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Section 1: DMS Shortcuts

What: To add a patient to the diabetes register, the most common (and recommended) method is to enter patients one at a time through the Patient Management menu option. This allows you to verify that patients actually have diabetes before you enter them into the register.

You can also transfer a batch of patients using a Q-Man search template or a File-Manager file. However, when you transfer a group of patients, you risk adding miscoded patients who do not actually have diabetes.

Why: To track patient care in relation to the *IHS Standards of Care for Patients with Type 2 Diabetes*.

When: When patients are diagnosed or identified as having diabetes

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **PM**
2. Select PATIENT NAME: **LAST NAME, FIRST NAME** (any patient name or health record number/chart number)
3. Add this client to the Register? NO// **YES**
4. At this point, you will be directed to the Patient Management screen

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

Select Diabetes Management System Option: PM  Patient Management
Select PATIENT NAME: BUTTER
,PEANUT
                                      M 02-01-1978 XXX-XX-5555
TRN 700055

     BUTTER,PEANUT is not on
     the 20 DIABETES Register

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

If the patient is not in the register, the system will prompt you to add this patient to the register.

Deleting a Patient from the Register

What: You may use the Delete Patient from the Register option to remove any patient who has not been diagnosed with diabetes. (For patients who are deceased or have moved out of the area, change register status under Patient Management #1 - Edit register data, p. 5.)

Note that this only removes the patient from the register. All demographic and visit information remains in the main clinic database (PCC).

Why: To delete miscoded patient(s) from your diabetes population.

When: As needed.

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **DEL**
2. NAME OR CHART: **LAST NAME, FIRST NAME** (any patient name or health record number/chart number)
3. Are you certain you want to do this? No// **Y** (Yes)
4. Press RETURN to continue or '^' to exit. **<Enter>**

```
                    ************************************
                            IHS DIABETES REGISTER
                    ************************************

                            PATIENT LOOKUP UTILITY

                Select CLIENT

NAME OR CHART: BUTTER,PEANUT            M 02-01-1978 XXX-XX-5555   TRN 700055
IHS DIABETES     BUTTER,PEANUT          M 02-01-1978 XXX-XX-5555   TRN 700055

           ******  WARNING  ******

This procedure will delete ALL data for
             PEANUT BUTTER from the
             IHS DIABETES register.
Are you certain you want to do this? No// Y  (Yes)

Deletion of PEANUT BUTTER
   from the IHS DIABETES register...is now complete.
```

Patient information is not removed from the PCC repository, only from the diabetes register.

What: Register data includes register status, case manager, and review dates. These are only seen by people who use the Diabetes Register. The Patient Management screen also shows items such as the patient's name, address, health record number, and date of birth, which come from the PCC database and can only be changed by data entry or registration staff.

Why: Register data should help you manage your register by allowing you to group patients for reports (examples: running the cumulative audit on only active patients, generating patient panels for case managers) and scheduling chart reviews.

When: When patients are added to the register and updated as needed.

#1 - Edit register data

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **PM**
2. Select PATIENT NAME: **LAST NAME, FIRST NAME** (any patient name or health record number/chart number)
3. Select Action: Quit// **1** (edit register data...see below)
4. Command: **S** (to save)
5. Command: **E** (to exit)

Field descriptions

- **Status** – Active, Inactive, Unreviewed, Transient, Deceased, Non-IHS, and Lost to follow-up
- **Case manager** – This person must be in your clinic database; enter as LAST,FIRST name; can be used to generate several different reports
- **Register prov[ider]** – Designate a provider other than the patient's primary care provider (optional); the provider must be in the clinic database; the field can be queried with GEN reports
- **Where followed** – Clinic where the patient is being seen
- **Contact** – Enter free text (1-30 characters) for reference by your diabetes team
- **Entry date** – Provided automatically when the individual is first entered into the diabetes register
- **Last edited** – The last date information in the PM screen was edited (automatic)
- **Last review** – You may use this field to track, for example, the last time the patient's chart was reviewed
- **Next review** – A future date when you want to review this patient's chart; use an actual date or shortcuts such as today's date plus 90 days (T+90) or today's date plus 3 months (T+3M), etc.

Patient Management Screen: Diagnosis

What: Type of diabetes and onset date are tracked here, similar to -- but not the same as -- the patient's problem list. You can also describe the severity in an optional field.

Why: The type and duration of diabetes have important ramifications for patient care, so it is important to make sure the onset date is included in the patient's record. The onset date is not necessarily the first visit for diabetes that the patient has at your clinic. The audit reports can find the type of diabetes and onset date from the patient's problem list, if it has been entered there, but those fields can only be updated by data entry staff at the request of a provider. This register field is convenient for diabetes program staff and can be used for reports.

When: The patient's diagnosis of diabetes and onset date should be updated when the patient is first entered onto the diabetes register.

#20 - Diagnosis

How: From the Diabetes Management System Main Menu:

1. Select the Diabetes Management System Option: **PM**
2. Select the PATIENT NAME: **LAST NAME,FIRST NAME** (any patient name or health record number)
3. Select Action: Quit// **20**
4. Select Action: Quit// **1** ADD Diagnosis
5. Which Diagnosis(s): (1-4): [**Choose diagnosis]**
6. Enter Date of Onset: **[Enter date of onset]**
7. Enter Severity: **N-Normal M-Mild S-Severe MO-Moderate** (optional)
8. Command: **S** to save
9. Command: **E** to exit
10. Select Action: Quit// <**Enter>**

```
Diagnosis          Dec 2, 2016 13:51:14      Page:    1 of  1

    NO.  Diagnosis                        ONSET DATE
    ---  -------------------------------  ----------




          - Previous Screen   Q Quit   ?? for More Actions
1   Add Diagnosis     2   Edit Diagnosis     3   Delete Diagnosis
Select Action:Quit// 1   Add Diagnosis
```

```
NO.  DIAG
---  --------------------
1    GESTATIONAL DM
2    IMPAIRED GLUCOSE TOLERANCE
3    TYPE 1
4    TYPE 2
```

What: View, edit, or add a complication for a particular patient. This list is similar to -- but not the same as -- the patient's problem list. Patients can have multiple complications. You can run reports to show complications by patient or to check the prevalence of conditions.

The list of complications tracked by the register can be changed in the Register Maintenance menu (see page 47).

Why: To monitor and care for patient complications.

When: Modify as needed.

#2 - Complications

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **PM**
2. Select PATIENT NAME: **LAST NAME, FIRST NAME** (any patient name or health record number/chart number)
3. Select Action: Quit// **2** (Complications)
4. Select Action: Quit// **2** (add a complication)
5. Which COMPLICATION(S): (1-10): **1-10** (choose from listed items)
6. DATE OF ONSET: **01/01/01** (or any other date such as 1998, Jan, 2001)
7. STATUS: **<Enter>**
8. COMMENTS: **<TAB>**
9. At command **Save** then **Exit**
10. Select Action: Quit// **<Enter>**

```
Complications                  Dec 2, 2016 13:52:40          Page:    1 of    1
    Complications
    NO.  Complication                      ONSET DATE
    ---  --------------------------------  ----------
    1    HYPERTENSION                      APR 10,2005
    2    CVA (STROKE)                      OCT 1, 2007

              - Previous Screen   Q Quit   ?? for More Actions
1    Edit Complication    2    Add Complication     3    Delete Complication
```

Remember to tab through at **COMMENTS**.

If you go too far and get stuck in the comments screen, you need to use the F1 key. Hit **F1, let go, and then hit E** to get you out of the comments screen.

If F1 doesn't work, try the Num Lock key and E.

Patient Management Screen: Individual Audit (Option 1)

What: This generates the IHS diabetes audit on one patient, giving a review of the patient's care over one year in comparison to the *IHS Standards of Care for Patients with Type 2 Diabetes*.

To print individual audits for all active patients on the register, see the tip box in the Cumulative Audit instructions.

Why: We encourage you to generate this report before each patient visit for case management as well as quality assurance. It is intended to alert providers to diabetes standards of care for which the patient is deficient.

The individual diabetes audit may also be used to check the accuracy of data.

When: (1) Prior to each patient visit and (2) for checking data quality, for example prior to the annual diabetes audit.

#10 – Audit Status

The date you specify is the ending date of the audit…t**he audit will look back one year from the date you specify.**

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **PM**
2. Select PATIENT NAME: **BRADY,MARSHA** (any patient name or HRN)
3. Select Action: Quit// **10** (Audit Status)
4. Enter the Audit Date: **T** (today) or (any specified date)
5. Enter Print option: 1// **1** (print individual reports)
6. Do you wish to print the patient's name on the audit sheet? N// **<Enter> or type Y for yes**
7. DEVICE: HOME// **<Enter>** to view on screen or **PRINTER NAME**, such as **SLAVE** or **S-O**, to print

```
Register Data                Dec 2, 2016 13:52:42          Page:    1 of    1
       PATIENT: BRADY,MARSHA                                 AGE: 30
       ADDRESS: PO BOX 0,WARM SPRINGS,OR,97761               DOB: 02/01/1978
         PHONE: 5415531196                                   HRN: 700055
PRIM CARE PROV: CASE,SHANNON                                 RES: WARM SPRINGS
        STATUS: ACTIVE
WHERE FOLLOWED:
 REGISTER PROV:                          CASE MGR:
       CONTACT:
    ENTRY DATE: APR 17,2008                            LAST EDITED:
     DIAGNOSIS: TYPE 1                                  ONSET DATE: AUG 13,1975
 COMPLICATIONS: HYPERTENSION                            ONSET DATE: APR 17,2008

            - Previous Screen   Q Quit   ?? for More Actions

1  Edit Register Data      8  DIABETES Medications    15 DIABETES Lab Profile
2  Complications           9  Review Appointments     17 Pat. Face Sheet
3  Comments                10 Audit Status           19 Local Option Entry
4  Health Summary          11 Flow Sheet             20 Diagnosis
5  Last Visit              12 Case Summary           21 Print Letter
6  Other PCC Visit         13 Edit Problem List
7  Medications             14 Lab Profile
Select Action: Quit//
```

Individual Diabetes Audit (Option 2)

What: The individual diabetes audit provides a complete review of the patient's care in comparison to the *IHS Standards of Care For Patients With Type 2 Diabetes*. You can use this option to print individual audits for more than one patient. You can choose whether or not to include the patient's name.

To print individual audits for all active patients on the register, see the tip box in the Cumulative Audit instructions.

Why: Since the individual diabetes audit parallels the *IHS Standards of Care For Patients With Type 2 Diabetes*, we encourage you to generate this report before each patient visit for case management as well as quality assurance.

