 06, 2002 9:00
```

Figure 11-26: List Patients on a Register with an Appointment, sample report

11.12 DM Register Patients and Select Values in 4 Months (DMV)

The option, **DMV DM Register Patients and Select Values in 4 Months**, provides an overview of all patients in the register and their current status regarding selected standards of care. Begin by selecting DMV DM Register Patients and Select Values in 4 Months from the DA Diabetes QA Audit menu.

```
This report will list patients who are on the diabetes register that you
select.
The following data items will be printed for each patient:  Name, HRN, DOB,
Community of Residence.

For each of the following tests the last value in the 4 months prior to the
as of date you enter and the next most recent prior to that one will be
displayed:
     Hbg A1C, BP, Total Cholesterol, HDL, LDL
```

Figure 11-27: DM Register Patients and Select Values in 4 Months

```
Patients must be a member of the Diabetes Register in order to be included in
this report.

Enter the Name of the DM Register: IHS DIABETES
Do you want to select register patients with a particular status? Y//[ENT]
Which status: A// [ENT]ACTIVE
Limit the report to a particular
primary care provider ? N//[ENT]



Enter As of Date for 4 month period:  T+30  (JUN 29, 2003)
DEVICE: HOME// ENTER PRINTER NAME OR NUMBER
```

Figure 11-28: Running the DM Register Patients and Select Values in 4 Months

Note that a date in the future may be chosen. This may be useful to quickly review required data on register candidates for the audit.

```
             ********** CONFIDENTIAL PATIENT INFORMATION **********
DKR                                                                 Page 1
                                IHS HOSP
           Patients on the IHS DIABETES Register     Status: ACTIVE
              As of Date: Jun 29, 2003   Designated Provider: ???

PATIENT NAME               HRN    DOB          COMMUNITY
-------------------------------------------------------------------------
PATIENT,ARETHRA          15701  Jun 25, 1939   SANTA ROSA
  Test                In Past 4 Months            Next most recent
  ----                ----------------            -------------
  Last Clinic Visit   05/20/03                    05/20/03
  Blood Pressure (BP) 04/24/03  131/87            10/21/02  93/65
  Hgb A1C             05/16/03  10.3              05/17/02  ?
  Total Cholesterol                              09/22/99  267
  LDL Cholesterol                                09/22/99  158
  HDL Cholesterol                                09/22/99  52
```

Figure 11-29: DM Register Patients and Select Values in 4 Months, sample report

11.13 Display a Patient's Diabetes Care Summary (DPCS)

This option allows you to print or browse on the screen only the Diabetes Patient Care Summary for a patient or group of patients instead of the whole health summary. Some programs have found this to be a useful tool in previewing patient records for a scheduled diabetes clinic.

```
                *** Print Diabetes Patient Care Supplement ***


Select PATIENT NAME: PATIENT,SALLY
                                        F 01-01-1950 000350003    SE 100010

     Select one of the following:

          P         PRINT Output
          B         BROWSE Output on Screen

Do you wish to: P// [ENT] PRINT Output
DEVICE: HOME// ENTER PRINTER NUMBER OR NAME
```

Figure 11-30: Display a Patient's Diabetes Care Summary

11.14 Print Health Summary for DM Patients with Appointments (HSRG)

This option allows you to print a health summary for all patients on the register who have an appointment on a selected date. It is a tool to identify patients who have specific follow-up needs and to make arrangements to contact them during a scheduled appointment whether it is to Diabetic or to any other clinic.

```
This option will print a health summary for all patients who are on the
Diabetes Register that have an appointment on the date you specify.


Enter the Appointment Date:  6/3/03  (JUN 03, 2003)
Enter the Official Diabetes Register: IHS DIABETES
Select health summary type: ADULT REGULAR// DIABETES STANDARD
DEVICE: HOME// ENTER PRINTER NAME OR NUMBER
```

Figure 11-31: Print Health Summary for DM Patients with appointment

11.15 SMBG Self Monitoring of Blood Glucose Follow up Report

This option will provide a list of patients on a register (e.g. IHS Diabetes) that either are doing Self Monitoring of Glucose or who are not doing Self Monitoring of Glucose.

The following definitions/logic is used:

Yes, Doing self monitoring:

- the last health factor documented in the 365 days prior to the end date is SELF MONITORING BLOOD GLUCOSE-YES
- the patient has had strips dispensed through pharmacy in the 365 days prior to the end date.

No, not doing self monitoring

- the last health factor documented in the 365 days prior to the end date is SELF MONITORING BLOOD GLUCOSE-NO or SELF MONITORING BLOOD GLUCOSE-REFUSED
- the patient has had no strips dispensed through pharmacy
- the patient has had neither strips dispensed nor a health

factor documented in the 365 days prior to the end date

In the case of the following conflict: the patient's last health factor states NO or REFUSED but they have had strips dispensed they will show up on each report with a status of Maybe.

```
Select Diabetes QA Audit Menu Option: SMBG  Self Monitoring of Blood Glucose
Enter the Name of the Register: IHS DIABETES
Do you want to select register patients with a particular status? Y// <ENTER>
Which status: A// <ENTER> ACTIVE

    Select one of the following:

         Y         YES, Doing Self Monitoring
         N         NO, Not doing Self Monitoring
         B         Both

What list of patients do you want: N// Both

Enter the end date to use in calculating the 365 day time period.
Enter the End Date:  6/1/2006  (JUN 01, 2006)

    Select one of the following:

         H         HRN
         P         PATIENT NAME
         C         COMMUNITY OF RESIDENCE

How would you like the report sorted: H// <ENTER>

DEVICE: HOME//   Enter Printer Name or Number

  AA                              Aug 17, 2006                       Page 1

    PATIENTS ON THE IHS DIABETES REGISTER - BLOOD GLUCOSE SELF MONITORING
          List of Patients w/Self Monitoring of Blood Glucose Status
                          End Date: Jun 01, 2006

HRN    PATIENT NAME                COMMUNITY       LAST VISIT           SMBG?
-------------------------------------------------------------------------------
151103 ADAMS,ANNETTE                  ADAIR           Apr 01, 2005         No
185397 POOLEY,MARLEY                  MUSKOGEE        May 10, 1997         No
220753 COCHRAN,TERESA                 RED ROCK        Jan 09, 2005         No
221242 SNOW,KARLA                     PAWHUSKA        Jan 09, 2005         No
989898 GUMP,FOREST                    CLAREMORE       Jul 18, 2006         No
  Health Factor: SELF MONITORING BLOOD GLUCOSE - REFUSED 5/18/06
```

Figure 11-31: Sample of report with *Maybe* status

12.0 Health Summary Tools for Diabetes Care

The tools described below – Diabetes Flow Sheet, Diabetes Patient Care Summary, Pre-Diabetes Patient Care Summary, Educational Assessment, Refusals, and DM Health Maintenance Reminders – can be included on any type of Health Summary. They are described in section 12.1. However, it is strongly recommended that they be added to the routinely used adult health summary at your facility. At most facilities that would be the Adult Regular Health Summary or a locally-developed version of the Adult Regular Summary. This recommendation is made so that these important diabetes care reminders are seen by providers at all visits, including ER and General Clinic, and not just visits to the Diabetic Clinic where the Diabetes Standard Health Summary may be used.

12.1 Diabetes Standard Summary

A special type of health summary for patients with diabetes is available – the Diabetes Standard Summary. There are several ways to display the Diabetes Standard Summary for a patient with diabetes. At the main Diabetes Management System menu, select **HS Health Summary**. When prompted for a health summary type, enter DIABETES STANDARD. The Health Summary will be printed in a standard format. If you plan to review the Health Summary on the terminal screen, you may choose the menu option **BHS Browse Health Summary** and select a health summary type of DIABETES STANDARD. This option permits the user to use the -, +, ↑, and ↓ keys to scroll through the Health Summary or to return to review various items of interest.

This Health Summary is similar to the Adult Regular Summary except that it includes a Diabetes Flow Sheet at the end of the report as well as a Diabetes Patient Care Summary. The flow sheet contains those items that have been identified for provider review at each Diabetic Clinic visit. In addition, the Diabetes Standard Summary includes a Diabetes Patient Care Summary which provides an overview of all IHS Diabetes Standards of Care for that patient. Both the Diabetic Flow Sheet and the Diabetes Patient Care Summary are triggered by the presence of a problem of Diabetes on the Active Problem list or a diagnosis of Diabetes in the last year by a primary provider. The Diabetes Standard Health Summary should be routinely printed by Health Records staff for all diabetic clinic visits.

An option may be set to automatically print the Diabetes Standard Health Summary for patients with Diabetes regardless of when or where the health summary is printed. The option, Update Health Summary Site Parameters, is included under the Health Summary Maintenance Menu. Instructions for setting up this feature are provided below.

1. In the Health Summary Maintenance Menu, select **HSSP** Update Health Summary Site parameters.

2. Identify the name of your facility.

3. Answer **YES** to Autoswitch to DM Summary.

4. Identify the Default DM Health Summary Type as **DIABETES STANDARD.**

```
Select HEALTH SUMMARY SITE PARAMETERS SITE NAME: CIMARRON HOSPITAL [ENT]
SITE NAME: CIMARRON HOSPITAL// [ENT]
AUTO-SWITCH TO DM SUMMARY: YES [ENT]
DEFAULT DIABETES SUMMARY TYPE: DIABETES STANDARD [ENT]
```

Figure 12-1: Sample of setting option to automatically print the Diabetes Standard Health Summary

A sample Diabetes Flow Sheet is shown below (*Figure 12-*). Remember that only data that has been entered into the PCC will show up on the Health Summary Flow Sheet.

```
--------------- FLOW SHEETS (max 10 visits or 2 years) ----------------

DIABETES FLOW SHEET
           WT        BP          A1C     CHOL     CREAT    PROT    TRIG
-------------------------------------------------------------------------
01/14/00  :196     :133/77    :         :         :        :       :
-------------------------------------------------------------------------
01/12/00  :207     :104/66    :10.1     :         :        :       :
-------------------------------------------------------------------------
10/22/99  :191     :          :12.9     :         :        :       :
-------------------------------------------------------------------------
08/20/99  :193     :140/100   :10.9     :         :        :       :
-------------------------------------------------------------------------
07/16/99  :194     :162/92    :         :         :        :       :
-------------------------------------------------------------------------
06/04/99  :195     :158/92    :10.6     :         :        :       :
-------------------------------------------------------------------------
04/16/99  :188     :173/99    :         :         :        :2      :
-------------------------------------------------------------------------
03/05/99  :187     :136/77    :         :         :        :       :
-------------------------------------------------------------------------
```

Figure 12-2: Sample of Diabetes Standard Summary

Note: The flow sheet will be displayed when a Diabetes Standard Health Summary is retrieved, but *only for those patients* with a diagnosis of diabetes on the PCC Problem List (ICD codes 250.00 - 250.93) or who have had a diagnosis of diabetes within the last year by a primary provider.

12.2 Diabetes Patient Care Summary

The Diabetes Patient Care Summary, also referred to as the Diabetes Supplement, was released with Patch 3 to Version 2.0 of the Health Summary. It provides a complete review of the patient's care in relation to the IHS National Diabetes Standards of Care. It includes virtually all data items used by the Diabetes Management System Audit Report. It is intended to alert providers to Diabetes Standards of Care for which the patient is deficient, each time the patient is seen, thus

encouraging providers to attend to these needs prospectively during the course of the year. An example is displayed in *Figure 12*-3.

```
DIABETES PATIENT CARE SUMMARY                Report Date:  Jun 28, 2005
Patient Name:  HURST,POLLY    HRN: 143782
Age:  49      Sex:  F         Date of DM Onset:
Dob:  Jul 05, 1955            DM Problem #: CIMH6
                              Primary Care Provider: PROVIDER,CATHY
Last Height:  65 inches       Sep 22, 2003
Last Weight:  188 lbs         Nov 18, 2003  BMI: 31.3
Tobacco Use:  NON-TOBACCO USER  May 13, 2003

HTN Diagnosed:  Yes
ON ACE Inhibitor/ARB in past 6 months: No
Aspirin Use/Anti-platelet (in past yr):  No

Last 3 BP:  123/45   Nov 18, 2003      Is Depression on the Problem List?
            139/53   Sep 22, 2003        Yes - Problem List 308.3
            166/59   Aug 12, 2003

In past 12 months:
Diabetic Foot Exam:   No    Sep 04, 2000
Diabetic Eye Exam:    No
Dental Exam:          No
(Females Only)
Last Pap Smear documented in PCC/WH: Mar 25, 2002
                WH Cervical TX Need:
Mammogram: Sep 16, 2003
SMBG: SELF MONITORING BLOOD GLUCOSE - YES  Jun 28, 2005

DM Education Provided (in past yr):
   Last Dietitian Visit:   Aug 12, 2003  DIET EDUCATION
      <No Education Topics recorded in past year>

Immunizations:
Flu vaccine since August 1st:  No
Pneumovax ever:                Patient Refused PNEUMOCOCCAL CONJUGATE VACCINE
o3
Td in past 10 yrs:             Yes  Mar 24, 2002

PPD Status:  Known Positive PPD or Hx of TB (POV/DX Mar 26, 2002)
Last CHEST X-RAY:
Last Documented PPD:      29     Mar 24, 2002
Last TB Status Health Factor:
EKG:                           Jul 11, 1999

Laboratory Results (most recent):
HbA1c:                    7.9            Jun 24, 2005  A1cnow
Next most recent HbA1c:
Nephropathy Assessment
  Urine Protein:          100            Aug 12, 2003  URINE PROTEIN
  Microalbuminuria:       N/A            Aug 12, 2003  ALBUMIN, MICRO
  Creatinine:             0.8            Aug 12, 2003  CREATININE
  Estimated GFR:
Total Cholesterol:        238            Aug 12, 2003  CHOLESTEROL
  LDL Cholesterol:        canc           Aug 12, 2003   LDL
  HDL Cholesterol:        34             Aug 12, 2003   HDL
  Triglycerides:          546            Jun 24, 2005  TRIGLYCERIDE
```

Figure 12-3: Diabetes Patient Care Summary

Normally the Patient Care Summary prints after the flow sheet on the Diabetes Standard Health Summary but it can also be printed as a "stand-alone" Health Summary by selecting the menu option, **DPCS Display a Patient's DIABETES CARE SUMMARY,** in the **DA Diabetic QA Audit** menu. Some facilities have chosen to print these for each patient with diabetes prior to a clinic appointment and "highlight" those items that are overdue as a reminder for the provider seeing the patient.

> **Note**: The criteria used to extract data for the Patient Care Summary are listed in the table in Appendix D of this manual.

12.3 Pre-Diabetes Patient Care Summary

The Pre-Diabetes Patient Care Summary was distributed in Health Summary Version 2.0 Patch 12. It must be added under health summary maintenance as a supplement type to any health summaries which are routinely used at your health care facility. Printing of this supplement will be triggered by a diagnosis of Impaired Glucose Tolerance, Impaired Fasting Glucose, or Metabolic Syndrome (Syndrome X) on the active problem list or made by a primary care provider in the past year. It will not print if the patient has a diagnosis of diabetes on the active problem list or a primary provider has used a diagnosis of diabetes in the past year. This supplement was designed as a tool for displaying those data items that are important in following patients who may be predisposed to developing diabetes. An example of a Pre-Diabetes Supplement is provided in *Figure 12*-4.

```
PRE-DIABETES PATIENT CARE SUMMARY                Report Date:  Jun 29, 2005
Patient Name:  WATERMAN,BECKY    HRN: 168923
Age:  61      Sex:  F    DOB:  Sep 23, 1943

Classification:
No    Impaired Fasting Glucose
No    Impaired Glucose Tolerance
Yes   Metabolic Syndrome:  Date of first DX in PCC:  Sep 09, 2004

Case Manager:
Primary Care Provider:

 Last Height:   66 inches       May 07, 2003
Last 3 Weight:  176 lbs         Sep 06, 2003  BMI: 28.3
                173 lbs         May 07, 2003  BMI: 28.0
                172 lbs         May 07, 2003  BMI: 27.8

Last Waist Circumference: 35    Feb 16, 2005

Last 3 non-ER BP:  140/65     Sep 06, 2003
                   146/81     May 07, 2003
                   131/65     May 07, 2003

Tobacco Use:  NON-TOBACCO USER  May 07, 2003

Pre-Diabetes Education Provided (in past yr):
  Last Dietitian Visit:   Oct 04, 2003  DIET CONSULTATION
  DM-PREVENTION           Sep 09, 2004

HTN Diagnosed:  Yes
ON ACE Inhibitor/ARB in past 6 months: No
Aspirin Use (in past yr):  No

On Metformin: No
On TZD: No
On Acarbose: No
On Lipid Lowering Drugs: No

Laboratory Results (most recent):
Last Fasting Glucose:      80            Sep 09, 2004  GTT, FASTING
Last 75 GM 2 hour Glucose: 175           Sep 09, 2004  2 HR PP GLUCOSE

Total Cholesterol:        228           Sep 06, 2003  CHOLESTEROL
 LDL Cholesterol:         130.8         Sep 06, 2003   LDL
 HDL Cholesterol:         62            Sep 06, 2003   HDL
   Triglycerides:

WATERMAN,BECKY                    DOB: 9/23/1943      Chart #CIMH 168923
*** END  CONFIDENTIAL PATIENT INFORMATION -- 6/29/2005  1:44 PM  [CMI] ******
```

Figure 12-4: Pre-Diabetes Patient Care Summary

12.4 Health Maintenance Reminders

The annual diabetes monitoring activities previously included on the PCC Preventive Health Maintenance Reminders list:

- DM Cholesterol
- DM Creatinine
- DM Dental Exam
- DM Eye Exam
- DM Foot Exam
- DM Triglycerides

The above items were deleted with Health Summary Patch 8 because the status of these exams and laboratory tests is already displayed on the Diabetes Patient Care Summary.

Other diabetes monitoring items (urinalysis, PPD, rectal exam, breast exam, Pap smear, mammography, review of alcohol use status, and review of tobacco use status) are already included as PCC Reminders for the general adult population.

A new Health Maintenance Reminder was added with Health Summary Patch 8 – Diabetes Screening. As distributed in the patch, this health maintenance reminder will be displayed for both males and females over the age of 18 who have not been screened for Diabetes within a three-year time frame. It will be displayed on both ADULT REGULAR and DIABETES STANDARD health summaries. If you do not see this health maintenance reminder on your health summaries or you wish to add to or change the criteria, contact your site manager to activate the reminder and make desired changes in the criteria for display by age, sex, or frequency of screening.

Instructions for modifying the Health Maintenance Component of the health summary can be obtained from your Area Office as documentation for Health Summary Patch 8, *apch0200.08o.pdf*.

12.5 Other Health Summary Components

There are two other health summary components that may be desirable for Diabetes programs:

- Patient Refusals – Groups all refusals of services under a single component.

- Educational Assessment – Displays the health factors for Learning Preference, Barriers to Learning, and Readiness to Learn. These are required data elements for the IHS Patient Education program.

These components may be added using the menu option for Create/Modify a Summary Type under Health Summary Maintenance. A segment of a health summary showing these components is displayed in *Figure 12*-5.

```
------------------------- EDUCATIONAL ASSESSMENT -----------------
Most recent Health Factor recorded.
Learning Preference:  LEARNING PREFERENCE-VIDEO  Sep 09, 2004
Readiness to Learn:  READINESS TO LEARN-UNRECEPTIVE  Sep 09, 2004
Barriers to Learning:  BARRIERS TO LEARNING-NO BARRIERS  Sep 09, 2004
---------- PATIENT REFUSALS FOR SERVICE (max 10 visits or 2 years) ----------

   Jun 23, 2005  SCREENING MAMMOGRAM   (RADIOLOGY EXAM)
     Refusal Type:  REFUSED SERVICE
   Jun 22, 2005  ECG SUMMARY   (EKG)
     Refusal Type:  REFUSED SERVICE

*** END  CONFIDENTIAL PATIENT INFORMATION -- 6/28/2005  2:07 PM  [CMI] ******
```

Figure 12-5: Educational Assessment and Refusals of Service Components

13.0 Update Diabetes Patient Data (DMU)

The DMU option was developed to enable Diabetes Coordinators to update certain diabetes-related data in the PCC if it is documented in the chart but has not been recorded in PCC. This includes both patient care data as well as refusals of service. The option is especially useful at small facilities which are not using the RPMS Laboratory or Pharmacy Packages or who use outside contracted providers for dental, eye, or podiatry services.

This option may also be used by certified Diabetes educators to directly enter the health factors relating to educational assessment and record the data items associated with education documentation including provider, level of understanding, length of educational session, individual or group setting, identify the objectives met, and the behavior code. It is often difficult to find the space to document these data items on a traditional PCC Encounter Record. However, a PCC Encounter Record still must be completed for each patient encounter documenting the patient encounter with the educator for statistical and billing purposes.

Data entered via DMU creates an "event" or "historical" type visit in PCC and therefore does not contribute to the PCC visit error report run prior to PCC visit exports. Before using the option, you need to review the health summary of the patient whose PCC record is to be updated, to ensure that the data truly does not reside in PCC. If the data is indeed missing and you plan to update the record, begin by selecting the DMU option and enter the name or chart number of the patient whose record will be updated.

```
                        PCC DATA ENTRY
                  Diabetes Patient Data Update

Select PATIENT NAME:  PATIENT,BARRY   M 05-09-1963 001040010    SE 100035

The data you enter for the above patient will be updated in the PCC database.

Do you wish to continue? Y// [ENT]
```

Figure 13-1: Updating Diabetes Patient Data, screen 1

Data may be entered for any of the data items displayed on the screen.

```
            *****  DIABETES PATIENT DATA UPDATE  *****
Patient Name: PATIENT,BARRY               HRN: 168923
--------------------------------------------------------------------------------
Problem Number:                      Date of DM Onset:
Height Date:                         Height Value:
Weight Date:                         Weight Value (lbs):
BP Date:                             BP Value:

Any HEALTH FACTORS to record?  N

Foot Exam Date:                      Foot Exam Result:
Eye Exam Date:                       Eye Exam Result:
Dental Exam Date:                    Pap Smear Date:
Mammogram Date:              EKG Date:               EKG Result:
Do wish to enter Td, Influenza or Pneumovax immunizations?  N
PPD Date:                    PPD Reading:
Any EDUCATION to record? N  Any LABs to enter? N Any Medications to Enter?
```

Figure 13-2: Update Diabetes Patient Data, data items

Date of Onset

If you plan to append a Date of DM Onset, the patient must first have an active problem of diabetes. That problem number must be specified before you will be allowed to enter a date of onset. You may determine the problem number by reviewing the active problem list of the patient's health summary. On the following Health Summary, the patient has an active problem of Diabetes recorded on 4/15/02 but there is no date of onset. This would normally be seen as a date in parenthesis after the problem, e.g. DIABETES MELLITIS TYPE 2 (onset 04/82). The problem number is SE3.

```
------------------------ ACTIVE PROBLEMS ---------------------------

             ENT.    MODIFIED
  SE1       05/03/67 05/03/67 ANEMIA DUE TO DEFICIENT INTAKE OF IRON
  SE3       04/15/02 04/15/02 DIABETES MELLITIS TYPE 2
```

Figure 13-3: Updating Diabetes Patient Data, active problem

The date of onset may be updated by recording the date of onset of April 1982 on problem SE3 using the DMU option. After recording this data, the changes may be saved by typing **S** and then pressing the Enter key followed by typing **E** and then pressing the Enter key at the "COMMAND:" prompt to save and exit the DMU screen.

```
            *****  DIABETES PATIENT DATA UPDATE  *****
Patient Name: PATIENT,BARRY               HRN: 100035
--------------------------------------------------------------
 Problem Number: SE3                    Date of DM Onset: 4/1982
```

Figure 13-4: Updating Diabetes Patient Data, date of onset

When the active problem list on the Health Summary is reviewed, it will now reflect the date of onset. If the patient does not have an active problem of Diabetes, the DMU option may not be used to add a date of onset.

```
------------------------ ACTIVE PROBLEMS --------------------------

             ENT.    MODIFIED
  SE1       05/03/67 05/03/67 ANEMIA DUE TO DEFICIENT INTAKE OF IRON
  SE3       04/15/02 05/30/03 DIABETES MELLITIS TYPE 2  (onset 04/82)
```

Figure 13-5: Updating Diabetes Patient Data, updated screen

Health Factors

The categories of health factors that may be updated using the DMU option include:

- Self Monitoring of Blood Glucose
- Tobacco Use
- TB Health Factor
- Barriers to Learning
- Readiness to Learn
- Learning Preference

```
Problem Number:                      Date of DM Onset:
Height Date: MAR 12,2005             Height Value: 56
Weight Date: MAR 12,2005             Weight Value (lbs): 234
BP Date: MAR 12,2005                 BP Value: 145/80

Any HEALTH FACTORS to record?  Y [ENT]
```

Figure 13-6: Updating Diabetes Patient Data,, Health Factors

Begin by typing **Y** and pressing the Enter key to indicate that you will be updating the patient's record with health factors. A screen will open in which you can identify one or more categories of health factors to update. Use the Enter or Tab keys to move through the fields. The date of the health factor will default to the date the update was made unless you change the date to the date that the health factor was actually recorded.

```
                          HEALTH FACTOR UPDATE
Enter the appropriate Health Factor for each category you wish to update

Tobacco Use:                                              DATE: JUN 30,2005

TB Health Factor:                                         DATE: JUN 30,2005

Self Monitoring Blood Glucose:  ??[ENT]                   DATE: JUN 30,2005

Barriers to Learning:                                     DATE: JUN 30,2005

Readiness to Learn:                                       DATE: JUN 30,2005

Learning Preference:                                      DATE: JUN 30,2005
```

Figure 13-7: Updating Diabetes Patient Data, Heatlh Factor Choices to update

The choice of health factors to enter under each category may be displayed by typing two question marks (**??**) when the cursor is blinking next to a health factor category. The choices will be displayed at the bottom of the screen.

```
Must be a Diabetes Self Monitoring Health Factor

Choose from:
SELF MONITORING BLOOD GLUCOSE - NO
SELF MONITORING BLOOD GLUCOSE - REFUSED
Press RETURN or ENTER to continue or '^' to exit: [ENT]
SELF MONITORING BLOOD GLUCOSE - YES
```

Figure 13-8: Updating Diabetes Patient Data, Self Monitoring of Blood Glucose Health Factors

The Enter key must be pressed as many times as necessary to display all the choices for that category.

When the cursor is once more blinking next to the category of health factor, the choice may be entered by typing the first few letters of that health factor. Select the number of the correct health factor. The date may also be changed to the date the health factor was documented.

```
Self Monitoring Blood Glucose: SELF [ENT]                DATE: 6/10/05

Barriers to Learning:                                    DATE: JUN 30,2005

Readiness to Learn:                                      DATE: JUN 30,2005

Learning Preference:                                     DATE: JUN 30,2005
_____________________________________________________________________________1
SELF MONITORING BLOOD GLUCOSE - NO
2      SELF MONITORING BLOOD GLUCOSE - REFUSED
3      SELF MONITORING BLOOD GLUCOSE - YES

Choose 1-3 or '^' to quit: 2 [ENT]
```

Figure 13-9: Updating Diabetes Patient Data, Entering Self Monitoring Health Factor

If more than one match is found, all matches will be displayed in a numbered list at the bottom of the screen and the choice may be made by number.

When all health factor data has been updated, the screen may be closed by pressing the Enter key when the cursor is blinking on the "Close" COMMAND.

Td, Influenza or Pneumovax Immunizations

In order to update Td, Influenza or Pneumovax immunizations, type **Y** to indicate that you will be making one or more entries in this field.

```
Do wish to enter Td, Influenza or Pneumovax immunizations?  Y [ENT]
```

Figure 13-10: Updating Diabetes Patient Data, Immunizations

A vaccine and the date given must be documented for each immunization type documented. The Enter or Tab keys may be used to move between fields. If the first few letters of a vaccine are entered, any vaccines in that category that match those letters will be displayed and the correct vaccine may be chosen by number.

```
                          Immunization Update
For each immunization you are updating you must enter the immunization that
was given and the date it was given.

INFLUENZA:                                  DATE FLU SHOT GIVEN:

PNEUMOVAX:  PNEU  [ENT]                     DATE PNEUMOVAX GIVEN:

TD:                                         DATE TD GIVEN:
_____________________________________________________________________________
1      PNEUMOCOCCAL CONJUGATE VACCINE       PNEUM-CONJ     100
2      PNEUMOCOCCAL POLYSACCARIDE VACCINE       PNEUMO-PS     33
```

Figure 13-11: Updating Diabetes Patient Data, Entering Pneumovax vaccine

When immunization data updates have been completed, press the Enter key until the cursor drops to COMMAND: where the word "Close" is displayed. Pressing the Enter key will close the window and return you to the main DMU screen.

Education

In order to enter Medications, Laboratory Tests, or Patient Education, type **Y** to indicate that you will be making entries in this field.

```
Any EDUCATION to record?Y Any LABs to enter?N Any Medications to Enter?Y
```

Figure 13-12: Updating Diabetes Patient Data, Education

A screen will open to allow entry of the desired information. Use standard IHS Patient Education mnemonics for recording education topics. If the category of the topic is typed, e.g. DM or DMC, the list of topics in that category will be displayed below the data entry box. The Enter key may be pressed as many times as necessary to review the entire list of topics in that category before selecting the number of the desired topic.

```
Enter all Education Topics you wish to record
After you enter a topic name and press ENTER you will be prompted for
additional information about that topic

TOPIC: DMC  [ENT]
TOPIC:
TOPIC:
TOPIC:
TOPIC:
_____________________________________________________________________________
1      DMC-ACUTE COMPLICATIONS       DMC-AC
2      DMC-BEHAVIORAL GOALS (MAKING HEALTHY CHANGES)       DMC-BG
3      DMC-BLOOD SUGAR MONITORING, HOME       DMC-BGM
4      DMC-CHRONIC COMPLICATIONS (PREVENTION & TREATMENT)       DMC-CC
5      DMC-DIABETES MEDICINE - INSULIN       DMC-IN
Choose 1-5 or '^' to quit: 5 [ENT]
```

Figure 13-13: Updating Diabetes Patient Data,Entering new education topic

When an education topic has been selected and the Enter key is pressed, a screen will open to allow entry of additional information about that educational encounter. The only required fields are those underlined or highlighted. If choices for a field are unknown, two question marks (**??**) may be typed and information about that field definition will be displayed.

```
DM EDUCATION: DMC-DIABETES MEDICINE - INSULIN
DATE EDUCATION PROVIDED: JUN 10,2005     [ENT]
PROVIDER: SHORR,GREGORY      [ENT]
LEVEL OF UNDERSTANDING: POOR     [ENT]
LENGTH OF EDUCATION (MINUTES): 60    [ENT]
INDIVIDUAL/GROUP: INDIVIDUAL  [ENT]
OBJECTIVES MET:
BEHAVIOR CODE: ?? [ENT]
_____________________________________________________________________________
Choose from:
GS       GOAL SET
GM       GOAL MET
GNM      GOAL NOT MET
```

Figure 13-14: Updating Diabetes Patient Data, Entering educational data items

When education topic data updates have been completed, press the Enter key until the cursor drops to COMMAND: where the word "Close" is displayed. Pressing the Enter key will close the window and return you to the main DMU screen.

Laboratory Tests

In order to enter Laboratory Tests, type **Y** to indicate that you will be making entries in this field.

```
Any EDUCATION to record?N Any LABs to enter?Y Any Medications to Enter?N
```

Figure 13-15: Updating Diabetes Patient Data, Laboratory tests

A screen will open to allow entry of the desired information. Type only the first few letters of the laboratory test. Matching tests will be displayed in a list at the bottom of the screen. Select the number of the correct test. Record the date of the test and the result. When entering numeric data, enter only the numeric results not any flags or other indications of normal or abnormal.

```
Lab Test Name                Date of Test      Value

CHOLESTEROL                  DEC 15,2004       340
TRIGLYCERIDE                 DEC 15,2004       510
LDL                          DEC 15,2004       210
HDL                          DEC 15,2004       40
```

Figure 13-16: Updating Diabetes Patient Data, updated lab test information

Upon completion of entry of the laboratory test information, press the Enter key until the cursor drops to COMMAND: where the word "Close" is displayed. Pressing the Enter key will close the window and return you to the main DMU screen.

Medications

In order to enter Medications, type **Y** to indicate that you will be making entries in this field.

```
Any EDUCATION to record?N Any LABs to enter?N Any Medications to Enter?Y
```

Figure 13-17: Updating Diabetes Patient Data, Medications

A screen will open to allow entry of the desired information. Type the first few letters of the medication and select the correct medication from the list that will display at the bottom of the screen. Type the date and the quantity of medication dispensed. SIG is optional information and does not need to be entered.

```
 Drug Name                    Date Dispensed Qty      SIG

ASPIRIN 81MG TAB               MAY 2,2003    100



Any EDUCATION to record?N  Any LABs to enter?N Any Medications to Enter?Y


Close     Refresh

Enter a command or '^' followed by a caption to jump to a specific field.


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

Figure 13-18: Updating Diabetes Patient Data, Recording medication data

Upon completion of entry of the medication information, press the Enter key until the cursor drops to COMMAND: where the word "`Close`" is displayed. Pressing the Enter key will close the window and return you to the main DMU screen.

Height, Weight, BP, Foot Exam, Eye Exam, Dental Exam, Pap Smear, Mammogram, EKG, and PPD

Each of these data items requires entry of the date of the exam, measurement, skin test, or procedure. When the Enter key is pressed after recording the date, you will be prompted to enter the result of the measurement - height in inches, weight in pounds, blood pressure, or PPD reading. For EKG, Foot Exam, and Eye Exam you will be prompted to enter a result of NORMAL or ABNORMAL. PAP Smears and Mammogram only require entry of a date.

Note: Be extremely careful about accurately recording data as it will be passed directly to PCC when the data is saved and you exit the screen. Only data entry staff can delete or correct inaccurate data once it has been stored in PCC. If you do need to delete incorrectly recorded data BEFORE exiting from the DMU screen, position the cursor in the erroneous field using the ↓ or ↑ keys or the Tab key and either type over the incorrect data with the correct data or type "@" which is the RPMS symbol used for deletion.

```
             *****  DIABETES PATIENT DATA UPDATE  *****
Patient Name: HURST,POLLY                    HRN: 143782
--------------------------------------------------------------------------------
Problem Number:                      Date of DM Onset:
Height Date: MAR 12,2005             Height Value: 66
Weight Date: MAR 12,2005             Weight Value (lbs): 234
BP Date: MAR 12,2005                 BP Value: 145/80

Any HEALTH FACTORS to record?  N

Foot Exam Date:                      Foot Exam Result:
Eye Exam Date: 2/10/2005             Eye Exam Result: NORMAL
Dental Exam Date:                    Pap Smear Date:
Mammogram Date:              EKG Date:               EKG Result:
Do wish to enter Td, Influenza or Pneumovax immunizations?  N
PPD Date: MAR 12,2005        PPD Reading: 5
Any EDUCATION to record? Y  Any LABs to enter? N Any Medications to Enter? N
```

Figure 13-19: Updating Diabetes Patient Data, additional data

Once all the desired data has been updated on the DMU screen, typing **S** and then pressing the Enter key followed by typing **E** and then pressing the Enter key will save the data and result in an updated PCC database.

When the PCC database update has completed, you will be prompted to enter any refusals. Begin by typing **Y** to indicate that one or more refusals will be documented and then record the date the refusal was documented.

```
Exit     Save     Refresh

Enter a command or '^' followed by a caption to jump to a specific field.


COMMAND: E                                      Press <PF1>H for help
Insert

Updating PCC database....hold on a moment...

Do you want to enter any Patient REFUSALS? N//Y [ENT]
Enter Date of Refusal: 6/10/05 [ENT]
```

Figure 13-20: Updating Diabetes Patient Data, updating the PCC database and entering refusals

This tool may be used to document any services that could not be provided to a patient because they were medically contra-indicated, the patient failed to respond to follow up, the provider discontinued the service, the patient failed to respond, or the patient refused the service. Refusals may be documented for:

Education Topics
EKG
Exams
Immunizations
Laboratory Tests
Mammogram
Measurements
Medication/Drugs
PAP Smear
Radiology Exam
Skin Test

Select the refusal type from the list of Refusal Types. The above list may be displayed by typing two question marks (**??**) when prompted for refusal type.

Identify the Refusal Type by typing the first few letters.

Type the name of the specific item that was refused, e.g. name of medication if a MEDICATION/DRUG, name of laboratory test if a LABORATORY TEST, specific immunization if an IMMUNIZATION, etc. When entering a Refusal Type of EKG, you will be prompted for the `DIAGNOSTIC PROCEDURE RESULT:`. There is only one choice, ECG SUMMARY.

Enter the refusal reason from the following list:

R	Refused Service
N	Not Medically Indicated
F	No Response to Followup
P	Provider Discontinued
U	Unable to Screen

```
Enter REFUSAL TYPE: ?? [ENT]

  Choose from:
  EDUCATION TOPICS
  EKG
  EXAM
  IMMUNIZATION
  LAB
  MAMMOGRAM
  MEASUREMENTS
  MEDICATION/DRUG
  PAP SMEAR
  RADIOLOGY EXAM
  SKIN TEST

Enter REFUSAL TYPE: EKG
Enter the DIAGNOSTIC PROCEDURE RESULT value: ?
   Answer with DIAGNOSTIC PROCEDURE RESULT:
  ECG SUMMARY
Enter the DIAGNOSTIC PROCEDURE RESULT value:  ECG SUMMARY [ENT]
Enter Refusal Reason: REFUSED SERVICE
creating Refusal entry in PCC...


Would you like to enter another refusal? N//
```

Figure 13-21: Updating Diabetes Patient Data, documenting EKG refusal

Upon completion of data entry for one refusal you may enter additional refusals by typing **Y** when prompted to enter another refusal.

The last step in using the DMU option for updating Diabetes-related data is to display the patient's health summary and individual audit to ensure that updated data is accurately displayed.

14.0 Recording Diabetes-Related Data in the PCC

The benefits derived from the many Diabetes Management System outputs described in this manual–the Diabetic Patient Care Summary, the Diabetes Flow Sheet, Audit Report, Preventive Maintenance Reminders, and QMan retrievals – are dependent upon the completeness, consistency, and quality of data entered into the PCC on a routine basis. The single most critical aspect of PCC data entry is the quality of data recording by healthcare providers. The sections 14.1 through 14.11address the areas of PCC data recording by healthcare providers that are critical to the success of the Diabetes Management System.

14.1 Purpose of Visit

Purpose of Visit (POV) is by far the most important area of PCC recording. It is essential that this data is extremely legible on the PCC form. Providers should print in the Purpose of Visit section of the form. Standard terms and abbreviations must be used to avoid miscoding of data. Two frequently encountered problems are:

1. Inappropriate use of the Diabetes Diagnosis Codes.

Use the following standard coding definitions:

Type 2 (non-insulin dependent/adult onset/unspecified type)	250.00
Type 1 (insulin dependent/juvenile type)	250.01

The following fifth digit should be used with category 250 if specified by the provider:

‘0’ – Type 2 “controlled”
‘2’ - Type 2 “uncontrolled”
‘1’ – Type 1 “controlled”
‘3” – Type 1 “uncontrolled”

Diabetes/Diabetic/DM Screening	V77.1
Abnormal Fasting Glucose	790.21

(Fasting plasma glucose between 100 and 125 mg /dL after an 8 hour fast.)

Abnormal Glucose Tolerance	790.22

(Plasma glucose between 140 and 199 2 hours after a 75 gram dose of glucose.)

Abnormal Glucose, Unspecified	790.29

Dysmetabolic Syndrome	277.7

(Metabolic Syndrome, Syndrome X)
Any 3 of the following 5 findings:
Waist Circumference > 40 inches for males, > 35 inches for females, or BMI ≥ 30
Triglyceride ≥150 mg/dL
HDL < 40 for males, < 50 for females
Blood Pressure ≥130/85
Fasting Plasma Glucose ≥ 100 mg/dL

Gestational Diabetes	648.83
Pre-gestational Diabetes*	648.03

*For Diabetes Complicating Pregnancy or Pre-gestational Diabetes (Patients who are pregnant but who had Diabetes prior to their pregnancy) use code 648.03 and add a secondary code for Diabetes of 250.0x.

Amputation Status (Acquired)	V49.6-V49.77

Diabetic Foot Care	250.0x
Callus	700.
Mycotic Nails	117.9
Ingrown Nails	703.0

2. Failure to preface complications, such as Retinopathy and Neuropathy, with the word Diabetic. This directly affects Purpose of Visit coding. Retinopathy and Diabetic Retinopathy receive significantly different ICD codes. Also, even though a diagnosis of Diabetes is recorded as one POV on the form, recording of Retinopathy as a second Purpose of Visit will not cause the data entry operator to assume that this is Diabetic Retinopathy.

   Complications/Manifestations require two codes including a code from the 250.4X-250.8X series with an additional code for the manifestation.

"Diabetic" Peripheral Vascular Disease	250.7x
Foot Ulcer	707.1
Gangrene	785.4
Decreased Sensation in Feet	782.0
Painful Paresthesis	782.0
Decreased Peripheral Pulses	785.9
Impotence of Organic Origin	607.84

"Diabetic" Nephropathy:	250.4x
Mild Proteinuria	791.0
Nephrotic Syndrome	581.81
Chronic Renal Failure	585.

Examples of correct coding:

Example 1: Chronic renal failure due to Type 1 diabetic nephrotic syndrome
Correct Coding: 250.41 (diabetes with renal manifestations)
585. (chronic renal failure)

Example 2: Ulcer of right foot due to diabetic peripheral vascular disease
Correct Coding: 250.70 (diabetes with peripheral vascular disease)

443.81 (peripheral vascular disease)
707.1 (foot ulcer)

Example 3: Pregestational diabetes, patient is Type 1, controlled
Correct coding: 648.03 (pregestational diabetes)
250.01(type 1, controlled)

14.2 Problem List

Presence of a diabetes-related diagnosis on the PCC Problem List triggers the generation of the flow sheet and the Diabetes Patient Care Summary on the Diabetes Health Summary and is used in the Audit Report. Every patient with diabetes should have a form of diabetes added to the Active Problem List along with an exact or estimated Date of Onset.

14.3 Laboratory Tests

Lab tests are used extensively in the Audit Report, PCC Health Maintenance Reminders, Diabetes and Pre-Diabetes Supplements, Flow Sheet, and QMan. The diabetes-related tests are:

Fasting Glucose
2 Hr Post 75 G Glucose
Hemoglobin A1c
Creatinine
Cholesterol
HDL Cholesterol
LDL Cholesterol
Triglyceride
Urinalysis
Urine Protein
Microalbumin or Microalbumin/Creatinine Ratio
Estimated GFR

If your facility is running RPMS Lab Version 5.2 and has the PCC Link turned on, then most if not all of the required lab results will automatically pass to the PCC and no special action is required. An important exception is that results of tests performed by clinical staff outside the laboratory must be recorded on the PCC encounter form for data entry.

Estimated GFR is a calculation made by the RPMS laboratory package based on the serum creatinine value, the age, and sex of the patient. The formula used is the Modification of Diet in Renal Disease (MDRD) formula. The abbreviated MDRD equation is used in RPMS.

Estimated GFR (mL/min/1.73 m^2) = 186 × (Scr)$^{-1.154}$ × (age) $^{-0.203}$ × (0.742 if female) × (1.21 if African-American)

This is the same GFR calculator used on the National Kidney Foundation and National Kidney Disease Education Program websites.

If your facility is not running the Lab System or does not have an interface to a contracted reference laboratory there are several alternatives to assure that this data is available.

1. Providers may record these test results on the PCC Form for data entry using the **LAB** or **HLAB** mnemonic.

2. Lab staff may maintain a log of these tests and provide the test results to PCC data entry staff for processing using the **LOG Enter Data From LOGS** (lab/rad/cpt/apc) ... option.

3. The Diabetes Coordinator or other designated staff may use the DMU – Update Diabetes-Related Data option to record the desired laboratory data.

In some cases, it is important to know whether a test was performed, even if results are unknown or were not entered in the PCC. Therefore, it is essential that providers initial the appropriate lab box on the right side of the PCC Form whenever a test is performed. If a patient refuses to have a test performed or blood drawn for a recommended test, the provider should document that refusal by placing a **REF** in front of the test on the PCC Encounter Form. If a box does not exist for one of the diabetes-related tests, it should be indicated and initialed in the area immediately above the Purpose of Visit section. This data must be recorded on the PCC Form even if you have made a notation on a manual flow sheet in use at your facility. Data recorded on the manual flow sheet is not entered in the PCC.

14.4 Health Factors

Tobacco Use, TB Treatment Status, Self Monitoring of Blood Glucose, Learning Preference, Barriers to Learning, and Readiness to Learn are stored as Health Factors in the PCC. Health Factors should be recorded in the right-hand portion of the Purpose of Visit section of the PCC Encounter Form and coded by data entry staff using the **HF** or **HHF** mnemonic.

TB Treatment Status should only be documented for those patients who have a previous history of tuberculosis.

TB Treatment Status Includes

TB	Tx Complete
TB	Tx Incomplete
TB	Tx Unknown

TB	TB – Untreated

Tobacco Use Includes

Current Smoker
Current Smokeless
Smoke-free Home
Cessation-Smokeless
Previous Smoker
Previous Smokeless
Exposure to Environmental
Cessation-Smoker
Non-Tobacco User
Smoker in Home
Tobacco Smoke
Ceremonial Use

Self Monitoring Blood Glucose health factors should be used at facilities where self-monitoring supplies are not dispensed by the Pharmacy or in the event that the Diabetes Coordinator wants to indicate that a patient has refused to do self-monitoring of their glucose.

Self Monitoring Blood Glucose

SELF MONITORING BLOOD GLUCOSE	NO
SELF MONITORING BLOOD GLUCOSE	REFUSED
SELF MONITORING BLOOD GLUCOSE	YES

Documenting an Educational Assessment is a requirement for certified Diabetes Programs. Therefore the following health factors should be documented for each patient seen by the Diabetes educator: Learning Preference, Barriers to Learning, and Readiness to Learn.

Learning Preference

Learning preference	Talk
Learning preference	Video
Learning preference	Small group
Learning preference	Read
Learning preference	Do/practice

Barriers to Learning

Barriers to learning	No barriers
Barriers to learning	Doesn't read English
Barriers to learning	Interpreter needed
Barriers to learning	Social stressors
Barriers to learning	Values/beliefs
Barriers to learning	Cognitive impairment
Barriers to learning	Fine motor skills deficit
Barriers to learning	Hard of hearing
Barriers to learning	Deaf
Barriers to learning	Visually impaired
Barriers to learning	Blind
Barriers to learning	Sign interpreter needed

Readiness to Learn

Readiness to learn	Receptive
Readiness to learn	Unreceptive
Readiness to learn	Pain
Readiness to learn	Severity of illness
Readiness to learn	Not ready

14.5 Examinations

The following annual exams are required to support the Diabetes Management System – particularly the DM Audit Report. PCC Data Entry staff should be entering these exams using either the **EX** mnemonic or the **HEX** mnemonic for historical exams. The exam code is in parenthesis beside each exam type.

Diabetic Foot Exam, Complete (28)

Diabetic Eye Exam (03)

Dental Exam (30)

Depression Screening (36)

Depression Screening is a new exam code scheduled for release in the summer of 2005. Responses to the exam code are: Present, Absent, Unable to Screen, or Refused.

There are no boxes for Diabetic Eye and Foot Exams. These should be recorded in the Treatments & Procedures section of the form. The PCC Data Entry staff must be informed to look for and enter Diabetic Eye and Foot Exams.

If your Opthalmology/Optometry program uses a special Eye Care encounter form, there may be a special box either in the demographic section in the upper left hand corner of the form or on the right side of the POV section. If either of these boxes is checked, data entry staff should enter an exam code of 03 for a Diabetic Eye Exam.

If your Podiatrist uses a special Podiatry encounter form, be sure that data entry staff enters an exam code of 28 if a POV of Diabetic Foot Exam is documented.

If your site uses the Data Entry module of the RPMS Dental System, Dental Exams are recorded in PCC by use of ADA Codes. To ensure that the Dental Exam is reflected on the DM Audit and the Diabetic Patient Care Summary, the taxonomy of DM AUDIT Dental Exam ADA Codes must be populated. If the Dental Package is not used, record Dental Exam in the Treatments & Procedures section of the form. The PCC Data Entry staff must be informed to look for and enter Dental Exams.

The following diabetes-related examinations are included in the PCC:

Diabetic Foot Check
A visual inspection for breaks or abnormalities in the cutaneous barrier. A foot check does not meet audit criteria for a Complete Diabetic Foot Exam.

Diabetic Foot Exam, Complete
Includes a neurologic exam, vascular exam, and a visual inspection for breaks in the cutaneous barrier or bony deformities.

Diabetic Eye Exam
Consists of a dilated eye exam by a trained observer. Mydriatic and nonmydriatic fundal photographs are also acceptable. Visual refractions and exams of the undilated eye with an ophthalmoscope do not qualify.

14.6 Education Topics

There are three categories of PCC Diabetes Education Topics, as follows:

Nutrition	DM-N, DM-D, DMC-N, and all other DMC-nutrition topics
Exercise	DM-EX, DMC-EX
Other	All other DM- and DMC- related Patient Education Topics

Whenever patient education is provided, it should be recorded in the box in the lower-right area of the PCC Form labeled Medications, Treatments, Procedures, Patient Education. The codes listed above should be recorded by the provider with the appropriate education topic or sub-topic. The patient's level of understanding (good, fair, poor, refused, or group – no evaluation), the time spent on the topic, and the provider's initials should also be recorded.

