



RESOURCE AND PATIENT MANAGEMENT SYSTEM

Diabetes Management System

(BDM)

2019 Diabetes Audit User Addendum

Version 2.0 Patch 12
January 2019

Office of Information Technology
Division of Information Technology

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Preface

The purpose of this document is to provide users with an overview of the Diabetes Management System (DMS) functionality that pertains specifically to performing a Diabetes Audit.

Note: Resource and Patient Management System (RPMS) software, including the DMS, is subject to regular updates. DMS updates are determined by the Indian Health Service (IHS) Diabetes Audit Team and are based in part on changes to the IHS Standards of Care and Clinical Practice Recommendations for Type 2 Diabetes Mellitus (DM): <https://www.ihs.gov/diabetes/clinician-resources/soc/>.

1.0 Introduction

The Diabetes Management System (DMS) can be used to conduct a Diabetes Audit, including creation of an Audit data file and reports. This manual focuses on the DMS menu options used to prepare for and conduct an Audit. Other DMS functionality is documented in the Diabetes Management System (BDM) General User Manual.

The general steps for conducting an Audit are:

1. Audit Setup (preparing for the Audit)
2. Create an Audit data file and/or reports
3. Upload the Audit data file to the WebAudit (required for Annual Audits, optional otherwise)

The DMS menu system is structured to follow these steps:

1. The Audit Setup menu includes tools for Audit preparation.
2. The Audit Reporting menu includes tools for creating Audit data files and reports.

Additional information about the IHS Diabetes Care and Outcomes Audit can be found on the Audit website: <https://www.ihs.gov/diabetes/audit/>.

DMS Main Menu

The DMS main menu provides four options (Figure 1-1).

```

THIS SYSTEM CONTAINS CONFIDENTIAL PATIENT INFORMATION COVERED
BY THE PRIVACY ACT. UNAUTHORIZED USE OF THIS DATA IS ILLEGAL
*****
**          DIABETES MANAGEMENT SYSTEM          **
*****
                VERSION 2.0 (Patch 12)
                DEMO HOSPITAL
                MAIN MENU

RM      Register Maintenance ...
AS      Audit Setup ...
AR      Audit Reporting ...
PDM     Prediabetes Audit ..

```

Figure 1-1: RPMS DMS Main Menu

Visual DMS includes the same options to prepare for and conduct an Audit (Figure 1-2).

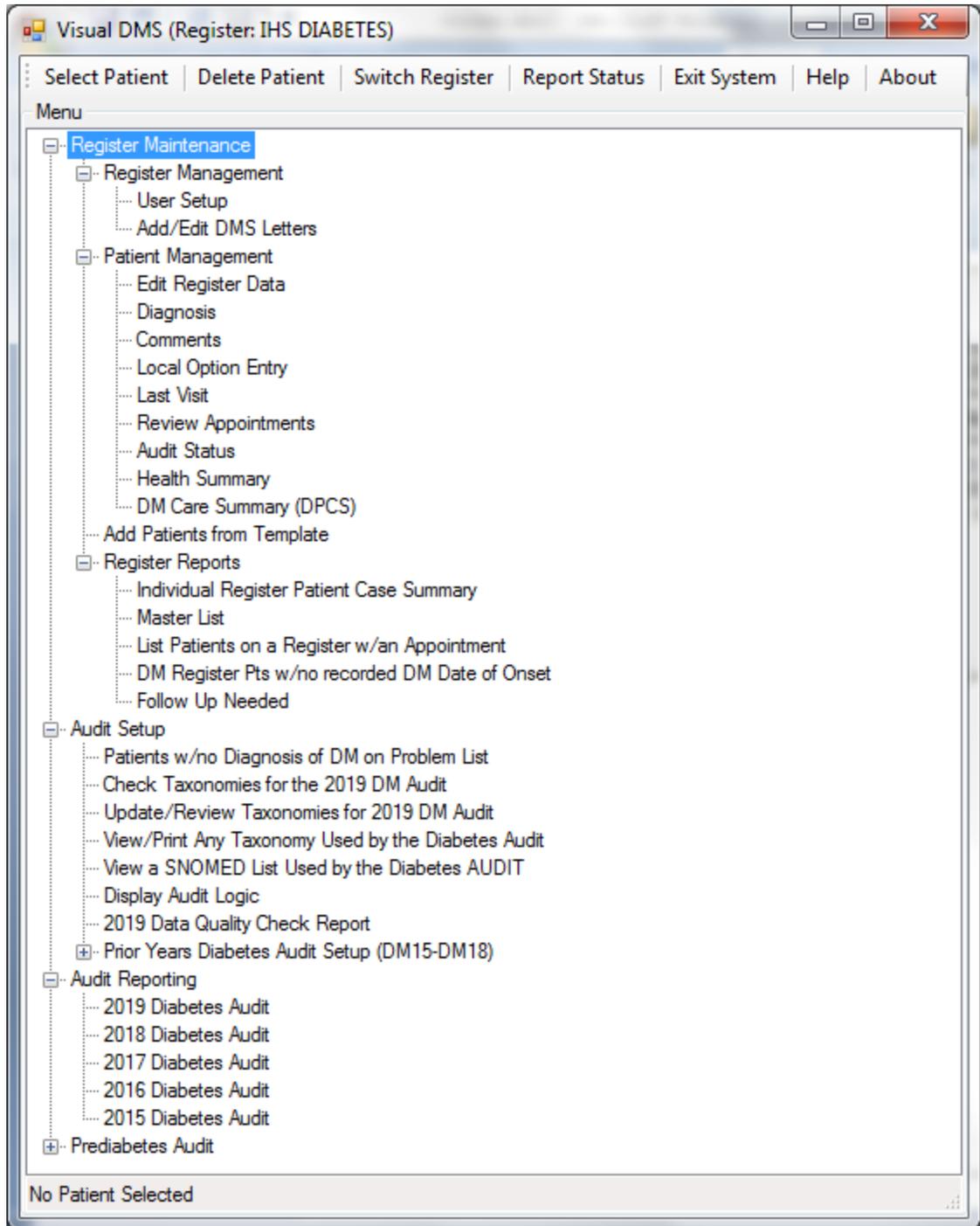


Figure 1-2: Visual DMS Menu

2.0 Audit Setup - Prepare for an Audit

There are three main steps to follow when preparing to conduct a Diabetes Audit using DMS:

1. Identify the cohort of patients to be included in the Audit. Two ways of doing this are described below. See Section 2.2 for additional information.
 - a. Use the patients that are members of a diabetes register and have a status of active. First ensure that the register is current by:
 - Adding patients who are receiving care at your facility but are not currently on the register.
 - Removing or inactivating patients who are on the register with an active status but are no longer receiving care at your facility.
 - Updating patients who are on the register with an active status but do not have diabetes on their problem list.
 - b. If the facility does not maintain a diabetes register, use QMAN to create a search template of patients with diabetes who are receiving care.
2. Review and update taxonomies for medications and laboratory tests as needed (see Section 2.3).
3. Run and review a Data Quality Check report. Make corrections as appropriate. See Section 2.4 for additional information.

2.1 Audit Setup Menu

The **Audit Setup (AS)** menu provides reports and utilities used to prepare for running an Audit. Details of AS menu options are provided in Figure 2-1 and Figure 2-2.

```

THIS SYSTEM CONTAINS CONFIDENTIAL PATIENT INFORMATION COVERED
BY THE PRIVACY ACT.  UNAUTHORIZED USE OF THIS DATA IS ILLEGAL
*****
**          DIABETES MANAGEMENT SYSTEM          **
*****
                VERSION 2.0 (Patch 12)
                2013 DEMO HOSPITAL (CMBA)
                AUDIT SETUP

DXNR  Patients with DM Diagnosis and not on Register
INA   List Possible Inactive Pts in the DM Register
PLDX  Patients w/no Diagnosis of DM on Problem List
-----
LMR   List Labs/Medications Used at this Facility
TC19  Check Taxonomies for the 2019 DM Audit
TU19  Update/Review Taxonomies for 2019 DM Audit
VTAX  View/Print Any Taxonomy Used by the Diabetes Audit
VSML  View a SNOMED List Used by the Diabetes AUDIT
DAL   Display Audit Logic
-----
DQC   2019 Data Quality Check Report
-----
ASPR  Prior Years Diabetes Audit Setup (DM15-DM18) ...
    
```

Figure 2-1: Audit Setup Menu

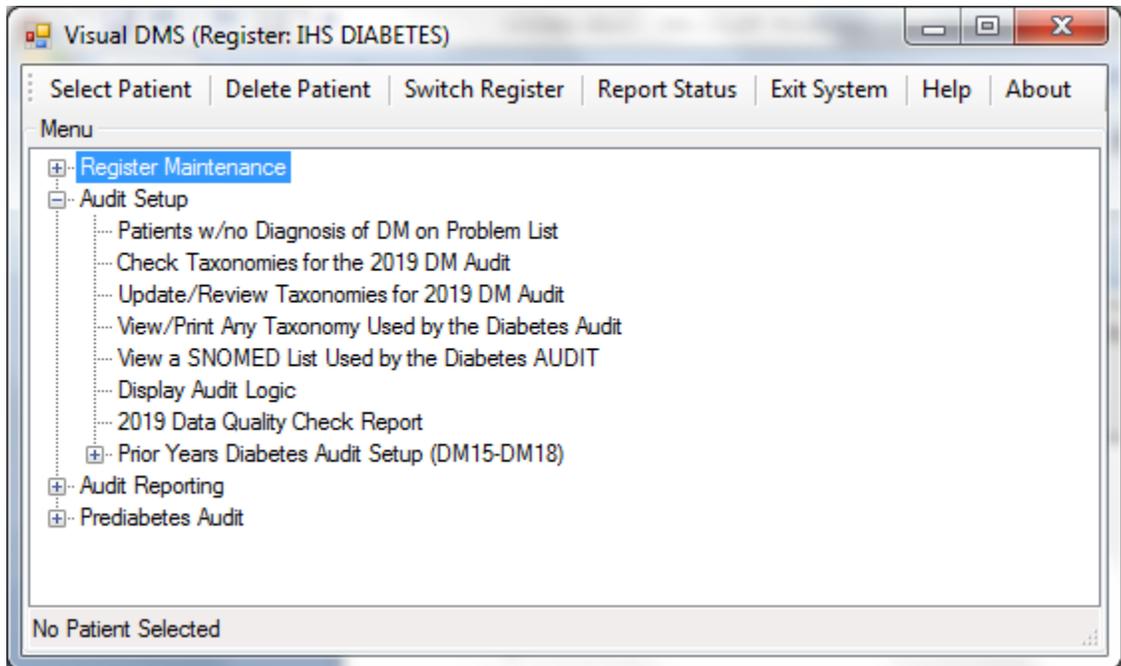


Figure 2-2: Visual DMS Audit Setup Menu

2.2 Identify Patients to be included in an Audit

Guidelines for Selecting Patients

Per guidance from the IHS Division of Diabetes Treatment and Prevention (Division of Diabetes), this section contains the criteria for selecting patients to include in the 2019 Annual Diabetes Audit. Include Patients who:

- Have a diagnosis of Type 1 or Type 2 diabetes.
- Are American Indian or Alaska Native.
- Have at least one visit to a primary care clinic during the Audit period (12-month time period ending on the Audit date). Primary care clinics include:
 - General (01)
 - Diabetic (06)
 - Internal Medicine (13)
 - Pediatric (20)
 - Family Practice (28)
 - Chronic Disease (50)
 - Endocrinology (69)
- Exclude Patients who:
 - Received most of their primary care outside your facility during the Audit period.
 - Are currently on dialysis and received most of their primary care at the dialysis unit during the Audit period.
 - Have died before the end of the Audit period.
 - Are women who were pregnant during any part of the Audit period.
 - Have pre-diabetes (impaired fasting glucose [IFG] or impaired glucose tolerance [IGT] only).
 - Have moved – permanently or temporarily (should be documented).

Unless the Diabetes Register is updated frequently, some of the patients identified as being in an active status might not qualify to be included in the Annual Audit. In addition, some patients who do qualify for inclusion may not be on the register in an active status. See Section 2.2.1 for guidance in reviewing and updating the Diabetes Register.

2.2.1 Using the Diabetes Register for the 2019 Diabetes Audit

The Diabetes Register may be used for the 2019 Annual Audit by updating patients who are on the register in an active status, as needed. This may require changing the status of some patients from active to inactive and adding new patients to the register with a status of active.

The QMAN tools and DMS reports below can help identify patients in the Diabetes Register who should and should not be included the Audit:

- Section 2.2.1.1 describes how to find patients in the Register who have a Register Diagnosis of IGT or Gestational Diabetes Mellitus (GDM) and should not be included in the Audit.
- Section 2.2.1.2 describes how use the **DXNR Patients with DM Diagnosis and not on Register** report to generate a list of patients who have a diabetes diagnosis and received care during the Audit period but are not currently on the diabetes register.
- Section 2.2.1.3 describes how to use the **INA List Possible Inactive Pts in the DM Register** report to list patients on the register with a status of Active who have not had a primary care visit during the Audit period and therefore do not meet the inclusion criteria.
- Section 2.2.1.4 describes how to change the status of a patient on the Register after the above-mentioned reports have been reviewed. When ineligible patients have been identified, their status can be changed by using the Register Status option under Patient Management in the DMS. The **Patient Management** option can also be used to add a new patient to the register.

Note: For the 2019 Annual Audit, the IHS Division of Diabetes requires review of the care provided during the calendar year ending December 31, 2018. Reports identifying patients with an active status should be run for the time period between 1/1/2018 and 12/31/2018.

2.2.1.1 Identify IHS Diabetes Register Patients with GDM or IGT Using QMan

The IHS Diabetes Register allows entry of GDM and IGT as Register diagnoses. It is generally recommended that the IHS Diabetes Register include only patients with a diagnosis of Type 1 or Type 2 diabetes. Separate registries should be set up for patients with GDM and IGT.

The QMan search shown in Figure 2-3 will retrieve a list of patients in the register who have been given a particular Register Diagnosis. In this dialogue, a search is made for patients on the register with a Register Diagnosis of GDM. The same process can be used to find patients on the Register who have a Register Diagnosis of IGT. If any patients are found, their information should be reviewed, and the patient status should be updated appropriately or the patient should be deleted from the register.

Note: QMan searches are not available in Visual DMS and must be performed in traditional RPMS.

Q-MAN OPTIONS -> SEARCH PCC Database (dialogue interface)

```

What is the subject of your search? LIVING PATIENTS // REGISTER <Enter>
REGISTER

Which CMS REGISTER: IHS DIABETES <Enter>

Register being checked to update status of deceased patients

Select the Patient Status for this report
  1   Active
  2   Inactive
  3   Transient
  4   Unreviewed
  5   Deceased
  6   Non-IHS
  7   Lost to Follow-up
  8   All Register Patients

Which Status(es): (1-8): 1//<Enter>

Select the Diabetes Register Diagnosis for this report

  Select one of the following:
  1   Type 1
  2   Type 2
  3   Type 1 & Type2
  4   Gestational DM
  5   Impaired Glucose Tolerance
  6   All Diagnoses

Which Diagnosis: All Diagnoses// 4 <Enter> Gestational DM

```

Figure 2-3: QMan search to identify patients with Register Diagnosis of GDM

Figure 2-4 shows the QMan output options and list of patients.

```

***** Q-MAN OUTPUT OPTIONS *****
Select one of the following:
  1  DISPLAY results on the screen
  2  PRINT results on paper
  3  COUNT 'hits'
  4  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 <Enter> DISPLAY results on the screen
...EXCUSE ME, LET ME PUT YOU ON 'HOLD' FOR A SECOND...

PATIENTS      CMI*DEV
              NUMBER
-----
PATIENT, DEMO I* 29693
Total: 1

```

Figure 2-4: QMan Search results

Note: A patient whose name is marked with an asterisk (*) might have an alias.

2.2.1.2 DXNR – Patients with DM Diagnosis and not on Register

The **Patients with DM Diagnosis and not on Register** report is used to find patients with a diabetes diagnosis who are being seen at your facility but are not currently on your diabetes register. This report can be especially useful at sites that have not kept their register up to date throughout the calendar year.

Notes: This report does not exclude non-Indian patients. Directions for running this report are shown in the following sequence followed by a sample of the report output.

This report is not available in Visual DMS and must be run in traditional RPMS.

1. At the Diabetes Management System main menu, type **AS** and press Enter.
2. Select **DXNR Patients with DM Diagnosis and not on Register**.
3. At the “Enter the Name of the Register” prompt, type some portion of the register name and press Enter.

```
DXNR Patients with DM Diagnosis and not on Register.

This report will list patients who are not on the diabetes register
but who have had a visit with a diagnosis of diabetes in a date range
specified by the user.

Enter the Name of the Register: IHS DIABETES
Enter the time frame to look for visits with a diabetes diagnosis.

Enter Beginning Visit Date: 1/1/18 (JAN 01, 2018)
Enter Ending Visit Date: 12/31/18 (DEC 31, 2018)
```

Figure 2-5: Enter the register name and time frame to look for visits with a diabetes diagnosis

4. At the “Enter Beginning Visit Date” prompt, type the beginning date and press Enter.
5. At the “Enter Ending Visit Date” prompt, type the ending date and press Enter.

```
How many diagnoses must the patient have had in that time period: (1-99): 2//
```

Figure 2-6: Type number of diagnoses the patient must have in the selected time period

6. At the “How many diagnoses must the patient have had in that time period” prompt, type the answer as a number and press Enter.

```
Select one of the following:

P          PRINT the List
B          BROWSE the List on the Screen
```

```
Output Type: P// BROWSE the List on the Screen
```

Figure 2-7: Enter the output type

7. At the “Output Type” prompt, do one of the following:

- Type **P** and press Enter to print the list.
- Type **B** and press Enter to browse the list on the screen.

```
Select one of the following:

      I      Include ALL Patients
      E      Exclude DEMO Patients
      O      Include ONLY DEMO Patients

Demo Patient Inclusion/Exclusion: E// xclude DEMO Patients
```

Figure 2-8: Prompt to include or exclude demo patients

8. At the Demo Patient Inclusion/Exclusion prompt, do one of the following:

- Type **I** and press Enter to include all patients.
- Type **E** and press Enter to exclude demo patients.
- Type **O** and press Enter to include only demo patients.

The report is printed or displayed as in Figure 2-9:

```
OUTPUT BROWSER                      Nov 17, 2018 12:00:26          Page: 1 of 26
***** CONFIDENTIAL PATIENT INFORMATION *****
DR                                     Page 1
                                DEMO HOSPITAL
                                Patients NOT on the PARKER DIABETES REGISTER Register
                                with at least 3 visits with a DX of Diabetes between
                                Jan 01, 2018 and Dec 31, 2018

PATIENT NAME          HRN      DOB          COMMUNITY      LAST VISIT #  DM  LAST DM
                                DXS      DX
-----
DEMO,RACHEL PATIENT  100018  03/28/1941  LAKE HAVSU    03/20/17     3  03/20/17
DEMOPATIENT,NEOMI    888885  03/15/1955  KINGMAN       03/22/17     3  03/22/17
PATIENTDEMO,CARLEE   122222  11/12/1993  PARKER        04/03/17     3  02/27/17
DEMO-CARTER,PATIENT A 144444  05/25/1977  PARKER        03/27/17     4  03/19/17
+      Enter ?? for more actions                                     >>>
+  NEXT SCREEN          -  PREVIOUS SCREEN          Q  QUIT
Select Action: +//
```

Figure 2-9: Report of patients not on the Diabetes register that have a diabetes diagnosis

2.2.1.3 INA – List Possible Inactive Pts in the DM Register

The **INA List Possible Inactive Pts in the DM Register** option can be used to identify patients who are no longer being seen at your facility but are still marked as active in the diabetes register. Patients on this list can be changed to inactive in the register so they will not be included in the Audit. This report can be especially useful at sites that have large numbers of patients whose Register status might not be accurate.

The report is in the AS - Audit Setup menu of the Diabetes Management System.

Begin by selecting AS Audit Setup . . .

Type INA to initiate the report for Possible Inactive Patients

Enter the name of the Register that is to be reviewed for inactive patients.

Select A for patients on the Register with a Register status of ACTIVE.

At the Clinic prompt, type [BGP PRIMARY CARE CLINICS]
This taxonomy contains the primary care clinics used by official GPRA reports. You may use just these six primary care clinics, or you may add additional clinics such as ENDOCRINOLOGY.

Enter the beginning and ending dates for searching for a visit to one or more of these primary care clinics. Note that the 2019 Annual Audit is for the time frame between January 1, 2018 and December 31, 2018. To be considered as an active patient, there should be at least one documented visit to a primary care clinic during that time frame.

Choose the option to Browse the list. Note the number of pages in the report in the upper right hand corner of the screen.

Figure 2-10: Report option details

1. The report may be printed by typing **PL** at the “Select Action” prompt.
2. At the “Device” prompt, enter the printer name or number where the report should be printed.

The sequence to generate this report is shown in Figure 2-11:

```
AS AUDIT SETUP . . .
Select Reports Option: INA List Possible Inactive Pts in the DM Register
                        DEMO HOSPITAL
                        DEMO,DOROTHY
This report will list patients who are on the diabetes register who have not
had a visit to a set of primary care clinics in a date range defined by the
user.
The report provides a way to identify patients who could possibly be inactivated
in the register.
Enter the Name of the Register: IHS DIABETES REGISTER
```

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
L	LOST TO FOLLOW-UP
NON	NONCOMPLIANT
0	All Register Patients

Which Status: A// CTIVE

Enter the list of clinics that you have determined to be primary care clinics.
You can enter them 1 at a time or enter a taxonomy using the '[' notation.

Enter CLINIC: [BGP PRIMARY CARE CLINICS BGP PRIMARY CARE CLINICS]

Members of BGP PRIMARY CARE CLINICS Taxonomy =>

GENERAL
DIABETIC
INTERNAL MEDICINE
PEDIATRIC
WELL CHILD
FAMILY PRACTICE

Enter ANOTHER CLINIC: ENDOCRINOLOGY 69
Enter ANOTHER CLINIC:

The following have been selected =>

GENERAL
DIABETIC
INTERNAL MEDICINE
PEDIATRIC
WELL CHILD
FAMILY PRACTICE
ENDOCRINOLOGY

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

Enter the time frame to look for visits.

Enter Beginning Visit Date: 1/1/18 (JAN 01, 2018)
Enter Ending Visit Date: 12/31/18 (DEC 31, 2018)

Select one of the following:

P	PRINT the List
B	BROWSE the List on the Screen

Output Type: P// BROWSE the List on the Screen

Select one of the following:

I	Include ALL Patients
E	Exclude DEMO Patients

```

O          Include ONLY DEMO Patients
Demo Patient Inclusion/Exclusion: E// [ENT] xclude DEMO Patients
OUTPUT BROWSER          Dec 31, 2018  12:25:21          Page:    1 of    48

***** CONFIDENTIAL PATIENT INFORMATION *****
DR                                                              Page 1
          DEMO HOSPITAL
Patients on the IHS DIABETES REGISTER Register
without a visit between Jan 01, 2018 and Dec 31, 2018

PATIENT NAME          HRN          STATUS          CASE          LAST VISIT          # DM          LAST DM DX
                      MANAGER
-----
DEMO,MARIE            999490  ACTIVE          03/22/2013          158  02/22/2013
DEMOA,CHANTEL        999991  ACTIVE          05/17/2005          18   02/08/2005
DEMOB,LAYLA GABRIELL 999992  ACTIVE          08/09/2010          4   08/09/2010
DEMOC,PHYLLIS N      999993  ACTIVE          04/10/2013          124 04/10/2013
DEMOD,CARLA          999994  ACTIVE          11/05/2004          0
DEMOF,ILLYANA        999995  ACTIVE          10/29/1993          1   10/27/1993
+          Enter ?? for more actions          >>>
+  NEXT SCREEN          -  PREVIOUS SCREEN          Q  QUIT
Select Action: +//
    
```

Figure 2-11: INA List Possible Inactive Pts in the DM Register report

2.2.1.4 Update Patient Register Status

If there are patients currently in an active status in the register, their register status may be updated using the Patient Management tool in the **DMS Register Maintenance** menu.

2.2.1.4.1 How To Edit Register Status in DMS

1. Open the **RM – Register Maintenance** menu of DMS.
2. Open the **RM – Register Management** menu.
3. Open the **Patient Management** option (Figure 2-12).

```

Register Data          Nov 01, 2018 13:14:24          Page:    1 of    1
  PATIENT: DEMO,MARY JANE          AGE: 55
  ADDRESS: P.O. BOX 234,ALB,NM,87119  DOB: 05/13/1963
  PHONE: 555-555-4811          HRN: 105176
PRIM CARE PROV: DOCTOR,MICHAEL J  RES: TUCSON
  STATUS: ACTIVE
WHERE FOLLOWED:
  CASE MGR: DEMO,LORI ANN
  CONTACT:
  ENTRY DATE: DEC 6,2016          LAST EDITED: OCT 4,2018
  DIAGNOSIS: TYPE 2          ONSET DATE: FEB 1,1978
COMMENTS:
LOCAL OPTION:
LOCAL OPTION TEXT:

- Previous Screen  Q Quit  ?? for More Actions
1 Register Status  6 Comments          11 Health Summary
    
```

2	Where Followed	7	Local Option Entry	12	DM Care Summary (DPCS)
3	Case Manager	8	Last Visit	13	Print Letter
4	Client Contact	9	Review Appointments	Q	Quit
5	DX/Date of Onset	10	Audit Status		

Select Action: Quit//

Figure 2-12: Select Register Status (1)

- At the “Select Action” prompt, type **1** and press Enter.

```
STATUS: ACTIVE//
```

Figure 2-13: Updating the Status

- To change the Register Status, select the new status from the **Status** list.
 - A** – Active patients who receive their primary healthcare at a facility and who have had care at that facility within the last year.
 - I** – Inactive patients who have not been seen within the last two years.
 - T** – Transient patients seen at the clinic within the past year but who do not receive their primary diabetes care at a facility and only visit the 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.

Note: This status will be automatically documented if a date of death is recorded in the patient registration file. However, if a patient’s status is changed to deceased in the Register, the patient registration file is not automatically updated.

- N** – Non-IHS patients who receive their diabetes care at a facility.
- L** – Lost to follow-up patients seen at a facility within the past two years but who have not had a visit in the last year.
- NON** – Noncompliant patients with repeated documented refusals of recommended services.

Note: There are no official definitions of Register Status, although recommendations for classifying Register patients can be provided by Area Diabetes Consultants or their staff. The definitions above can be used as a guideline in the absence of Area-defined criteria.

2.2.1.4.2 How To Edit Register Status in Visual DMS

- Select the desired Patient using the **Select Patient** tab at the top of the screen.