When: (1) Prior to each patient visit and (2) prior to the annual diabetes audit

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **DA** Diabetes QA Audit Menu
2. Select Diabetes QA Audit Menu Option: **DM17** 2017 Diabetes Program Audit ...
3. Select 2012 Diabetes Program Audit Option: **DM17** Run 2017 Diabetes Program...
4. Enter the Official Diabetes Register: **IHS DIABETES** or name of your diabetes register
5. Enter the Audit Date: **T** for today's date or enter any other date
6. Run the audit for: P// **P** Individual Patients
7. Select PATIENT NAME: **LAST NAME, FIRST NAME** (any patient name or health record number/chart number)
8. Select PATIENT NAME: **<Enter>** or type additional names
9. Enter Print option: 1// **<Enter>** Print Individual Reports
10. Do you wish to print the patient's name on the audit sheet? N// **<Enter>** or **Y** for Yes
11. DEVICE: HOME// **<Enter>** to view on screen or **PRINTER NAME** to print

Sample Individual Diabetes Audit

```
 ASSESSMENT OF DIABETES CARE, 2017       DATE AUDIT RUN: Feb 21, 2018  Page: 1

Audit Period Ending Date: Dec 31, 2016  Facility Name: CHEMAWA H CT
REVIEWER initials: ST5                  Community: BATTLE GROUND
STATE of Residence: OR
NAME: BRADY,MARSHA     CHART #: 22469    DOB: Dec 16, 1965    SEX: FEMALE
PRIMARY CARE PROVIDER:  SINGLETON,KORI

DATE of Diabetes Diagnosis:
  DM Reg: 08/15/2000  Problem List: <not documented>  1st PCC DX: 05/11/2000
DM TYPE: 2  Type 2
  DM Register: TYPE 2  Problem List: 250.02  PCC POV's: Type 2

Tobacco/Nicotine Use
Screened for tobacco use during Audit period: 2  No
Tobacco Use Status: 2  Not a Current User NEVER SMOKED  01/05/2012
  Tobacco cessation counseling received?
Screened for electronic nicotine delivery system (ENDS) use during
  audit period: 2-No
ENDS use status:  3 Not Documented

Visit Statistics

HEIGHT (last ever): 69.00 inches 01/05/2012

Last WEIGHT in audit period:       BMI:

HTN (documented diagnosis): 1  Yes
Last 3 BLOOD PRESSURES during audit period: 132/85 mm Hg Aug 15, 2017
                                            128/83 mm Hg Jun 20, 2017
                                            127/80 mm Hg Mar 13, 2017

Examinations during audit period
  FOOT EXAM - complete:           2  No
  EYE EXAM (dilated or retinal imaging): 2  No
  DENTAL EXAM:                    2  No

Mental Health
  Depression an active problem?  2  No
  If 'No', Screened for depression during audit period:
       2  No

Education during audit period

  NUTRITION INSTRUCTION:            4  None
  PHYSICAL ACTIVITY INSTRUCTION:    2  No
  DM Education (Other):             2  No

Diabetes Therapy    Select all prescribed, as of the end of the audit period:
      1 Diet & Exercise Alone
   X  2 Insulin
      3 Sulfonylurea (glyburide, glipizide, others)
      4 Glinide (Prandin, Starlix)
   X  5 Metformin (Glucophage, others)
      6 Acarbose (Precose) or miglitol (Glyset)
      7 Pioglitazone (Actos) or rosiglitazone (Avandia)
      8 GLP-1 med (Byetta, Bydureon, Victoza, Tanzeum, Trulicity)
      9 DPP4 inhibitors (Januvia, Onglyza, Tradjenta, Nesina)
      10 Amylin Analog (Symlin)
      11 Bromocriptine (Cycloset)
      12 Colesevelam (Welchol)
      13 SGLT-2 inhibitor (Invokana, Farxiga, Jardiance)

ACE Inhibitor/ARB Prescribed, as of the end of the audit period:
          2  No
```

```
Aspirin/Antiplatelet/Anticoagulant Therapy Prescribed, as of the end of the
  audit period: 2  None

Statin Therapy Prescribed, as of the end of the Audit period:
        2  No
CVD: Cardiovascular disease diagnosed:  2  No

TB Testing
TB test done: 1 Skin test (PPD)
TB test result: 2  Negative 8/4/94 Reading: 0 Result: N
    If test positive, isoniazid tx complete:
    If test negative, Last test: 08/04/1994

Immunizations
  Influenza vaccine during audit period: 2  No
  Pneumococcal vaccine - ever:     1  Yes  10/02/2001
  Td or Tdap in past 10 yrs:       1  Yes  05/08/2009
  Tdap ever:                       1  Yes  05/08/2009
  HEP B 3 dose series complete - ever: 1  Yes

LABORATORY DATA - most recent result during audit period
  A1C:                  5.6          Nov 15, 2017
  Total Cholesterol:    234 mg/dl    Nov 15, 2017
  HDL Cholesterol:      39 mg/dl     Nov 15, 2017
  LDL Cholesterol:      180 mg/dl    Nov 15, 2017
  Triglycerides:        213 mg/dl    Nov 15, 2017
  Serum Creatinine:     1.1 mg/dl    Nov 15, 2017
  eGFR:                 >60          Nov 15, 2017
  Quantitative Urine Albumin: Creatinine Ratio UACR value:

COMBINED: Meets ALL: A1C <8.0, statin prescribed, mean BP <140/<90
     2  No  A1C: <Not Documented>; statin prescribed: No; Mean BP:

Has e-GFR and UACR: No

Local Questions:

Extended Local Option question:
```

Diabetes Patient Care Summary

What: The diabetes patient care summary provides a complete review of the patient's care in relation to the *IHS Standards of Care for Patients with Type 2 Diabetes*. It includes the same data items as the audit report except medications.

Some clinics print the diabetes patient care summary at the end of the regular adult health summary.

Why: The diabetes patient care summary is an alternative to the individual audit. It gives dates of service, even if those dates are outside the one-year range of the audit date.

Since the diabetes patient care summary parallels the *IHS Standards of Care for Patients with Type 2 Diabetes*, we encourage you to generate this report before each patient visit for case management as well as for quality assurance.

When: (1) Prior to each patient visit, (2) prior to the annual diabetes audit

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **DA** Diabetes QA Audit Menu...
2. Select Diabetes QA Audit Menu Option: **DPCS** Display a Patient's DIABETES CARE...
3. Select PATIENT NAME: **LAST NAME, FIRST NAME** (any patient name or health record number/chart number)
4. Do you wish to: P// **P** PRINT Output or **B** BROWSE Output on Screen
5. DEVICE: HOME// **<Enter>** to view on screen or **PRINTER NAME**, such as **SLAVE** or **S-O**, to print

TIP: You can also find the DPCS on the RP - REPORTS menu.

```
                *** Print Diabetes Patient Care Supplement ***


Select PATIENT NAME: ABUN
E,KATHLEEN S
                                        F 09-08-1974 XXX-XX-9706   TRN 25634



     Select one of the following:

          P         PRINT Output
          B         BROWSE Output on Screen

Do you wish to: P// RINT Output
DEVICE: HOME//
```

```
********** CONFIDENTIAL PATIENT INFORMATION [DH]  Feb 19, 2018 **********
DIABETES PATIENT CARE SUMMARY          Report Date:  02/19/2018

Patient: SMURF,PAPA                    HRN: 10815
Age:  39 (DOB 02/11/1976)              Sex: MALE
CLASS/BEN: INDIAN/ALASKA NATIVE        Designated PCP: LEE,DONNIE MD

Date of DM Onset: 12/00/1983 (Diabetes Register) DM Problem #: WOR6

BMI: 28.5  Last Height:  72 inches     02/11/2017
           Last Weight:  210 lbs       02/11/2017

Tobacco Use:  Current User CURRENT SMOKER, SOME DAY  Feb 11, 2015
              Counseled in the past year?  Yes Jul 15, 2017 TO-QT
HTN Diagnosed:  Yes
CVD Diagnosed:  No
Last 3 BP:      120/80   02/11/2017
(non ER)        132/85   08/19/2017
                144/84   12/31/2016
ACE Inhibitor/ARB prescribed (in past 6 months): No
Aspirin/Anti-platelet prescribed (in past yr):
   Yes  09/15/2017 ASPIRIN 81MG TAB
Statin prescribed (in past 6 months):
   Yes  09/15/2017 SIMVASTATIN 10MG TAB
Exams (in past 12 months):
   Foot:    Yes  05/19/2017 Diabetic Foot Exam
   Eye:     Yes  04/19/2017 Diabetic Eye Exam
   Dental:  Yes  09/19/2017 Dental Exam
Depression: Active Problem: No
            If no, screened in past year:  Yes - Exam: DEPRESSION SCR 12/15/2017
Immunizations:
   Flu vaccine (since August 1st):      Yes  09/15/2017
   Pneumovax (ever):                    Yes  10/01/2017   10/18/1988
   Hepatitis B series complete (ever):  No
   Td/Tdap (in past 10 yrs):            Yes  04/19/2017
TB - Last Documented Test:   10/04/2006   PPD
     TB Test Result:
     TB Treatment Completed:
Laboratory Results (most recent):                    RPMS LAB TEST NAME
 A1C:                    7.1            02/11/2017 HEMOGLOBIN A1C
 Next most recent A1C:   7.8            08/15/2017 HEMOGLOBIN A1C
 Creatinine:             1.1            08/15/2017 CREATININE
 Estimated GFR:          >60            08/15/2017 ESTIMATED GFR
 UACR (Quant A/C Ratio):comment mg/g    12/31/2017 MALB/CREAT
 Total Cholesterol:      234            08/15/2017 CHOLESTEROL
  Non-HDL Cholesterol:   195            08/15/2017 [Calculated Value]
  LDL Cholesterol:       180            08/15/2017 LDL
  HDL Cholesterol:        39            08/15/2017 HDL (CHOLESTEROL)
  Triglycerides:         213            08/15/2017 TRIGLYCERIDE

DM Education Provided (in past yr):
  Last Dietitian Visit:
  DM-EXERCISE              02/11/2017
```

Cumulative Diabetes Audit

What: The cumulative diabetes audit summarizes care and outcomes for a group of patients you specify (usually active patients on the register). It shows all items from the *IHS Standards of Care For Patients With Type 2 Diabetes*.

Why: You can use the cumulative diabetes audit to set goals and monitor progress in meeting the IHS standards of care (or documenting the care that is provided). It is also required annually as part of the Special Diabetes Program for Indians (SDPI).