Because of the limited space in the designated box on the PCC form for recording education, many facilities use customized forms or overprints for adequately recording all the required information. Diabetes educators should either ensure that data entry staff knows how to code this specialized data, or use the DMU option to enter the special education data.

These and other diabetes-specific recording procedures should be coordinated with your local PCC Data Entry staff to ensure proper entry of all information required in the Diabetes Management System.

Please see ***Error! Reference source not found.*** for a more complete discussion of Patient Education Topics and recording Diabetes Curriculum.

14.7 Entry of Other Diabetes-Related Data into the PCC

- **EKG** should be entered into the system by the data entry staff as a Diagnostic procedure, using the **EKG** or **HEKG** mnemonic, if it is initialed or contains a date in the Orders section of the form.

- **Mammogram** should be entered into the system by data entry staff as a Radiology Procedure, using the **RAD** or **HRAD** mnemonic, if it is initialed or contains a date in the *Orders* section of the form. If the RPMS Radiology system is used at a facility, PCC should automatically be updated with mammograms performed on site.

- **Date of Onset** of Diabetes should be recorded in the PCC Problem List and/or in the DM Register. When recorded in the Problem List, data entry staff must enter this in the special field for Date of Onset and not just as part of the Problem Narrative.

- **Diabetes Medications** must be recorded on the PCC form and entered by PCC data entry staff using the **PRX**, **ORX**, or **HRX** mnemonic if your facility does not run the RPMS Pharmacy System.

- **Immunizations** preferably should be entered by nursing staff using the RPMS Immunization Package. If that program is not being used, the box for the immunization given (influenza, pneumovax, Td) may be checked off and initialed on the lower right hand corner of the PCC Form. When Data Entry staff use the **IM** or **HIM** mnemonic for recording the immunization they will be prompted to enter the vaccine. So that information must also be recorded on the PCC Form.

- **Waist Circumference** should be measured in inches and recorded either at the bottom of the column of boxes on the right hand side of the PCC Form or in the bottom right hand corner of the SOAP section as **WC**=xx in.

14.8 Patient Refusals of Service

At times patients may refuse certain measurements, examinations, immunizations or other care required under the IHS Diabetes standards of care. The provider may document the refusal of service by entering **REF** on the PCC encounter form next to the service refused. Data entry staff may subsequently use the mnemonic **REF** to record this refusal in PCC. Currently refusals may be documented for:

EDUCATION TOPICS
EKG
EXAM
IMMUNIZATION
LAB
MAMMOGRAM
MEASUREMENTS
MEDICATION/DRUG
PAP SMEAR
RADIOLOGY EXAM
SKIN TEST

After entering the category of service, the data entry operator may then specify the specific examination, measurement, immunization, lab test, etc. refused by the patient.

14.9 Medical Contraindications

Certain services may not be rendered to a diabetes patient because they are medically contraindicated; e.g. an influenza shot may not be given to a patient who is allergic to eggs. Or a service may not be rendered because it is no longer medically appropriate, e.g., a diabetic foot exam for a double amputee. The provider may document **NMI** (Not Medically Indicated) on the PCC record next to the service that is contraindicated. Data entry staff may use the **NMI** mnemonic to record the category of service and specific service, which is not medically indicated. The same categories and specific services available as refusals of service may be used to document medical contraindications.

14.10 No Response to Followup

Services may be offered to patients who do not refuse those services but just never appear or follow through with the proffered service. Such services may be documented by the provider on the PCC by using **NRF** on the encounter record. Data entry staff may use the **NRF** mnemonic to enter the category of service and specific service, to which the patient has not responded. The same categories and specific services available as refusals of service may be used to document failure to respond to follow up.

14.11 Use of Customized PCC Forms for Diabetes Clinic Visits

At the local level, it is possible to develop your own customized PCC Diabetes Forms in order to include check boxes for diabetes-monitoring items, such as Foot and Eye Exams, and for diabetes Patient Education topics. To create customized PCC forms,

use the tractor-feed version of the PCC Ambulatory Encounter Record (form #IHS 803-1A). With your local word-processing equipment and software, print the desired specialty items on a few thousand forms. These forms may then be used during diabetes clinic visits in place of the standard PCC Form.

Those facilities using PCC+ must ensure that required Diabetes-related items are clearly listed on the encounter form developed for Diabetes care. In addition, data entry operators must be trained to look for and code the information correctly from the customized form.

15.0 Specific RPMS Rules of Behavior

15.1 Specific RPMS Rules of Behavior

All users (Contractors and IHS Employees) of RPMS will be provided a copy of the rules of behavior (RoB) and will have to acknowledge them in accordance IHS policy prior to being granted access to a RPMS system. The RPMS system is a United States Department of Health and Human Services, Indian Health Service information system that is FOR OFFICIAL USE ONLY. The system is subject to monitoring; therefore, no expectation of privacy shall be assumed. Individuals found performing unauthorized activities are subject to disciplinary action including criminal prosecution.

RPMS users must follow these RoB in addition to the RoB listed in the IHS General User Security Handbook and, if a privileged user, the RoB listed in the IHS Technical and Managerial Handbook.

Important Note: The RoBs listed in this document are specific to RPMS. For a listing of general RoB for all users, please see the IHS General User Security Handbook and for a listing of system administrators/managers rules, the IHS Technical and Managerial Handbook located at http://home.ihs.gov/ITSC-CIO/security/secpgm/ITproced.cfm.

15.1.1 All RPMS Users

In addition to these rules, each application may include additional RoBs, which may be defined within the individual application's documentation (e.g., PCC, Dental, Pharmacy).

15.1.1.1 Access

RPMS Users Shall:

- ✓ Only use data for which you have been granted authorization.
- ✓ Only give information to personnel who have access authority and have a need to know.
- ✓ Always verify a caller's identification and job purpose with your supervisor or the entity provided as employer *before* providing any type of information system access, sensitive information, or non-public agency information.
- ✓ Be aware that personal use of information resources is authorized on a limited basis within the provisions Indian Health Manual Chapter 6 OMS Limited Personal Use of Information Technology Resources TN 03-05," August 6, 2003.

Users Shall Not:

- **X** Retrieve information for someone who does not have authority to access the information.
- **X** Access, research, or change any user account, file, directory, table, or record not required to perform your OFFICIAL duties.
- **X** Store sensitive files on a PC hard drive, or portable devices or media, if access to the PC or files cannot be physically or technically limited.
- **X** Exceed their authorized access limits in RPMS by changing information or searching databases beyond the responsibilities of their job or by divulging information to anyone not authorized to know that information.

15.1.1.2 Logging On To the System

RPMS Users Shall:

- ✓ Have a unique User Identification/Account name and password.
- ✓ Be granted access based on authenticating the account name and password entered.
- ✓ Be locked out of an account after 5 successive failed login attempts within a specified time period (e.g., one hour).

15.1.1.3 Information Accessibility

RPMS shall restrict access to information based on the type and identity of the user. However, regardless of the type of user, access shall be restricted to the minimum level necessary to perform the job.

Users Shall:

- ✓ Access only those documents they created and those other documents to which they have a valid need-to-know and to which they have specifically granted access through an RPMS application based on their menus (job roles), keys, and FileMan access codes. Some users may be afforded additional privileges based on the function they perform such as system administrator or application administrator.
- ✓ Acquire a written preauthorization in accordance with IHS polices and procedures prior to interconnection to or transferring data from RPMS.

15.1.1.4 Accountability

Users Shall:

- ✓ Behave in an ethical, technically proficient, informed, and trustworthy manner.
- ✓ Logout of the system whenever they leave the vicinity of their PC.
- ✓ Be alert to threats and vulnerabilities in the security of the system.
- ✓ Report all security incidents to their local Information System Security Officer (ISSO)
- ✓ Differentiate tasks and functions to ensure that no one person has sole access to or control over important resources.
- ✓ Protect all sensitive data entrusted to them as part of their government employment.
- ✓ Shall abide by all Department and Agency policies and procedures and guidelines related to ethics, conduct, behavior and IT information processes.

15.1.1.5 Confidentiality

Users Shall:

- ✓ Be aware of the sensitivity of electronic and hardcopy information, and protect it accordingly.
- ✓ Store hardcopy reports/storage media containing confidential information in a locked room or cabinet.
- ✓ Erase sensitive data on storage media, prior to reusing or disposing of the media.
- ✓ Protect all RPMS terminals from public viewing at all times.
- ✓ Abide by all HIPAA regulations to ensure patient confidentiality.

Users Shall Not:

- **X** Allow confidential information to remain on the PC screen when someone who is not authorized to that data is in the vicinity.
- **X** Store sensitive files on a portable device or media without encrypting.

15.1.1.6 Integrity

Users Shall:

- ✓ Protect your system against viruses and similar malicious programs.
- ✓ Observe all software license agreements.
- ✓ Follow industry standard procedures for maintaining and managing RPMS hardware, operating system software, application software, and/or database software and database tables.
- ✓ Comply with all copyright regulations and license agreements associated with RPMS software.

Users Shall Not:

- **X** Violate Federal copyright laws.
- **X** Install or use unauthorized software within the system libraries or folders.
- **X** Use freeware, shareware or public domain software on/with the system without your manager's written permission and without scanning it for viruses first.

15.1.1.7 Passwords

Users Shall:

- ✓ Change passwords a minimum of every 90 days.
- ✓ Create passwords with a minimum of eight characters.
- ✓ If the system allows, use a combination of alpha, numeric characters for passwords, with at least one uppercase letter, one lower case letter, and one number. It is recommended, if possible, that a special character also be used in the password.
- ✓ Change vendor-supplied passwords immediately.
- ✓ Protect passwords by committing them to memory or store them in a safe place (do not store passwords in login scripts, or batch files.
- ✓ Change password immediately if password has been seen, guessed or otherwise compromised; and report the compromise or suspected compromise to your ISSO.
- ✓ Keep user identifications (ID) and passwords confidential.

Users Shall Not:

- **X** Use common words found in any dictionary as a password.
- **X** Use obvious readable passwords or passwords that incorporate personal data elements (e.g., user's name, date of birth, address, telephone number, or social security number; names of children or spouses; favorite band, sports team, or automobile; or other personal attributes).
- **X** Share passwords/IDs with anyone or accept the use of another's password/ID, even if offered.
- **X** Reuse passwords. A new password must contain no more than five characters per 8 characters from the previous password.
- **X** Post passwords.
- **X** Keep a password list in an obvious place, such as under keyboards, in desk drawers, or in any other location where it might be disclosed.
- **X** Give a password out over the phone.

15.1.1.8 Backups

Users Shall:

- ✓ Plan for contingencies such as physical disasters, loss of processing, and disclosure of information by preparing alternate work strategies and system recovery mechanisms.
- ✓ Make backups of systems and files on a regular, defined basis.
- ✓ If possible, store backups away from the system in a secure environment.

15.1.1.9 Reporting

Users Shall:

- ✓ Contact and inform your ISSO that you have identified an IT security incident and you will begin the reporting process by providing an IT Incident Reporting Form regarding this incident.
- ✓ Report security incidents as detailed in IHS SOP 05-03, *Incident Handling Guide*.

Users Shall Not:

- **X** Assume that someone else has already reported an incident. The risk of an incident going unreported far outweighs the possibility that an incident gets reported more than once.

15.1.1.10 Session Time Outs

RPMS system implements system-based timeouts that back users out of a prompt after no more than five minutes of inactivity.

Users Shall:

- ✓ Utilize a screen saver with password protection set to suspend operations at no greater than 10-minutes of inactivity. This will prevent inappropriate access and viewing of any material displayed on your screen after some period of inactivity.

15.1.1.11 Hardware

Users Shall:

- ✓ Avoid placing system equipment near obvious environmental hazards (e.g., water pipes).
- ✓ Keep an inventory of all system equipment.
- ✓ Keep records of maintenance/repairs performed on system equipment.

Users Shall Not:

- **X** Do not eat or drink near system equipment.

15.1.1.12 Awareness

Users Shall:

- ✓ Participate in organization-wide security training as required.
- ✓ Read and adhere to security information pertaining to system hardware and software.
- ✓ Take the annual information security awareness.
- ✓ Read all applicable RPMS Manuals for the applications used in their jobs.

15.1.1.13 Remote Access

Each subscriber organization establishes its own policies for determining which employees may work at home or in other remote workplace locations. Any remote work arrangement should include policies that:

- Are in writing
- Provide authentication of the remote user through the use of ID and password or other acceptable technical means
- Outline the work requirements and the security safeguards and procedures the employee is expected to follow
- Ensure adequate storage of files, removal and non-recovery of temporary files created in processing sensitive data, virus protection, intrusion detection, and provides physical security for government equipment and sensitive data
- Establish mechanisms to back up data created and/or stored at alternate work locations.

Remote Users Shall:

- ✓ Remotely access RPMS through a virtual private network (VPN) when ever possible. Use of direct dial in access must be justified and approved in writing and its use secured in accordance with industry best practices or government procedures.

Remote Users Shall Not:

- **X** Disable any encryption established for network, internet and web browser communications.

15.1.2 RPMS Developers

Developers Shall:

- ✓ Always be mindful of protecting the confidentiality, availability, and integrity of RPMS when writing or revising code.
- ✓ Always follow the IHS RPMS Programming Standards and Conventions (SAC) when developing for RPMS.
- ✓ Only access information or code within the namespaces for which they have been assigned as part of their duties.
- ✓ Remember that all RPMS code is the property of the U.S. Government, not the developer.
- ✓ Shall not access live production systems without obtaining appropriate written access, shall only retain that access for the shortest period possible to accomplish the task that requires the access.
- ✓ Shall observe separation of duties policies and procedures to the fullest extent possible.
- ✓ Shall document or comment all changes to any RPMS software at the time the change or update is made. Documentation shall include the programmer's initials, date of change and reason for the change.
- ✓ Shall use checksums or other integrity mechanism when releasing their certified applications to assure the integrity of the routines within their RPMS applications.
- ✓ Shall follow industry best standards for systems they are assigned to develop or maintain; abide by all Department and Agency policies and procedures.
- ✓ Shall document and implement security processes whenever available.

Developers Shall Not:

- **X** Write any code that adversely impacts RPMS, such as backdoor access, "Easter eggs," time bombs, or any other malicious code or make inappropriate comments within the code, manuals, or help frames.
- **X** Grant any user or system administrator access to RPMS unless proper documentation is provided.
- **X** Not release any sensitive agency or patient information.

15.1.3 Privileged Users

Personnel who have significant access to processes and data in RPMS, such as, system security administrators, systems administrators, and database administrators have added responsibilities to ensure the secure operation of RPMS.

Privileged Users Shall:

- ✓ Verify that any user requesting access to any RPMS system has completed the appropriate access request forms.
- ✓ Ensure that government personnel and contractor personnel understand and comply with license requirements. End users, supervisors, and functional managers are ultimately responsible for this compliance.
- ✓ Advise the system owner on matters concerning information technology security.
- ✓ Assist the system owner in developing security plans, risk assessments, and supporting documentation for the certification and accreditation process.
- ✓ Ensure that any changes to RPMS that affect contingency and disaster recovery plans are conveyed to the person responsible for maintaining continuity of operations plans.
- ✓ Ensure that adequate physical and administrative safeguards are operational within their areas of responsibility and that access to information and data is restricted to authorized personnel on a need to know basis.
- ✓ Verify that users have received appropriate security training before allowing access to RPMS.
- ✓ Implement applicable security access procedures and mechanisms, incorporate appropriate levels of system auditing, and review audit logs.
- ✓ Document and investigate known or suspected security incidents or violations and report them to the ISSO, CISO, and systems owner.
- ✓ Protect the supervisor, superuser or system administrator passwords.
- ✓ Avoid instances where the same individual has responsibility for several functions (i.e., transaction entry and transaction approval).
- ✓ Watch for unscheduled, unusual, and unauthorized programs.
- ✓ Help train system users on the appropriate use and security of the system.
- ✓ Establish protective controls to ensure the accountability, integrity, confidentiality, and availability of the system.
- ✓ Replace passwords when a compromise is suspected. Delete user accounts as quickly as possible from the time that the user is no longer authorized system. Passwords forgotten by their owner should be replaced, not reissued.
- ✓ Terminate user accounts when a user transfers or has been terminated. If the user has authority to grant authorizations to others, review these other authorizations. Retrieve any devices used to gain access to the system or equipment. Cancel logon IDs and passwords, and delete or reassign related active and back up files.
- ✓ Use a suspend program to prevent an unauthorized user from logging on with the

Privileged Users Shall:

current user's ID if the system is left on and unattended.

✓ Verify the identity of the user when resetting passwords. This can be done either in person or having the user answer a question that can be compared to one in the administrator's database.

✓ Shall follow industry best standards for systems they are assigned to; abide by all Department and Agency policies and procedures.

Privileged Shall Not:

X Access any files, records, systems, etc., that are not explicitly needed to perform their duties

X Grant any user or system administrator access to RPMS unless proper documentation is provided.

X Not release any sensitive agency or patient information.

16.0 Glossary

Term	Definition
Amputation	To cut a limb from the body[1]
CRS	Clinical Reporting System: A RPMS program for running standard reports for facility or service unit performance on GPRA indicators.
CVA	Short for Cerebrovascular accident, also known as a stroke.
Default Response	A suggested response that can be activated simply by pressing the Return key . For example: "Do you really want to quit? No//." Pressing the Return key tells the system you do not want to quit. "No//" is considered the default response.
Device	The name of the printer you want the system to use when printing information. Home means the computer screen.
Diabetes	Referring to Diabetes Mellitus, a variable disorder of carbohydrate metabolism caused by a combination of hereditary and environmental factors and usually characterized by inadequate secretion or utilization of insulin, by excessive urine production, by excessive amounts of sugar in the blood and urine, and by thirst, hunger, and loss of weight[1]
Discharge	To release a patient from care
DOB	Date of Birth
DOS	Date Of Service
Enter Key	Used interchangeably with the Return key. Press the Enter key to show the end of an entry such as a number or a word. Press the Enter key each time you respond to a computer prompt. If you want to return to the previous screen, simply press the Enter key without entering a response. This will take you back to the previous menu screen. The Enter key on some keyboards is shown as the Return Key. Whenever you see [ENT] or the Enter key, press the Enter or Return Key.

[1] Merriam Webster Medical Dictionary, www.intelihealth.com

Term	Definition
Export	To format data so it can be used by another application.
Fields	Fields are a collection of related information that comprises a record. Fields on a display screen function like blanks on a form. For each field, you will find a prompt requesting specific types of data. There are nine basic field types in RPMS programs, and each collects a specific type of information.
File	A set of related records or entries treated as a single unit.
FileMan	The database management system for RPMS.
Free Text Field	This field type will accept numbers, letter, and most of the symbols on the keyboard. There may be restrictions on the number of characters you are allowed to enter.
Full Screen Editor	A word processing system used by RPMS. In many ways, the Full Screen Text Editor works just like a traditional word processor. The lines wrap automatically, the up, down, right, and left arrows move the cursor around the screen, and a combination of upper and lower case letters can be used.
Global	In MUMPS, global refers to a variable stored on disk (global variable) or the array to which the global variable may belong (global array).
GPRA Indicators	The Government Performance and Results Act (GPRA) requires Federal agencies to report annually on how the agency measured up against the performance targets set in its annual Plan. IHS GPRA indicators include measures for clinical prevention and treatment, quality of care, infrastructure, and administrative efficiency functions.
Hypertension	High arterial blood pressure.
I/T/U	Abbreviation referring to all IHS direct, tribal, and urban facilities. Using the abbreviation I/T/U generally means that all components of the Indian health care system are being referred to.
ICD Codes	One of several code sets used by the healthcare industry to standardize data. The International Classification of Disease is an international diagnostic coding scheme. In addition to diseases,

Term	Definition
	ICD also includes several families of terms for medical-specialty diagnoses, health status, disablements, procedure and reasons for contact with healthcare providers. IHS currently uses ICD-9 for coding.
Imminent	Almost or ready to occur.
Interfaces	A boundary where two systems can communicate.
Kernel	The set of MUMPS software utilities that function as an intermediary between the host operating system and application packages, such as Laboratory and Pharmacy. The Kernel provides a standard and consistent user and programmer interface between application packages and the underlying MUMPS implementation. These utilities provide the foundation for RPMS.
Line Editor	A word-processing editor that allows to you edit text line by line.
Logic	The detailed definition, including specific RPMS fields and codes, of how the software defines a denominator or numerator.
MailMan	Short for Mail Manager, MailMan is a VA-based utility that facilitates messaging for a number of RPMS packages.
Mandatory	Required. A mandatory field is a field that must be completed before the system will allow you to continue.
Menu	A list of choices for computing activity. A menu is a type of option designed to identify a series of items (other options) for presentation to the user for selection. When displayed, menu-type options are preceded by the word "Select" and followed by the word "option" as in Select Menu Management option: (the menu's select prompt).
Microalbuminuria	Albuminuria characterized by a relatively low rate of urinary excretion of albumin typically between 30 and 300 milligrams per 24-hour period[1]
Myocardial Infarction	Also know as a MI or heart attack; infarction of the myocardium that results typically from coronary occlusion, that may be marked

[1] Merriam Webster Medical Dictionary, www.intelihealth.com

Term	Definition
	by sudden chest pain, shortness of breath, nausea, and loss of consciousness, and that sometimes results in death[1]
Mnemonic	A short cut or code that is designated to access a particular menu option, data entry option, name, or facility.
Namespace	A unique set of 2 to 4 alpha characters that are assigned by the database administrator to a software application.
Narrative Description	A detailed description given using words rather than codes.
Option	An entry in the Option file. As an item on a menu, an option provides an opportunity for users to select it, thereby invoking the associated computing activity. Options may also be scheduled to run in the background, non-interactively, by TaskMan.
Outpatient Treatment	Treatment that occurs within a medical facility that does not involve an overnight stay.
Prompt	A field displayed onscreen indicating that the system is waiting for input. Once the computer displays a prompt, it waits for you to enter some specific information.
Provider	One who provides direct medical care to a patient (i.e. physician, nurse, physician's assistant).
Provider Codes	Codes that are assigned at the time a provider is added as a new user to RPMS and denotes the provider's discipline.
QMan	Short for Query Manager
Queuing	Requesting that a job be processed at a later time rather than within the current session.
Return key	Press the Return key to show the end of an entry such as a number or a word. Press the Return key each time you respond to a computer prompt. If you want to return to the previous screen, simply press the Return key without entering a response. This will take you back to the previous menu screen. The Return key on some keyboards are shown as the Enter Key. Whenever you see

Term	Definition
	[RET] or the Return key, press the Return or Enter Key.
Retinopathy	Any of various noninflammatory disorders of the retina including some that cause blindness1
Routine	A program or sequence of instructions called by a program that may have some general or frequent use. MUMPS routines are groups of program lines that are saved, loaded, and called as a single unit via a specific name.
RPMS	Resource and Patient Management System; a suite of software packages used by IHS
Select	To choose one option from a list of options.
Site Manager	The person in charge of setting up and maintaining the RPMS System at the facility or area level.
Submenu	A menu that is accessed through another menu.
Taxonomy	Grouping of functionally related data elements
Text Editor	A word processing program that allows you to enter and edit text.
Triage	Sorting patients by the urgency of their need for care
Type 1 Diabetes	Diabetes of a form that usually develops during childhood or adolescence and is characterized by a severe deficiency of insulin secretion resulting from atrophy of the islets of Langerhans and causing hyperglycemia and a marked tendency toward ketoacidosis -- called also *insulin-dependent diabetes, insulin-dependent diabetes mellitus, juvenile diabetes, juvenile-onset diabetes, type 1 diabetes mellitus*[1]
Type 2 Diabetes	Diabetes mellitus of a common form that develops especially in adults and most often in obese individuals and that is characterized by hyperglycemia resulting from impaired insulin utilization coupled with the body's inability to compensate with increased insulin production -- called also *adult-onset diabetes,*

[1] Merriam Webster Medical Dictionary, www.intelihealth.com

Term	Definition
	late-onset diabetes, maturity-onset diabetes, non-insulin-dependent diabetes, non-insulin-dependent diabetes mellitus, type 2 diabetes mellitus[1]
Up-Hat (^)	A circumflex, also know as a "hat" or "caret," that is used as a piece delimiter in a global. The up-hat is denoted as "^" and is typed by pressing Shift+6 on the keyboard.
Utility	A callable routine line tag or function. A universal routine usable by anyone.
Variable	A character or group of characters that refers to a value. MUMPS recognizes 3 types of variables: local variables, global variables, and special variables. Local variables exist in a partition of the main memory and disappear at sign-off. A global variable is stored on disk, potentially available to any user. Global variables usually exist as parts of global arrays.
Walk-In	A patient who walks into a medical facility seeking care but who does not have an appointment.
Word Processing Field	This is a field that allows you to write, edit, and format text for letters, MailMan messages, etc.

DIABETES AUDIT LOGIC MODULE

1.0 2006 Diabetes Audit Logic 191

1.1 Audit Date 191
1.2 Facility Name 191
1.3 Area 191
1.4 Service Unit 191
1.5 Facility Code 192
1.6 Number of Patients on DM Register 192
1.7 Reviewer 192
1.8 Chart Number 193
1.9 DOB 193
1.10 Gender 193
1.11 Primary Care Provider 193
1.12 Date of Diabetes Diagnosis/Duration of DM 194
1.13 Type of Diabetes 194
1.14 Tobacco Use 195
1.15 Tobacco Cessation Counseling 196
1.16 Height 197
1.17 Weight 197
1.18 BMI 197
1.19 Hypertension Documented 198
1.20 Foot Exam - Complete 198
1.21 Diabetic Eye Exam 199
1.22 Dental Exam 200
1.23 Diet Instruction 201
1.24 Exercise Instruction 202
1.25 DM Education (Other) 202
1.26 DM Therapy 203
1.27 ACE Inhibitor 204
1.28 Aspirin/Anti-Platelet Therapy 204
1.29 Lipid Lowering Agent 205
1.30 Flu Vaccine 205
1.31 Pneumovax Ever 206
1.32 TD in Past Ten Years 206
1.33 PPD Status 207
1.34 If PPD POS, INH TX Complete 207
1.35 If PPD Negative, Last PPD Date 208
1.36 TB Status (TB Code) 208
1.37 EKG 209
1.38 HBA1C Values 209
1.39 Creatinine 210
1.40 Total Cholesterol 211
1.41 HDL Cholesterol 211
1.42 LDL Cholesterol 212
1.43 Triglycerides 212

1.44 Urinalysis 213
1.45 Proteinuria 214
1.46 Microalbuminuria 215
1.47 Tribal Affiliation 216
1.48 Community 216
1.49 SDPI Grant Funds 217
1.50 Depression on Problem List 217
1.51 Depression Screening 217

2.0 2006 Pre-Diabetes Audit Logic 218

2.1 Audit Date 218
2.2 Reviewer 218
2.3 Facility Name 218
2.4 Area 218
2.5 Service Unit 218
2.6 Facility Code 219
2.7 Number of Patients on Pre-Diabetes Register 219
2.8 Tribal Affiliation 219
2.9 Community 219
2.10 Chart Number 219
2.11 DOB 220
2.12 Gender 220
2.13 Primary Care Provider 220
2.14 Classification 220
2.15 Height 222
2.16 Weight 222
2.17 Waist Circumference 222
2.18 Last Three BP'S 223
2.19 Hypertension Documented 223
2.20 Diet Instruction 223
2.21 Exercise Instruction 224
2.22 Tobacco Use 224
2.23 Referred for Cessation Counseling 225
2.24 DM Therapy 226
2.25 ACE Inhibitor 227
2.26 Aspirin/Anti-Platelet Therapy 227
2.27 Lipid Lowering Agent 227
2.28 EKG 228
2.29 Fasting Glucose 228
2.30 75 GM 2 Hour Glucose 228
2.31 Total Cholesterol 228
2.32 HDL Cholesterol 229
2.33 LDL Cholesterol 230
2.34 Triglycerides 230

3.0 2007 Diabetes Audit Logic 232

3.1 Audit Date 232

3.2 Facility Name 232
3.3 Area 232
3.4 Service Unit 232
3.5 Facility Code 233
3.6 Number of Patients on DM Register 233
3.7 Reviewer 233
3.8 Chart Number 234
3.9 DOB 234
3.10 Gender 234
3.11 Primary Care Provider 234
3.12 Date of Diabetes Diagnosis/Duration of DM 235
3.13 Type of Diabetes 235
3.14 Tobacco Use 236
3.15 Tobacco Cessation Counseling 237
3.16 Height 238
3.17 Weight 238
3.18 BMI 238
3.19 Hypertension Documented 239
3.20 Foot Exam - Complete 239
3.21 Diabetic Eye Exam 240
3.22 Dental Exam 241
3.23 Diet Instruction 242
3.24 Exercise Instruction 243
3.25 DM Education (Other) 243
3.26 DM Therapy 244
3.27 ACE Inhibitor 245
3.28 Aspirin/Anti-Platelet Therapy 245
3.29 Lipid Lowering Agent 246
3.30 Flu Vaccine 246
3.31 Pneumovax Ever 247
3.32 TD in Past Ten Years 247
3.33 PPD Status 248
3.34 If PPD POS, INH TX Complete 248
3.35 If PPD Neg, Last PPD Date 249
3.36 TB Status (TB Code) 249
3.37 EKG 250
3.38 HBA1C Values 250
3.39 Creatinine 251
3.40 Total Cholesterol 252
3.41 HDL Cholesterol 252
3.42 LDL Cholesterol 253
3.43 Triglycerides 253
3.44 Urinalysis 254
3.45 Proteinuria 255
3.46 Microalbuminuria 256
3.47 Tribal Affiliation 257

3.48 Community 257
3.49 SDPI Grant Funds 257
3.50 Depression on Problem List 258
3.51 Depression Screening 258

4.0 2007 Pre-Diabetes Audit Logic 259

4.1 Audit Date 259
4.2 Reviewer 259
4.3 Facility Name 259
4.4 Area 259
4.5 Service Unit 259
4.6 Facility Code 260
4.7 Number of Patients on Pre-Diabetes Register 260
4.8 Tribal Affiliation 260
4.9 Community 260
4.10 Chart Number 260
4.11 DOB 261
4.12 Gender 261
4.13 Primary Care Provider 261
4.14 Classification 261
4.15 Height 263
4.16 Weight 263
4.17 Waist Circumference 263
4.18 Last Three BPs 264
4.19 Hypertension Documented 264
4.20 Diet Instruction 264
4.21 Exercise Instruction 265
4.22 Tobacco Use 265
4.23 Referred for Cessation Counseling 266
4.24 DM Therapy 267
4.25 ACE Inhibitor 268
4.26 Aspirin/Anti-Platelet Therapy 268
4.27 Lipid Lowering Agent 268
4.28 EKG 269
4.29 Fasting Glucose 269
4.30 75 GM 2 Hour Glucose 269
4.31 Total Cholesterol 269
4.32 HDL Cholesterol 270
4.33 LDL Cholesterol 270
4.34 Triglycerides 271

1.0 2006 Diabetes Audit Logic

1.1 Audit Date

This is the date of the audit. The user supplies this date. It is used as the ending date to calculate the time range when looking for values. For example, if the audit date is September 30, 2005 then data is examined during the year prior to this audit date (October 1, 2004 to September 30, 2005).

Individual Audit
The audit date is displayed, e.g. SEPTEMBER 30, 2005

Cumulative Audit
N/A

EPI Info Export
The audit date is exported in MM/DD/YYYY format

1.2 Facility Name

This is the name of the facility at which the audit is being run.

Individual Audit
The name of the facility is displayed.

Cumulative Audit
N/A.

EPI Info Export
The name of the facility is exported. Length is 20.

1.3 Area

This is the two-digit IHS Area code for this facility. (Information was taken from the LOCATION table.)

Individual Audit
The area code is displayed, e.g. 10

Cumulative Audit
N/A

EPI Info Export
The area code is exported

1.4 Service Unit

This is the two-digit IHS Service Unit code for this facility. (Information was taken from the LOCATION table.)

Individual Audit
The service unit code is displayed, e.g. *10*.

Cumulative Audit
N/A.

EPI Info Export
The service unit code is exported.

1.5 Facility Code

This is the two-digit facility code for this facility.

Individual Audit
The facility code is displayed, e.g. *01*.

Cumulative Audit
N/A.

EPI Info Export
The facility code is exported.

1.6 Number of Patients on DM Register

This is the number of active patients on the diabetes register. The user is prompted to enter the name of their register.

Individual Audit
The total number of active patients in the register is displayed.

Cumulative Audit
The total number of active patients in the register is displayed.

EPI Info Export
The total number of active patients in the register is exported.

1.7 Reviewer

Initials of the person who ran the audit.

Individual Audit
The initials are displayed.

Cumulative Audit
N/A.

EPI Info Export
The initials of the person running the audit are exported.

1.8 Chart Number

Health record number of the patient at the facility at which the audit is run.

Individual Audit
The chart number is displayed.

Cumulative Audit
N/A.

EPI Info Export
The patients chart number is exported.

1.9 DOB

The patient's Date of Birth.

Individual Audit
The date of birth is displayed.

Cumulative Audit
The age of the patient is calculated from the audit date and used in the age tally on the cumulative audit.

EPI Info Export
The DOB in MM/DD/YYYY format is exported. Calculated age is also exported.

1.10 Gender

Gender of the patient.

Individual Audit
MALE or FEMALE.

Cumulative Audit
A tally by gender is displayed on the cumulative audit.

EPI Info Export
1 = Male 2 = Female

1.11 Primary Care Provider

The name of the primary care (designated) provider documented in RPMS.

Individual Audit
The name of the primary care provider is displayed.

Cumulative Audit
N/A.

EPI Info Export

N/A.

1.12 Date of Diabetes Diagnosis/Duration of DM

The diabetes onset date. This date is used in the calculation of the duration of diabetes.

Individual Audit

Three different dates are displayed to the user:

- The date of onset from the Diabetes Register.
- The earliest date of onset from all diabetes related problems on the problem list. The problem list is scanned for all problems in the ICD9 code range 250.00-250.93.
- The first recorded diagnosis (POV) of diabetes in PCC. ICD9 codes: 250.00-250.93.

Cumulative Audit

When calculating the duration of diabetes, the earliest of the date of onset from the diabetes register or the problem list date of onset is used. Duration of diabetes is calculated from that date to the date of the audit. If neither the date of onset in the register nor the date of onset in the problem list is recorded, the duration of diabetes is not calculated. The first diagnosis date from POV is not used.

EPI Info Export

The earliest date found from the Diabetes Register or the problem is exported. Format: MM/DD/YYYY

1.13 Type of Diabetes

The computer audit uses the following logic in determining the type of diabetes (once a "hit" is made, no further processing done):

1. If the diagnosis documented in the Diabetes Register is NIDDM the type is assumed to be Type 2.
2. If the diagnosis documented in the Diabetes Register is "TYPE II" the type is assumed to be Type 2.
3. If the diagnosis documented in the Diabetes Register contains a "2" the type is assumed to be Type 2.
4. If the diagnosis documented in the Diabetes Register contains IDDM the type is assumed to be type 1.
5. If the diagnosis documented in the Diabetes Register contains a "1" the type is assumed to be Type 1.

6. If no diagnosis is documented in the Diabetes Register, or it does not contain any of the above strings the problem list is then scanned. If any diabetes diagnosis on the problem list has a fifth digit of 0 or 2 then the type is assumed to be 2. If any diabetes diagnosis on the problem list has a fifth digit of 1 or 3 then the type is assumed to be type 1.

7. If no diagnosis exists on the problem list or in the diabetes register, then the last PCC purpose of visit related to diabetes is reviewed. If it contains a fifth digit of 0 or 2 then the type is assumed to be Type 2, if the fifth digit is a 1 or 3, then the type is assumed to be type 1.

Individual Audit

Four items are displayed:

1. The logic described above is used to determine the type of diabetes and is displayed after the prompt "Diabetes Type."

2. If the type of Diabetes is documented in the Diabetes Register, it is displayed.

3. If Diabetes is listed on the PCC Problem List the diagnoses codes are displayed.

4. The type of diabetes is determined from the last PCC purpose of visit and is displayed.

Cumulative Audit

The logic described above is used in the cumulative audit.

EPI Info Export

The logic described above is used and a 1 or 2 is exported to the EPI file.

1.14 Tobacco Use

Tobacco use status of the patient. The tobacco use is determined in the following way:

1. The last TOBACCO health factor recorded on or before the audit date is found. This is done using the DM AUDIT TOBACCO HLTH FACTORS taxonomy. If the health factor contains the word "CURRENT" or "CESS" the patient is assumed to be a current user and a value of 1 - Current user is assumed, if any of the other TOBACCO health factors are recorded then a value of 2 - Not a current user is used.

2. If no health factor has been recorded, the PCC problem list is scanned for smoking related diagnoses. If the diagnosis recorded is 305.13 - Tobacco Use in Remission then the patient is assumed to be 2 - Not a current user. All other diagnoses fall into 1 - Current User.

3. If no health factor and no smoking diagnosis is found on the problem list, all PCC purpose of visits in the year prior to the audit date are scanned. If any of the diagnoses is a smoking related diagnosis the same logic used in the problem list is used.

4. The V Dental file is searched for documentation of ADA code 1320 in the year prior to the audit date. If it is found the value 1 - Current User is assigned.

5. If none of the above is found, a 3 - Not documented is used.

Individual Audit

The logic described above is used to display one of the following three statements:

1	Current User
2	Not a current user
3	Not Documented

Cumulative Audit

The logic above is used to tally tobacco use.

EPI Info Export

The logic described above is used to export a 1, 2 or 3 value.

1.15 Tobacco Cessation Counseling

If the patient is a current tobacco user whether or not they were offered cessation counseling is determined in the following manner:

1. The patient's health factors recorded in the past year are reviewed for a recorded health factor that is contained in the DM AUDIT CESSATION HLTH FACTOR taxonomy. If one is found then a value of *1 - Yes* is displayed.

2. All recorded patient education provided to the patient is reviewed. If any topic in the DM AUDIT SMOKING CESS EDUC taxonomy or any topic with a mnemonic starting with TO-Q, or a topic TO-LA is found then a value of *1 - Yes* is displayed.

3. If the patient had a visit to clinic 94 - Tobacco Cessation clinic in the year prior to the audit date then a 1 - *Yes* is displayed.

4. If the patient had a dental visit with a *1320 ADA* code recorded a 1 - *Yes* is displayed.

5. If the patient had a refusal of any education topic in the DM AUDIT SMOKING CESS EDUC taxonomy or a refusal of topic TO-Q or TO-LA then a value of *3 - Refused* is displayed.

6. If none of the above are found, a *2 - No* is displayed.

Individual Audit
The logic above is applied and the value and date are displayed.

Cumulative Audit
The value found is tallied

EPI Info Export
Value of 1, 2 or 3 is exported.

1.16 Height

The last recorded height value and the date the height was taken.

Individual Audit
The height must have been recorded anytime prior to the audit date and is displayed along with the date the height was done.

Cumulative Audit
N/A

EPI Info Export
The last recorded height prior to the audit date is passed to the EPI record.

1.17 Weight

The last recorded weight value on a non-prenatal visit and the date the weight was taken.

Individual Audit
The weight must have been recorded prior to the audit date and not be on a visit on which one of the diagnoses was prenatal care.

Cumulative Audit
N/A (See BMI)

EPI Info Export
The last recorded weight prior to the audit date is passed to the EPI record

1.18 BMI

BMI is calculated in the following way:

If the patient is older than age 19 (20 and older), the last weight in the year prior to the audit date is found. The last height recorded after their 19th birthday is found. BMI is calculated based on these two values.

If the patient is 19 years of age or younger, the last height and weight taken on the same date in the year prior to the audit date are found and used in calculating BMI.

Individual Audit

BMI is displayed.

Cumulative Audit

BMI is used and percentages of overweight and obese patients are calculated. If the patient did not have a height or weight recorded as described above they fall into the "BMI could not be calculated" category. The percentages don't add up to 100. The obese patients are included in the overweight category as well.

EPI Info Export

BMI as calculated above is passed to the EPI record.

1.19 Hypertension Documented

Is a diagnosis of hypertension documented? If hypertension is on the problem list or the patient has had at least three visits with a diagnosis of hypertension.

Individual Audit

A *Yes* or *No* is displayed.

Cumulative Audit

Used in the ACE Inhibitor tally.

EPI Info Export

A 1 (Yes) or a 2 (No) is passed to the EPI record.

1.20 Foot Exam - Complete

Has a complete foot exam been done?

The logic used in determining if a complete foot exam has been done is as follows:

1. A documented DIABETIC FOOT EXAM, COMPLETE (CODE 28) is searched for in the year prior to the audit date. If found, no other processing is done.

2. A visit on which a podiatrist (provider class codes 33 - PODIATRIST, 84 - (PEDORTHIST) or 25 - CONTRACT PODIATRIST) that is not a DNKA visit is searched for in the year prior to the audit date. If found, it is assumed the exam was done and no further processing is done.

3. A visit to clinic 65 - PODIATRY clinic that is not a DNKA is searched for in the year prior to the audit date. If found, no other processing is done.

4. If none of the above are found, a documented refusal (REF) or No Response to Followup (NRF) of a diabetic foot exam is searched for. If found, value is "Refused."

5. If none of the above is found, or "Not Medically Indicated" has been documented the value is "No."

Individual Audit

If any of the above criteria met, a *Yes* is displayed along with one of the following terms:

- Diabetic Foot Exam
- Podiatrist Visit
- Podiatry Clinic Visit
- Otherwise, a No or Refused is displayed

Cumulative Audit

The percentage of those who had the exam (all yes) and the percent (%) that refused is displayed.

EPI Info Export

A 1 (Yes) or a 2 (No) or 3 (Refused) is passed to the EPI record.

1.21 Diabetic Eye Exam

Has a diabetic eye exam been done?

The logic used in determining if a diabetic eye exam has been done is as follows:

The system looks for the last documented Diabetic Eye Exam in the patient's computer record. If that exam was done in the year prior to the date of audit then a *Yes* will display. No further processing is done.

If no exam is found then all visits in the time period are scanned for documentation of CPT code 92012, 92250, 92014, 92015, 92004 or 92002.

If none of these CPT codes is found, then all PCC Visits in the year prior to the end of the audit are scanned for a non-DNKA, non-Refraction visit to an Optometrist or Ophthalmologist (24, 79, 08) or an Optometry or Ophthalmology Clinic (17, 18, 64 or A2).

If found, then a *Yes,* and an indication of what was found is displayed.

If none of the above is found, then the refusals file is checked for documentation of a patient refusal or no response to follow-up of a diabetic eye exam. If found a note indicating the refusal is displayed. If *Not Medically Indicated* is documented then the value displayed is No-Not Medically Indicated.

The EPI values are 1 - Yes, 2 - No, 3- Refused.

Individual Audit

If any of the above criteria are met, a *Yes* is displayed along with one of the following terms:

- Diabetic Eye Exam
- Optometrist/Ophthalmologist Visit Optometry/Ophthalmology Clinic Visit
- Otherwise, a *No* or *Refused* is displayed

Cumulative Audit

The percentage of those who had the exam (all yes) and the percent (%) that refused is displayed.

EPI Info Export

A 1 (Yes) or a 2 (no) or 3 (Refused) is passed to the EPI record.

1.22 Dental Exam

Has a dental exam been done?

The logic used in determining if a dental exam has been done is as follows:

1. A documented DENTAL EXAM (CODE 30) is searched for in the year prior to the audit date. If found, no other processing is done.

2. A visit to clinic 56 - DENTAL clinic that is not a DNKA is searched for in the year prior to the audit date. If found, no other processing is done.

3. A visit on which a dentist (provider class codes 52 -DENTIST) that is not a DNKA visit is searched for in the year prior to the audit date. If found, and there is any ADA code other than 9991, then it is assumed the exam was done and no further processing is done.

4. If none of the above is found, a documented refusal of a DENTAL exam is searched for. If found, value is "Refused." If a visit to dental clinic with only an ADA code of 9991 is found, it is documented as a "Refused."

5. If none of the above is found, the value is "No." This includes *Not Medically Indicated*.

Individual Audit

If any of the above criteria are met, a *Yes* is displayed along with one of the following terms:

- DENTAL Exam.
- Dental Clinic Visit.

- Dentist Visit.
- Otherwise a *No* or *Refused* is displayed.

Cumulative Audit

The percentage of those who had the exam (all yes) and the percent (%) that refused is displayed.

EPI Info Export

A 1 (Yes) or a 2 (no) or 3 (Refused) is passed to the EPI record.

1.23 Diet Instruction

Has diet instruction been given?

The values in the audit are:

1	RD
2	Other
3	Both RD & Other
4	None
5	Refused

Logic

All visits in the year prior to the audit date are examined.

If there is a visit (which is not a chart review) on which a DIETICIAN or NUTRITIONIST is the provider and no other visit with a diet patient education topic documented a value of 1 - RD is assigned. No further processing is done.

If there is a visit on which a DIETICIAN or NUTRITIONIST is the provider and another visit on which a patient education topic in the DM AUDIT DIET EDUC TOPICS taxonomy, a topic ending in "-N", a topic ending in "-DT" or a topic beginning or ending with "MNT" is documented or a diagnosis of V65.3 is documented, and the provider is not a dietician or nutritionist then the value is 3 - Both RD & OTHER. No further processing is done.

If there is a visit on which a patient education topic in the DM AUDIT DIET EDUC TOPICS taxonomy, a topic ending in "-N", a topic ending in "-DT", a topic beginning or ending with "MNT", or a diagnosis of V65.3 is documented and no visit to a DIETICIAN or NUTRITIONIST then a 2 -Other is assigned. No further processing is done.

If a refusal of one of these education topics is documented the value is *5- Refused*.

If none of the above is documented, the value is *4 – None.*

Individual Audit: The value calculated as described above is displayed.

Cumulative Audit: Percentages are calculated of who had diet instruction includes values 1-3. The percent (%) of the patients who refused is also displayed.

EPI Info Export: A value of 1-5 is passed to the EPI record.

1.24 Exercise Instruction

Has exercise instruction been given?

The values in the audit are:

1 Yes 2 No 3 Refused

Logic

All visits in the year prior to the audit date are examined.

If there is a visit on which a patient education topic in the DM AUDIT EXERCISE EDUC TOPICS taxonomy, or any topic ending in "-EX" is documented then a 1 - Yes. No further processing is done.

All visits in the year prior to the audit date are examined for a POV of V65.41 and if one is found a *1 - Yes* is displayed.

If a refusal of one of these education topics is documented the value is *3- Refused*.

If neither of the above is documented, the value is *2 – None.*

Individual Audit

The value calculated as described above is displayed.

Cumulative Audit

Percentages are calculated of who had exercise instruction includes value of 1. The percent (%) of the patients who refused is also displayed.

EPI Info Export

A value of 1-3 is passed to the EPI record.

1.25 DM Education (Other)

Has DM Education other than diet/exercise been given?

The values in the audit are: 1 Yes 2 No 3 Refused

Logic

All visits in the year prior to the audit date are examined.

If there is a visit on which a patient education topic in the DM AUDIT OTHER EDUC TOPICS taxonomy then a 1 - Yes. No further processing is done.

If a refusal of one of these education topics is documented the value is *3- Refused*.

If neither of the above is documented, the value is *2 – None.*

Individual Audit

The value calculated as described above is displayed.

Cumulative Audit

Percentages are calculated of who had other DM instruction includes value of *1 – YES*. The percent (%) of the patients who refused is also displayed.

EPI Info Export

A value of 1-3 is passed to the EPI record.

1.26 DM Therapy

All visits in the six months prior to the audit date are reviewed. If any medication in the taxonomy specified is found, then an "X" is placed by the therapy name. If no medications are found then all documented medication refusals in the past year are reviewed to see if any med within any of the below listed taxonomies was refused. If it was an **X** is placed beside item *9 - Unknown/Refused*. If no medications or refusals are found then the Diet & Exercise Alone item is marked with an **X**.

We are unable to calculate the Unknown/Refused group.

Therapy	Taxonomy Name
Insulin	DM AUDIT INSULIN DRUGS
Sulfonylurea	DM AUDIT SULFONYLUREA DRUGS
Metformin	DM AUDIT METFORMIN DRUGS
Acarbose	DM AUDIT ACARBOSE DRUGS
Glitazones	DM AUDIT TROGLITAZONE DRUGS

Individual Audit

Each therapy found will have an "X" next to it. If a refusal is found the Unknown/Refused column will have an X next to it. If none are found, then the X is placed beside Diet & Exercise Alone.

Cumulative Audit

The patient is put in the appropriate category depending on what therapies are found:

Diet and Exercise Alone	If no therapies documented/refusals are found.
Insulin	If only Insulin is found.
Oral Med (monotherapy)	
Sulfonylurea	If only sulfonylurea is found.
Metformin	If only metformin is found.
Acarbose	If only Acarbose is found.

Glitazone	If only glitizones found.
Combination of Oral Meds	If any 2 of the above oral meds is found but no insulin is found.
Combination of Oral Meds+Insulin	If any one of the oral meds is found plus Insulin is found.
Unknown/Refused	If no meds are found but a refusal is found, Unknown is not calculated.

EPI Info Export

A string containing any of the numbers 1-9 will be sent indicating which therapies were found for this patient. For example, if 3 (sulfonylurea) and 4 (metformin) are found in the time window, a 34 is sent to the EPI file.