2. Open the **Patient Management** menu (Figure 2-14).

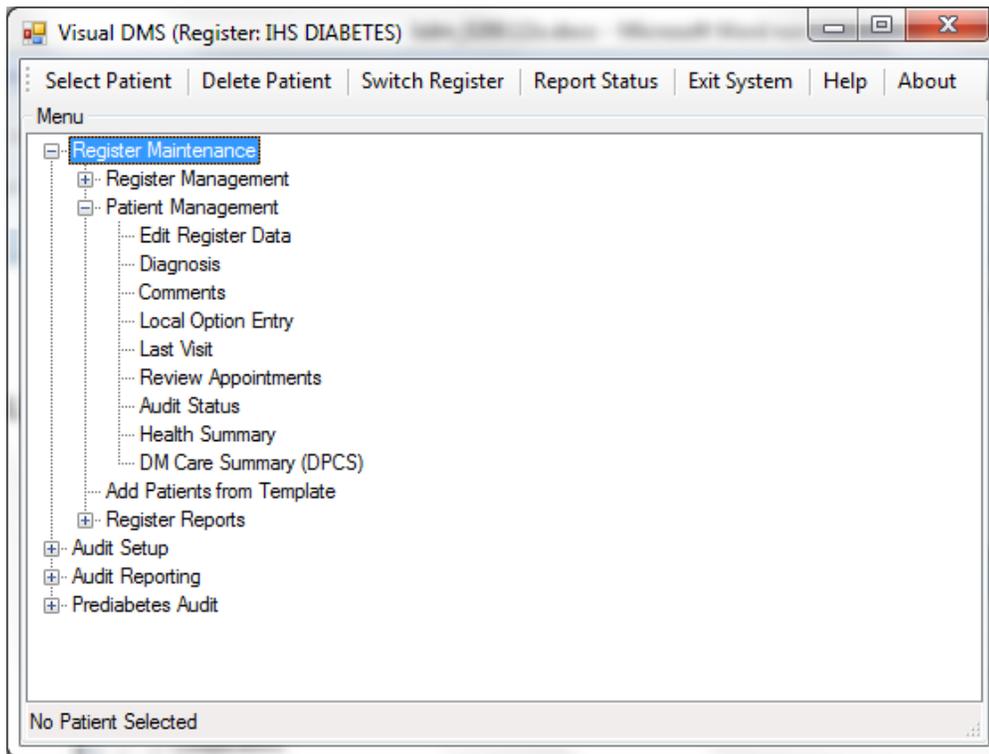


Figure 2-14: Selecting Edit Register Data from the Patient Management menu

3. Click **Edit Register Data**. The **Patient Profile** (Figure 2-15) displays.

The screenshot shows a 'Patient Profile' window with the following sections:

- Register Data:**
 - Address/City/State/Zip Code: PO BOX 1302, ALB, NEW MEXICO, 87119
 - Phone: 555-555-5994
 - Residence: KINGMAN
 - Primary Care Provider: DEMO DEMO, KAREN
- Editable Patient Data:**
 - Status:** A-Active (dropdown)
 - Case Manager:** (text field with 'Select' button)
 - Where Followed:** (text field with 'Select' button)
 - Contact:** (text field)
 - Last Edited:** Thursday, May 31, 2018 (checkbox checked)
 - Entry Date:** Thursday, May 31, 2018 (checkbox checked)
 - Next Review:** Wednesday, November 28, 2018 (checkbox checked)
 - Last Review:** Wednesday, November 28, 2018 (checkbox checked)

Buttons at the bottom: Save, Close, ?

Footer: DEMO, ALISTER LANE Chart: 124625 Sex: M DOB: May 20, 1980 Saved

Figure 2-15: Patient Profile screen display

4. To change the Register Status, select the new status from the **Status** list. The available choices are described in Figure 2-15.
5. Click **Save**.
6. Close the dialog.

2.2.1.5 PLDX - Patients w/No Diagnosis of DM on Problem List

This report identifies patients who do not have a problem list diagnosis of diabetes. In addition, these patients will not have this date of onset documented on the problem list. You will be first prompted to choose between patients on the Register or those with a specified number of diagnoses of diabetes but not 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 2-16: 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 diagnoses.

```
***** 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

Figure 2-17: Patients w/No Diagnosis of DM on Problem List, report sample

2.2.2 Create a Template of Patients for the 2019 Diabetes Audit

If the IHS Diabetes Register is not current or has not been routinely used for management of patients with diabetes, you can use a QMan search to identify patients with diabetes who have had a visit to a primary care clinic during the Audit period. The template created from this query can be used for the 2019 Annual Diabetes Audit.

Users can run the QMan search using either the general patient population (see Section 2.3.1) or the Diabetes Register (see Section 2.2.1). In either case, if patients with diabetes who are not American Indian or Alaska Native are seen at the clinic or included in the Register, another attribute called Classification can be used to exclude these patients. The Classification for American Indian/Alaska Native patients is 01.

2.2.2.1 Create a Template using the General Population

The QMan search in the sequence that follows shows the creation of a template looking for patients with at least one diagnosis of diabetes during the Audit period and who have had at least one visit to a primary care clinic during the Audit period (Figure 2-18 through Figure 2-20).

```

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

What is the subject of your search? LIVING PATIENTS // <ENTER> LIVING
PATIENTS

Include list of upcoming appts for the patient? NO// <ENTER>

  Subject of search: PATIENTS
    ALIVE TODAY

Attribute of LIVING PATIENTS: VISIT

SUBQUERY: Analysis of multiple VISITS

First condition of "VISIT": CLINIC                VISIT ATTRIBUTES

Enter CLINIC: [BGP PRIMARY CARE CLINICS          BGP PRIMARY CARE CLINICS]

Members of BGP PRIMARY CARE CLINICS Taxonomy =>

GENERAL
DIABETIC
INTERNAL MEDICINE
PEDIATRIC
WELL CHILD
FAMILY PRACTICE

Enter ANOTHER CLINIC: ENDOCRINOLOGY

The following have been selected =>

  GENERAL
  DIABETIC
  INTERNAL MEDICINE
  PEDIATRIC
  WELL CHILD
  FAMILY PRACTICE
  ENDOCRINOLOGY

Want to save this CLINIC group for future use? No//<ENTER> (No)

Next condition of "VISIT": DURING THE PERIOD          VISIT ATTRIBUTES

Exact starting date: 1/1/18 (JAN 01, 2018)
Exact ending date: 12/31/18 (DEC 31, 2018)

  Subject of subquery: VISIT
  CLINIC (GENERAL/DIABETIC...)
  BETWEEN BETWEEN JAN 1,2018 and DEC 31,2018@23:59:59

Next condition of "VISIT":

Computing Search Efficiency Rating....

  Subject of search: PATIENTS
    ALIVE TODAY
  Subject of subquery: VISIT
  CLINIC (GENERAL/DIABETIC...)
  BETWEEN BETWEEN JAN 1,2018 and DEC 31,2019@23:59:59

Attribute of LIVING PATIENTS: DX                DIAGNOSES

```

```
Enter DX: [SURVEILLANCE DIABETES
```

Figure 2-18: Search Criteria

Note: Use the taxonomy SURVEILLANCE DIABETES, as it includes all diabetes diagnosis codes, including ICD-9 and ICD-10.

```
250.00 - 250.93
E10.10
E10.11
E10.21
E10.22
E10.29
E10.311
E10.319
E10.321
E10.329
E10.331
E10.339
E10.341
<>
```

Figure 2-19: Code Listing

Note: The symbols <> denote a page break. Press Enter to continue listing codes each time <> is displayed.

```
(THIS FULL LIST OF CODES WILL DISPLAY)

Enter ANOTHER DX: No or <ENTER>

Want to save this DX group for future use? No// <ENTER> (No)

SUBQUERY: Analysis of multiple DIAGNOSES

First condition of "DIAGNOSIS": DURING THE TIME PERIOD
Exact starting date: 1/1/18 (JAN 01, 2018)
Exact ending date: 12/31/18 (DEC 31, 2018)

Next condition of "DIAGNOSIS":
Computing Search Efficiency
Rating.....

Subject of search: PATIENTS
ALIVE TODAY
Subject of subquery: VISIT
CLINIC (GENERAL/DIABETIC...)
BETWEEN BETWEEN JAN 1,2018 and DEC 31,2018@23:59:59
DIAGNOSIS (250.01/250.11...)
Subject of subquery: DIAGNOSIS
BETWEEN JAN 1,2018 and DEC 31,2018@23:59:59

Attribute of LIVING PATIENTS:

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

Select one of the following:

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

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: DM AUDIT 2019

Are you adding 'DM AUDIT 2019' as a new SORT TEMPLATE? No// Y (Yes)

DESCRIPTION:

No existing text

Edit? NO// <ENTER>

Next, you will be asked about creating your template in background...

Answer 'YES' to run in background.

To run in background means to pass the template creation job off to Taskman. Your terminal will be released so additional RPMS work may be performed while the template is being created. When finished, Taskman will send you a Mailman message indicating that the job is ready. Then, you may use the template in future Qman searches, PGEN, VGEN and other reports that can utilize templates.

Answer 'NO', to create the search template in foreground.

While the template is being created, data will be displayed to your screen. When the job has finished, you will have the opportunity to go to PGEN or VGEN.

Remember ... some templates may take a very long time to finish.

Press ENTER to continue or '^' to quit:

Want to run this task in background? No// <ENTER> (No)

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

PATIENTS (Alive)	DEMO H NUMBER #	ICD CODE	VISIT
---------------------	--------------------	----------	-------

DEMOG, ABE	999996	+	+
DEMOH, MICKEY*	999997	+	+
DEMOJ, JANE*	999998	+	+
DEMOK, AMY *	999999	+	+
DEMOM, SHANE	999910	+	+
DEMO, JESSICA*	999911	+	+
DEMOO, ALEXANDRI	999912	+	+
DEMOPAT, RHIANNON	999913	+	+

TEST,AMY	999914	+	+
----------	--------	---	---

Figure 2-20: Audit Template

Note: FileMan users: This template will be attached to IHS's Patient file.

2.2.2.2 Create a Template of Register Patients for the Audit

If a Diabetes Register exists but Register diagnoses and patient status have not been maintained, it might be easier to create a template (subset) of patients on the register who have had at least one visit to a primary clinic during the Audit year and have a diagnosis of diabetes. The QMan search demonstrating how to create that template is shown in the following sequences (Figure 2-21 through Figure 2-23).

```

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

Which CMS REGISTER: IHS DIABETES

Register being checked to update status of deceased patients.

Select the Patient Status for this report

      1 Active
      2 Inactive
      3 Transient
      4 Unreviewed
      5 Deceased
      6 Non-IHS
      7 Lost to Follow-up
      8 All Register Patients

Which Status(es): (1-8): 1// 8

Select the Diabetes Register 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 Register Diagnosis: All Diagnoses// 3 Type 1 & Type
2.....

There are 74 register patients for the combination selected.

Attribute of IHS DIABETES REGISTER: ALIVE
Alive at least until exactly what date: TODAY//12/31/18 (DEC 31, 2018)
Computing Search Efficiency Rating.....

      Subject of search: PATIENTS
      MEMBER OF 'IHS DIABETES REGISTER-4104' COHORT
    
```

```

ALIVE AS OF DEC 31,2018

Attribute of IHS DIABETES REGISTER: VISIT

SUBQUERY: Analysis of multiple VISITS

First condition of "VISIT": CLINIC                VISIT ATTRIBUTES

Enter CLINIC: [  BGP PRIMARY CARE CLINICS      BGP PRIMARY CARE CLINICS]

Members of  Taxonomy =>

GENERAL
DIABETIC
INTERNAL MEDICINE
PEDIATRIC
CHRONIC DISEASE
FAMILY PRACTICE
ENDOCRINOLOGY

Enter ANOTHER CLINIC:

The following have been selected =>

    GENERAL
    DIABETIC
    INTERNAL MEDICINE
    PEDIATRIC
    CHRONIC DISEASE
    FAMILY PRACTICE
    ENDOCRINOLOGY

Want to save this CLINIC group for future use? No// <ENTER>  (No)

Next condition of "VISIT": DURING THE PERIOD          VISIT ATTRIBUTES

Exact starting date: 1/1/2018  (JAN 01, 2018
Exact ending date: 12/31/2018  (DEC 31, 2018)

    Subject of subquery: VISIT
    CLINIC (GENERAL/DIABETIC...)
    BETWEEN BETWEEN JAN 1,2018 and DEC 31,2018@23:59:59

Next condition of "VISIT":

Attribute of LIVING PATIENTS: DX                DIAGNOSES

Enter DX: [SURVEILLANCE DIABETES
250.00 - 250.93
E10.10
E10.11
E10.21

```

Figure 2-21: Creating a Template of Register Patients

Note: The SURVEILLANCE DIABETES taxonomy contains all of the ICD-9 and ICD-10 codes pertaining to Diabetes. Not all of the ICD-10 codes are listed in this illustration, as there are numerous pages of them.

```
<>E10.42
```

Figure 2-22: Sample ICD-10 code

Note: The symbols <> denote a page break. Press Enter to continue listing codes each time <> is displayed.

```
Enter ANOTHER DX: No or <ENTER>

Want to save this DX group for future use? No// <ENTER>      (No)

SUBQUERY: Analysis of multiple DIAGNOSES

First condition of "DIAGNOSIS": DURING THE TIME PERIOD

Exact starting date: 1/1/18   (JAN 01, 2018)
Exact ending date: 12/31/18  (DEC 31, 2018)

Next condition of "DIAGNOSIS":

Computing Search Efficiency Rating

  Subject of search: PATIENTS
    ALIVE TODAY
    Subject of subquery: VISIT
      CLINIC (GENERAL/DIABETIC...)
        BETWEEN BETWEEN JAN 1,2018 and DEC 31,2018@23:59:59
    DIAGNOSIS (250.01/250.11...)
    Subject of subquery: DIAGNOSIS
      BETWEEN JAN 1,2018 and DEC 31,2018@23:59:59

Attribute of LIVING PATIENTS:

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

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

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: DM AUDIT 2019
Are you adding 'DM AUDIT 2019' as a new SORT TEMPLATE? No// Y  (Yes)
DESCRIPTION:
No existing text
Edit? NO//

Next, you will be asked about creating your template in background...
```

```

Answer 'YES' to run in background.

To run in background means to pass the template creation job off to
Taskman. Your terminal will be released so additional RPMS work may be
performed while the template is being created. When finished, Taskman will
send you a Mailman message indicating that the job is ready. Then, you may
use the template in future Qman searches, PGEN, VGEN and other reports that
can utilize templates.

Answer 'NO', to create the search template in foreground.

While the template is being created, data will be displayed to your screen.
When the job has finished, you will have the opportunity to go to PGEN or
VGEN.
Remember ... some templates may take a very long time to finish.

Press ENTER to continue or '^' to quit:

Want to run this task in background? No// <ENTER> (No)

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

PATIENTS          2103 D ICD CODE  VISIT
(Alive)          NUMBER #
-----
DEMOQ,NKITA      100006 +          +
DEMOR,ARON*     100007 +          +
DEMOS,MARIE*    100008 +          +
DEMOT,ADRIANN*  100009 +          +
DEMOU,SHANTELI  100010 +          +
DEMOV,JESSICA*  100011 +          +
DEMOW,ALEXANDRI 100012 +          +
DEMOX,RHIANNON  100014 +          +

```

Figure 2-23: QMan search demonstrating how to create a template of patients for the audit

2.3 Taxonomy Review and Setup

An important step in preparing for a diabetes Audit is to make sure that all relevant medication and lab test taxonomies are up to date and include all appropriate drugs and lab tests that are currently being used at your facility.

The taxonomies listed in Figure 2-24 are referenced in the 2019 RPMS Diabetes Audit. You will notice in the list below that several of the taxonomies begin with BGP rather than DM AUDIT. These taxonomies, as well as several of the DM AUDIT taxonomies, are shared between the Government Performance and Results Act (GPRA) program and the DMS. It is imperative that staff work together to review and update these taxonomies.

Even though taxonomies might have been updated for the 2018 Annual Audit, they must be reviewed and updated again before running the 2019 Annual Audit as new medications may have been added to the pharmacy formulary or new lab tests offered.

```

TAXONOMIES TO SUPPORT 2019 DIABETES AUDIT REPORTING
* Update Taxonomies
-----
1)  BGP CMS SMOKING CESSATION MEDS    DRUG
2)  BGP CREATINE KINASE TAX           LABORATORY TEST
3)  BGP GPRA ESTIMATED GFR TAX       LABORATORY TEST
4)  BGP PQA STATIN MEDS              DRUG
5)  DM AUDIT ACARBOSE DRUGS          DRUG
6)  DM AUDIT ACE INHIBITORS          DRUG
7)  DM AUDIT ALT TAX                 LABORATORY TEST
8)  DM AUDIT AMYLIN ANALOGUES        DRUG
9)  DM AUDIT ANTIPLT/ANTICOAG RX     DRUG
10) DM AUDIT ASPIRIN DRUGS           DRUG
11) DM AUDIT AST TAX                 LABORATORY TEST
12) DM AUDIT BROMOCRIPTINE DRUGS     DRUG
13) DM AUDIT CESSATION HLTH FACTOR   HEALTH FACTORS
14) DM AUDIT CHOLESTEROL TAX         LABORATORY TEST
15) DM AUDIT COLESEVELAM DRUGS      DRUG
16) DM AUDIT CREATININE TAX          LABORATORY TEST
17) DM AUDIT DIET EDUC TOPICS        EDUCATION TOPICS
18) DM AUDIT DPP4 INHIBITOR DRUGS    DRUG
19) DM AUDIT EXERCISE EDUC TOPICS    EDUCATION TOPICS
20) DM AUDIT GLITAZONE DRUGS        DRUG
21) DM AUDIT GLP-1 ANALOG DRUGS     DRUG
22) DM AUDIT HDL TAX                 LABORATORY TEST
23) DM AUDIT HGB A1C TAX             LABORATORY TEST
24) DM AUDIT INCRETIN MIMETIC        DRUG
25) DM AUDIT INSULIN DRUGS           DRUG
26) DM AUDIT LDL CHOLESTEROL TAX     LABORATORY TEST
27) DM AUDIT LIPID LOWERING DRUGS    DRUG
28) DM AUDIT METFORMIN DRUGS        DRUG
29) DM AUDIT MICROALBUMINURIA TAX    LABORATORY TEST
30) DM AUDIT OTHER EDUC TOPICS       EDUCATION TOPICS
31) DM AUDIT QUANT UACR              LABORATORY TEST
32) DM AUDIT SGLT-2 INHIBITOR DRUG  DRUG
33) DM AUDIT STATIN DRUGS            DRUG
34) DM AUDIT SULFONYLUREA DRUGS     DRUG
35) DM AUDIT SULFONYLUREA-LIKE      DRUG
36) DM AUDIT TB LAB TESTS           LABORATORY TEST
37) DM AUDIT TRIGLYCERIDE TAX        LABORATORY TEST

```

Figure 2-24: Audit 2019 user-populated taxonomies

2.3.1 LMR–List Labs or Medications Used at this Facility

This report displays the laboratory tests reported or the drugs prescribed at a facility during the Audit period. In addition to displaying the laboratory tests or drugs, it identifies those that are already included in a taxonomy used by the Audit. This report can be very helpful for reviewing and updating taxonomies. To run the laboratory tests version of this report:

1. At the Diabetes Management Systems menu, type **AS** and press Enter.
2. Type **LMR** (List Labs/Medications Used at this Facility) and press Enter.
3. At the “Do you wish to list” prompt, type **L** (LAB TESTS) and press Enter.

4. Type the beginning and ending dates for the report (**1/1/18** and **12/31/18** for the 2019 Annual Diabetes Audit), pressing Enter after each.
5. At the “Do you wish to” prompt, do one of the following:
 - To print the output, accept the default (**P**) by pressing Enter. A prompt asking for the device name displays; type the device’s name and press Enter.
 - To browse the output on the screen, type **B** and press Enter.

A sample report is shown in Figure 2-25.

LAB TEST NAME TAXONOMIES	IEN	# DONE	UNITS	RESULT
Oct 31, 2018 Page 1				
LAB TESTS Used at DEMO HOSPITAL				
Date Range: Jan 01, 2018 - Dec 31, 2018				

HDL	244	1		40
DM AUDIT HDL TAX				
LDL	901	1		120
DM AUDIT LDL CHOLESTEROL TAX				
ALBUMIN/CREATININE RATIO	9034	1		3
DM AUDIT QUANT UACR				
ANION GAP	1160	2		
BASIC METABOLIC PANEL	9999068	2		
C DIFF A+B E/A (R)	9999195	3		
CALCIUM	180	2		
CHLORIDE	178	2		
CHOLESTEROL	183	1		240
DM AUDIT CHOLESTEROL TAX				
CO2	179	2		
CREATININE	173	3		0.6
DM AUDIT CREATININE TAX				
CRYSTALS, FLUID	9999199	1		
CULTURE, HSV RAPID (R)	9999198	1		
CYCLIC CITRULLINATED PEPTIDE A	9999172	1		
DIAGNOSIS:	9999089	3		WITHIN NORMAL LIMITS
DILANTIN	210	1		
ESTIMATED GFR	9999103	3		>60
BGP GPRA ESTIMATED GFR TAX				
FERRITIN (SQ)	9999175	2		
FREE T3	9999176	1		
GLUCOSE	175	5	mg/dL	145
H PYLORI AG EIA	9999183	2		
H. PYLORI AG EIA	9999177	1		
HEMOGLOBIN	3	1	g/dL	5.0
LEAD	262	1	mcg/dL	6.7
LIPASE (R)	200	1	U/L	456

Figure 2-25: Sample Report of Labs Reported during the Audit Period

To run the version of this report for the medications that have been prescribed:

1. At the Diabetes Management Systems menu, type **AS** and press Enter.
2. Type **LMR** (List Labs/Medications Used at this Facility) and press Enter.

3. At the “Do you wish to list” prompt, type **M** (MEDICATIONS) and press Enter.
4. Type the beginning and ending dates for the report (7/1/18 and 12/31/18 for the 2019 Annual Diabetes Audit), pressing Enter after each. This is July1 rather than January 1, as with labs. The audit only reviews medications prescribed during the last six months of the audit period.
5. At the “Do you wish to” prompt, do one of the following:
 - To print the output, accept the default (**P**) by pressing Enter. A prompt asking for the device name displays; type the device’s name and press Enter.
 - To browse the output on the screen, type **B** and press Enter.

A sample report is shown in Figure 2-26.

Oct 31, 2018		Page 1
MEDICATIONS (DRUGS) Used at DEMO HOSPITAL		
Date Range: Jul01, 2018 - Dec 31, 2018		
MEDICATION/DRUG NAME	IEN	# DONE
TAXONOMIES		
ACARBOSE 25MG TAB	84472	4
DM AUDIT ACARBOSE DRUGS		
ACETAMINOPHEN 325MG TAB	263	3
ACETAMINOPHEN WITH CODEINE 30M	342	301
ACETAMINOPHEN/CODEINE 12MG/5M	3958	5
ACETAZOLAMIDE 250MG TABS	638	2
ACETIC ACID 2% HC 1% OTIC	2810	13
ACETIC ACID 2% OTIC SOL	3868	1
ACYCLOVIR 200MG CAP	83978	7
ACYCLOVIR 800MG TAB	84481	2
ALBUTEROL 2MG TAB	84348	2
ALBUTEROL 4MG TAB	84333	5
ALBUTEROL INHALER 17GM	3769	247
ALBUTEROL REFILL	84459	1
ALBUTEROL SOL 0.5%	84042	66
ALBUTEROL SULFATE SYRUP 2MG/5M	84061	20
ALENDRONATE SODIUM 10MG TAB	84444	1
ALLEGRA	84422	8
ALLOPURINOL 100MG TABS	1391	10
ALLOPURINOL 300MG TAB	3740	27
ALUMINUM ACETATE SOLN TAB	83607	1
AMANTADINE 100MG CAP	1606	3
AMIODARONE 200MG TAB	84092	17
AMITRIPTYLINE 25MG TAB	1639	100
AMLODIPINE BESYLATE 10MG TAB	84337	34
AMLODIPINE BESYLATE 2.5MG TAB	84335	2
AMLODIPINE BESYLATE 5MG TAB	84336	22
AMOXICILLIN 250MG CAP	4601	7
AMOXICILLIN 250MG/5ML	83611	78
AMOXICILLIN 500MG CAP	84024	135
AMOXICILLIN/CLAVULENATE 400MG/	84434	20
ANTIPYRINE/BENZOCAINE OTIC SOL	83614	19
ASCORBIC ACID 500MG TAB	1642	421
ASPIRIN 325MG E.C. TAB UD	84291	1
DM AUDIT ASPIRIN DRUGS		
ASPIRIN 325MG TAB	276	310

DM AUDIT ASPIRIN DRUGS		
ASPIRIN 650MG E.C. TAB	83618	113
DM AUDIT ASPIRIN DRUGS		
ASPIRIN 81MG TAB	83620	8
DM AUDIT ASPIRIN DRUGS		
ATENOLOL 25MG TAB	84328	42
ATENOLOL 50MG TAB	84329	301
ATORVASTATIN 40MG TABLETS	84416	7
DM AUDIT STATIN DRUGS		
ATORVASTATIN 80MG TABLETS	84503	8
DM AUDIT STATIN DRUGS		
ATROPINE SULFATE 0.4MG/1ML	2545	1

Figure 2-26: Sample Report of Drugs Prescribed during the audit period

2.3.2 Update Taxonomies

The taxonomies can be reviewed and updated with the TU19 option under the **AS – Audit Setup** menu in DMS or the corresponding Visual DMS Update Taxonomy option.

When updating lab test taxonomies, attempting to add a test panel to a laboratory test taxonomy that should only include individual tests results in the display of a warning. This warning is displayed because the Audit cannot correctly display hemoglobin A1C, lipid breakdown, or estimated GFR according to value categories if panels are included in the taxonomy. Panel tests have no values associated with them; only the tests within the panels have values.

Some taxonomies might not have any members. For example, if providers at a facility never prescribe INVOKANA, the DM AUDIT SGLP-2 DRUG taxonomy will not have any members.

Taxonomies in the following sections must be reviewed carefully. Possible members of the taxonomies are listed, but are by no means to be considered comprehensive.

2.3.2.1 Drug Taxonomies

Table 2-1 provides a list of DM Audit Drug Taxonomies. Review this list with the pharmacist to be sure it includes all that are available at your facility or may be ordered as outside medications.

While there are two separate taxonomies for GLP-1 medications, DM AUDIT GLP-1 ANALOG DRUGS and DM AUDIT INCRETIN MIMETICS, the components of those taxonomies are displayed together as GLP-1 Meds for the Audit.

Combination drugs should be added to the taxonomy for each of the components of that drug.

Medications entered as outside medications via the RPMS EHR can be orderable items, but they might not be in your facility's drug file. If a medication is not in your facility's drug file, the outside medication will not be stored in the V Medication file in Patient Care Component (PCC). If that is the case, those medications might not be found as drugs available to add to medication taxonomies, nor will they be included in the Diabetes Audit or Diabetes Patient Care Summary.

Note: The BGP PQA STATIN MEDS taxonomy is not included in the list that follows as it is pre-populated using the NDC numbers of Statin Drugs and does not need to be reviewed or populated on a local basis.