When: Monthly – quarterly – annually for the IHS Diabetes Audit

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **DA** Diabetes QA Audit Menu
2. Select Diabetes QA Audit Menu Option: **DM18** 2018 Diabetes Program...
3. Select 2017 Diabetes Program Audit Option: **DM18** Run 2018 Diabetes ...
4. Checking for Taxonomies to support the 2018 Audit: HIT RETURN: **<ENTER>**
   (Note: You will likely see empty taxonomy errors for taxonomies related to labs and medications not used at your facility. These are OK.)
5. Enter the Official Diabetes Register: **IHS DIABETES** (or name of register)
6. Enter the Audit Date: **T** for today or exact date, e.g. 123117 for calendar year 2017
7. Run the audit for: P// **C** Members of a CMS Register
8. Enter the Name of the Register: **IHS DIABETES** (or name of register)
9. Do you want to select register patients with a particular status? Y// **YES**
10. Which status: A// **<Enter>** for Active, or type other status
11. Limit the audit to a particular primary care provider? N// **<Enter>** for no
12. Limit the patients who live in a particular community? N// **<Enter>** for no
13. Select Beneficiary Population to include in the audit: 1// **<Enter>**
14. Select whether to include or exclue pregnant patients in the audit: E// **<Enter>**
15. Do you want to select: A// **<Enter>** for ALL Patients selected so far
16. Enter Print option: 1// **3** Cumulative Audit Only
17. Demo Patient Inclusion/Exclusion: 3// **<Enter>**
18. DEVICE: HOME// **<Enter>** to view on screen or **PRINTER NAME**, such as **SLAVE** or **S-O**, to print

Tip: Choose **1** or **4** to print **individual** sheets for all active patients

```
DM18    Run 2018 Diabetes Program Audit
TC18    Check Taxonomies for the 2017 DM Audit
TU18    Update/Review Taxonomies for 2017 DM Audit
VTAX    View/Print Any DM Audit Taxonomy
EAUD    Run the 2017 Audit w/predefined set of Pts
VSML    View a SNOMED List Used by the DM AUDIT
        ---------------------------------------
PR18    Run 2018 PreDiabetes/Metabolic Syndrome Audit
PRTC    Check Taxonomies for the 2017 Pre-Diabetes Audit
PRTU    Update/Review Taxonomies for 2017 PreDiab Audit
```

IHS DIABETES CARE AND OUTCOMES AUDIT REPORT - RPMS AUDIT
AUDIT REPORT FOR 2016 (Audit Period 01/01/2016 to 12/31/2016)
for PORTLAND AREA SDPI GRANTEES
7075 of 7608 patients were audited

	# of Patients (Numerator)	# Considered (Denominator)	Percent
Gender			
Male	3330	7075	47%
Female	3745	7075	53%
Age			
<20 years	27	7075	0%
20-44 years	1263	7075	18%
45-64 years	3603	7075	51%
65 years and older	2182	7075	30%
Diabetes Type			
Type 1	110	7075	2%
Type 2	6965	7075	98%
Duration of Diabetes			
Less than 1 year	332	7075	5%
Less than 10 years	3537	7075	51%
10 years or more	2745	7075	38%
Diagnosis date not recorded	793	7075	11%
BMI Category			
Normal (BMI<25.0)	450	7075	6%
Overweight (BMI 25.0-29.9)	1233	7075	17%
Obese (BMI 30.0 or above)	5196	7075	73%
Height or Weight missing	196	7075	3%
Severely Obese (BMI 40.0 or above)	1746	7075	25%
Blood Sugar Control			
A1C <7.0	2544	7075	36%
A1C 7.0-7.9	1252	7075	18%
A1C 8.0-8.9	908	7075	13%
A1C 9.0-9.9	644	7075	9%
A1C 10.0-10.9	495	7075	7%
A1C 11.0 or higher	841	7075	12%
Not tested or no valid result	340	7075	5%
Mean Blood Pressure (BP) - Mean of last 2, or 3 if available			
<140/<90	5182	7075	73%
140/90 - <160/<95	1480	7075	21%
160/95 or higher	395	7075	6%
BP category Undetermined	18	7075	0%
Comorbidities			
Active Depression	2254	7075	32%
Current tobacco user	2327	7075	33%
Severely obese (BMI 40.0 or above)	1746	7075	25%
Diagnosed hypertension	5619	7075	79%
Diagnosed hypertension & mean BP <140/<90	3897	5619	69%
Diagnosed CVD	2418	7075	34%
Diagnosed CVD & mean BP <140/<90	1729	2418	72%
Diagnosed CVD & not current tobacco user	1694	2418	70%
Diagnosed CVD & statin prescribed	1618	2353	69%
Diagnosed CVD & aspirin or other antiplatelet/anticoagulant therapy prescribed	1763	2418	73%

Sample Cumulative Diabetes Audit

IHS DIABETES CARE AND OUTCOMES AUDIT REPORT - RPMS AUDIT
AUDIT REPORT FOR 2016 (Audit Period 01/01/2015 to 12/31/2015)
for PORTLAND AREA SDPI GRANTEES
7075 of 7608 patients were audited

	# of Patients (Numerator)	# Considered (Denominator)	Percent
In age 18+ chronic kidney disease (CKD)*	2275	7060	32%
CKD* & mean BP <140/<90	1545	2275	68%
CKD* & ACE Inhibitor or ARB prescribed	1692	2275	74%
In age 18+	7060	7075	100%
Chronic Kidney Disease Stage			
Normal: eGFR =>60 ml/min & UACR <30 mg/g	2462	7060	35%
Stage 1/2: eGFR =>60 ml/min & UACR =>30 mg/g	1073	7060	15%
Stage 3: eGFR 30-59 ml/min	1006	7060	14%
Stage 4: eGFR 15-29 ml/min	111	7060	2%
Stage 5: eGFR <15 ml/min	48	7060	1%
In age 18+ Chronic Kidney Disease Stage undetermined	2360	7060	33%
Number of comorbid conditions****			
Diabetes only	360	7075	5%
One	1377	7075	19%
Two	2171	7075	31%
Three	1998	7075	28%
Four	934	7075	13%
Five	220	7075	3%
Six	15	7075	0%
Tobacco Use			
Tobacco use screening during Audit period:			
Screened	6069	7075	86%
Not screened	1006	7075	14%
Tobacco use status:			
Current tobacco user	2327	7075	33%
In current tobacco users, counseled?			
Yes	1537	2327	66%
No	790	2327	34%
Not a current tobacco user	4644	7075	66%
Tobacco use not documented	104	7075	1%
Electronic nicotine delivery system (ENDS) use screening during Audit period:			
Screened	147	7075	2%
Not Screened	6928	7075	98%
ENDS use status:			
Current ENDS user	23	7075	0%
Not a current ENDS user	365	7075	5%
ENDS use not determined	6687	7075	95%
Current user of both tobacco and ENDS	15	7075	0%
Diabetes Treatment			
Diet and exercise alone	1291	7075	18%
Diabetes meds currently prescribed, alone or in combination			
Insulin	2565	7075	36%

IHS DIABETES CARE AND OUTCOMES AUDIT REPORT - RPMS AUDIT
AUDIT REPORT FOR 2016 (Audit Period 01/01/2015 to 12/31/2015)
for PORTLAND AREA SDPI GRANTEES
7075 of 7608 patients were audited

	# of Patients (Numerator)	# Considered (Denominator)	Percent
Sulfonylurea (glyburide, glipizide, others)	1770	7075	25%
Glinide (Prandin, Starlix)	41	7075	0%
Metformin (Glucophage, others)	4422	7075	63%
Acarbose (Precose)/Miglitol (Glyset)	11	7075	0%
Pioglitizone (Actos) or rosiglitazone (Avandia)	483	7075	7%
GLP-1 med (Byetta, Bydureon, Victoza, Tanzeum, Trulicity)	164	7075	2%
DPP4 inhibitor (Januvia, Onglyza, Tradjenta, Nesina)	287	7075	4%
Amylin analog (Symlin)	6	7075	0%
Bromocriptine (Cycloset)	1	7075	0%
Colesevelam (Welchol)	6	7075	0%
SGLT-2 Inhibitor (Invokana, Farxiga, Jardiance)	51	7075	1%
Number of diabetes meds currently prescribed			
One med	2750	7075	39%
Two meds	2189	7075	31%
Three meds	714	7075	10%
Four or more meds	131	7075	2%
ACE Inhibitor or ARB Prescribed			
In patients with known hypertension**	4279	5619	76%
In patients age 18+ with CKD*	1692	2275	74%
Aspirin or Other Antiplatelet/Anticoagulant Therapy Prescribed			
In patients with diagnosed CVD	1763	2418	73%
Statin Prescribed			
Yes	3859	6907	56%
Allergy, intolerance, or contraindication	167	7075	2%
In patients with diagnosed CVD:			
Yes	1618	2353	69%
Allergy, intolerance, or contraindication	65	2418	3%
In patients aged 40-75:			
Yes	3278	5548	59%
Allergy, intolerance, or contraindication	126	5675	2%
In patients with diagnosed CVD and/or aged 40-75:			
Yes	3580	6019	59%
Allergy, intolerance, or contraindication	144	6164	2%

IHS DIABETES CARE AND OUTCOMES AUDIT REPORT - RPMS AUDIT
AUDIT REPORT FOR 2016 (Audit Period 01/01/2015 to 12/31/2015)
for PORTLAND AREA SDPI GRANTEES
7075 of 7608 patients were audited

	# of Patients (Numerator)	# Considered (Denominator)	Percent
Exams			
Foot exam - comprehensive	3641	7075	51%
Eye exam - dilated or retinal imaging	3417	7075	48%
Dental exam	3059	7075	43%
Diabetes-Related Education			
Nutrition - by any provider	4159	7075	59%
Nutrition - by RD	1115	7075	16%
Physical activity	4379	7075	62%
Other	4948	7075	70%
Any of above topics	6082	7075	86%
Immunizations			
Influenza vaccine during Audit period	4027	7075	57%
Refused – Influenza vaccine	664	7075	9%
Pneumococcal vaccine - ever	5538	7075	78%
Refused - Pneumococcal	357	7075	5%
Td/Tdap/DT - past 10 years	6368	7075	90%
Refused - Td/Tdap/DT	132	7075	2%
Tdap - ever	6175	7075	87%
Refused - Tdap	116	7075	2%
Hepatitis B 3-dose series complete - ever	2647	7000	38%
Refused - Hepatitis B	357	7000	5%
Immune - Hepatitis B	75	7075	1%
Depression An Active Problem			
Yes	2254	7075	32%
No	4821	7075	68%
In patients without active depression, screened for depression during the audit period:			
Screened	3713	4821	77%
Not screened	1108	4821	23%