1.27 ACE Inhibitor

If any drug in the DM AUDIT ACE INHIBITORS taxonomy has been prescribed in the six months prior to the audit date a *Yes* is displayed. If any of the drugs in the DM AUDIT ACE INHIBITORS taxonomy is documented as refused then it is counted as *Refused*. A not medically indicated documentation is considered a *No*.

If none of the above criteria is met, a *No* is displayed.

Individual Audit

A *Yes*, *No* or refused is displayed.

Cumulative Audit

Used in the calculation of those with hypertension and those with proteinuria.

EPI Info Export

A 1 (Yes) or 2 (No) or 3 (Refused) is passed to the EPI record.

1.28 Aspirin/Anti-Platelet Therapy

If any drug in the DM AUDIT ASPIRIN DRUGS taxonomy has been prescribed in the year prior to the audit date, the term “Aspirin” is displayed. If a drug in the DM AUDIT ANTI-PLATELET DRUGS taxonomy is prescribed the term “Other” is displayed. If both are prescribed the term “Both” is displayed. If a refusal is on file the term “Refused” is displayed. Otherwise, a *No* is displayed.

Cumulative Audit

Used in the calculation of those Daily Aspirin Therapy totals. Only the *Yes* and *No* are calculated. We cannot calculate the 'Undetermined' category.

EPI Info Export

1-5 value is passed to the EPI record.

1.29 Lipid Lowering Agent

If any drug in the DM AUDIT LIPID LOWERING DRUGS or DM AUDIT STATIN DRUGS taxonomy has been prescribed in the six months prior to the audit date the following values will be displayed:

- 1 - Statin
- 2 - Other
- 3 - Both

If a refusal of any drug within the above mentioned taxonomies is documented the value *5- Refused* is displayed, otherwise, a *No* is displayed.

Cumulative Audit

Used in the calculation of those with TOTAL CHOLESTEROL >=240 (if total cholesterol is documented and result can be determined). Used in the calculation of those with LDL cholesterol > 100 (if LDL is documented and LDL value can be determined). EPI Info Export: a 1-5 is passed.

1.30 Flu Vaccine

Immunizations are scanned for an influenza vaccine in the 15 months prior to the audit date. If none are found, a search is done for a documented refusal in the past 15 months. If neither are found a *No* is assumed.

Values: *Yes*, *No*, *Refused*.

Logic for determining whether a vaccine has been done in the past 15 months:

- Immunization CVX codes: 15, 16, 88, 111
- Purpose of Visit (ICD diagnoses): V04.8, V04.81, V06.6
- CPT codes: 90655 through 90660, 90711, 90724
- ICD procedure: 99.52

Refusals documented in both PCC and the immunization package, are reviewed.

Individual Audit

If a flu vaccine is found, a *Yes* with the date the shot was given is displayed.

Otherwise a *No* or *Refused* is displayed.

Cumulative Audit

The total number and percentage of those having a Flu Vaccine and the percent that refused is displayed.

EPI Info Export

A 1 (Yes) or 2 (No) or 3 (Refused) is passed to the EPI record.

1.31 Pneumovax Ever

Immunizations are scanned for Pneumococcal vaccine anytime prior to the audit date. If none is found, the refusal file is checked for a documented refusal of this vaccination. If neither are found a *No* is assumed.

Values: *Yes*, *No*, *Refused*.

Logic used to determine if a Pneumovax was done:

- Immunization CVX codes: 33, 100, 109
- CPT codes: 90669, 90732

Refusals documented in both the PCC and the immunization package, are reviewed.

Individual Audit

If a pneumovax was found, a *Yes* with the date the shot was given is displayed. Otherwise a *No* or *Refused* is displayed.

Cumulative Audit

The total number and percentage of those having a pneumococcal immunization and the percent that refused is displayed.

EPI Info Export

A 1 (Yes) or 2 (No) or 3 (Refused) is passed to the EPI record.

1.32 TD in Past Ten Years

Immunizations are scanned for a tetanus vaccine in the ten years prior to the audit date. If none is found, a search is done for a documented refusal. If neither are found a *No* is assumed.

Values: *Yes*, *No*, *Refused*.

Logic used to find a TD vaccine:

- Immunization CVX codes: 1, 9, 20, 22, 28, 35, 50, 106, 107, 110
- CPT Codes: 90700, 90701, 90702, 90703, 90718, 90720-90723

Individual Audit

If a tetanus immunization is found, a *Yes* with the date the shot was given is displayed. Otherwise a *No* or *Refused* is displayed.

Cumulative Audit

The total number and percentage of those having a tetanus shot and the percent that refused is displayed.

EPI Info Export
A 1 (Yes) or 2 (No) or 3 (Refused) is passed to the EPI record.

1.33 PPD Status

Possible values: POSITIVE, NEGATIVE, UNKNOWN, REFUSED

In determining PDD Status the following logic is used:

1. If the patient has a TB health factor recorded, TB on the problem list or any diagnoses of TB documented in the PCC then the status is POSITIVE, no further processing is done.

2. All recorded PPD entries prior to the audit date are gathered. If there are none found then the refusal file is checked. If a refusal is on file then the value is REFUSED. If no refusal is found then the value is UNKNOWN. No further processing is done.

3. The LAST PPD with a reading or result is examined. If the reading or result is Positive (reading >9) then POSITIVE, if reading or result of last PPD is negative, then NEG, if reading and result of all PPDs are blank then UKNOWN. If no PPD ever recorded, then UNKNOWN or REFUSED if a refusal has been recorded.

Individual Audit
POSITIVE, NEGATIVE, REFUSED or UNKNOWN is displayed.

Cumulative Audit
N/A (See TB status below.)

EPI Info Export
A 1 (Positive) or 2 (Negative), 3 (Refused) or 4 (Unknown) is passed to the EPI record.

1.34 If PPD POS, INH TX Complete

Is INH treatment complete? If the value of the PPD Status is POSITIVE then the last TB health factor is looked at for determining TB Treatment status.

Individual Audit
The last recorded TB Health factor is displayed. The TB Health factors are:

- TB - TX COMPLETE
- TB - TX INCOMPLETE
- TB - TX UNKNOWN
- TB - TX UNTREATED

Cumulative Audit
N/A (SEE TB STATUS BELOW)

EPI Info Export
The last TB health factor is examined and recoded as follows:

1. Yes if factor is TB - TX COMPLETE
2. No if factor is TB - TX INCOMPLETE or TB - TX UNTREATED
3. Unknown if factor is TB - TX UNKNOWN

1.35 If PPD Negative, Last PPD Date

If the value of the PPD Status is NEGATIVE then the date of the last PPD is displayed.

Individual Audit
The date of the last PPD is displayed.

Cumulative Audit
N/A (See TB status below.)

EPI Info Export
If PPD Status is NEGATIVE the date of the last negative PPD is passed to the EPI record.

1.36 TB Status (TB Code)

For the cumulative audit and EPI export record a TB Status code is calculated. The values of PPD STATUS, TB Treatment Status and date of last PPD are used to determine into which category the patient falls.

The values are as follows

1. PPD +,INH treatment complete: If the PPD Status is *Positive* and the last recorded health factor is TB - TX COMPLETE then the patient falls into this category.

2. PPD +, untreated/incomplete or tx unknown: If the PPD Status is *Positive* and the last recorded health factor is TB - TX INCOMPLETE or TX - UNKNOWN or TB - TX UNTREATED then the patient falls into this category.

3. PPD -, placed since DM dx: If the PPD Status is *Negative* and the date of the last PPD is after the date of DM diagnosis, the patient falls into this category. The date of DM diagnosis is taken from the earliest of the register, problem list or first PCC diagnosis.

4. PPD -, placed before DM dx: If the PPD Status is *Negative* and the date of the last PPD is before the date of DM diagnosis, the patient falls into this

category. The date of DM diagnosis is taken from the earliest of the register, problem list or first PCC diagnosis.

5. Date of DM DX Unknown: If the PPD Status is *Negative* but the date of DM diagnosis is unknown the patient falls into this category. (This will more than likely be zero because the patient will have had at least one DM diagnosis).

6. PPD status unknown: If the PPD Status is *Unknown* or *Refused*, then the patient falls into this category.

Individual Audit

N/A.

Cumulative Audit

The categories as described above are displayed.

EPI Info Export

The TB status code as described above is passed to the EPI record. The codes 1-6 are passed.

1.37 EKG

The date of the last EKG before the audit date. EKG is searched for the following ways:

ECG Summary in the V DIAGNOSTIC PROCEDURE file. (This is populated by the EKG mnemonic in data entry).

ICD OPERATION/PROCEDURE codes 89.51, 89.52 or 89.53

CPT Codes: 93000-93024, 93040-93042, 93224-93237, 93268-93268, 93270-93272, 93278-93278

Individual Audit

The date of last EKG is displayed

Cumulative Audit

The date is used to determine % performed in past three years, past five years and ever.

EPI Info Export

A 1 (Yes) or 2 (No) is passed in one field and the date of the most recent is passed in another field.

1.38 HBA1C Values

The last two HbA1c tests in the V LAB file are found using the DM AUDIT HGBA1C TAX taxonomy and the BGP HGBA1C LOINC CODES taxonomies.

Individual Audit

The date and result of each test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the last HbA1c test is examined and is put into the following categories. If the result contains a ">" it goes into the 11.0 or higher category. If the result is blank *or* the first digit of the result is not a number (and is not a >) then it is put in the *Undocumented* category since we cannot interpret the result. For example, if the value is "cancelled," it will fall into undocumented.

- HbA1c <7.0
- HbA1c 7.0-7.9
- HbA1c 8.0-8.9
- HbA1c 9.0-9.9
- HbA1c 10.0-10.9
- HbA1c 11.0 or higher
- Undocumented

EPI Info Export

The dates and values of the last two HbA1c tests are passed to the EPI record.

1.39 Creatinine

The last lab test in the year prior to the audit date that is a member of the DM AUDIT CREATININE TAX taxonomy or the BGP CREATININE LOINC CODES taxonomy is found in V LAB.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *or* the first digit of the result is not a number or a "." (as in **.5**), then it is put in the *Unable to determine result* category since we cannot interpret the result. For example, if the value is "cancelled," it will fall into unable to determine.

- Creatinine >= 2.0 mg/
- Creatinine < 2.0 mg/dl
- Creatinine not tested/unknown
- Unable to determine result

EPI Info Export

A 1 or 2 is passed with 1 indicating a test was done and a 2 indicating it was not done. The value of the test is passed in a separate field.

1.40 Total Cholesterol

The last lab test in the year prior to the audit date that is a member of the DM AUDIT TOTAL CHOLESTEROL TAX taxonomy or the BGP TOTAL CHOLESTEROL LOINC taxonomy is found in V LAB.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *or* the first digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled," it will fall into unable to determine.

Desirable	(<200 mg/dl)
Borderline	(200-239 mg/dl)
High	(240 mg/dl or more)
Unable to determine result	
Not tested	

EPI Info Export

A 1 or 2 is passed with 1 indicating a test was done and a 2 indicating it was not done.

The value of the test is passed in a separate field.

1.41 HDL Cholesterol

The last lab test in the year prior to the audit date that is a member of the DM AUDIT HDL CHOLESTEROL TAX taxonomy or the BGP HDL OINC CODES taxonomy is found in V LAB.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank, but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *or* the 1st digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled," it will fall into unable to determine.

- HDL <35 mg/dl
- HDL 35-45 mg/dl
- HDL 46-55 mg/dl
- HDL >55
- Unable to determine result
- Not tested

EPI Info Export

A 1 or 2 is passed with 1 indicating a test was done and a 2 indicating it was not done. The value of the test is passed in a separate field.

1.42 LDL Cholesterol

The last lab test in the year prior to the audit date that is a member of the DM AUDIT LDL CHOLESTEROL TAX taxonomy, or the BGP LDL LOINC CODES taxonomy is found in V LAB.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank, but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *or* the first digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled," it will fall into unable to determine.

- LDL <100 mg/dl
- LDL 100-129 mg/dl
- LDL 130-160 mg/dl
- LDL >160
- Unable to determine result
- Not tested

EPI Info Export

A 1 or 2 is passed with 1 indicating a test was done and a 2 indicating it was not done. The value of the test is passed in a separate field.

1.43 Triglycerides

The last lab test in the year prior to the audit date that is a member of the DM AUDIT TRIGLYCERIDES TAX taxonomy or the BGP TRIGLYCERIDE LOINC CODES taxonomy is found in V LAB.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *or* the first digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled," it will fall into unable to determine.

- TG <150 mg/dl
- TG 150-199 mg/dl
- TG 200-400 mg/dl
- TG >400 mg/dl
- Unable to determine result
- Not tested

EPI Info Export

A 1 or 2 is passed with 1 indicating a test was done and a 2 indicating it was not done. The value of the test is passed in a separate field.

1.44 Urinalysis

To determine whether or not a urinalysis was done the following logic is used:

1. The last lab test in the year prior to the audit date that is a member of the DM AUDIT URINALYSIS TAX or the DM AUDIT URINALYSIS LOINC taxonomy is found. If one is found the date of the Urinalysis is displayed on the audit. No further processing is done.

2. If no test is found in 1 above then the last lab test in the year prior to the audit date that is a member of the DM AUDIT A/C RATIO taxonomy or the DM AUDIT A/C RATIO LOINC taxonomy is found in V LAB. If one is found the date is displayed on the audit form, no further processing occurs.

3. If neither a Urinalysis nor an A/C Ratio is found then the system will look for the last lab test in the year prior to the audit date that is a member of the DM AUDIT URINE PROTEIN TAX taxonomy or the DM AUDIT URINE PROTEIN LOINC taxonomy. If one is found the date is displayed on the audit.

4. If no tests described above are found then the system will check for a refusal of any LAB test in the lab taxonomies described above.

Individual Audit

The date of the test is displayed.

Cumulative Audit

Used with urine protein and microalbuminuria.

EPI Info Export

A 1 (Yes) or 2 (No) or 3 (Refused) is passed.

1.45 Proteinuria

The following logic is used in regard to proteinuria.

1. The last lab test in the year prior to the audit date that is a member of the DM AUDIT URINE PROTEIN TAX taxonomy or the DM AUDIT URINE PROT LOINC taxonomy is found in V LAB. If one is found it is used to determine proteinuria on the audit using the following described below.

When calculating the Yes/No the following logic is used:

- If the result is blank then "`No Result`" (a blank is passed to EPI)
- If the result contains a "+" then "`Yes`".
- If the first character of the result is a "`P`" or "`p`" then `Yes`.

If the first character of the result is an "`M`", "`L`", "m" or "`l`" then `Yes.`

- If the first character of the result is a "`S`" or "`s`" then `Yes`.
- If the result contains a ">" then `Yes.`
- If the result is a numeric value > 29 then `Yes.`
- If the first character of the result is a "`C`" or "`c`" then "`No result`" (a blank is passed to EPI) these would be the CANCELLED values.
- Anything else, "`No`."

2. If no urine protein tests are found the system will look for the last lab test in the year prior to the audit date that is a member of the DM AUDIT A/C RATIO or the DM AUDIT A/C RATIO LOINC taxonomies. If one is found it is used to determine proteinuria on the audit using the following logic:

- If the result is blank then `No result`.
- If the result contains a ">" then `Yes.`
- If the first character of the result is a "`C`" or "`c`" then `No result`.
- If the result is a number >299 then `Yes.`

Individual Audit

The date of the test and the result are displayed along with a Yes/No as to whether proteinuria was present. If the result is blank, then "`No result`" is displayed.

Cumulative Audit

Used with urine protein and microalbuminuria (see below under microalbuminuria).

EPI Info Export

A 1 (Yes) or 2 (No) or blank is passed.

1.46 Microalbuminuria

The last lab test in the year prior to the audit date that is a member of the DM AUDIT MICROALBUMINURIA TAX taxonomy or the DM AUDIT MICORALBUMINURIA LOINC taxonomy is found in V LAB.

The positive/negative indication is determined in the following way:

- If the result is blank then `No Result` (a blank is passed to EPI).
- If the result contains a "+" then `Positive`.
- If the first character of the result is a `P` or `p` then `Positive`.
- If the result contains a ">" then `Positive`.
- If the result is a numeric value > 29 then `Positive`.
- If the first character of the result is a `C` or `c` then `No result` (a blank is passed to EPI) - these would be the CANCELLED values.
- Anything else, `Negative`.

If no microalbuminuria test is found then the system looks for the last lab test prior to the audit date that is a member of the DM AUDIT A/C RATIO TAX or the DM AUDIT A/C RATIO LOINC taxonomy. The result is interpreted as follows:

- If the result is blank then `No Result`.
- If the result is 30-300 then `Positive`.
- If the result is numeric and >29 and <300 then `Positive`.
- If the first character of the result is a "`C`" or "`c`" then `No Result`.
- All other values are interpreted to be `Negative`.

Individual Audit

The date of the test and the result are displayed along with a Positive/Negative indication. If the result is blank, then `No Result` is displayed.

Cumulative Audit

The following items are calculated on the cumulative audit:

Urinalysis in the past 12 months - this is the total number of patients who had a Urinalysis test documented or a Urine Protein test or A/C ratio documented.

Proteinuria present - if there is a Urine Protein value and it is calculated as Yes, Protein present using the logic defined above in the Proteinuria section.

Proteinuria absent - if there is a Urine Protein value and it is calculated as No Proteinuria present using the logic defined above in the Proteinuria section.

Of the total number without proteinuria:

Microalbuminuria present - using the logic defined above if value is POSITIVE

Microalbuminuria absent - using the logic defined above if value is NEGATIVE

Microalbuminuria not tested - using the logic defined above if the value is blank or unable to determine.

EPI Info Export

A 1 (Positive) or 2 (Negative) or blank is passed. Those that are "Unable to determine" are passed to EPI as blank.

1.47 Tribal Affiliation

The patient's tribe code as entered in Patient Registration.

Individual Audit

3-digit tribe code and name of tribe display

Cumulative Audit

N/A

EPI Info Export

3-digit tribe code

1.48 Community

This is the community in which the patient resides at the time the audit was done.

Individual Audit

State-county-community code and name of community display

Cumulative Audit

N/A

EPI Info Export

State-county community code is passed to EPI

1.49 SDPI Grant Funds

Does your community receive SDPI grant funds? Yes or No. This data is prompted for when running the audit, the user provides the data. If the answer is yes, the user is requested to enter the grant number.

Individual Audit

Yes or No is displayed, along with grant number, if entered.

Cumulative Audit

N/A

EPI Info Export

1 for Yes or 2 for No exported along with grant number, if entered.

1.50 Depression on Problem List

Logic

The patient's problem lists in both PCC and the Behavioral Health module are reviewed for any problem with the following ICD codes: 296.*, 300.*, 301.13, 308.3, 309.*, 311.*. In addition the BH problem list is reviewed for the following problem codes: 14, 15, 18, 24. If no problem is found on the problem list, then the PCC and BH systems are reviewed for at least 2 diagnoses (POV's) of 300.*, 301.13, 308.3, 309.*, 311.*, 14, 15, 18, 24. If either a problem is found on the problem list or 2 POV's are found then the value on the audit is 1 - Yes. If not, then value of 2 - No is assigned.

1.51 Depression Screening

Logic

The PCC and Behavioral health databases are reviewed for any of the following documented in the past year: (1) Yes, if provider documented a purpose of visit of Depression Screening or Counseling: POV V79.0, Patient Education codes containing "DEP-" (depression), "SB-" (suicidal behavior), “GAD-" (generalized anxiety disorder), "BH-" (behavioral and social health), or “PDEP-" (postpartum depression), or EXAM code 36 – Depression Screening.

(No) if no documentation of depression screening found.

2.0 2006 Pre-Diabetes Audit Logic

2.1 Audit Date

This is the date of the audit. The user supplies this date. It is used as the ending date to calculate the time range when looking for values. For example, if the audit date is September 30, 2005 then data is examined during the year prior to this audit date (October 1, 2004 to September 30, 2005).

Individual Audit

The audit date is displayed. E.g. SEPTEMBER 30, 2005.

Cumulative Audit

N/A.

2.2 Reviewer

Initials of the person who ran the audit.

Individual Audit

The initials are displayed.

Cumulative Audit: N/A.

2.3 Facility Name

This is the name of the facility at which the audit is being run.

Individual Audit

The name of the facility is displayed.

Cumulative Audit

N/A

2.4 Area

This is the 2-digit IHS Area code for this facility. This information was taken from the LOCATION table.

Individual Audit

The area code is displayed. E.g. 10.

Cumulative Audit

N/A.

2.5 Service Unit

This is the 2-digit IHS Service Unit code for this facility. This information was taken from the LOCATION table.

Individual Audit
The service unit code is displayed. E.g. 10.

Cumulative Audit
N/A.

2.6 Facility Code

This is the 2-digit facility code for this facility.

Individual Audit
The facility code is displayed. E.g. 01.

Cumulative Audit
N/A.

2.7 Number of Patients on Pre-Diabetes Register

This is the number of active patients on the pre-diabetes register. The user is prompted to enter the name of their register.

Individual Audit
The total number of active patients in the register is displayed.

Cumulative Audit
The total number of active patients in the register is displayed.

2.8 Tribal Affiliation

The patient's tribe code as entered in Patient Registration.

Individual Audit
Three-digit tribe code and name of tribe display

Cumulative Audit
N/A

2.9 Community

This is the community in which the patient resides at the time the audit was done.

Individual Audit
State-county-community code and name of community display

Cumulative Audit
N/A

2.10 Chart Number

Health record number of the patient at the facility at which the audit is run.

Individual Audit
The chart number is displayed

Cumulative Audit
N/A

2.11 DOB

The patient's Date of Birth.

Individual Audit
The date of birth is displayed.

Cumulative Audit
The age of the patient is calculated from the audit date and used in the age tally on the cumulative audit.

2.12 Gender

Gender of the patient.

Individual Audit
MALE or FEMALE.

Cumulative Audit
A tally by gender is displayed on the cumulative audit.

2.13 Primary Care Provider

The name of the primary care (designated) provider documented in RPMS.

Individual Audit
The name of the primary care provider is displayed.

Cumulative Audit
N/A.

2.14 Classification

Classification is determined in the following manner:

1. Impaired Fasting Glucose

The system first looks at the problem list for a documented problem with ICD Diagnosis code 790.21 - IMPAIRED FASTING GLUCOSE, if one is found, it will display "`Problem List:`" with the date of onset if the date of onset was documented. The system then looks at all of a patient's purpose of visits for code 790.21, if it finds one, it displays the dates of the earliest one found and the latest one found.

2. Impaired Glucose Tolerance

The system first looks at the problem list for a documented problem with ICD Diagnosis code 790.22 - IMPAIRED GLUCOSE TOLERANCE, if one is found, it will display "`Problem List:`" with the date of onset if the date of onset was documented.

The system then looks at all of a patient's purpose of visits for code 790.22, if it finds one, it displays the dates of the earliest one found and the latest one found.

3. Metabolic Syndrome

The system first looks at the problem list for a documented problem with ICD Diagnosis code 277.7 - DYSMETABOLIC SYNDROME X, if one is found, it will display "`Problem List:`" with the date of onset if the date of onset was documented.

The system then looks at all of a patient's purpose of visits for code 277.7, if it finds one, it displays the dates of the earliest one found and the latest one found.

4. Other Abnormal Glucose

The system first looks at the problem list for a documented problem with ICD Diagnosis code 790.29 - OTHER ABNORMAL GLUCOSE, if one is found, it will display "Problem List:" with the date of onset if the date of onset was documented.

The system then looks at all of a patient's purpose of visits for code 790.29, if it finds one, it displays the dates of the earliest one found and the latest one found.

5. CMS Register Diagnoses

The system will display all diagnoses documented in the Pre-Diabetes register for this patient. The date of onset recorded will also display.

In addition, the system searches for a diagnosis of Diabetes on the problem list and in the purpose of visits recorded for the patient. If any are found they are displayed along with the date of the diagnosis.

Sample output on audit sheet:

```
CLASSIFICATION (all that apply):
 1 IFG - No
 2 IGT - Yes
   Last POV in PCC: 790.22  Date: May 01, 2004
   First POV in PCC: 790.22  Date: Mar 17, 2004
 3 METABOLIC SYNDROME - No
 OTHER ABNORMAL GLUCOSE (790.29) - No
 CMS Register DX: May 01, 2004 IMPAIRED GLUCOSE TOLERANCE
 PLEASE NOTE:  Diabetes is on the Problem list for this patient
 PLEASE NOTE:  Diabetes has been used as a diagnosis in PCC: Apr 02, 2005
```

Figure 2-1: Sample of an audit sheet

2.15 Height

The last recorded height value and the date the height was taken.

Individual Audit
The height must have been recorded anytime prior to the audit date and is displayed along with the date the height was done.

Cumulative Audit
N/A

2.16 Weight

The last three recorded weight values on a non-prenatal visit and the date the weight was taken.

Individual Audit
The weight must have been recorded prior to the audit date and not be on a visit on which one of the diagnoses was prenatal care.

Cumulative Audit
N/A (See BMI)

2.17 Waist Circumference

The last recorded Waist Circumference measurement on or before the audit date is displayed with the date recorded.

Individual Audit
The waist circumference value and date recorded are displayed.

Cumulative Audit
N/A.

2.18 Last Three BP'S

The last three recorded Blood Pressure values and dates. BPs taken in the ER (ER Clinic) are skipped.

Individual Audit

The last three BPs in the year, prior to the audit date, that were taken on non-ER clinic visits are displayed.

Cumulative Audit

If the patient had three documented BPs. They are used to determine blood pressure control in the cumulative audit.

2.19 Hypertension Documented

Is a diagnosis of hypertension documented? If hypertension is on the problem list or the patient has had at least three visits with a diagnosis of hypertension.

Individual Audit: A `Yes` or `No` is displayed.

Cumulative Audit: Used in the ACE Inhibitor tally.

2.20 Diet Instruction

Has diet instruction been given?

Audit Values

The values in the audit are as follows:

1 RD
2 Other
3 Both RD & Other
4 None
5 Refused

Logic

All visits in the year prior to the audit date are examined.

If there is a visit on which a DIETICIAN or NUTRITIONIST is the provider and no other visit with a diet patient education topic documented a value of 1 - RD is assigned. No further processing is done.

If there is a visit on which a DIETICIAN or NUTRITIONIST is the provider and another visit on which a patient education topic in the DM AUDIT DIET EDUC TOPICS taxonomy, a topic ending in "-N" or a topic ending in "-DT" is documented and the provider is not a dietician or nutritionist then the value is 3 - Both RD & OTHER. No further processing is done.

If there is a visit on which a patient education topic in the DM AUDIT DIET EDUC TOPICS taxonomy, a topic ending in "-N" or a topic ending in "-DT" is documented and no visit to a DIETICIAN or NUTRITIONIST then a 2 -Other is assigned. No further processing is done.

If a refusal of one of these education topics is documented the value is 5- Refused.

If none of the above is documented, the value is 4 - None

Individual Audit

The value calculated as described above is displayed.

Cumulative Audit

Percentages are calculated of who had diet instruction includes values 1-3. The percent (%) of the patients who refused is also displayed.

2.21 Exercise Instruction

Has exercise instruction been given?

The values in the audit are:

1 Yes 2 No 3 Refused

Logic

All visits in the year prior to the audit date are examined.

If there is a visit on which a patient education topic in the DM AUDIT EXERCISE EDUC TOPICS taxonomy, or any topic ending in "-EX" is documented then a 1 - Yes. No further processing is done.

All visits in the year prior to the audit date are examined for a POV of V65.41 and if one is found a 1 - Yes is displayed.

If a refusal of one of these education topics is documented the value is 3- Refused.

If neither of the above is documented, the value is 2 - None

Individual Audit

The value calculated as described above is displayed.

Cumulative Audit

Percentages are calculated of who had exercise instruction includes value of 1. The percent (%) of the patients who refused is also displayed.

2.22 Tobacco Use

Tobacco use status of the patient. The tobacco use is determined in the following way:

1. The last TOBACCO health factor recorded on or before the audit date is found. This is done using the DM AUDIT TOBACCO HLTH FACTORS taxonomy. If the health factor contains the word "CURRENT" or "CESS" the patient is assumed to be a current user and a value of 1 - Current user is assumed, if any of the other TOBACCO health factors are recorded then a value of 2 - Not a current user is used.

2. If no health factor has been recorded, the PCC problem list is scanned for smoking related diagnoses. If the diagnosis recorded is 305.13 - Tobacco Use in Remission then the patient is assumed to be 2- Not a current user. All other diagnoses fall into 1 - Current User.

3. If no health factor and no smoking diagnosis are found on the problem list, all PCC purpose of visits in the year prior to the audit date are scanned. If any of the diagnoses is a smoking related diagnosis the same logic used in the problem list is used.

4. The V Dental file is searched for documentation of ADA code 1320 in the year prior to the audit date. If it is found the value 1 - Current User is assigned.

5. If none of the above is found, a 3 - Not documented is used.

Individual Audit

The logic described above is used to display one of the following 3 statements:

1	Current User
2	Not a current user
3	Not Documented

Cumulative Audit

The logic above is used to tally tobacco use.

2.23 Referred for Cessation Counseling

Did the patient have cessation counseling?

Logic Used

1. A documented health factor that resides in the DM AUDIT CESSATION HLTH FACTOR taxonomy is searched for in the year prior to the audit date. If one is found the value is YES.

2. A documented Patient Education topic that resides in the DM AUDIT SMOKING CESS EDUC taxonomy is searched for in the year prior to the audit date. If one is found, a Yes is assumed.

3. A documented refusal of cessation patient education is searched for in the year prior to the date of the audit. If one is found then REFUSED is used as the value.

Individual Audit

If a health factor is found a `YES` and the date it was recorded is displayed.

If an education topic is found a `YES` and the date if was recorded is displayed.

If a refusal is found, the word `Refused` is displayed.

If none of the above, a `No` is displayed.

Cumulative Audit

If the patient is documented as a tobacco user (value of 1 in tobacco use) the number counseled (YES value), the number not counseled (NO or REFUSED value) are tallied in the cumulative audit. (There is not a separate tally of refused in the official 2001 audit).

2.24 DM Therapy

All Visits in the six months prior to the audit date are reviewed. If any medication in the taxonomy specified is found, then an "**X**" is placed by the therapy name. If no medications are found then all documented medication refusals in the past year are reviewed to see if any med within any of the below listed taxonomies was refused. If it was an **X** is placed beside item 9 - Unknown/Refused. If no medications or refusals are found then the Diet & Exercise Alone item is marked with an **X**.

We are unable to calculate the Unknown/Refused group.

Therapy	Taxonomy Name
Sulfonylurea	DM AUDIT SULFONYLUREA DRUGS
Metformin	DM AUDIT METFORMIN DRUGS
Acarbose	DM AUDIT ACARBOSE DRUGS
Glitazones	DM AUDIT TROGLITAZONE DRUGS

Individual Audit

Each therapy found will have an **X** next to it. If a refusal is found the Unknown/Refused column will have an **X** next to it. If none are found, then the **X** is placed beside Unknown/Refused.

Cumulative Audit

The patient is put in the appropriate category depending on what therapies are found, as follows:

Metformin	If metformin is found.
Acarbose	If Acarbose is found.
Glitazone	If glitizones found.
Sulfonylurea	If sufonylurea is found.
Unknown/Refused	If no meds are found or a refusal is found.

2.25 ACE Inhibitor

If any drug in the DM AUDIT ACE INHIBITORS taxonomy has been prescribed in the 6 months prior to the audit date a `Yes` is displayed. If any of the drugs in the DM AUDIT ACE INHIBITORS taxonomy is documented as refused then it is counted as `Refused`. A not medically indicated documentation is considered a `No`.

If none of the above criteria is met, a `No` is displayed.

Individual Audit

A yes, no or refused is displayed.

Cumulative Audit

Used in the calculation of those with hypertension and those with proteinuria.

2.26 Aspirin/Anti-Platelet Therapy

If any drug in the DM AUDIT ASPIRIN DRUGS taxonomy has been prescribed in the year prior to the audit date, the term `Aspirin` is displayed. If a drug in the DM AUDIT ANTI-PLATELET DRUGS taxonomy is prescribed the term "`Other`" is displayed. If both are prescribed the term `Both` is displayed. If a refusal is on file the term `Refused` is displayed.

Otherwise, a `No` is displayed.

Cumulative Audit

Used in the calculation of those Daily Aspirin Therapy totals. Only the Yes and No are calculated. We cannot calculate the "Undetermined" category.

2.27 Lipid Lowering Agent

If any drug in the DM AUDIT LIPID LOWERING DRUGS or DM AUDIT STATIN DRUGS taxonomy has been prescribed in the six MONTHS prior to the audit date the following values will be displayed:

1	Statin
2	Other
3	Both

If a refusal of any drug within the above mentioned taxonomies is documented the value 5- Refused is displayed, otherwise, a `No` is displayed.

Cumulative Audit

Used in the calculation of those with TOTAL CHOLESTEROL >=240 (if total cholesterol is documented and result can be determined.) Used in the calculation of those with LDL cholesterol > 100 (if LDL is documented and LDL value can be determined).

2.28 EKG

The date of the last EKG before the audit date. EKG is searched for the following ways:

- ECG Summary in the V DIAGNOSTIC PROCEDURE file. (This is populated by the EKG mnemonic in data entry.)
- ICD OPERATION/PROCEDURE codes 89.51, 89.52 or 89.53
- CPT Codes: 93000-93024, 93040-93042, 93224-93237, 93268-93268, 93270-93272, 93278-93278

Individual Audit

The date of last EKG is displayed

Cumulative Audit

The date is used to determine the percent (%) performed in past three years, past five years and ever.

2.29 Fasting Glucose

The last Fasting Glucose test in the V LAB file is found. The taxonomy used to find these tests is the DM AUDIT FASTING GLUCOSE TESTS lab taxonomy. If no test in that taxonomy is found, then the V LAB file is searched for a LOINC code in the DM AUDIT FASTING GLUC LOINC code taxonomy.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

A tally of those with a fasting glucose test and those without will be displayed.

2.30 75 GM 2 Hour Glucose

The last lab test in the year prior to the audit date that is a member of the DM AUDIT 75GM 2HR GLUCOSE taxonomy is found in V LAB. If no test in that taxonomy is found, then the V LAB file is searched for a LOINC code in the DM AUDIT 75GM 2HR LOINC code taxonomy.

Individual Audit

The date of the test and the result are displayed.

Cumulative Audit

A tally of those who had the test done and those who did not is displayed.

2.31 Total Cholesterol

The last lab test in the year prior to the audit date that is a member of the DM AUDIT TOTAL CHOLESTEROL TAX taxonomy is found in V LAB. If no test in that

taxonomy is found, then the V LAB file is searched for a LOINC code in the BGP CHOLESTEROL LOINC code taxonomy.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *or* the first digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled" it will fall into unable to determine.

Desirable	(<200 mg/dl)
Borderline	(200-239 mg/dl)
High	(240 mg/dl or more)
Unable to determine result	
Not tested	

2.32 HDL Cholesterol

The last lab test in the year prior to the audit date that is a member of the DM AUDIT HDL CHOLESTEROL TAX taxonomy is found in V LAB. If no test in that taxonomy is found, then the V LAB file is searched for a LOINC code in the BGP HDL LOINC codes taxonomy.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *or* the first digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled," it will fall into unable to determine.

- HDL <35 mg/dl
- HDL 35-45 mg/dl
- HDL 46-55 mg/dl
- HDL >55
- Unable to determine result
- Not tested

2.33 LDL Cholesterol

The last lab test in the year prior to the audit date that is a member of the DM AUDIT LDL CHOLESTEROL TAX taxonomy is found in V LAB. If no test in that taxonomy is found, then the V LAB file is searched for a LOINC code in the BGP LDL LOINC codes taxonomy.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *or* the first digit of the result is not a number then it is put in the unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled," it will fall into unable to determine.

- LDL <100 mg/dl
- LDL 100-129 mg/dl
- LDL 130-160 mg/dl
- LDL >160
- Unable to determine result
- Not tested

2.34 Triglycerides

The last lab test in the year prior to the audit date that is a member of the DM AUDIT TRIGLYCERIDES TAX taxonomy is found in V LAB. If no test in that taxonomy is found, then the V LAB file is searched for a LOINC code in the BGP TRIGLYCERIDE LOINC codes taxonomy.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *or* the first digit of the result is not a number then it is put in the unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled," it will fall into unable to determine.

- TG <150 mg/dl
- TG 150-199 mg/dl
- TG 200-400 mg/dl
- TG >400 mg/dl
- Unable to determine result
- Not tested

3.0 2007 Diabetes Audit Logic

3.1 Audit Date

This is the date of the audit. The user supplies this date. It is used as the ending date to calculate the time range when looking for values. For example, if the audit date is September 30, 2005 then data is examined during the year prior to this audit date (October 1, 2004 to September 30, 2005).

Individual Audit
The audit date is displayed. E.g. SEPTEMBER 30, 2005

Cumulative Audit
N/A

EPI Info Export
The audit date is exported in MM/DD/YYYY format.

3.2 Facility Name

This is the name of the facility at which the audit is being run.

Individual Audit
The name of the facility is displayed.

Cumulative Audit
N/A

EPI Info Export
The name of the facility is exported. Length is 20.

3.3 Area

This is the 2-digit IHS Area code for this facility. Information is taken from the LOCATION table.

Individual Audit
The area code is displayed. E.g. 10

Cumulative Audit
N/A

EPI Info Export
The area code is exported.

3.4 Service Unit

This is the 2-digit IHS Service Unit code for this facility. Information is taken from the LOCATION table.

Individual Audit
The service unit code is displayed. E.g. 10.

Cumulative Audit
N/A

EPI Info Export
The service unit code is exported.

3.5 Facility Code

This is the 2-digit facility code for this facility.

Individual Audit
The facility code is displayed. E.g. 01.

Cumulative Audit
N/A

EPI Info Export
The facility code is exported.

3.6 Number of Patients on DM Register

This is the number of active patients on the diabetes register. The user is prompted to enter the name of their register.

Individual Audit
The total number of active patients in the register is displayed.

Cumulative Audit
The total number of active patients in the register is displayed

EPI Info Export
The total number of active patients in the register is exported.

3.7 Reviewer

Initials of the person who ran the audit.

Individual Audit
The initials are displayed.

Cumulative Audit
N/A.

EPI Info Export
The initials of the person running the audit are exported.

3.8 Chart Number

Health record number of the patient at the facility at which the audit is run.

Individual Audit
The chart number is displayed.

Cumulative Audit
N/A.

EPI Info Export
The patients chart number is exported.

3.9 DOB

The patient's Date of Birth.

Individual Audit
The date of birth is displayed.

Cumulative Audit
The age of the patient is calculated from the audit date and used in the age tally on the cumulative audit.

EPI Info Export
The DOB in MM/DD/YYYY format is exported. Calculated age is also exported.

3.10 Gender

Gender of the patient.

Individual Audit
MALE or FEMALE.

Cumulative Audit
A tally by gender is displayed on the cumulative audit.

EPI Info Export
1 = Male 2 = Female.

3.11 Primary Care Provider

The name of the primary care (designated) provider documented in RPMS.

Individual Audit
The name of the primary care provider is displayed.

Cumulative Audit
N/A.

EPI Info Export

N/A.

3.12 Date of Diabetes Diagnosis/Duration of DM

The diabetes onset date. This date is used in the calculation of the duration of diabetes.

Individual Audit

Three different dates are displayed to the user:

- The date of onset from the Diabetes Register.
- The earliest date of onset from all diabetes related problems on the problem list. The problem list is scanned for all problems in the ICD9 code range 250.00-250.93.
- The first recorded diagnosis (POV) of diabetes in PCC. ICD9 codes: 250.00-250.93.

Cumulative Audit

When calculating the duration of diabetes, the earliest of the date of onset from the diabetes register or the problem list date of onset is used. Duration of diabetes is calculated from that date to the date of the audit. If neither the date of onset in the register nor the date of onset in the problem list is recorded, the duration of diabetes is not calculated. The first diagnosis date from POV is not used.

EPI Info Export

The earliest date found from the Diabetes Register or the problem is exported. Format: MM/DD/YYYY

3.13 Type of Diabetes

The computer audit uses the following logic in determining the type of diabetes: (once a "hit" is made, no further processing done)

- If the diagnosis documented in the Diabetes Register is NIDDM the type is assumed to be Type 2.
- If the diagnosis documented in the Diabetes Register is "TYPE II" the type is assumed to be Type 2.
- If the diagnosis documented in the Diabetes Register contains a "2" the type is assumed to be Type 2.
- If the diagnosis documented in the Diabetes Register contains IDDM the type is assumed to be Type 1.
- If the diagnosis documented in the Diabetes Register contains a "1" the type is assumed to be Type 1.
- If no diagnosis is documented in the Diabetes Register, or it does not contain any

of the above strings the problem list is then scanned. If any diabetes diagnosis on the problem list has a fifth digit of 0 or 2 then the type is assumed to be 2. If any diabetes diagnosis on the problem list has a fifth digit of 1 or 3 then the type is assumed to be Type 1.

- If no diagnosis exists on the problem list or in the Diabetes Register, then the last PCC purpose of visit related to diabetes is reviewed. If it contains a fifth digit of 0 or 2 then the type is assumed to be Type 2, if the fifth digit is a 1 or 3 then the type is assumed to be Type 1.

Individual Audit

Four items are displayed:

- The logic described above is used to determine the type of diabetes and is displayed after the prompt Diabetes Type.
- If the type of Diabetes is documented in the Diabetes Register, it is displayed.
- If Diabetes is listed on the PCC Problem List the diagnoses codes are displayed.
- The type of Diabetes is determined from the last PCC purpose of visit and is displayed.

Cumulative Audit

The logic described above is used in the cumulative audit.

EPI Info Export

The logic described above is used and a 1 or 2 is exported to the EPI file.

3.14 Tobacco Use

Tobacco use status of the patient. The tobacco use is determined in the following way:

- The last TOBACCO health factor recorded on or before the audit date is found. This is done using the DM AUDIT TOBACCO HLTH FACTORS taxonomy. If the health factor contains the word "CURRENT" or "CESS" the patient is assumed to be a current user and a value of 1 - Current user is assumed, if any of the other TOBACCO health factors are recorded then a value of 2 - Not a current user is used.

- If no health factor has been recorded, the PCC problem list is scanned for smoking related diagnoses. If the diagnosis recorded is 305.13 - Tobacco Use in Remission then the patient is assumed to be 2 - Not a current user. All other diagnoses fall into 1 - Current User.

- If no health factor and no smoking diagnosis is found on the problem list, all PCC purpose of visits in the year prior to the audit date are scanned. If any of the diagnoses is a smoking related diagnosis the same logic used in the problem list is used.

- The V Dental file is searched for documentation of ADA code 1320 in the year prior to the audit date. If it is found the value 1 - Current User is assigned.

- If none of the above is found, a 3 - Not documented is used.

Individual Audit
The logic described above is used to display one of the following three statements:

1	Current User
2	Not a current user
3	Not Documented

Cumulative Audit
The logic above is used to tally tobacco use.

EPI Info Export
The logic described above is used to export a 1, 2 or 3 value.

3.15 Tobacco Cessation Counseling

If the patient is a current tobacco user whether or not they were offered cessation counseling is determined in the following manner:

1. The patient's health factors recorded in the past year are reviewed for a recorded health factor that is contained in the DM AUDIT CESSATION HLTH FACTOR taxonomy. If one is found then a value of `1 - Yes` is displayed.
2. All recorded patient education provided to the patient is reviewed. If any topic in the DM AUDIT SMOKING CESS EDUC taxonomy or any topic with a mnemonic starting with TO-Q, or a topic TO-LA is found then a value of `1 - Yes` is displayed.
3. If the patient had a visit to clinic 94 - Tobacco Cessation clinic in the year prior to the audit date then a `1 - Yes` is displayed.
4. If the patient had a dental visit with a 1320 ADA code recorded a `1 - Yes` is displayed.
5. If the patient had a refusal of any education topic in the DM AUDIT SMOKING CESS EDUC taxonomy or a refusal of topic TO-Q or TO-LA then a value of 3 - Refused is displayed.
6. If none of the above are found, a 2 - No is displayed.

Individual Audit
The logic above is applied and the value and date are displayed.

Cumulative Audit
The value found is tallied.

EPI Info Export
Value of 1, 2 or 3 is exported.

3.16 Height

The last recorded Height value and the date the height was taken.

Individual Audit
The height must have been recorded anytime prior to the audit date and is displayed along with the date the height was done.

Cumulative Audit
N/A

EPI Info Export
The last recorded height prior to the audit date is passed to the EPI record.

3.17 Weight

The last recorded weight value on a non-prenatal visit and the date the weight was taken.

Individual Audit
The weight must have been recorded prior to the audit date and not be on a visit on which one of the diagnoses was prenatal care.

Cumulative Audit
N/A (See BMI)

EPI Info Export
The last recorded weight prior to the audit date is passed to the EPI record

3.18 BMI

BMI is calculated in the following way:

If the patient is older than age 19 (20 and older) the last weight in the year prior to the audit date is found. The last height recorded after their 19th birthday is found. BMI is calculated based on these two values.

If the patient is age 19 or under the last height and weight taken on the same date in the year prior to the audit date are found and used in calculating BMI.

Individual Audit
BMI is displayed.

Cumulative Audit
BMI is used and percentages of overweight and obese patients are calculated. If the patient did not have a height or weight recorded as described above they fall

into the "BMI could not be calculated" category. The percentages don't add up to 100. The obese patients are included in the overweight category as well.

EPI Info Export

BMI as calculated above is passed to the EPI record.

3.19 Hypertension Documented

Is a Diagnosis of hypertension documented? If Hypertension is on the problem list or the patient has had at least 3 visits with a diagnosis of hypertension.

Individual Audit

A Yes or No is displayed.

Cumulative Audit

Used in the ACE Inhibitor tally.

EPI Info Export

A 1 (Yes) or a 2 (No) is passed to the EPI record.

3.20 Foot Exam - Complete

Has a complete foot exam been done?

The logic used in determining if a complete foot exam has been done is as follows:

7. A documented DIABETIC FOOT EXAM, COMPLETE (CODE 28) is searched for in the year prior to the audit date. If found, no other processing is done.
8. A visit on which a podiatrist (provider class codes 33 - PODIATRIST, 84 - (PEDORTHIST) or 25 - CONTRACT PODIATRIST) that is not a DNKA visit is searched for in the year prior to the audit date. If found, it is assumed the exam was done and no further processing is done.
9. A visit to clinic 65 - PODIATRY clinic that is not a DNKA is searched for in the year prior to the audit date. If found, no other processing is done.
10. If none of the above are found, a documented refusal (REF) or No Response to Followup (NRF) of a diabetic foot exam is searched for. If found, value is "Refused."
11. If none of the above is found, or "Not Medically Indicated" has been documented the value is "No."

Individual Audit

If any of the above criteria met, a Yes is displayed along with one of the following terms:

- Diabetic Foot Exam
- Podiatrist Visit
- Podiatry Clinic Visit

- Otherwise, a No or Refused is displayed

Cumulative Audit

The percentage of those who had the exam (all yes) and the percent (%) that refused is displayed.

EPI Info Export

A 1 (Yes) or a 2 (No) or 3 (Refused) is passed to the EPI record.

3.21 Diabetic Eye Exam

Has a diabetic eye exam been done?

The logic used in determining if a diabetic eye exam has been done is as follows:

The system looks for the last documented Diabetic Eye Exam in the patient's computer record. If that exam was done in the year prior to the date of audit then a `Yes` will display. No further processing is done.

If no exam is found then all visits in the time period are scanned for documentation of CPT code 92012, 92250, 92014, 92015, 92004 or 92002.

If none of these CPT codes is found, then all PCC Visits in the year prior to the end of the audit are scanned for a non-DNKA, non-Refraction visit to an Optometrist or Ophthalmologist (24, 79, 08) or an Optometry or Ophthalmology Clinic (17, 18, 64 or A2). If found, then a yes and an indication of what was found is displayed. If none of the above is found, then the refusals file is checked for documentation of a patient refusal or no response to followup of a diabetic eye exam. If found, a note indicating the refusal is displayed. If Not Medically Indicated is documented then the value displayed is No-Not Medically Indicated.

The EPI values are 1 - Yes, 2 - No, 3- Refused.

Individual Audit

If any of the above criteria are met, a `Yes` is displayed along with one of the following terms: Diabetic Eye Exam

Optometrist/Ophthalmologist Visit Optometry/Ophthalmology Clinic Visit

Otherwise, a `No` or `Refused` is displayed.

Cumulative Audit

The percentage of those who had the exam (all yes) and the percent (%) that refused is displayed.

EPI Info Export

A 1 (Yes) or a 2 (no) or 3 (Refused) is passed to the EPI record.

3.22 Dental Exam

Has a dental exam been done?

The logic used in determining if a dental exam has been done is as follows:

A documented DENTAL EXAM (CODE 30) is searched for in the year prior to the audit date. If found, no other processing is done.

A visit to clinic 56 - DENTAL clinic that is not a DNKA is searched for in the year prior to the audit date. If found, no other processing is done.

A visit on which a dentist (provider class codes 52 -DENTIST) that is not a DNKA visit is searched for in the year prior to the audit date. If found, and there is any ADA code other than 9991, then it is assumed the exam was done and no further processing is done.

If none of the above is found, a documented refusal of a DENTAL exam is searched for. If found, value is "Refused." If a visit to dental clinic with only an ADA code of 9991 is found, it is documented as a "Refused."