Table 2-1: DM Audit Drug Taxonomies

Taxonomy	Drugs
DM AUDIT ACE INHIBITORS	Benazepril (Lotensin) Benazepril and hydrochlorothiazide (Lotensin HCT) Benazepril and amlodipine (Lotrel) Captopril (Capoten) Captopril and hydrochlorothiazide (Capozide) Enalapril (Vasotec) Enalapril and hydrochlorothiazide (Vaseretic) Enalapril and diltiazem (Teczem) Enalapril and felodipine (Lexxel) Fosinopril (Monopril) Lisinopril (Prinivil, Zestril) Lisinopril and hydrochlorothiazide (Prinzide, Zestoretic) Moexipril (Univasc) Perindopril (Aceon) Quinapril (Accupril) Ramipril (Altace) Trandolapril (Mavik) Trandolapril and verapamil (Tarka) Also, include Angiotensin II Receptor Blockers (ARB) in this Taxonomy Azilsartan (Edarbi) Candesartan (Atacand) Eprosartan (Teveten) Irbesartan (Avapro) Irbesartan and hydrochlorothiazide (Avalide) Losartan (Cozaar) Losartan and hydrochlorothiazide (Cozaar) Olmesartan (Benicar) Telmisartan (Micardis) Valsartan (Diovan) Valsartan and hydrochlorothiazide (Diovan/HCT)

Taxonomy	Drugs
DM AUDIT ACARBOSE DRUGS	Acarbose (Precose) Miglitol (Glyset)
DM AUDIT AMYLIN ANALOGUES	Pramlintide (Symlin)
DM AUDIT ANTIPLT/ANTICOAG THERAPY	Any non-aspirin anti-platelet product including Heparin and Warfarin (Coumadin) Apixaban (Eliquis) Aspirin and Dipyridamole (Aggrenox) Cilistazol (Pletal) Clopidogrel (Plavix) Dabigatran Etxilate (Pradaxa) Dipyridamole (Persantine) Edoxaban (Sarvaysa) Ticagrelor (Brilinta) Ticlopidine (Ticlid) Prasugrel (Effient) Rivaroxaban (Xarelto) Vorapaxar (Zontivity)
DM AUDIT ASPIRIN DRUGS	Any Aspirin (ASA) or Aspirin containing product (Verasa, Rubrasa)
DM AUDIT BROMOCRIPTINE DRUGS	Bromocriptine 0.8 mg (Cycloset)
DM AUDIT COLESEVELAM DRUGS	Colesevelam (Welchol)
DM AUDIT DPP4 INHIBITOR DRUGS	Alogliptin (Nesina) Alogliptin and Metformin (Kazano) Alogliptin and Pioglitazone (Oseni) Linagliptin (Trajenta) Linagliptin and Metformin (Jentadueto) Sitagliptin (Januvia) Sitagliptin and metformin (Janumet) Sitagliptin and Simvastatin (Juvisync) Saxagliptin (Onglyza) Saxagliptin and Metformin (Kombiglyze XR)
DM AUDIT GLITAZONE DRUGS (a.k.a.: Thiazolidinediones)	Pioglitazone (Actos) Pioglitazone and Alogliptin (Oseni) Pioglitazone and Metformin (Actoplus met) Pioglitazone and Glimeperide (Duetact) Rosiglitazone and Glimeperide (Avandaryl) Rosiglitazone (Avandia) Rosiglitazone and Metformin (Avandamet) Troglitazone (Rezulin) – RECALLED in 2000
DM AUDIT GLP-1 ANALOG DRUGS	Albiglutide (Tanzeum) Dulaglutide (Trulicity) Liraglutide (Victoza)
DM AUDIT INCRETIN MIMETICS	Exenatide (Byetta, Bydureon)

Taxonomy	Drugs
DM AUDIT INSULIN DRUGS	Any Insulin product in Drug File – Insulin, REG, NPH, Lente, Ultralente, Insulin Lispro (Humalog), Insulin Glargine (Lantus), Insulin Detemir (Levemir) Insulin Aspart (Novolog), Insulin Glulisine (Apidra), Inhalable Insulin (Affreza, Exubera – discontinued 2007), Pre-Mixed Insulins (70/30, 75/25)
DM AUDIT LIPID LOWERING DRUGS	
DM AUDIT METFORMIN DRUGS	Metformin (Glucophage, Fortamet, Glumetza, Riomet) Metformin extended release (Glucophage XR, Glumetza) Metformin and Alogliptin (Kazano) Metformin and Canagliflozin (Invokamet) Metformin and Dapagliflozin (Xigduo) Metformin and Glipizide (Metaglip) Metformin and Glyburide (Glucovance) Metformin and Linagliptin (Jentadueto) Metformin and Rosiglitazone(Avandamet) Metformin and Pioglitazone (Actoplus met) Metformin and Sitagliptin (Janumet) Metformin and Repaglinide (PrandiMet) Metformin and Saxagliptin (Kombiglyze XR)
DM AUDIT SGLT-2 INHIBITOR DRUG	Canagliflozin (Invokana) Dapagliflozin (Farxiga) Empagliflozen (Jardiance)

Taxonomy	Drugs
DM AUDIT STATIN DRUGS	Atorvastatin (Lipitor) Atorvastatin and Amlodipine (Caduet) Atorvastatin and Ezetimibe (Liptruzet) Fluvastatin (Lescol) Lovastatin (Mevacor, Altocor, Altoprev) Lovastatin and Niacin (Advicor) Pravastatin (Pravachol) Pitivistatin (Livalo) Rosuvastatin (Crestor) Simvastatin (Zocor) Simvastatin and Ezetimibe (Vytorin) Simvastatin and Niacin (Simcor) Simvastatin and Sitagliptin (Juvissync)
DM AUDIT SULFONYLUREA DRUGS	Acetohexamide (Dymelor) Chlorpropamide (Diabinese) Glimepiride (Amaryl) Glimepiride and pioglitazone (Duetact) Glimepiride and rosiglitazone (Avandaryl) Glipizide (Glucotrol) Glipizide and metformin (Metaglip) Glyburide (Diabeta, Micronase, Glynase, Glycron) Glyburide and metformin (GlucoVance) Tolazamide (Tolinase) Tolbutamide (Orinase)
DM AUDIT SULFONYLUREA-LIKE DRUGS	Nateglinide (Starlix) Repaglinide (Prandin) Repaglinide and Metformin (PrandiMet)

2.3.2.2 Laboratory Test Taxonomies

Table 2-2 lists the taxonomies that must be reviewed for potential changes in laboratory testing at a facility each year. Note that the DM AUDIT ALT, DM AUDIT AST, and DM AUDIT CREATINE KINASE taxonomies are used to check for test values that would be indicative of an adverse reaction to statin therapy.

Table 2-2: DM Audit Laboratory Test Taxonomies

Taxonomy	Topics
BGP GPRA ESTIMATED GFR TAX	Estimated GFR, Calculated GFR, _GFR, Estimated, _GFR Non-African American, EST GFR, eGFR
BGP CREATINE KINASE TAX	CK, CPK, Creatine Kinase, Total CK
DM AUDIT ALT TAX	ALT, SGPT
DM AUDIT AST TAX	AST, SGOT

Taxonomy	Topics
DM AUDIT CHOLESTEROL TAX	Cholesterol, Total Cholesterol, _Cholesterol, POC Cholesterol
DM AUDIT CREATININE TAX (Be careful not to include any tests for Urine Creatinine.)	Creatinine, POC Creatinine, Serum Creatinine, _Creatinine
DM AUDIT HDL TAX	HDL, HDL Cholesterol, POC HDL Cholesterol, _HDL Cholesterol
DM AUDIT HGB A1C TAX	Hemoglobin A1C, A1C, HGB A1C, HBA1C, HA1C, POC HEMOGLOBIN A1C, _A1C
DM AUDIT LDL CHOLESTEROL TAX	LDL, Direct LDL, LDL Cholesterol, LDL Cholesterol (calc), POC LDL Cholesterol, _LDL Cholesterol
DM AUDIT MICROALBUMINURIA TAX	Microalbumin, _Microalbumin, Albumin, Urine, POC Microalbumin
DM AUDIT QUANT UACR TAX	Microalbumin/Creatinine Ratio measured in actual numeric values (mg/g Creatinine). Look for tests A/C, A:C, Albumin/Creatinine, _A/C, -A/C, asterisk (*)A/C, Microalbumin/Creatinine, M-Alb/Creatinine.
DM AUDIT TB LAB TESTS	QFT-G, T SPOT-TB, Quantiferon GOLD
DM AUDIT TRIGLYCERIDE TAX	Triglyceride, POC Triglyceride, _Triglyceride

With the advent of reference laboratory interfaces and Point of Care result entry, there is considerable variation in test nomenclature. Diabetes program staff are encouraged to solicit assistance from both laboratory and pharmacy staff in updating taxonomies.

When deciding which tests should be included in a taxonomy, it may be useful to review test results on a health summary for a known patient with diabetes whose Standards of Care are current. Once test names are determined, the appropriate tests can be added or deleted from taxonomies.

Figure 2-27 shows a Health Summary sample with the name of the taxonomy that the test is included in noted underneath the lab test.

HGB A1C-GLYCO (R)	01/16/09	5.7	%	4.3-6.1
DM AUDIT HGB A1C				
LIPID PROFILE (R)	01/16/09			
HDL CHOLESTEROL (R)	01/16/09	44	MG/DL	40-125
DM AUDIT HDL CHOLESTEROL				
TRIGLYCERIDE (R)	01/16/09	109	MG/DL	30-150
DM AUDIT TRIGLYCERIDE				
LDL CHOLESTEROL (R)	01/16/09	97	MG/DL	0-130
DM AUDIT LDL CHOLESTEROL				
CHOLESTEROL (R)	01/16/09	163	MG/DL	100-200
DM AUDIT CHOLESTEROL				
CHOL/HDL RATIO (R)	01/16/09	3.70	RATIO	0.00-4.44
CALCULATED GFR (R)	01/16/09			
_GFR AFRICN AMER	01/16/09	>60	ML/MIN	>60-
_BGP GPRA ESTIMATED GFR				
_GFR NON AFR AMR	01/16/09	>60	ML/MIN	>60-
_BGP GPRA ESTIMATED GFR				

COMPREHENSIVE-14 METABOLIC (R)	01/16/09			
AST (SGOT) (R)	01/16/09	18	U/L	0-40
ALT (SGPT) (R)	01/16/09	15	U/L	0-40
BUN (R)	01/16/09	11	MG/DL	5-19
ALBUMIN (R)	01/16/09	4.2	GM/DL	3.9-5.0
CHLORIDE (R)	01/16/09	104	MMOL/L	96-108
BILIRUBIN, TOTAL (R)	01/16/09	0.9	MG/DL	0.1-1.0
ALKALINE PHOS (R)	01/16/09	76	U/L	28-110
SODIUM (R)	01/16/09	139	MMOL/L	135-145
CREATININE (R)	01/16/09	0.86	MG/DL	0.50-1.00
DM AUDIT CREATININE				
CALCIUM (R)	01/16/09	8.9	MG/DL	8.5-10.5
POTASSIUM (R)	01/16/09	5.6 (H)	MMOL/L	3.5-5.5
PROTEIN, TOTAL (R)	01/16/09	7.7	GM/DL	6.7-8.3
GLUCOSE RANDOM (R)	01/16/09	68 (L)	MG/DL	70-100
CO2 (R)	01/16/09	23	MMOL/L	18-30
ANION GAP (R)	01/16/09	12	MM/L	5-16
URINE DIPSTICK (R)	03/10/08			
URINE COLOR	03/10/08	O		
URINE APPEARANCE	03/10/08	C		
SPECIFIC GRAVITY	03/10/08	1.001		1.001-1.035
URINE UROBILINOGEN	03/10/08	NORMAL	EU/dL	.2-1
URINE BLOOD	03/10/08	N	mg/dL	NEG-
URINE BILIRUBIN	03/10/08	N	mg/dL	NEG-
URINE KETONES	03/10/08	L	mg/dL	NEG-
URINE GLUCOSE	03/10/08	500	mg/dL	NEG-
URINE PROTEIN	03/10/08	L	mg/dL	NEG-
URINE PH	03/10/08	5		5-9
URINE NITRITE	03/10/08	N		NEG-
URINE LEUKOCYTE ESTERASE	03/10/08	N		NEG-
M-ALB/CREAT RATIO (R)	01/22/09			
_ MICROALB, RANDOM	01/22/09	<5.0	MG/L	0.0-20.0
DM AUDIT MICROALBUMINURIA				
_ ALB/CREAT RATIO	01/22/09	FOOTNOTE	MG/GCR	0.0-16.9
DM AUDIT QUANT UACR				
_ CREAT UR, MG/DL	01/22/09	138	MG/DL	
_ CREAT/100 Calc Malb	01/22/09	1.38	G/LFigure	

Figure 2-27: Health Summary with recommended taxonomy placement

2.3.3 View/Print Any DM Audit Taxonomy

The **View/Print Any DM Taxonomy** option may be used to review any of the Diabetes Audit taxonomies, including: CPT Codes, Diagnoses Codes, LOINC Codes, Medications, Laboratory Tests, or Education Topics. To review a taxonomy:

1. Select **AS** (Audit Setup) from the DMS main menu.
2. Select **VTAX View/Print Any DM Audit Taxonomy**.

When prompted, type **2019** as the Audit year. A list of the taxonomies used in the 2019 Diabetes Audit display (Figure 2-28). Note that there are multiple pages of taxonomies. Use the up arrow or down arrow to browse the list.

Type **S** to indicate a selection will be made. Then type the number preceding the taxonomy of interest.

The taxonomy contents may be browsed on the screen or printed to a RPMS printer. Figure 2-29 shows a sample of the taxonomy contents for the creatinine kinase test.

```

DM AUDIT TAXONOMY VIEW          Nov 02, 2018 11:28:20          Page: 1 of 7
TAXONOMIES TO SUPPORT 2019 DIABETES/PRE-DIABETES AUDIT REPORTING
* View Taxonomies

1)  APCH TD CPTS                  CPT
2)  BGP ADV EFF CARDIOVASC NEC    ICD DIAGNOSIS
3)  BGP ALCOHOL HEPATITIS DXS    ICD DIAGNOSIS
4)  BGP ALT LOINC                 LAB LOINC
5)  BGP ASA ALLERGY 995.0-995.3  ICD DIAGNOSIS
6)  BGP AST LOINC                 LAB LOINC
7)  BGP BREASTFEEDING DXS        ICD DIAGNOSIS
8)  BGP CABG CPTS                 CPT
9)  BGP CABG DXS                  ICD DIAGNOSIS
10) BGP CABG PROCS                ICD OPERATION/PROCEDURE
11) BGP CMS SMOKING CESSATION MEDS DRUG
12) BGP CMS SMOKING CESSATION NDC NDC/UPN
13) BGP CPT FLU                   CPT
14) BGP CPT FOOT EXAM             CPT
15) BGP CREATINE KINASE LOINC     LAB LOINC
16) BGP CREATINE KINASE TAX       LABORATORY TEST
+      Enter ?? for more actions
S      Select Taxonomy to View      Q      Quit
Select Action:+/S

Which Taxonomy: (1-95): 16

      Select one of the following:

          P          PRINT Taxonomy Output
          B          BROWSE Taxonomy Output on Screen

Do you wish to: B//
    
```

Figure 2-28: Taxonomy list for 2019 Diabetes Audit

```

DKR                               DEMO HOSPITAL                Page 1
                                Listing of the BGP CREATINE KINASE LOINC taxonomy
-----
2157-6      CREATINE KINASE:CCNC:PT:SER/PLAS:QN
24335-2     CREATINE KINASE PANEL: - :PT:SER/PLAS:QN
50756-6
    
```

Figure 2-29: Sample of a Taxonomy for Creatine Kinase LOINC Codes

2.3.4 View a SNOMED List Used by the DM Audit

The **View a SNOMED List Used by the DM Audit** option may be used to review any SNOMED list that is used by the Diabetes Audit.

1. Select **AS** (Audit Setup) from the DMS main menu.
 - a. Select **VSML** View a SNOMED List Used by the DM AUDIT.

- b. When prompted for the year, type **2019**.
- c. The SNOMED Lists used in the 2019 Diabetes Audit will display (Figure 2-30).
- d. Type **S** to indicate a selection will be made.
- e. Enter the number preceding the SNOMED List of interest. The contents of the SNOMED List may be browsed on the screen or printed to a RPMS printer.

```

DM AUDIT SNOMED LIST VIEW      Nov 02, 2018 11:30:36      Page:  1 of  1
SNOMED LISTS TO SUPPORT 2019 DIABETES AUDIT REPORTING
* View SNOMED Lists

1) BREASTFEEDING PATIENT ED
2) DEPRESSION DIAGNOSES
3) PXRMBGPDMATKAMP
4) PXRMBGPDMBTKAMP
5) PXRMBGPDMRETINOPATHY
6) PXRMBGPQUITTOBACCO
7) PXRMBGPTOBACCO SMOKELESS
8) PXRMBGPTOBACCO SMOKER
9) PXRMBGPTOBACCO TOPICS
10) PXRMDIABETES
11) PXRMESSENTIAL HYPERTENSION
12) PXRMEPATITIS C

      Enter ?? for more actions
S      Select SNOMED List to View      Q      Quit
Select Action:+//S      Select SNOMED List to View

Which SNOMED List:  (1-5): 5

      Select one of the following:

          P          PRINT Taxonomy Output
          B          BROWSE Taxonomy Output on Screen

Do you wish to: B//
    
```

Figure 2-30: Selecting a SNOMED List used in the 2019 Diabetes Audit

```

OUTPUT BROWSER      Dec 11, 2018 10:51:50      Page:  1 of  5
BHS
2013 DEMO HOSPITAL
Listing of the PXRMBGPDMRETINOPATHY SNOMED List
-----
4855003      Diabetic retinopathy
25412000     Diabetic retinal microaneurysm
59276001     Proliferative diabetic retinopathy
193349004    Preproliferative diabetic retinopathy
193350004    Advanced diabetic maculopathy
232020009    Diabetic maculopathy
232021008    Proliferative diabetic retinopathy with new vessels on
232022001    Proliferative diabetic retinopathy with new vessels els
232023006    Diabetic traction retinal detachment
311782002    Advanced diabetic retinal disease
312903003    Mild non-proliferative diabetic retinopathy
+      Enter ?? for more actions      >>>
    
```

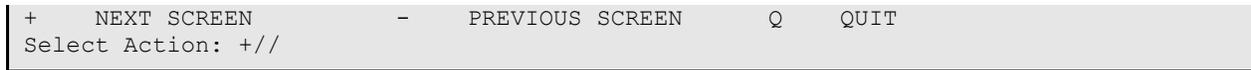


Figure 2-31: Browsing a selected SNOMED List used in the 2019 Diabetes Audit

2.4 Run a Data Quality Check Report

This report identifies potential errors in the data extracted for your Audit data file and/or report – the same errors that would be identified by WebAudit Data Quality Check. The DMS version of the report includes patient identifiers, which the WebAudit version does not, making it easier to locate and correct the relevant data. It is highly recommended that you run this report using DMS and fix all possible errors prior to uploading any data file to the WebAudit.

The Data Check Report has two sections, one listing the details of each potential error and one listing the number of potential errors for each Audit item. An Audit item with a large number of errors may indicate a taxonomy or some other systematic issue. It is recommended that these issues be resolved as the first step in data cleaning.

Note: When running this report, use the exact same parameters that you will be using when creating the Audit data file.

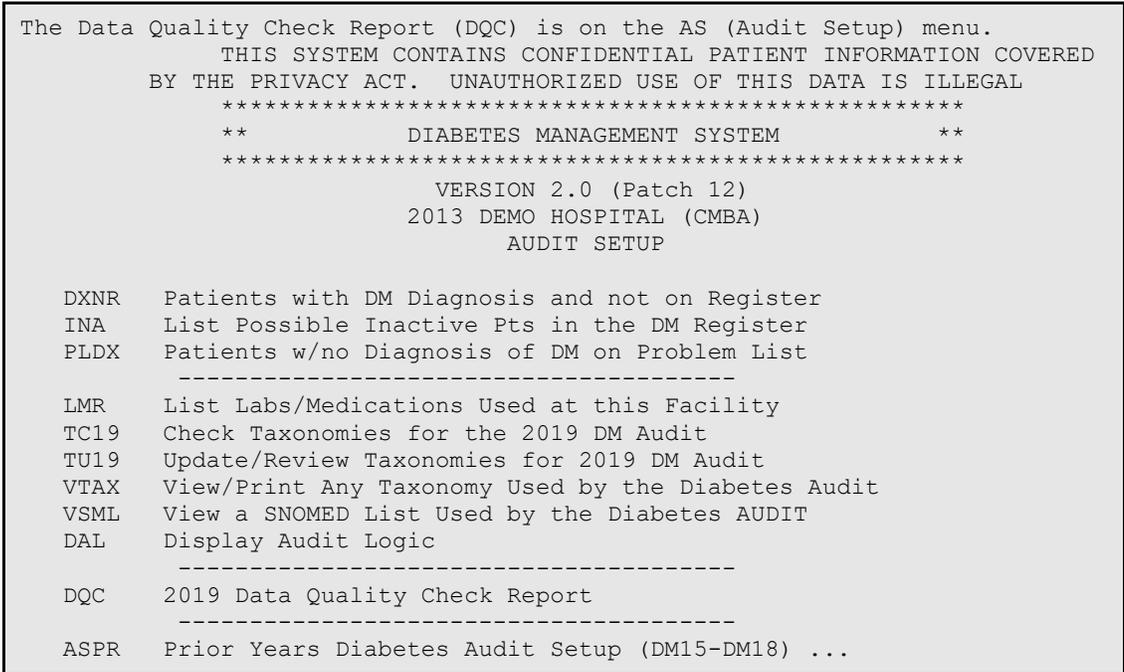


Figure 2-32: Audit Setup Menu

Figure 2-33 shows a script on how to run the Data Quality Check Report, followed by a sample report.



AS - Audit Setup

DQC - Data Quality Check

In order for the 2019 DM AUDIT Report to find all necessary data, several taxonomies must be established. The following taxonomies are missing or have no entries:

DRUG taxonomy [DM AUDIT AMYLIN ANALOGUES] has no entries
 DRUG taxonomy [DM AUDIT COLESEVELAM DRUGS] has no entries
 DRUG taxonomy [DM AUDIT INCRETIN MIMETIC] has no entries
 DRUG taxonomy [DM AUDIT SGLT-2 INHIBITOR DRUG] has no entries
 DRUG taxonomy [DM AUDIT SULFONYLUREA-LIKE] has no entries
 End of taxonomy check. HIT RETURN: <Enter>

ASSESSMENT OF DIABETES CARE, 2019

PCC DIABETES AUDIT

Enter the Official Diabetes Register: IHS DIABETES

Enter the date of the audit. 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.

Enter the Audit Date: 12/31/18 (DEC 31, 2018)

Select one of the following:

P	Individual Patients
S	Search Template of Patients
C	Members of a CMS Register
E	E-Audit (predefined set of patients)

Run the audit for: P// C Members of a CMS Register

Do you want to select register patients with a particular status? Y// ES
 Which status: A// <Enter> ACTIVE

There are 873 patients in the IHS DIABETES register with a status of A.

You have selected a register or template/cohort of patients.
 You can run the audit just for the subset of patients in the cohort or register who live in a particular community or have a particular primary care provider.

Limit the audit to a particular primary care provider ? N// <Enter> 0

Limit the patients who live in a particular community ? N// <Enter> 0

Select one of the following:

1	Indian/Alaskan Native (Classification 01)
2	Not Indian Alaskan/Native (Not Classification 01)
3	All (both Indian/Alaskan Natives and Non 01)

Select Beneficiary Population to include in the audit: 1// <Enter>
 Indian/Alaskan Native (Classification 01)

Select one of the following:

I	Include Pregnant Patients
---	---------------------------

```

      E          Exclude Pregnant Patients

Select whether to include or exclude pregnant patients in the audit: E//
<Enter> xclude Pregnant Patients
okay, hold on...this may take a few minutes..

      Note:  When not running an official Audit, you may choose to include
pregnant patients.  Pregnant patients are identified as those who have
had two or more pregnancy-related visits during the Audit period to a
non-pharmacy clinic, or where the provider is not a CHR.  The list of
pregnancy-related diagnoses may be reviewed under the View/Print
Taxonomy Lists.

There are 860 patients selected so far to be used in the audit.

      Select one of the following:

      A          ALL Patients selected so far
      R          RANDOM Sample of the patients selected so far

Do you want to select: A// <Enter> LL Patients selected so far

      Select one of the following:

      P          PATIENT NAME
      E          ERROR FIELD NAME

How should the report be sorted: P// <Enter>

      Select one of the following:

      I          Include ALL Patients
      E          Exclude DEMO Patients
      O          Include ONLY DEMO Patients

Demo Patient Inclusion/Exclusion: E// <Enter> xclude DEMO Patients

      Select one of the following:

      P          PRINT Output
      B          BROWSE Output on Screen

Do you wish to: P// BROWSE Output on Screen

```

Figure 2-33: Running a Data Quality Check Report

If the **Print Output** option is selected, at the “Device” prompt, type the printer name. This report can be queued to run later as shown in Figure 2-34.

```

Device: HOME// Q <Enter> QUEUE TO PRINT ON

Device: P171 <Enter>
Start Date/Time: T@2000 <Enter>
Device: P180

```

Figure 2-34: Device prompt

Note: A queued report cannot be printed to a locally connected printer, usually referred to as a Slave printer.

A sample 2019 Data Quality Check Report is displayed in Figure 2-35.

LAB	Nov 03, 2018	Page 1			
DIABETES AUDIT EXPORT DATA QUALITY CHECK REPORT Audit Date 12/31/2018 (01/01/2018 to 12/31/2018) Facility: 2013 DEMO HOSPITAL (CMBA)					
PATIENT NAME	HRN	DOB	SEX AGE	VALUE	ERR TYPE

DEMOA, CHARLENE	111111	12/06/1985	F 27		POTENTIAL
ERROR: ALL KEY DATA MISSING-Data is missing for all key fields: weight, blood pressure, Alc, LDL, uACR.					
DEMOB, MARIE	222222	09/15/1970	F 42	145	POTENTIAL
ERROR: HDL VALUE <12 OR >140-HDL Value is less than 12 or greater than 120. Check the value, if accurate no action necessary.					
DEMOC, LORI	333333	04/28/1992	F 20	2	POTENTIAL
ERROR: TX INSULIN / DM TYPE 1-Value for this medication is inconsistent with DM Type 1. Check the value for insulin therapy and DM Type. DEMOD, MARY					
ANN	444444	10/14/1940	M 72	28	POTENTIAL
ERROR: DIASTOLIC 1 <30 OR >140-Diastolic 1 is less than 30 or greater than 140. Check value.					
DEMOF, MINNIE	555555	01/10/1969	F 43	15.6	POTENTIAL
ERROR: BMI <16 OR >80-BMI is less than 16 or greater than 80. Check values and if necessary correct HT/WT. If value is correct, no action is necessary.					
DEMOG, ANGELA	666666	08/17/1920	F 92	7	POTENTIAL
ERROR: HEIGHT IN FEET HIGH FOR AGE >9-Height is high (>6) for patient age >9. Check the patient's last height value. DEMOH, JOHN MITCHELL 777777					
09/07/2014	F -1	03/07/1997	DEFINITE		
ERROR: DATE OF DX BEFORE YOB-Date of Diabetes Diagnosis is before year of birth.					
...					
LAB	Nov 03, 2018	Page 36			
DIABETES AUDIT EXPORT DATA QUALITY CHECK REPORT Audit Date 12/31/2012 (01/01/2012 to 12/31/2012) Facility: 2013 DEMO HOSPITAL (CMBA)					
PATIENT NAME	HRN	DOB	SEX AGE	VALUE	ERR TYPE

SUMMARY OF POTENTIAL ERRORS					
ERROR MESSAGE		# OF POTENTIAL ERRORS			
AGE OVER 100		1			
ALL KEY DATA MISSING		25			
BMI <16 OR >80		2			
CREATININE VALUE <0.3 OR >15		1			
DATE OF DX BEFORE YOB		1			
DIASTOLIC 1 <30 OR >140		1			
DURATION OF DM		1			
EGFR VALUE <5 OR >250		2			
HBA1C DATE <20 DAYS BEFORE DOO		1			
HDL VALUE <12 OR >140		4			

HEIGHT IN FEET HIGH FOR AGE >9	1
HEIGHT IN FEET LOW FOR AGE <19	1
HEIGHT IN FEET LOW FOR AGE >18	2
HEIGHT IN FEET MISSING	1
HEIGHT TOTAL <24 AGE<18	1
HEIGHT TOTAL <48 AGE>17	2
HEIGHT TOTAL >60 AGE <10	4
HEIGHT TOTAL >84 AGE >9	1
TB TEST DATE < YOB	2
WEIGHT LESS THAN 80, AGE >17	1

Figure 2-35: Sample Data Quality Check Report

3.0 2019 Audit Tools

Instructions for creating and submitting a Diabetes Audit data file are provided in the Audit 2019 Instructions at <https://www.ihs.gov/diabetes/audit/audit-resources/>.

In RPMS, Diabetes Audits can be run for individual patients, a template of patients, patients in a Register, or a random sample of patients in a Register. Additional options exist for running the Audit by Primary Care Provider, by Community, for only American Indian/Alaska Native Patients, non-Indian/Alaska Native Patients, or both.

Output options include an individual audit, the Audit Report, the SDPI RKM Report, and an Audit Data (Export) file. Even those doing manual audits may find it useful to print individual audits which most likely have some information on them, such as measurements.

3.1 Individual Audits

Individual Audits list all of the Audit data items for a particular patient. These can be run either via the Audit Reporting menu or the Patient Management option. To run using the Audit Reporting menu, please refer to the DMS General User Manual. To run an individual audit using the Patient Management option do the following:

1. At the Diabetes Management Systems menu, type **RM** for Register Maintenance and press Enter, then type **PM** for Patient Management and press Enter.
2. At the Patient Management menu, type **10** (Audit Status) and press Enter.
3. At the “Enter the Audit Date” prompt, type the ending date of the audit period desired and press Enter.
4. At the “Do you wish to print the Patient’s Name...?” prompt, do one of the following:
 - a. To not print the patient’s name on the audit sheet, accept the default (**N**) by pressing Enter.
 - b. To print the patient’s name, type **Y** and press Enter.
5. At the “Do you wish to” prompt, do one of the following:
 - a. To print the output, accept the default (**P**) by pressing Enter. A prompt asking for the device name displays; type the device’s name and press Enter.
 - b. To browse the output on the screen, type **B** and press Enter.

A sample individual audit is shown in Figure 3-1.