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	5573	7075	79%
LDL <100 mg/dl	3478	7075	49%
LDL 100-129 mg/dl	1356	7075	19%
LDL 130-189 mg/dl	678	7075	10%
LDL >=190	61	7075	1%
Not tested or no valid result	1508	7075	21%
HDL cholesterol	5574	7075	79%
In females			
HDL <50 mg/dl	1830	3745	49%
HDL >=50 mg/dl	1078	3745	29%
Not tested or no valid result	837	3745	22%
In males			
HDL <40 mg/dl	1323	3330	40%
HDL >=40 mg/dl	1343	3330	40%
Not tested or no valid result	664	3330	20%

IHS DIABETES CARE AND OUTCOMES AUDIT REPORT - RPMS AUDIT
AUDIT REPORT FOR 2016 (Audit Period 01/01/2015 to 12/31/2015)
for PORTLAND AREA SDPI GRANTEES
7075 of 7608 patients were audited

	# of Patients (Numerator)	# Considered (Denominator)	Percent
Triglycerides***	4903	7075	69%
TG <150 mg/dl	1869	7075	26%
TG 150-999 mg/dl	2981	7075	42%
TG >1000 mg/dl	53	7075	0%
Not tested or no valid result	2172	7075	31%
Kidney Evaluation			
eGFR to assess kidney function (In age 18 and above)	6343	7060	90%
eGFR >= 60 ml/min	5178	7060	73%
eGFR 30-59 ml/min	1006	7060	14%
eGFR 15-29 ml/min	111	7060	2%
eGFR < 15 ml/min	48	7060	1%
eGFR Not tested or no valid result	717	7060	10%
Urine Albumin:Creatinine Ratio (UACR) to assess kidney damage			
Yes	4462	7075	63%
No	2613	7075	37%
In patients with UACR:			
Urine albumin excretion - Normal <30 mg/g	2958	4462	66%
Urine albumin excretion - Increased			
30-300 mg/g	1147	4462	26%
>300 mg/g	357	4462	8%
In patients age 18 and above with eGFR =>30, UACR done	4283	7060	61%
Tuberculosis Status			
TB Test done (skin or blood)	3818	7075	54%
If test done, skin test	3222	3818	84%
If test done, blood test	596	3818	16%
If TB test done, positive result	493	3818	13%
If positive TB test, treatment completed	74	493	15%
If negative TB test, test done after DM diagnosis	1566	2819	56%
Combined Outcome Measures			
Patients age >= 40 meeting ALL of the following criteria: A1C <8.0, Statin prescribed, and mean BP <140/<90	1567	6159	25%

* CKD: eGFR <60 or uACR =>30
** Known hypertension: Has hypertension listed as an active problem, or three visits with a diagnosis of hypertension ever (prior to the end of the Audit period).
*** For triglycerides: >150 is a marker of CVD risk, not a treatment target; >1000 is a risk marker for pancreatitis.
**** Comorbid conditions counted are: active depression, current tobacco use, severely obese (BMI 40 or higher), diagnosed hypertension, diagnosed CVD, and CKD (eGFR<60 or uACR=>30).

Master List

What: This report will list all patients on the Diabetes Register. You will be able to select which patients will be included on the list based on any of the following:

- Register Status
- Age
- Community of Residence
- Gender
- Case Manager
- Where Followed

You can also sort by a combination of these register items; for example, a common query is generating an alphabetical list of patients by status.

Why: We encourage you to generate the master list periodically and review the patient listing for status changes and/or case management purposes.

When: Monthly - Quarterly

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **RP** Reports ...
2. Select Reports Option: **RR** Register Reports ...
3. Select Register Reports Option: **ML**
4. Enter the Name of the Register: **IHS DIABETES**
5. Do you want to select register patients with a particular status? Y// **YES**
6. Select status: A// **ACTIVE**
7. Select another status: **<ENTER>**
8. Would you like to restrict the master list by Patient age range? NO// **<ENTER>**
9. Include Patients: A// **All Communities**
10. Include which Gender(s): A// **ALL Genders**
11. Do you want to select register patients with a particular CASE MANAGER? N// **NO**
12. Do you want to select patients with a particular facility WHERE FOLLOWED? N// **NO**
13. Select Primary Sort Value: **Patient Name**
14. Select Secondary Sort Value: **<ENTER>**
15. Output Type: P// **Print the List**
16. Demo Patient Inclusion/Exclusion: E// **Exclude DEMO Patients**

Note: These directions will give you Active patients on your register. You can tailor this report further by restricting age ranges, communities, gender, case manager, or where followed. The order of these criteria are above.

********** CONFIDENTIAL PATIENT INFORMATION **********

DH Page 1

CHEMAWA H CT
DIABETES REGISTER MASTER LIST
Total number of patient selected for this report: 26

HRN	PATIENT	CASE MANAGER	LAST VISIT NEXT REVIEW
8876	BAGEI,DARELYNE L		05/07/2014
7606	CAERLAI,SERENA J	HEAD,DON	05/07/201409/14/2016
12956	ELVURD,GEORGE		05/06/2014
21208	GELLYGHAR,WINONA	HEAD,DON	07/25/2013
12675	GUKAI,STEPHANIE DELILAH		01/24/2013
9463	GUNSELAZ,TIFFANY R		10/25/2013
16057	GUNZELAZ,LLOYD	HEAD,DON	04/24/2014
9743	GYBSUN,DELMAR S		05/02/2014
19443	HACUCTE,CHARLES D	HEAD,DON	04/21/201402/22/2016
10873	HUVA,MARIE		03/21/2014
9736	HYLBORN,KEVIN C	MARTIN,BRENDA	05/06/2014
9505	HYLBORN,MARVEL J		04/25/2014
22798	JECUBS,ARLISSA	HEAD,DON	08/05/2013
8384	KUAHLAR,ROGER M		03/11/2014
12037	KYNG,HENRIETTA L		05/02/2014
16120	MUURA,BOBBY RAE	HEAD,DON	04/24/2014
22895	ONRAYN,RHONDA E	HEAD,DON	04/30/201412/02/2015
5372	PYNNACUUSA,RUBENA G		02/28/2013
17838	QOYNTARU,SANDRA LYNN	AALAMI,OLIVER O	10/23/201302/24/2016
10719	RADHURN,KRISTI M		05/07/2014
8108	REMUS,LYLE		04/18/201406/07/2016
7522	ROSSALL,MELANIE J	HEAD,DON	04/17/201409/27/2016
21368	SHEW,ELENA T	HEAD,DON	04/11/201409/13/2016
642	SYNGAR,TIM		02/18/2014
5739	WYLSUN,THELMA		04/18/2014
400029	YELLOWSLEEVE,DPATIENT	HEAD,DON	08/16/2016

Follow-Up Reports

What: The follow-up report allows you to identify members of the register who are due for or have never had, exams, procedures, diabetes patient education, immunizations, vaccines, or lab tests as part of their diabetes care.

The follow-up report displays the patients, chart numbers, and date of last exam. Only those patients who have not had a specific exam in the last 11 months are displayed. The report is sorted alphabetically by patient name within each community. Each of the follow-up reports can be limited to patients within a specific community or followed by a specific primary provider.

Why: A quick way to identify patients who are due for care.

When: Quarterly, or as needed

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **RP** Reports...
2. Select Reports Option: **FU** Follow-up Needed
3. Which Report: **ALL**
4. Which Group: Use Register Members// **<Enter>**
5. Which patients: Active// **<Enter>** for Active or type other status
6. Which Diagnosis: All Diagnoses// **<Enter>**
7. Include list of patient's upcoming appointments? NO// **<Enter>**
8. Which one: Community// **<Enter>**
9. Which Community: **<Enter>**
10. Which one: Follow-up Report// **<Enter>**
11. DEVICE: HOME// **<Enter>** to view on screen or **PRINTER NAME**, such as **SLAVE** or **S-O**, to print

This looks for the diagnosis entered under Patient Management #20

```
DIABETES REGISTER - FOLLOW-UP NEEDED REPORTS
       (Patients due now or within the next 30 days.)

       1      ALL Exams/Procedures-----------------------------
         11   Foot Exam                12   Eye Exam
         14   Depression Screening     18   Dental Exam
       2      ALL Patient Education----------------------------
         21   Nutrition                22   Exercise
         23   General Info
       3      ALL Immunizations/Vaccines-----------------------
         31   Seasonal Flu Shot        32   Pneumovax
         33   Td/Tdap                  34   TB Test
         35   Hepatitis B
       4      ALL Lab Tests------------------------------------
         41   LDL Cholesterol          42   HDL Cholesterol
         43   Cholesterol              44   Triglyceride
         45   Creatinine               46   Hemoglobin A1c
         47   Estimated GFR            48   A/C Ratio


       Type 'ALL' to include ALL Follow-up Needed
       Which Report:
```

Use the one-digit codes to find whole categories and two-digit codes for specific items.

Example: '3' returns all immunizations but '31" finds people due for flu shots.

#1: Sorted by PROVIDER

```
     NPAIHB DIABETES Register - Active Patients
     Follow-up Report: EYE EXAM                                  Page: 1
     (For Patients due now or within the next 30 days)
     REPORT DATE: MAR 10,2018

PROVIDER        PATIENT                    HRN    STATUS
--------------- -------------------------- ------ --------------------
APPLEGATE-MD,RO BAGEI,LAVERNA CHAROLETTE   23840   last EYE EXAM MAY 21,2001
APPLEGATE-MD,RO BIARS-SCHRUADAR,MARTINA L  35448   last EYE EXAM OCT 21,2008
APPLEGATE-MD,RO BLECK,CONNIE L             29070   last EYE EXAM DEC 2,2010
APPLEGATE-MD,RO LUFSTRUM,IRVIN             43400   last EYE EXAM FEB 19,2010
APPLEGATE-MD,RO PEPPYN,TODD MYCHAL         35726   last EYE EXAM JAN 27,2011
APPLEGATE-MD,RO WHAALAR,ALVIE D            11083   last EYE EXAM FEB 22,1993
BISCHOFF,JASON  NYVELE,CHRYSTOPHER RAY     41963   *NO* EYE EXAM on record.
HANSON,AARON P  BALGERDA,WILLIAM C L       37859   last EYE EXAM SEP 29,2010
HANSON,AARON P  BERFYALD,RITA K            22895   last EYE EXAM NOV 25,2010
HANSON,AARON P  CUUNS,BILLY D              36358   last EYE EXAM JAN 27,2011
HANSON,AARON P  DEWKYNS,DUSTIN B           40950   last EYE EXAM AUG 29,2010
HANSON,AARON P  HUFMENN,TED                41915   last EYE EXAM DEC 12,2010
HANSON,AARON P  KULB,COLINDA R             45446   *NO* EYE EXAM on record.
HANSON,AARON P  LYTFYN,DEBRA               30775   last EYE EXAM NOV 17,2010
HANSON,AARON P  SOLLI,GEORGE L             26904   last EYE EXAM MAY 16,2005
HANSON,AARON P  THUMES,VIRGINIA RAE        29944   last EYE EXAM JAN 28,2011
NOT LISTED      BLECKBAER,LISA LENORE      28605   last EYE EXAM NOV 4,2010
NOT LISTED      HELSTAED,RACHAEL CASSANDR  8734    last EYE EXAM SEP 30,2010
NOT LISTED      SMUOSA,LENA MARIE          22521   *NO* EYE EXAM on record.
NOT LISTED      SMYTH,MARK CARROLL         42959   last EYE EXAM JAN 14,2010
```