If none of the above is found, the value is "No." This includes Not Medically Indicated.

Individual Audit

If any of the above criteria are met, a `Yes` is displayed along with one of the following terms:

DENTAL Exam

Dental Clinic Visit

Dentist Visit

Otherwise a No or Refused is displayed

Cumulative Audit

The percentage of those who had the exam (all yes's) and the percent (%) who refused is displayed.

EPI Info Export

A 1 (Yes) or a 2 (no) or 3 (Refused) is passed to the EPI record.

3.23 Diet Instruction

Has diet instruction been given?

The values in the audit are:

1	R
2	Other
3	Both RD & Other
4	None
5	Refused

Logic

All visits in the year prior to the audit date are examined.

If there is a visit (which is not a chart review) on which a DIETICIAN or NUTRITIONIST is the provider and no other visit with a diet patient education topic documented a value of 1 - RD is assigned. No further processing is done.

If there is a visit on which a DIETICIAN or NUTRITIONIST is the provider and another visit on which a patient education topic in the DM AUDIT DIET EDUC TOPICS taxonomy, a topic ending in "-N," a topic ending in "-DT" or a topic beginning or ending with "MNT" is documented, or a diagnosis of V65.3 is documented and the provider is not a dietician or nutritionist, then the value is 3 - Both RD & OTHER. No further processing is done.

If there is a visit on which a patient education topic in the DM AUDIT DIET EDUC TOPICS taxonomy, a topic ending in "-N," a topic ending in "-DT", a topic beginning or ending with "MNT", or a diagnosis of V65.3 is documented and no visit to a DIETICIAN or NUTRITIONIST then a 2 -Other is assigned. No further processing is done.

If a refusal of one of these education topics is documented the value is 5- Refused.

If none of the above is documented, the value is 4 - None

Individual Audit

The value calculated as described above is displayed.

Cumulative Audit

Percentages are calculated of who had diet instruction includes values 1-3. The percent (%) of the patients who refused is also displayed.

EPI Info Export

A value of 1-5 is passed to the EPI record.

3.24 Exercise Instruction

Has exercise instruction been given?

The values in the audit are:

1 Yes 2 No 3 Refused

Logic

All visits in the year prior to the audit date are examined.

If there is a visit on which a patient education topic in the DM AUDIT EXERCISE EDUC TOPICS taxonomy, or any topic ending in "-EX" is documented then a 1 - Yes. No further processing is done.

All visits in the year prior to the audit date are examined for a POV of V65.41 and if one is found a 1 - Yes is displayed.

If a refusal of one of these education topics is documented the value is 3- Refused.

If neither of the above is documented, the value is 2 - None

Individual Audit

The value calculated as described above is displayed.

Cumulative Audit

Percentages are calculated of who had exercise instruction includes value of 1. The percent (%) of the patients who refused is also displayed.

EPI Info Export

A value of 1-3 is passed to the EPI record.

3.25 DM Education (Other)

Has DM Education other than diet/exercise been given?

The values in the audit are: 1 Yes 2 No 3 Refused

Logic

All visits in the year prior to the audit date are examined.

If there is a visit on which a patient education topic in the DM AUDIT OTHER EDUC TOPICS taxonomy then a 1 - Yes. No further processing is done.

If a refusal of one of these education topics is documented the value is 3- Refused.

If neither of the above is documented, the value is 2 - None

Individual Audit

The value calculated as described above is displayed.

Cumulative Audit

Percentages are calculated of who had other DM instruction includes value of 1 – YES. The percent (%) of the patients who refused is also displayed.

EPI Info Export

A value of 1-3 is passed to the EPI record.

3.26 DM Therapy

All Visits in the 6 months prior to the audit date are reviewed. If any medication in the taxonomy specified is found, then an "X" is placed by the therapy name. If no medications are found then all documented medication refusals in the past year are reviewed to see if any med within any of the below listed taxonomies was refused. If it was an X is placed beside item 9 - Unknown/Refused. If no medications or refusals are found then the Diet & Exercise Alone item is marked with an X.

We are unable to calculate the Unknown/Refused group.

Therapy	Taxonomy Name
Insulin	DM AUDIT INSULIN DRUGS
Sulfonylurea	DM AUDIT SULFONYLUREA DRUGS
Metformin	DM AUDIT METFORMIN DRUGS
Acarbose	DM AUDIT ACARBOSE DRUGS
Glitazones	DM AUDIT TROGLITAZONE DRUGS

Individual Audit

Each therapy found will have an X next to it. If a refusal is found, the Unknown/Refused column will have an X next to it. If none are found, then the X is placed beside Diet & Exercise Alone.

Cumulative Audit

The patient is put in the appropriate category depending on what therapies are found:

Diet and Exercise Alone	If no therapies documented/refusals are found.
Insulin	If only Insulin is found.
Oral Med (monotherapy)	
Sulfonylurea	If only sulfonylurea is found.
Metformin	If only metformin is found.
Acarbose	If only Acarbose is found.
Glitazone	If only glitizones found.
Combination of Oral Meds	If any 2 of the above oral meds is found but no insulin is found.
Combination of Oral Meds+Insulin	If any one of the oral meds is found plus Insulin is found.

Unknown/Refused	If no meds are found but a refusal is found, Unknown is not calculated.

EPI Info Export

A string containing any of the numbers 1-9 will be sent indicating which therapies were found for this patient. For example, if 3 (sulfonylurea) and 4 (metformin) are found in the time window, a 34 is sent to the EPI file.

3.27 ACE Inhibitor

If any drug in the DM AUDIT ACE INHIBITORS taxonomy has been prescribed in the six months prior to the audit date a `Yes` is displayed. If any of the drugs in the DM AUDIT ACE INHIBITORS taxonomy is documented as refused then it is counted as "Refused." A not medically indicated documentation is considered a No.

If none of the above criteria is met, a `No` is displayed.

Individual Audit

A yes, no or refused is displayed.

Cumulative Audit

Used in the calculation of those with hypertension and those with proteinuria.

EPI Info Export

A 1 (Yes) or 2 (No) or 3 (Refused) is passed to the EPI record.

3.28 Aspirin/Anti-Platelet Therapy

If any drug in the DM AUDIT ASPIRIN DRUGS taxonomy has been prescribed in the year prior to the audit date, the term "`Aspirin`" is displayed. If a drug in the DM AUDIT ANTI-PLATELET DRUGS taxonomy is prescribed the term "Other" is displayed. If both are prescribed the term "`Both`" is displayed. If a refusal is on file the term `Refused` is displayed. Otherwise, a `No` is displayed.

Cumulative Audit

Used in the calculation of those Daily Aspirin Therapy totals. Only the Yes and No are calculated. We cannot calculate the "Undetermined" category.

EPI Info Export

1-5 value is passed to the EPI record.

3.29 Lipid Lowering Agent

If any drug in the DM AUDIT LIPID LOWERING DRUGS or DM AUDIT STATIN DRUGS taxonomy has been prescribed in the six months prior to the audit date the following values will be displayed:

1 Statin
2 Other
3 Both

If a refusal of any drug within the above mentioned taxonomies is documented the value `5- Refused` is displayed, otherwise, a `No` is displayed.

Cumulative Audit

Used in the calculation of those with TOTAL CHOLESTEROL >=240 (if total cholesterol is documented and result can be determined). Used in the calculation of those with LDL cholesterol > 100 (if LDL is documented and LDL value can be determined). EPI Info Export: a 1-5 is passed.

3.30 Flu Vaccine

Immunizations are scanned for an influenza vaccine in the 15 months prior to the audit date. If none if found, a search is done for documented refusal in the past 15 months. If neither are found a No is assumed.

Values: Yes, No, Refused.

Logic for determining whether a vaccine has been done in the past 15 months:

- Immunization CVX codes: 15, 16, 88, 111
- Purpose of Visit (ICD diagnoses): V04.8, V04.81, V06.6
- CPT codes: 90655 through 90660, 90711, 90724
- ICD procedure: 99.52

Refusals documented in both PCC and the immunization package are reviewed.

Individual Audit

If a flu vaccine is found, a `Yes` with the date the shot was given is displayed.

Otherwise a `No` or `Refused` is displayed.

Cumulative Audit

The total number and percentage of those having a Flu Vaccine and the percent that refused is displayed.

EPI Info Export

A 1 (Yes) or 2 (No) or 3 (Refused) is passed to the EPI record.

3.31 Pneumovax Ever

Immunizations are scanned for Pneumococcal vaccine anytime prior to the audit date. If none are found, the refusal file is checked for a documented refusal of this vaccination. If neither are found a `No` is assumed.

Values: Yes, No, Refused.

Logic used to determine if a Pneumovax was done:

- Immunization CVX codes: 33, 100, 109
- CPT codes: 90669, 90732

Refusals documented in both the PCC and the immunization package are reviewed.

Individual Audit

If a pneumovax was found, a `Yes` with the date the shot was given is displayed. Otherwise a `No` or `Refused` is displayed.

Cumulative Audit

The total number and percentage of those having a pneumococcal immunization and the percent that refused is displayed.

EPI Info Export

A 1 (Yes) or 2 (No) or 3 (Refused) is passed to the EPI record.

3.32 TD in Past Ten Years

Immunizations are scanned for a tetanus vaccine in the ten years prior to the audit date. If none is found, a documented refusal is searched for. If neither are found a No is assumed.

Values: Yes, No, Refused.

Logic used to find a TD vaccine:

- Immunization CVX codes: 1, 9, 20, 22, 28, 35, 50, 106, 107, 110
- CPT Codes: 90700, 90701, 90702, 90703, 90718, 90720-90723

Individual Audit

If a tetanus immunization is found, a `Yes` with the date the shot was given is displayed. Otherwise a `No` or `Refused` is displayed.

Cumulative Audit

The total number and percentage of those having a tetanus shot and the percent that refused is displayed.

EPI Info Export

A 1 (Yes) or 2 (No) or 3 (Refused) is passed to the EPI record.

3.33 PPD Status

Possible values: POSITIVE, NEGATIVE, UNKNOWN, REFUSED

In determining PDD Status the following logic is used:

- If the patient has a TB health factor recorded, TB on the problem list or any diagnoses of TB documented in the PCC then the status is POSITIVE, no further processing is done.
- All recorded PPD entries prior to the audit date are gathered. If there are none found then the refusal file is checked. If a refusal is on file then the value is REFUSED. If no refusal is found then the value is UNKNOWN. No further processing is done.
- The LAST PPD with a reading or result is examined. If the reading or result is Positive (reading >9) then POSITIVE, if reading or result of last PPD is negative, then NEG, if reading and result of all PPDs are blank then UKNOWN. If no PPD ever recorded, then UNKNOWN or REFUSED if a refusal has been recorded.

Individual Audit

POSITIVE, NEGATIVE, REFUSED or UNKNOWN is displayed.

Cumulative Audit

N/A (See TB status below.)

EPI Info Export

A 1 (Positive) or 2 (Negative), 3 (Refused) or 4 (Unknown) is passed to the EPI record.

3.34 If PPD POS, INH TX Complete

Is INH treatment complete? If the value of the PPD Status is POSITIVE then the last TB health factor is looked at for determining TB Treatment status.

Individual Audit

The last recorded TB Health factor is displayed. The TB Health factors are:

- TB - TX COMPLETE
- TB - TX INCOMPLETE
- TB - TX UNKNOWN
- TB - TX UNTREATED

Cumulative Audit

N/A (See TB status below.)

EPI Info Export

The last TB health factor is examined and recoded as follows:

Yes if factor is TB - TX COMPLETE

No if factor is TB - TX INCOMPLETE or TB - TX UNTREATED

Unknown if factor is TB - TX UNKNOWN

3.35 If PPD Neg, Last PPD Date

If the value of the PPD Status is NEGATIVE then the date of the last PPD is displayed.

Individual Audit

The date of the last PPD is displayed.

Cumulative Audit

N/A (See TB status below.)

EPI Info Export

If PPD Status is NEGATIVE the date of the last negative PPD is passed to the EPI record.

3.36 TB Status (TB Code)

For the cumulative audit and EPI export record a TB Status code is calculated. The values of PPD STATUS, TB Treatment Status and date of last PPD are used to determine which category the patient falls into.

The Values Are

PPD +,INH treatment complete. If the PPD Status is Positive and the last recorded health factor is TB - TX COMPLETE then the patient falls into this category.

PPD +, untreated/incomplete or tx unknown. If the PPD Status is Positive and the last recorded health factor is TB - TX INCOMPLETE or TX - UNKNOWN or TB - TX UNTREATED then the patient falls into this category.

PPD -, placed since DM dx. If the PPD Status is negative and the date of the last PPD is after the date of DM diagnosis, the patient falls into this category. The date of DM diagnosis is taken from the earliest of the register, problem list or first PCC diagnosis.

PPD -, placed before DM dx. If the PPD Status is negative and the date of the last PPD is before the date of DM diagnosis, the patient falls into this category. The date of DM diagnosis is taken from the earliest of the register, problem list or first PCC diagnosis.

Date of DM DX Unknown. If the PPD Status is negative but the date of DM diagnosis is unknown the patient falls into this category. (This will more than likely be zero because the patient will have had at least one DM diagnosis).

PPD status unknown. If the PPD Status is Unknown or Refused, then the patient falls into this category.

Individual Audit
N/A.

Cumulative Audit
The categories as described above are displayed.

EPI Info Export
The TB STATUS code as described above is passed to the EPI record. The codes 1-6 are passed.

3.37 EKG

The date of the last EKG before the audit date. EKG is searched for the following ways:

ECG Summary in the V DIAGNOSTIC PROCEDURE file. (This is populated by the EKG mnemonic in data entry).

ICD OPERATION/PROCEDURE codes 89.51, 89.52 or 89.53

CPT Codes: 93000-93024, 93040-93042, 93224-93237, 93268-93268, 93270-93272, 93278-93278

Individual Audit
The date of last EKG is displayed

Cumulative Audit
The date is used to determine the percent (%) performed in past three years, past five years, and ever.

EPI Info Export
A 1 (Yes) or 2 (No) is passed in one field and the date of the most recent is passed in another field.

3.38 HBA1C Values

The last two HbA1c tests in the V LAB file are found using the DM AUDIT HGBA1C TAX taxonomy and the BGP HGBA1C LOINC CODES taxonomies.

Individual Audit
The date and result of each test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the last HbA1c test is examined and is put into the following categories. If the result contains a ">" it goes into the 11.0 or higher category. If the result is blank *or* the first digit of the result is not a number (and is not a >) then it is put in the Undocumented category since we cannot interpret the result. For example, if the value is "cancelled" it will fall into undocumented.

- HbA1c <7.0
- HbA1c 7.0-7.9
- HbA1c 8.0-8.9
- HbA1c 9.0-9.9
- HbA1c 10.0-10.9
- HbA1c 11.0 or higher
- Undocumented

EPI Info Export

The dates and values of the last two HbA1c tests are passed to the EPI record.

3.39 Creatinine

The last lab test in the year prior to the audit date that is a member of the DM AUDIT CREATININE TAX taxonomy or the BGP CREATININE LOINC CODES taxonomy is found in V LAB.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *or* the first digit of the result is not a number or a "." (as in .5), then it is put in the Unable to Determine Result category since we cannot interpret the result. For example, if the value is "cancelled" it will fall into unable to determine.

- Creatinine >= 2.0 mg/
- Creatinine < 2.0 mg/dl
- Creatinine not tested/unknown
- Unable to determine result

EPI Info Export

A 1 or 2 is passed with 1 indicating a test was done and a 2 indicating it was not done. The value of the test is passed in a separate field.

3.40 Total Cholesterol

The last lab test in the year prior to the audit date that is a member of the DM AUDIT TOTAL CHOLESTEROL TAX taxonomy or the BGP TOTAL CHOLESTEROL LOINC taxonomy is found in V LAB.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *or* the first digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled" it will fall into unable to determine.

Desirable	(<200 mg/dl)
Borderline	(200-239 mg/dl)
High	(240 mg/dl or more)
Unable to determine result	
Not tested	

EPI Info Export

A 1 or 2 is passed with 1 indicating a test was done, and a 2 indicating itwas not done.

The value of the test is passed in a separate field.

3.41 HDL Cholesterol

The last lab test in the year prior to the audit date that is a member of the DM AUDIT HDL CHOLESTEROL TAX taxonomy or the BGP HDL OINC CODES taxonomy is found in V LAB.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank OR the 1st digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled" it will fall into unable to determine.

- HDL <35 mg/dl
- HDL 35-45 mg/dl
- HDL 46-55 mg/dl

- HDL >55
- Unable to determine result
- Not tested

EPI Info Export

A 1 or 2 is passed with 1 indicating a test was done and a 2 indicating it was not done. The value of the test is passed in a separate field.

3.42 LDL Cholesterol

The last lab test in the year prior to the audit date that is a member of the DM AUDIT LDL CHOLESTEROL TAX taxonomy or the BGP LDL LOINC CODES taxonomy is found in V LAB.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *or* the first digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled" it will fall into unable to determine.

- LDL <100 mg/dl
- LDL 100-129 mg/dl
- LDL 130-160 mg/dl
- LDL >160
- Unable to determine result
- Not tested

EPI Info Export

A 1 or 2 is passed with 1 indicating a test was done and a 2 indicating it was not done. The value of the test is passed in a separate field.

3.43 Triglycerides

The last lab test in the year prior to the audit date that is a member of the DM AUDIT TRIGLYCERIDES TAX taxonomy or the BGP TRIGLYCERIDE LOINC CODES taxonomy is found in V LAB.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *or* the first digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled" it will fall into unable to determine.

- TG <150 mg/dl
- TG 150-199 mg/dl
- TG 200-400 mg/dl
- TG >400 mg/dl
- Unable to determine result
- Not tested

EPI Info Export

A 1 or 2 is passed with 1 indicating a test was done and a 2 indicating it was not done. The value of the test is passed in a separate field.

3.44 Urinalysis

To determine whether or not a Urinalysis was done the following logic is used:

1. The last lab test in the year prior to the audit date that is a member of the DM AUDIT URINALYSIS TAX or the DM AUDIT URINALYSIS LOINC taxonomy is found. If one is found the date of the Urinalysis is displayed on the audit. No further processing is done.

2. If no test is found in 1 above then the last lab test in the year prior to the audit date that is a member of the DM AUDIT A/C RATIO taxonomy or the DM AUDIT A/C RATIO LOINC taxonomy is found in V LAB. If one is found the date is displayed on the audit form, no further processing occurs.

3. If neither a Urinalysis nor A/C Ratio is found then the system will look for the last lab test in the year prior to the audit date that is a member of the DM AUDIT URINE PROTEIN TAX taxonomy or the DM AUDIT URINE PROTEIN LOINC taxonomy. If one is found the date is displayed on the audit.

4. If no tests described above are found then the system will check for a refusal of any LAB test in the lab taxonomies described above.

Individual Audit

The date of the test is displayed

Cumulative Audit

Used with urine protein and microalbuminuria

EPI Info Export

A 1 (Yes) or 2 (No) or 3 (Refused) is passed.

3.45 Proteinuria

1. The last lab test in the year prior to the audit date that is a member of the DM AUDIT URINE PROTEIN TAX taxonomy or the DM AUDIT URINE PROT LOINC taxonomy is found in V LAB. If one is found it is used to determine proteinuria on the audit using the following logic.

When calculating the Yes/No the following logic is used:

If the result is blank then "No Result" (a blank is passed to EPI).

If the result contains a "+" then Yes.

If the first character of the result is a "P" or "p" then Yes.

If the first character of the result is an "M", "L", "m" or "l" then Yes.

If the first character of the result is an "S" or "s" then Yes.

If the result contains a ">" then Yes.

If the result is a numeric value > 29 then Yes.

If the first character of the result is a "C" or "c" then "No result" (a blank is passed to EPI) - these would be the CANCELLED values.

Anything else, No.

2. If no urine protein tests are found the system will look for the last lab test in the year prior to the audit date that is a member of the DM AUDIT A/C RATIO or the DM AUDIT A/C RATIO LOINC taxonomies. If one is found it is used to determine proteinuria on the audit using the following logic:

- If the result is blank then No result.
- If the result contains a ">" then Yes.
- If the first character of the result is a "C" or "c" then No result
- If the result is a number >299 then Yes

Individual Audit

The date of the test and the result are displayed along with a Yes/No as to whether proteinuria was present. If the result is blank, then "No result" is displayed.

Cumulative Audit

Used with urine protein and microalbuminuria (see below undermicroalbuminuria)

EPI Info Export

A 1 (Yes) or 2 (No) or blank is passed.

3.46 Microalbuminuria

The last lab test in the year prior to the audit date that is a member of the DM AUDIT MICROALBUMINURIA TAX taxonomy or the DM AUDIT MICORALBUMINURIA LOINC taxonomy is found in V LAB.

The positive/negative indication is determined in the following way:

- If the result is blank then "No Result" (a blank is passed to EPI)
- If the result contains a "+" then Positive.
- If the first character of the result is a "P" or "p" then Positive.
- If the result contains a ">" then Positive.
- If the result is a numeric value > 29 then Positive.
- If the first character of the result is a "C" or "c" then "No result" (a blank is passed to EPI) - these would be the CANCELLED values.
- Anything else, then Negative.

If no microalbuminuria test is found then the system looks for the last lab test prior to the audit date that is a member of the DM AUDIT A/C RATIO TAX or the DM AUDIT A/C RATIO LOINC taxonomy. The result is interpreted as follows:

- If the result is blank then No result.
- If the result is 30-300 then Positive.
- If the result is numeric and >29 and <300 then Positive.
- If the first character of the result is a "C" or a "c" then No result.
- All other values are interpreted to be "Negative.

Individual Audit

The date of the test and the result are displayed along with a Positive/Negative indication. If the result is blank, then "No result" is displayed.

Cumulative Audit

The following items are calculated on the cumulative audit:

Urinalysis in the past 12 months - this is the total number of patients who had a Urinalysis test documented or a Urine Protein test or A/C ratio documented.

Proteinuria present - if there is a Urine Protein value and it is calculated as Yes, Protein present using the logic defined above in the Proteinuria section.

Proteinuria absent - if there is a Urine Protein value and it is calculated as No Proteinuria present using the logic defined above in the Proteinuria section.

Of the total number without proteinuria:

Microalbuminuria present - using the logic defined above if value is POSITIVE

Microalbuminuria absent - using the logic defined above if value is NEGATIVE

Microalbuminuria not tested - using the logic defined above if the value is blank or unable to determine.

EPI Info Export

A 1 (Positive) or 2 (Negative) or blank is passed. Those that are "Unable to determine" are passed to EPI as blank.

3.47 Tribal Affiliation

The patient's tribe code as entered in Patient Registration.

Individual Audit

Three-digit tribe code and name of tribe display

Cumulative Audit

N/A

EPI Info Export

Three -digit tribe code

3.48 Community

This is the community in which the patient resides at the time the audit was done.

Individual Audit

State-county-community code and name of community display

Cumulative Audit

N/A

EPI Info Export

State-county community code is passed to EPI

3.49 SDPI Grant Funds

Does your community receive SDPI grant funds? Yes or No. This data is prompted for when running the audit, the user provides the data. If the answer is yes, the user is requested to enter the grant number.

Individual Audit
Yes or No is displayed, along with grant number, if entered.

Cumulative Audit
N/A.

EPI Info Export
1 for Yes or 2 for No exported along with grant number, if entered.

3.50 Depression on Problem List

Logic
The patient's problem lists in both PCC and the Behavioral Health module are reviewed for any problem with the following ICD codes: 296.*, 300.*, 301.13, 308.3, 309.*, 311.*. In addition the BH problem list is reviewed for the following problem codes: 14, 15, 18, 24. If no problem found on the problem list then the PCC and BH systems are reviewed for at least 2 diagnoses (POVs) of 300.*, 301.13, 308.3, 309.*, 311.*, 14, 15, 18, 24. If either a problem is found on the problem list or 2 POV's are found then the value on the audit is 1 - Yes. If not, then value of 2 - No is assigned.

3.51 Depression Screening

Logic
The PCC and Behavioral health databases are reviewed for any of the following documented in the past year: (1) Yes, if provider documented a purpose of visit of Depression Screening or Counseling: POV V79.0, Patient Education codes containing “DEP-” (depression), “SB’ (suicidal behavior), “GAD-” (generalized anxiety disorder), “BH-” (behavioral and social health), or “PDEP-” (postpartum depression), or EXAM code 36 – Depression Screening.

(No) if no documentation of depression screening found.

4.0 2007 Pre-Diabetes Audit Logic

4.1 Audit Date

This is the date of the audit. The user supplies this date. It is used as the ending date to calculate the time range when looking for values. For example, if the audit date is September 30, 2005 then data is examined during the year prior to this audit date (October 1, 2004 to September 30, 2005).

Individual Audit
The audit date is displayed. E.g. SEPTEMBER 30, 2005.

Cumulative Audit
N/A

4.2 Reviewer

Initials of the person who ran the audit.

Individual Audit
The initials are displayed.

Cumulative Audit
N/A

4.3 Facility Name

This is the name of the facility at which the audit is being run.

Individual Audit
The name of the facility is displayed.

Cumulative Audit
N/A

4.4 Area

This is the 2-digit IHS Area code for this facility. Taken from the LOCATION table.

Individual Audit
The area code is displayed. E.g. 10.

Cumulative Audit
N/A.

4.5 Service Unit

This is the 2-digit IHS Service Unit code for this facility. Information was taken from the LOCATION table.

Individual Audit
The service unit code is displayed. E.g. 10.

Cumulative Audit
N/A.

4.6 Facility Code

This is the 2-digit facility code for this facility.

Individual Audit
The facility code is displayed. E.g. 01.

Cumulative Audit
N/A.

4.7 Number of Patients on Pre-Diabetes Register

This is the number of active patients on the pre-diabetes register. The user is prompted to enter the name of their register.

Individual Audit
The total number of active patients in the register is displayed.

Cumulative Audit
The total number of active patients in the register is displayed

4.8 Tribal Affiliation

The patient's tribe code as entered in Patient Registration.

Individual Audit
The 3-digit tribe code and name of tribe display

Cumulative Audit
N/A

4.9 Community

This is the community in which the patient resides at the time the audit was done.

Individual Audit
State-county-community code and name of community display

Cumulative Audit
N/A

4.10 Chart Number

Health record number of the patient at the facility at which the audit is run.

Individual Audit
The chart number is displayed.

Cumulative Audit
N/A.

4.11 DOB

The patient's Date of Birth.

Individual Audit
The date of birth is displayed.

Cumulative Audit
The age of the patient is calculated from the audit date and used in the age tally on the cumulative audit.

4.12 Gender

Gender of the patient.

Individual Audit
MALE or FEMALE.

Cumulative Audit
A tally by gender is displayed on the cumulative audit.

4.13 Primary Care Provider

The name of the primary care (designated) provider documented in RPMS.

Individual Audit
The name of the primary care provider is displayed.

Cumulative Audit
N/A

4.14 Classification

Classification is determined in the following manner:

Impaired Fasting Glucose
The system first looks at the problem list for a documented problem with ICD Diagnosis code 790.21 - IMPAIRED FASTING GLUCOSE, if one is found, it will display "`Problem List:`" with the date of onset if the date of onset was documented. The system then looks at all of a patient's purpose of visits for code 790.21, if it finds one, it displays the dates of the earliest one found and the latest one found.

Impaired Glucose Tolerance

The system first looks at the problem list for a documented problem with ICD Diagnosis code 790.22 - IMPAIRED GLUCOSE TOLERANCE, if one is found, it will display "`Problem List:`" with the date of onset if the date of onset was documented.

The system then looks at all of a patient's purpose of visits for code 790.22, if it finds one, it displays the dates of the earliest one found and the latest one found.

Metabolic Syndrome

The system first looks at the problem list for a documented problem with ICD Diagnosis code 277.7 - DYSMETABOLIC SYNDROME X, if one is found, it will display "`Problem List:`" with the date of onset if the date of onset was documented.

The system then looks at all of a patient's purpose of visits for code 277.7, if it finds one, it displays the dates of the earliest one found and the latest one found.

Other Abnormal Glucose

The system first looks at the problem list for a documented problem with ICD Diagnosis code 790.29 - OTHER ABNORMAL GLUCOSE, if one is found, it will display "`Problem List:`" with the date of onset if the date of onset was documented.

The system then looks at all of a patient's purpose of visits for code 790.29, if it finds one, it displays the dates of the earliest one found and the latest one found.

CMS Register Diagnoses

The system will display all diagnoses documented in the Pre-Diabetes register for this patient. The date of onset recorded will also display.

In addition, the system searches for a diagnosis of Diabetes on the problem list and in the purpose of visits recorded for the patient. If any are found they are displayed along with the date of the diagnosis.

An example output on audit sheet follows:

```
CLASSIFICATION (all that apply):
 1 IFG - No
 2 IGT - Yes
   Last POV in PCC: 790.22  Date: May 01, 2004
   First POV in PCC: 790.22  Date: Mar 17, 2004
 3 METABOLIC SYNDROME - No
OTHER ABNORMAL GLUCOSE (790.29) - No
CMS Register DX: May 01, 2004 IMPAIRED GLUCOSE TOLERANCE
PLEASE NOTE:  Diabetes is on the Problem list for this patient
PLEASE NOTE:  Diabetes has been used as a diagnosis in PCC: Apr 02, 2005
```

Figure 18-1: Sample of audit sheet output

4.15 Height

The last recorded height value and the date the height was taken.

Individual Audit

The height must have been recorded anytime prior to the audit date and is displayed along with the date the height was done.

Cumulative Audit

N/A.

4.16 Weight

The last three recorded weight values on a non-prenatal visit and the date the weight was taken.

Individual Audit

The weight must have been recorded prior to the audit date and not be on a visit on which one of the diagnoses was prenatal care.

Cumulative Audit

N/A (See BMI).

4.17 Waist Circumference

The last recorded Waist Circumference measurement on or before the audit date is displayed with the date recorded.

Individual Audit

The waist circumference value and date recorded are displayed.

Cumulative Audit

N/A.

4.18 Last Three BPs

The last three recorded Blood Pressure values and dates. BPs taken in the ER (ER Clinic) are skipped.

Individual Audit

The last three BPs, in the year prior to the audit date, that were taken on non-ER clinic visits are displayed.

Cumulative Audit

If the patient had three documented BPs they are used to determine Blood Pressure control in the cumulative audit.

4.19 Hypertension Documented

Is a diagnosis of hypertension documented? If hypertension is on the problem list or the patient has had at least three visits with a diagnosis of hypertension.

Individual Audit

A Yes or No is displayed.

Cumulative Audit

Used in the ACE Inhibitor tally.

4.20 Diet Instruction

Has diet instruction been given?

The values in the audit are listed below:

1	RD
2	Other
3	Both RD & Other
4	None
5	Refused

Logic

All visits in the year prior to the audit date are examined.

If there is a visit on which a DIETICIAN or NUTRITIONIST is the provider and no other visit with a diet patient education topic documented a value of 1 - RD is assigned. No further processing is done.

If there is a visit on which a DIETICIAN or NUTRITIONIST is the provider and another visit on which a patient education topic in the DM AUDIT DIET EDUC TOPICS taxonomy, a topic ending in "-N" or a topic ending in "-DT" is documented and the provider is not a dietician or nutritionist then the value is 3 - Both RD & OTHER. No further processing is done.

If there is a visit on which a patient education topic in the DM AUDIT DIET EDUC TOPICS taxonomy, a topic ending in "-N" or a topic ending in "-DT" is documented and no visit to a DIETICIAN or NUTRITIONIST then a 2 -Other is assigned. No further processing is done.

If a refusal of one of these education topics is documented the value is 5- Refused.

If none of the above is documented, the value is 4 – None

Individual Audit

The value calculated as described above is displayed.

Cumulative Audit

Percentages are calculated of who had diet instruction includes values 1-3. The percent (%) of the patients who refused is also displayed.

4.21 Exercise Instruction

Has exercise instruction been given?

The values in the audit are:

1 Yes 2 No 3 Refused

Logic

All visits in the year prior to the audit date are examined.

If there is a visit on which a patient education topic in the DM AUDIT EXERCISE EDUC TOPICS taxonomy, or any topic ending in "-EX" is documented then a 1 - Yes. No further processing is done.

All visits in the year prior to the audit date are examined for a POV of V65.41 and if one is found a `1 - Yes` is displayed.

If a refusal of one of these education topics is documented the value is 3- Refused.

If neither of the above is documented, the value is 2 - None

Individual Audit

The value calculated as described above is displayed.

Cumulative Audit

Percentages are calculated of who had exercise instruction includes value of 1. The percent (%) of the patients who refused is also displayed.

4.22 Tobacco Use

Tobacco use status of the patient. The tobacco use is determined in the following way:

- The last TOBACCO health factor recorded on or before the audit date is found.

This is done using the DM AUDIT TOBACCO HLTH FACTORS taxonomy. If the health factor contains the words "CURRENT" or "CESS" the patient is assumed to be a current user and a value of 1 - Current user is assumed, if any of the other TOBACCO health factors are recorded then a value of 2 - Not a current user is used.

- If no health factor has been recorded, the PCC problem list is scanned for smoking related diagnoses. If the diagnosis recorded is 305.13 - Tobacco Use in Remission then the patient is assumed to be 2- Not a current user. All other diagnoses fall into 1 - Current User.
- If no health factor and no smoking diagnosis is found on the problem list, all PCC purpose of visits in the year prior to the audit date are scanned. If any of the diagnoses is a smoking related diagnosis the same logic used in the problem list is used.
- The V Dental file is searched for documentation of ADA code 1320 in the year prior to the audit date. If it is found the value 1 - Current User is assigned.
- If none of the above is found, a 3 - Not documented is used.

Individual Audit

The logic described above is used to display one of the following three statements:

1 Current User
2 Not a current user
3 Not Documented

Cumulative Audit

The logic above is used to tally tobacco use.

4.23 Referred for Cessation Counseling

Did the patient have cessation counseling?

Logic

12. A documented health factor that resides in the DM AUDIT CESSATION HLTH FACTOR taxonomy is searched for in the year prior to the audit date. If one is found the value is YES.
13. A documented Patient Education topic that resides in the DM AUDIT SMOKING CESS EDUC taxonomy is searched for in the year prior to the audit date. If one is found, a Yes is assumed.
14. A documented refusal of cessation patient education is searched for in the year prior to the date of the audit. If one is found then REFUSED is used as the value.

Individual Audit

If a health factor is found a YES and the date it was recorded is displayed.

If an education topic is found a YES and the date if was recorded is displayed.

If a refusal is found, the word Refused is displayed.

If none of the above, a No is displayed.

Cumulative Audit

If the patient is documented as a tobacco user (value of 1 in tobacco use) the number counseled (YES value), the number not counseled (NO or REFUSED value) are tallied in the cumulative audit. (There is not a separate tally of refused in the official 2001 audit.)

4.24 DM Therapy

All Visits in the six months prior to the audit date are reviewed. If any medication in the taxonomy specified is found, then an "X" is placed by the therapy name. If no medications are found then all documented medication refusals in the past year are reviewed to see if any med within any of the below listed taxonomies was refused. If it was an X is placed beside item 9 - Unknown/Refused. If no medications or refusals are found then the Diet & Exercise Alone item is marked with an X.

We are unable to calculate the Unknown/Refused group.

Therapy	Taxonomy Name
Sulfonylurea	DM AUDIT SULFONYLUREA DRUGS
Metformin	DM AUDIT METFORMIN DRUGS
Acarbose	DM AUDIT ACARBOSE DRUGS
Glitazones	DM AUDIT TROGLITAZONE DRUGS

Individual Audit

Each therapy found will have an X next to it. If a refusal is found the Unknown/Refused column will have an X next to it. If none are found, then the X is placed beside Unknown/Refused.

Cumulative Audit

The patient is put in the appropriate category depending on what therapies are found:

Metformin	If metformin is found.
Acarbose	If Acarbose is found.
Glitazone	If glitizones found.
Sulfonylurea	If sufonylurea is found.
Unknown/Refused	If no meds are found or a refusal is found.

4.25 ACE Inhibitor

If any drug in the DM AUDIT ACE INHIBITORS taxonomy has been prescribed in the six months prior to the audit date a `Yes` is displayed. If any of the drugs in the DM AUDIT ACE INHIBITORS taxonomy is documented as refused then it is counted as *Refused*. A not medically indicated documentation is considered a No.

If none of the above criteria is met, a No is displayed.

Individual Audit

A yes, no or refused is displayed.

Cumulative Audit

Used in the calculation of those with Hypertension and those with proteinuria.

4.26 Aspirin/Anti-Platelet Therapy

If any drug in the DM AUDIT ASPIRIN DRUGS taxonomy has been prescribed in the year prior to the audit date, the term "`Aspirin`" is displayed. If a drug in the DM AUDIT ANTI-PLATELET DRUGS taxonomy is prescribed the term "`Other`" is displayed. If both are prescribed the term "`Both`" is displayed. If a refusal is on file the term "`Refused`" is displayed.

Otherwise, a `No` is displayed.

Cumulative Audit

Used in the calculation of those Daily Aspirin Therapy totals. Only the Yes and No are calculated. We cannot calculate the "Undetermined" category.

4.27 Lipid Lowering Agent

If any drug in the DM AUDIT LIPID LOWERING DRUGS or DM AUDIT STATIN DRUGS taxonomy has been prescribed in the six months prior to the audit date the following values will be displayed:

1	Statin
2	Other
3	Both

If a refusal of any drug within the above mentioned taxonomies is documented the value `5- Refused` is displayed. Otherwise, a `No` is displayed.

Cumulative Audit

Used in the calculation of those with TOTAL CHOLESTEROL >=240 (if total cholesterol is documented and result can be determined.) Used in the calculation of those with LDL cholesterol > 100 (if LDL is documented and LDL value can be determined).

4.28 EKG

The date of the last EKG before the audit date. EKG is searched for the following ways:

ECG Summary in the V DIAGNOSTIC PROCEDURE file. (This is populated by the EKG mnemonic in data entry).

ICD OPERATION/PROCEDURE codes 89.51, 89.52 or 89.53

CPT Codes: 93000-93024, 93040-93042, 93224-93237, 93268-93268, 93270-93272, 93278-93278

Individual Audit

The date of last EKG is displayed

Cumulative Audit

The date is used to determine the percent (%) performed in past three years, past five years, and ever.

4.29 Fasting Glucose

The last Fasting Glucose test in the V LAB file are found. The taxonomy used to find these tests is the DM AUDIT FASTING GLUCOSE TESTS lab taxonomy. If no test in that taxonomy is found, then the V LAB file is searched for a LOINC code in the DM AUDIT FASTING GLUC LOINC code taxonomy.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

A tally of those with a fasting glucose test and those without will be displayed.

4.30 75 GM 2 Hour Glucose

The last lab test in the year prior to the audit date that is a member of the DM AUDIT 75GM 2HR GLUCOSE taxonomy is found in V LAB. If no test in that taxonomy is found, then the V LAB file is searched for a LOINC code in the DM AUDIT 75GM 2HR LOINC code taxonomy.

Individual Audit

The date of the test and the result are displayed.

Cumulative Audit

A tally of those who had the test done and those who did not is displayed.

4.31 Total Cholesterol

The last lab test in the year prior to the audit date that is a member of the DM AUDIT TOTAL CHOLESTEROL TAX taxonomy is found in V LAB. If no test in that

taxonomy is found, then the V LAB file is searched for a LOINC code in the BGP CHOLESTEROL LOINC code taxonomy.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *or* the first digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled" it will fall into Unable to Determine.

Desirable	(<200 mg/dl)
Borderline	(200-239 mg/dl)
High	(240 mg/dl or more)
Unable to determine result	
Not tested	

4.32 HDL Cholesterol

The last lab test in the year prior to the audit date that is a member of the DM AUDIT HDL CHOLESTEROL TAX taxonomy is found in V LAB. If no test in that taxonomy is found, then the V LAB file is searched for a LOINC code in the BGP HDL LOINC codes taxonomy.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *or* the first digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled" it will fall into unable to determine.

HDL <35 mg/dl
HDL 35-45 mg/dl
HDL 46-55 mg/dl
HDL >55
Unable to determine result
Not tested

4.33 LDL Cholesterol

The last lab test in the year prior to the audit date that is a member of the DM AUDIT LDL CHOLESTEROL TAX taxonomy is found in V LAB. If no test in that

taxonomy is found, then the V LAB file is searched for a LOINC code in the BGP LDL LOINC codes taxonomy.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *OR* the first digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled" it will fall into unable to determine.

LDL <100 mg/dl
LDL 100-129 mg/dl
LDL 130-160 mg/dl
LDL >160
Unable to determine result
Not tested

4.34 Triglycerides

The last lab test in the year prior to the audit date that is a member of the DM AUDIT TRIGLYCERIDES TAX taxonomy is found in V LAB. If no test in that taxonomy is found, then the V LAB file is searched for a LOINC code in the BGP TRIGLYCERIDE LOINC codes taxonomy.

Individual Audit

The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit

The result of the test is examined and is put into the following categories. If the result is blank *or* the first digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled" it will fall into Unable to Determine.

TG <150 mg/dl
TG 150-199 mg/dl
TG 200-400 mg/dl
TG >400 mg/dl
Unable to determine result
Not tested

TABLE OF CONTENTS

A.0 Appendix A: Bulletin System for Notification of Newly Diagnosed Patients 1

B.0 Appendix B: Word Processing Commands 4

C.0 Appendix C: Suggested ICD-9 Codes for Complications of Diabetes 6

D.0 Appendix D: Diabetes Patient Care Supplement Criteria 9

E.0 Appendix E: Patient Education Topics 16

E.1 Generic Documentation 16
E.2 The New IHS Diabetes Mellitus Education Curriculum 17

F.0 Appendix F: Sample Size Calculations for Audit 21

G.0 Appendix G: Visual DMS 24

G.1 Getting Started 24
G.2 Toolbar Options 27
Select Patient 27
Delete Patient 29
Switch Register 29
Report Status 29
Exit System 30
About 30
G.3 Menu Options 30
G.4 Patient Management 31
G.4.1 Patient Profile 32
G.4.2 Complications 34
G.4.3 Comments 34
G.4.4 Health Summary 35
G.4.5 Last Visit 36
G.4.6 Other PCC Visit 36
G.4.7 Medications 37
G.4.8 Diabetes Medications 37
G.4.9 Review Appointments 37
G.4.10 Audit Status 38
G.4.11 Flow Sheet 38
G.4.12 Case Summary 39
G.4.13 Update Problem List 39
G.4.14 Lab Profile 43
G.4.15 Diabetes Lab Profile 44
G.4.16 Face Sheet 44
G.4.17 Diagnosis 44
G.4.18 Graph Patient Data 45
G.4.19 Patient Labs 47
G.5 Reports 49
G.5.1 Follow Up Needed 49
G.5.2 List Patient Appointments 53

G.5.3 Register Reports 54
G.5.4 Blood Glucose Self Monitoring Report 55
G.6 Register Maintenance 57
G.6.1 Taxonomy Setup 57
G.6.2 User Setup 59
G.6.3 Add Patients from Template 60
G.6.4 Complications List 61
G.7 Diabetes QA Audit 64
G.7.1 2006 Diabetes Program Audit 65
G.7.2 Check Taxonomies for the 2006 DM Audit 67
G.7.3 Update/Review Taxonomies for 2006 DM Audit 68
G.7.4 Run the 2006 Audit with Predefined Set of Patients 68
G.7.5 Run 2006 Pre-Diabetes/Metabolic Syndrome Audit 70
G.7.6 Update/Review Taxonomies for 2006 Pre-Diab Audit 73
G.7.7 2005 Diabetes Program Audit 73
G.7.8 2003 Diabetes Program Audit 73
G.7.9 Patients with No DX of DM on Problem List 74
G.7.10 DM Register Patients with No Recorded DM Onset 75
G.7.11 List Patients on a Register with an Appointment 76
G.7.12 DM Register Patients and Select Values in 4 Months 77
G.7.13 Print Health Summary for DM Patients with Appointment 79
G.8 Update Patient Data 80
G.9 Health Summary 90

H.0 Contact Information 91

A.0 Appendix A: Bulletin System for Notification of Newly Diagnosed Patients

The RPMS MailMan system can be used for generating bulletins to members of a Diabetes Team so that newly diagnosed diabetic patients, those with new complications, those with abnormal fasting glucose values, or those with abnormal 2-hour glucose tolerance test results are not lost to follow-up. The bulletins are added automatically to the facility Bulletin file during installation of the PCC Management Reports Package. The bulletins are as follows:

- APCL DIABETES REG COMPLICATION
- APCL DIABETES REG NEW CASE
- APCL IFG NOTIFICATION *(Note: You must have Fasting Glucose lab tests added as members to the DM AUDIT FASTING GLUCOSE lab test taxonomy.)*
- APCL IGT NOTIFICATION *(Note: You must have the 2 Hr Post 75 Gm Glucose test added as a member to the DM AUDIT 75GM 2HR GLUCOSE lab test taxonomy.)*

Please seek assistance from your local or area IS staff if you do not have FileMan security to set up a new Mail Group, Add Members, and add that Mail Group to the PCC Management Reports Bulletins.

> **Note:** It is currently recommended that only the bulletins for patients newly diagnosed with Diabetes, IGT, or IFG be set up. If the complications on the complication list have been appropriately linked to ICD-9 codes as described in this manual, the patients on the Diabetes Register will automatically be updated with their complications via provider POV recording and data entry coding.

A Mail Group for the Diabetes Team may already exist on your system. If not, one may be set up as illustrated in the following screen example.

```
VA Fileman Version 21.0

Select VA FileMan Option: Enter or Edit File Entries

INPUT TO WHAT FILE: MAIL GROUP//
EDIT WHICH FIELD: ALL//
Select MAIL GROUP NAME: DIABETES TEAM
Are you adding 'DIABETES TEAM' as a new MAIL GROUP (the 17TH)? No// Y  (Yes)
   MAIL GROUP COORDINATOR: USER,DAVID K          DKR
Select MEMBER: USER,BETTY          BM
  Are you adding 'USER,BETTY' as a new MEMBER (the 1ST for this MAIL GROUP)?
No// Y  (Yes)
Select MEMBER: USER,DAVID K
Are you adding 'USER,DAVID' as a new MEMBER (the 2ND for this MAIL GROUP)?
No// Y  (Yes)
DESCRIPTION:
  No existing text
  Edit? NO//Y
==[ WRAP ]==[ INSERT ]=====< DESCRIPTION >======[ <PF1>H=Help ]====
THIS GROUP RECEIVES BULLETINS FOR NEWLY DIAGNOSED DIABETICS AND THOSE WITH
NEW COMPLICATIONS.

TYPE: PRIVATE
ORGANIZER: USER,DAVID K
COORDINATOR: USER,DAVID K
Select AUTHORIZED SENDER:
ALLOW SELF ENROLLMENT?: NO
REFERENCE COUNT:
LAST REFERENCED:
RESTRICTIONS: 0
```

Figure A-1: Setting up a mail group for the Diabetes team

Additional entries to the Mail Group may be made for Remote Members outside the local facility but will require assistance from the IHS National Mailman Coordinator.

Once the Mail Group and Members have been defined, all that remains is assigning this mail group to the desired APCL Bulletins, as shown in the following example.

```
VA Fileman Version 21.0

Select VA FileMan Option: Enter or Edit File Entries

INPUT TO WHAT FILE: BULLETIN
EDIT WHICH FIELD: ALL// [ENT]


Select BULLETIN NAME: APCL
     1   APCL DIABETES REG COMPLICATION
     2   APCL DIABETES REG NEW CASE
CHOOSE 1-2: 2  APCL DIABETES REG NEW CASE
NAME: APCL DIABETES REG NEW CASE  Replace
SUBJECT: DM NEW CASE// [ENT]
Select MAIL GROUP: DIABETES TEAM   ROSS,DAVID K
Are you adding 'DIABETES TEAM' as a new MAIL GROUP (the 1ST for this
BULLETIN)
? No// Y
Select MAIL GROUP:
DESCRIPTION:
This bulletin will be sent to diabetes control officer when a patient is seen
for the first time for a dm diagnosis

  Edit? NO//
MESSAGE:. . .
       . . .
was seen on |3| at |15|
with the following diagnosis:
     ICD9 Code: |1|  ICD Description: |8|
     Provider Stated: |4|
 This is the first time that this patient has been seen for the
diabetes diagnosis listed above.  This patient/visit may require
your follow-up.  Please review the patient's medical record at your
earliest convenience for further information.

  Edit? NO// [ENT]
```

Figure A-2: Assigning a mail group to the desired APCL Bulletins

Repeat the process for the bulletins, APCL DIABETES REG COMPLICATION, APCL IFG NOTIFICATION, and APCL IGT NOTIFICATION.

To be sure that the bulletin system works correctly, add a new diabetic complication as a Purpose of Visit to a DEMO, PATIENT in your facility database. If the Mail Groups and Bulletins have been set up correctly, you should see, within a few minutes of entering the complication as a Purpose of Visit, a notice that you have a new mail message when signing on to RPMS.

B.0 Appendix B: Word Processing Commands

Listed are the commands used in the ScreenMan word processing fields. These commands may be accessed at any time in the word processing screen by pressing F1 (PF1 on some keyboards) followed by the H key.