Individual Diabetes Audit, 2019	DATE AUDIT RUN: 11/02/2018	Page: 1
---------------------------------	----------------------------	---------

Audit Period Ending Date: 12/31/2018 Facility Name: DEMO HOSPITAL
 Reviewer initials: LAB Community: LAS VEGAS
 State of Residence: NV
 Chart #: 105176 DOB: 05/13/1963 Sex: FEMALE
 Primary Care Provider: DEMO,MARCUS

Date of Diabetes Diagnosis:
 DM Reg: 02/01/2003 Problem List: 03/01/2003 1st PCC DX: 01/04/2002
 DM Type: 2 Type 2
 DM Register: Type 2 Problem List: E11.00;E11.311 PCC POV's: Type 2

Tobacco/Nicotine Use
 Screened for tobacco use (during Audit period): 1 Yes
 Tobacco use status (most recent):
 1 Current user CURRENT SMOKER, SOME DAY 11/02/2018
 If 'Current user', tobacco cessation counseling received
 (during Audit period): 2 No

Electronic Nicotine Delivery Systems (ENDS)
 Screened for ENDS use (during Audit period):
 1 Yes NEVER USED ENDS USER 11/02/2018
 ENDS use status (most recent): 2 Not a current user

Vital Statistics
 Height (last ever): 66.00 inches 11/02/2018
 Weight (last in audit period): 150 lbs 11/02/2018 BMI: 24.2
 Hypertension (documented diagnosis ever): 1 Yes
 Blood pressure (last 3 during Audit period): 140/90 mm Hg 11/02/2018

Examinations (during Audit period)
 Foot (comprehensive or 'complete'): 1 Yes 09/01/2018 Diabetic Foot Exam
 Eye (dilated or retinal imaging): 1 Yes 04/03/2018 Diabetic Eye Exam
 Dental: 2 No

Mental Health
 Depression an active problem: 2 No
 If 'No', screened for depression (during Audit period):
 1 Yes - Exam: DEPRESSION SCR 11/02/2018

Education (during Audit period)
 Nutrition: 2 Yes (Non RD) NRD: DM-N 11/02/2018
 Physical activity: 1 Yes DM-EXERCISE 11/02/2018
 Other diabetes: 2 No

Diabetes Therapy All prescribed (as of the end of the Audit period):
 X 1 None of the following
 2 Insulin
 3 Metformin [Glucophage, others]
 4 Sulfonylurea [glyburide, glipizide, others]
 5 DPP4 inhibitor [Sitagliptin (Januvia), Saxagliptin (Onglyza),
 Linagliptin (Tradjenta), Alogliptin (Nesina)]
 6 GLP-1 agonist [Exenatide (Byetta, Bydureon), Liraglutide
 (Victoza), Albiglutide (Tanzeum), Dulaglutide (Trulicity)
 Lixisenatide (Adlyxin), Semaglutide (Ozempic)]
 7 SGLT-2 inhibitor [Canagliflozin (Invokana),
 Dapagliflozin (Farxiga), Empagliflozin (Jardiance),
 Ertugliflozin (Steglatro)]
 8 Pioglitazone [Actos] or rosiglitazone [Avandia]
 9 Acarbose [Precose] or miglitol [Glyset]
 10 Repaglinide [Prandin] or Nateglinide [Starlix]
 11 Amylin analog [Symlin]

12 Bromocriptine [Cycloset]
 13 Colesevelam [Welchol]

ACE Inhibitor or ARB
 Prescribed (as of the end of the Audit period):
 1 Yes 11/02/2018 LISINOPRIL 10MG TAB *

Commonly prescribed medications include:
 ACE Inhibitors: Lisinopril (Prinivil, Zestril), Enalapril (Vasotec, Epaned), Fosinopril (Monopril), Ramipril (Altace), Benazepril (Lotensin)
 ARBs: Losartan (Cozaar), Telmisartan (Micardis), Irbesartan (Avapro), Olmesartan (Benicar), Valsartan (Diovan, Prexxartan)

Aspirin or Other Antiplatelet/Anticoagulant Therapy
 Prescribed (as of the end of the Audit period):
 2 No

Commonly prescribed medications include:
 Anticoagulants: Warfarin (Coumadin), Rivaroxaban (Xarelto), Apixaban (Eliquis),
 Dabigatran (Pradaxa)
 Antiplatelets: Clopidogrel (Plavix), Ticagrelor (Brilinta), Prasugrel (Effient), Cilostazol (Pletal)

Statin Therapy
 Prescribed (as of the end of the Audit period): 2 No

Cardiovascular Disease (CVD)
 Diagnosed (ever): 2 No

Tuberculosis (TB)
 TB test done (ever): 3 Unknown
 TB test result:
 If result 'Positive', isoniazid treatment complete:

 If result 'Negative', test date:

Hepatitis C (HCV)
 HCV diagnosed (ever): 2 No
 If 'No', screened for HCV at least once (ever):
 1 Yes 11/02/2018 HEPATITIS C Antibody (R) (N)

Retinopathy
 Diagnosed (ever): 1 Yes - Problem List

Amputation
 Lower extremity (ever), any type (e.g., toe, partial foot, above or below knee): 2 No

Immunizations
 Influenza vaccine (during Audit period): 1 Yes 11/02/2018
 Pneumococcal vaccine (ever): 1 Yes 05/10/2017
 Td, Tdap, DTaP, or DT (in past 10 years): 2 No 09/25/2008
 Tdap (ever): 1 Yes 09/25/2008
 Hepatitis B complete series (ever): 2 No

Laboratory Data (most recent result during Audit period)

A1c:	8.4	11/02/2018	HGB A1c (R)
Total Cholesterol:			
HDL Cholesterol:	50 mg/dl	11/02/2018	HDL CHOLESTEROL (PO)
LDL Cholesterol:	97 mg/dl	11/02/2018	LDL CHOLESTEROL (PO)
Triglycerides:	109 mg/dl	11/02/2018	TRIGLYCERIDE (POCT)

Serum Creatinine:	0.86 mg/dl	11/02/2018	_CREATININE (R)
eGFR:	>60	11/02/2018	ESTIMATED GFR (CALC)
Quantitative Urine			
Albumin: Creatinine			
Ratio UACR value:			
COMBINED: Meets ALL: A1C <8.0, statin prescribed, mean BP <140/<90			
2 No A1C: 8.4; statin prescribed: No; Mean BP: 140/90			
Has e-GFR and UACR: No			
Local Questions			
Select one:			
Text:			

Figure 3-1: Individual Audit sample

3.2 Audit Report

The Audit Report summarizes all of the Audit data items for a selected group of patients. Figure 3-2 shows a script for running an Audit Report. The Audit Report can be either queued using the DM19 option in Visual DMS or run from the traditional RPMS menu. It is highly recommended that the 2019 Audit Report be run and reviewed twice before creating a data file to submit via the WebAudit for the Annual Audit.

The first time, run the Audit Report on all active members of the register with Type 1 or Type 2 Diabetes or on the created template of eligible patients with Type 1 or Type 2 Diabetes.

Review the initial Audit Report carefully and look for Audit items that have no data or that have far larger or smaller numbers than would be expected. If any are found, this may be due to improperly populated taxonomies. If necessary, review taxonomy set up and edit taxonomies as needed. Then run and review the Audit Report again to make sure that problems are corrected before creating the Audit Data (Export) file.

Note: It is possible to have taxonomies with no members, if the drugs or laboratory tests referenced are not used at a facility. See Section 2.3 for more information.

Figure 3-2 shows the steps for generating an Audit Report.

```
Diabetes Management System ...
AR Audit Reporting ...
DM19 2019 Diabetes Audit

          Select 2019 Diabetes Program Audit Option: DM19 Run 2019
Diabetes Program Audit

In order for the 2019 DM AUDIT Report to find all necessary data, several
```

taxonomies must be established. The following taxonomies are missing or have no entries:

DRUG taxonomy [DM AUDIT AMYLIN ANALOGUES] has no entries
 DRUG taxonomy [DM AUDIT COLESEVELAM DRUGS] has no entries
 DRUG taxonomy [DM AUDIT INCRETIN MIMETIC] has no entries
 DRUG taxonomy [DM AUDIT SGLT-2 INHIBITOR DRUG] has no entries
 DRUG taxonomy [DM AUDIT SULFONYLUREA-LIKE] has no entries
 End of taxonomy check. HIT RETURN: <Enter>

ASSESSMENT OF DIABETES CARE, 2019

PCC DIABETES AUDIT

Enter the Official Diabetes Register: IHS DIABETES

Enter the date of the audit. 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.

Enter the Audit Date: 12/31/18 (DEC 31, 2018)

Select one of the following:

P Individual Patients
 S Search Template of Patients
 C Members of a CMS Register

Run the audit for: P// C Members of a CMS Register

Do you want to select register patients with a particular status? Y//
 <Enter> ES

Which status: A// <Enter> ACTIVE

There are 873 patients in the IHS DIABETES register with a status of A.

You have selected a register or template/cohort of patients. You can run the audit just for the subset of patients in the cohort or register who live in a particular community or have a particular primary care provider.

Limit the audit to a particular primary care provider ? N// <Enter> O

Limit the patients who live in a particular community ? N// <Enter> O

Select one of the following:

1 Indian/Alaskan Native (Classification 01)
 2 Not Indian Alaskan/Native (Not Classification 01)
 3 All (both Indian/Alaskan Natives and Non 01)

Select Beneficiary Population to include in the audit: 1// <Enter>
 Indian/Alaskan Native (Classification 01)

Select one of the following:

I Include Pregnant Patients
 E Exclude Pregnant Patients

Select whether to include or exclude pregnant patients in the audit: E//
 <Enter> xclude Pregnant Patients
 okay, hold on...this may take a few minutes..

Note: When not running an official Audit, you may choose to include pregnant patients. Pregnant patients are identified as those who have had two or more pregnancy-related visits during the Audit period to a non-pharmacy clinic, or where the provider is not a CHR. The list of pregnancy-related diagnoses may be reviewed under the View/Print Taxonomy Lists.

There are 543 patients selected so far to be used in the audit.

Select one of the following:

A ALL Patients selected so far
R RANDOM Sample of the patients selected so far

Do you want to select: A// <Enter> LL Patients selected so far

Select one of the following:

1 Print Individual Reports
2 Create AUDIT EXPORT file
3 Audit Report (Cumulative Audit)
4 Both Individual and Cumulative Audits
5 SDPI RKM Report

Enter Print option: 1// 3 Audit Report (Cumulative Audit)

Select one of the following:

I Include ALL Patients
E Exclude DEMO Patients
O Include ONLY DEMO Patients

Demo Patient Inclusion/Exclusion: E// <Enter> xclude DEMO Patients

Select one of the following:

P PRINT Output
B BROWSE Output on Screen

Do you wish to: P// BROWSE Output on Screen

Figure 3-2: Running a Cumulative Audit (Audit Report)

If the **Print Output** option is selected, at the “Device” prompt, type the printer name. This report can be queued to run later as shown in Figure 3-3.

```
Device: HOME// Q <Enter> QUEUE TO PRINT ON
Device: P171 <Enter>
Start Date/Time: T@2000 <Enter>
Device: P180
```

Figure 3-3: Device prompt

Note: A queued report cannot be printed to a locally connected printer, usually referred to as a Slave printer.

A sample 2019 Audit Report is displayed in Appendix D.

3.3 Audit Export (Data) File

IHS recommends that the Annual Audit include all eligible diabetes patients. There may be patients on your register who do not have Type 1 or Type 2 diabetes or otherwise do not meet the inclusion and exclusion criteria outlined in the Audit 2019 Instructions and in Section 2.1. If that is the case, you may need to edit your register or create a separate template of patients for the Audit.

The option to create an Audit Export (Data) File is on the **AR Audit Reporting** menu. To generate this report:

1. At the Diabetes Management System main menu, type **AR** and press Enter.
2. Select **DM19 (2019 Diabetes Audit)** and follow the prompts as shown in the script in Figure 3-4.

```

DM19  2019 Diabetes Audit

In order for the 2019 DM AUDIT Report to find all necessary data, several
taxonomies must be established. The following taxonomies are missing or have
no entries:
DRUG taxonomy  [DM AUDIT AMYLIN ANALOGUES] has no entries
DRUG taxonomy  [DM AUDIT COLESEVELAM DRUGS] has no entries
DRUG taxonomy  [DM AUDIT INCRETIN MIMETIC] has no entries
DRUG taxonomy  [DM AUDIT SGLT-2 INHIBITOR DRUG] has no entries
DRUG taxonomy  [DM AUDIT SULFONYLUREA-LIKE] has no entries
End of taxonomy check. HIT RETURN: <Enter>

                ASSESSMENT OF DIABETES CARE, 2019

                PCC DIABETES AUDIT

Enter the Official Diabetes Register: IHS DIABETES

Enter the date of the audit. 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.

Enter the Audit Date:  12/31/18  (DEC 31, 2018)

    Select one of the following:

        P          Individual Patients
        S          Search Template of Patients
        C          Members of a CMS Register

Run the audit for: P// C  Members of a CMS Register

Do you want to select register patients with a particular status? Y// <Enter> ES
Which status: A// <Enter> ACTIVE

There are 543 patients in the IHS DIABETES register with a status of A.

You have selected a register or template/cohort of patients.
You can run the audit just for the subset of patients in the cohort or register
who live in a particular community or have a particular primary care provider.

```

```

Limit the audit to a particular primary care provider ? N// <Enter> 0
Limit the patients who live in a particular community ? N// <Enter> 0

  Select one of the following:

      1      Indian/Alaskan Native (Classification 01)
      2      Not Indian Alaskan/Native (Not Classification 01)
      3      All (both Indian/Alaskan Natives and Non 01)

Select Beneficiary Population to include in the audit: 1// <Enter>  Indian/Alaskan
Native (Classification 01)

  Select one of the following:

      I      Include Pregnant Patients
      E      Exclude Pregnant Patients

Select whether to include or exclude pregnant patients in the audit: E// <Enter>
xclude Pregnant Patients
okay, hold on...this may take a few minutes..

  Note:  When not running an official Audit, you may choose to include pregnant
patients.  Pregnant patients are identified as those who have had two or more
pregnancy-related visits during the Audit period to a non-pharmacy clinic, or
where the provider is not a CHR.  The list of pregnancy-related diagnoses may be
reviewed under the View/Print Taxonomy Lists.

There are 861 patients selected so far to be used in the audit.

  Select one of the following:

      A      ALL Patients selected so far
      R      RANDOM Sample of the patients selected so far

Do you want to select: A// <Enter> LL Patients selected so far

  Select one of the following:

      1      Print Individual Reports
      2      Create AUDIT EXPORT file
      3      Audit Report (Cumulative Audit)
      4      Both Individual and Cumulative Audits
      5      SDPI RKM Report

Enter Print option: 1// 2  Create AUDIT EXPORT file

The file generated will be in a "^" delimited format.  You can use
this file to review your data in EXCEL if you so choose.

Enter the name of the FILE to be Created (3-20 characters): DKR 2019 AUDIT

I am going to create a file called dkr 2019 audit.txt which will reside in
the X:\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:
      *****      dkr 2019 audit.txt      *****
It may be several hours (or overnight) before your report and flat file are
finished.

The records that are generated and placed in file dkr 2019 audit.txt

```

```
are in a format readable by Excel. For a definition of the format
please see your user manual.
```

```
Is everything ok? Do you want to continue? Y// <Enter> ES
```

```
Select one of the following:
```

```

I          Include ALL Patients
E          Exclude DEMO Patients
O          Include ONLY DEMO Patients
```

```
Demo Patient Inclusion/Exclusion: E// <Enter> xclude DEMO Patients
```

```
Won't you queue this ? Y// <Enter> ES
```

```
Requested Start Time: NOW//T@2000
```

Figure 3-4: Creating an Audit Export file

Make a note of the file name you provided and notify the RPMS site manager that a Diabetes Audit has been run. Provide the file name and the directory where the file is stored. The site manager will place the file in a shared folder on the server where it can be accessed and uploaded to the WebAudit.

3.4 SDPI Report

The option to create an SDPI RKM Report is on the **AR Audit Reporting** menu. To generate this report:

1. At the Diabetes Management System main menu, type **AR** and press Enter.
2. Select **DM19** (2019 Diabetes Audit) and follow the prompts as shown in the script in Figure 3-5.

```
Select Audit Reporting Option: DM19 Run 2019 Diabetes Program Audit

In order for the 2019 DM AUDIT Report to find all necessary data, several
taxonomies must be established. The following taxonomies are missing or have
no entries:
LABORATORY TEST taxonomy [BGP CREATINE KINASE TAX] contains a panel test: SQL C
KMB 5030 and should not.
DRUG taxonomy [DM AUDIT AMYLIN ANALOGUES] has no entries
DRUG taxonomy [DM AUDIT COLESEVELAM DRUGS] has no entries
DRUG taxonomy [DM AUDIT INCRETIN MIMETIC] has no entries
DRUG taxonomy [DM AUDIT SGLT-2 INHIBITOR DRUG] has no entries
DRUG taxonomy [DM AUDIT SULFONYLUREA-LIKE] has no entries
End of taxonomy check. HIT RETURN: <Enter>

                ASSESSMENT OF DIABETES CARE, 2019

                PCC DIABETES AUDIT

Enter the Official Diabetes Register: IHS DIABETES

Enter the date of the audit. 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.

Enter the Audit Date: 12/31/18 (DEC 31, 2018)

Select one of the following:

- P Individual Patients
- S Search Template of Patients
- C Members of a CMS Register

Run the audit for: P// C Members of a CMS Register

Do you want to select register patients with a particular status? Y// <Enter> ES
Which status: A// <Enter> ACTIVE

There are 873 patients in the IHS DIABETES register with a status of A.

You have selected a register or template/cohort of patients.
You can run the audit just for the subset of patients in the cohort or register who live in a particular community or have a particular primary care provider.

Limit the audit to a particular primary care provider ? N// <Enter> 0

Limit the patients who live in a particular community ? N// <Enter> 0

Select one of the following:

- 1 Indian/Alaskan Native (Classification 01)
- 2 Not Indian Alaskan/Native (Not Classification 01)
- 3 All (both Indian/Alaskan Natives and Non 01)

Select Beneficiary Population to include in the audit: 1// <Enter> Indian/Alaskan Native (Classification 01)

Select one of the following:

- I Include Pregnant Patients
- E Exclude Pregnant Patients

Select whether to include or exclude pregnant patients in the audit: E// <Enter>
xclude Pregnant Patients
okay, hold on...this may take a few minutes..

Note: When not running an official Audit, you may choose to include pregnant patients. Pregnant patients are identified as those who have had two or more pregnancy-related visits during the Audit period to a non-pharmacy clinic, or where the provider is not a CHR. The list of pregnancy-related diagnoses may be reviewed under the View/Print Taxonomy Lists.

There are 861 patients selected so far to be used in the audit.

Select one of the following:

- A ALL Patients selected so far
- R RANDOM Sample of the patients selected so far

Do you want to select: A// <Enter> LL Patients selected so far

Select one of the following:

- 1 Print Individual Reports
- 2 Create AUDIT EXPORT file

```

3      Cumulative Audit Only
4      Both Individual and Cumulative Audits
5      SDPI RKM Report

Enter Print option: 1//5

Select one of the following:

I      Include ALL Patients
E      Exclude DEMO Patients
O      Include ONLY DEMO Patients

Demo Patient Inclusion/Exclusion: E// <Enter> xclude DEMO Patients

Select one of the following:

P      PRINT Output
B      BROWSE Output on Screen

Do you wish to: P//          <BROWSE or PRINT as desired>
    
```

Figure 3-5: Running an SDPI RKM Report

The SDPI RKM Report is displayed in Figure 3-6.

LAB		Nov 02, 2018		Page 1
IHS Diabetes Care and Outcomes Audit - RPMS SDPI Required Key Measures Report for 2019 (01/01/2013 to 12/31/2013) Facility: 2013 DEMO HOSPITAL (CMBA) Annual Audit				
960 patients were audited				

	# of Patients (Numerator)	# Considered (Denominator)	Percent	
***NOTE: 11 Patients were not included in this report because their date of onset was after the Audit end period date.				
Aspirin or Other Antiplatelet Therapy in Cardiovascular Disease				
In patients with diagnosed CVD, aspirin or other antiplatelet/anticoagulant therapy prescribed	2	395	1%	
Blood Pressure (BP) Control				
BP <140/<90 mmHg (one value or mean of 2 or 3 values)	339	960	35%	
Chronic Kidney Disease Screening and Monitoring				
In age >=18 years, both UACR and eGFR done	89	932	10%	
Dental Exam				
Dental exam received	108	960	11%	
Depression Screening				
In patients without active depression,	147	869	17%	

screened for depression			
Diabetes-Related Education			
Any diabetes topic (nutrition, physical activity, or other)	252	960	26%
Eye Exam - Retinopathy Screening			
Eye exam - dilated or retinal imaging	129	960	13%
Foot Exam			
Foot exam - comprehensive	104	960	11%
Glycemic Control			
A1C <8.0%	92	960	10%
Hepatitis C (HCV) Screening			
Screened for HCV ever	191	932	20%
LAB	Nov 02, 2018		Page 2
IHS Diabetes Care and Outcomes Audit - RPMS SDPI Required Key Measures Report for 2019 (01/01/2013 to 12/31/2013) Facility: 2013 DEMO HOSPITAL (CMBA) Annual Audit			
960 patients were audited			
	# of Patients (Numerator)	# Considered (Denominator)	Percent
Immunizations: Hepatitis B			
Hepatitis B complete series - ever	527	957	55%
Immunizations: Influenza			
Influenza vaccine during report period	37	960	4%
Immunizations: Pneumococcal			
Pneumococcal vaccine - ever	641	960	67%
Immunizations: Tetanus/Diphtheria			
Td/Tdap/DTap/DT - past 10 years	619	960	64%
Lipid Management in Cardiovascular Disease			
In patients age 40-75 years and/or with diagnosed CVD, statin prescribed	2	784	0%
Nutrition Education			
Nutrition education - by any provider (registered dietitian and/or other)	106	960	11%
Physical Activity Education			
Physical activity education	64	960	7%
Tobacco Use Screening			
Screened for tobacco use during report period	174	960	18%
Tuberculosis (TB) Screening			

TB test done ever (skin or blood)	497	960	52%
-----------------------------------	-----	-----	-----

Figure 3-6: Sample SDPI RKM Report

4.0 Upload the Export (Data) File to WebAudit

Audit Export (Data) files can be uploaded to the WebAudit for data cleaning, report generation, and submission of data to the IHS Division of Diabetes. For further information and resources, visit the IHS Division of Diabetes Audit website at <https://www.ihs.gov/diabetes/audit/>. To upload a file:

1. Request a WebAudit account if you do not already have one.
2. Log in to WebAudit.
3. From the main or left menu, select **Facility Administration**, then **Enter Facility Information**.
4. Enter the number of patients that meet the inclusion and exclusion criteria found in the 2019 Audit Instructions and Section 2.1 of this manual.
5. Click **Submit**.
6. Select **Data Processing** from the menu on the left, then select **Upload Data**.
7. Select an Audit Type. For the Annual Audit submitted to the IHS Division of Diabetes, select **Annual Audit**. For all other Audits, select **Interim Audit**.
8. Individuals with access to multiple facilities must select a Facility.
9. Select the electronic health record system used to create the file (RPMS if you RPMS/DMS).
10. Click **Browse** and navigate to the Audit data file you created using DMS, then click **Open**.
11. When the data file is selected, click **Upload File**.
 - If the upload of the data file is successful, you will receive a message on the screen to that effect.
 - If the upload is unsuccessful, you will receive an on-screen message telling you that the file upload attempt was unsuccessful, with a brief description of the problem.
12. Once the file has been successfully uploaded, proceed with checking the data quality and generating reports, as described in the Audit 2019 Instructions, which can be found on the Audit website: <https://www.ihs.gov/diabetes/audit/audit-resources/>.

- Click **File**, then **Open**; browse to the folder containing the Audit Export file.

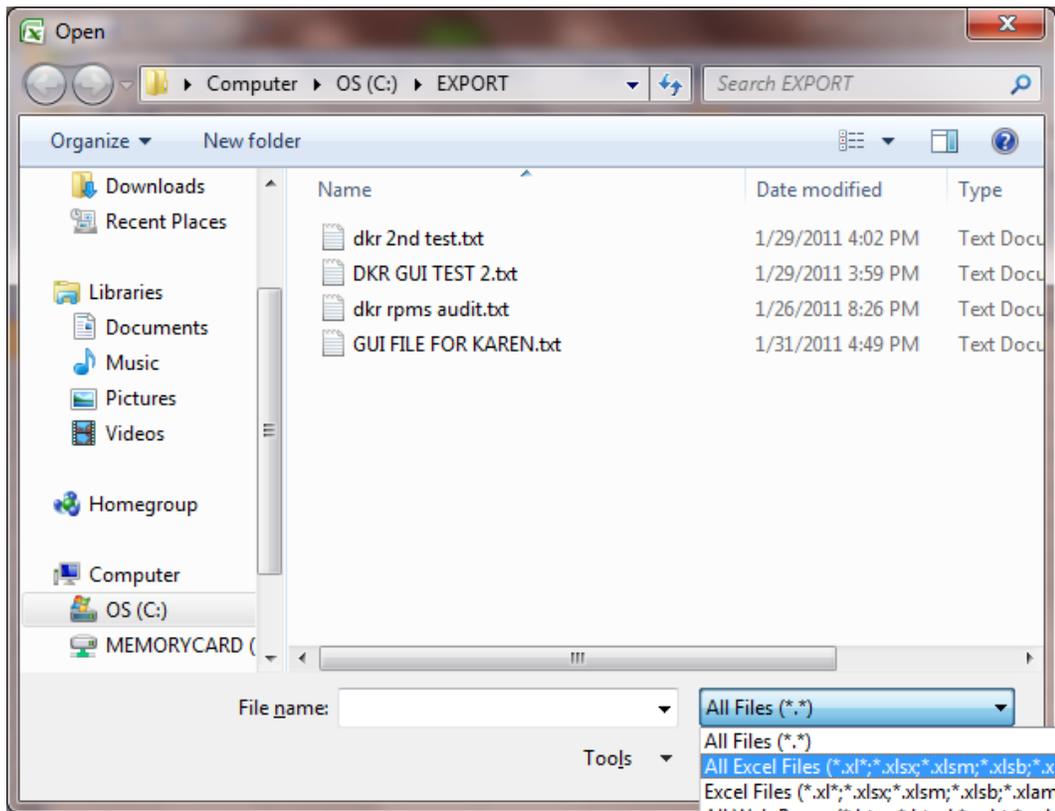


Figure 5-2: Excel – Open dialog

- Change the file type from **All Excel Files** to **All Files** in the list (Figure 5-2). This is necessary to see and select the Audit Export file, which is not in Excel format.
- Select the Audit Export file to import.
- Click **Open**. The **Text Import Wizard – Step 1 of 3** dialog (Figure 5-3) displays.

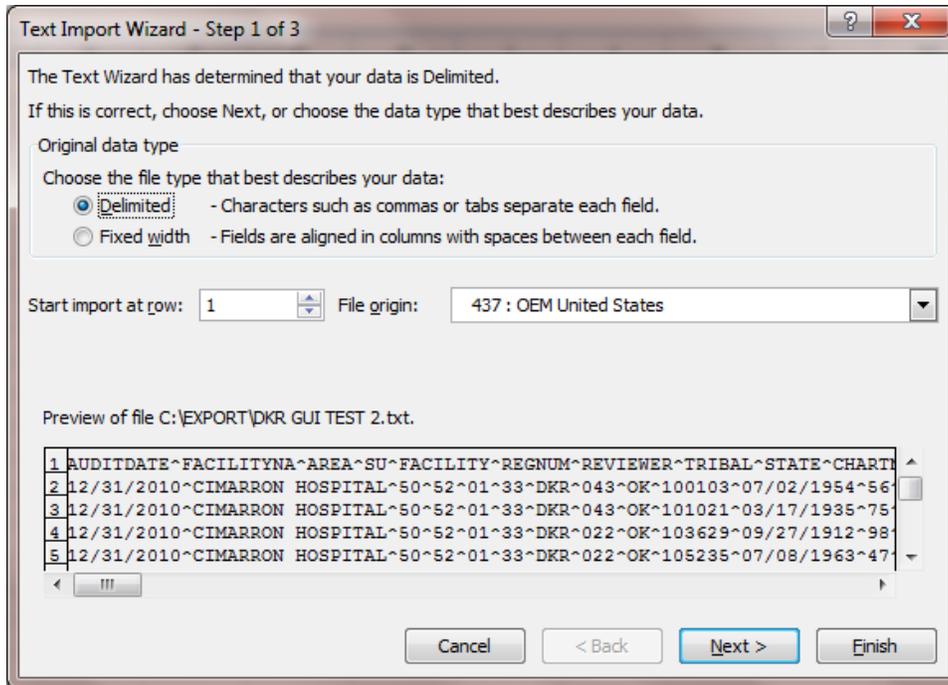


Figure 5-3: Text Import Wizard – Step 1 of 3 dialog

6. If the Text Import Wizard does not correctly identify that this is a delimited file, select the **Delimited** option button.
7. Click **Next**. The **Text Import Wizard – Step 2 of 3** dialog (Figure 5-4) displays.

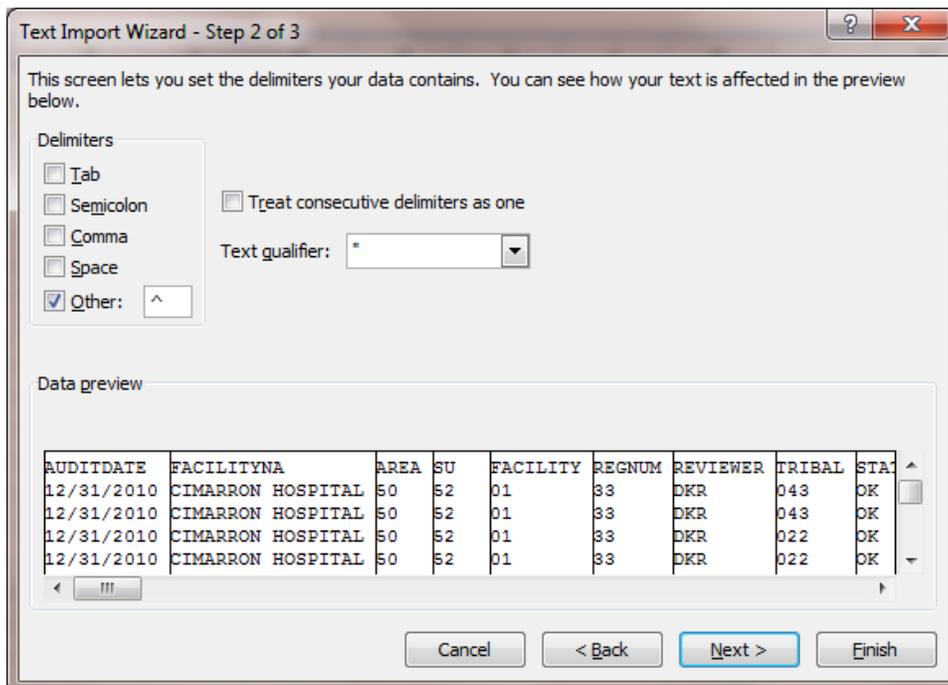


Figure 5-4: Text Import Wizard – Step 2 of 3 dialog

8. Under Delimiters, select the **Other** check box and type a caret (^) in the field to the right of the check box.
9. Deselect the **Tab** check box.
10. Click **Next**. Vertical lines will display between the columns of data.
11. Click **Finish** to complete the import to Excel. Expand columns and sort data as desired.
12. To save the file in Excel format, select **Save As**.
13. Save as an Excel file. Save the Excel file in a secure folder as identified by the Information Technology (IT) staff at your facility.

<p>Note: The Excel file cannot be uploaded to the WebAudit; the original delimited text file must be uploaded.</p>

6.0 Identify Patients with Potential Errors in the Audit Export File

The DMS Data Quality Check report can identify potential data errors prior to uploading data to the WebAudit (see Section 3.2). The DMS version of this report includes patient identifiers, which the WebAudit version does not. If you do need to identify patients from the WebAudit version of the Data Quality Check, you can use the instructions below.

1. In the WebAudit, use the Data Quality Check tool to run the Annual Audit Potential Data Entry Errors Details report.
2. Scan through the errors. Use the link to add comments as needed or click the button to edit the record in order to gather additional data required to identify the patient.
 - The Year and Month of Birth, Sex, and Date of Diagnosis may all be used to identify the patient via iCare. The RPMS Data Quality Check report may also be used to identify the patients with errors. Running this report is described in Section 2.4. The RPMS Data Quality Check report contains the patient's name and chart number.
 - Once the patient is identified, either edit the record directly in the WebAudit using the View/Edit Data tool or correct the data in RPMS, then generate and upload a new Audit Export file.

There are two ways to use the GEN Report to identify patients:

- By Date of Diagnosis
- By Register Status, Sex, and Year and Month of Birth

7.0 Display 2019 Diabetes Audit Logic

The logic for the 2019 Diabetes Audit is provided under the **DAL** menu option in the **AS – Audit Setup** menu, as shown in Figure 7-1.

1. At the Diabetes Management Systems menu, type **AS** and press Enter.
2. At the “Select DMS Audit Item Descriptions Audit Year” prompt, type **2019** for the audit year and press Enter to display the item list.

DM AUDIT ITEM DESCRIPTION	Nov 02, 2018 13:21:37	Page:	1 of	2
1) AUDIT DATE (AKA AUDI	21) FOOT EXAM - COMPLETE	41) LOWER LEG AMPUTATION		
2) FACILITY NAME	22) EYE EXAM (dilated or	42) INFLUENZA VACCINE DU		
3) REVIEWER INITIALS	23) DENTAL EXAM	43) PNEUMOCOCCAL VACCINE		
4) STATE OF RESIDENCE	24) DEPRESSION AN ACTIVE	44) Td, Tdap, DTap, or D		
5) CHART NUMBER	25) DEPRESSION SCREENING	45) Tdap EVER		
6) DATE OF BIRTH	26) NUTRITION INSTRUCTIO	46) HEPATITIS B COMPLETE		
7) SEX	27) PHYSICAL ACTIVITY IN	47) A1C		
8) PRIMARY CARE PROVIDE	28) DM EDUCATION (OTHER)	48) TOTAL CHOLESTEROL		
9) DATE OF DIABETES DIA	29) DIABETES THERAPY	49) HDL CHOLESTEROL		
10) DM TYPE	30) ACE INHIBITOR OR ARB	50) LDL CHOLESTEROL		
11) TOBACCO - SCREENED D	31) ASPIRIN/ OTHER ANTIP	51) TRIGLYCERIDES		
12) TOBACCO USE STATUS	32) STATIN THERAPY	52) SERUM CREATININE		
13) TOBACCO CESSATION CO	33) CVD	53) eGFR (ESTIMATED GFR)		
14) ELECTRONIC NICOTINE	34) TB TEST DONE	54) QUANTITATIVE URINE A		
15) ENDS USE STATUS	35) TB TEST RESULT	55) COMBINED OUTCOMES ME		
16) HEIGHT	36) TB RESULT POSITIVE,	56) e-GFR and UACR		
17) WEIGHT	37) TB RESULT NEGATIVE,	57) COMORBIDITY		
18) BMI	38) HEPATITIS C - HCV Di			
19) HYPERTENSION DOCUMEN	39) HEPATITIS C - SCREEN			
+ Enter ?? for more actions				
S Select Item	A Display All Items	Q Quit		
Select Action: +//				

Figure 7-1: 2019 Audit Logic display

3. At the “Select Action” prompt, type **S** and press Enter to enable selection of an Audit logic item for review.
4. At the next “Select Action” prompt, type the number of the logic item to be displayed and press Enter.
5. Once the Audit logic for a selected item displays, print it by typing **PL** at the “Select Action” prompt of the logic item display.
6. Enter the desired printer for the output at the “Device” prompt.

Appendix A provides a complete listing of the logic for all Audit items.

8.0 Audit Resources

- The complete DMS v2.0 User Manual (bdm_020u.pdf) can be found on the RPMS Web site: https://www.ihs.gov/RPMS/PackageDocs/BDM/bdm_020u.pdf.
- Diabetes Audit 2019 information can be found on the IHS Division of Diabetes website: <https://www.ihs.gov/diabetes/audit/>.
- IHS Standards of Care and Clinical Practice Recommendations: Type 2 Diabetes can be found on the IHS Division of Diabetes website: <https://www.ihs.gov/diabetes/clinician-resources/soc/>.

Appendix A: 2019 Diabetes Audit Logic

Notes: Audit Logic uses several taxonomies for diagnosis codes, CPT codes, LOINC codes, SNOMED codes, and medications that are used by other national RPMS programs. The contents of those taxonomies may be reviewed by using the **VTAX** (View/Print Any DM Audit Taxonomy) report option, found in the Diabetes Management System Reports menu.

View or print the contents of site-populated taxonomies by using the TU19 (Update/Review Taxonomies for 2019 DM Audit) menu option under the **AS** menu option of the Diabetes Management System menu.

View contents of SNOMED lists by using the **VSML** (View a SNOMED List Used by the DM AUDIT) menu option.

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
1	Report Date	Date report was generated	Date report was generated	N/A	The date the report was generated is included in the header of the report.	N/A
2	Audit Date	Last day of 12 month Audit period for which data are reviewed.	N/A	This date, supplied by the user, determines the time period for which data are reviewed for the Audit. For most Audit elements, data are reviewed for the 12 months prior to the Audit date, known as the Audit period. For example, if the Audit date is December 31, 2018, data are reviewed for the year prior to this date (January 1- December 31, 2018).	AUDIT DATE (AKA AUDIT PERIOD ENDING DATE) is used to determine the Audit period and is displayed in the header of the report. (Audit Period 01/01/2018 to 12/31/2018)	AUDITDATE mm/dd/yyyy

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
3	FACILITY NAME	Facility Name	N/A	This is the name of the facility at which the Audit is being run. It is the division or facility to which the user logged in. (The DUZ(2) variable is used.)	FACILITY NAME Facility name is displayed in the report header.	FACILITYNA (max length 20)
4	AGE	Patient age	Age of patient in years on the date the summary was generated.	Age of the patient as of the Audit date	Age in years is used to calculate this section of the Audit Report: Age <20 years 20-44 years 45-64 years ≥65 years It is also used in various sections that have age specific tallies.	AGE Age in years as of the Audit date # with maximum of 3 digits and no decimal places Calculate as: integer part of difference in days between AUDITDATE and date of birth, divided by 365.25
5	REVIEWER INITIALS	Reviewer initials	N/A	Initials of the person running the Audit. A maximum of 3 initials may be used. This information is taken from the New Person (file 200) entry for the user.	REVIEWER INITIALS Displayed in the Audit Report header.	REVIEWER
6	STATE OF RESIDENCE	Postal abbreviation for the last known state of residence	N/A	This is the state in which the patient resides at the time the Audit is conducted. This is captured from the mailing address.	N/A	STATE 2 character state abbreviation

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
7	CHART NUMBER	The Patient's Health Record Number	The Health Record Number at the facility at which the summary was generated.	Health record number of the patient at the facility at which the Audit is run.	N/A	Not included in the Audit export (Data) File and not uploaded to the WebAudit.
8	DOB	Patient's date of birth	Patient's DOB from Patient Registration.	The patient's Date of Birth. Obtained from data entered through patient registration.	Date of Birth is used to calculate age and age is used in various sections of the Audit report to exclude patients who are of a certain age.	MOB YOB Only the month and year of birth are in the Audit Export (Data) File and can be uploaded to the WebAudit.
9	SEX	Gender of patient.	Male, Female or Unknown, from patient registration	The gender of the patient. Obtained from data entered through patient registration. Male, Female or Unknown	Used in this section of the Audit Report: Gender Male Female	SEX 1=Male 2=Female 3=Unknown
10	Primary Care Provider	Primary Care Provider name	The name of the Primary Care Provider from RPMS.	The name of the primary care (designated) provider documented in RPMS. Taken from field Primary Care Provider (#.14) of the patient file.	N/A	Not included in the Audit export (Data) File and not uploaded into the WebAudit.

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
11	Date of DM Onset	Date of diabetes onset	<p>First, the system looks for a Register in the Case Management system that contains the term "DIAB". If one exists, 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 ICD diagnosis code ranges defined in the SURVEILLANCE DIABETES taxonomy or SNOMED code defined in PXR DIABETES SNOMED subset. For each problem on the problem list in these code ranges the date of onset is picked up. The earliest of all the dates of onset found is used. Where the date of onset was found is also displayed.</p>	<p>The diabetes onset date. This date is used in the calculation of the duration of diabetes. The system obtains the date from three different dates in the following order:</p> <ul style="list-style-type: none"> - 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 ICD diagnosis code ranges defined in the SURVEILLANCE DIABETES taxonomy or SNOMED code defined in PXR DIABETES SNOMED subset. -The first recorded diagnosis (POV) of diabetes in PCC. ICD codes: SURVEILLANCE DIABETES taxonomy. 	<p>Duration of Diabetes</p> <p>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 Audit date. 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. Please note: The first diagnosis date from POV is not used.</p> <p>Audit Report categories:</p> <ul style="list-style-type: none"> Duration of Diabetes <1 year <10 years ≥10 years Diagnosis date not recorded 	<p>DODX</p> <p>Audit Export (Data) File: The earliest date found from the Diabetes register or the problem list is exported. Format: MM/DD/YYYY</p>

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
12a	Diabetes Type	Type of Diabetes (Type 1 or Type 2)	N/A	<p>The following logic is used to determine diabetes type. Once a 'hit' is made, no further processing is done.</p> <ol style="list-style-type: none"> 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. 	<p>Diabetes Type Type 1 Type 2 See AUDIT LOGIC for how this is determined. For the audit report if the system cannot determine the diabetes type, type 2 is assumed.</p>	<p>DMTYPE For the export if the system cannot determine the diabetes type, type 2 is assumed. 1=Type 1 2=Type 2 (or uncertain)</p>

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
12b				5. If the diagnosis documented in the Diabetes Register is "Type I" the type is assumed to be Type 1. 6. If the diagnosis documented in the Diabetes Register contains a '1' type is assumed to be Type 1. 7. 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 [SURVEILLANCE DIABETES taxonomy] is also in the DM AUDIT TYPE II DXS taxonomy then the type is assumed to be Type 2.		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
12c				<p>8. If any diabetes diagnosis on the problem list is also in the DM AUDIT TYPE I DXS taxonomy then the type is assumed to be Type 1.</p> <p>9. 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 the diagnosis is contained in the DM AUDIT TYPE II DXS taxonomy the type is assumed to be Type II, if it is contained in the DM AUDIT TYPE I DXS taxonomy it is assumed to be Type 1.</p> <p>10. If type is not determined by any of the above, type is assumed to be Type 2 for the Audit (Data) Export File and Audit Report. For RPMS individual audit sheet, "Not Documented" is displayed.</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
13	Screened for tobacco use	Was the patient screened for tobacco use during the audit period?	See Audit Logic. For the summary the last screening done ever is displayed, it does not have to fall into a certain period of time.	<p>If any of the following items is documented during the Audit period, then a value of 1 - Yes is assigned. Otherwise, a value of 2 - No is assigned.</p> <ul style="list-style-type: none"> - Health Factor in the TOBACCO (SMOKING) Category. - Health Factor in the TOBACCO (SMOKELESS - CHEWING/DIP) Category. - The PCC Problem list and purpose of visits are scanned for any diagnosis contained in the BGP TOBACCO DXS taxonomy. - Any visit with Dental ADA code 1320 documented. - Any visit with the following CPT codes documented: BGP TOBACCO SCREEN CPTS taxonomy. 	Value is used in the Tobacco and Nicotine Use section of the Audit Report.	TOBSCREEN 1=Yes 2=No

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
14a	Tobacco Use Status	Tobacco Use Status (most recent documented), does not have to be documented during the report period.	<p>The last documented of the following items is found and displayed.</p> <p>1. Health Factors in the categories TOBACCO (SMOKING) and TOBACCO (SMOKELESS - CHEWING/DIP) that relate to the patient's tobacco use status. As of the DM Audit 2019 these are the health factors available: (the ones with one asterisk (*) indicate a current user, those with two asterisks (**) are non-tobacco users, the others are put in the "Not Documented" category).</p> <p>*CURRENT SMOKELESS TOBACCO (SMOKELESS - CHEWING/D</p> <p>**PREVIOUS (FORMER) SMOKELESS TOBACCO (SMOKELESS - CHEWING/D</p> <p>*CESSATION-SMOKELESS TOBACCO (SMOKELESS - CHEWING/D</p> <p>SMOKELESS TOBACCO, STATUS UNKNOWN TOBACCO (SMOKELESS - CHEWING/D</p>	<p>The last documented of the following items is found:</p> <p>1. Health Factors in the categories TOBACCO (SMOKING) and TOBACCO (SMOKELESS - CHEWING/DIP) that relate to the patient's tobacco use status. As of the DM Audit 2019 these are the health factors available: (the ones with one asterisk (*) indicate a current user, those with two asterisks (**) are non-tobacco users, the others are put in the "Not Documented" category).</p> <p>*CURRENT SMOKELESS TOBACCO (SMOKELESS - CHEWING/D</p> <p>**PREVIOUS (FORMER) SMOKELESS TOBACCO (SMOKELESS - CHEWING/D</p> <p>*CESSATION-SMOKELESS TOBACCO (SMOKELESS - CHEWING/D</p> <p>SMOKELESS TOBACCO, STATUS UNKNOWN TOBACCO (SMOKELESS - CHEWING/D</p>	Value is used in the Tobacco and Nicotine Use section of the Audit Report. It is also used when determining whether tobacco use is a diabetes related condition.	TOBACCO 1=Current user 2=Not a current user 3=Not documented

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
14b			**NEVER USED SMOKELESS TOBACCO TOBACCO (SMOKELESS - CHEWING/D **NON-TOBACCO USER TOBACCO (SMOKING) *CURRENT SMOKER, STATUS UNKNOWN TOBACCO (SMOKING) **PREVIOUS (FORMER) SMOKER TOBACCO (SMOKING) *CESSATION-SMOKER TOBACCO (SMOKING) *CURRENT SMOKER, EVERY DAY TOBACCO (SMOKING) *CURRENT SMOKER, SOME DAY TOBACCO (SMOKING) **NEVER SMOKED TOBACCO (SMOKING) SMOKING STATUS UNKNOWN TOBACCO (SMOKING) *HEAVY TOBACCO SMOKER TOBACCO (SMOKING) *LIGHT TOBACCO SMOKER TOBACCO (SMOKING)	**NEVER USED SMOKELESS TOBACCO TOBACCO (SMOKELESS - CHEWING/D **NON-TOBACCO USER TOBACCO (SMOKING) *CURRENT SMOKER, STATUS UNKNOWN TOBACCO (SMOKING) **PREVIOUS (FORMER) SMOKER TOBACCO (SMOKING) *CESSATION-SMOKER TOBACCO (SMOKING) *CURRENT SMOKER, EVERY DAY TOBACCO (SMOKING) *CURRENT SMOKER, SOME DAY TOBACCO (SMOKING) **NEVER SMOKED TOBACCO (SMOKING) SMOKING STATUS UNKNOWN TOBACCO (SMOKING) *HEAVY TOBACCO SMOKER TOBACCO (SMOKING) *LIGHT TOBACCO SMOKER TOBACCO (SMOKING)		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
14c			<p>If a factor is found in each of these categories, the one that indicates active use is used. If one is found in just one category, it is used. For example, patient has LIGHT TOBACCO SMOKER and NEVER USED SMOKELESS TOBACCO documented - the LIGHT TOBACCO USER is used. If the patient has NEVER SMOKED and CURRENT SMOKELESS documented, CURRENT SMOKELESS is used.</p> <p>2. Diagnoses contained in the BGP TOBACCO DXS taxonomy. Both the V POVs and Problem List are checked. The latest documented diagnosis that is contained in the taxonomy is used. Diagnoses that indicate a tobacco user: diagnoses codes in the BGP TOBACCO USER DXS taxonomy, all others are considered non-tobacco user.</p>			

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
14d			<p>3. Dental ADA code 1320 - TOBACCO USE INTERVENTION TO PREVENT DISEASE. If this code is documented the patient is considered a tobacco user.</p> <p>4. A CPT code documented that is in the BGP TOBACCO SCREEN CPTS taxonomy. If the code found is in the BGP TOBACCO USER CPTS taxonomy the patient is considered a tobacco user, all others are considered a non-tobacco user.</p> <p>If the patient is a user, then "1 - Current user" is assigned. If the patient is not a tobacco user, then "2 - Not a current user" is assigned. Otherwise "3 - Not documented" is assigned.</p>	<p>3. Dental ADA code 1320 - TOBACCO USE INTERVENTION TO PREVENT DISEASE. If this code is documented the patient is considered a tobacco user.</p> <p>4. A CPT code documented that is in the BGP TOBACCO SCREEN CPTS taxonomy. If the code found is in the BGP TOBACCO USER CPTS taxonomy the patient is considered a tobacco user, all others are considered a non-tobacco user.</p> <p>If the patient is a user, then "1 - Current user" is assigned. If the patient is not a tobacco user, then "2 - Not a current user" is assigned. Otherwise "3 - Not documented" is assigned.</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
15a	Tobacco cessation counseling	If the patient is a tobacco user, were they provided cessation counseling during the audit period.	Any cessation counseling found in the past 365 from the date the summary is run is found. If counseling is found, a yes is displayed along with a description of what was found. See logic for cessation counseling under Audit Logic.	If the tobacco use status is "1 - Current user" then counseling documented in the past year is searched for. Counseling is defined as any of the following: 1. A health factor containing the word CESSATION documented in the past year. (CESSATION-SMOKELESS, CESSATION-SMOKER) Taxonomy used: DM AUDIT CESSATION HLTH FACTOR. 2. A visit to clinic 94 - TOBACCO CESSATION CLINIC 3. A patient education topic that meets any of the following criteria: a. Begins with TO- (e.g. TO-Q) b. Ends in -TO (e.g. CAD-TO)	Value is used in the Tobacco and Nicotine Use section of the Audit Report.	TOBCOUNSEL 1=Yes 2=No Blank if value for TOBACCO is not 1=Current user

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
15b				<p>c. Begins with any Tobacco User diagnosis (taxonomy is BGP TOBACCO USER DXS) (e.g. 305.1-L)</p> <p>d. Begins with any Tobacco User CPT code (e.g. 99407-L)</p> <p>e. Begins with a SNOMED code from the PXRМ BGP TOBACCO TOPICS, PXRМ BGP TOBACCO SMOKER, PXRМ BGP TOBACCO SMOKELESS or PXRМ BGP QUIT TOBACCO SNOMED code lists</p> <p>4. Any of the following CPT codes documented. These indicate tobacco use counseling: CPT code D1320, 99406, 99407, G0375 (old code), G0376 (old code), 4000F, 4001F, G8402 or G8453.</p> <p>5. Dental ADA code 1320.</p> <p>The latest documented of the above 5 data elements is displayed along with the date.</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
15c				<p>If no counseling is found, then the system will look for a smoking aid prescribed:</p> <p>Any prescription for a medication in the site-populated BGP CMS SMOKING CESSATION MEDS taxonomy that does not have a comment of RETURNED TO STOCK. A prescription for any medication with name containing "NICOTINE PATCH", "NICOTINE POLACRILEX", "NICOTINE INHALER", or "NICOTINE NASAL SPRAY" that does not have a comment of RETURNED TO STOCK. If any the above is found, then a value of 1 - Yes is assigned. Otherwise, a value of 2 - No is assigned.</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
16	Electronic Nicotine Delivery Systems (ENDS) Screening	Was the patient screened for Electronic Nicotine Delivery Systems (ENDS) use?	The last documented health factor in the category ELECTRONIC NICOTINE DELIV SYSTEM (ENDS) is found and the date documented is displayed. If none are found "Never" is displayed.	The last documented health factor in the category ELECTRONIC NICOTINE DELIV SYSTEM (ENDS) during the Audit period is found. Screened for electronic nicotine delivery system (ENDS) use during Audit period: If a health factor is found a value of 1 - Yes is assigned. If no health factors have been recorded during the Audit period a value of 2 - No is assigned.	Value is used in the Electronic nicotine delivery system (ENDS) use screening during Audit period section of the Audit report.	ENDSSCREEN 1=Yes 2=No

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
17	ENDS Use status	Most recent ENDS use status documented.	The last documented health factor in the category ELECTRONIC NICOTINE DELIV SYSTEM (ENDS) is found and displayed. If none are found "Never" is displayed	<p>The last documented health factor in the category ELECTRONIC NICOTINE DELIV SYSTEM (ENDS) is found. Use status is assigned as follows:</p> <p>CURRENT ENDS USER: 1 - Current User CESSATION ENDS USER: 1 - Current User PREVIOUS ENDS USER: 2 - Not a current user NEVER USED ENDS USER: 2 - Not a current user No health factor recorded: 3 - Not documented</p>	Value is used in the Electronic nicotine delivery system (ENDS) use screening during Audit period section of the Audit report.	ENDSSTATUS 1=Current user 2=Not a current user 3= Not documented

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
18	Height	Height (most recent)	The last measurement HT is found. The date obtained and the value is displayed in inches.	The last recorded height value (measurement HT) taken on or before the Audit date. Total height in inches is displayed for the Individual Audit.	Height value is used in calculating this section of the Audit report: Body Mass Index (BMI) Category Normal (BMI<25.0) Overweight (BMI 25.0-29.9) Obese (BMI≥30.0) Height or weight missing Severely obese (BMI≥40.0)	FEET (combine with INCHES) INCHES (total or in combination with FEET) The last recorded height prior to the Audit date is exported - either in feet and inches or just inches. The inches are rounded to 2 decimal digits. For example, 1.25 inches.
19	Weight	Weight in lbs	The last recorded measurement WT is found, the date and value in lbs is displayed.	The last weight value during the Audit period is found and displayed.	Weight is used in calculating this section of the Audit report: Body Mass Index (BMI) Category Normal (BMI<25.0) Overweight (BMI 25.0-29.9) Obese (BMI≥30.0) Height or weight missing Severely obese (BMI≥40.0)	WEIGHT The last recorded weight during the Audit period is exported, truncated to the nearest whole pound.