#2: Sorted by COMMUNITY

```
     NPAIHB DIABETES Register - Active Patients
     Follow-up Report: ALL Patient Education                     Page: 1
     (For Patients due now or within the next 30 days)
     REPORT DATE: MAR 10,2014

COMMUNITY      PATIENT                    HRN    STATUS
-------------- -------------------------- ------ --------------------
BEAVERTON      BLECKBAER,LISA LENORE      28605   *NO* EXERCISE ED on record.
BEAVERTON      HOYSMEN,TAMARA F           40222   *NO* NUTRITION ED on record.
BEAVERTON      HOYSMEN,TAMARA F           40222   *NO* EXERCISE ED on record.
BEAVERTON      HUFMENN,TED                41915   *NO* NUTRITION ED on record.
BEAVERTON      HUFMENN,TED                41915   *NO* EXERCISE ED on record.
CANBY          FUOSA,TONYA L              44027   *NO* NUTRITION ED on record.
CANBY          FUOSA,TONYA L              44027   *NO* EXERCISE ED on record.
ESTACADA       CREYN,MARCUS L JR          22545   *NO* NUTRITION ED on record.
ESTACADA       CREYN,MARCUS L JR          22545   *NO* EXERCISE ED on record.
FOREST GROVE   SMYTH,KEVIN J              45328   *NO* NUTRITION ED on record.
FOREST GROVE   SMYTH,KEVIN J              45328   *NO* EXERCISE ED on record.
FOREST GROVE   SMYTH,KEVIN J              45328   *NO* EXERCISE ED on record.
GRESHAM        SKYNNAR,BONNIE             13165   *NO* NUTRITION ED on record.
GRESHAM        SKYNNAR,BONNIE             13165   *NO* EXERCISE ED on record.
```

Creating a Follow-Up Letter

What: You can create form letters that are stored on your system. Letter inserts for information such as name, address, and date are filled in when you print.

Form letters can be printed for individual patients through Patient Management, or for groups of patients with the same follow-up needs through Follow-Up Reports.

Why: This option simplifies case management by merging patient data in the RPMS system into a letter of your choice.

When: As needed. Letters can be created, saved, and modified as you wish.

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **LM** LETTER MANAGEMENT
2. Select Letter Management Option: **LAE** ADD/EDIT DMS Letters
3. Select Action: Quit// **2** ADD Letter
4. NAME OF LETTER: **FOOT EXAM** (this is an example name)
5. Are you adding 'FOOT EXAM' as a new DMS LETTER (the 29TH)? No// **Y**
6. LETTER:

   No existing text

   Edit? NO// **Y**

6. Type your letter using the INSERTS listed below. To use the inserts, enter the number surrounded by the "|" character. ([SHIFT+\], below the backspace key). For example, |3| will insert the patient's address in each letter.

   You can also enter the name of the field, ex: |FIRST NAME|.

   Tip: It may be easier to write your letter in another program (such as Microsoft Word) and copy and paste it into this window.
7. To save and exit, hit the **F1** key let go, and type **E**. (If that doesn't work, try either **Num Lock and then E**, or the **End** key.)

TIP: You can use this function to create a quick list of the care a patient is due for. Create a letter that contains the following:

|LAST NAME|, |FIRST NAME|
|CHART|
|PROVIDER NAME|
|FOLLOW UP|

Before an appointment, check this in Patient Management, "Print Letter." Example:

```
ADANFYALD, FLORENCE
32458
APPLEGATE,ROGER
FOOT EXAM                last FOOT EXAM JUN 7,2014
EYE EXAM                 last EYE EXAM FEB 28,2014
PAP SMEAR                last PAP SMEAR JUN 7,2014
EXERCISE ED              last EXERCISE ED JUL 27,2014
```

```
==[ WRAP ]==[ INSERT ]===============[ LETTER ]===========[ <PF1>H=HELP ]====

|8|

|1| |2|
|3|

DEAR |1| |2|,

Our records show that you are due for a dental exam.

|12|

Please call the clinic at (555) 555-5555 to make your appointment.

Thank you,

Rachel Smith
Diabetes Coordinator


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

Letter Inserts

NO.	INSERT
1	FIRST NAME
2	LAST NAME
3	ADDRESS
4	PRIMARY CARE PROVIDER
5	REGISTER PROVIDER
6	FOLLOW UP
7	CHART
8	DATE
9	EDUCATE
10	FOOT EXAM EDUCATION
11	EYE EXAM EDUCATION
12	DENTAL EXAM EDUCATION
13	FLU SHOT EDUCATION
14	PNEUMO EDUCATION
15	TETANUS EDUCATION
16	TB TEST EDUCATION
17	A1C HEMOGLOBIN EDUCATION
18	CREATININE EDUCATION
19	URINE PROTEIN TEST EDUCATION
20	LIPID PANEL EDUCATION
21	FOLLOW UP WITH EDUCATION
22	NUTRITION EDUCATION
23	EXERCISE EDUCATION
24	A/C RATIO EDUCATION
25	CENTER
26	HEP B EDUCATION
27	FOLLOW UP W/EDUC (W/O DEP, EDUC)
28	eGFR
29	EKG
30	eGFR

The list of inserts is updated periodically. To see all the inserts in RPMS, choose number 4 in step 3 above.

Generating Follow-Up Letters

What: You can print a batch of letters to patients who are due for follow-up using one of the form letters created by you or someone else on your diabetes team. You can also request a follow-up report at the same time, which creates a convenient record of who the letters were printed for.

****To print one letter for a specific patient, use Patient Management option #21.**

Why: The follow-up letter can be a convenient tool to contact patients for needed care. It ensures that the *IHS Standards of Care For Patients With Type 2 Diabetes* is being addressed by your clinic.

When: Monthly, as needed.

1. How: From the Diabetes Management System Main Menu:
2. Select Diabetes Management System Option: **RP** Reports...
3. Select Reports Option: **FU** Follow-up Needed
4. Which Report: **ALL**
5. Which Group: Use Register Members// **<Enter>**
6. Which patients: Active// **<Enter>**
7. Which Diagnosis: All Diagnoses// **<Enter>**
8. Include list of patient's upcoming appointments? NO// **<Enter>**
9. Which one: Community// **<Enter>**
10. Which Community: **<Enter >**
11. Which one: Follow-up Report// **2** (Follow-up letter)
12. Select Letter No.: **Enter letter #** from list of created letters
13. DEVICE: HOME// **<Enter>** to view on screen or **PRINTER NAME**, or **SLAVE** or **S-O**, to print

March 13,2018

FLORENCE ADANFYALD
2084 MCCOY NE
WS CAMPUS, OR 97305

DEAR FLORENCE ADANFYALD,

Our records show that you are due for a dental exam.

A yearly DENTAL EXAM is recommended to look for evidence of gum disease and other conditions that can both make diabetes harder to control and can lead to premature tooth loss.

Please call the clinic at (555) 555-5555 to make your appointment.

Thank you,

Rachel Smith
Diabetes Coordinator

Register Patient General Retrieval (GEN)

What: Use GEN to search for patients in your register and print custom reports. Reports can be either lists of patients or counts of patients.

First, GEN allows you to search (or select) patients in your diabetes register. *For example, to find all inactive patients, you would search by register status.*

Decide whether you want a listing with one line per patient, or just summary counts.

Next, you choose which information you want to print about the patients you found in step 1. *For example, you may want to print each inactive patient's name, chart number, and last visit date.*

Lastly, GEN allows you to sort (or group) the resulting list. *For example, you may want to sort your list of patients by name (alphabetical list).*

Why: This report can be a useful tool for case management, updating your register, and getting information about your diabetic population.

When: As needed.

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **RP** Reports ...
2. Select Reports Option: **RR** Register Reports ...
3. Select Option: **GEN** Patient General Retrieval . . .
4. Do you want to use a previously defined report? N// **<Enter>**
5. Select Patients based on which of the above: (1-47): Choose from the listed criteria to search your register patients. Choose as many as you wish. You will then be asked for more specifics on your chosen criteria. For example, if you chose Register Status, you will need to enter the status you are looking for.
6. Would you like to select additional PATIENT criteria? NO// **<Enter>**
7. Choose Type of Report: D// **<Enter>**
8. Select print item(s): (1-56): Choose which of the listed criteria you would like printed for each patient found.
9. Enter Column width for Patient Name (suggested: 20): (2-80): 20// **<Enter>** (For each criteria you chose to print you will be asked to enter a column width. You are aiming for a total of 80 or less. Simply press enter to choose the default width.)
10. Would you like to select additional PRINT criteria? NO// **<Enter>**
11. Sort Patients by which of the above: (1-25): Choose which of the listed criteria you would like to have the patients sorted by.
12. Do you want a separate page for each Patient Name? N// **<Enter>**
13. Would you like a custom title for this report? N// **<Enter>** (You can choose Yes and type in your own title that will appear at the top of the report.)
14. Do you wish to save this SEARCH/PRINT/SORT logic for future use? N// **<Enter>**
15. DEVICE: HOME// **<Enter>** to view on screen or **PRINTER NAME**, such as **SLAVE** or **S-O**, to print)

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

1)  Patient Name                18)  Priv Ins Elibibility       35)  Intervent Result DT
2)  Patient Sex                 19)  Primary Care Provide       36)  Care Plan
3)  Patient DOB                 20)  Register Status            37)  Care-Plan Comment
4)  Birth Month                 21)  Initial Entry Date         38)  Complications
5)  Patient Age                 22)  Inactivation Date          39)  Complication Onset D
6)  Patient DOD                 23)  Case Priority              40)  Complication Comment
7)  Mlg Address-State           24)  Case Manager               41)  Diagnoses
8)  Mlg Address-Zip Code        25)  PHN                        42)  Date of Onset
9)  Living Patients             26)  Last Review Date           43)  Recall Date
10)  Chart Facility             27)  Next Review Date           44)  Etiology
11)  Patient Community          28)  Where PT Followed          45)  Risk Factors
12)  Patient Tribe              29)  Date Last Edited           46)  Medications
13)  Eligibility Status         30)  Case Comments              47)  Services
14)  Class/Beneficiary          31)  Register Provider          48)  Diagnostic Criteria
15)  Cause of Death             32)  Case History
16)  Medicare Eligibility       33)  Interventions
17)  Medicaid Eligibility       34)  Intervention Due DT

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

     Select Patients based on which of the above:  (1-48):
```

(The criteria shown in gray will not work for most sites.)