SUMMARY OF KEY SEQUENCES

Navigation

Incremental movement	Arrow keys
One word left and right	<Ctrl-J> and <Ctrl-L>
Next tab stop to the right	<Tab>
Jump left and right	<PF1><Left> and <PF1><Right>
Beginning and end of line	<PF1><PF1><Left> and <PF1><PF1><Right>
Screen up or down	<PF1><Up> and <PF1><Down> or: <PrevScr> and <NextScr> or: <PageUp> and <PageDown>
Top or bottom of document	<PF1>T and <PF1>B
Go to a specific location	<PF1>G

Exiting/Saving

Exit and save text	<PF1>E
Quit without saving	<PF1>Q
Exit, save, and switch editors	<PF1>A
Save without exiting	<PF1>S

Deleting

Character before cursor	<Backspace>
Character at cursor	<PF4> or <Remove> or <Delete>
From cursor to end of word	<Ctrl-W>
From cursor to end of line	<PF1><PF2>
Entire line	<PF1>D

Settings/Modes

Wrap/nowrap mode toggle	<PF2>
Insert/replace mode toggle	<PF3>
Set/clear tab stop	<PF1><Tab>
Set left margin	<PF1>,
Set right margin	<PF1>.
Status line toggle	<PF1>?

Formatting

Join current line to next line	<PF1>J
Reformat paragraph	<PF1>R

Finding

Find text	<PF1>F or <Find>
Find next occurrence of text	<PF1>N
Find/Replace text	<PF1>P

Cutting/Copying/Pasting

Select (Mark) text	<PF1>M at beginning and end of text
Unselect (Unmark) text	<PF1><PF1>M
Delete selected text	<Delete> or <Backspace> on selected text
Cut and save to buffer	<PF1>X on selected text
Copy and save to buffer	<PF1>C on selected text
Paste from buffer	<PF1>V
Move text to another location	<PF1>X at new location
Copy text to another location	<PF1>C at new location

C.0 Appendix C: Suggested ICD-9 Codes for Complications of Diabetes

1. ASHD
   Code(s): 414.00
2. CAD
   Code(s): 414.00
3. CONGESTIVE HEART FAILURE
   Code(s): 428.0
4. CVA (STROKE)
   Code(s): 436.
5. END STAGE RENAL DISEASE
   Code(s): 585.6
6. CHRONIC KIDNEY DISEASE
   Codes: 585.1 CHRONIC KIDNEY DISEASE STAGE I
   CHRONIC KIDNEY DISEASE, STAGE I
   585.2 CHRONiC KIDNEY DISEASE STAGE 2 MLD
   585.3 CHRONiC KIDNEY DISEASE STAGE 3 MOD
   585.4 CHRONIC KIDNEY DISEASE STAGE 4 SVR
   585.5 CHRONIC KIDNEY DISEASE STAGE V
   585.9 CHRONIC KIDNEY DISEASE, UNSPEC
7. FIXED PROTEINURIA
   Code(s): 791.0
8. GLAUCOMA
   Code(s): 365.10, .11, .12, .13, .14, .15 – Open-angle glaucoma
   365.20, .21, .22, .23, .24 – Primary angle-closure glaucoma
   365. 31, .32 – Corticosteriod-induced glaucoma
   365.41, .42, .43, .44 – Glaucoma assoc. w/congenital anomalies, dystrophies, and systemic syndromes
   365.51, .52, .59 – Glaucoma assoc. w/disorders of the lens
   365.60, .61, .62, .63, .64, .65 – Glaucoma assoc. w/other ocular disorders
   365.81, .82, .89 – Other specified forms of glaucoma
   365.9 – Unspecified glaucoma (code most commonly used when no other specificity)
   Exclude the following codes because they are “borderline/suspect” glaucoma codes: 365.00, .01, .02, .03, .04
9. HIGH RISK FOOT – No code for this narrative. Please provide condition(s) for a high risk foot.
10. HYPERLIPIDEMIA
    Code(s): 272.0, .1, .2, .3, *.4, .5, .6, .7, .8, .9 – Disorders of lipoid metabolism
    *Code most commonly used when no other specificity
11. HYPERTENSION
    Code(s): 401.0, .1, *9

*Code most commonly used when no other specificity

12. IMPOTENCE
    Code(s): 302.72, 607.84
13. LASER TX FOR RETINOPATHY – This is a procedure.
14. MAJOR AMPUTATION(S) – Please define major. See ICD listing of status amputation codes
15. MINOR AMPUTATIONS – Please define minor. Same as 13 above.
16. MYOCARDIAL INFARCTION
    Code(s): 410.0, .1, .2, .3, .4, .5, .6, .7, .8, *.9, and each with a 5th-digit of 0, 1, and 2
    *Code most commonly used when no other specificity
17. NEPHROPATHY
    Code(s): 583.0, .1, .2, .4, .6, .7, .81, .89, *.9
    *Code most commonly used when no other specificity
18. NEUROPATHY
    Code(s): 354.0, .1, .2, .3, .4, .5, .8, .9
    355.0, .1, .2, .3, .4, .5, .6, .71, .79, .8, *.9
    *Code most commonly used when no other specificity

    Exclude the following codes:
    356 – Hereditary and idiopathic peripheral neuropathy
    357 – Inflammatory and toxic neuropathy
19. PERIPHERAL VASCULAR DISEASE
    Code(s): 443.0, .1, .81, .89. *9
    *Code most commonly used when no other specificity
20. RETINOPATHY
    Code(s): 362.01, .02, *.10, .11, .12
    362.21, .29, .41
    *Code most commonly used when no other specificity

21. AMPUTATION STATUS CODES

1: V49.60 (UPPER LIMB AMP STATUS,NOS)
UNSPECIFIED LEVEL UPPER LIMB AMPUTATION STATUS
2: V49.61 (THUMB AMPUTATION STATUS) *
THUMB AMPUTATION STATUS
3: V49.62 (FINGER(S) AMPUTATION STATUS) *
OTHER FINGER(S) AMPUTATION STATUS
4: V49.63 (HAND AMPUTATION STATUS)
HAND AMPUTATION STATUS
5: V49.64 (WRIST AMPUTATION STATUS)
WRIST AMPUTATION STATUS
6: V49.65 (BELOW ELBOW AMPUTATION STATUS)
BELOW ELBOW AMPUTATION STATUS
7: V49.66 (ABOVE ELBOW AMPUTATION STATUS)
ABOVE ELBOW AMPUTATION STATUS

8: V49.67 (SHOULDER AMPUTATION STATUS)
SHOULDER AMPUTATION STATUS
9: V49.70 (LOWER LIMB AMP STATUS,NOS)
UNSPECIFIED LEVEL LOWER LIMB AMPUTATION STATUS
10: V49.71 (GREAT TOE AMPUTATION STATUS) *
GREAT TOE AMPUTATION STATUS
11: V49.72 (OTHER TOE(S) AMPUTATION STATUS) *
OTHER TOE(S) AMPUTATION STATUS
12: V49.73 (FOOT AMPUTATION STATUS)
FOOT AMPUTATION STATUS
13: V49.74 (ANKLE AMPUTATION STATUS)
ANKLE AMPUTATION STATUS
14: V49.75 (BELOW KNEE AMPUTATION STATUS)
BELOW KNEE AMPUTATION STATUS
15: V49.76 (ABOVE KNEE AMPUTATION STATUS)
ABOVE KNEE AMPUTATION STATUS
16: V49.77 (HIP AMPUTATION STATUS)
HIP AMPUTATION STATUS

D.0 Appendix D: Diabetes Patient Care Supplement Criteria

The following table describes each item on the Health Summary Diabetes Patient Care Supplement and how the system determines the value displayed.

Audit Item	Description	How Data Is Obtained from PCC
Report Date	Date Health Summary was generated,	Date Health Summary was generated
AGE	Age of patient in years on the date the summary was generated.	Age of patient in years on the date the summary was generated.
SEX	Gender of patient.	Male or Female.
Date of DM Onset	Date of Diabetes Onset.	First, the system looks for a Register in the Case Management system called "IHS DIABETES". If one exists, then the system will look for this patient and get the date of onset from the date of onset field of the register. If none exists then the PCC Problem list is scanned for all problems in the 250.00-250.93 range. For each problem on the list in the range the date of onset is picked up. The earliest of all the dates of onset found is used. The system also displays where the date of onset was found.
DOB	Patient's DOB.	Patient's DOB from Patient Registration.
Primary Care Provider	Name of the Primary Care Provider.	The name of the Primary Care Provider from PCC.
Last Height	The last height in inches and the date of the last height.	The last height value in inches and the date of the last height recorded in PCC is displayed.
Last Weight	The last weight in pounds and the date of the last weight.	The last weight value in pounds and the date of the last weight recorded in PCC is displayed.
BMI	Using the last height and weight, the BMI is calculated.	The system uses the last height and weight found (regardless of how old they are) to calculate the BMI. For patients under 19 the height and weight must be on the same date. If either the last height or weight is blank, the BMI is not calculated.
Tobacco Use	Tobacco Use. Values: YES, USES	The system looks for the last documented Tobacco related health factor. If one is found, it is displayed. If none is found, the PCC

Audit Item	Description	How Data Is Obtained from PCC
	TOBACCO, NO, DOES NOT USE TOBACCO, PAST USE OF TOBACCO and UNDOCUMENTED.	problem list is scanned for a diagnosis of 305.1-305.13 or V15.82. If the diagnosis found is 305.13 then PAST USE OF TOBACCO is displayed, otherwise, YES, USES TOBACCO is displayed. If no health factor or diagnosis is found, then UNDOCUMENTED is displayed.
HTN Diagnosed	Has Hypertension been diagnosed? Yes or No.	The PCC Problem is checked for a diagnosis of Hypertension (401.0-405.99). If found, a Yes is displayed. If none found, then the PCC Purpose of Visits are scanned and if at least 3 diagnoses of HTN are found, then a yes is displayed. In all other cases, a NO is displayed.
ON ACE Inhibitor/ARB in past 6 months	Any documentation of an ACE Inhibitor or ARB prescribed through Pharmacy in the past 6 months.	All PCC V Medication entries with visit dates in the last 6 months prior to the run date of the summary, are scanned for a drug with a class of CV800 or CV805 or one that exists in the DM AUDIT ACE INHIBITORS taxonomy. The last one found is used. If none are found, then a NO is displayed. If the V Medication found does NOT have a date discontinued value then a YES with the date of the visit is displayed. If the V Medication entry found HAS a date discontinued then the term DISCONTINUED is displayed with the date of that Visit.
Aspirin Use (in past year)	If aspirin has been prescribed in the past year, a Yes and the date of the prescription and the name of the drug will display.	All PCC V Medication entries with dates in the year prior to the run date of the summary are scanned for drugs in the DM AUDIT ASPIRIN DRUGS taxonomy. The last one found is used. If none are found, then a *NO* is displayed. If the V Medication found does *not* have a date discontinued value then a YES with the date of the visit and name of the drug is displayed. If the V Medication entry found HAS a date discontinued then the term DISCONTINUED is displayed with the date of that Visit and the name of the drug.
Last 3 BP Values	The last 3 BP values for non-Emergency Room clinic visits area displayed.	The last 3 BP values for non-Emergency Room clinic visits are displayed.
Diabetic Foot Exam	Documentation of a Diabetic Foot Exam in	The system looks for the last documented Diabetic Foot Exam in the patient's computer record. If that exam was done in the year prior

Audit Item	Description	How Data Is Obtained from PCC
	the past 12 months.	to the date of the summary then a Yes with the date is displayed. No further processing is done. If the date of the documented foot exam was over a year ago, or there was not one recorded ever, then all PCC Visits in the past year are scanned for a non-DNKA visit to a Podiatrist (33 or 25) or to Podiatry Clinic (65). If found, the date of the visit and an indication of whether it was to a podiatrist or podiatry clinic is displayed. If none of the above are found, then the refusals file is checked for documentation of a patient refusal of a diabetic footexam. If found, a note indicating the refusal is displayed.
Diabetic Eye Exam	Documentation of a Diabetic Eye Exam in the past 12 months.	The system looks for the last documented Diabetic Eye Exam in the patient's computer record. If that exam was done in the year prior to the date of the summary then a Yes with the date is displayed. No further processing is done. If the date of the documented eye exam was over a year ago, or there was not one recorded ever, then all PCC Visits in the past year are scanned for a non-DNKA, non-Refraction visit to an Optometrst or Opthamologist (24, 79, 08) or an Optometry or Opthamology Clinic (17 or 18). If found, the date of the visit and an indication of whether it was to the provider or clinic is displayed. If none of the above are found, then the refusals file is checked for documentation of a patient refusal of a diabetic eye exam. If found, a note indicating the refusal is displayed.
Dental Exam	Was a dental exam done during the year prior to the end of the time frame?	The system checks for any visit in the year prior to the date the summary was run for a documentation of exam code 30 (Dental Exam) or any visit to a dentist (52) or dental clinic (56 or 99). The visits must not be DNKA's. If none of the above are found, then the refusals file is checked for documentation of a patient refusal of a dental exam. If found, a note indicating the refusal is displayed.

Audit Item	Description	How Data Is Obtained from PCC
Pap Smear	Females Only. Date of the Last Pap Smear.	For females only, the PCC database is scanned for the last documented PAP SMEAR. GPRA Logic for excluding women who have had a hysterectomy is used. The following PCC files are scanned: 1. V Lab is checked for a PAP SMEAR lab test in the BGP PAP Smear Lab Test taxonomy. 2. If the date of that Pap is within the past year, it is used. 3. The last diagnosis of V76.2 is found. 4. The last Procedure of 91.46 is found. 5. V Lab is checked for a LOINC Code in the BGP PAP Smear LOINC Code taxonomy. 6. The latest of the above dates is used. 7. If none is found, or the date is over 1 year ago, the refusals file is checked for a documented refusal of the PAP SMEAR lab test. If one is found, a note indicating the refusal is displayed.
Last Mammogram Date	Date of the last documented Mammogram.	The PCC database is scanned for the last documented Mammogram. First the V Radiology file is scanned for a Mammogram procedure, then the V POV file is scanned for diagnosis V76.11 or V76.12 then the V Procedure file is scanned for procedure 87.37. The latest of those found is displayed. If the date found is over a year ago, the refusals file is checked for a documented refusal of the Mammogram V Radiology procedure. If one is found, a note indicating the refusal is displayed.
Self Monitoring of Blood Glucose	Self Monitoring of Blood Glucose	The system scans all V Medication entries in PCC for the past year for a drug that is in the DM AUDIT SELF MONITOR DRUGS taxonomy. The last one found is used. If it has a date discontinued then the term "Discontinued" is displayed with the date. If there is no date discontinued then the term "Yes – strips dispensed" and the date is displayed. If no entries are found for a self-monitoring drug, the V Health Factor file is scanned for the most recent Self Monitoring health factor. If none found then the term "No strips dispensed

Audit Item	Description	How Data Is Obtained from PCC
		through Pharmacy" is displayed.
DM Education Provided (in past yr), Last Dietician Visit	Was any DM Education provided? List last visit to Dietitian.	First, the last visit to a Dietitian (29 or 07) or Dietary Clinic (67) is found and the date is displayed with the provider narrative. DNKA and Chart Review visits are excluded. Then, all education topics that are Diabetes related and documented in the past year are displayed. The following taxonomies are utilized to find education topics: DM AUDIT DIABETES EDUC TOPICS DM AUDIT DIET EDUC TOPICS DM AUDIT EXERCISE EDUC TOPICS DM AUDIT OTHER EDUC TOPICS If the topic is in any of these taxonomies it is displayed. Then, the refusals file is scanned for any documentation of an education topic being refused by a patient. If found, a note indicating that refusal is displayed.
FLU Vaccine	Was a FLU vaccine since August 1st?	The system looks for the last Influenza Vaccine documented. If the current month is August, Sept, Oct, Nov or Dec the system checks to see if the flu shot was given since August 1st of the current year. If the Month is Jan-July then the system checks to see if the flu shot was given since August 1st of the previous year. If yes, then a YES and the date are displayed. If not, then a NO with the date of the last Flu vaccine is displayed. If the answer is no, the refusals file is checked to see if a refusal of a flu vaccine is documented. If so, a note indicating the refusal is displayed.
Pneumovax: Last 2	The last 2 pneumovax are displayed.	The system looks for the last 2 Pneumovax vaccines documented and the dates of each are displayed. If none are found, the refusals file is checked to see if a refusal of a pneumovax vaccine is documented. If so, a note indicating the refusal is displayed.
Td in past 10 years	Has a TD been given in the past 10 years?	The system looks for a Tetanus shot documented in the past ten years. A Yes, No and the date are displayed. If none are found, the refusals file is checked to see if a refusal of a Td is documented. If so, a note indicating the

Audit Item	Description	How Data Is Obtained from PCC
		refusal is displayed.
PPD Status	PPD Status	This item is displayed IF one of the following is found: 1. A documented TB Health factor. The phrase "Known Positive PDD/Hx of TB (Health Factor recorded)" is displayed. 2. A problem on the PCC Problem list with a TB diagnosis.(010.00-018.96, 137.0-137.4, 795.5, V12.01). The phrase "Known Positive PPD/Hx of TB (Problem List DX)" is displayed. 3. Any recorded PCC Purpose of Visit with the above diagnosis will result in the phrase "Known Positive PDD/Hx of TB (POV/DX and the date of the POV" is displayed.
Last PPD Reading	Last PPD reading	If the calculated PPD status as defined above is blank, then this item is displayed. The system scans the PCC database for a documented PPD. It looks for the last PPD recorded in the V Skin Test file and displays the reading and the date. If there is no reading, just the date is displayed. If none are found, then the PCC Purpose of Visits is scanned for a diagnosis of V74.1. If one is found, the date is displayed along with a phrase "(by Diagnosis)." If none are found, then the refusals file is scanned for a patient refusal of a PPD. If a refusal is documented, a note indicating such is displayed.
Last TB Health Factor	Last TB Health Factor.	The last TB Health Factor recorded is displayed.
Date of Last EKG	Date of the last EKG is displayed.	Date of last EKG is displayed. In addition to looking for an EKG entered via the EKG mnemonic, ICD procedures 89.51, 89.52, 89.53 are searched for.
Urine Protein	Last Urine Protein result and date is displayed.	The PCC V Lab file is scanned for a last test contained in the DM AUDIT URINE PROTEIN TAX lab taxonomy that has a result entered. If no test is found, the PCC V LAB file is searched for the last LOINC code in the DM AUDIT URINE PROTEIN LOINC CODES tax. If a test is found, the date and result are displayed.

Audit Item	Description	How Data Is Obtained from PCC
Microalbuminuria	Last Microalbumuria result and date are displayed.	The PCC V Lab file is scanned for a last test contained in the DM AUDIT MICROALBUMUNIA TAX lab taxonomy that has a result entered. If no test is found, the PCC V LAB file is searched for the last LOINC code in the DM AUDIT MICROALBUMIN LOINC CODES tax. The date and result are displayed.
HbA1c	Last HbA1c result and date are displayed.	The PCC V Lab file is scanned for a last test contained in the DM AUDIT HGB A1C TAX lab taxonomy that has a result. If no test is found, the PCC V LAB file is searched for the last LOINC code in the BGP HGBAIC LOINC CODES tax. The date and result are displayed.
Creatinine	Last Creatinine result and date are displayed.	The PCC V Lab file is scanned for a last test contained in the DM AUDIT CREATININE TAX lab taxonomy that has a result entered is found. If no test is found, the PCC V LAB file is searched for the last LOINC code in the BGP CREATININE LOINC CODES tax. The date and result are displayed.
Estimated GFR	Last Estimated GFR result and date are displayed.	The PCC V Lab file is scanned for a last test contained in the BGP ESTIMATED GFR TAX lab taxonomy that has a result. If no test is found, the PCC V LAB file is searched for the last LOINC code in the DM AUDIT ESTIMATED GFR LOINC CODES tax. The date and result are displayed.
LDL Cholesterol	LDL Cholesterol	The PCC V Lab file is scanned for a last test contained in the DM AUDIT LDL CHOLESTEROL TAX lab taxonomy that has a result. If no test is found, the PCC V LAB file is searched for the last LOINC code in the BGP LDL LOINC CODES tax. The date and result are displayed.
Triglycerides	Triglycerides	The PCC V Lab file is scanned for a last test contained in the DM AUDIT TRIGLYCERIDE TAX lab taxonomy that has a result entered. If no test is found, the PCC V LAB file is searched for the last LOINC code in the BGP TRIGLYCERIDE LOINC CODES tax. The date and result are displayed.

E.0 Appendix E: Patient Education Topics

There are two methods for documenting the diabetes education that is provided to patients:

- If you are providing Diabetes Education and your site is *not* using the IHS "Balancing Your Life and Diabetes" curriculum, the DM codes found in the main set of patient education codes should be used. The "generic" documentation of diabetes education.

- Only sites using the IHS "Balancing Your Life and Diabetes" should use the DMC (Diabetes Mellitis Curriculum) codes.

While documentation for both types of diabetes education is similar, "Balancing Your Life and Diabetes" requires knowledge of how to use and document the new IHS Diabetes Curriculum.

E.1 Generic Documentation

There are fifteen (15) Diabetes Education Topics from which you may choose when documenting the education provided. Note the following table.

Diabetes Complication Education	**DM-C**	Diabetes Follow-Up Education	**DM-FU**	Diabetes Medication Education	**DM-M**
Diabetes Disease Process Education	**DM-DP**	Diabetes Home Management Education	**DM-HM**	Diabetes Nutrition Education	**DM-N**
Diabetes Equipment Education	**DM-EQ**	Diabetes Kidney Disease Education	**DM-KID**	Diabetes Prevention Education	**DM-P**
Diabetes Exercise Education	**DM-EX**	Diabetes Patient Information Literature	**DM-L**	Diabetes Pain Management Education	**DM-PM**
Diabetes Foot Care Education	**DM-FTC**	Diabetes Life Style Adaptation Education	**DM-LA**	Diabetes Wound Care Education	**DM-WC**

Figure E-1: Table of diabetes Education topics

An explanation of the specific education Standards and Outcome for the above 15 education topics can be found in the IHS Patient Education Protocols and Code Manual. The IHS Patient Education Protocols and Code Manual can be found on the

www.ihs.gov website under the Health Education Program, National Patient Education Initiative.

E.2 The New IHS Diabetes Mellitus Education Curriculum

Mnemonic	Session Topic
DMC-DP	**Session One** Diabetes Disease Process -"*What is Diabetes?"* DM-DP 1-10 GS, GM, GNM
DMC-MSE	**Session Two** Diabetes –"Mind, Spirit and Emotion" DM-MSE 1-6 GS, GM, GNM
DMC-MSE	**Session Three** Diabetes Behavior Goals – "*Making Health Changes*" DM-MSE 1-4 GS, GM, GNM
DMC-N	**Session Four** Diabetes Nutrition – *"Basics of Healthy Eating"* DM-N 1-18 1) Section One: *"Introduction to Healthy Eating"* DM-N 1-5 2) Section Two: *"Basics of Healthy Eating"* DM-N 6-13 GS, GM, GNM 3) Section Three: *"Heart Healthy Eating"* DM-N 14-18 GS, GM. GNM
DMC-EX	**Session Five** Diabetes Exercise -*"Moving to Stay Healthy"* DM-EX 1-7 GS, GM, GNM
DMC-M **DMC-IN**	**Session Six** Diabetes Medicine: Oral Pills DM-M Section One: Overview DM-M1-6 Section Two: Oral Pills DM-M 7 Section Three: Diabetes Medicine: Insulin DM-IN 1-7 GS, GM, GNM
DM-BGM	**Session Seven** Diabetes – *"Home Blood Sugar Monitoring"* DM-BGM 1-10 GS, GM, GNM
DMC-ABC	**Session Eight** Diabetes – *"Know Your Numbers-ABC"* DM-ABC 1-13 GS, GM, GNM
DMC-AC	**Session Nine** Diabetes – *"Balancing Your Blood Sugar"* 1) Section One: *"Low Blood Sugar"* DM-AC 1-5 2) Section Two: "High Blood Sugar" AD-AC 6-10 3) Section Three: *"Sick Day Management"* DM-AC 11-13 GS, GM, GNM
DMC-CC	**Session Ten** Diabetes – 1) Section One: *Staying Health with Diabetes* DM – CC 1-6

Mnemonic	Session Topic
	2) Section Two: *Retinopathy* DM-CC 4-6 3) Section Three: *Heart Disease* DM-CC 7-9 4) Section Four: *Nephropathy* DM-CC 10-12 5) Section Five: *Neuropathy* DM-CC 13-15 6) Section Six: *Sexual Health* DM-CC 16-19 7) Section Seven: *Periodontal* DM-CC 20-22 8) Section Eight: *Summary* DM-CC 23-24 GS, GM, GNM
DMC-FTC	**Session Eleven** Diabetes - *Taking Care of your Feet* DM-FTC 1-9 GS, GM, GNM
DMC-PPC	**Session Twelve** Diabetes - *Preconception Care* DM-PPC 1-9 GS, GM, GNM

Figure E-2: Table of new Diabetes Mellitus Education Curriculum

An explanation of the specific education Standards and Outcome for the above 12 education topics can be found in the IHS Patient Education Protocols and Code Manual. The IHS Patient Education Protocols and Code Manual can be found on the www.ihs.gov website under the Health Education Program, National Patient Education Initiative.

The documentation of patient education may be documented in one of two areas on the PCC Form. Check with your Medical Records staff to determine where they would prefer that you enter the documentation of patient education.

The first option is to record the education provided in the box in the lower-right area of the PCC Form labeled Medications, Treatments, Procedures, Patient Education. The second option is to enter the patient education documentation under the Purpose of Visit Section (POV) providing there is sufficient remaining space under the POV section. If there is insufficient space at either of those locations on the PCC Form, get an unused PCC Form, write the appropriate identifying patient information on the additional PCC Form (name, birth date, chart number), and write the education provided on this additional form and submit to Medical Records with the original PCC Form. There are seven items that must be addressed in the correct documentation of diabetes patient education:

1. The mnemonic **PED** begins the documentation "string". PED = Patient Education.

2. The diagnosis of Diabetes Mellitus, i.e., DM

3. The appropriate education topic.

4. The patient's level of understanding (G=good, F=fair, P=poor, R=refused or Gp=Group No Assessment)

5. Record the Time spent providing the face-to-face education for each education topic, i.e., do not lump all education under one time slot – such as 30 minutes – unless you taught for 30 minutes on one subject.

6. The provider's initials,

7. And, if you are using the new Diabetes Education Curriculum, you should end the documentation with a Behavior Code: Goal Set-GS; Goal Met-GM; or, GNM-Goal Not Met.

These and other diabetes-specific recording procedures should be coordinated with your local PCC Data Entry staff to ensure proper entry of all information required in the Diabetes Management System.

When Data Entry records the education provided the following options require completion:

MNEMONIC: PED

PROVIDER:

LEVEL OF UNDERSTANDING:

INDIVIDUAL/GROUP:

LENGTH OF EDUC (MINUTES):

CPT CODE:

COMMENT:

BEHAVIOR CODE

MNEMONIC: PED Patient Education ALLOWED VISIT RELATED ONLY

You can enter education topics in two ways:

- Using the name of the topic (e.g. DM-N for Diabetes Nutrition education)
- Using an ICD Diagnosis for the topic diagnosis and enter a topic category

```
     Select one of the following:

          T         EDUCATION TOPIC
          D         DIAGNOSIS

Do you wish to enter a: T// T  EDUCATION TOPIC
Enter EDUCATION Topic: DM ?? (All DM Education topics will pop-up
alphabetically)
Enter EDUCATION Topic: N
     1   DM - Complication
     2   DM - Disease Process
     3   DM - Equipment
     4   DM - Exercise
     5   DM – Foot Care
Press <RETURN> to see more, '^' to exit this list, OR
CHOOSE 6-10:
Press <RETURN>
     6   DM – Follow-up
     7   DM – Home Management
     8   DM – Kidney disease
     9   DM – Patient Information Literature
   10   DM – Life Style Adaptation
Press <RETURN> to see more, '^' to exit this list, OR
CHOOSE 11-15:
Press <RETURN>
    11   DM – Medications
    12   DM – Nutrition
    13   DM – Prevention
    14   DM – Pain Management
    15   DM – Wound Care

PROVIDER:    Enter Provider's Name here.  (Facility Information then pops-up)
IHS     999     1A1999
  LEVEL OF UNDERSTANDING: ?
     Enter the number which best rates the patient's level of understanding.
     Choose from:
       1        POOR
       2        FAIR
       3        GOOD
       4        GROUP-NO ASSESSMENT
       5        REFUSED
  LEVEL OF UNDERSTANDING: 3  GOOD
  INDIVIDUAL/GROUP: I  INDIVIDUAL
  LENGTH OF EDUC (MINUTES): 13
  CPT CODE:
  COMMENT:
  BEHAVIOR CODE:  (Use only if using the new IHS Diabetes Education
Curriculum)
     Enter the Behavior Code number
Goal Set
Goal Met
Goal Unmet
```

Figure E-3: Entering and education topic

F.0 Appendix F: Sample Size Calculations for Audit

From Dr. Ray Shields, Audit Instructions, FY 2005.

Table 1 - Sample Size Calculations (see explanation below table)

Sample size needed to be 90% or 95% certain that the rate you find is within 10% or within 5% of the true rate, for populations up to 4000.

Population	**90% Certainty**		**95% Certainty**	
(# of DM Patients)	Within 10%	Within 5%	Within 10%>	Within 5%
<30	all	all	all	all
30	21	27	23	28
40	25	35	28	36
50	29	42	33	44
60	32	49	37	52
70	34	56	40	59
80	37	62	44	66
90	39	68	46	73
100	40	73	49	79
110	42	78	51	86
120	43	83	53	91
130	44	88	55	97
140	46	92	57	103
150	47	96	59	108
160	48	101	60	113
170	48	104	61	118
180	49	108	63	123
190	50	112	64	127
200	51	115	65	132
220	52	121	67	140
240	53	127	69	148
260	54	133	70	155
280	54	138	72	162
300	55	142	73	168
320	56	147	74	175
340	56	151	75	180
360	57	154	76	186

Population	90% Certainty		95% Certainty	
(# of DM Patients)	Within 10%	Within 5%	Within 10%>	Within 5%
380	57	158	77	191
400	58	161	77	196
420	58	165	78	201
440	59	168	79	205
460	59	170	79	209
480	59	173	80	213
500	60	176	81	217
525	60	179	81	222
550	60	181	82	226
575	61	184	82	230
600	61	186	83	234
650	61	191	84	241
700	62	195	84	248
750	62	199	85	254
800	62	202	86	260
900	62	208	87	269
1000	63	213	88	278
2000	65	238	92	322
3000	66	248	93	341
4000	67	253	94	350
	▲ Minimum number of charts recommended			

Figure F-1: Calculations table

The number of charts you will need to select depends on the number of active patients in your diabetes register.

The table above outlines the minimum number of charts you will need to audit to be reasonably sure (90% confident) that a 10% difference noted from a previous or subsequent audit is a real change and not just due to chance. If, for example, your facility has 1000 active patients with diabetes, you will need to audit a total of 63 charts.

The diabetes register will often include people who are not considered active patients of the clinic and thus do not need to be audited. These charts should be identified

early in the audit process and excluded. The following table outlines the charts which are to be included and excluded.

Table 2 - Patients to Include and Exclude in the Chart Audit

Include patients who: • Attend regular clinics or diabetes clinics. • Refuse care or have special motivational problems (e.g., alcoholism). • Are not attending clinic, but you do not know if they have moved or have found another source of care.
Exclude patients who: • Have not had at least one visit during the past 12 months. • Receive primarily referral or contract care, paid by IHS. • Have arranged other MD care, paid with non-IHS monies. • Receive their primary care at another IHS or Tribal health facility. • Live in a jail, and receive care there. • Live in a nursing home, and receive care there. • Attend a dialysis unit (if on-site dialysis not available). • Have gestational diabetes. • Have Pre-Diabetes (IFG or IGT) only. • Have moved -- permanently or temporarily (should be documented) • You are unable to contact, defined as 3 tries in 12 months (should be documented in the chart). • Have died.

Figure F-2: Sample of patients to include or exclude in audit

Keep in mind that unless your diabetes register is frequently updated, up to 10% of the people in the diabetes registry may not qualify to be included in the audit. To make sure you have an adequate sample at the end of the audit, increase the chart sample by at least 10%. In the example of 63 charts used above, this would mean an additional 6 charts, or a total of 69, would need to be pulled for the audit.

G.0 Appendix G: Visual DMS

A graphical user interface (GUI) or Windows-based version is available for the Diabetes Management System (DMS) software. The GUI version of the software contains most of the existing functionality of the traditional "roll and scroll" RPMS application, including patient management, register maintenance, running reports, and running the Diabetes Audit.

In order to avoid redundancy, this section only includes the steps for using the DMS GUI and does not include background information such as how to use the patient management list manager, setting up taxonomies, adding or deleting users, or running reports. This information is included in prior sections of this User Manual.

G.1 Getting Started

1. After the DMS GUI has been installed, a shortcut will be placed on the Windows desktop that is labeled "Visual DMS." Double click that icon to open the DMS GUI.

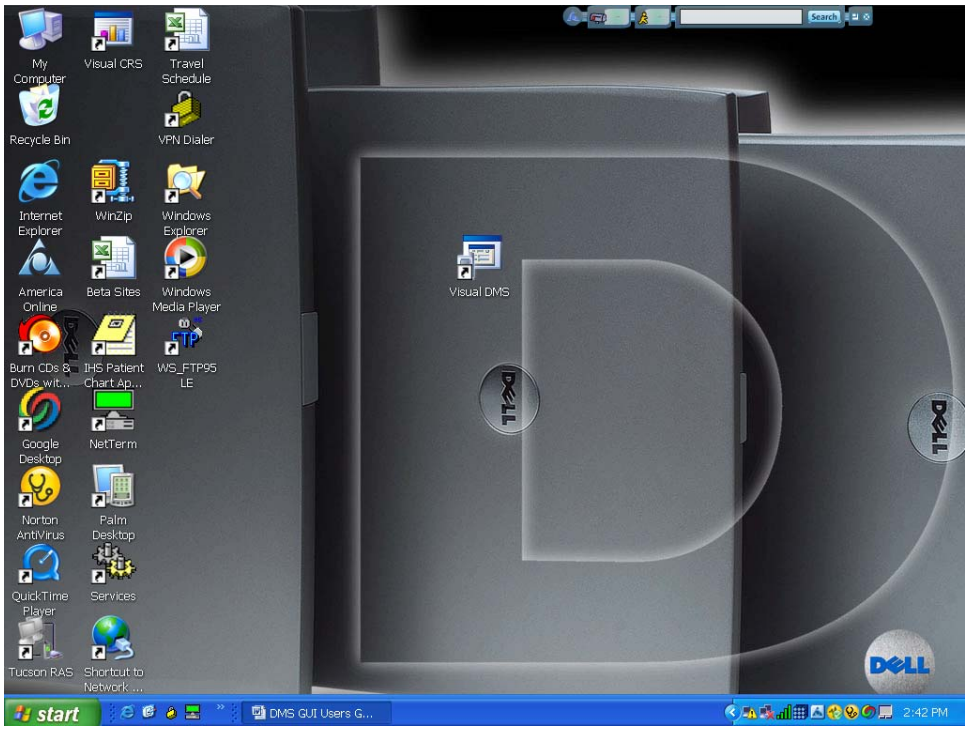

Figure G-1: Sample of a computer desktop

2. The program screen will display briefly before you are prompted to enter a RPMS server and port.

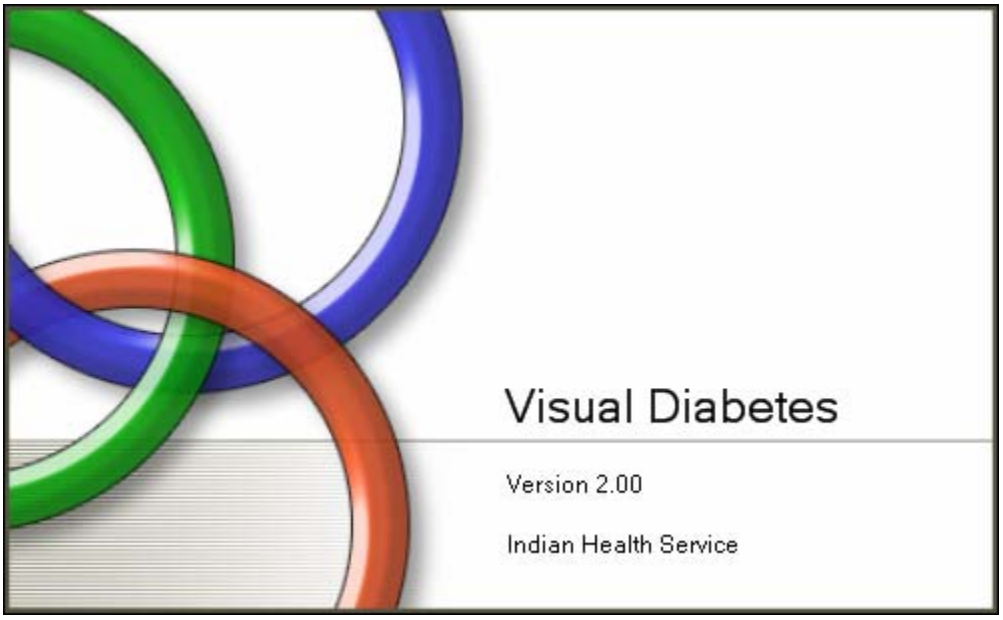

Figure G-2: Sample of program screen

3. On the RPMS server address screen, type the IP address of your RPMS server. Enter port number **10901**, which should have been assigned for this application when it was installed. Click **OK**.

Note: This information will be saved and will not need to be changed unless you change servers.

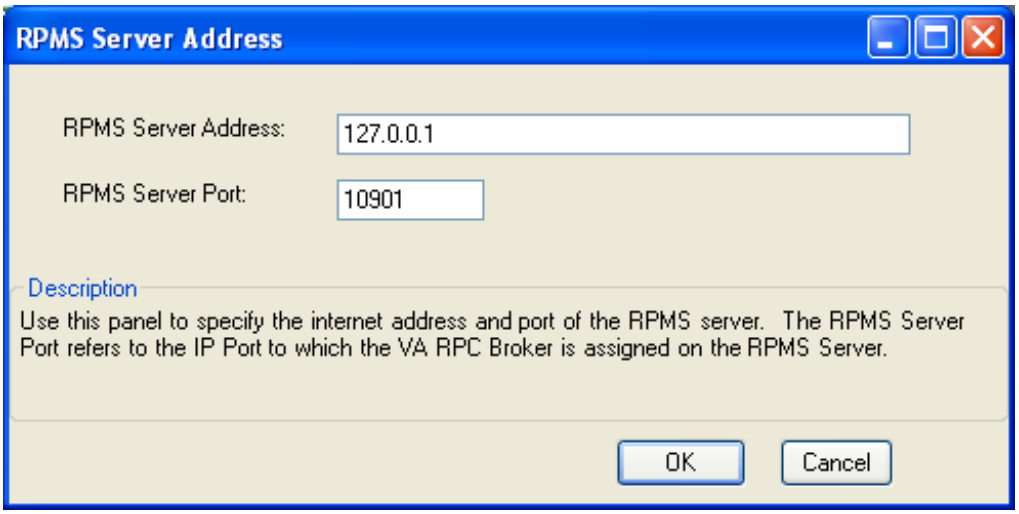

Figure G-3: Sample of screen used to enter server and port information

4. At the RPMS login window, type your RPMS Access Code and Verify Code. Click **OK**.

5. A list of registers for which you are an authorized user will be displayed. Click on the register that you wish to use.

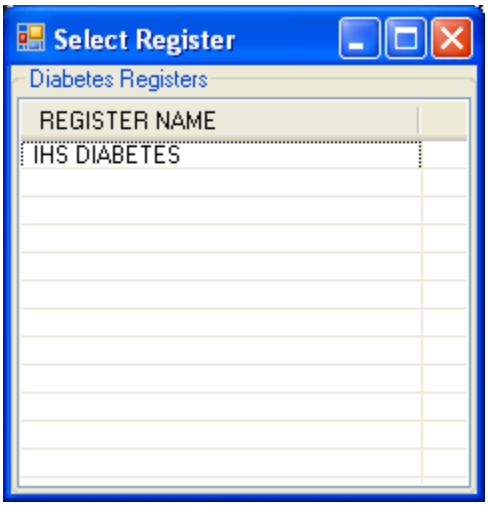

Figure G-4: Sample of screen used to select register

6. The Visual DMS window is displayed as shown in the following figure.

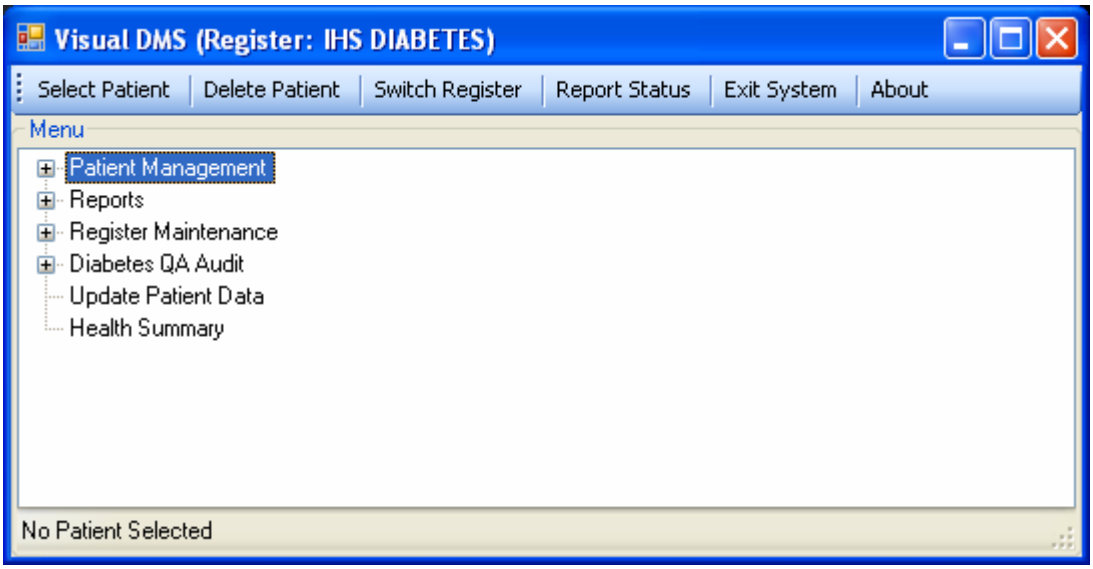

Figure G-5: Sample of VIsual DMS window

Once a register has been selected, you may begin using either the listed options or select from the toolbar at the top of the window. The name of the register which you are currently using is displayed in the title bar of the window.

The window may be enlarged either by clicking on the box in the upper right hand corner of the screen, or the mouse may be used to point at the lower right hand corner of the screen and by holding down the left mouse button, drag to resize the window.

A "+" in a box preceding a menu indicates that more menu options in that category may be displayed by clicking on the **+**.

G.2 Toolbar Options

There are six toolbar options and six main menu options. The six toolbar options are described below:

Select Patient

In order to use any of the Patient Management options, you may click on this toolbar button to select a patient. Patients may be entered by Last Name, First Name, Date of Birth, or Chart Number. If only a Last Name is entered you must click on **Display** to view a list of matching patients. If the list is too long to display on a single page, you may use the scroll bar or the **More** button to see additional names. The desired patient may be selected by clicking on that patient.

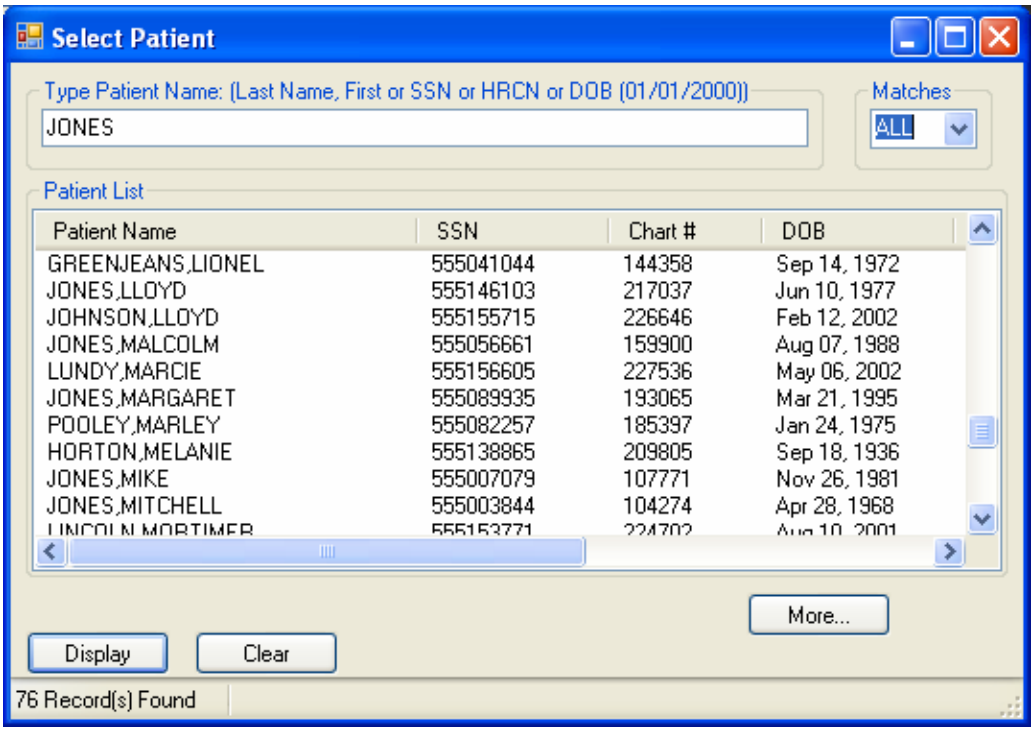

Figure G-6: Sample of screen used to select patient

If you select a patient that is not currently a member of the register, you will be asked if you wish to add the patient to the register. Click "**YES**" if you wish to add the patient to the register.

If you click on the toolbar button to Select Patient while working on another patient, a warning box will ask if you wish to switch patients. Click **YES** to switch, or click "**NO**" to continue working with the same patient.

The register that you are currently working with is always displayed in the blue bar at the top of the window and if you have a patient currently selected, that patient is displayed in the gray bar at the bottom of the window. See the following example.

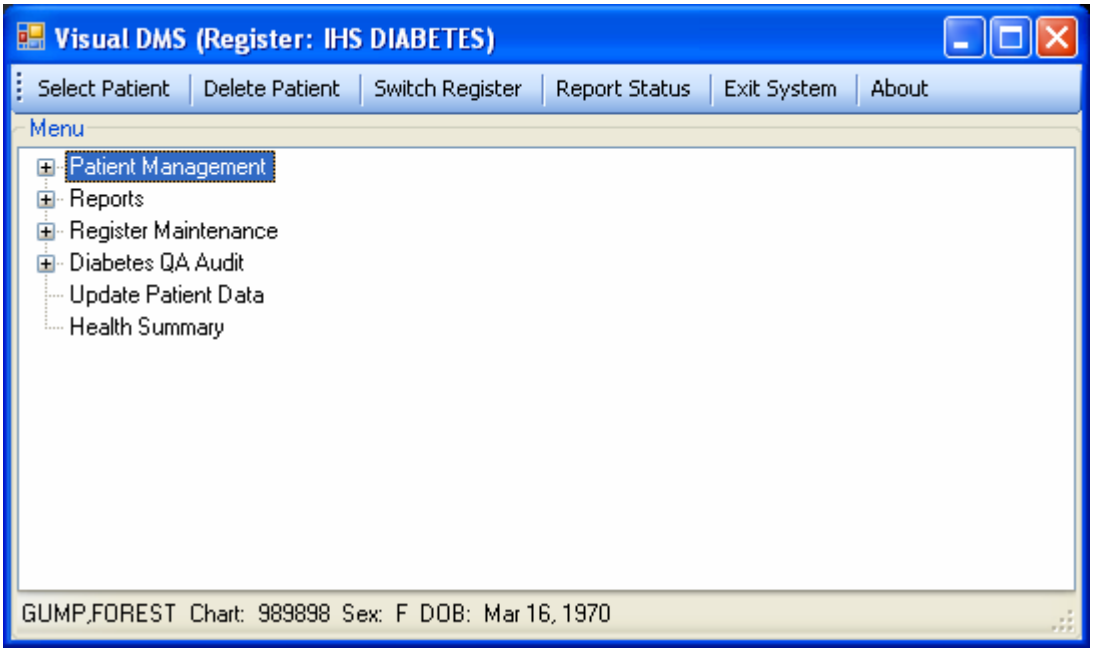

Figure G-7: Sample of Visual DMS screen showing currently selected regester highlighted

Delete Patient

A patient may be deleted from the register if he/she does not belong by clicking on the Delete Patient option. If you click on this option while working with a patient (name displayed in windows bar at bottom of screen), the program will assume that you wish to delete this patient. You may click on "**YES**" if you wish to delete this patient.

If no patient has been selected and you click on the Delete Patient option, you will be prompted to enter the Name (Last Name, First Name, Chart Number, or Date of Birth of the patient you wish to delete. When you click on the patient, he/she will be immediately deleted from the Register.

> **Warning:** Deletion is final and any register data associated with this patient will be deleted as well.

Switch Register

If you are an authorized user of other registers, you may click on the toolbar option to "Switch to another Register." Click on the register you wish to use from the displayed list.