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
20	Body Mass Index (BMI)	Calculated BMI	BMI is calculated as: $BMI = (weight/height*height) \times 703$. weight=the last weight (in lbs). height=the last height (in inches) recorded any time. If the patient has a pregnancy diagnosis on the date of the weight, the BMI is not calculated or displayed. If the patient is <19 years of age the height and weight must be on the same day or the BMI is not calculated.	BMI is calculated as: $BMI = (weight/height*height) \times 703$. weight=the last weight (in lbs) documented during the Audit period. height=the last height (in inches) recorded any time before the Audit date.	Body Mass Index (BMI) Category Normal (BMI<25.0) Overweight (BMI 25.0-29.9) Obese (BMI≥30.0) Height or weight missing Severely obese (BMI≥40.0)	Not included in the Audit export (Data) File and not uploaded into the WebAudit.
21	Hypertension Diagnosed	Has this patient had a diagnosis of Hypertension?	If hypertension is on the problem list or the patient has had at least 3 visits with a diagnosis of hypertension ever, then it is assumed that they have hypertension and a value of Yes displays. Otherwise, a No is displayed. Taxonomy used: SURVEILLANCE HYPERTENSION. SNOMED List: PXRMESSENTIAL HYPERTENSION.	If hypertension is on the problem list or the patient has had at least 3 visits with a diagnosis of hypertension ever, then it is assumed that they have hypertension and a value of 1 - Yes is assigned. Otherwise, a value of 2 - No is assigned. Taxonomy used: SURVEILLANCE HYPERTENSION. SNOMED List: PXRMESSENTIAL HYPERTENSION.	Hypertension (documented diagnosis ever) This value is also used when determining diabetes related conditions.	HTNDX 1=Yes 2=No

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
22	Blood Pressure	Last 3 Blood Pressure values record during the Audit period.	The last 3 non-ER Blood Pressures values and the date they were obtained are displayed.	The most recently recorded systolic and diastolic blood pressure values (up to three on different days) on non-ER clinic visits during the Audit period are obtained. If more than one blood pressure is recorded on anyone day, the latest one is used.	Blood Pressure (BP) - Based on one value or mean of two or three values <140/<90 140/90 - <160/<100 160/100 or higher BP category undetermined If age≥60 years, <150/<90	SYST1 DIAST1 SYST2 DIAST2 SYST3 DIAST3 The blood pressure values are exported, but mean blood pressure is not.

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
23a	Foot Exam	Foot exam (comprehensive or "complete") during the Audit period	<p>The last foot exam done in the past year (from the date the summary is run) is obtained and displayed.</p> <p>The logic used in determining if a comprehensive or complete foot exam has been done is as follows:</p> <ol style="list-style-type: none"> 1. A documented DIABETIC FOOT EXAM, COMPLETE (CODE 28) is searched for in the past year. This is recorded in V Exam. If found, no other processing is done, an exam is assumed to have been done. 2. CPT codes 2028F and G9226 in V CPT [Taxonomy: BGP CPT FOOT EXAM] 3. 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. 	<p>The logic used in determining if a comprehensive or complete foot exam has been done is as follows:</p> <ol style="list-style-type: none"> 1. A documented DIABETIC FOOT EXAM, COMPLETE (CODE 28) is searched for in the year prior to the Audit date. This is recorded in V Exam. If found, no other processing is done, an exam is assumed to have been done. 2. CPT codes 2028F and G9226 in V CPT [Taxonomy: BGP CPT FOOT EXAM] 3. 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. 	This value is used in the Exam section of the Audit report.	FOOTEXAM 1=Yes 2=No

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
23b			<p>If found, it is not assumed the exam was done so the term “maybe” is displayed with the date of the visit.</p> <p>4. A visit to clinic 65=PODIATRY or B7=Diabetic Foot clinic that is not a DNKA is searched for in the year prior to the Audit date. If found, it is not assumed the exam was done so the term “maybe” is displayed with the date of the visit.</p>	<p>4. A visit to clinic 65=PODIATRY or B7=Diabetic Foot clinic that is not a DNKA is searched for in the year prior to the Audit date. If found, no other processing is done. If any of the above is found, a value of 1 - Yes is assigned. If none of the above are found the value is 2 - No.</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
24a	Eye Exam	Eye Exam (dilated or retinal imaging) performed during the Audit period.	<p>The logic used in determining if a diabetic eye exam has been done is as follows:</p> <ol style="list-style-type: none"> 1. The system looks for the last documented Diabetic Eye Exam in the year prior to the date the summary was generated. Diabetic Eye Exam is defined as: <ol style="list-style-type: none"> a. EXAM 03 - Diabetic Eye Exam b. CPT in either the BGP DM RETINAL EXAM CPTS or the BGP DM EYE EXAM CPTS taxonomy. 2. If one of the above is found, Yes, along with the date the exam was found is displayed. 3. If none of the above is found, then all PCC Visits in the year prior to the Audit date 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, or A2). 	<p>The logic used in determining if a diabetic eye exam has been done is as follows:</p> <ol style="list-style-type: none"> 1. The system looks for the last documented Diabetic Eye Exam in the year prior to the Audit date. Diabetic Eye Exam is defined as: <ol style="list-style-type: none"> a. EXAM 03 - Diabetic Eye Exam b. CPT in either the BGP DM RETINAL EXAM CPTS or the BGP DM EYE EXAM CPTS taxonomy. 2. If one of the above is found, the value 1 - Yes is assigned and no further processing is done. 3. If none of the above is found, then all PCC Visits in the year prior to the Audit date 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, or A2). 	This value is used in the Exam section of the Audit report.	EYEEEXAM 1=Yes 2=No

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
24b			<p>If found, the term “Maybe”, along with the date the visit was found is displayed. Refraction is defined as a POV on the visit of: [DM AUDIT REFRACTION DXS]. DNKA is defined as any visit with a primary purpose of visit with a provider narrative containing the following phrases: DNKA, DID NOT KEEP APPOINTMENT, DID NOT KEEP APPT. 4. If none of the above are found, a “No” is displayed.</p>	<p>If found, then the value 1 – Yes is assigned and an indication of what was found is displayed. Refraction is defined as a POV on the visit of: [DM AUDIT REFRACTION DXS]. DNKA is defined as any visit with a primary purpose of visit with a provider narrative containing the following phrases: DNKA, DID NOT KEEP APPOINTMENT, DID NOT KEEP APPT. 4. If none of the above are found, the value 2 - No is assigned.</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
25a	Dental Exam	Dental exam performed during the Audit period.	See Audit Logic. For the DPSC if the only item found is a visit to a dentist or to dental clinic then "Maybe" is displayed rather than a "Yes".	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, the value 1 - Yes is assigned and 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, and there is any ADA code other than 9991, then it is assumed the exam was done, the value 1 - Yes is assigned and no other processing is done. 3. A visit on which a dentist (provider class code 52 - DENTIST) that is not a DNKA visit is searched for in the year prior to the Audit date.	Value is used in the Exam section of the Audit report.	DENTALEXAM 1=Yes 2=No

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
25b				<p>If found, and there is any ADA code other than 9991, then it is assumed the exam was done, the value 1 - Yes is assigned and no further processing is done.</p> <p>4. A Visit on which a CPT code from the BGP DENTAL VISIT CPT CODES taxonomy was recorded. If found, then it is assumed the exam was done, and the value 1 - Yes is assigned.</p> <p>If none of the above are found, the value 2 - No is assigned.</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
26	Depression an active Problem?	Is Depression an active problem for this patient?	See Audit Logic	<p>The patient's problem lists in both PCC and the Behavioral Health module are reviewed for any problem with a code that is contained in the BGP MOOD DISORDERS taxonomy; or for the following Behavioral Health problem codes: 14, 15.</p> <p>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 the codes listed above in the year prior to the Audit date.</p> <p>If either a problem is found on the problem list or 2 POV's are found then the value assigned is 1 - Yes. If not, then a value of 2 - No is assigned.</p>	<p>Used in the Depression as an active problem section of the Audit Report.</p> <p>Depression as an Active Problem Yes No</p> <p>This value is also used to determine if depression is a diabetes related condition.</p>	<p>DEPDX 1=Yes 2=No</p>

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
27a	Depression Screening	For patients without a diagnosis of depression, were they screened for depression in the audit period.	See Audit Logic.	<p>This item is only reviewed if depression was not found on the problem list and the patient is not currently being seen for depression. (See item DEPRESSION AS AN ACTIVE PROBLEM).</p> <p>The PCC and Behavioral health databases are reviewed for any of the following documented in the past year: Exam 36 or Behavioral Health Module Depression Screening. Diagnosis - V POV V79.0 (NOTE: there are no ICD10 codes used). Measurements PHQ2, PHQ9, PHQT. Behavioral Health Module Diagnosis (POV) of 14.1. Diagnosis in the BGP MOOD DISORDERS taxonomy used as a Purpose of Visit.</p>	<p>Used in the Depression as an Active Problem section of the Audit Report: In patients without active depression, screened for depression during Audit period Screened Not screened</p>	<p>DEPSCREEN 1=Yes 2=No Leave blank if value for DEPDX is not 2=No</p>

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
27b				Diagnosis in the BGP MOOD DISORDERS taxonomy used as a Purpose of visit in the Behavioral Health system. Problem Code of 14 or 15 used as a Purpose of Visit in the Behavioral Health system. CPT codes 1220F, 3725F or G0444 in PCC or Behavioral Health. If any of the above is found, then a value of 1 - Yes is assigned. If not, then a value of 2 - No is assigned.		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
28a	Nutrition Education	Was nutrition education provided during the audit period?	All DM education provided in the year prior to the date the summary is generated is displayed on the DPSC. For DM education definition see Audit Logic for nutrition education, physical activity education and other DM education.	<p>The values for the Audit are: 1 RD (Registered Dietitian) 2 Other 3 Both RD & Other 4 None</p> <p>All visits in the year prior to the Audit date are examined. Chart review visits are skipped (service category of C or clinic code of 52).</p> <ul style="list-style-type: none"> - If the primary provider on any visit is a DIETITIAN or NUTRITIONIST (codes 29, 07 or 34) then RD is assigned. - If the visit does not have one of the above providers but has a Diagnosis of [BGP DIETARY SURVEILLANCE DXS] then Other is assigned. - If the visit has a CPT documented of 97802, 97803, or 97804 then RD is assigned. 	<p>This value is used in the Diabetes-Related Education section of the Audit Report.</p> <p>Nutrition - by any provider (RD and/or other) Nutrition - by RD</p>	<p>DIETINSTR 1=Yes by RD 2=Yes by non-RD 3=Yes by RD & non-RD 4=None</p>

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
28b				<p>- If the visit contains any of the following education topics Topic in the DM AUDIT DIET EDUC TOPICS taxonomy or any Topic ending in -N Topic ending in -DT Topic ending in -MNT Topic beginning with MNT- Topic beginning with DNCN- The V Patient Education entry is examined and if the provider documented in that entry is a Dietitian or Nutritionist the RD is assigned if the provider is blank or not a dietitian/nutritionist then Other is assigned. At this point: - if RD is assigned and Other is not then the value assigned is 1 - RD. - if RD and Other is assigned then the value assigned is 3 - Both RD & Other.</p>		
28c				<p>- if Other is assigned and RD is not then the value assigned is 2 - Other. Processing stops if a value is assigned. If none of the above is documented, the value 4 - None is assigned.</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
29	Physical Activity Education	Physical activity education provided during the audit period.	All DM education provided in the year prior to the date the summary is generated is displayed on the DPSC. For DM education definition see Audit Logic for nutrition education, physical activity education and other DM education.	<p>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 value is assigned. No further processing is done.</p> <p>All visits in the year prior to the Audit date are examined for a POV of V65.41 (there are no ICD10 codes) and if one is found a 1 - Yes is assigned.</p> <p>If none of the above is documented, the value is 2 - No</p>	This value is used in the Diabetes-Related Education section of the Audit Report. Physical Activity	EXERCISE 1=Yes 2=No

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
30	Other Diabetes Education	Diabetes education, other than nutrition or physical activity, provided during the audit period.	All DM education provided in the year prior to the date the summary is generated is displayed on the DPSC. For DM education definition see Audit Logic for nutrition education, physical activity education and other DM education.	<p>All education topics documented in the year prior to the Audit date are examined. If any topic meets the following criteria, then the value assigned is 1 - Yes:</p> <ul style="list-style-type: none"> - topic does not end in -EX, -N, -DT or -MNT - topic does not begin with MNT- - topic is a member of the DM AUDIT EDUC TOPICS taxonomy OR the topic begins with one of the following: <ul style="list-style-type: none"> - DM- (e.g. DM-L) - DMC- (e.g. DMC-L) - an ICD Diagnosis code that is a member of the SURVEILLANCE DIABETES taxonomy (e.g. 250.00-L, E10.51-L) - a Diabetes SNOMED code (e.g., 46635009-L) <p>If none of the above is documented, the value is 2 - No</p>	This value is used in the Diabetes-Related Education section of the Audit Report.	DMEDUC 1=Yes 2=No

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
31a	Diabetes Therapy	Diabetes Therapy – all medications that the patient has been prescribed in the 6 months prior to the audit date.	N/A Note: Medications can be found in other sections of the health summary.	The following logic is used to determine if the patient is currently taking any medication in each of the categories below: 1. Looks for any PCC V Medication entry for any drug in the taxonomy of drugs being searched for where the visit date of the V Medication is in the 6 months prior to the Audit date. (Looking to see if the patient had at least 1 fill in the past 6 months.) 2. If no V Medication is found, the Prescription file (file 52) is searched for any drug in the taxonomy of drugs being searched for. The prescription number must begin with an X (an X indicates that the prescription was e-prescribed). If the prescription begins with an X the following calculation is done:	This data is used to calculate the numbers and percentages in the Diabetes Treatment section of the Audit Report.	See audit logic. If any medication is found in the various categories a 1 is sent in the corresponding audit export field. If no medication is found a 2 is sent in the field. If no medications are found a 1 is sent in the TXNONE field. TXNONE TXINSUL TXMETFORM TXSUREA TXDPP4 TXGLU1MED TXSGLT2 TXGLIT TXACARB TXSUREALK

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
31b				<p>- days supply times (# of refills +1) (this is the total number of days the prescription covers)</p> <p>- # of days calculated above + issue date (this is the last date the prescription covers)</p> <p>- If the date calculated above is greater than the Audit date minus 180 days it is assumed the patient was taking that medication in the 6 months prior to the end of the Audit date</p> <p>3. If no medications are found in searches 1 and 2 above the system will look for any EHR Outside Medication that fits into one of medication categories. EHR Outside Medications are found in the V Medication file and have a value in the EHR Outside Medication field and no discontinued date. The system will go back 10 years to find one of these medications</p>		<p>TXAMYLIN TXBROMO TXCOLESEV</p>

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
31c				<p>. It is assumed that a medication entered as an EHR Outside Medication is active until it is discontinued. If any medication in the taxonomy specified is found, then an 'X' is placed by the therapy name DM therapy items. Therapy Taxonomy Name Insulin DM AUDIT INSULIN DRUGS Metformin DM AUDIT METFORMIN DRUGS Sulfonylurea DM AUDIT SULFONYLUREA DRUGS DPP4 inhibitor DM AUDIT DPP4 INHIBITOR DRUGS GLP-1 agonist DM AUDIT INCRETIN MIMETIC DM</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
31d				AUDIT GLP-1 ANALOG DRUGS SGLT-2 inhibitor DM AUDIT SGLT-2 INHIBITOR DRUG Pioglitazone, rosiglitazone DM AUDIT GLITAZONE DRUGS Acarbose, miglitol DM AUDIT ACARBOSE DRUGS Rapaglinide, Nateglinide DM AUDIT SULFONYLUREA-LIKE Amylin analog DM AUDIT AMYLIN ANALOGUES Bromocriptine DM AUDIT BROMOCRIPTINE DRUGS Colesevelam DM AUDIT COLESEVELAM DRUGS		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
32a	Ace Inhibitor or ARB	Was an ACE Inhibitor or ARB prescribed to the patient as of the end of the Audit Period?	N/A Note: Medications can be found in other sections of the health summary.	The taxonomy used to find ACE Inhibitors is DM AUDIT ACE INHIBITORS. If any drug in this taxonomy is found using the logic detailed below a value of 1 - Yes is assigned, no further processing is done. 1. Searches for any PCC V Medication entry for any drug in the taxonomy of drugs being searched for where the visit date of the V Medication is in the 6 months prior to the Audit date. (DM Audit is looking to see if the patient had at least 1 fill in the past 6 months.) 2. If no V Medication is found the Prescription file (file 52) is searched for any drug in the taxonomy of drugs being searched for. The prescription number must begin with an X (an X indicates that the prescription was e-prescribed).	Used in the CVD section of the Audit Report. CVD and aspirin or other antiplatelet/anticoagulant therapy prescribed	ACE 1=Yes 2=No

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
32b				<p>If the prescription begins with an X the following calculation is done: days supply times (# of refills +1) (this is the total number of days the prescription covers) # of days calculated above + issue date (this is the last date the prescription covers) If the date calculated above is greater than the Audit date minus 180 days it is assumed the patient was taking that medication in the 6 months prior to the end of the Audit date 3. If no medications are found in searches 1 and 2 above the system will look for any EHR Outside Medication that fits into one of medication groups.</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
32c				EHR Outside Medications are found in the V Medication file and have a value in the EHR Outside Medication field and no discontinued date. The system will go back 10 years to find one of these medications. It is assumed that a medication entered as an EHR Outside Medication is active until it is discontinued. If no relevant drugs are found, then a 2 - No is assigned.		
33a	Aspirin or Other Antiplatelet/Anticoagulant Therapy	Was the patient prescribed Aspirin or Other Antiplatelet or Anticoagulant Therapy as of the end of the Audit period?	N/A Note: Medications can be found in other sections of the health summary.	Two taxonomies are used to find Aspirin and Other Antiplatelet/Anticoagulant therapy: DM AUDIT ASPIRIN DRUGS; DM AUDIT ANTIPLT/ANTICOAG RX If any drug in the above listed taxonomies is found using the logic detailed below a value of 1 - Yes is assigned, no further processing is done. 1. Searches for any PCC V Medication entry for any drug in the taxonomy of drugs being searched for where the visit date of the V Medication is in the 6 months prior to the Audit date. (DM Audit is looking to see if the patient had at least 1 fill in the past 6 months.)		ASPIRIN 1=Yes 2=No

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
33b				2. If no V Medication is found the Prescription file (file 52) is searched for any drug in the taxonomy of drugs being searched for. The prescription number must begin with an X (an X indicates that the prescription was e-prescribed). If the prescription begins with an X the following calculation is done: days supply times (# of refills +1) (this is the total number of days the prescription covers) # of days calculated above + issue date (this is the last date the prescription covers) If the date calculated above is greater than the Audit date minus 180 days it is assumed the patient was taking that medication in the 6 months prior to the end of the Audit date		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
33c				<p>3. If no medications are found in searches 1 and 2 above the system will look for any EHR Outside Medication that fits into one of medication groups. EHR Outside Medications are found in the V Medication file and have a value in the EHR Outside Medication field and no discontinued date. The system will go back 10 years to find one of these medications. It is assumed that a medication entered as an EHR Outside Medication is active until it is discontinued.</p> <p>4. The Non-VA meds component in the pharmacy patient file is reviewed for any drug in the above mentioned taxonomies or an orderable item whose first 7 characters is "ASPIRIN" and whose 8th character is not a "/".</p> <p>If no relevant drugs are found, then a 2 - No is assigned.</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
34a	Statin Therapy	Statin Therapy prescribed as of the end of the Audit period.	N/A Note: Medications can be found in other sections of the health summary.	One taxonomy is used to find Statin therapy medications: BGP PQA STATIN MEDS. If any drug in this taxonomy is found using the logic detailed below a value of 1 - Yes is assigned, no further processing is done. 1. Searches for any PCC V Medication entry for any drug in the taxonomy of drugs being searched for where the visit date of the V Medication is in the 6 months prior to the Audit date. (DM Audit is looking to see if the patient had at least 1 fill in the past 6 months.) 2. If no V Medication is found the Prescription file (file 52) is searched for any drug in the taxonomy of drugs being searched for. The prescription number must begin with an X (an X indicates that the prescription was e-prescribed).	This value is used in the following sections of the Audit Report. Statin Prescribed Yes* Allergy, intolerance, or contraindication In patients with diagnosed CVD Yes Allergy, intolerance, or contraindication In patients age 40-75 years Yes Allergy, intolerance, or contraindication In patients with diagnosed CVD and/or age 40-75 years Yes* Allergy, intolerance, or contraindication *Excludes patients with an allergy, intolerance, or contraindication	LLSTATIN2 1=Yes 2=No 3= Allergy/intolerance/ Contraindication -Look for yes, then allergy or intolerance or contraindication, then no

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
34b				<p>If the prescription begins with an X the following calculation is done: days supply times (# of refills +1) (this is the total number of days the prescription covers) # of days calculated above + issue date (this is the last date the prescription covers) If the date calculated above is greater than the Audit date minus 180 days it is assumed the patient was taking that medication in the 6 months prior to the end of the Audit date 3. If no medications are found in searches 1 and 2 above the system will look for any EHR Outside Medication that fits into one of medication groups. EHR Outside Medications are found in the V Medication file and have a value in the EHR Outside Medication field and no discontinued date.</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
34c				<p>The system will go back 10 years to find one of these medications. It is assumed that a medication entered as an EHR Outside Medication is active until it is discontinued. Statin Allergy defined as: Adverse drug reaction/documentated statin allergy defined as any of the following: 1) ALT and/or AST > 3x the Upper Limit of Normal (ULN) (i.e. Reference High) on 2 or more consecutive visits during the Audit Period; 2) Creatine Kinase (CK) levels > 10x ULN or CK > 10,000 IU/L during the Report Period; 3) Myopathy/Myalgia, defined as any of the following during the Report Period: Dx in the BGP MYOPATHY/MYALGIA DXS taxonomy; 4) any of the following occurring anytime through the end of the Report Period:</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
34d				A) POV ICD-9: 995.0-995.3 AND E942.9; B) "Statin" or "Statins" entry in ART (Patient Allergies File); or C) "Statin" or "Statins" contained within Problem List or in Provider Narrative field for any POV ICD-9: 995.0-995.3, V14.8; ICD-10: Z88.8. Test Definitions: ALT: Site-populated taxonomy DM AUDIT ALT TAX or the BGP ALT LOINC taxonomy. AST: Site-populated taxonomy DM AUDIT AST TAX or the BGP AST LOINC taxonomy. Creatine Kinase: Site-populated taxonomy BGP CREATINE KINASE TAX or the BGP CREATINE KINASE LOINC taxonomy. Statin Intolerance/Contraindication defined as:		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
34e				<p>Contraindications to Statins defined as any of the following: 1) Pregnancy (see definition below); 2) Breastfeeding, defined as POV ICD-9: V24.1; ICD-10: Z39.1 or breastfeeding patient education codes BF-BC, BF-BP, BF-CS, BF-EQ, BF-FU, BF-HC, BF-ON, BF-M, BF-MK, or BF-N during the Report Period; 3) Acute Alcoholic Hepatitis, defined as POV ICD-9: 571.1; ICD-10: K70.10, K70.11 during the Report Period; or 4) NMI (not medically indicated) refusal for any statin at least once during the Report Period. Pregnancy definition: At least two visits during the Audit Period with Documented codes in the following taxonomies:</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
34f				<p>BGP PREGNANCY DIAGNOSES 2; BGP PREGNANCY ICD PROCEDURES; BGP PREGNANCY CPT CODES where the provider is not a CHR (Provider code 53). Pharmacy-only visits (clinic code 39) will not count toward these two visits. If the patient has more than two pregnancy-related visits during the Report Period, the Audit will use the first two visits in the Report Period. The patient must not have a documented miscarriage or abortion occurring after the second pregnancy-related visit. Miscarriage definition: Codes documented that are contained in the following taxonomies: BGP MISCARRIAGE/ABORTION DXS; BGP ABORTION PROCEDURES; BGP CPT ABORTION; BGP CPT MISCARRIAGE</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
35a	Cardiovascular Disease (CVD)	CVD Diagnosed Ever?	See Audit Logic.	<p>CVD diagnosis (using DM AUDIT CVD DIAGNOSES taxonomy) is searched for on the patient's problem list. If a diagnosis is found, a 1 - Yes is assigned.</p> <p>If no problem is found on the problem list, then the V POV file is searched for the following, if found, a 1 - Yes is assigned along with the visit date on which the item was found:</p> <ul style="list-style-type: none"> - One diagnosis ever of any code in the BGP CABG DXS taxonomy. - One diagnosis ever of any code in the BGP PCI DXS taxonomy. - Two diagnoses ever of any code in the DM AUDIT CVD DIAGNOSES taxonomy. - One procedure ever documented of any code in the BGP PCI CM PROCS taxonomy. - One procedure ever documented of any code in the BGP CABG PROCS taxonomy. 	<p>Cardiovascular Disease (CVD) CVD diagnosed ever CVD and mean BP <140/<90 CVD and not current tobacco user CVD and aspirin or other antiplatelet/anticoagulant therapy prescribed CVD and statin prescribed* *Excludes patients with allergy, intolerance, or contraindication</p>	<p>CVDDX 1=Yes 2=No</p>