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

Choose Type of Report: D//
```

```
PRINT Data Items Menu
1)  Patient Name                21)  Medicaid Eligibility       41)  Intervention Results
2)  Patient Chart #             22)  Priv Ins Elibibility       42)  Intervent Result DT
3)  Patient Sex                 23)  Patient's Last Visit       43)  Intervent Plan Categ
4)  Patient SSN                 24)  Primary Care Provide       44)  Care Plan
5)  Patient DOB                 25)  Register Status            45)  Care-Plan Comment
6)  Birth Month                 26)  Initial Entry Date         46)  Complications
7)  Patient Age                 27)  Inactivation Date          47)  Complication Onset D
8)  Patient DOD                 28)  Case Priority              48)  Complication Comment
9)  Mlg Address-Street          29)  Case Manager               49)  Diagnoses
10)  Mlg Address-State          30)  PHN                        50)  Date of Onset
11)  Mlg Address-City           31)  Last Review Date           51)  Recall Date
12)  Mlg Address-Zip Code       32)  Next Review Date           52)  Etiology
13)  Home Phone                 33)  Where PT Followed          53)  Family Members
14)  Mother's Name              34)  Date Last Edited           54)  Risk Factors
15)  Patient Community          35)  Case Comments              55)  Medications
16)  Patient Tribe              36)  Client Contact             56)  Services
17)  Eligibility Status         37)  Register Provider          57)  Diagnostic Criteria
18)  Class/Beneficiary          38)  Case History
19)  Cause of Death             39)  Interventions
20)  Medicare Eligibility       40)  Intervention Due DT

      <Enter a list or a range.  E.g. 1-4,5,18 or 10,12,18,30>
      <<HIT RETURN to conclude selections or '^' to exit>>

  Select print item(s):  (1-57):
```

```
The Patients displayed can be SORTED by any one of the following:

     1)  Patient Name                  15)  Next Review Date
     2)  Patient Age                   16)  Date Last Edited
     3)  Patient Community             17)  Case Priority
     4)  Patient Sex                   18)  Case Manager
     5)  Patient Tribe                 19)  PHN
     6)  Patient Chart #               20)  Where PT Followed
     7)  Primary Care Provider (PCC)   21)  Register Provider
     8)  Classification/Beneficiary    22)  Inactivation Date
     9)  Eligibility Status            23)  Initial Entry Date
     10)  Cause of Death               24)  Mlg Address-Zip Code
     11)  Patient DOB                  25)  Mlg Address-State
     12)  Patient DOD                  26)  Birth Month
     13)  Register Status
     14)  Last Review Date

<<If you don't select a sort criteria the report will be sorted by Patient Name.>>

Sort Patients by which of the above:  (1-26):
```

Sample GEN Reports

GEN Report for complications

The following report will print out a patient's name, health record number, case manager, and complications, if any. This report is used to determine which patients have complications, and which complications they have. Patients with multiple complications will have them listed on succeeding lines.

Using the directions on page 26, to print out a detailed patient summary, use the following items to:

SEARCH

9) LIVING PATIENTS

38) COMPLICATIONS to specify one or more complications (optional)

Choose Type of Report: D// <Enter>

PRINT

1) PATIENT NAME,

2) PATIENT CHART #

46) COMPLICATIONS

47) COMPLICATIONS DATE OF ONSET

SORT

1) PATIENT NAME

```
                    CASE MANAGEMENT PATIENT LISTING            Page 1
                       NPAIHB1 DIABETES REGISTER
PATIENT NAME          HRN           COMPLICATION     COMPL ONSET DT
-------------------------------------------------------------------------

ADLER,STEVEN          WOR-400000    END STAGE RENAL  02/06/99
AEGLA,JACQUELINE MAR  WOR-46027     --               --
BACK,STELLA J         WOR-16518     --               --
BAGEI,GLENN L         WOR-632       KLR DIABETIC SH  10/31/11
BAGEI,TYRONE A        WOR-24432     HYPERTENSION     06/15/10
                                    DEPRESSION       12/07/11
BEKAR,AMANDA C        WOR-45748     HIGH RISK FOOT   12/06/11
                                    DRH DEPRESSION   --
BEKAR,SHARLA M        WOR-39763     HIGH RISK FOOT   11/06/11
BERFYALD,CARSON W     WOR-22869     --               --

Total Patients 108
```

GEN Report for patient status update

The following report will print out a patient's name, health record number, status, and the last time that they had visited the clinic. This report is used to determine whether your Inactive or Active patients' status is correct.

Using the directions on page 26, to print out a detailed patient summary, use the following items to:

SEARCH

20) REGISTER STATUS, specify ACTIVE, INACTIVE, TRANSIENT

Choose Type of Report: D// <Enter>

PRINT

1) PATIENT NAME
2) PATIENT CHART #
25) REGISTER STATUS
23) PATIENT'S LAST VISIT

SORT

13) REGISTER STATUS

```
            CASE MANAGEMENT PATIENT LISTING   Page 1
                 IHS DIABETES REGISTER
PATIENT NAME          HRN           REGISTER STATUS LAST VISIT
-----------------------------------------------------------------

DONN,SHEILA J         TRN-40457     ACTIVE          APR 24,2011
BRADY,MARSHA          TRN-660204    ACTIVE          JUL 15,2011
HUFFMEN,DANIEL B      TRN-11949     ACTIVE          NOV 21,2011
MOUSE,MICKEY          TRN-700227    INACTIVE `      MAR 17,2010
AWESOMEPOWER,DUDE OF  TRN-199422    INACTIVE        JAN 31,2008
SMITH,HICKORY         TRN-400000    TRANSIENT       OCT 14,2010
SMYTH,LEONARD L       TRN-31511     TRANSIENT       SEP 13,2009

Total Patients 108
```

GEN Report to list patients with upcoming review dates and their case manager

This report will list patients with upcoming review dates, and the case manager, if any, that has been assigned to them. It will also list those patients without a case manager.

Using the directions on page 26, to print out a detailed patient summary, use the following items to:

SEARCH

27) NEXT REVIEW DATE: you will be prompted to enter a beginning date and an end date for the next review dates; enter a time frame that you want to search, like T-7 (last week) for beginning date, and T+7 (next week) for an end date.

Choose Type of Report: D// <Enter>

PRINT

1) PATIENT NAME
2) PATIENT CHART #
32) NEXT REVIEW
29) CASE MANAGER

SORT

18) CASE MANAGER

```
                CASE MANAGEMENT PATIENT LISTING              Page 1
                      NPAIHB1 DIABETES REGISTER
PATIENT NAME          HRN           NEXT REVIEW   CASE MANAGER
-----------------------------------------------------------------

TENNAR,DWIGHT D       WOR-21431     DEC 06, 2011  ABEL,J
HALM,TRACY            WOR-21473     JUN 07, 2011  ABEL,J
FRYCKA,ARVINE J       WOR-23053     MAR 06, 2012  ABEL,J
GUNZELAZ,GREGORY B    WOR-16057     JUN 07, 2011  ACKERMAN,D
HEMPTUN,JACKIE L      WOR-44141     --            ACKERMAN,ROGER
MUURA,PAMELA JANE     WOR-41575     DEC 06, 2011  ADAMS,BOB
RUDRYGOAZ,CHRISTINE   WOR-33204     MAR 06, 2012  ALBERT,L

Total Patients 108
```

Sample GEN Reports (continued)

GEN Report to list Active patients by primary care provider with last visit

This GEN report will list the living patients on your register, and their Primary Care Provider (if one is assigned), and their last visit to the clinic.

Using the directions on page 26, to print out a detailed patient summary, use the following items to:

SEARCH

9) LIVING PATIENTS
20) REGISTER STATUS (ACTIVE)

Choose Type of Report: D// <Enter>

PRINT

1) PATIENT NAME
2) PATIENT CHART #
24) PRIMARY CARE PROVIDER
23) PATIENT'S LAST VISIT

SORT

7) PRIMARY CARE PROVIDER

```
                    CASE MANAGEMENT PATIENT LISTING      Page 1
                       NPAIHB1 DIABETES REGISTER
PATIENT NAME          HRN           PRIMARY PROVIDE  LAST VISIT
-------------------------------------------------------------------
KAERNS,PHYLLIS A G    WOR-30778     --               JAN 14, 2011
MURYN,MARTIE D        WOR-31065     --               DEC 08, 2012
NAWBRUOGH,CARMEN YVO  WOR-33071     HANSON,AARON P   APR 05, 2012
COLLAN,RANDI MICHELL  WOR-33832     HANSON,AARON P   JAN 13, 2011
FYNNYCOM,RONDA R      WOR-36126     HANSON,AARON P   JAN 11, 2011
CUUNS,BILLY D         WOR-36358     HANSON,AARON P   DEC 08, 2011
SHERAK,TONI L         WOR-40181     HANSON,AARON P   JAN 08, 2011

Total Patients 100
```

GEN Report to count active patients assigned to primary care provider

This report will list all the primary care providers, and the number of patients that are assigned to each. Instead of the Detailed Patient Summary, at the GEN Output Options screen choose Total Counts and Sub-counts.

SEARCH

9) LIVING PATIENTS
20) REGISTER STATUS (ACTIVE)

Choose Type of Report: D// S (Sub-counts)

SORT

7) PRIMARY CARE PROVIDER

```
              CASE MANAGEMENT PATIENT LISTING      Page 1
                 NPAIHB1 DIABETES REGISTER
       PATIENT SUB-TOTALS BY:  Primary Care Provider (PCC)
-------------------------------------------------------------

Primary Care Provider (PCC):
          --                                      13
          ADAMS,KAREN                              1
          APPLEGATE-MD,ROGER H                    34
          BAILEY,WILLIAM                           1
          BISCHOFF,JASON M FNP                    10
          HANSON,AARON P DO                       39
          LEE,DONNIE MD                            1
          LEMMERS,MICHAEL J                        1