Report Status

Clicking on the Report Status button will allow display of any reports that are currently running or that have been completed. You may click on a report to automatically open the report in Microsoft Word. The reports may be printed or

saved just as you would any other Word document. If a report is no longer needed it may be deleted by clicking to place a check mark in the box in front of the report and then clicking on the Delete button on the toolbar.

Exit System

> **Note:** If you click the Exit System button on the toolbar, you will be presented with a box asking, Are You Sure You Want to Exit? Click "YES" or "NO" as desired. Clicking on the X in the upper right hand corner of the window will also allow you to exit as desired.

About

If you click on the **About** button on the toolbar, the version of Visual DMS will be displayed. Click **OK** to close the window.

G.3 Menu Options

There are six main menu options in Visual DMS that correspond to the traditional RPMS Diabetes Management System Menu options. Use of these options will be explained in the following section.

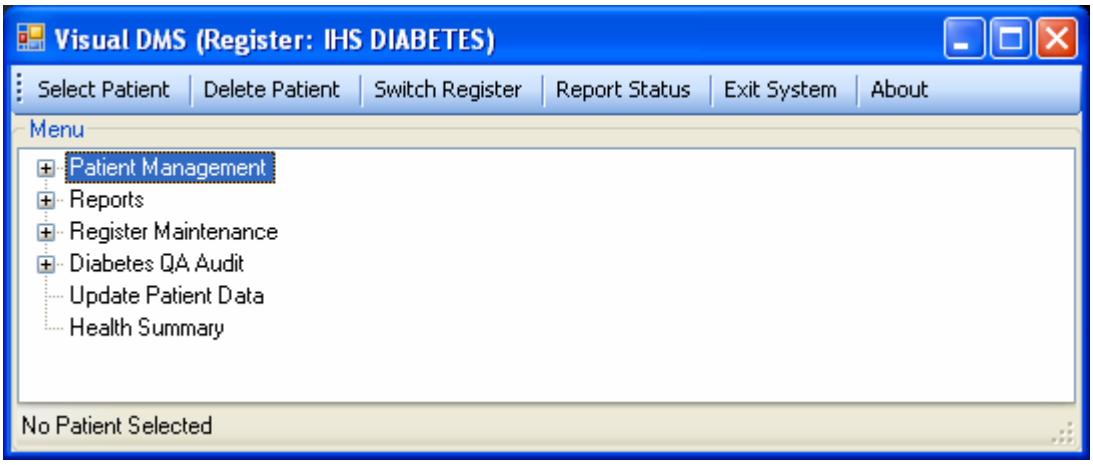

Figure G-8: Sample of menu options

G.4 Patient Management

1. Open the Patient Management Menu by clicking on the "**+**" in front of Patient Management. The options correspond to the List View Menu options in the traditional RPMS application.

2. You will be unable to use any of the Patient Management options until a patient has been selected using the Select Patient option on the Toolbar.

3. When a patient has been selected, that patient's name will display in the gray bar at the bottom of the window.

4. Use of each of the menu options will be described below.

5. When use of the Patient Management Menu has been completed, click the "**-**" in the box in front of Patient Management to close the menu.

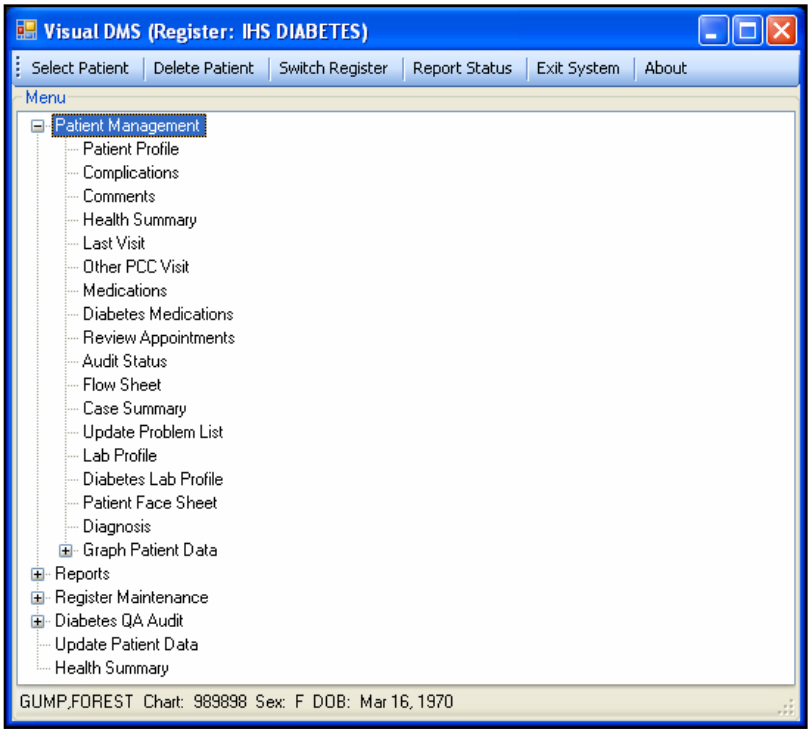

Figure G-9: Sample of Patient Management screen

G.4.1 Patient Profile

1. The patient profile screen may be used to change Register Status, Primary Care Provider, Where Followed, Case Manager, Register Provider, Contact, Last Review, and Next Review Date.

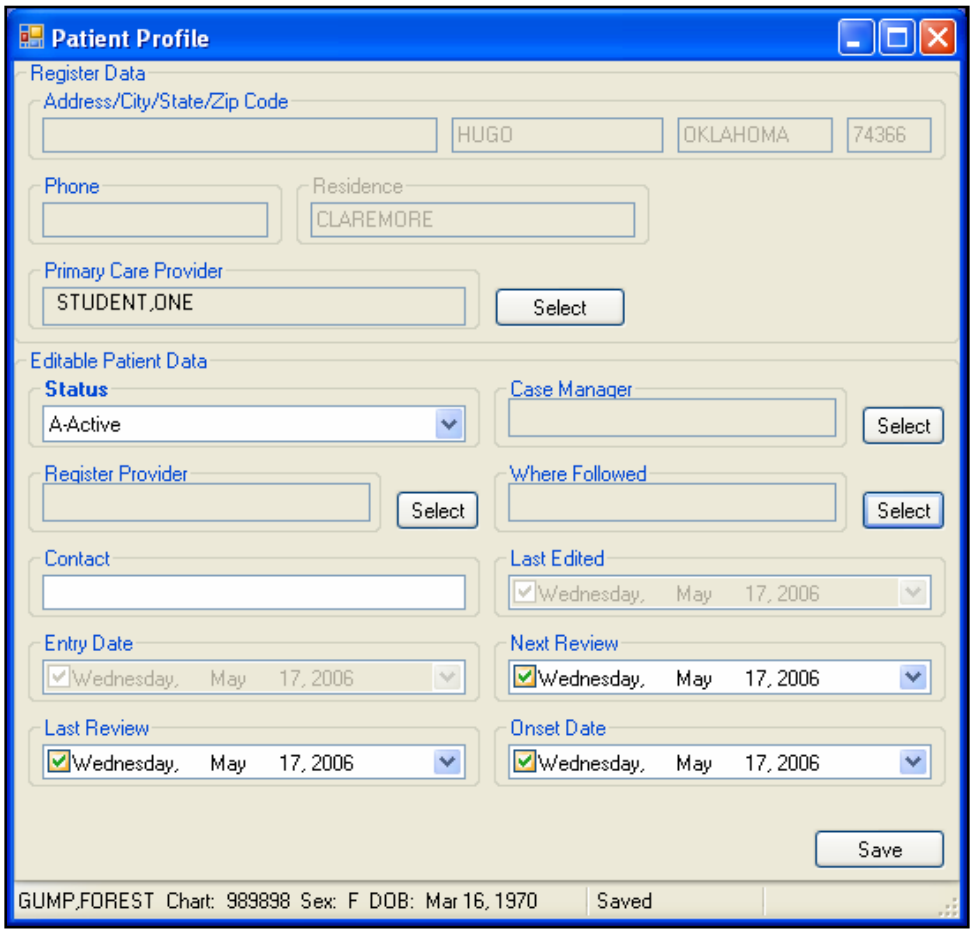

Figure G-10: Sample of a patient profile screen

2. Date fields may be changed by clicking on the date (month, day, or year) and using the up or down arrows to change the month, date, or year. The date and year may also be changed by typing the desired new date or year to replace the one displayed. Alternatively, clicking on the drop down arrow will open a calendar which may be browsed by scrolling forward or backward using the right and left arrows. Dates may be selected by clicking on them on the calendar, as shown in the following example.

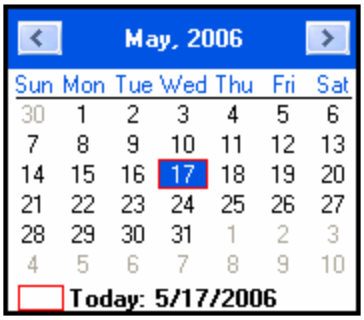

Figure G-11: Sample of calendar

3. Contact is a free text field to enter patient contact information.

Clicking on the Select button to the right of the field, Register Status, Primary Care Provider, Case Manager, or Register Provider will display a list. Browse the list until the desired entry is found and click on it. For example, in the figure above, May 17, 2006 is selected.

4. Where followed requires a match on the name of a facility. Type the first few letters of the facility name in the Begin String box and click **Search**.

5. Click on the name of the facility where the patient is followed.

6. When all data entry has been completed, click "**Save**" to exit. Then click the **X** in the upper right hand corner of the window to close the Patient Profile window.

G.4.2 Complications

1. Click on **Complications** to add or edit complications for a patient. Entries may be made for complications, date of onset, risk, and comments.

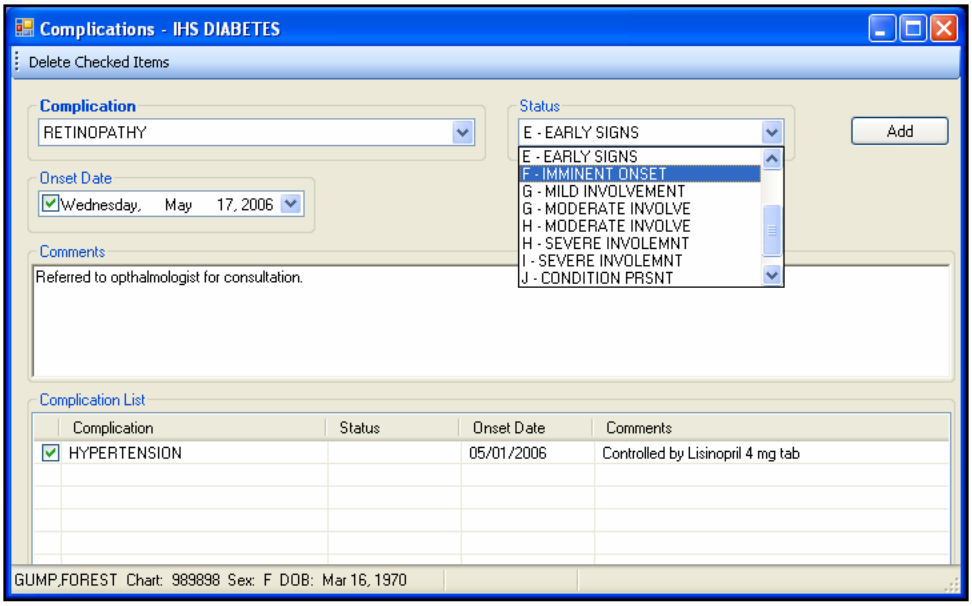

Figure G-12: Sample of screen used to enter information regarding complications

2. Make entries by using the *Select* button to display choices and click on the desired choice.

3. The date of onset may be changed by clicking on the Day, Month, and or Year to change or clicking **Select** to display a calendar. Browse the calendar by using the right and left arrows and click on the desired date of onset. Complete your entry of complications by clicking on the **Save** button.

4. A complication that has been entered in error may be deleted by clicking to place a check mark in the box in front of the complication to be deleted. Complete the deletion by clicking on the toolbar option, **Delete Checked Items**.

5. Close the Complication window by clicking on the **X** in the upper right hand corner of the window.

G.4.3 Comments

1. Case comments may be entered by clicking on the **Comments** option.

2. Enter any comments in free text and click the **Save** button when entry is complete. You will notice that "Not Saved" in the gray bar at the bottom of the window is replaced by "Saved".

3. Close the screen by clicking on **X**. Please note the following example

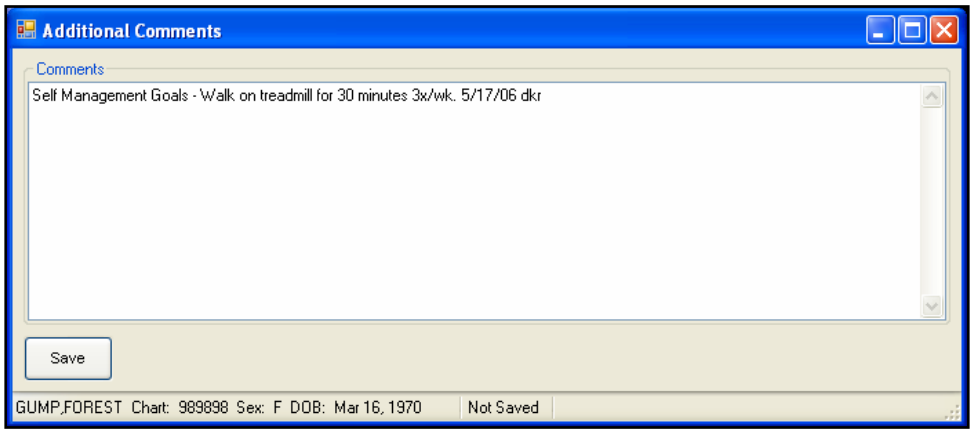

Figure G-13: Sample of screen used to add comments

G.4.4 Health Summary

1. A health summary may be displayed by clicking on the menu option, **Health Summary**. Note the next example screen.

2. Use the drop down arrow next to the box named Health Summary/Flow Sheet Type to display the available choices.

3. Highlight the desired health summary type and click **OK**.

4. The health summary will be displayed in Microsoft Word. The health summary may be browsed or printed as desired.

5. Click on **X** to close the Health Summary Display. Please see the following example.

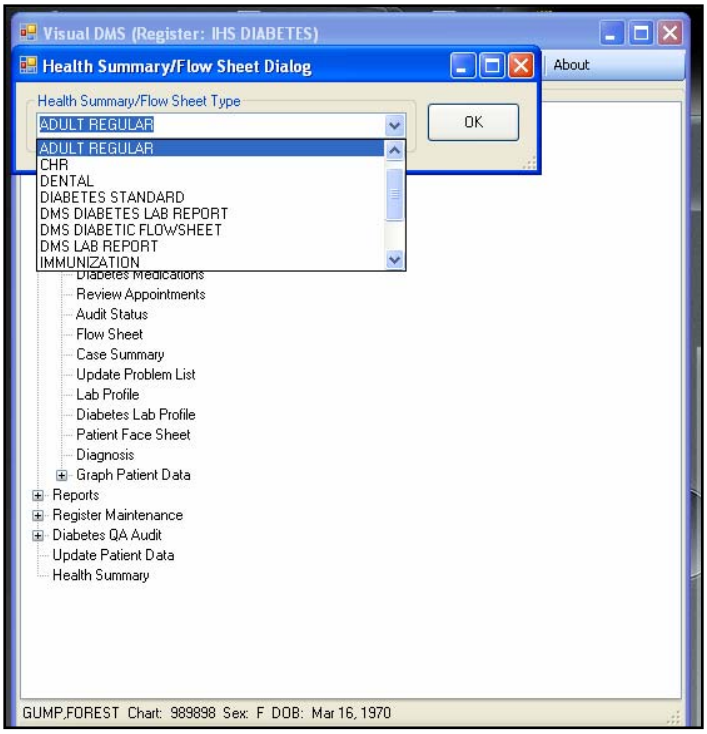

Figure G-14: Sample of health summary screen

G.4.5 Last Visit

1. The patient's last visit may be displayed by clicking on the menu option, **Last Visit**.

2. The visit record will be displayed in Microsoft Word. The visit record may be browsed or printed as desired.

3. When the record review is complete the Word window may be closed by clicking on **X**.

G.4.6 Other PCC Visit

1. Click on the menu option, **Other PCC Visit**, to see a list of other visit dates by this patient.

2. When presented with the encounter records for this patient, click on the desired encounter date to display the record for that date in Microsoft Word format.

3. When the record review is complete, the Word window may be closed by clicking on the **X**.

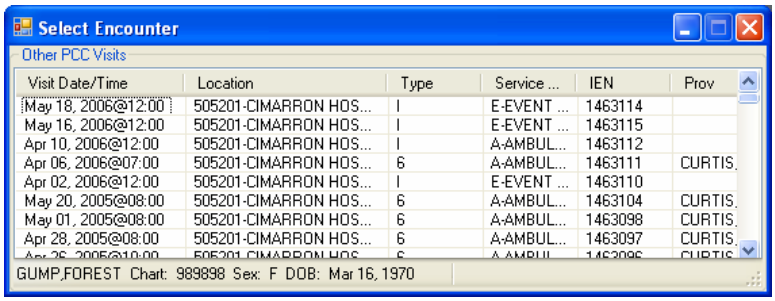

Figure G-15: Sample of screen used to select an encounter

G.4.7 Medications

1. Click on the menu option, **Medications** to see the list of all medications in this patient's record.

2. They will be displayed in a Microsoft Word document with the most current medications beginning the list.

3. The list may be browed or printed as desired.

4. Close the Word document by clicking the **X** when review is complete.

G.4.8 Diabetes Medications

1. Click on the menu option, **Diabetes Medications**, to see a list of medications this patient is taking now or has taken that belong to one or more of the DM Audit Medication taxonomies.

2. The Diabetes Medications will be displayed in a Microsoft Word document with the most current medications beginning the list.

3. The list may be browsed or printed as desired.

4. Close the Word document by clicking the **X** when review is complete.

G.4.9 Review Appointments

1. Click on the menu option, **Review Appointments**, to see a list of scheduled appointments for this patient.

2. This list will only include appointments made in the IHS Scheduling or PIMS Scheduling modules.

3. The list will be displayed in a Microsoft Word document.

4. The list may be browsed or printed as desired.

5. Close the Word document by clicking the **X** when review is complete.

G.4.10 Audit Status

Review a patient's individual audit status by clicking on the menu option, **Audit Status**.

When the window for setting the audit parameters opens, use either the drop down browsable calendar to select the audit date or change the date by changing the day, month, or year in the date window. See the following example.

Identify whether your community does or does not receive SDPI Grant funding by clicking in the appropriate circle and enter the grant fund number if you have marked the circle for "YES".

When your entries are complete; click the **Print** button. The audit will be displayed in a Microsoft Word document.

The audit may be browsed or printed as desired.

Close the Word document by clicking the **X** when review is complete.

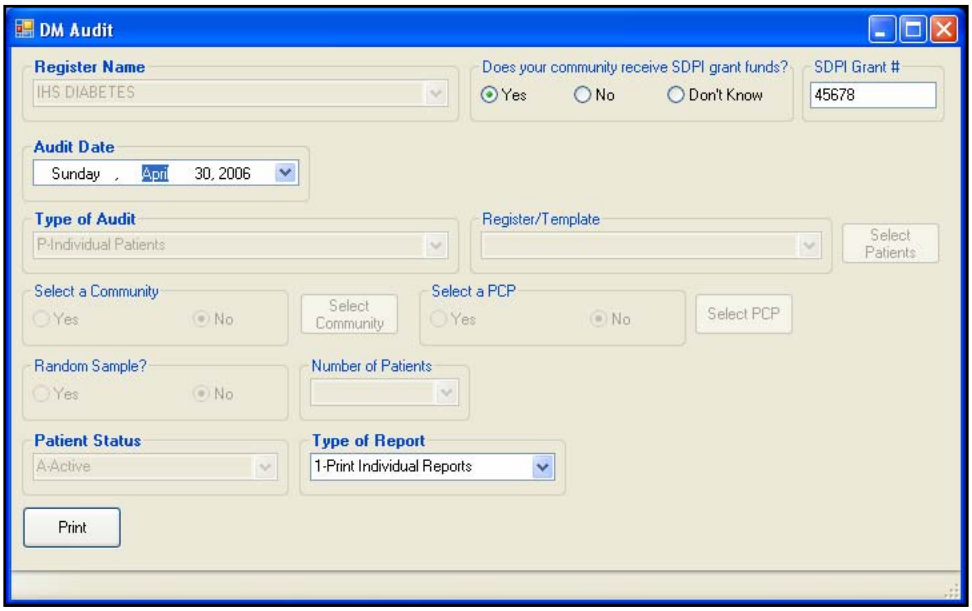

Figure G-16: Sample of DM Audit screen

G.4.11 Flow Sheet

1. Click on the menu option for **Flow Sheet** to display just the flowsheet for a patient.

2. When the box labeled, Health Summary/Flow Sheet displays, you may use the drop down arrow to display all available flowsheet types.

3. Highlight the desired flowsheet and click **OK**.

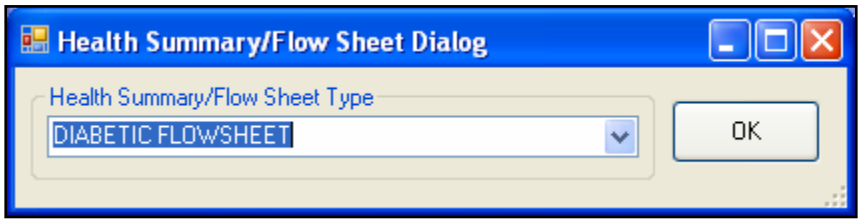

Figure G-17: Sample of selecting a flowsheet

4. The flow sheet will display in a Microsoft Word document.

5. The flowsheet may be browsed or printed as desired.

6. Close the Word document by clicking the **X** when review is complete.

G.4.12 Case Summary

1. Click on the menu option, **Case Summary**, to display the individual case summary for a patient.

2. The case summary will display in a Microsoft Word document.

3. The case summary may be browsed or printed as desired. Remember that the Case Summary is the only display option that will show case comments.

4. Close the Word document by clicking the **X** when review is complete.

G.4.13 Update Problem List

1. The patient's PCC Problem list may be reviewed, edited, or appended to using the menu option, Update Problem List.

2. Begin by clicking on **Update Problem List**. See the following example.

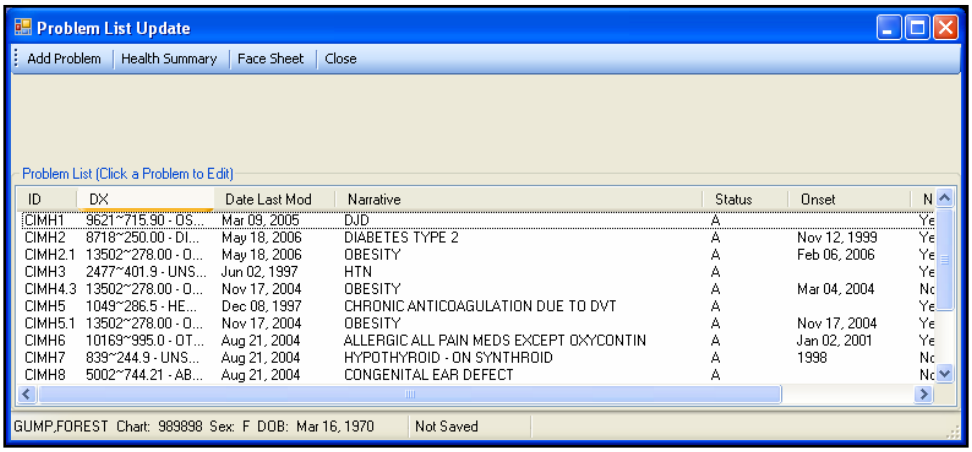

Figure G-18: Sample of adding to problems list

3. Either the patient's health summary or face sheet may be displayed by clicking on the corresponding options on the toolbar of this window.

4. The display contains the following fields:

- Problem numbers appear in the first column labeled, ID
- ICD-9 Code~ICD-9 Narrative in the DX column,
- Date last modified in the Date Last Mod column,
- Provider narrative in the Narrative column,
- Status of A for Active or I for Inactive in the Status column,
- Date of Onset if recorded in the Onset column, and
- Yes or No in the column labeled, Note(s), indicating whether notes are or are not associated with a problem.

5. Notes for a particular problem may be displayed by clicking on that problem in the list.

6. Individual columns may be made wider or narrower by placing the mouse pointer on the line between labels for the columns until right and left arrows appear. Holding down the left mouse button and dragging the divider right or left will change the column width as well.

7. An existing problem may be modified by clicking on the problem in the list.

8. Date of onset, provider narrative, status of active versus inactive, and diagnosis may all be modified by editing the data in the existing boxes.

9. Changes made to the problem may be saved by clicking on the **Save Problem** button before leaving the problem update screen.

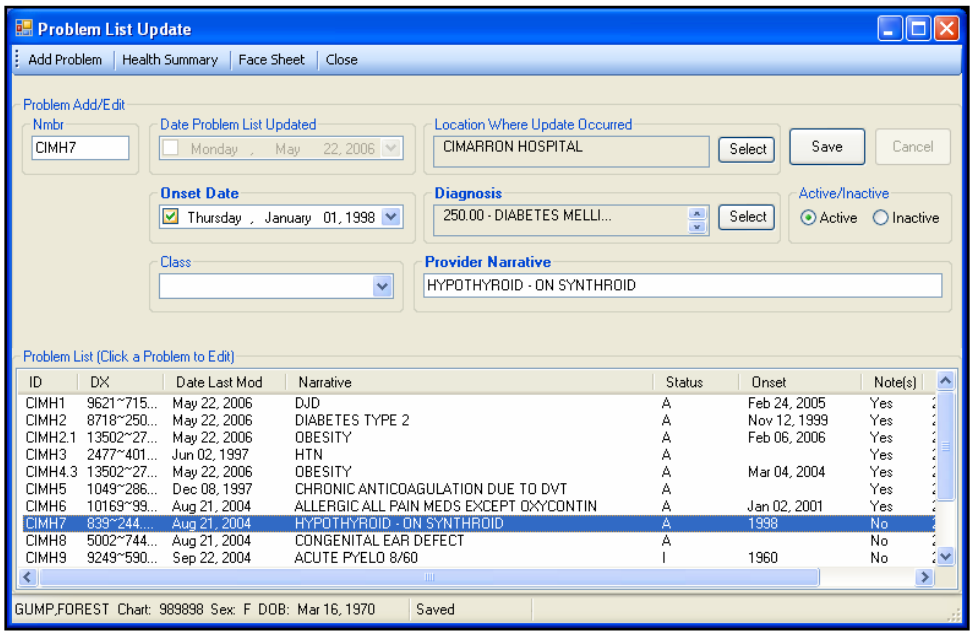

Figure G-19: Sample of Problem List Update screen

10. If the only change desired is to append a note, right click on the problem. A box will open with the choices, Detail, Delete, Add a Note.

11. Click **Add a Note** if you wish to add a note to this problem. A narrative note may be added when the Note box opens.

12. Click the **Save** button to save the new note narrative.

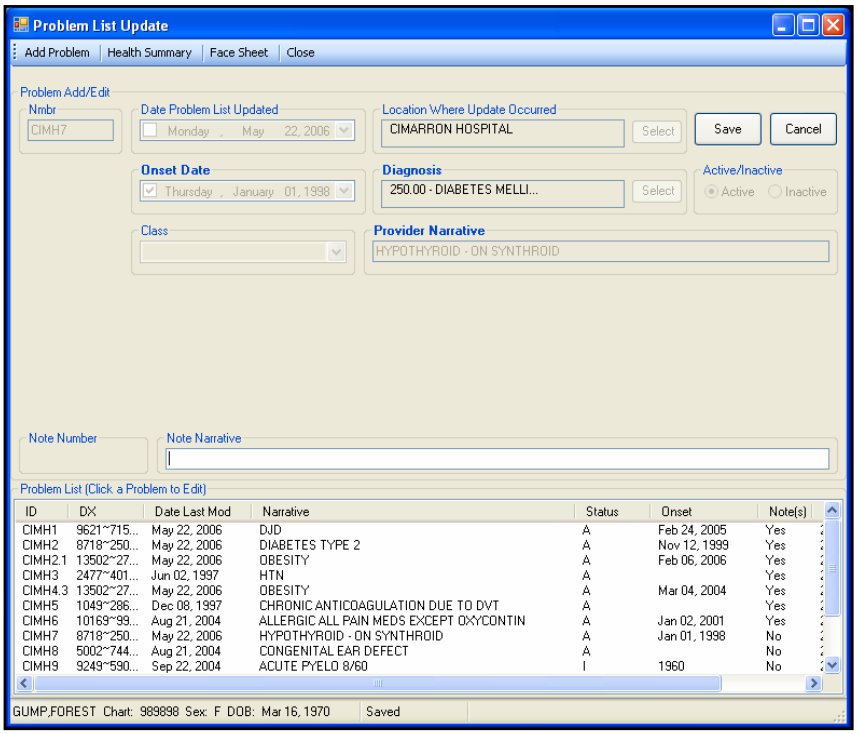

Figure G-20: Sample of Problem List Update screen

13. A problem may be deleted if it is incorrect, is a duplicate, or has been entered by right clicking on the problem. Click on **Delete** to remove the problem. *Deletion is immediate and permanent.*

14. A new problem may be added to the problem list by clicking on the toolbar option, **Add Problem**.

- The *location* where the problem list was updated will default to the facility where you are currently signed on. It may be changed by clicking on the **Select** button next to the location where update occurred and typing the first few letters of the facility name in the beginning string box. When the list of matching facilities is displayed, click on the correct facility.
- The date of the problem list update and the date of onset of the problem may both be updated by clicking on the current day, month, or year and changing those entries or clicking on the drop down arrow next to the data fields. The calendar may be browsed and a date selected by clicking on it.
- The Class field may be left blank, or Family or Personal History may be selected.
- Either the Active or Inactive button may be selected for this problem.

- The problem diagnosis may be entered by clicking on the **Select** button next to Diagnosis. Type the first few characters of the diagnosis in the Beginning String box. A list of diagnosis with this matching text will display and the correct diagnosis may be selected by clicking on it. In the example below, Periodontitis is searched for by typing the letters, PERIOD.

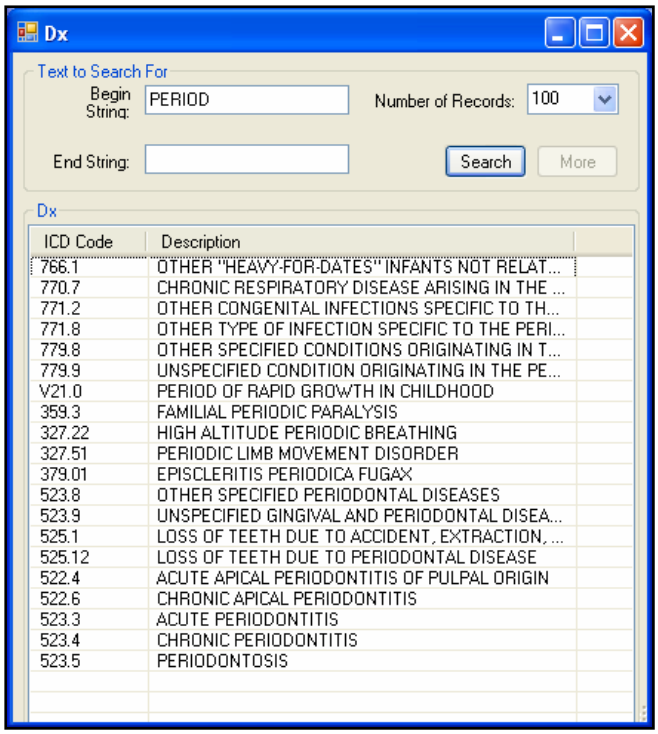

Figure G-21: Sample of screen used to select a diagnosis type

- The accompanying provider narrative may be entered as free text in the Provider Narrative box.
- When all data has been entered, the **Save** button may be clicked to store the new problem.

15. The Update Problem List screen may be closed by clicking **X**.

G.4.14 Lab Profile

1. The Lab Profile may be displayed by clicking on the menu option, **Lab Profile**. This shows only tests in a Lab Profile called DMS Lab Report Summary for a maximum of 30 visits or one year.

2. The Lab Profile is displayed in a Microsoft Word document that may be printed.

3. When review is completed, the Word Window may be closed by clicking on **X**.

G.4.15 Diabetes Lab Profile

1. The Diabetes Lab Profile only displays tests that are included in the DM Audit Lab test taxonomies for the last 30 visits or for one year.

2. Click on the **Diabetes Lab Profile** to display the tests in a Microsoft Word document.

3. When review is complete, close the Word window by clicking on the **X**.

G.4.16 Face Sheet

1. A patient's Face Sheet may be displayed by clicking on the **Face Sheet** option.

2. The Face Sheet displays in a Microsoft Word document.

3. The Word document may be browed or printed.

4. When review is completed, the Word window may be closed by clicking on **X**.

G.4.17 Diagnosis

1. Register diagnosis may be entered or updated by clicking on the menu option, **Diagnosis**.

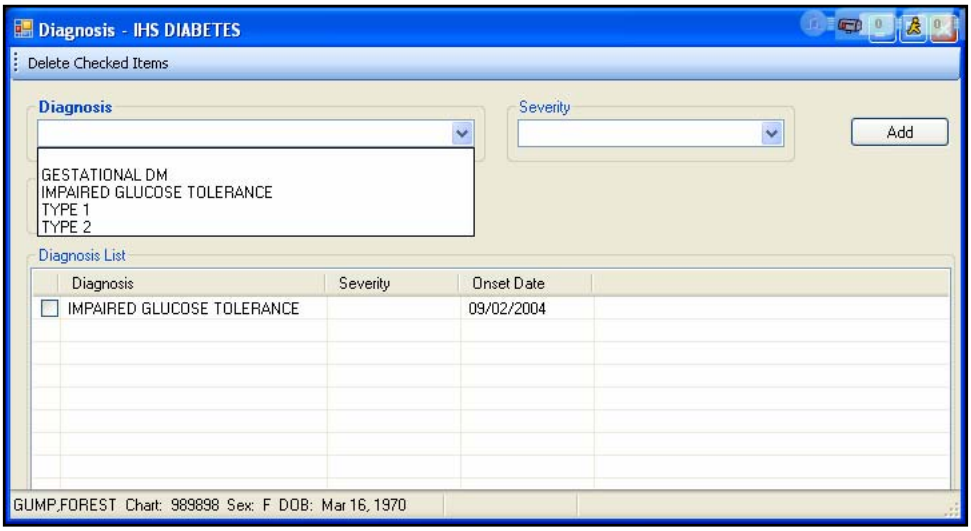

Figure G-22: Sample of a diagnosis screen

2. Click on the drop down arrow next to the Diagnosis box to select from the available register diagnoses.

3. Severity may be added if desired by using the drop down arrow. Add the diagnosis as a Register Diagnosis by clicking on the **Add** button.

4. If you note that an incorrect diagnosis has been entered, that diagnosis may be removed. Place a check mark by clicking in the box in front of the incorrect diagnosis. Then click on the toolbar option to **Delete Checked Items**.

5. When updating of register diagnosis has been completed, click in the **X** to close the Diagnosis window.

G.4.18 Graph Patient Data

Click on the "**+**" in front of the menu option, Graph Patient Data, to display the three menu choices, weights, blood pressures, or labs. Any of these options will graph the desired choice in Microsoft Excel. The resulting graph may be saved or printed.

Patient Weights
To prepare a graph of patient weights, click on the first menu option, **Patient Weights**.

Select a beginning and ending date for weights to be displayed on the graph by changing the dates displayed or using the drop down arrow to display a calendar to browse.

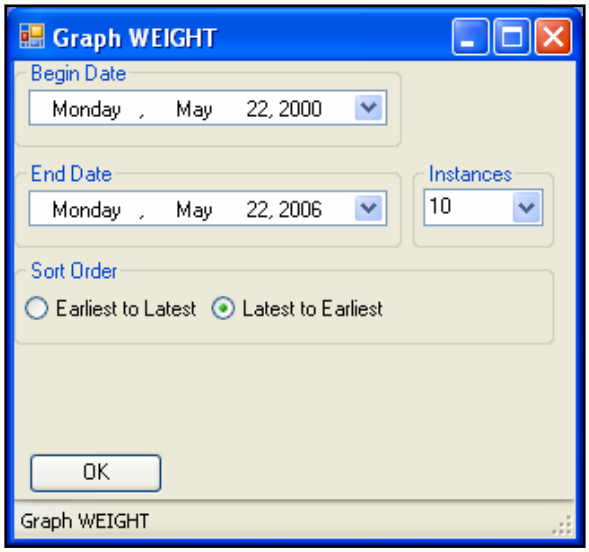

Figure G-23: Sample of entering weight information

Determine how many weights (instances) to display during the desired time frame and then determine whether the weights will be displayed with earliest to latest or vice versa. Click **OK** to display the graph.

The resulting graph is in Microsoft Excel and may be saved as a file or printed as desired.

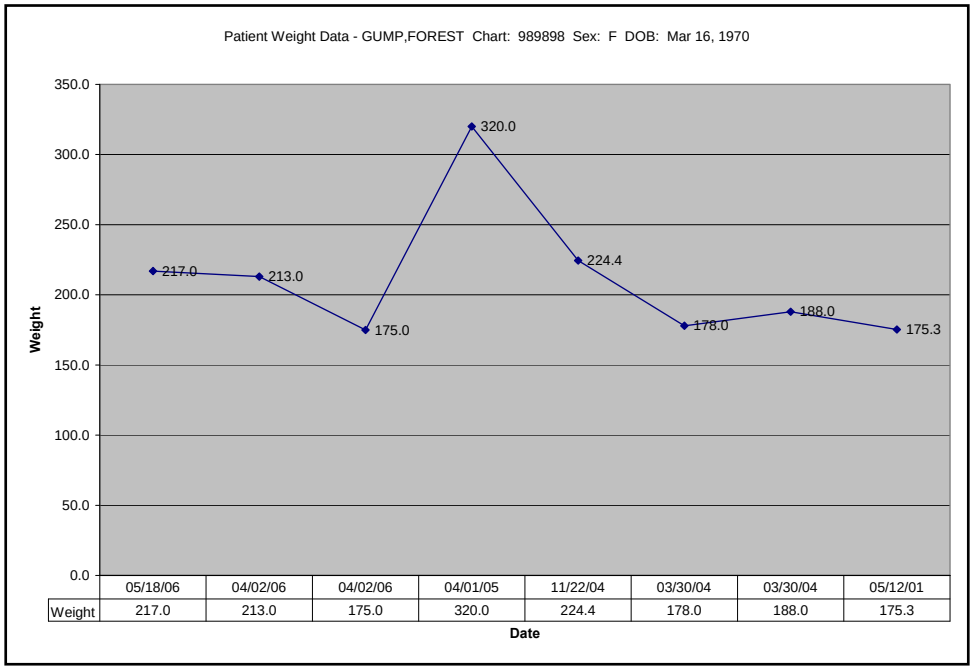

Figure G-24: Sample of a weight graph

Patient Blood Pressure

Selection of a time frame, the number of data points, and the order of display from latest to earliest or earliest to latest may be chosen in a similar manner for patient blood pressure. The resulting graph will again be displayed in Microsoft Excel and be saved or printed as desired, as shown in the next example.

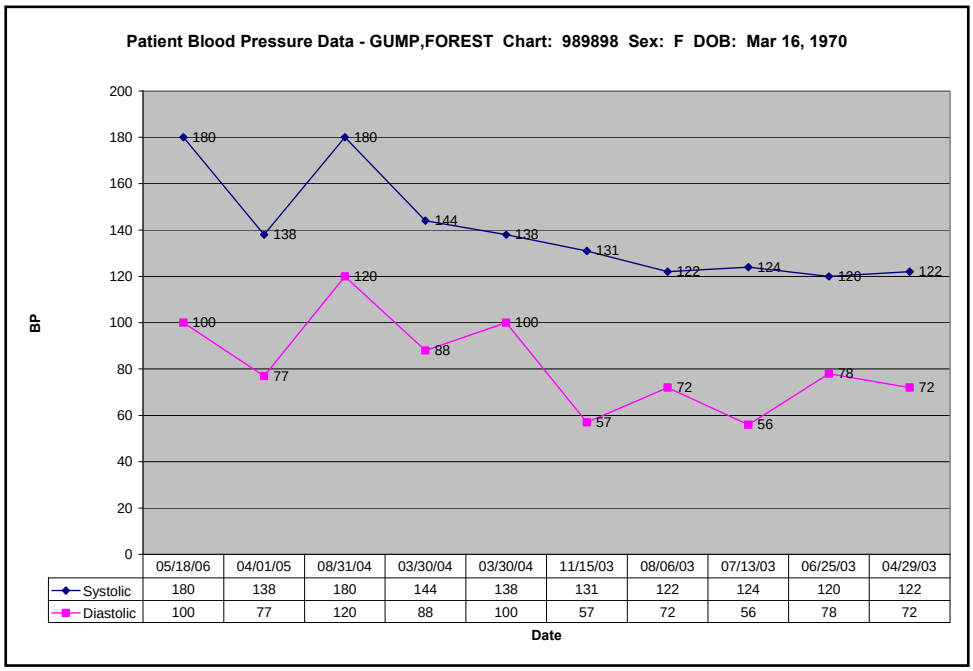

Figure G-25: Sample of blood pressure graph

G.4.19 Patient Labs

In addition to selecting the date range for display, the number of occurrences, and the order of display, the desired lab test must be selected to display. Begin by clicking on the Select button next to the Lab Test box. When the window for lab test selection opens, type the first few letters if the desired lab test in the *Begin String* box. See the next example screen.

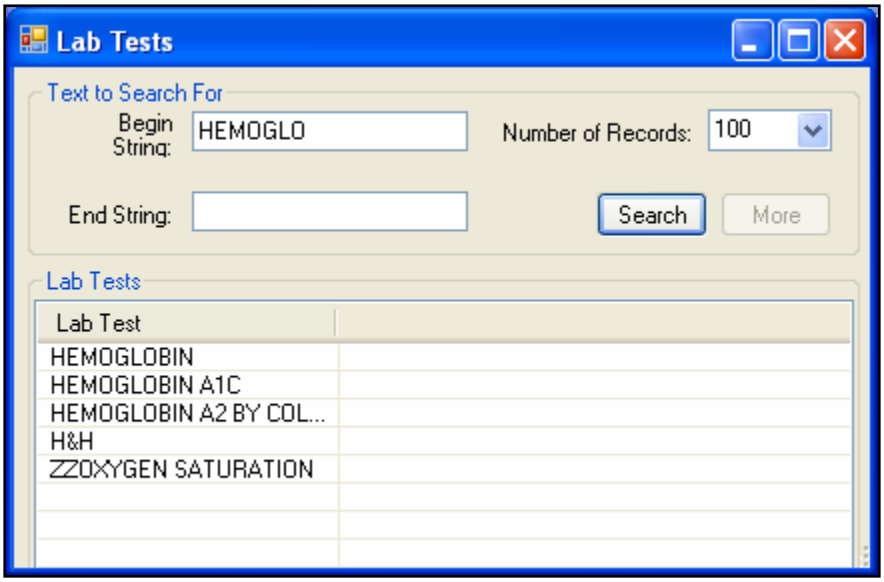

Figure G-26: Sample of lab tests screen

Click on the lab test form which values are to be graphed. For example: Hemoglobin A1C, as in the following example. Click **OK** to complete the graph.

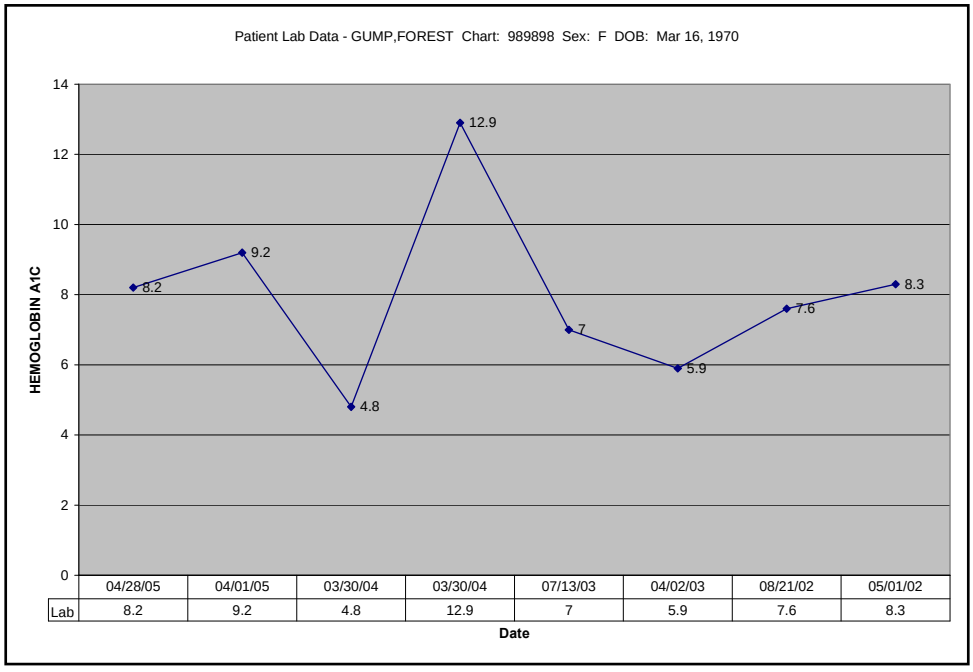

Figure 25-27: Sample of hemoglobin graph

The graph may be printed or saved as an Excel graph.

G.5 Reports

Click on the "**+**" in front of *Reports* to display the options for Visual DMS Reports. You do not have to select a patient in order to run reports.

G.5.1 Follow Up Needed

This option will allow generation of a report of patients that are due now or within the next 30 days for specific diabetes care needs.

1. Begin by clicking on the menu option, **Follow up Needed**.

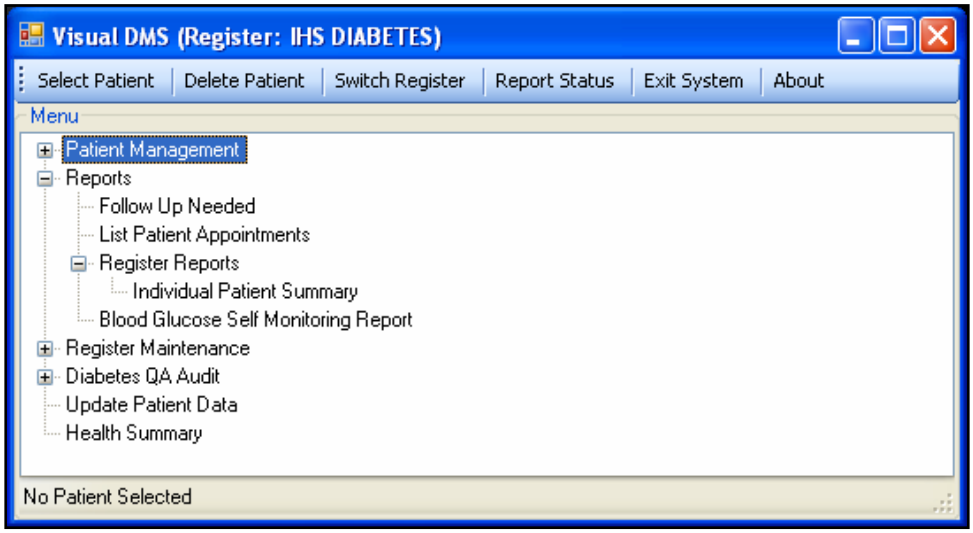

Figure G-28: Sample of selecting options

2. Identify which follow up report is desired. Either highlight the desired follow up need in the *Report Types* list (in the upper left window) and click on the arrow to move it into the *Reports Type Selected* box (in the upper right window). Or simply drag it from the list on the left to the list on the right. See the following screenshot.

3. Now look down to the radio buttons near the mid-point of the screen. Determine whether the report will be run for members of your register or for a preselected group of patients stored in a search template.

Below the radio buttons you will see boxes for *Patient Status* (to the left) and *Diabetes Diagnosis* (to the right). If the *Search Template* radio button is selected, use the drop down list of search templates to identify the desired search template of patients for the report.

4. Use the drop down list to identify the patient status for the report. Click on the desired status.

5. Use the drop down list below the Diabetes Diagnosis box to identify the diagnoses of the patients that will be included in this report.

6. Next, if you are using the IHS Scheduling Package or PIMS, determine whether you wish to see a list of patient appointments for patients on the report by clicking on "Yes" or "No" radio buttons at the *Include Patient Appointment* box.

7. Now look to the bottom of the screen. Note the dropdown box of dates below the *Run Date/Time* box. If you do wish to see scheduled appointments, indicate the beginning date for the appointments as well as the end date for appointments by browsing the calendar. The calendar is displayed by clicking the drop down arrow or changing the month or day using the up or down arrow keys.

8. Look back up just before the *Run Date/Time* box to the *Print By* box. The report may be printed by community, primary provider, or where followed. Make your selection by using the drop down arrow next to the *Print By* box. Click on the desired selection.

9. If choosing *Community*, you may indicate that you wish all communities by clicking on that option, or by selected communities.