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
35b				- One CPT procedure ever documented of any code in the BGP PCI CM CPTS taxonomy. - One CPT procedure ever documented of any code in the BGP CABG CPTS taxonomy. If none of the above are found, a value of 2 - No is assigned.		
36	TB test done (ever)	Tuberculosis (TB) Was a TB test done ever? Skin Test; Blood test; Unknown/not offered	TB - Last Documented Test The date of the last documented TB test is displayed along with what type of test was done. See Audit Logic for TB Test definition.	The type of TB Test done is determined in the following way: If the patient has a TB health factor recorded, TB on the problem list or any diagnosis of TB documented in the PCC then the test type is assigned as 1 - Skin Test (PPD), no further processing is done. All recorded PPD entries and TB lab tests using the DM AUDIT TB LAB TESTS TAX prior to the Audit date are gathered. If at least one is found the latest one is used, if it is a Skin test then 1 - Skin test(PPD) is assigned, if it is a lab test then 2 - Blood Test is assigned. 3. If no TB test is found then the value is 3 - UNKNOWN/NOT OFFERED.	Tuberculosis (TB) Status TB test done ever (skin or blood) If test done, skin test If test done, blood test If TB test done, positive result If positive TB test, treatment completed If negative TB test, test done after diabetes diagnosis	TBTESTDONE2 1=Skin test (PPD) 2=Blood test (QFT-GIT, T-SPOT) 3=Unknown/not offered

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
37a	TB Test Result	Result of the most recent TB Test	TB Test Result: The last documented TB Test result is displayed. See Audit Logic for TB Test definition	If a TB test was done, the test result is determined in the following way: 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 test result is assigned as 1 - Positive, no further processing is done. Taxonomy Used is DM AUDIT TUBERCULOSIS DXS. All recorded PPD entries and TB lab tests using the DM AUDIT TB LAB TESTS TAX prior to the Audit date are gathered. If at least one is found the latest one is used, if it is a Skin test and the reading or result is Positive (reading >9) then it is assigned as 1 - Positive, if reading or result of last PPD is negative, then the values is 2 -Negative, if the test type is a blood test then the value of the test is examined,	Tuberculosis (TB) Status TB test done ever (skin or blood) If test done, skin test If test done, blood test If TB test done, positive result If positive TB test, treatment completed If negative TB test, test done after diabetes diagnosis	TBTESTRSLT2 1=Positive 2=Negative 3=Unknown

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
37b				if it is Positive then 1 - Positive is recorded, if it is negative then 2 - Negative is assigned. If the results are null the value 3 - Unknown/Not offered is assigned. If no result is found then the value assigned is 3 - Unknown/not offered.		
38	TB Isoniazid treatment	If TB result positive, is isoniazid treatment complete?	See Audit Logic for definition of treatment completed. The value of the last TB Health factor is displayed.	If the value of the TB Test result is POSITIVE then the last TB health factor is looked at for determining TB Treatment status. 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, TB - IN PROGRESS. The value assigned is based on the last recorded health factor: TX COMPLETE 1 - Yes TX INCOMPLETE 2 - No TX UNTREATED 2 - No TX IN PROGRESS 2 - No TX UNKNOWN 3 - Unknown	Tuberculosis (TB) Status TB test done ever (skin or blood) If test done, skin test If test done, blood test If TB test done, positive result If positive TB test, treatment completed If negative TB test, test done after diabetes diagnosis	TBINHTX2 1=Yes 2=No 3=Unknown Leave blank if value for TBTESTRSLT2 is not 1=Positive

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
39	TB Test Date	Date of last TB test	TB - Last Documented Test The date of the last documented TB test is displayed along with what type of test was done. See Audit Logic for TB Test Done for definition of a TB test.	If the value of TB test result is NEGATIVE then the date of the last TB test is displayed.	Tuberculosis (TB) Status If negative TB test, test done after diabetes diagnosis	TBTESTDATE MM/DD/YYYY Leave blank if value for TBTESTRSLT2 is not 2=Negative
40	Hepatitis C (HCV)	Hepatitis C (HCV) diagnosis ever	See Audit Logic	The Purpose of Visits are scanned for any diagnosis ever contained in the BGP HEPATITIS C DXS taxonomy. If one is found the value of 1 - Yes is assigned, if no diagnosis is found the Problem List is scanned for a diagnosis contained in the BGP HEPATITIS C DXS taxonomy or a SNOMED contained in the PXR HEPATITIS C snomed list. If that is found on the problem list a value of 1 - Yes is assigned, if not found a value of 2 - No is assigned.	Hepatitis C (HCV) Diagnosed HCV ever If not diagnosed Screened ever If born 1945-1965, screened ever	HCVDX 1=Yes 2=No

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
41	Hepatitis C Screen	Screened for HCV at least once (ever) if no diagnosis of Hepatitis C	See Audit Logic. The date, test name and the test result is displayed.	<p>If the patient has a diagnosis of Hepatitis C this item is skipped.</p> <p>Hepatitis C Screening (Ab Test) is determined by the following: CPT 86803; BGP HEP C TEST LOINC CODES taxonomy; site-populated lab test taxonomy BGP HEP C TEST TAX.</p> <p>The V LAB file is scanned for any test contained in the lab test and LOINC taxonomies.</p> <p>The V CPT file is scanned for CPT 86803.</p> <p>If a lab test or CPT code is found a value of 1 - Yes is assigned.</p> <p>If a lab test or CPT code is not found a value of 2 - No is assigned.</p>	<p>Hepatitis C (HCV) Diagnosed HCV ever If not diagnosed Screened ever If born 1945-1965, screened ever</p>	<p>HCVSCREEN2 1=Yes 2=No</p>

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
42	Retinopathy Diagnosis	Retinopathy diagnosed ever?	See Audit Logic. The date of the diagnosis is displayed.	If retinopathy is on the problem list or the patient has had at least 1 visit with a diagnosis of retinopathy ever, then it is assumed that they have been diagnosed with retinopathy and a value of 1 - Yes is assigned. Otherwise, a value of 2 - No is assigned. Taxonomy used: DM AUDIT RETINOPATHY DIAGNOSES SNOMED List: PXRMBGP DM RETINOPATHY	Retinopathy Diagnosed ever Also used in calculation of diabetes related conditions	RETINOPDX 1=Yes 2=No

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
43	Lower Extremity Amputation	Lower Extremity Amputation (ever), any type (e.g. toe, partial foot, above or below knee)	See Audit Logic.	<p>The patient's electronic record is scanned for documentation of any of the following items:</p> <ol style="list-style-type: none"> 1. The purpose of visits are scanned for any diagnosis in the BGP DM BTK AMP DXS or the BGP DM ATK AMP DXS taxonomies. If a diagnosis is found a value of 1 - Yes is assigned. 2. The problem list is scanned for a diagnosis in the BGP DM BTK AMP DXS or BGP DM ATK AMP DXS taxonomies or a SNOMED in the PXR M BGP DM BTK AMP or PXR M BGP DM ATK AMP SNOMED subsets. 3. The procedures are scanned for a procedure in the BGP DM BTK AMP PROCS or BGP DM ATK AMP PROCS taxonomies. 4. The CPT codes are scanned for a CPT in the BGP DM BTK AMP CPTS or BGP DM ATK AMP CPTS taxonomies. <p>If any of the above are found, a value of 1 - Yes is assigned, otherwise a value of 2 - No is assigned.</p>	Lower Extremity Amputation Any type ever (e.g., toe, partial foot, above or below knee) Yes	LEA 1=Yes 2=No

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
44a	Influenza vaccine	Influenza vaccine received or refusal documented during the Audit Period	See Audit Logic for definition of Influenza vaccine. The date of the vaccine since August 1 st is displayed.	The patient's data is scanned for an influenza vaccine in the 12 months prior to the Audit date. Influenza vaccine is determined by: - Immunization CVX codes: See BGP FLU IZ CVX CODES taxonomy 15 INFLUENZA, SPLIT [TIVhx] (INCL 16 INFLUENZA, WHOLE 88 INFLUENZA, NOS 111 INFLUENZA, Intranasal, Trivale 135 INFLUENZA, HIGH DOSE SEASONAL 140 INFLUENZA, seasonal, injectabl 141 INFLUENZA [TIV], SEASONAL, INJ 144 INFLUENZA, INTRADERMAL 149 INFLUENZA, Live, Intranasal, Q 150 INFLUENZA, INJECTABLE, QUAD, P 151 INFLUENZA NASAL, UNSPECIFIED	Immunization Section	FLUVAX 1=Yes 2=No 3=Refused

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
44b				153 INFLUENZA, INJECTABLE, MDCK, P 155 INFLUENZA, INJECTABLE, RECOMB, 158 INFLUENZA, Injectable, Quadrav 161 INFLUENZA, injectable,quadriva 166 INFLUENZA, intradermal, quadri 168 INFLUENZA, Trivalent, adjuvant 171 Influenza, injectable, MDCK, p 185 influenza, recombinant, quadri 186 Influenza, injectable, MDCK, q - CPT codes: BGP CPT FLU - Diagnosis codes: BGP FLU IZ DXS (there are no ICD10 codes) If any of the above is found, a value of 1 - Yes is assigned.		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
44c				<p>If no documented immunization is found, a search is done for a documented refusal in the Audit period. If one is found, then a value of 3 - Refused is assigned.</p> <p>If neither of the above are found, a value of 2 - No is assigned.</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
45a	Pneumococcal vaccine	Pneumococcal vaccine (ever)	See Audit Logic for the definition of a pneumococcal vaccine. The date of the last pneumococcal vaccine is displayed.	<p>Data is scanned for pneumococcal vaccine any time prior to the Audit date. A pneumococcal vaccine is determined by:</p> <ul style="list-style-type: none"> - Immunization CVX codes: <ul style="list-style-type: none"> 33 PNEUMOCOCCAL 100 Pneumococcal, PCV-7 109 PNEUMOCOCCAL, NOS 133 Pneumococcal, PCV-13 152 Pneumococcal, Unspecified - Diagnoses: V03.82 (there are no ICD10 codes) - CPT codes: BGP PNEUMOLZ CPTS taxonomy (90669, 90670, 90732, G0009, G8115, G9279) <p>If any of the above is found, a value of 1 - Yes is assigned. If none is found, the refusal file is checked for a documented refusal of this vaccination. Refusals documented in both the PCC and the Immunization register are reviewed.</p>	Immunization Section	PNEUMOVAX 1=Yes 2=No 3=Refused

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
45b				If one is found, then a value of 3 - Refused is assigned. If neither of the above is found, a value of 2 - No is assigned.		
46a	Td, Tdap, DTaP, or DT in past 10 years	Td, Tdap, DTaP, or DT in past 10 years	See Audit Logic for the definition of the vaccines. The date of the last vaccine is displayed.	Immunizations are scanned for any tetanus vaccine in the 10 years prior to the Audit date. Logic used to find a TD vaccine: Immunization CVX codes: 115 Tdap 9 TD (ADULT) 113 TD (ADULT) PRESERVATIVE FREE 115 Tdap 138 Td-NA 139 Td,NOS 1 DTP 20 DTAP 28 DT (PEDIATRIC) 35 TETANUS TOXOID 106 DTAP, 5 PERTUSSIS ANTIGENS 107 DTAP, NOS 112 TETANUS TOXOID, NOS 22 DTP-HIB 50 DTAP-HIB 110 PEDIARIX 120 PENTACEL 130 KINRIX 132 DTaPIPVHHb	Immunization Section	TD 1=Yes 2=No 3=Refused

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
46b				CPT Codes: APCH TD CPT LOW VALUE: 90698 HIGH VALUE: 90698 LOW VALUE: 90700 HIGH VALUE: 90701 LOW VALUE: 90702 HIGH VALUE: 90702 LOW VALUE: 90703 HIGH VALUE: 90703 LOW VALUE: 90714 HIGH VALUE: 90714 LOW VALUE: 90715 HIGH VALUE: 90715 LOW VALUE: 90718 HIGH VALUE: 90718 LOW VALUE: 90720 HIGH VALUE: 90723 If any of the above is found, a value of 1 - Yes is assigned. If none is found, the refusal file is checked for a documented refusal of this vaccination. Refusals documented in both the PCC and the Immunization register are reviewed. If one is found, then a value of 3 - Refused is assigned.		
46c				If neither of the above is found, a value of 2 - No is assigned		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
47	Tdap (ever)	Tdap given ever	See Audit Logic for the definition of Tdap. The date of the last Tdap is displayed.	Immunizations are scanned for a Tdap vaccine ever. A Tdap vaccine is determined by: CVX code 115 Tdap CPT code 90715 If either of the above is found, a value of 1 - Yes is assigned. If none is found, the refusal file is checked for a documented refusal of this vaccination. Refusals documented in both the PCC and the Immunization register are reviewed. If one is found, then a value of 3 - Refused is assigned. If neither of the above is found, a value of 2 - No is assigned.	Immunization Section	TDAP 1=Yes 2=No 3=Refused

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
48a	Hepatitis B complete series (ever)	Hepatitis B complete series received ever	See Audit Logic for definition of Hepatitis B vaccines.	Data is scanned for hepatitis B vaccine any time prior to the Audit date. HEP B (3 DOSE SERIES) is determined by: CVX codes: 8 HEP B, ADOLESCENT OR PEDIATRIC 42 HEP B, ADOLESCENT/HIGH RISK IN 43 HEP B,ADULT 44 HEP B, DIALYSIS 45 HEP B, NOS 51 HIB-HEP B 102 DTP-HIB-HEP B 104 HEP A-HEP B 110 DTaP-Hep B-IPV 132 DTaP-IPV-HIB-HEP B, historical 146 DTaP,IPV,Hib,HepB 193 Hep A-Hep B, pediatric/adolescent CPT codes contained in the BGP HEPATITIS CPTS taxonomy: 90636, 90723, 90731, 90740, 90743, G0010, Q3021, Q3023	Immunization Section	HEPBVAX 1=Yes 2=No 3=Refused 4=Immune

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
48b				<p>HEP B (2 DOSE SERIES) is determined by: CVX code 189 Hep B, adjuvanted</p> <p>Vaccinations must be given at least 20 days apart. If the appropriate number are found (2 for the 2 dose series or 3 for the 3 dose series) a value of 1 - Yes is assigned.</p> <p>If less than the required number of vaccines are found, the system will look for an Immune Contraindication in the Immunization contraindications file. If it is found, a value of 4 - Immune is assigned. The system then looks for evidence of disease: Problem List or V POV of [BGP HEP EVIDENCE] Taxonomy. If it is found, a value of 4 - Immune is assigned.</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
48c				<p>If the required number of vaccinations are not found and immunity or evidence of disease is not found, the system searches for a refusal documented in the past year. If one is found, then a value of 3 – Refused is assigned. Refusal definitions: Immunization Package refusal or PCC refusal of the above listed CVX or CPT codes. If none of the above are found, a value of 2 - No is assigned.</p>		

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
49	A1C	Hemoglobin A1c test performed during the audit period	The date, test name and result of the last A1c test is displayed. See Audit Logic for the definition of an A1c test.	All lab tests in the V LAB file in the year prior to the Audit date are found using the DM AUDIT HGB A1C TAX taxonomy and the BGP HGBA1C LOINC CODES taxonomies. Only tests that have a result are used, if the result of the V LAB is blank, contains "CANC" or contains "COMMENT" the V Lab is skipped. Individual Audit: The date and result of test are displayed.	If the result contains a ">" it goes into the >=11.0 category. If the result contains a "<" it goes into the <7.0 category. At this point everything is stripped from the result value except for numbers and ".". If after stripping, what is left is something other than a number then it is put in the "Not tested or no valid result" category. If what is left is a numerical value, it is put in the appropriate category(ies) below: A1C <7.0 A1C 7.0-7.9 A1C 8.0-8.9 A1C 9.0-9.9 A1C 10.0-10.9 A1C >= 11.0 Not tested or no valid result A1C <8.0 A1C >9.0	HBA1C HBA1CDATE Most recent in the report period Audit Export (Data) File: When exported, all characters that are not a number or a "." are stripped from the result value, so if the value is <7.0 what is exported is 7.0. Date is in MM/DD/YYYY format

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
50	Total Cholesterol	Most recent Total Cholesterol value	The date, test name and result of the last Total Cholesterol test is displayed. See Audit Logic for the definition of a Total Cholesterol test.	The last lab test with a result in the year prior to the Audit date that is a member of the DM AUDIT CHOLESTEROL TAX taxonomy or the BGP TOTAL CHOLESTEROL LOINC taxonomy is found in V LAB.	N/A	CHOLVALUE Audit Export (Data) File: All characters other than numbers and "." are stripped from the result value and that value is then rounded to the closest whole number and truncated to a total of 3 characters with 0 decimal digits.

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
51	HDL Cholesterol	Most recent HDL Cholesterol value	The date, test name and result of the last HDL Cholesterol test is displayed. See Audit Logic for the definition of a HDL Cholesterol test.	The last lab test with a result in the year prior to the Audit date that is a member of the DM AUDIT HDL TAX taxonomy or the BGP HDL LOINC CODES taxonomy is found in V LAB.	The result of the test is examined and is put into the following categories by gender. If the result is blank OR the first digit of the result is not a number, then it is put in the "Not tested or no valid result" category. For example, if the value is "cancelled", it will fall into "Not tested or no valid result". In females HDL <50 mg/dl HDL >=50 mg/dl Not tested or no valid result In males HDL <40 mg/dl HDL >=40 mg/dl Not tested or no valid result	HDLVALUE Audit Export (Data) File: All characters that are not numbers or "." are stripped from the result value and that value is then rounded to the closest whole number and truncated to a total of 3 characters with 0 decimal digits.

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
52	LDL Cholesterol	Most recent LDL Cholesterol value	The date, test name and result of the last LDL Cholesterol test is displayed. See Audit Logic for the definition of a LDL Cholesterol test.	The last lab test with a result 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. Tests with a result containing CANC" are ignored.	The result of the test is examined and is put into the following categories. If the first digit of the result is not a number, then it is put in the "Not tested or no valid result" category. For example, if the value is "UNK", it will fall into "Not tested or no valid result". LDL <100 mg/dl LDL 100-189 mg/dl LDL >=190 Not tested or no valid result	LDLVALUE Audit Export (Data) File: All characters that are not numbers or "." are stripped from the result value and that value is then rounded to the closest whole number and truncated to a total of 3 characters with 0 decimal digits.

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
53	Triglyceride value (mg/dl)	Most recent Triglyceride value	The date, test name and result of the last Triglyceride test is displayed. See Audit Logic for the definition of a Triglyceride test.	The last lab test with a result in the year prior to the Audit date that is a member of the DM AUDIT TRIGLYCERIDE TAX taxonomy or the BGP TRIGLYCERIDE LOINC CODES taxonomy is found in V LAB. Only tests with a result are used; tests with a result containing "CANC" or "COMMENT" are also skipped.	Audit Report: 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 "Not tested or no valid result" category. For example, if the value is "cancelled", it will fall into "Not tested or no valid result". TG <150 mg/dl TG 150-499 mg/dl TG 500-999 mg/dl TG >=1000 mg/dl Not tested or no valid result	TRIGVALUE Audit Export (Data) File: All characters other than numbers and "." are stripped from the result value and that value is then rounded to the closest whole number and truncated to a total of 3 characters with 0 decimal digits

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
54	Serum Creatinine	Most recent Serum Creatinine value	The date, test name and result of the last Serum Creatinine test is displayed. See Audit Logic for the definition of a Serum Creatinine test.	The last lab test with a result 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. All tests with a result containing "CANC" are skipped. Specimen types are not examined so if the same creatinine test is used for serum creatinine as for urine creatinine, the Audit is unable to distinguish between these values. Result reporting: For the individual Audit, the actual value that is in V LAB is displayed.	N/A	CREATVALUE For the Audit Export (Data) File: All characters other than numbers and "." s are stripped from the result value and that value is truncated to a total of 4 characters with two decimal digits.

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
55	eGFR	Most recent Estimated GFR value	The date, test name and result of the last eGFR test is displayed. See Audit Logic for the definition of a eGFR test.	For patients that are 18 or older, the last lab test in the year prior to the Audit date that is a member of the BGP GPRA ESTIMATED GFR TAX or the BGP ESTIMATED GFR LOINC taxonomy is found. For the individual Audit, the actual value that is in V LAB is displayed. If there is no estimated GFR found in V LAB but there is a creatinine value found, the Estimated GFR is calculated using the Modified Diet in Renal Disease (MDRD) formula for eGFR	If the first character of the value is ">" it goes into >=60 ml/min. Otherwise, all characters other than numbers and "." are stripped from the result value. The resulting value is placed in the following categories: eGFR >=60 eGFR 30-59 eGFR 15-29 eGFR <15 Not tested or no valid result	EGFRVALUE Audit Export (Data) File: All characters other than numbers or "." are stripped from the result value and that value is truncated to a total of 4 characters with 1 decimal digit.

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
56	Quantitative Urine Albumin Creatinine Ratio (UACR) value	Most recent Quantitative Urine Albumin Creatinine Ratio (UACR) value	The date, test name and result of the last UACR test is displayed. See Audit Logic for the definition of a Uacr test.	The system looks for a test contained in the DM AUDIT QUANT UACR lab taxonomy or DM AUDIT A/C RATIO LOINC taxonomy, if found and the test has a valid numeric result then the result of the test is assigned to UACR value. If the test found does not have a valid numeric result, then the system will look for a urine microalbumin test on the same visit date. If found, the result of that test is evaluated. If the result contains a < symbol or the words "less than," a value of 5 is assigned to UACR value. If the result contains a '>' symbol or contains the words "greater than" a value of 999 is assigned to UACR value. Result reporting: For the individual Audit, the resulting value is displayed.	For the Audit Report: The resulting value is placed in the following categories: Urine albumin excretion - normal: <30 mg/g Urine albumin excretion increased: 30-300 mg/g Urine albumin excretion increased: >300 mg/g Not tested or no valid result	UPACRVAL For the Audit Export (Data) File: The UACR value is found as described in the audit logic column, all non-numeric characters are stripped from the value.

	Audit Item	Description	How Data Is Obtained from PCC (For Diabetes Patient Care Summary/Supplement)	Audit Logic	Audit Report	Audit Export Field Name and Details
57	Local questions	Single digit 1-9 Locally defined data element	N/A	Data is obtained from the LOCAL OPTION field of the Diabetes Register.	N/A	LOCAL #, single digit, 1-9 This field may be left blank for all patients if the facility does not choose to populate it.
58	Extended Local Question	Extended Local Question Locally defined data element	N/A	Data is obtained from the LOCAL OPTION TEXT field of the Diabetes Register.	N/A	LOCALEXT Character (max length=50) This field may be left blank for all patients if the facility does not choose to populate it.

Appendix B: Audit Export (Data) File Definition

IHS Diabetes Care & Outcomes Audit

Data Export File Specifications for 2019

B.1 General Information

- Data File Format: Delimited text, with the following general requirements:
 - Delimiter must be the ^ symbol, not a tab, space, or any other character.
 - Line 1 contains the Audit field names in the order they appear below.
 - Lines 2 and beyond contain the data, with each line representing a single record/patient.
 - All records must contain a value or a place holder for all fields. If there is no value for a field (because data are missing or due to skip pattern), the place holder is one blank space between the delimiters (i.e., ^^).
- Data Fields: A list of the fields for Audit 2019 and basic details/requirements for each can be found on subsequent pages of this document. Extracting accurate data for many fields requires additional information, some of which is available in the Audit documentation. Other information is specific to the health record system being used and must be determined locally, including documentation of medications and education.
- Additional Information and Resources:
 - Audit webpages: <https://www.ihs.gov/diabetes/audit/>
 - Contact the Audit team via email: diabetesaudit@ihs.gov

B.2 List of Fields

Order	Field Name	Description	Timeframe	Format/Values/Units	Comments
1.	AUDITDATE	Ending date of the Audit period - 12/31/2018 for Annual Audit 2019	N/A	MM/DD/YYYY	
2.	FACILITYNA	Name or abbreviation for the facility	N/A	Character (max length=20)	
3.	REVIEWER	Reviewer's initials	N/A	Character (max length=3)	
4.	STATE	Postal abbreviation for last known state of residence	N/A	Character (max length=2)	If the patient's address is outside of the US (e.g., in Canada), leave blank.
5.	MOB	Month of birth	N/A	# with value 1-12	
6.	YOB	Year of Birth	N/A	YYYY	
7.	SEX	Gender	N/A	# field with: 1=Male 2=Female 3=Unknown	
8.	DODX	Date of diabetes diagnosis	N/A	MM/DD/YYYY	If only year is known, use value 07/01/yyyy. If only month and year are known, use 15 for the day. Leave blank if year or entire date is unknown.
9.	DMTYPE	Diabetes type	N/A	# field with: 1=Type 1 2=Type 2 (or uncertain)	
10.	TOBSCREEN	Screened for tobacco use	Audit period	# field with: 1=Yes 2=No	
11.	TOBACCO	Tobacco use status	Most recent	# field with: 1=Current user 2=Not a current user 3=Not documented	

Order	Field Name	Description	Timeframe	Format/Values/Units	Comments
12.	TOBCOUNSEL	Tobacco cessation counseling received	Audit period	# field with: 1=Yes 2=No	Leave blank if value for TOBACCO is not 1=Current user
13.	ENDSSCREEN	Screened for electronic nicotine delivery system (ENDS) use during Audit period	Audit period	# field with: 1=Yes 2=No	
14.	ENDSSTATUS	ENDS use status	Most recent	# field with: 1=Current user 2=Not a current user 3=Not documented	
15.	FEET	Last recorded height - feet part	Last ever	# with up to 2 decimal places	Combine with INCHES
16.	INCHES	Last recorded height - inches part	Last ever	# with up to 2 decimal places	Total or in combination with FEET
17.	WEIGHT	Weight in lbs	Audit period, most recent	# with 0 decimal places	Truncate to nearest pound
18.	HTNDX	Hypertension diagnosed	Ever	# field with: 1=Yes 2=No	
19.	SYST1	Most recent systolic blood pressure (mmHg)	Audit period	# with 0 decimal places	
20.	DIAST1	Most recent diastolic blood pressure (mmHg)	Audit period	# with 0 decimal places	
21.	SYST2	Next most recent systolic blood pressure BP (mmHg)	Audit period	# with 0 decimal places	
22.	DIAST2	Next most recent diastolic blood pressure (mmHg)	Audit period	# with 0 decimal places	
23.	SYST3	Third most recent systolic blood pressure (mmHg)	Audit period	# with 0 decimal places	
24.	DIAST3	Third most recent diastolic blood pressure (mmHg)	Audit period	# with 0 decimal places	

Order	Field Name	Description	Timeframe	Format/Values/Units	Comments
25.	FOOTEXAM	Complete diabetic foot exam	Audit period	# field with: 1=Yes 2=No	
26.	EYEEEXAM	Dilated retinal exam or retinal imaging exam	Audit period	# field with: 1=Yes 2=No	
27.	DENTALEXAM	Dental exam including examination of teeth and gingiva	Audit period	# field with: 1=Yes 2=No	
28.	DEPDX	Active diagnosis of depression	Audit period	# field with: 1=Yes 2=No	
29.	DEPSCREEN	Screened for depression	Audit period	# field with: 1=Yes 2=No	Leave blank if value for DEPDX is not 2=No
30.	DIETINSTR	Nutrition education	Audit period	# field with: 1=Yes by RD 2=Yes by non-RD 3=Yes by RD & non-RD 4=None	
31.	EXERCISE	Physical activity education	Audit period	# field with: 1=Yes 2=No	
32.	DMEDUC	Diabetes education other than nutrition and physical activity	Audit period	# field with: 1=Yes 2=No	