Total Patients 100
```

Section 2: Supporting Information

Diabetes Capacity Pyramid

What: A self-assessment tool to measure the ability and needs of tribal diabetes data tracking systems.

Why: To determine diabetes data system needs of each program and to assess progress at improving diabetes data systems.

How: The tribes will use the tool to self-assess their capacity level.

When: This tool will either be mailed to sites and followed up with a phone call or will be discussed during site visits.

The Western Tribal Diabetes Project (WTDP) Diabetes Data Capacity Pyramid is a tool to measure the ability and needs of tribal programs to track the care and health statistics of patients with diabetes. A complete, accurate, and comprehensive data system is key to ensuring the standards of care are met for each patient with diabetes. The data system is necessary to determine the true impact diabetes has on American Indians and Alaska Natives, can be used to strengthen the care of those with diabetes and ultimately move the community towards prevention.

The structure of the Pyramid was chosen to illustrate the need for a solid foundation and the step-by-step approach necessary for a stable, sustainable diabetes data system. Progress upward on the Pyramid is dependent on the strength of the levels below. It is likely that programs will gain and lose capacity over time. By using this tool to assess diabetes data capacity WTDP can best target technical assistance and resources to create successful public health systems. This is a tool developed for tracking diabetes data systems, but can be a model for other disease management and prevention activities.

Components of the Diabetes Data Capacity Pyramid

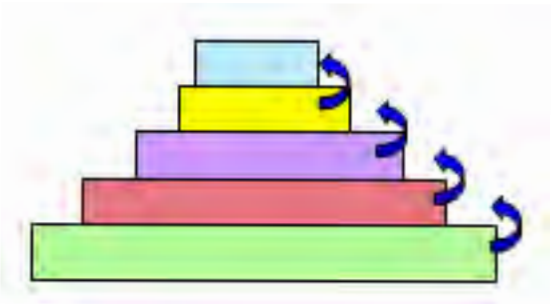
Data-Informed Prevention – ability to focus prevention efforts based on objective data

Data Utilization – ability to use data for case management, standards of care, etc.

Data Retrieval – ability to retrieve information from database

Data Entry – ability to enter comprehensive and quality data

Data Systems Capacity – foundation for a data system



Diabetes Data Capacity Pyramid

Western Tribal Diabetes Project

Site Name:_____
Date of completion:_____
Completed by:
__Diabetes Team
__Diabetes Coordinator
__Executive Director
__Other_____

Location of Program

DATA-DRIVEN PREVENTION

- ❑ Monitor risk factors in populations to target screening and interventions
- ❑ Monitor HgbA1c to prevent complications
- ❑ Monitor patients with Impaired Glucose Tolerance
- ❑ Tribe uses data to shape own research
- ❑ Other_____

DATA UTILIZATION

- ❑ Use diabetes (DM) register to manage patient care
- ❑ Determine rates of diabetes and associated complications
- ❑ Use audit results for quality improvement
- ❑ Present data to clinic
- ❑ Present data to tribe
- ❑ Use DM data for grant writing and reporting
- ❑ Other_____

DATA RETRIEVAL

- ❑ Can generate Q-MAN searches
- ❑ Can generate letters for patients follow up
- ❑ Use Diabetes Register in Q-MAN searches
- ❑ Can generate reports using the Diabetes Management System (DMS)
- ❑ Can generate the cumulative audit in DMS
- ❑ Other_____

DATA ENTRY

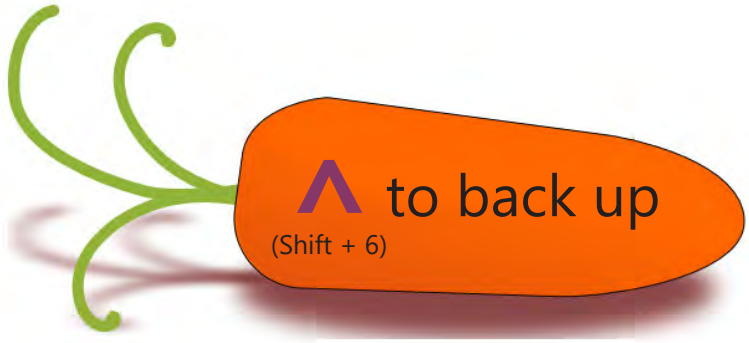
- ❑ Perform timely Patient Care Component (PCC) data entry
- ❑ Maintain and update PCC Active Problem List
- ❑ Register is updated at least every six months
- ❑ Diabetes related care (immunizations, tobacco status, patient education, comprehensive foot exam, eye exam…) is documented in PCC
- ❑ Diabetes diagnosis, complications, and onset dates are documented in register
- ❑ Medications are documented in PCC
- ❑ Lab results are documented in PCC
- ❑ Diabetes Team has access to DMS
- ❑ Other_____

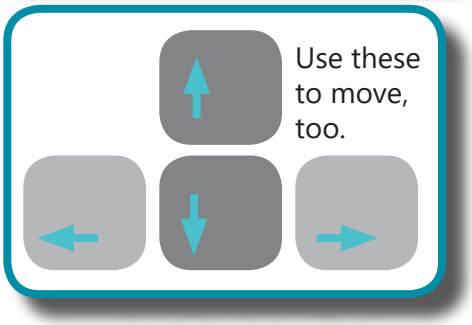
DATA SYSTEMS CAPACITY

- ❑ Have Tribal Health Board support
- ❑ Have administrative support
- ❑ Have clinical support
- ❑ Have RPMS Site Manager support
- ❑ Have computerized medical records (other than RPMS)
- ❑ Have RPMS with current packages
- ❑ Have a Diabetes Coordinator
- ❑ Have multidisciplinary diabetes team
- ❑ Diabetes team trained in DMS
- ❑ Staff trained in PCC data entry and ICD-9 Coding
- ❑ Tribal member trained in DMS
- ❑ Providers trained to document all diabetes-related care on PCC forms
- ❑ Tribal members know health data is being gathered on diabetes
- ❑ Have system to notify key staff of new diabetes patients
- ❑ Other_____

RPMS Hints

For information, type **??**
For less info, type **?**
For more, type **???**





Dates

7/15/03
071503
7-15-03
7 15 03
JUL 15 2003

Date Shortcuts

T = Today
T+10 = 10 days from now
T-365 = 1 year ago
T+40W = 40 weeks from today
T-3M = 3 months ago

deletes the contents of a field

Hi! My name is ...

MOUSE,MINNIE
87612 (chart number/HRN)
5/15/1928
[SPACE] [ENTER] for the last person you entered

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

I'm typing in this screen, and now I'm done,
and I want to get out. Q for quit? No, not
that. ^ ^ ^ to escape? Hmm, that doesn't work.
Now what? Oh, yeah --
```

F1 then E

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

Register Patient Status: Each patient in the register must have a register status. This allows you to group patients for reports (example: running the audit on only active patients). There is no standard definition for the different register statuses, but it is helpful if everyone in a clinic has clear guidelines to follow. Here are some examples.

Status	Example 1*	Example 2
Active	Patients who obtain primary care at your facility and have been seen for a diabetes medical visit within the past year. The Active list will be used for the annual IHS Diabetes Audit	Patients with at least 1 primary care visit in the past 12 months or patients who are not attending clinic, but you do not know if they have recently moved or found another source of care
Inactive	Patients not seen within the past 2 years or patients no longer utilizing any services of your facility, or who have moved away.	Patients who have moved away permanently or who you know to be receiving care elsewhere or who have not had a primary care visit in more than 2 years
Transient	Patients who are seen for primary diabetes care elsewhere, but visit your clinic periodically for some level of care, e.g., education, medications, dental, etc.	Not a local resident/resides outside of CHSDA
Deceased	self-explanatory	Patients you know to be deceased (does not require a death certificate on file)
Non-IHS	Non-Indian patients	Non-Indian patients
Unreviewed	Patients in your register who have not gone through medical record review. Add new patients to the Diabetes Register as "un-reviewed" until diagnosis of diabetes is substantiated.	Patients on dialysis Note: The word "unreviewed" has no relationship to dialysis — it is just a category that was not being used. By designating a status for dialysis patients, you can streamline reporting for that group.
Lost to follow-up	Temporary category where patients can be moved until appropriate status category is determined. These are patients seen at your facility that have not had a visit within the last year, but had a visit within the past two years. EX: "Active" register patient who has not had a visit at your facility in 13 months.	Unable to contact, defined as at least 3 tries in 12 months (should be documented in the patient's chart)
Noncompliant	*seldom used; not searchable in QMAN*	

*Example 1 definitions are taken from recommendations for California diabetes programs in 2005.

Saving the Register as a Template

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **QMAN**
2. Enter RETURN to continue or '^' to exit: **<Enter>**
3. Your choice: SEARCH// **1** Search PCC Database
4. What is the subject of your search? LIVING PATIENTS // **REGISTER**
5. Which CMS REGISTER: **IHS DIABETES** (or the name of your register)
6. Which Status(es): (1-8): 1// **8** (all statuses)
7. Which Diagnosis: All Diagnoses// **6** (all diagnoses)
8. Attribute of IHS DIABETES REGISTER: **<Enter>**
9. Your choice: DISPLAY// **4** STORE results of a search in a FM search template
10. Enter the name of the SEARCH TEMPLATE: **DRH DM REG 040515**
11. Are you adding 'DRH DM REG 040515' as a new SORT TEMPLATE? No// **Y** (Yes)
12. Edit? NO// **<Enter>**
13. Want to run this task in background? No// **<Enter>**

Start with your initials and use the current date to name your template.

Sample Results

```
PATIENTS          SELLS
                  NUMBER
-------------------------------------------------------------------------------

WATERMAN,RAE*     100003
WHEELWRIGHT,MAND  100006
MILLER,SALLY*     100010
ROBERTS,DIANE*    100018
WHEELWRIGHT,WALL  100026
VON BRAUN,RAY     100031
SMITH,MAUDE       100047
WASHINGTON,JOAN*  100050
WINKERBEAN,JESS*  100053
SMITH,FAY*        100065
WHEELWRIGHT,MALC  100069

Search template completed...
This query generates 11 "hits"
Time required to create search template: 1 SECOND
```

Using the template to exclude register patients from your search

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **QMAN**
2. Enter RETURN to continue or '^' to exit: **<Enter>**
3. Your choice: SEARCH// **1** Search PCC Database
4. What is the subject of your search? LIVING PATIENTS // **<Enter>**
5. Attribute of PATIENT: **[DRH DM REG 010518**
6. Your choice (1-4): 1// **2** (Living pts must not be a member of the DRH DM REG 040512 cohort)
7. Attribute of PATIENT: **DX**
8. Enter DX: **[SURVEILLANCE DIABETES**
9. Press return to continue: **<Enter>**
10. Enter ANOTHER DX: **<Enter>**
11. Want to save this DX group for future use? No// **<Enter>** (No)
12. First condition of "DIAGNOSIS": **SINCE**
13. Exact date: **T-3M** (DEC 12, 2017)
14. Next condition of "DIAGNOSIS": **<Enter>**
15. Attribute of LIVING PATIENTS: **<Enter>**
16. Your choice: DISPLAY// **<Enter>** to view on screen or **PRINTER NAME, such as SLAVE or S-O**, to print
17. Your choice (1-3): 1// **2** or **3** (see examples below)

Type the name of your search template here.