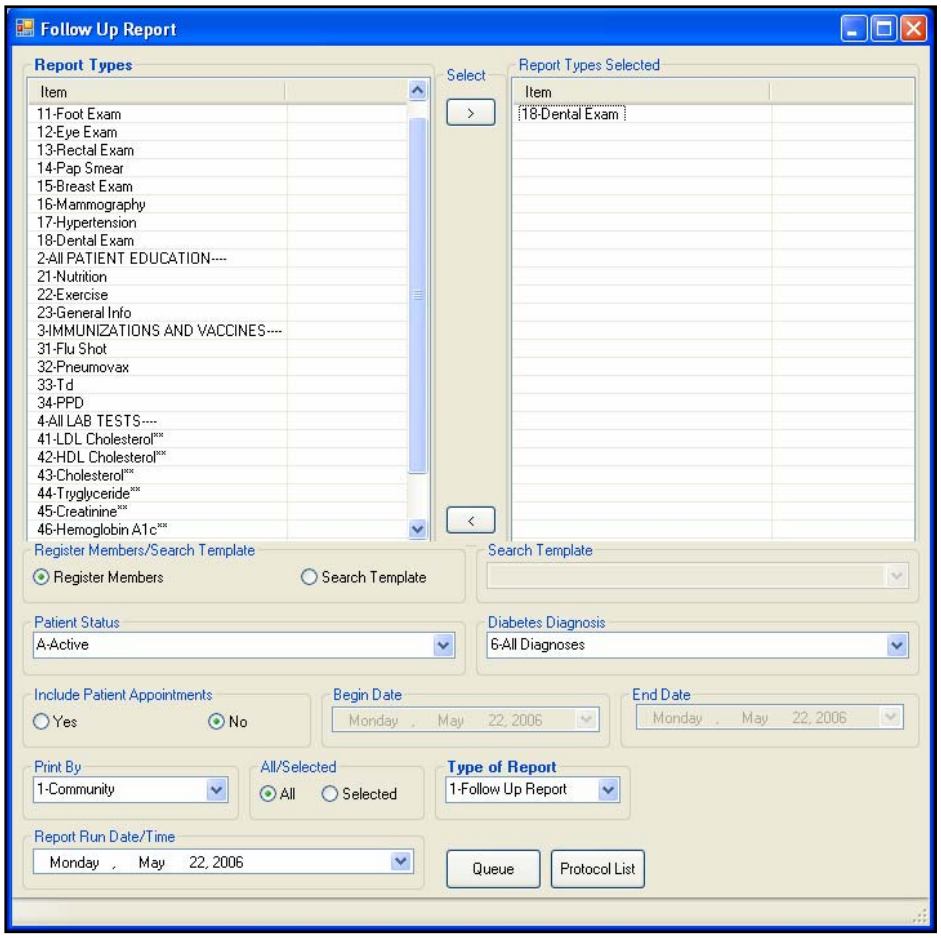

Figure G-29: Sample of Follow Up Report screen

10. If *Selected Communities* is chosen in Step 9, a window will open where the first few letters of the desired community may be chosen by typing them in the *Begin String* box. The **>** button may be clicked to move the desired community into the *Communities Selected* box. This process may be repeated as many times as desired to identify all communities to be included in the report. When all communities have been selected, click the **Save** button. Click **X** to close the Community Selection window. See the following example.

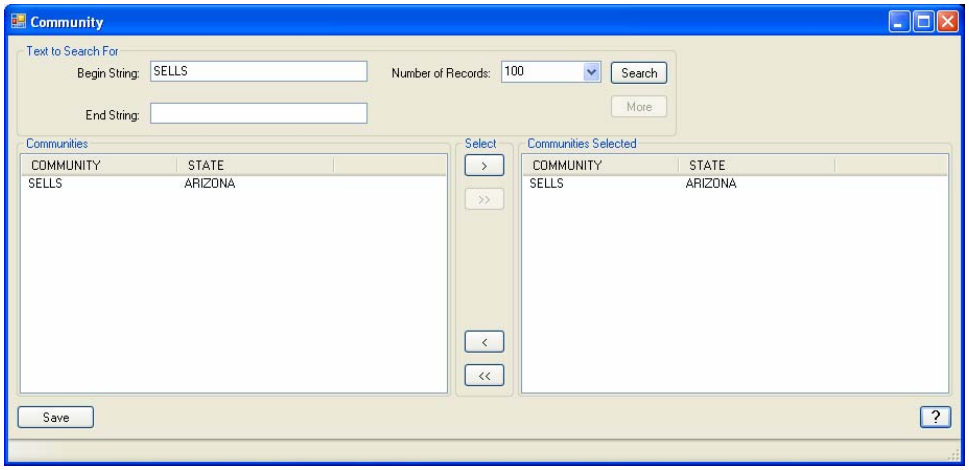

Figure G-30: Sample of Selected Communities screen

11. Returning to Figure 25-29, click on the drop down box next to *Type of Report* to select the **Follow Up Report**.

12. Select the Report Run Date/Time by taking the actions you performed in Step 10 to use the browsable calendar.

13. When all desired entries are made, click on the **Queue** button near the bottom right of the Follow Up Report screen, to initiate the report generation.

14. If you want to see the progress, after the report has been queued to run, click the **Report Status** option on the toolbar of the main window to review the progress of the report. A report may be reviewed by clicking on that report. The report will be displayed in a Microsoft Word document that may be saved or printed.

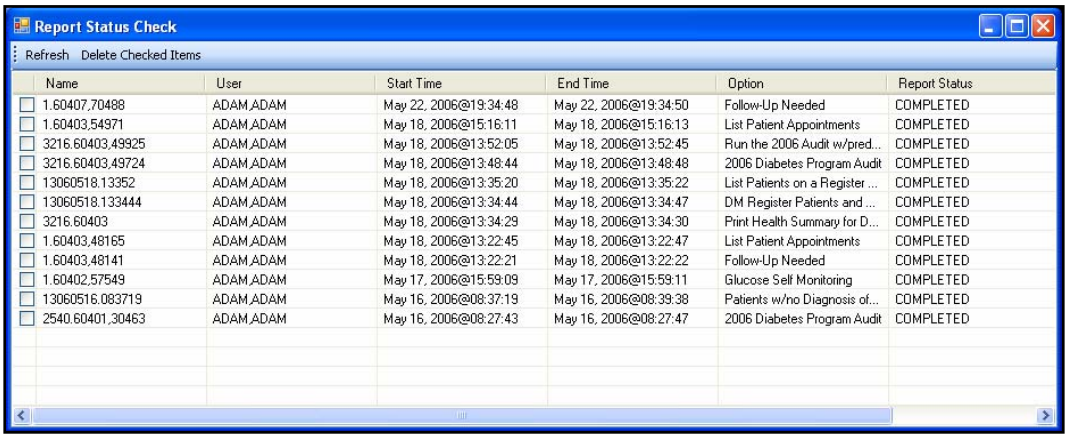

Figure G-31: Sample of Report Status Check screen

When review of the report is complete, the Word document may be closed by clicking the **X**. If a report is no longer needed, the box in front of that report can be clicked to place a check in the box. Click the **Delete Checked Items** option on the toolbar to delete the checked report(s).

15. Returning to the Follow Up Report screen, you will see that the last button on the screen is the *Protocol* button. When this button is clicked, the Diabetes protocols that are used to determine when particular item(s) are due will be displayed. The **X** may be clicked to close the window when review is completed.

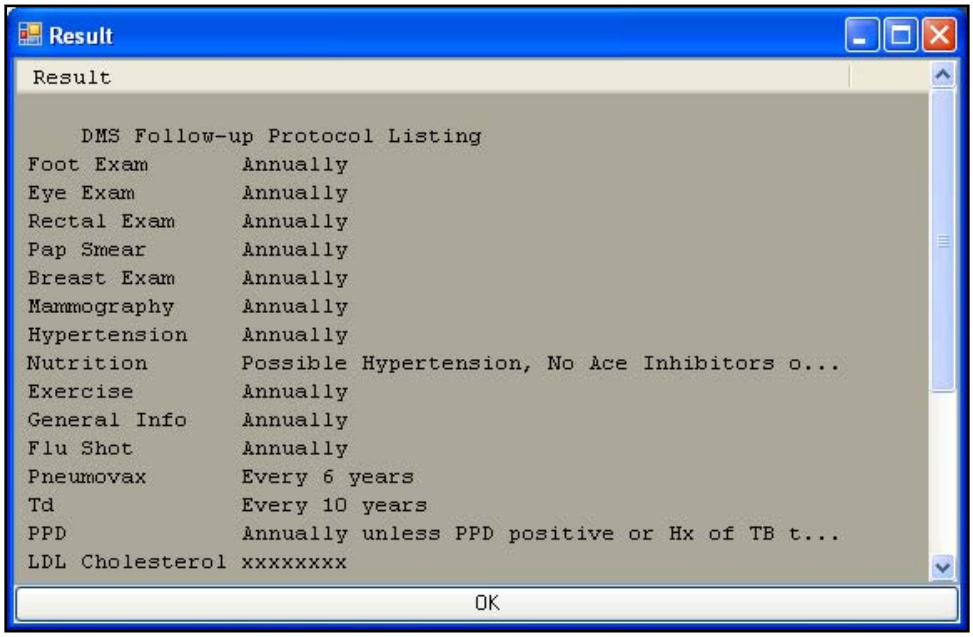

Figure G-32: Sample of Results screen

G.5.2 List Patient Appointments

1. If the IHS Scheduling Package or PIMS is used to schedule appointments, a list of a appointments for a patient may be displayed.

2. When you click on List Patient Appointments, a window will open in which the beginning date for the appointment list and the ending date of the appointment list may be selected by browsing the calendar displayed using the drop down arrow or by using the up or down arrow keys to change the date, month, or year entries, as shown in the following example.

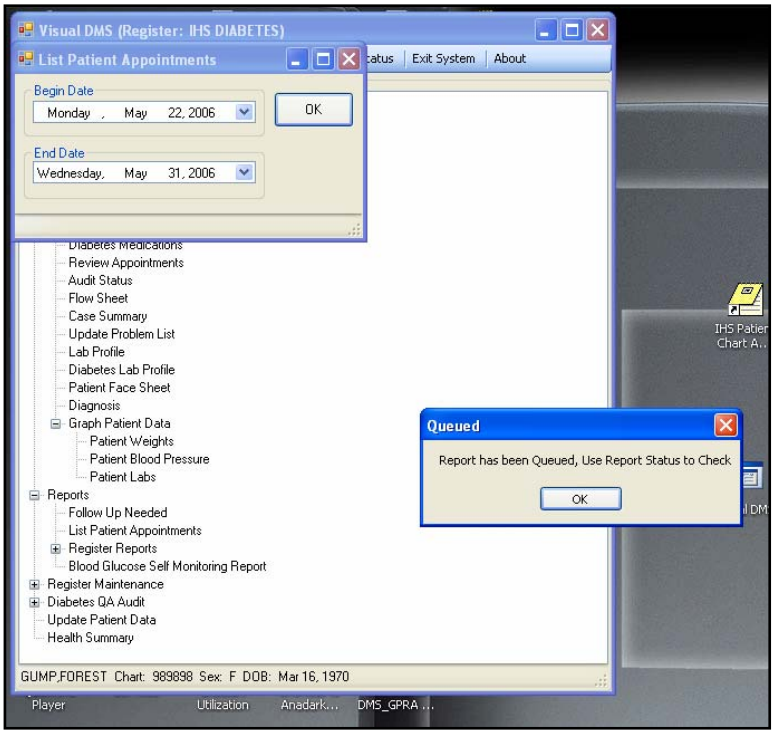

Figure G-33: Sample of listing patient appointments

3. When the beginning and end dates have been selected, click on **OK** to queue the report.

4. A pop up box will notify you that the report has been queued. Click **OK** to close the box. The list of appointments will be queued and may be reviewed by clicking on the report under the **Report Status** button on the toolbar.

G.5.3 Register Reports

1. Look at the menu screen, as depicted in the following example. Approximately half way down the screen you will find *Register Reports.* Click on the "x" in front of that menu option to open this folder.

2. Currently only one register report is available, the *Individual Patient Summary*. This is the same summary that you can display by selecting *Case Summary* under the Patient Management menu.

3. To review the Individual Case Summary, click on the menu option.

4. The case summary will be displayed as a Microsoft Word document that may be browsed or printed.

5. Click on the **X** to close the document when review is complete.

6. When you have finished using this menu, the Register Reports Menu may be closed by clicking on the box with a "**-**" in front of the menu option.

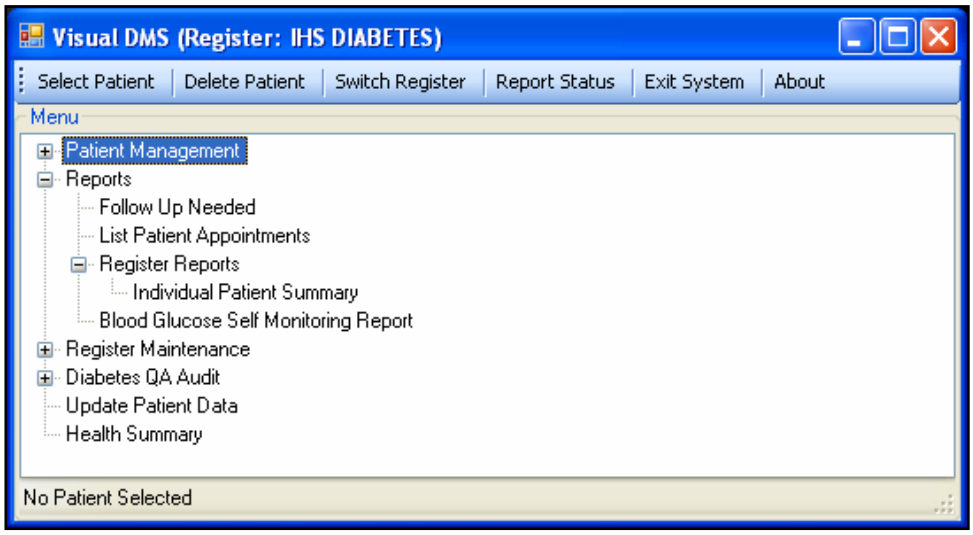

Figure G-34: Sample of selecting Register Reports option

G.5.4 Blood Glucose Self Monitoring Report

1. Click on *Blood Glucose Self Monitoring Report* to display a report of patients who are doing self monitoring of blood glucose, those who are not doing self monitoring of blood glucose, or to see a combined report of those who are and those who are not doing self monitoring.

2. The self monitoring window will allow selection of the register, the status of patients to be included in the report, the ending date of the report, and the desired report output.

3. Begin by using the drop down arrow to display register choices. Click on the desired register for the report.

4. Click on **Yes** or **No** to indicate whether the report will be run on a particular status of patients.

5. If "Yes" has been selected, click on the drop down arrow to display status choices. Click on the desired status for patients on the report.

6. Use the drop down arrow next to the *List of Patients* box to display the list of report choices. Click on the desired report output. Identify the *End Date* of the report by using the up or down arrows to change the month, date, or year or use the drop

down arrow to open a browseable calendar. Click on the desired end date for the report.

7. Click on the drop down arrow next to the *Report Sort* box to identify how you wish the report sorted. Click on the desired sort item – Patient Name, Health Record Number, or Community.

8. When all selection criteria have been made, click on the **Queue** button to queue the report.

9. When the pop up window notifies you that the report has been queued, click **OK** to close the window.

10. The status of the report may be checked by clicking on the **Report Status** button on the toolbar. When the report shows a status of complete, it may be displayed by clicking on the report.

11. It will be displayed in a Microsoft Word document that may be browsed, saved, or printed.

12. Click on the **X** to close the report when review is complete.

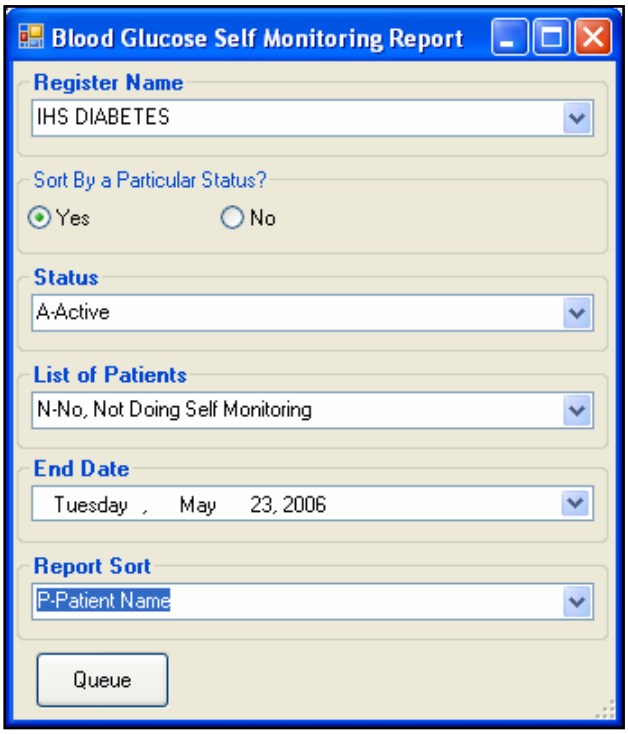

Figure G-35: Sample of Blook Glucose Self Monitoring Report screen

G.6 Register Maintenance

Click on the "**+**" in front of the third item on the list – *Register Maintenance* to open this menu. The available options include, User Setup, Complications List, Taxonomy Setup, and Add Patients from Template.

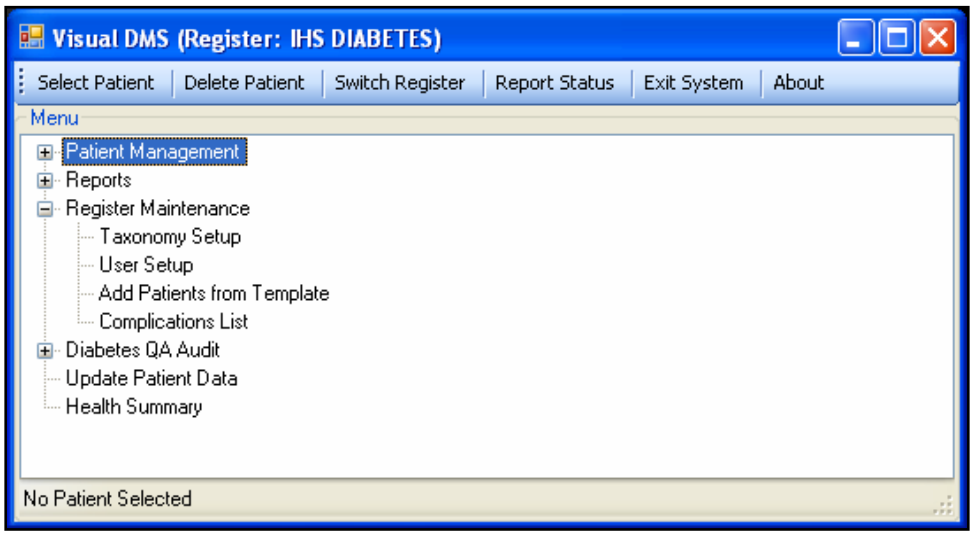

Figure G-36: Sample of Register Maintenance options

G.6.1 Taxonomy Setup

1. Click on the menu option, **Taxonomy Setup**, to open the screen to add or delete items from the DM AUDIT taxonomies. A popup window will notify you that it may take a few moments for the taxonomy tables to load initially. Click **OK** to close the popup window.

2. Begin by clicking on the drop down arrow adjacent to the **Select Taxonomy** box. Use the browse bar to review the list of available taxonomies and click on the taxonomy which you will be updating.

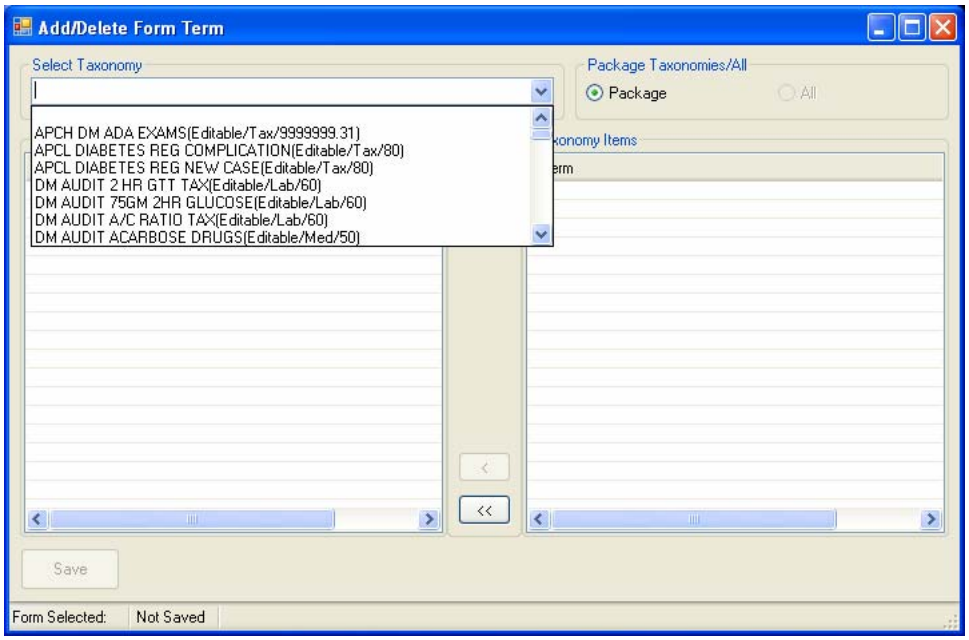

Figure G-37: Sample of selecting a taxonomy

1. When a taxonomy is selected, current members of that taxonomy are displayed in the **Taxonomy Items** List on the right side of the screen.

2. A list of potential choices is displayed in the **Items to Choose From** list. The browse bar may be used to scroll down the list. When a new taxonomy member is identified, it may be dragged from the "Choose From" list to the Taxonomy Item list or it may be highlighted and the right arrow clicked to move it into the taxonomy. This process may be repeated as many times as necessary to add all new items to the taxonomy. If an item has been added in error, it may be dragged from the **Taxonomy Items** list back to the **Items to Choose From** list.

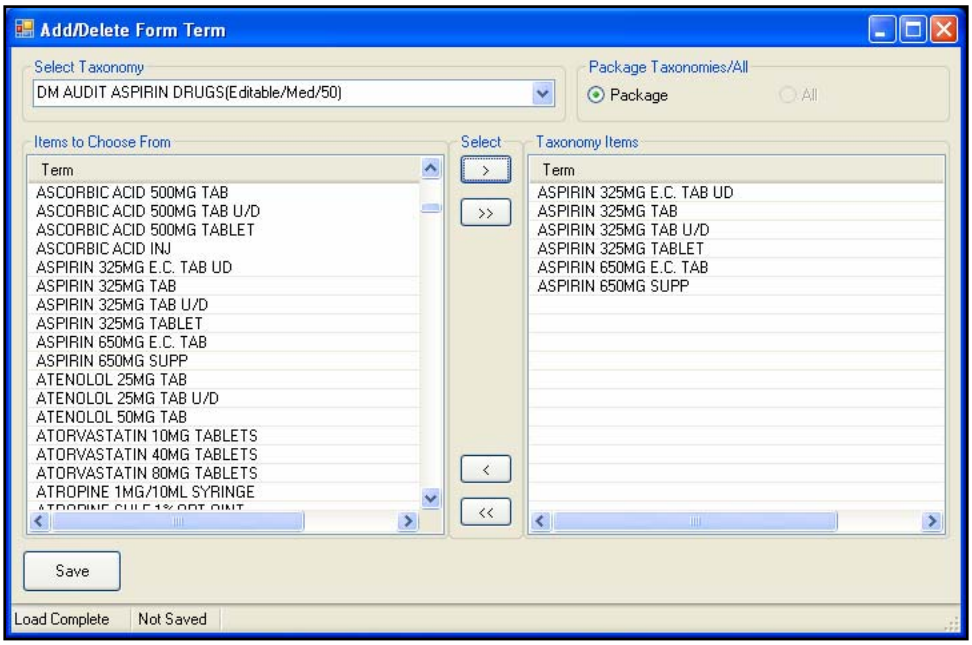

Figure G-38: Sample of items available

3. The double arrows will move *all* data items in the **Items to Choose From** list to the **Taxonomy Items** list or vice versa.

4. When a taxonomy has been updated, the **Save** button may be clicked to save the changes.

5. The down arrow next to the Select Taxonomy box may be clicked and the next taxonomy may be selected for review and editing.

6. Click X to close the Select Taxonomy window when all taxonomies have been updated.

G.6.2 User Setup

1. Click on User Setup to review current authorized users of the register as well as update that list.

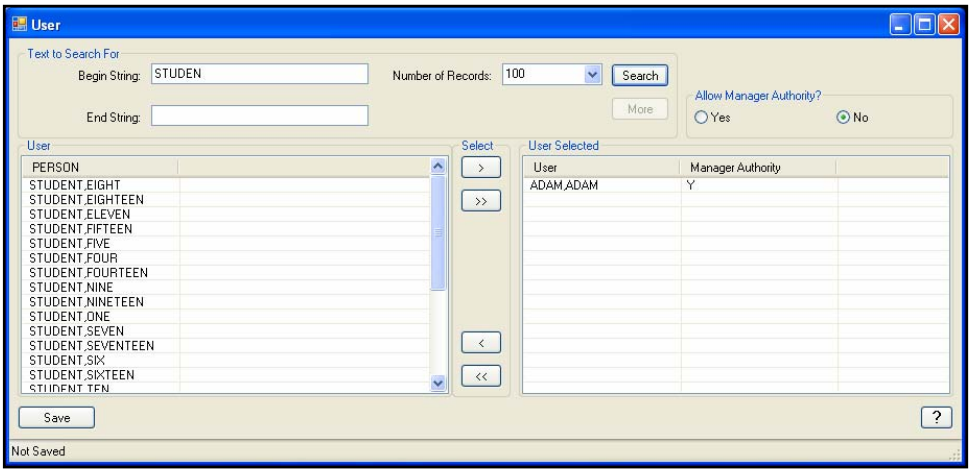

Figure G-39: Example of a user setup screen

2. Current users of the register will be listed in the **User Selected** list. Those that have Manager authority will have a "Y" in the column labeled *Manager Authority*.

3. If additional authorized users are to be added to the Register, type the first few letters of that user's last name in the **Begin String** box. A list of matching entries will be displayed. Either click and drag a user's name from the **User** list to the **User Selected** list, or highlight the user and click the right arrow to move them into the **User** list. If User(s) are to be removed from the **User Selected** list, either drag their name back to the User list or highlight their name and click on the left arrow.

4. If a user is to be give manager authority, click the "Yes" button under **Allow Manager Authority**?, and then click the User's name. Manager authority may be removed in a similar manner, by clicking the "No" button under Allow Manager Authority? And then click the name(s) of user(s) who will not be allowed manager authority.

5. When the list of authorized users has been updated, click the **Save** button to save changes. Click X to close the User window.

G.6.3 Add Patients from Template

1. Click the menu option, **Add Patients from Template**, if you have created a template of patients that you wish to add to the register.

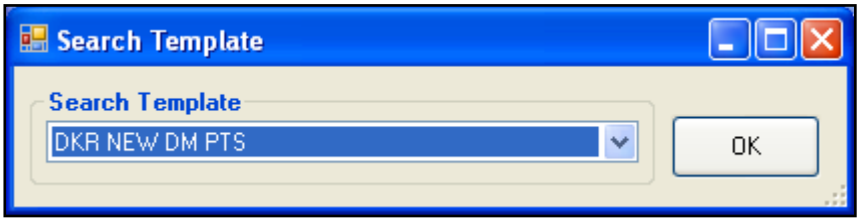

Figure G-40: Sample of a search template screen

2. Click on the drop down arrow next to the Search Template box to see a list of available templates. Click on the desired template and click OK.

3. A popup window will display indicating if the patients have been added successfully. The popup window may be closed by clicking OK.

G.6.4 Complications List

1. Click on the menu option, Complications List, to see the complications that are currently available for your register.

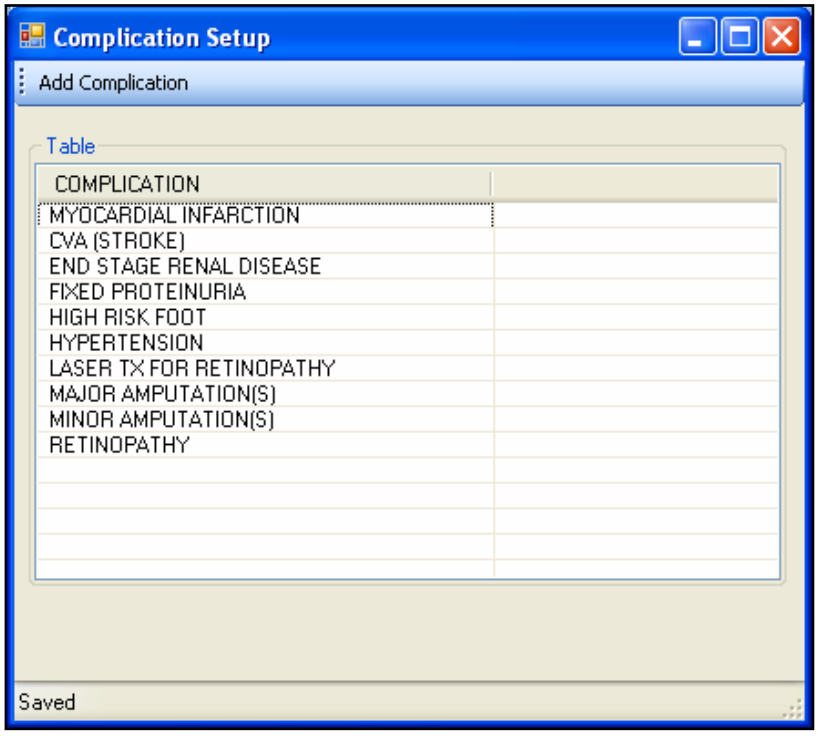

Figure G-41: Sample of a complications list

2. If you wish to add a complication to this list, click on the **Add Complication** button on the toolbar. You may use this screen to type in the name of the new

complication and associate ICD-9 codes with this complication for automatic linkage of complications to patients in the register during the normal data entry process.

3. In the following example, PERIODONTITIS will be added as a new complication. Type PERIODONTITIS in the **Complication** box.

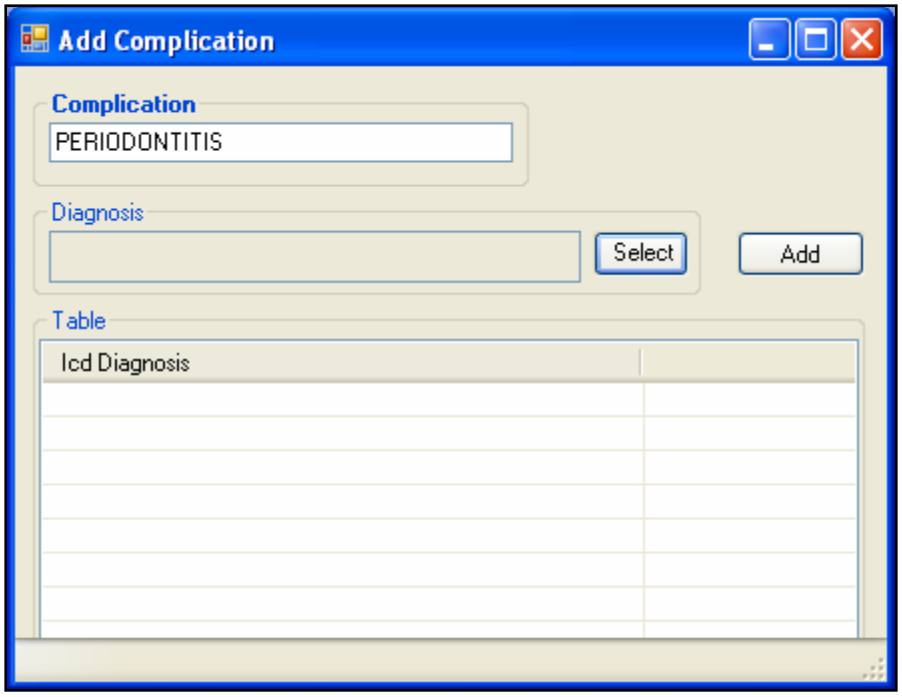

Figure G-42: Sample of adding a complication

4. Then click the **Select** button to identify the diagnoses that will be associated with this complication.

5. Type the first few letters of the diagnosis in the **Begin String** box located near the top of the screen. A list of diagnoses that match this string will be displayed in the **Icd Diagnosis** list. Please see the following example

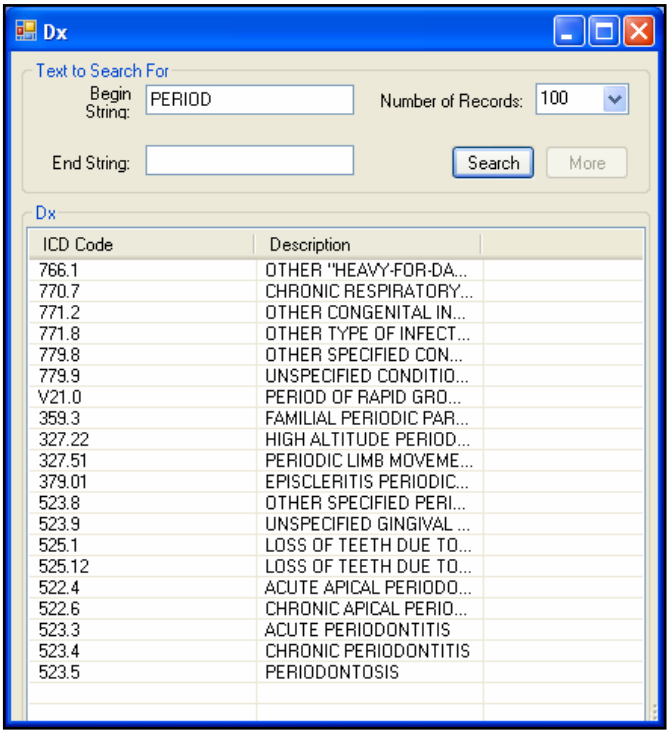

Figure G-43: Sample of using the Begin String box

6. Click on a matching diagnosis. It will be transferred into the **Diagnosis** box .

7. Click on the **Add** button to add the ICD-9 code to the Diagnosis List.

8. Repeat the steps as necessary to add all matching ICD-9 codes to the diagnosis list.

9. When all matching ICD-9 codes have been selected, click X to close the Add Complication window.

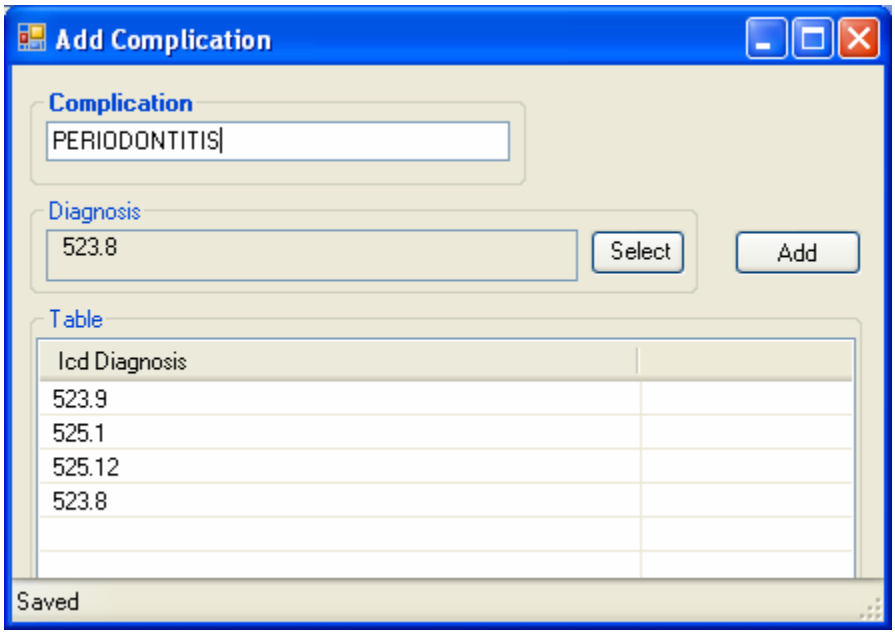

Figure G-44: Sample of a

G.7 Diabetes QA Audit

The menu options for running the annual Diabetes Audit are grouped under the menu option, **Diabetes QA Audit**.

Click on the "+" in front of the menu option to open the folder. Click on the "+" in front of the menu option, 2006 Diabetes Program Audit to access the menu options for the 2006 Audit. When work with these menus has been completed, the menus may be closed by clicking on the "-" in front of the menu.

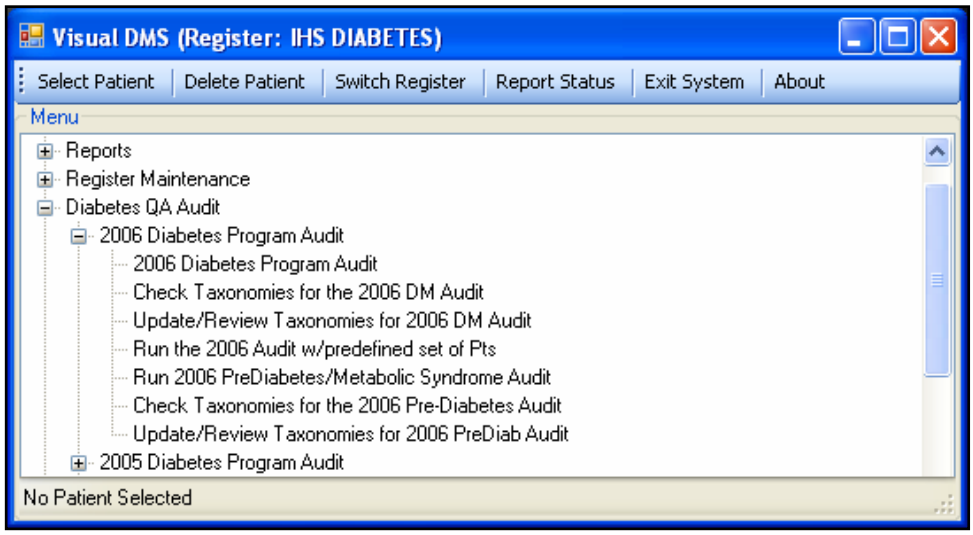

Figure G-45: Example of navigating to the 2006 Diabetes Program Audit screen

G.7.1 2006 Diabetes Program Audit

1. Click on the menu option, **2006 Diabetes Program Audit**, to run the 2006 audit. Before the audit window opens, a taxonomy check will be run and the results displayed on the screen.

2. Click X to close the taxonomy result check screen.

3. Use the drop down arrow next to the **Register Name** box to display a list of available registers. Click on the register which is to be audited.

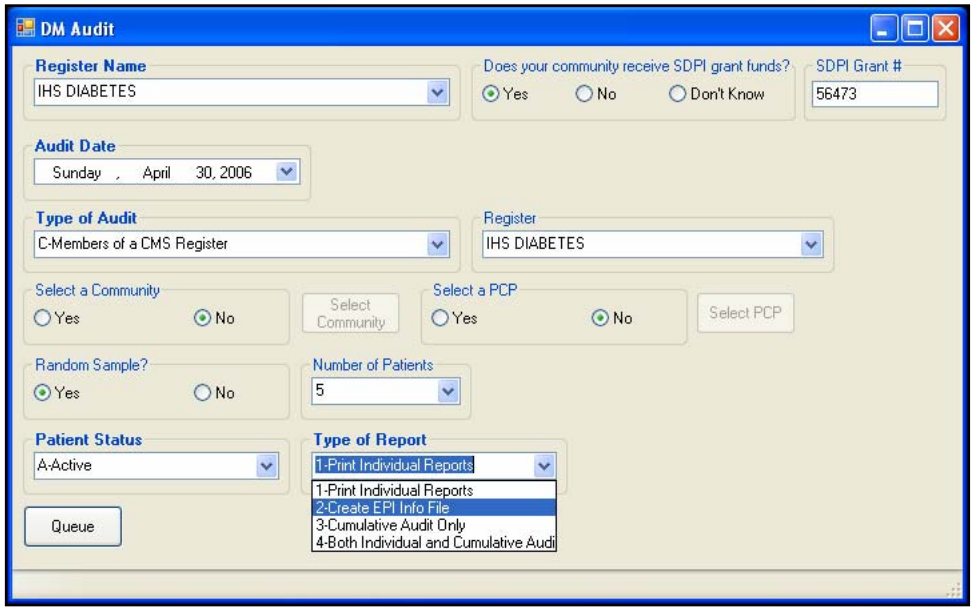

Figure E-46: Sample of selecting a register name

3. Click, "Yes", "No", or "Don't Know" to answer the question, **Does your community receive SDPI grant funds?** If you answer "YES", you must type in your grant number in the box labeled, **SDPI Grant Number**.

4. Use the drop down arrow to review a browsable calendar and click on the **Audit Date**. Alternatively, the up or down arrow keys may be used on the month, day, or year to change the audit date.

5. Use the drop down arrow to identify the **Type of Audit** as:

- P- Individual Patients
- S- Search Template of Patients
- C- Members of a CMS Register

Then click on the Type of Audit.

5. If you choose Individual Patients, you must select the patients to be included in the audit by clicking on the Select Patients button that is highlighted when this selection is made.

Enter patients one at a time by chart number, last name, first name, or date of birth on the patient selection screen. If you only enter last name, the entire list of matching patients may be displayed by clicking on the **Display** button.

Click on patients who you wish to include in the audit. Their names will appear in the **Patients Selected** screen. The process may be repeated until all desired patients have been identified for the audit. Click the **Save** button when the list is complete.

6. If you choose **Search Template of Patients**, you will see a box to select the search template. Use the drop down arrow next to the box to see the available choices and click on the desired search template.

7. If you choose Members of a CMS Register, you will see a box to select the Register. Use the drop down arrow next to the box to see available registers. Click on the register that will be used for the audit.

8. If you wish to run the audit on patients that live in a particular community, click "Yes" in the box, **Select a Community**. A window will open where the first few letters in the community name may be entered in the **Begin String** box. When the list of communities is displayed, click on the desired community.

9. If you wish to run the audit on patients with a particular primary care provider, click on "YES" in the box, **Select a PCP**. A window will open where the first few letters of the primary care provider's last name may be typed in the **Begin String** box. When the list of providers is displayed, click on the desired provider's name.

10. If you chose the run the audit on Members of a CMS Register, you will may answer "Yes" or "No" in the box for **Select a Random Sample**. If you answer "Yes", you will be prompted to enter the **Number of Patients**. Use the drop down arrow to identify the number of patients in the random sample.

11. Use the drop down arrow next to the **Patient Status** box to identify the status of the patients to be included in the audit. Click on the desired status in the displayed list.

12. Use the drop down arrow next to the Type of Report box to identify what type of report is to be generated. Click on the desired report format.

- 1 – Print Individual Reports
- 2 – Create EPI Info File
- 3 – Cumulative Audit
- 4 – Both Individual and Cumulative Audit

13. When all selections have been made for the DM Audit, click on the **Queue** button. A popup window will notify you that the report has been queued. Close the popup window by clicking on X.

14. The report status may be checked by clicking on the Report Status button on the toolbar.

15. The Individual or Cumulative Audit may be opened by clicking on the report when it shows a status of complete. It will open in a Microsoft Word document.

16. The report may be printed, browsed, or saved. The document may be closed when review is complete by clicking the X.

17. If the EPI Info option has been selected, the file will have been stored on your RPMS server and will have to be returned to you in electronic form by your RPMS site manager.

G.7.2 Check Taxonomies for the 2006 DM Audit

1. Click on the menu option, Check Taxonomies for the 2006 DM Audit, to determine whether any taxonomies have not been populated. The result of the taxonomy check will be displayed in a result box.

2. Close the box by clicking X.

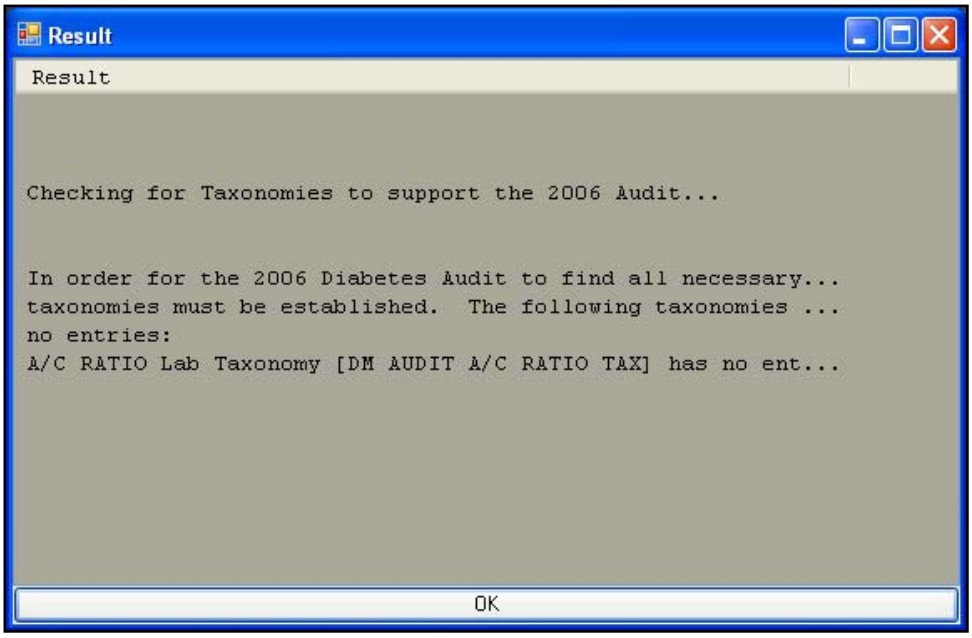

Figure E-47: Sample of checking for taxonomies

G.7.3 Update/Review Taxonomies for 2006 DM Audit

Click on the menu option, **Update/Review Taxonomies** for the 2006 DM Audit, to open the taxonomy update window. Review and update the taxonomies as described in this manual.

G.7.4 Run the 2006 Audit with Predefined Set of Patients

This option may be used to run the Diabetes Audit using the same patient selection criteria as the GPRA Reports. A subset of patients may not be selected.

1. Begin by clicking on the menu option, Run the 2006 Audit with predefined set of Pts.

2. When the DM Audit window opens, selection criteria include the Register Name, the Audit Date, the taxonomy of service unit communities, Type of Report, and SDPI Grant information.

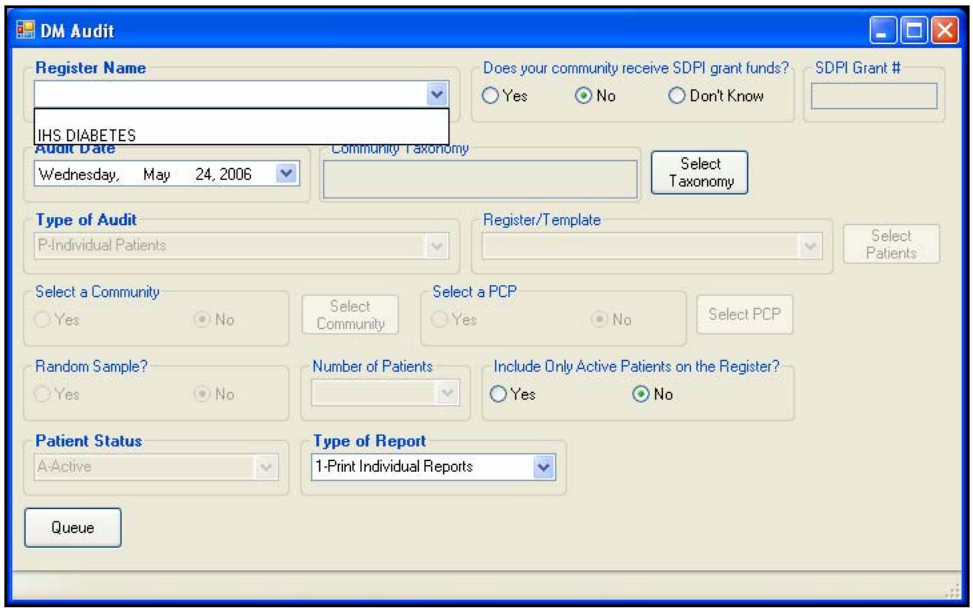

Figure E-48: Sample of DM Audit screen

3. Begin by clicking the drop down arrow beside the Register Name box. Select the desired register.

4. Click on "Yes", "No", or "Don't Know" to answer the question, **Does your community receive SDPI grant funds?** If you answer "Yes", enter the SDPI Grant number in the box provided.

5. Identify the audit date by using the drop down arrow next to the **Audit Date** box to display a calendar. Browse the calendar and click on the audit date. You may also click on the month, day, or year and use the up or down arrow keys to change one or more of these entries.

6. Click on **Select Taxonomy** to identify the GPRA taxonomy of communities that has been established for your service unit. When the list of taxonomies is displayed, click on the desired taxonomy name.

7. Click on the drop down arrow next to the Type of Report box to display the choice of reports. Click on the desired report format.

1 – Print Individual Reports

2 – Create EPI Info File

3 – Cumulative Audit

4 – Both Individual and Cumulative Audit

8. Initiate the audit by clicking on the **Queue** button. A popup window will notify you that the report has been queued. Close the popup window by clicking on X.