33.	TXNONE	None of the listed diabetes medications prescribed	As of the end of the Audit period	# field with: 1=Yes 2=No	-If this item=1:Yes, then all other TX fields should=2:No. -If all other TX fields=2:No, then this item should=1:Yes.

Order	Field Name	Description	Timeframe	Format/Values/Units	Comments
34.	TXINSUL	Prescribed any insulin	As of the end of the Audit period	# field with: 1=Yes 2=No	
35.	TXMETFORM	Prescribed metformin	As of the end of the Audit period	# field with: 1=Yes 2=No	Includes Glucophage, others
36.	TXSUREA	Prescribed a sulfonylurea	As of the end of the Audit period	# field with: 1=Yes 2=No	Includes glyburide, glipizide, others
37.	TXDPP4	Prescribed a DPP4 inhibitor	As of the end of the Audit period	# field with: 1=Yes 2=No	Includes Sitagliptin (Januvia), Saxagliptin (Onglyza), Linagliptin (Tradjenta), Alogliptin (Nesina)
38.	TXGLP1MED	Prescribed an injectable GLP-1 agonist	As of the end of the Audit period	# field with: 1=Yes 2=No	Includes Exenatide (Byetta, Bydureon), Liraglutide (Victoza), Albiglutide (Tanzeum), Dulaglutide (Trulicity), Lixisenatide (Adlyxin), Semaglutide (Ozempic)
39.	TXSGLT2	Prescribed an SGLT2 inhibitor	As of the end of the Audit period	# field with: 1=Yes 2=No	Includes Canagliflozin (Invokana), Dapagliflozin (Farxiga), Empagliflozin (Jardiance), Ertugliflozin (Steglatro)
40.	TXGLIT	Prescribed Pioglitazone [Actos] or rosiglitazone [Avandia]	As of the end of the Audit period	# field with: 1=Yes 2=No	
41.	TXACARB	Prescribed Acarbose [Precose] or miglitol [Glyset]	As of the end of the Audit period	# field with: 1=Yes 2=No	
42.	TXSUREALK	Prescribed Repaglinide [Prandin] or Nateglinide [Starlix]	As of the end of the Audit period	# field with: 1=Yes 2=No	
43.	TXAMYLIN	Prescribed injectable Amylin analog [Symlin]	As of the end of the Audit period	# field with: 1=Yes 2=No	

Order	Field Name	Description	Timeframe	Format/Values/Units	Comments
44.	TXBROMO	Prescribed Bromocriptine [Cycloset]	As of the end of the Audit period	# field with: 1=Yes 2=No	
45.	TXCOLESEV	Prescribed Colesevelam [Welchol]	As of the end of the Audit period	# field with: 1=Yes 2=No	
46.	ACE	Prescribed an ACE inhibitor or ARB	As of the end of the Audit period	# field with: 1=Yes 2=No	
47.	ASPIRIN	Prescribed aspirin or other antiplatelet/ anticoagulant therapy	As of the end of the Audit period	# field with: 1=Yes 2=No	
48.	LLSTATIN2	Prescribed a statin drug	As of the end of the Audit period	# field with: 1=Yes 2=No 3= Allergy/intolerance/ contraindication	-Look for yes, then allergy or intolerance or contraindication, then no.
49.	CVDDX	Diagnosed cardiovascular disease (CVD)	Ever	# field with: 1=Yes 2=No	
50.	TBTESTDONE2	Skin (PPD) or blood test for tuberculosis (TB) done with valid result	Ever	# field with: 1=Skin test (PPD) 2=Blood test (QFT-GIT, T-SPOT) 3=Unknown/not offered	
51.	TBTESTRSLT2	TB test result	Ever	# field with: 1=Positive 2=Negative 3=Unknown	Leave blank if value for TBTESTDONE is not 1=Skin test or 2=Blood test

Order	Field Name	Description	Timeframe	Format/Values/Units	Comments
52.	TBINHTX2	Isoniazid treatment complete	Ever	# field with: 1=Yes 2=No 3=Unknown	Leave blank if value for TBTESTRSLT2 is not 1=Positive
53.	TBTESTDATE	Date of last TB test	Ever	mm/dd/yyyy	Leave blank if value for TBTESTRSLT2 is not 2=Negative
54.	HCVDX	Diagnosed hepatitis C (HCV)	Ever	# field with: 1=Yes 2=No	
55.	HCVSCREEN2	Screened for HCV at least once	Ever	# field with: 1=Yes 2=No	New for 2019 Replaces HCVSCREEN
56.	RETINOPDX	Diagnosed retinopathy	Ever	# field with: 1=Yes 2=No	
57.	LEA	Lower extremity amputation, any type (e.g., toe, partial foot, above or below knee)	Ever	# field with: 1=Yes 2=No	New for 2019 See Audit Instructions and DMS Audit Logic for more information
58.	FLUVAX	Influenza vaccine	Audit period	# field with: 1=Yes 2=No 3=Refused	
59.	PNEUMOVAX	Pneumococcal vaccine	Ever	# field with: 1=Yes 2=No 3=Refused	
60.	TD	Tetanus (Td, Tdap, DTaP, or DT) vaccine	Past 10 years	# field with: 1=Yes 2=No 3=Refused	

Order	Field Name	Description	Timeframe	Format/Values/Units	Comments
61.	TDAP	Tdap vaccine	Ever	# field with: 1=Yes 2=No 3=Refused	
62.	HEPBVAX	Hepatitis B complete series	Ever	# field with: 1=Yes 2=No 3=Refused 4=Immune	Either complete 2-dose series or complete 3-dose series counts
63.	HBA1C	HbA1c test result (%)	Most recent in Audit period	# with 1 decimal place	
64.	HBA1CDATE	Date of most recent HbA1c	Most recent in Audit period	MM/DD/YYYY	
65.	CHOLVALUE	Total cholesterol value	Most recent in Audit period	# with 0 decimal places	
66.	HDLVALUE	HDL cholesterol value (mg/dl)	Most recent in Audit period	# with 0 decimal places	
67.	LDLVALUE	LDL cholesterol value (mg/dl)	Most recent in Audit period	# with 0 decimal places	
68.	TRIGVALUE	Triglyceride value (mg/dl)	Most recent in Audit period	# with 0 decimal places	
69.	CREATVALUE	Serum creatinine value (mg/dl)	Most recent in Audit period	# with up to 2 decimal places	
70.	EGFRVALUE	Estimated GFR (eGFR) value	Most recent in Audit period	# with 1 decimal place	-Use documented value, if available. -If no eGFR value is available, but serum creatinine value is, calculate as: $eGFR (mL/min/1.73 m^2) = 175 \times (Scr)^{-1.154} \times (Age)^{-0.203} \times (0.742 \text{ if female})$
71.	UPACRVAL	Quantitative urine albumin:creatinine ratio (UACR) value (mg/g)	Most recent in Audit period	# with up to 2 decimal places	
72.	LOCAL	Local question	N/A	#, single digit, 1-9	This field may be left blank for all patients if the facility does not choose to populate it.

Order	Field Name	Description	Timeframe	Format/Values/Units	Comments
73.	LOCALEXT	Extended local question	N/A	Character (max length=50)	This field may be left blank for all patients if the facility does not choose to populate it.
74.	AGE	Patient age in years at time of AUDITDATE	N/A	# with maximum of 3 digits and no decimal places	-Calculate as: integer part of difference in days between AUDITDATE and date of birth, divided by 365.25

Appendix C: Data Quality Error Report Error Definitions

ERROR	DEFINITION
REVIEWER INITIALS MISSING	Review initials are missing. IT staff should update the NEW PERSON entry and add initials for the reviewer.
MONTH OF BIRTH NOT VALID	Month of birth is invalid. Check this patient's DOB in patient registration.
YEAR OF BIRTH MISSING	Year of Birth is missing. Check this patient's DOB in patient registration.
GENDER NOT VALID	Gender of patient is missing or is invalid. Check this patient's gender in patient registration.
DATE OF DX BEFORE YOB	Date of Diabetes Diagnosis is before year of birth.
DATE OF DX > AUDIT DATE	Date of Diabetes diagnosis is after the audit date.
DATE OF DX = AUDIT DATE	Date of Diabetes Diagnosis is equal to the audit date.
DIABETES TYPE MISSING	Diabetes Type is missing. Update the patient's DM register status.
DIABETES TYPE INVALID	Diabetes Type is invalid. Value must be 1 or 2. Update the patient's diabetes type in the diabetes register.
TOBACCO SCREEN IS MISSING	Tobacco Screen in past year is missing.
TOBACCO SCREEN IS INVALID	Tobacco Screen is invalid, must be 1 for Yes, 2 for No.
TOBACCO USE IS INVALID	Tobacco Use value is invalid, must be a 1, 2 or 3.
TOBACCO USE IS MISSING	Tobacco Use is missing.
TOBACCO COUNSEL INVALID	Tobacco Use is 1-Yes. Tobacco Counsel Must be 1 or 2; it cannot be blank.
TOBACCO COUNSEL INVALID	Tobacco Use Status is 2-No or 3-Undocumented. Tobacco Counsel should be blank.
ENDS SCREEN MISSING	ENDS Use Screen is missing.
ENDS USE STATUS MISSING	ENDS Use Status is missing.
HEIGHT IN FEET LOW FOR AGE >18	Height in feet value is unusually low (less than 4). Check patient's last Height value.
HEIGHT IN FEET LOW FOR AGE <19	Height in feet is unusually low for patient under 19 years old. Value is less than 2, check patient's last height value.
HEIGHT IN FEET HIGH AGE <10	Height Value is high (greater than 5) for patient age under 10. Check the patient's last height value.
HEIGHT IN FEET HIGH FOR AGE >9	Height is high (over 6) for patient under the age of 9. Check the patient's last height value.
HEIGHT INCHES IS <0	Height in inches is blank or less than zero. Check patient's last height value.
HT INCHES >12, FEET ENTERED	Height in feet is entered, inches cannot be greater than 12.

ERROR	DEFINITION
WEIGHT IS NOT A WHOLE NUMBER	Weight must be a whole number. No decimals.
WEIGHT LESS THAN 80, AGE >17	Weight is less than 80 and patient is over 17 years old. Check the patient's last weight value. If accurate, no action necessary.
HYPERTENSION DX NOT VALID	Hypertension diagnosed value is not a 1–Yes or a 2–No.
SYSTOLIC 1 VALUE <50 OR >250	Systolic 1 value is less than 50 or greater than 250. Check value and change if necessary.
SYSTOLIC 2 VALUE <50 OR >250	Systolic 2 value is less than 50 or greater than 250. Check value and change if necessary.
SYSTOLIC 3 VALUE <50 OR >250	Systolic 3 value is less than 50 or greater than 250. Check value and change if necessary.
DIASTOLIC 1 <30 OR >140	Diastolic 1 is less than 30 or greater than 140. Check value.
DIASTOLIC 2 <30 OR >140	Diastolic 2 is less than 30 or greater than 140. Check value.
DIASTOLIC 3 <30 OR >140	Diastolic 3 is less than 30 or greater than 140. Check value.
FOOT EXAM NOT VALID	Foot Exam value must be 1 or 2.
EYE EXAM NOT VALID	Eye Exam value must be 1 or 2.
DENTAL EXAM NOT VALID	Dental Exam value must be 1 or 2.
DEPRESSION ACTIVE DIAGNOSIS	Depression Active on the Problem List must be 1 or 2.
DEP SCREEN MUST BE BLANK	Depression Screen value must be blank if Depression on the Problem List is a 1–Yes.
DEP SCREEN BLANK/DEP DX = NO	Depression Screen must not be blank if Depression Dialysis field is 2–No.
DEPRESSION SCREEN NOT VALID	Depression Screen value not valid. Must be blank, 1, or 2.
DIET INSTRUCTION NOT VALID	Diet Instruction does not equal 1, 2, 3, or 4.
EXERCISE EDUCATION NOT VALID	Exercise Education value must be 1 or 2.
OTHER EDUCATION NOT VALID	Other Education value must be 1 or 2.
TX NONE IS INVALID	TX None must be 1 or 2.
TX INSULIN NOT VALID	TX insulin must be 1 or 2.
TX SULFONYLUREA INVALID	TX Sulfonylurea value must be 1 or 2.
TX SULFONYLUREA/DM TYPE 1	Value for this treatment inconsistent with DM Type 1; check medications and DM Type.
TX SUFONYLUREA LIKE INVALID	TX Sulfonylurea like therapy must be 1 or 2.
TX SULFONYLURA LIKE/DM TYPE 1	Value for this treatment inconsistent with DM Type 1, check medications and DM Type.
TX METFORMIN INVALID	TX Metformin value must be 1 or 2.

ERROR	DEFINITION
TX METFORMIN/DM TYPE 1	TX Metformin inconsistent with DM Type 1. Check medications and DM Type.
TX ACARBOSE INVALID	TX Acarbose must be 1 or 2.
TX ACARBOSE/DM TYPE 1	TX Acarbose inconsistent with DM Type 1. Check medications and DM Type.
TX GLITAZONE INVALID	TX Glitazone must be 1 or 2.
TX GLITAZONE/DM TYPE 1	TX Glitazone therapy value inconsistent with DM Type 1. Check the patient's medications and DM Type.
TX GLP-1 INVALID	TX GLP-1 value must be 1 or 2.
TX GLP-1/DM TYPE 1	TX GLP-1 inconsistent with DM Type 1. Check the patient's medications and DM Type.
TX DPP4 INVALID	TX DPP4 must be 1 or 2.
TX DPP4/DM TYPE 1	TX DPP4 inconsistent with DM Type 1. Check the patient's medications and DM Type.
TX AMYLIN INVALID	TX Amylin therapy inconsistent with DM Type 1.
TX BROMO INVALID	TX Bromocriptine must be 1 or 2.
TX BROMO/DM TYPE 1	Tx Bromocriptine therapy inconsistent with DM Type 1. Check the patient's medications and DM Type.
TX COLESEV INVALID	TX Colesevelam therapy inconsistent with DM Type 1. Check the patient's medications and DM Type.
TX SLGT2 INVALID	TX SLGT2 inhibitor therapy inconsistent with DM Type 1. Check the patient's medication and DM Type.
ACE INHIBITOR INVALID	ACE Inhibitor value must be 1 or 2.
ASPIRIN INVALID	Aspirin value must be 1 or 2.
CVD DX INVALID	CVD Dx value must be 1 or 2.
TB TEST DONE INVALID	TB Test Done must be 1, 2, or 3.
TB TEST RESULT INVALID	TB Test Result must be a 1–Positive, 2–Negative or 3–Unknown.
TB RESULT/TB TEST INCONSISTENT	TB Test Result must be blank if the TB Test Done value is 3–Unknown.
TB INH TX/TB TEST RESULT	If TB Test result is 1–Positive, TB INH Treatment must not be blank.
TB INH TX/TB TEST NEGATIVE	If TB Test Result is not 1–Positive, TB INH must be blank.
TB INH TX INVALID	TB INH Treatment must be a value of 1, 2, 3, or blank.
TB TEST DATE < YOB	Date of TB Test is earlier than year of birth.
TB TEST DATE > AUDIT DATE	Date of TB Test is after audit date.
TB TEST DATE/TB TEST RESULT	TB Test date should be blank if TB Test Result is 2–Negative.
TB TEST RESULT/TB TEST DATE	TB Test date should not be blank if TB Test Result is 2.
HEPATITIS C DX INVALID	Hepatitis C Diagnosis must be 1 or 2.

ERROR	DEFINITION
RETINOPATHY INVALID	Retinopathy Diagnosis must be 1 or 2.
FLU VACCINE INVALID	Flu vaccine value must be 1, 2, or 3.
PNEUMOVAX INVALID	Pneumovax Value must be 1, 2, or 3.
TD INVALID	TD value must be 1, 2, or 3.
TDAP INVALID	TDAP value must be 1, 2, or 3.
HEP B VACCINE INVALID	Hepatitis B Vaccine value must be 1, 2, 3 or 4.
HBA1C TEST RESULT <4 OR >18	HbA1c value is less than 4 or greater than 18; check value and if accurate no action necessary.
HBA1C DATE > AUDIT DATE	Date of HbA1c is after the audit date.
HBA1C BEFORE AUDIT BEGIN DATE	HbA1c date is before audit begin date.
HBA1C DATE > YOBB	HbA1c date is before year of birth.
HBA1C DATE <20 DAYS BEFORE DOO	HbA1c date is more than 20 days prior to the date of onset. Check both values; if they are accurate no action is necessary.
TOTAL CHOLESTEROL <70 OR >500	Total Cholesterol Value is less than 70 or greater than 500. Check the value; if accurate no action necessary.
HDL VALUE <12 OR >140	HDL Value is less than 12 or greater than 140. Check the value; if accurate no action necessary.
HDL > TOTAL CHOLESTEROL	HDL value is greater than the Total Cholesterol value. Check both values; if accurate, no action necessary.
LDL VALUE <10 OR >300	LDL value is less than 10 or greater than 300. Check the value; if accurate, no action necessary.
LDL > TOTAL CHOLESTEROL	LDL value is greater than the Total Cholesterol. Check both values; if accurate, no action necessary.
TRIGLYCERIDE <25 OR >4000	Triglyceride value is less than 25 or greater than 4000. Check the value; if accurate, no action necessary.
CREATININE VALUE <0.3 OR >15	Serum Creatinine value is less than .3 or greater than 15. Check the value; if accurate, no action necessary.
EGFR VALUE <5 OR >250	eGFR value is less than 5 or greater than 250. Check the value; if accurate, no action necessary.
UACR VALUE > 20,000	Quantative urine albumin creatinine value is greater than 20,000. Check the value; if accurate, no action necessary.
BMI <16 OR >80	BMI is less than 16 or greater than 80. Check values and if necessary correct HT/WT. If value is correct, no action is necessary.
DURATION OF DM	Duration of Diabetes is less than zero or greater than the patient's age.
ALL KEY DATA MISSING	Data is missing for all key fields: weight, blood pressure, A1c, LDL, uACR.
AGE OVER 100	Age of the patient is greater than 100. Check to be sure this patient should be included in the audit.

ERROR	DEFINITION
HEIGHT TOTAL <48 AGE>17	Age of patient is greater than 17 and total height is less than 48 inches. Check the DOB and height value.
HEIGHT TOTAL <24 AGE<18	Age of patient is less than 17 and total height in inches is less than 24 inches. Check the DOB and height value.
HEIGHT TOTAL >60 AGE <10	Age of patient is less than 10 and height in total inches is greater than 60. Check the DOB and height value.
HEIGHT TOTAL >84 AGE >9	Age of patient is greater than 9 and total height is greater than 84. Check the DOB and height value.
HEIGHT IN FEET MISSING	Height in feet is missing, inches is present. Check patient's last height value.
AGE LESS THAN 1	Age is less than 1, check DOB and audit date.

Appendix D: Sample Cumulative Audit Report

Figure D-1 displays a sample Cumulative Audit Report over several pages.

LAB		Nov 02, 2018		Page 1
IHS Diabetes Care and Outcomes Audit - RPMS Audit Audit Report for 2019 (Audit Period 01/01/2018 to 12/31/2013) Facility: 2013 DEMO HOSPITAL (CMBA) Annual Audit 543 patients were audited				

		# of Patients (Numerator)	# Considered (Denominator)	Percent
Gender				
	Male	242	543	45%
	Female	301	543	55%
Age				
	<20 years	24	543	4%
	20-44 years	94	543	17%
	45-64 years	263	543	48%
	>=65 years	162	543	30%
Diabetes Type				
	Type 1	10	543	2%
	Type 2	533	543	98%
Duration of Diabetes				
	<1 year	0	543	0%
	<10 years	175	543	32%
	>=10 years	332	543	61%
	Diagnosis date not recorded	36	543	7%
Body Mass Index (BMI) Category				
	Normal (BMI<25.0)	17	543	3%
	Overweight (BMI 25.0-29.9)	74	543	14%
	Obese (BMI >=30.0)	289	543	53%
	Height or weight missing	163	543	30%

	Severely obese (BMI >=40.0)	101	543	19%
Blood Sugar Control				
	A1C <7.0	36	543	7%
	A1C 7.0-7.9	46	543	8%
	A1C 8.0-8.9	37	543	7%
	A1C 9.0-9.9	24	543	4%
	A1C 10.0-10.9	24	543	4%
	A1C >=11.0	36	543	7%
	Not tested or no valid result	340	543	63%

	A1C <8.0	82	543	15%
	A1C >9.0	82	543	15%

IHS Diabetes Care and Outcomes Audit - RPMS Audit			
Audit Report for 2019 (Audit Period 01/01/2013 to 12/31/2013)			
Facility: 2013 DEMO HOSPITAL (CMBA)			
Annual Audit			
543 patients were audited			
	# of Patients (Numerator)	# Considered (Denominator)	Percent

Blood Pressure (BP) - Based on one value or mean of two or three values			
<140/<90	287	543	53%
140/90 - <160/<100	74	543	14%
160/100 or higher	19	543	3%
BP category undetermined	163	543	30%

If age >=60 years, <150/<90	148	239	62%
Hypertension			
Diagnosed ever	495	543	91%
Diagnosed hypertension and mean BP <140/<90	272	495	55%
Diagnosed hypertension and ACE inhibitor or ARB prescribed.	1	495	0%
Tobacco and Nicotine Use			
Tobacco use screening during Audit period:			
Screened	137	543	25%
Not screened	406	543	75%
Tobacco use status			
Current tobacco user	133	543	24%
In current users, counseled?			
Yes	24	133	18%
No	109	133	82%
Not a current tobacco user	400	543	74%
Tobacco use not documented	10	543	2%
Electronic nicotine delivery system (ENDS) use screening during Audit period			
Screened	0	543	0%
Not screened	543	543	100%
ENDS use status			
Current ENDS user	0	543	0%
Not a current ENDS user	0	543	0%
ENDS use not documented	543	543	100%

Current user of both tobacco and ENDS	0	543	0%
Current user of tobacco and/or ENDS	133	543	24%

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IHS Diabetes Care and Outcomes Audit - RPMS Audit Audit Report for 2019 (Audit Period 01/01/2013 to 12/31/2013) Facility: 2013 DEMO HOSPITAL (CMBA) Annual Audit 543 patients were audited				

		# of Patients (Numerator)	# Considered (Denominator)	Percent
Diabetes Treatment				
Number of diabetes meds currently prescribed				
None	543	543	100%	
One medication	0	543	0%	
Two medications	0	543	0%	
Three medications	0	543	0%	
Four or more medications	0	543	0%	
Diabetes meds currently prescribed, alone or in combination				
Insulin	0	543	0%	
Metformin [Glucophage, others]	0	543	0%	
Sulfonylurea [glyburide, glipizide, others]	0	543	0%	
DPP4 inhibitor [Sitagliptin (Januvia), Saxagliptin (Onglyza), Linagliptin (Tradjenta), Alogliptin (Nesina)]	0	543	0%	
GLP-1 agonist [Exenatide (Byetta), Bydureon), Liraglutide (Victoza), Albiglutide (Tanzeum), Dulaglutide (Trulicity), Lixisenatide (Adlyxin), Semaglutide (Ozempic)]	0	543	0%	
SGLT-2 inhibitor [Canagliflozin, (Invokana), Dapagliflozin (Farxiga), Empagliflozin (Jardiance), Ertugliflozin (Steglatro)]	0	543	0%	
Pioglitazone [Actos] or rosiglitazone [Avandia]	0	543	0%	
Acarbose [Precose] or miglitol [Glyset]	0	543	0%	
Repaglinide [Prandin] or Nateglinide [Starlix]	0	543	0%	
Amylin analog [Symlin]	0	543	0%	
Bromocriptine [Cycloset]	0	543	0%	
Colesevelam [Welchol]	0	543	0%	

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IHS Diabetes Care and Outcomes Audit - RPMS Audit Audit Report for 2019 (Audit Period 01/01/2013 to 12/31/2013) Facility: 2013 DEMO HOSPITAL (CMBA) Annual Audit 543 patients were audited				

		# of Patients (Numerator)	# Considered (Denominator)	Percent
Statin Prescribed				
Yes*		1	531	0%
Allergy, intolerance, or contraindication		12	543	2%
In patients with diagnosed CVD				
Yes*		0	234	0%
Allergy, intolerance, or contraindication		6	240	3%
In patients age 40-75 years				
Yes*		1	403	0%
Allergy, intolerance, or contraindication		8	411	2%
In patients with diagnosed CVD and/or age 40-75 years				
Yes*		1	456	0%
Allergy, intolerance, or contraindication		8	464	2%
*Excludes patients with an allergy, intolerance, or contraindication.				
Cardiovascular Disease (CVD)				
CVD diagnosed ever		240	543	44%
CVD and mean BP <140/<90		138	240	58%
CVD and not current tobacco user		189	240	79%
CVD and aspirin or other antiplatelet/anticoagulant therapy prescribed		1	240	0%
CVD and statin prescribed*		0	234	0%
*Excludes patients with an allergy, intolerance, or contraindication				
Retinopathy				
Diagnosed ever		0	543	0%
Lower Extremity Amputation				
Any type ever (e.g., toe, partial foot, above or below knee)		32	543	6%
Exams				
Foot exam - comprehensive		81	543	15%
Eye exam - dilated or retinal imaging		118	543	22%
Dental exam		93	543	17%

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IHS Diabetes Care and Outcomes Audit - RPMS Audit Audit Report for 2019 (Audit Period 01/01/2013 to 12/31/2013) Facility: 2013 DEMO HOSPITAL (CMBA) Annual Audit 543 patients were audited			
	# of Patients (Numerator)	# Considered (Denominator)	Percent
Diabetes-Related Education			
Nutrition - by any provider (RD and/or other)	99	543	18%
Nutrition - by RD	41	543	8%
Physical activity	47	543	9%
Other diabetes education	224	543	41%

Any of above	245	543	45%
Immunizations			
Influenza vaccine during Audit period	34	543	6%
Refused - Influenza vaccine	54	543	10%
Pneumococcal vaccine - ever	456	543	84%
Refused - Pneumococcal	14	543	3%
Td/Tdap/DTap/DT - past 10 years	517	543	95%
Refused - Td/Tdap/DTap/DT	3	543	1%
Tdap - ever	482	543	89%
Refused - Tdap	0	543	0%
Hepatitis B complete series - ever	443	539	82%
Refused - Hepatitis B	6	539	1%
Immune - Hepatitis B	4	543	1%
Depression an Active Problem			
Yes	78	543	14%
No	465	543	86%
In patients without active depression, screened for depression during Audit period:			
Screened	115	465	25%
Not screened	350	465	75%
Lipid Evaluation - Note these results are presented as population level CVD risk markers and should not be considered treatment targets for individual patients.			
LDL cholesterol	122	543	22%
LDL <100 mg/dl	81	543	15%
LDL 100-189 mg/dl	37	543	7%
LDL >=190	4	543	1%
Not tested or no valid result	421	543	78%

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IHS Diabetes Care and Outcomes Audit - RPMS Audit Audit Report for 2019 (Audit Period 01/01/2013 to 12/31/2013) Facility: 2013 DEMO HOSPITAL (CMBA) Annual Audit 543 patients were audited			
	# of Patients (Numerator)	# Considered (Denominator)	Percent
HDL cholesterol	120	543	22%
In females			
HDL <50 mg/dl	49	301	16%
HDL >=50 mg/dl	17	301	6%
Not tested or no valid result	235	301	78%
In males			
HDL <40 mg/dl	31	242	13%
HDL >=40 mg/dl	23	242	10%
Not tested or no valid result	188	242	78%
Triglycerides [1]	120	543	22%
Trig <150 mg/dl	61	543	11%
Trig 150-499 mg/dl	57	543	10%
Trig 500-999 mg/dl	1	543	0%
Trig >=1000 mg/dl	1	543	0%
Not tested or no valid result	423	543	78%
Kidney Evaluation			
eGFR to assess kidney function (In age >=18 years)	245	520	47%
eGFR >=60 ml/min	148	520	28%
eGFR 30-59 ml/min	74	520	14%
eGFR 15-29 ml/min	13	520	3%
eGFR < 15 ml/min	10	520	2%
eGFR Not tested or no valid result	275	520	53%
Urine Albumin:Creatinine Ratio (UACR) to assess kidney damage	63	543	12%
Urine albumin excretion - normal: <30 mg/g	39	63	62%
Urine albumin excretion increased:			
30-300 mg/g	20	63	32%
>300 mg/g	4	63	6%
Not tested or no valid result	480	543	88%
In patients age >=18 years, eGFR and UACR	55	520	11%

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IHS Diabetes Care and Outcomes Audit - RPMS Audit Audit Report for 2019 (Audit Period 01/01/2013 to 12/31/2013) Facility: 2013 DEMO HOSPITAL (CMBA) Annual Audit 543 patients were audited				

		# of Patients (Numerator)	# Considered (Denominator)	Percent
Chronic Kidney Disease (CKD) (In age >=18 years)				
CKD [2]		113	520	22%
CKD [2] and mean BP <140/<90		84	113	74%
CKD [2] and ACE Inhibitor or ARB prescribed		0	113	0%
CKD Stage				
Normal: eGFR >=60 ml/min and UACR <30 mg/g		27	520	5%
Stages 1 and 2: eGFR >=60 ml/min and UACR >=30 mg/g		14	520	3%
Stage 3: eGFR 30-59 ml/min		74	520	14%
Stage 4: eGFR 15-29 ml/min		13	520	3%
Stage 5: eGFR <15 ml/min		10	520	2%
Undetermined		382	520	73%
Tuberculosis (TB) Status				
TB Test done ever (skin or blood)		385	543	71%
If test done, skin test		383	385	99%
If test done, blood test		2	385	1%
If TB test done, positive result		49	385	13%
If positive TB test, treatment completed		1	49	2%
If negative TB test, test done after diabetes diagnosis		279	334	84%
Hepatitis C (HCV)				
Diagnosed HCV ever		23	543	4%
If not diagnosed				
Screened ever		189	520	36%
If born 1945-1965, screened ever		98	263	37%
Combined Outcome Measure				
Patients age >= 40 years meeting ALL of the following criteria: A1C <8.0, Statin prescribed*, and mean BP <140/<90		0	445	0%
*Excludes patients with a statin allergy, intolerance, or contraindication				

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IHS Diabetes Care and Outcomes Audit - RPMS Audit Audit Report for 2019 (Audit Period 01/01/2013 to 12/31/2013) Facility: 2013 DEMO HOSPITAL (CMBA) Annual Audit 543 patients were audited			

	# of Patients (Numerator)	# Considered (Denominator)	Percent
Diabetes Related Conditions (In age >=18 years)			
Severely obese (BMI >=40)	96	520	18%
Hypertension diagnosed ever	476	520	92%
Current tobacco user	129	520	25%
CVD diagnosed ever	228	520	44%
Retinopathy diagnosed ever	0	520	0%
Lower extremity amputation ever (any type (e.g., toe, partial foot, above or below knee)	31	520	6%
Active Depression	75	520	14%
CKD stage 3-5	97	520	19%
Number of diabetes related conditions			
Diabetes only	22	520	4%
One	126	520	24%
Two	176	520	34%
Three	143	520	28%
Four	41	520	8%
Five or more	12	520	2%
Footnotes			
[1] For triglycerides: >150 is a marker of CVD risk, not a treatment target; >1000 is a risk marker for pancreatitis.			
[2] Chronic Kidney Disease (CKD): eGFR <60 or UACR >=30			

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IHS Diabetes Care and Outcomes Audit - RPMS Audit Audit Report for 2019 (Audit Period 01/01/2013 to 12/31/2013) Facility: 2013 DEMO HOSPITAL (CMBA) Annual Audit 543 patients were audited		

	# of Patients (Numerator)	# Considered (Denominator)
		Percent
Abbreviations		
A1c = hemoglobin A1c (HbA1c)		
ACE inhibitor = angiotensin converting enzyme inhibitor		
ARB = angiotensin receptor blocker		
BMI = body mass index		
BP = blood pressure		
DT = diphtheria and tetanus		
DTaP = diphtheria, tetanus, and pertussis		
CKD = chronic kidney disease		
CVD = cardiovascular disease		
eGFR = estimated glomerular filtration rate		
ENDS = electronic nicotine delivery systems		
HCV = hepatitis C virus		
HDL = high-density lipoprotein		
LDL = low-density lipoprotein		
RD = registered dietitian		
TB = tuberculosis		
Td = tetanus and diphtheria		
Tdap = tetanus, diphtheria, and pertussis		
Trig = triglycerides		
UACR = urine albumin-to-creatinine ratio		

Figure D-1: Sample 2019 Cumulative Audit Report

Acronym List

Acronym	Meaning
ASUFAC	Area, Service Unit, and Facility
BDM	Namespace for the Diabetes Management System
BGP	Namespace for the Clinical Reporting System
CKD	Chronic Kidney Disease
CRS	Clinical Reporting System
CPT	Current Procedural Terminology
CVD	Cardiovascular Disease
DAL	Display Audit Logic
DM	Diabetes Mellitus
DMS	Diabetes Management System
DMU	Update Diabetes Patient Data
DOB	Date of Birth
DPCS	Diabetes Patient Care Summary
eGFR	Estimated Glomerular Filtration Rate
EHR	Electronic Health Record
ENDS	Electronic Nicotine Delivery System
GDM	Gestational Diabetes Mellitus
GEN	General Retrieval Report
GPRA	Government Performance and Results Act
HDL	High-Density Lipoproteins
HTN	Hypertension
ICD	International Classification of Disease
IFG	Impaired Fasting Glucose
IGT	Impaired Glucose Tolerance
IHS	Indian Health Service
IT	Information Technology
LDL	Low-Density Lipoproteins
LMR	Lists, Labs, or Medications used at this Facility
LOINC	Logical Observation Identifiers Names and Codes
NDC	National Drug Code
PCC	Patient Care Component
POC	Point of Care
RML	Master List Report

Acronym	Meaning
RPMS	Resource and Patient Management System
SDPI	Special Diabetes Program for Indians
SNOMED	Systematized Nomenclature of Medicine
UACR	Urine Albumin/Creatinine Ratio

Contact Information

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