The report status may be checked by clicking on the Report Status button on the toolbar. The Individual or Cumulative Audit may be opened by clicking on the report when it shows a status of complete. It will open in a Microsoft Word document. The report may be printed, browsed, or saved. The document may be closed when review is complete by clicking the X. If the EPI Info option has been selected, the file will have been stored on your RPMS server and will have to be returned to you in electronic form by your RPMS site manager.

G.7.5 Run 2006 Pre-Diabetes/Metabolic Syndrome Audit

The Pre-Diabetes/Metabolic Syndrome Audit may be run if you have identified patients who have any of the conditions associated with an increased risk of developing diabetes and have added those patients to a Pre-Diabetes Register.

1. To begin, click on the menu option, **Run 2006 PreDiabetes/Metabolic Syndrome Audit.**

2. Before the audit window opens, a taxonomy check will be run and the results displayed on the screen. Click X to close the taxonomy result check screen.

3. Use the drop down arrow next to the **Register Name** box to display a list of available registers. Click on the Register which is to be audited.

4. Click, "Yes", "No", or "Don't Know" to answer the question, **Does your community receive SDPI grant funds?** If you answer "YES", you must type in your grant number in the box labeled, **SDPI Grant #**.

5. Use the drop down arrow to review a browsable calendar and click on the **Audit Date**. Alternatively, the up or down arrow keys may be used on the month, day, or year to change the audit date.

6. Use the drop down arrow to identify the **Type of Audit** as:

P	Individual Patients
S	Search Template of Patients
C	Members of a CMS Register

Then click on the Type of Audit.

7. If you choose *Individual Patients*, you must select the patients to be included in the audit by clicking on the Select Patients button that is highlighted when this selection is made.

Enter patients one at a time by chart number, last name, first name, or date of birth on the patient selection screen. If you only enter last name, the entire list of matching patients may be displayed by clicking on the **Display** button. Click on patients who you wish to include in the audit. Their names will appear in the **Patients Selected**

screen. The process may be repeated until all desired patients have been identified for the audit. Click the **Save** button when the list is complete.

If you choose **Search Template of Patients**, you will see a box to select the search template. Use the drop down arrow next to the box to see the available choices and click on the desired search template.

If you choose Members of a CMS Register, you will see a box to select the register. Use the drop down arrow next to the box to see available registers. Click on the register that will be used for the audit.

8. If you wish to run the audit on patients that live in a particular community, click "Yes" in the box, **Select a Community**. A window will open where the first few letters in the community name may be entered in the **Begin String** box. When the list of communities is displayed, click on the desired community.

9. If you wish to run the audit on patients with a particular primary care provider, click on "YES" in the box, **Select a PCP**. A window will open where the first few letters of the primary care provider's last name may be typed in the **Begin String** box. When the list of providers is displayed, click on the desired provider's name.

10. If you chose the run the audit on Members of a CMS Register, you may answer "Yes" or "No" in the box for **Select a Random Sample**. If you answer "Yes", you will be prompted to enter the **Number of Patients**. Use the drop down arrow to identify the number of patients in the random sample.

11. Use the drop down arrow next to the **Patient Status** box to identify the status of the patients to be included in the audit. Click on the desired status in the displayed list.

12. Use the drop down arrow next to the Type of Report box to identify what type of report is to be generated. Click on the desired report format.

1 – Print Individual Reports

2 – Create EPI Info File

3 – Cumulative Audit

4 – Both Individual and Cumulative Audit

13. When all selections have been made for the PreDiabetes/Metabolic Syndrome Audit, click on the **Queue** button. A popup window will notify you that the report has been queued. Close the popup window by clicking on X.

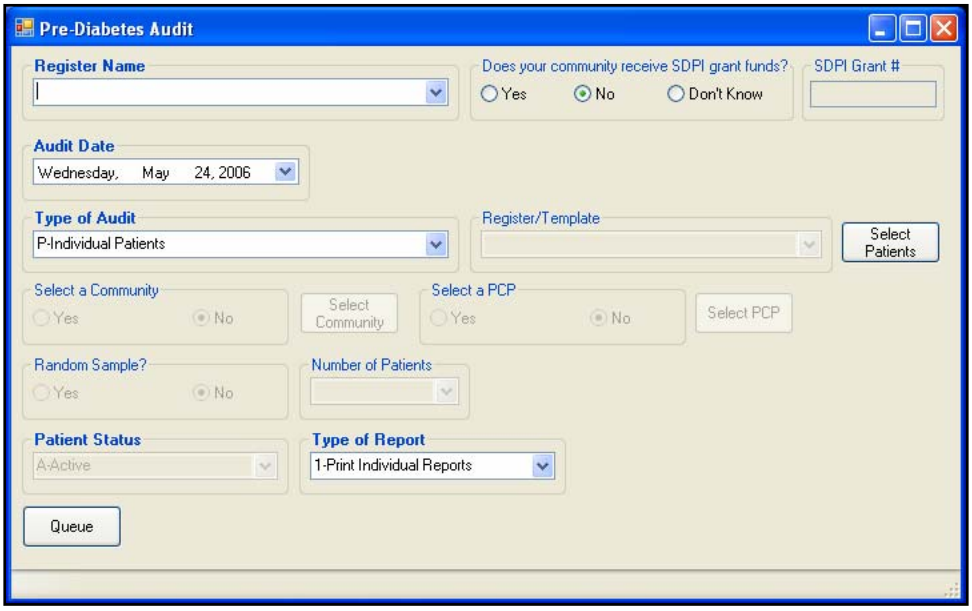

Figure E-49: Sample of Pre-Diabetes Audit screen selections

The report status may be checked by clicking on the Report Status button on the toolbar. The Individual or Cumulative Audit may be opened by clicking on the report when it shows a status of complete. It will open in a Microsoft Word document. The report may be printed, browsed, or saved. The document may be closed when review is complete by clicking the X. If the EPI Info option has been selected, the file will have been stored on your RPMS server and will have to be returned to you in electronic form by your RPMS site manager.

Check Taxonomies for the 2006 Pre-Diabetes Audit

Click on the menu option, Check Taxonomies for the 2006 Pre-Diabetes Audit, to determine whether any taxonomies have not been populated. The result of the taxonomy check will be displayed in a result box. Close the box by clicking X.

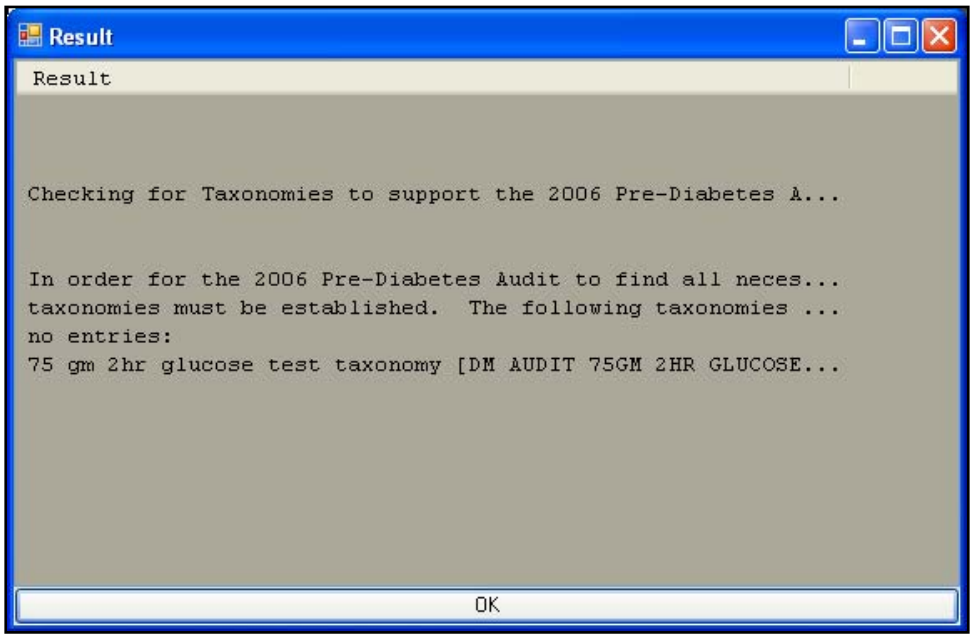

Figure E-50: Sample of results screen

G.7.6 Update/Review Taxonomies for 2006 Pre-Diab Audit

Click on the menu option, **Update/Review Taxonomies for 2006 Pre-Diab Audit**, to open the taxonomy update window. Review and update the taxonomies as described in this manual.

G.7.7 2005 Diabetes Program Audit

The directions provided in the 2006 Diabetes Program Audit may be used as guidelines for using the menu options for the 2003 and the 2005 Diabetes Program Audit menus.

G.7.8 2003 Diabetes Program Audit

The directions provided in the 2006 Diabetes Program Audit may be used as guidelines for using the menu options for the 2003 and the 2005 Diabetes Program Audit menus.

G.7.9 Patients with No DX of DM on Problem List

A report may be run to determine which patients on your register or who have x number of diagnosis of diabetes do not have a diagnosis of diabetes on their problem list.

1. Begin by clicking on the menu option, Patients with No DX of DM on Problem List.

2. A window will open which will allow defining the criteria for the report.

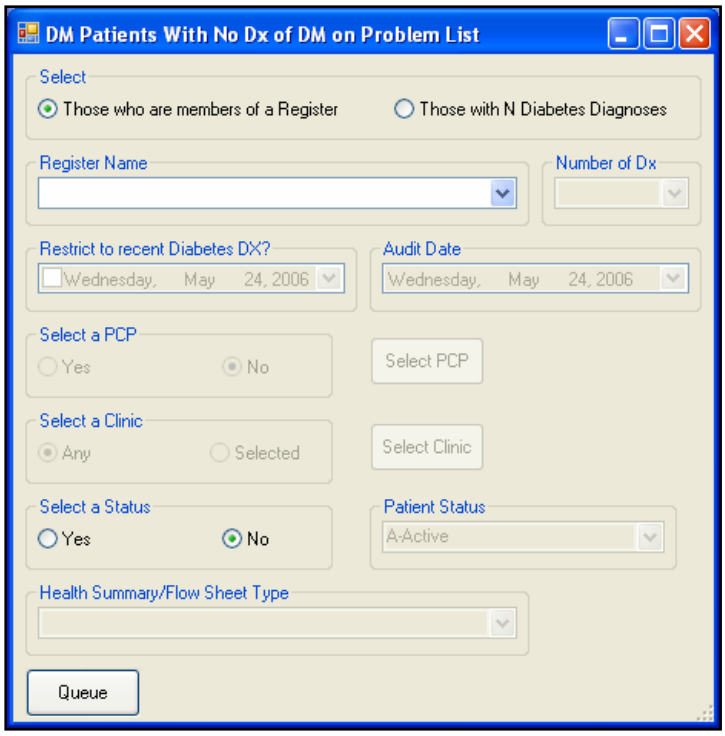

Figure E-51: Sample of screen used to define criteria for report

3. Click on either *Those who are members of a Register* or *Those with N Diabetes Diagnoses*. N refers to the Number of Diabetes Dx a patient has had.

4. If you select Those with N Diabetes Diagnoses, you will need to click the drop down arrow next to the box, **Number of Dx,** to make that selection. If you select **Those who are members of a Register**, you will need to use the drop down arrow next to the Register Name box, and then select the Name of the Register included in the report.

5. If you are interested in restricting your list to only those patients whose most recent Diabetes diagnosis is since a certain date, click on the drop down arrow next to the **Restrict to recent Diabetes DX?** box to display a browseable calendar. Click on the desired date of how far back you wish to look at diagnoses. You may also click on the month, date, or year and use the up or down arrows to change those entries.

6. When selections have been completed, click on the **Queue** button. A popup window will notify you that the report has been queued. Close the popup window by clicking on X.

The report status may be checked by clicking on the Report Status button on the toolbar. The Report of Patients with no Diagnosis of Diabetes on the Problem List may be opened by clicking on the report when it shows a status of complete. It will open in a Microsoft Word document. The report may be printed, browsed, or saved. The document may be closed when review is complete by clicking the X.

G.7.10 DM Register Patients with No Recorded DM Onset

This report may be run to identify patients on the register who do not have a date of onset of Diabetes recorded in RPMS.

1. Begin by clicking on the menu option, **DM Register Patients with No Recorded DM Onset**. A window will open that will allow selection of the register to be reviewed and identify, if desired the status of the patients who will be reviewed for the report.

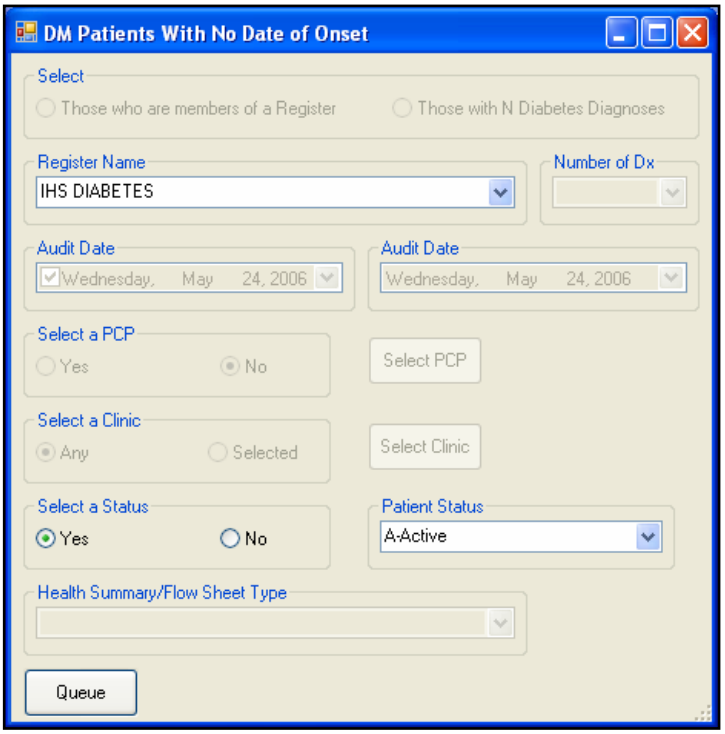

Figure E-52: Sample of selecting register to be reviewed

2. Click on the drop down arrow next to **Register Name**. Click on the desired Register Name from the list displayed.

3. Click on "Yes" or "No" in the box, **Select a Status**.

4. Use the drop down arrow next to the **Patient Status** box to display the list of statuses. Click on the desired status.

5. Click on the **Queue** button to run the report. A popup window will notify you that the report has been queued. Close the popup window by clicking on X.

The report status may be checked by clicking on the Report Status button on the toolbar. The report of Patients with No Date of DM Diagnosis may be opened by clicking on the report when it shows a status of complete. It will open in a Microsoft Word document. The report may be printed, browsed, or saved. The document may be closed when review is complete by clicking the X.

G.7.11 List Patients on a Register with an Appointment

This report will allow you to print a list of patients on a register with appointments within the date range you specify in all or in select clinics.

1. Begin by clicking on the menu option, **List Patients on a Register w/an Appointment**.

2. When the *List Patients on Register with an Appointmen*t window opens, click on the drop down arrow next to the Register Name box to display a list of registers. Select the desired register for the report.

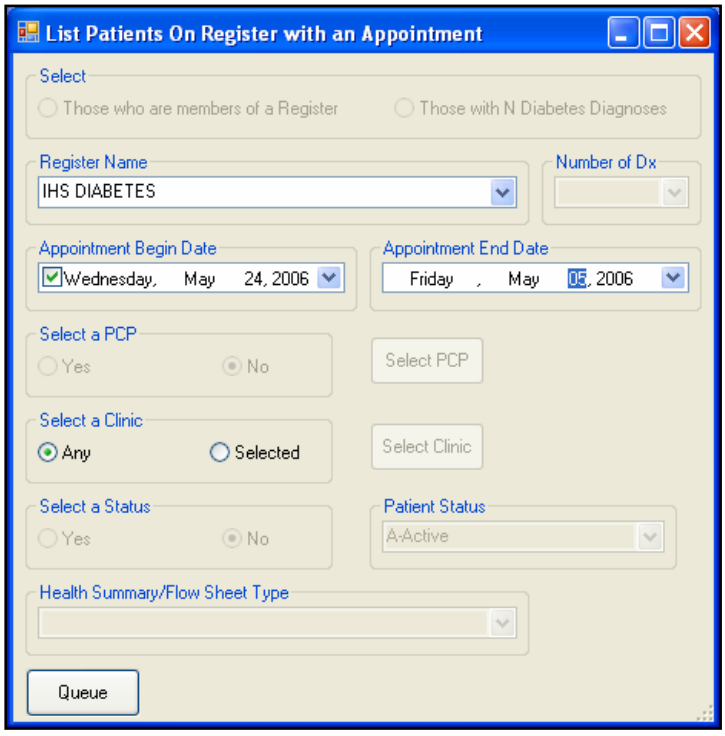

Figure E-53: Sample of displaying a list of registers

3. Use the browsable calendars displayed by clicking on the drop down arrows next to the **Appointment Begin Date** and **Appointment End Date** to click on the

appointment dates desired. The month, day, or year may be changed by clicking on each and using the up or down arrows to set the beginning appointment date or ending appointment date.

4. If you wish to see all appointments, regardless of clinic, select "Any" under **Select a Clinic**. If you wish to only review appointments for one or more particular clinics, click on the **Select Clinic** button.

Type the first three letters of the clinic with a scheduled appointment in the beginning string box. When the list of matching clinics is displayed, the desired clinic may be highlighted and dragged into the column on the right. You may also highlight the clinic and click on the right arrow (>) button to move the clinic into the right hand column. When all desired clinics have been added to the **Clinic Selected List**, click on the Save button.

5. Click on the **Queue** button to run the report. A popup window will notify you that the report has been queued. Close the popup window by clicking on X.

The report status may be checked by clicking on the Report Status button on the toolbar. The report of Patients with Appointments during the specified time frame at the designated clinics may be opened by clicking on the report when it shows a status of complete. It will open in a Microsoft Word document. The report may be printed, browsed, or saved. The document may be closed when review is complete by clicking the X.

G.7.12 DM Register Patients and Select Values in 4 Months

This is a pre-formatted report that shows the status of certain laboratory tests, measurements, and exams for register patients.

1. Begin by clicking on the menu option, **DM Register Patients and Select Values in 4 Months.**

2. You may select the register, the cut off date for running the report, the status of the patients, and whether the report will be run for a particular primary care provider when the report window opens.

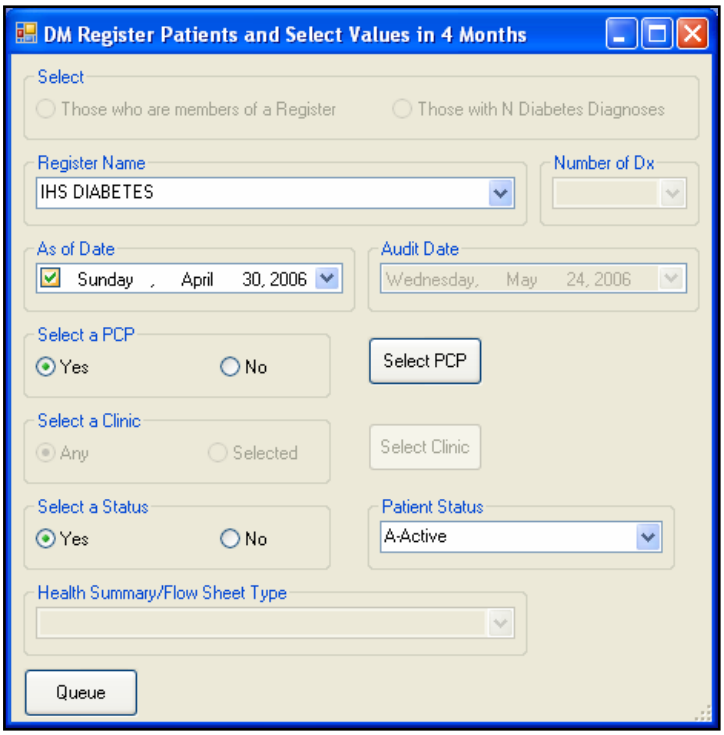

Figure E-54: Sample of selecting values

3. Click on the drop down arrow beside the **Register Name** box and select the desired register from the list displayed.

4. Identify the cut off date for reviewing tests and measurements by clicking on the drop down arrow next to the **As of Date** box and browsing the calendar to click on the cut off date. You may click on the month, date, or year and use the up or down arrow keys to change the entries for the cut off date.

5. If you wish to run the report for a particular Primary Care Provider, Click "Yes" under Select a PCP. Click "No" if you wish to review results for patients regardless of Primary Care Provider.

6. If you have chosen to *Select a PCP*, Click on the button, **Select PCP**. Type the first few letters of the desired provider's last name in the beginning string box. When you click the Search button, a list of providers with matching last names will be displayed. Click on the name of the desired provider for this report.

7. Click on the **Queue** button to run the report. A popup window will notify you that the report has been queued. Close the popup window by clicking on X.

The report status may be checked by clicking on the Report Status button on the toolbar. The report of Register Patients and select values for 4 months may be opened by clicking on the report when it shows a status of complete. It will open in a

Microsoft Word document. The report may be printed, browsed, or saved. The document may be closed when review is complete by clicking the X.

G.7.13 Print Health Summary for DM Patients with Appointment

You may choose this option to print a health summary of the desired type for patients who have an appointment at a designated clinic within a designated time frame. This will facilitate review of a patient's record before their appointment.

1. Begin by clicking on the menu option, Print Health Summary for DM Patients W/Appointment.

2. When the Print Health Summary for DM patients W/Appt window opens you may select the register of interest, the date of the appointment, and the type of health summary desired.

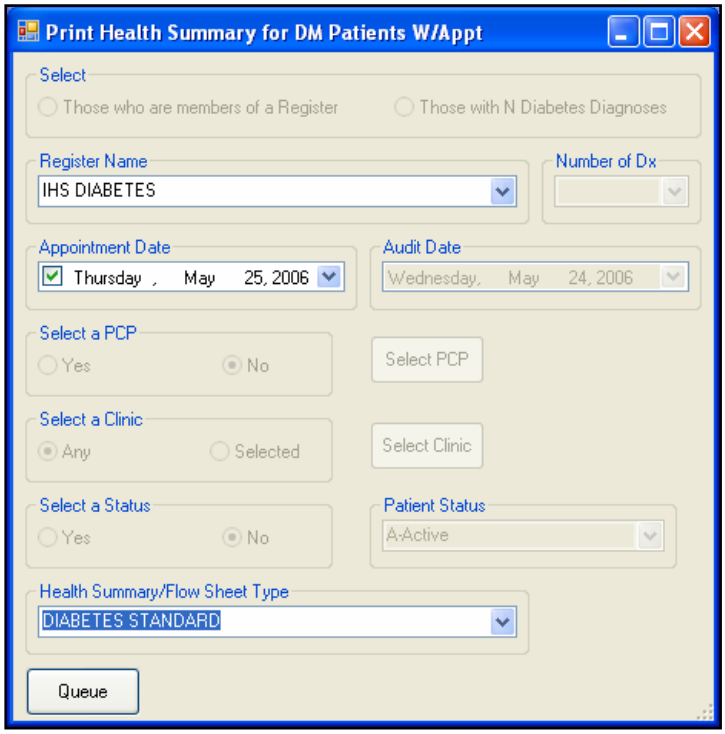

Figure E-55: Sample of Print Health Summary for DM patients W/Appt screen

3. Select the register to be used in the report by clicking the down arrow beside the **Register Name** box. Click on the desired register name.

4. Select the appointment date by clicking on the drop down arrow beside the **Appointment Date** box and browse the calendar displayed. Click on the desired appointment date. You may also click on the month, date, or year in the Appointment Date box and use your up or down arrow keys to change these entries to the desired appointment date.

5. Select the Type of Health Summary to display by clicking the drop down arrow beside the **Health Summary/Flow Sheet Type**. When the list is displayed, select the desired health summary type by clicking on it.

6. Click on the **Queue** button to run the report. A popup window will notify you that the report has been queued. Close the popup window by clicking on X.

7. The report status may be checked by clicking on the Report Status button on the toolbar. The report of Health Summaries may be opened by clicking on the report when it shows a status of complete. The report may be printed, browsed, or saved. The document may be closed when review is complete by clicking the X.

G.8 Update Patient Data

The **Update Patient Data** menu option may be used to update diabetes-related data in PCC. The health summary should be reviewed first to ensure that data already entered by data entry staff will not be duplicated. Be sure that a patient has first been selected using the toolbar option to Select Patient and that a patient name is displayed in the gray bar at the bottom of the window.

1. Begin by clicking on the menu option, **Update Patient Data**. The update window will open.

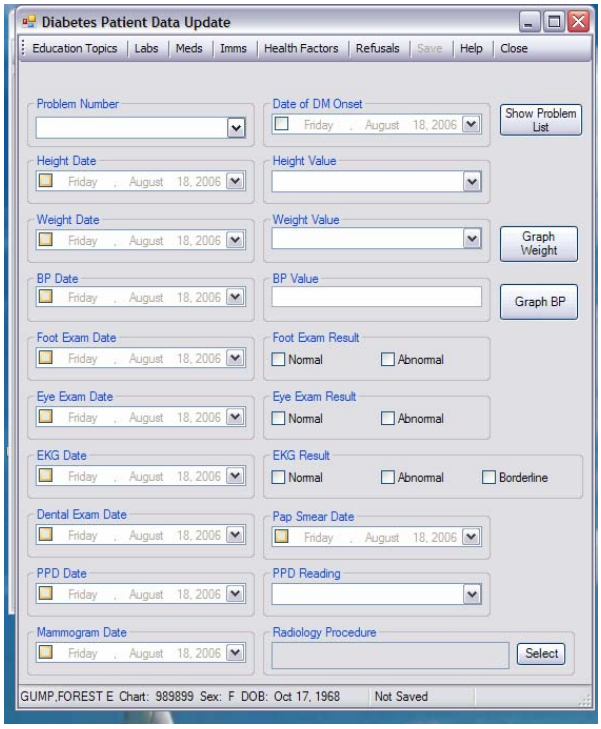

Figure E-56: Sample of Update Patient Data option

2. The following data items may be updated via the main screen:

- Date of DM onset
- Weight
- Height
- Blood Pressure
- Diabetic Foot Exam
- Diabetic Eye Exam
- EKG
- Dental Exam
- PPD
- Pap Smear Date
- Mammogram

3. Toolbar options are available to enter data for:

- Education Topics
- Lab tests
- Medications
- Immunizations
- Health Factors
- Refusals

4. One or more items may be updated either using the main screen or the toolbar options. Data will not be saved until the Save button on the toolbar is clicked. This may be done each time a new piece of data (date and value) is entered or when all updates have been made.

However, PCC will not be updated until the Update Patient Data window is closed by clicking on X. A popup window will display indicating, "I will now Update PCC Data." Click OK to file the data. If filing was successful, a result screen will indicate that filing was successful. The screen may be closed by clicking on X.

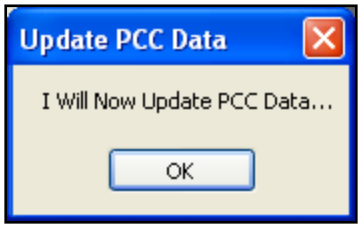

Figure E-57: Sample of confirmation screen

5. The problem list may be displayed to identify a problem number that may be updated with a date of onset. To review the patient's problem list, click on the **Show Problem List** button. Click on X to close the problem list window.

6. Blood pressure and Weight values may be graphed by clicking on the **Graph Blood Pressure** or **Graph Weight** buttons. The directions for using this graphing option are included in this manual. A Blood Pressure or Weight measurement entered during this update session will not display on the graph until new data entered during the current update session has been saved.

7. Date of DM onset - Problem Number
Place a check mark in the box for **Date of DM Onset**. Select the Date of DM Onset by clicking on the drop down arrow beside the **Date of DM Onset** box and browse the calendar displayed. Click on the desired onset date. You may also click on the month, date, or year in the Date of DM Onset date box and use the up or down arrow keys to change these entries to the desired date. Pick the Problem Number from the patient's problem list in the **Problem Number** box.

8. Height Date – Height Value
Place a check mark in the box for **Height Date**. Select the date of the measurement by clicking on the drop down arrow beside the Height Date box and browse the calendar displayed. Click on the desired date. You may also click on the month, date, or year in the Height Date box and use the up or down arrow keys to change these entries to the desired date. Use the drop down arrow beside the **Height Value** box to display heights in inches. Click on the correct height.

9. Weight Date – Weight Value
Place a check mark in the box for **Weight Date**. Select the date of the measurement by clicking on the drop down arrow beside the Weight Date box and browse the calendar displayed. Click on the desired date. You may also click on the month, date, or year in the Weight Date box and use the up or down arrow keys to change these entries to the desired date. Use the drop down arrow beside the **Weight Value** box to display weight in pounds. Click on the correct weight.

10. BP Date – BP Value:
Place a check mark in the box for **BP Date**. Select the date of the measurement by clicking on the drop down arrow beside the BP Date box and browse the calendar displayed. Click on the desired date. You may also click on the month, date, or year in the BP Date box and use the up or down arrow keys to change these entries to the desired date. Enter the blood pressure in standard blood pressure format in the **BP Value** box, e.g. 140/80.

11. Foot Exam Date – Foot Exam Result
Place a check mark in the box for **Foot Exam Date**. Select the date of the exam by clicking on the drop down arrow beside the Foot Exam Date box and browse the calendar displayed. Click on the desired date. You may also click on the month, date, or year in the Foot Exam Date box and use the up or down arrow keys to change

these entries to the desired date. Click on Normal or Abnormal in the **Foot Exam Result** box.

12. Eye Exam Date – Eye Exam Result: Place a check mark in the box for **Eye Exam Date**. Select the date of the exam by clicking on the drop down arrow beside the Eye Exam Date box and browse the calendar displayed. Click on the desired date. You may also click on the month, date, or year in the Eye Exam Date box and use the up or down arrow keys to change these entries to the desired date. Click on Normal or Abnormal in the **Eye Exam Result** box.

13. EKG Date – EKG Result: Place a check mark in the box for **EKG Date**. Select the date of the EKG by clicking on the drop down arrow beside the EKG Date box and browse the calendar displayed. Click on the desired date. You may also click on the month, date, or year in the EKG Date box and use the up or down arrow keys to change these entries to the desired date. Click on Normal or Abnormal in the **EKG Result** box.

14. Dental Exam Date – Dental Exam Result: Place a check mark in the box for **Dental Exam Date**. Select the date of the Dental Exam by clicking on the drop down arrow beside the Dental Exam Date box and browse the calendar displayed. Click on the desired date. You may also click on the month, date, or year in the Dental Exam Date box and use the up or down arrow keys to change these entries to the desired date. Click on Normal or Abnormal in the Dental Exam box.

15. PPD Date – PPD Reading: Place a check mark in the box for **PPD Date**. Select the date of the PPD by clicking on the drop down arrow beside the PPD Date box and browse the calendar displayed. Click on the desired date. You may also click on the month, date, or year in the PPD Date box and use the up or down arrow keys to change these entries to the desired date. Click on the drop down arrow next to the PPD Reading box and click on the PPD reading recorded.

16. Pap Smear Date: Place a check mark in the box for **Pap Smear Date**. Select the date of the Pap Smear by clicking on the drop down arrow beside the Pap Smear Date box and browse the calendar displayed. Click on the desired date. You may also click on the month, date, or year in the Pap Smear Date box and use the up or down arrow keys to change these entries to the desired date.

17. Mammogram Date – Radiology Procedure: Place a check mark in the box for **Mammogram Date**. Select the date of the Mammogram by clicking on the drop down arrow beside the Mammogram Date box and browse the calendar displayed. Click on the desired date.

You may also click on the month, date, or year in the Mammogram Date box and use the up or down arrow keys to change these entries to the desired date. Click on the drop down arrow next to the Mammogram Procedure box. Type MAMMO or SCREEN depending upon the type of procedure done in the Begin string box. Click on the Search button to display all matching procedures. Click on the correct

mammogram procedure that was performed. It will now be displayed in the Radiology Procedure box.

18. Click on the Education Topics button on the toolbar of the Update Patient Data window. The Education Topics window will open.

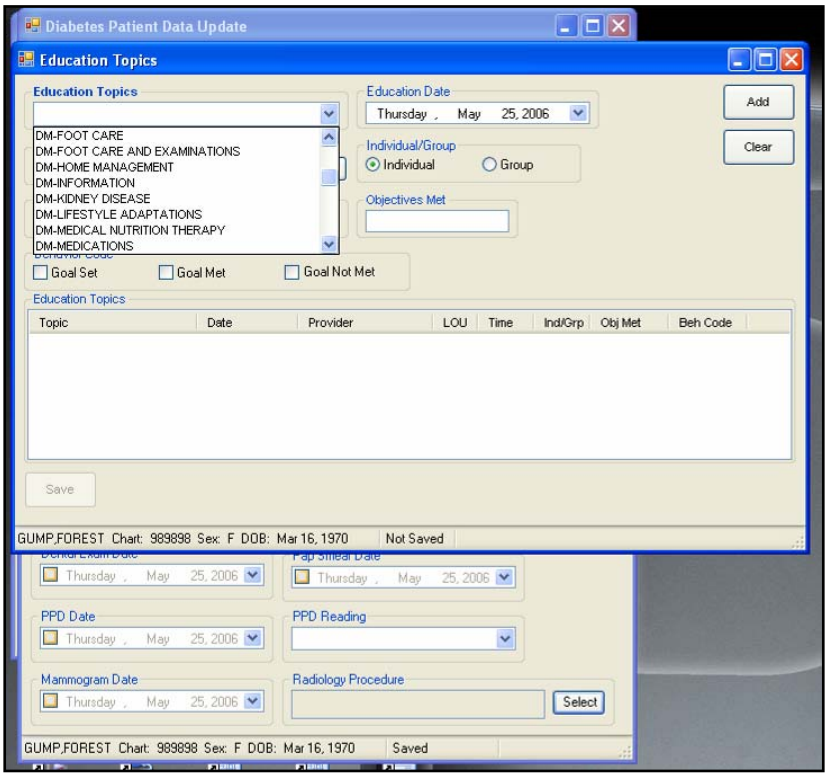

Figure E-58: Sample of Education Topics screen

Click on the drop down arrow next to the **Education Topics** button to display a list of Diabetes-related education topics. Click on the desired topic.

- Select the date of the Education by clicking on the drop down arrow beside the **Education Date** box and browse the calendar displayed. Click on the desired date. You may also click on the month, date, or year in the Mammogram Date box and use the up or down arrow keys to change these entries to the desired date.
- Click on **Individual or Group** to indicate the setting for the education.
- Type, in free text, the objectives met during this session, e.g. 1-3, 7 in the **Objectives Met** box.
- Click the Select button next to the **Provider** box. Browse the list of providers and click on the provider of the education topic.
- Click on the drop down arrow next to the **Level of Understanding** box to display the choices. Click on the appropriate level of understanding.

- Click on the drop down arrow next to the **Time in Minutes** box and click on the number of minutes spent on this education topic.
- Select Goal Set, Goal Not Met, or Goal Met for the **Behavioral Goal** for this session.
- When all desired data fields have been entered, click the Add button to store this education data.
- The steps above may be repeated for each additional education topic. When all data has been entered and added, the list of education data items will display in the Education Topics box at the bottom of the window. Click the Save button to store this data and then click X to leave the Education Topics window. The education data will not be passed to PCC until the **Update Patient Data** window is closed.

19. Click on the **Labs** button on the toolbar of the **Update Patient Data** window. The Labs window will open. Lab tests, the date performed, and the results may be entered in this window. Lab values may also be graphed following the directions provided in this manual.

- Click on the Select button next to the Lab Test box. Type the first few letters of the lab test name in the Begin String box when the selection window opens. Click Search. Click on the desired lab test in the list displayed.
- Select the date of the Lab test by clicking on the drop down arrow beside the Lab Date box and browse the calendar displayed. Click on the desired date. You may also click on the month, date, or year in the Lab Date box and use the up or down arrow keys to change these entries to the desired date
- Enter the value of the Lab Test in the Result box.
- Click the Add button to add the lab test to the list of Labs to be added to the patient's record.
- As many lab tests as desired may be added using these steps. When all lab data has been entered, click on the Save button to store these results and click on X to close the Labs window. Lab data will not be updated in PCC until the Update Patient Data window is closed.

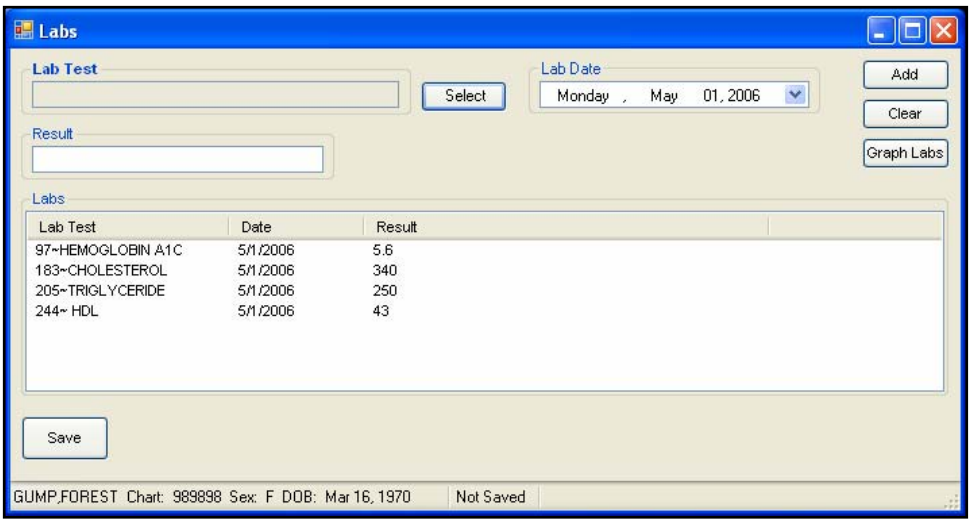

Figure E-59: Sample of screen used to add lab tests

20. Click on the **Meds** button of the Update Patient Data toolbar to open the Meds window. Medications, date dispensed, quantity, and Sig may be recorded in this window.

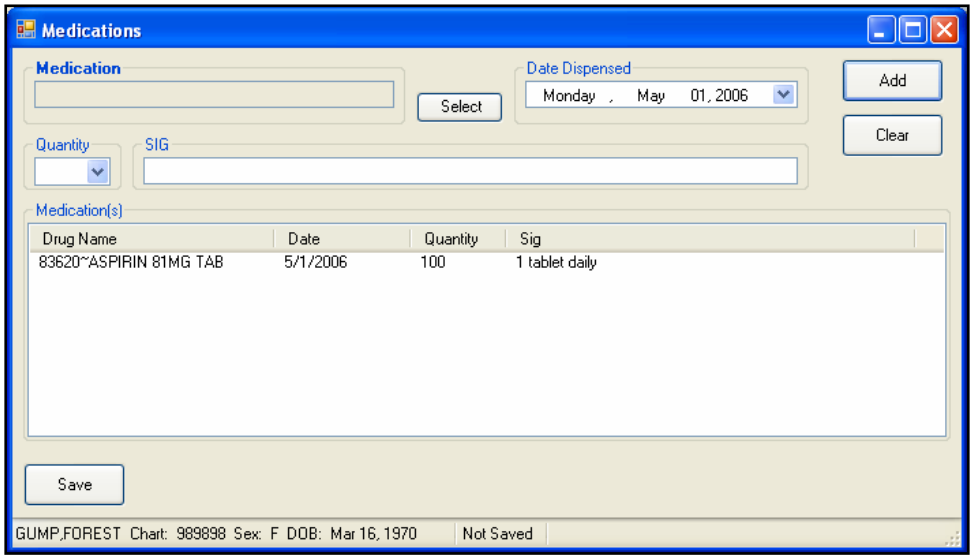

Figure E-60: Sample of medication screen

- Click on the Select button next to the Medication box. Type the first few letters of the medication in the Begin String box when the selection window opens. Click Search. Click on the desired medication in the list displayed.

- Select the date dispensed by clicking on the drop down arrow beside the Date Dispensed box and browse the calendar displayed. Click on the desired date. You may also click on the month, date, or year in the Date Dispensed box and use the up or down arrow keys to change these entries to the desired date
- Click the drop down arrow next to Quantity and select the quantity of the medication dispensed.
- Enter the SIG as free text if desired.
- Click the Add button to add the medication to the list of Medications to be added to the patient's record.
- As many medications as desired may be added using these steps. When all medication data has been entered, click on the Save button to store these results and click on X to close the Labs window. Medication data will not be updated in PCC until the Update Patient Data window is closed.

21. Click on the **Immunization** button on the toolbar of the **Update Patient Data** window to enter Pneumovax, Influenza, and TD immunizations. When the Immunization window opens you may enter vaccines and the date they were given.

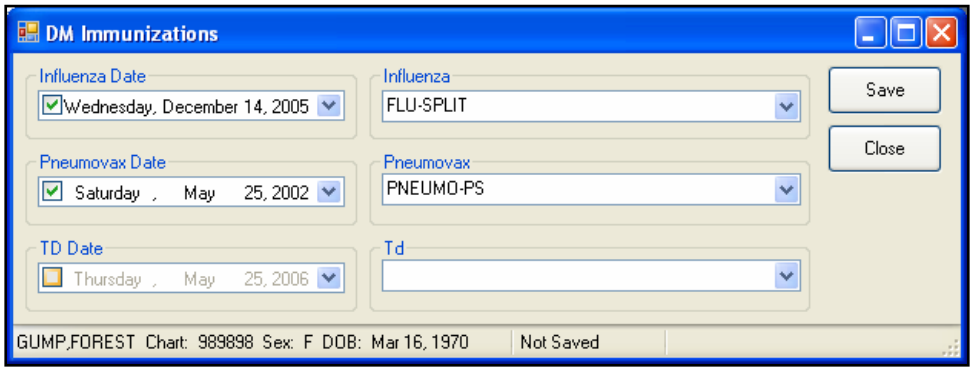

Figure E-62: Sample of screen used to enter immunizations

- Click to place a check in the date box of each immunization that will be updated. Select the date of the immunization by clicking on the drop down arrow beside the date box and browse the calendar displayed. Click on the desired date. You may also click on the month, date, or year in the Date box and use the up or down arrow keys to change these entries to the desired date.
- Click on the drop down arrow adjacent to the Vaccine type box and click on the vaccine given from the list displayed.
- When all immunizations have been recorded, click on the Save button.
- Click on the X or the Close button to close the Immunization window. Immunization data will not be updated in PCC until the Update Patient Data window is closed.

22. **Health Factors** may be updated by clicking on the Health Factor button on the Update Patient Data toolbar. When the window opens, you may enter health factors for:

- Tobacco Use
- TB Treatment Status
- Self Monitoring Blood Glucose
- Barriers to Learning
- Readiness to Learn
- Learning Preference

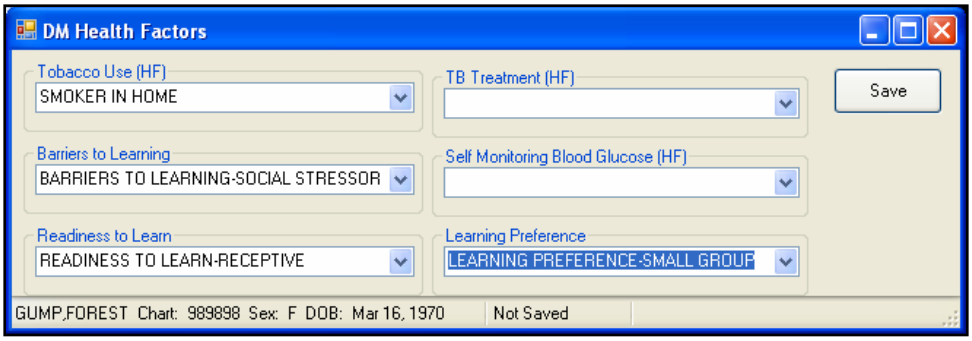

Figure E-63: Sample of screen used to update health factors

Click on the drop down arrow next to the health factor to be recorded. Select the desired health factor from the list displayed.

When desired health factors have been updated, click on the Save button to store the health factors. Click on X to close the DM Health Factors window. Health Factor data will not be updated in PCC until the Patient Update Data window is closed.

23. Refusal of diabetic care needs may be documented by clicking on the Refusals button of the Patient Data Update window.

Refusals may be documented for:

- Education Topics
- Medications
- EKG
- Measurements
- Mammogram
- Lab tests
- EKG

- Exams
- Skin Tests

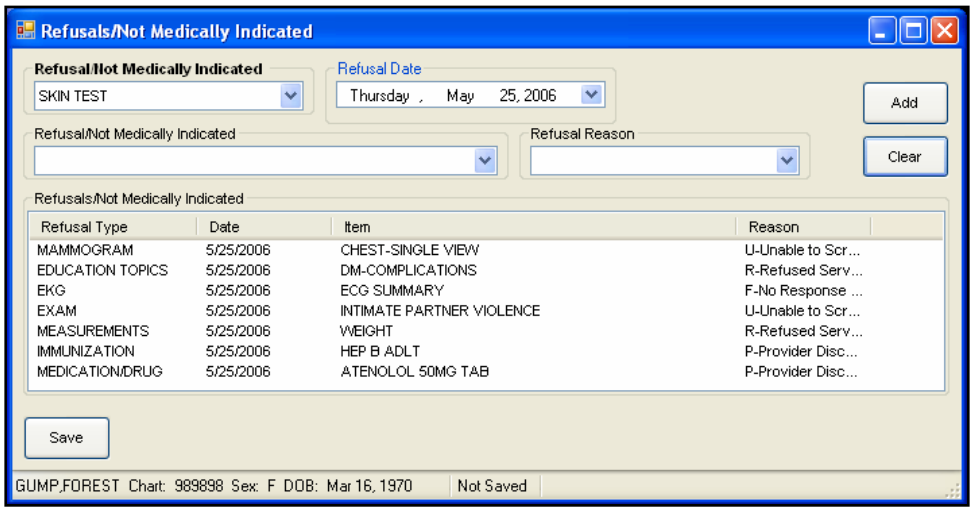

Figure E-64: Sample of documenting refusals of various types

- Begin by clicking on the drop down arrow next to the Refusal/Not Medically Indicated box. Select from the list of categories of items that may be refused.
- Select the date of the refusal by clicking on the drop down arrow beside the Refusal Date box and browse the calendar displayed. Click on the desired date. You may also click on the month, date, or year in the Refusal Date box and use the up or down arrow keys to change these entries to the desired date.
- Next click on the drop down arrow next to the second Refusal/Not Medically Indicated box. A list of data items in the category selected will display, click on the actual data item refused. For example, if the Measurement category was chosen in the fist refusal/not medically indicated box, the second box will display a list of measurement types to choose from.
- Next document the Type of Refusal by clicking on the drop down arrow and selecting from:

R	Refused Service
N	Not Medically Indicated
F	No Response to Followup
P	Provider Discontinued
U	Unable to Screen

- When all desired entries are made for one type of refusal, click the Add button to add the refusal to the list of Refusals/Not Medically Indicated in the bottom portion of the window.

- When all refusals have been documented, click the Save button. Click the X to close the Refusals/Not Medically Indicated window. Refusal data will not be updated in PCC until the Update Patient Data window is closed.

G.9 Health Summary

A health summary may be displayed by clicking on the menu option, Health Summary. Be sure that a Patient has first been selected using the toolbar option to Select Patient and that a patient name is displayed in the bar at the bottom of the window. This is the same option available under the Patient Management menu.

Use the drop down arrow next to the display of Health Summary/Flow Sheet Type to display the available choices.

Highlight the desired health summary type and Click OK.

The health summary will be displayed in Microsoft Word. The health summary may be browsed or printed as desired. Click on X to close the Health Summary Display.

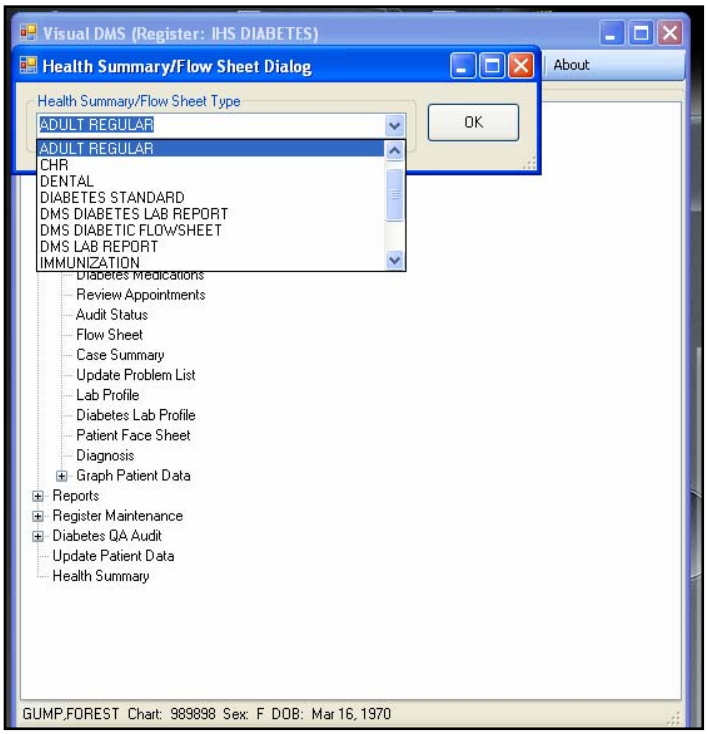

Figure E-65 Sample of health summary dialogue

H.0 Contact Information

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

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

Fax: (505) 248-4199

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

Email: ITSCHelp@ihs.gov