This is a taxonomy that includes all the ICD-9 and 10 codes for diabetes

Type in an appropriate date. You can use an exact date or date a set amount of time in the past (such as T-12M).

Sample Results

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

PATIENTS          SELLS   DX/ICD9  DATE OF POV  PROVIDER NARRATIVE
(Alive)           NUMBER  #
-------------------------------------------------------------------------------
SMITH, CAROL      122695  250.00   FEB 28,1999  TYPE 2 DM
SMITH, CAROL      122695  250.00   MAY 25,1999  TYPE 2 DM
BRADY, MIKE       102695  250.00   MAR 15,1999  DIABETES
WILLIAMS,JASON    102052  250.0O   APR 10,2000  DM SCREENING


PATIENTS          G ROND DX/ICD9    BENEFICIARY
                  NUMBER #          CLASS
-------------------------------------------------------------------------------
WILLIAMS,MARCIA   988     +         INDIAN/ALASKA NA
DAVIDSON,MARK     888     +         INDIAN/ALASKA NA
BRADY,MIKE        34567   +         INDIAN/ALASKA NA
FUDD,ELMER        88879   +         INDIAN/ALASKA NA
Total: 4
```

2) List of each patient visit where POV was for DM, with provider narratives

3) Unduplicated list of patients

Patients with No Diabetes on the Problem List

PLDX: Patients with no diagnosis of diabetes on problem list

The following steps can be used to find patients on your register that do not have a diagnosis of diabetes on their problem list. Patients that do not have a diagnosis of diabetes on their problem list may have been miscoded into the diabetes register. For patients that were not miscoded, it is important for the provider to be aware of the patient's diagnosis of diabetes.

Option 1: Report for patients on the DMS Register

1. Open RPMS
2. Go to **DMS** Diabetes Management System
3. Go to **RP** Reports Menu ...
4. Enter **PLDX** Patients w/no Diagnosis of DM on Problem List
5. Select **R** Those who are members of a registry
6. Enter the Name of the Register: **IHS DIABETES** [or the name of your register]
7. Do you want to select register patients with a particular status? Y// **<enter>**
8. Which status: A// **<enter>** ACTIVE
9. Enter your **Printer Name**, or use the default "HOME" to display the results on your screen.

Option 2: Report for patients with at least *N* visits with diabetes as purpose of visit (POV)

1. Open RPMS
2. Go to **DMS** Diabetes QA Audit Menu
3. Go to **RP** Reports Menu ...
4. Enter **PLDX** Patients w/no Diagnosis of DM on Problem List
5. Select **D** Those with at least N Diabetes Diagnoses
6. How many diagnoses must the patient have had: (1-999): 3// [**enter any number**]
7. The report will allow you to restrict the results to patients whose last visit was "recent." Otherwise, the report will give you patients with at least N number of diabetes visits since the start of your RPMS database. [Enter a date, e.g., **T-24M**, or **<enter>**]
8. Enter your **Printer Name**, or use the default "HOME" to display the results on your screen.

```
********** CONFIDENTIAL PATIENT INFORMATION **********
S1                                                                    Page 1
                              TRAINING HC
            PATIENTS WITH NO DIAGNOSIS OF DIABETES ON PROBLEM LIST
                    Patients on the IHS DIABETES Register

PATIENT NAME          HRN    DOB              LAST DM DX      # OF DM DXS
-------------------------------------------------------------------------
AEGLAMEN,LONNIE W     40785  Dec 27, 1959  M  Oct 30, 2005    3
BACK,TOBI WYNN        21511  Nov 17, 1947  F  Apr 28, 1995    1
BALYLLA,GERALD A JR   30487  Jan 16, 1939  M                  0
BOANU,SHERMAN W       37067  Aug 29, 1967  M  Oct 11, 2007    2
JONES,MARSHA          99975  Jan 01, 1967  F  Mar 15, 2006    2
```

NDOO: Patients with no date of onset

This report will list patients who are on the diabetes register who do not have an onset date for diabetes recorded in either the problem list or the register data (accessed through the Patient Management screen under #20 - Diagnosis). The Annual IHS Audit tracks how long patients have lived with diabetes.

1. Open RPMS
2. Go to **DMS** Diabetes Management System
3. Go to **RP** Reports Menu …
4. Enter **NDOO** DM Register Pts w/no recorded DM Date of Onset
5. Enter the name of the Register: **IHS DIABETES** [or the name of your register]
6. Do you want to select register patients with a particular status? Y// **<enter>**
7. Which status: A// **<enter>**
8. Demo Patient Inclusion/Exclusion: E// **<Enter>**
9. Enter your **Printer Name**, or use the default "HOME" to display the results on your screen.

```
********** CONFIDENTIAL PATIENT INFORMATION **********
S1                                                                    Page 1
                                TRAINING HC
     DIABETES REGISTER PATIENTS WITH NO RECORDED DATE OF ONSET OF DIABETES
                    Patients on the IHS DIABETES Register

PATIENT NAME          HRN    DOB               LAST DM DX      #DM DXS DM ON PL
-------------------------------------------------------------------------------
AEGLA STEFF,AMY M     32951  Jul 17, 1960  F   Apr 19, 2007    2          YES
ALLYSUN,JULIE ANN     477    Nov 11, 1927  F   Jun 23, 2003    56         YES
BALYLLA,GERALD A JR   30487  Jan 16, 1939  M                   0          NO
BOANU,SHERMAN W       37067  Aug 29, 1967  M   Oct 11, 2007    2          NO
BUORESSE,LARRY A SR   40247  Nov 10, 1938  M   Aug 21, 2003    10         YES
CEODLA,CHAD B         29189  Jan 18, 1952  M   Jul 10, 1995    5          YES
CREM,JOLYNE M         20989  Sep 23, 1948  F   Mar 24, 1999    6          YES
DALGERYTU,HEATHER A   38423  Nov 01, 1972  F   Feb 28, 2002    5          YES
DONN,SHEILA J         40457  Feb 18, 1937  F   Aug 04, 2003    2          YES
```

Last DM DX refers to the last time a patient received a diagnosis of diabetes. Typically, a patient will receive a diagnosis of diabetes every time that they see a provider

#DM DXS DM refers to the number of times a patient has received a diagnosis of diabetes. The number usually refers to how many purpose of visit for diabetes the patient has.

DM ON PL: Does the patient have a diagnosis of diabetes on their problem list?

Submitting the Electronic IHS Audit

Getting ready

Update your active diabetes register patients. These are the people you provide diabetes care to, and who you want to run your reports on throughout the year. If your definition of "active" patients is not the same as the audit definition, you can always use a QMAN search to fix that. (Instructions below.)

Save a template of active patients for your audit. You are aiming to include patients who:

- Have type 1 or type 2 diabetes
- Had at least 1 primary care visit in the calendar year
- Are American Indian or Alaska Native

Exclude patients who:

- Are receiving most of their diabetes care elsewhere (through Contract Health, a dialysis center, jail, nursing home, etc.)
- Did not live in the area during the year, or
- You were unable to contact (3 failed attempts in 12 months)

A QMAN Template for your audit population

SUBJECT: REGISTER
WHICH REGISTER: <name of your register, ex: IHS DIABETES>
WHICH Status(es): 1 (active)
WHICH Register Diagnosis: 6 (all diagnoses)
ATTRIBUTE: DX
Enter DX: [SURVEILLANCE DIABETES <enter until next condition>
ATTRIBUTE: VISIT
First condition: BETWEEN
Exact starting date: 1/1/2017
Exact ending date: 12/31/2017
Next condition: CLINIC
Enter CLINIC: [BGP PRIMARY (this uses the GPRA taxonomy for primary care visits)
<enter> until you get to the output screen
Your choice: 4 (store results in a search template)
Enter the name of the SEARCH TEMPLATE: DM AUDIT 2015
DESCRIPTION: Edit? Y
Cohort for 2015 DIabetes Audit. Uses Active IHS DIABETES register patients, beneficiary status 01, at least one visit in 2013 for diabetes (DX 250.00-250.93) coded for a clinic in the BGP PRIMARY CARE taxonomy.
<F1, E> to save and exit
Run this task in background? No// <enter>

Check and update taxonomies. Instructions on pages 48-51.

Review your audit report. Follow the steps below. If you have paper charts (not EHR), you may wish to print an individual audit sheet for all patients and review their charts for missing items (print option 4).

1. From the main menu, go to **DMS** Diabetes Management System (*may also be listed as BDM*)
2. Select Diabetes Management System Option: **DA** (*Diabetes QA Audit Menu...*)
3. Select Diabetes QA Audit Menu Option: **DM18** (*2018 Diabetes Program Audit...*)
4. Select 2015 Diabetes Program Audit Option: **DM18** (*Run 2018 Diabetes Program Audit*)
5. End of taxonomy check. HIT RETURN **<enter>**
6. Enter the Official Diabetes Register: **IHS DIABETES** (*or the name of your register*)
7. Enter the Audit Date: 12/31/2017 (*The last day of the calendar year*)
8. Run the Audit for: P// **S** (*Search template of patients, if you made one - C if otherwise*)
9. Enter Search Template Name: <the name you saved>
10. Limit the audit to a particular primary care provider? N// **<enter>**
11. Limit the patients who live in a particular community? N// **<enter>**
12. Select Beneficiary Population to include in the audit: 1//**<enter> Indian/Alaska Native (Class. 01)**
13. Select whether to include or exclude pregnant patients in the audit: E// **<enter> Exclude Preg. Patients**
14. Do you want to select: A// **<enter>** (*ALL patients selected so far*)
15. Enter Print option: 1// **3** (*Cumulative Audit Only*)
16. Demo Patient Inclusion/Exclusion: E// **<enter>**

17. Do you wish to: P// **P** to print, or **B** to Browse followed by PL to print
18. DEVICE: HOME// (*enter the name of your printer here*)

Create the audit data file

Follow steps 1-12 on the previous page, then:

13. Enter the Print Option: 1// **2** (*Create AUDIT EXPORT file*)
14. Enter the name of the FILE to be Created (3-20 characters): (*Enter a short name, example: DMCLINIC12A. Your file may be saved to a server that is shared with other clinics, so it is useful to include the name or initials of your clinic in the name of the file, plus the year and an "A" in case you have to repeat.*)
15. Write down the name of the file, example: DMCLINIC14A.txt
16. Is everything ok? Do you want to continue? Y// **<enter>**
17. Demo Patient Inclusion/Exclusion: E// **<enter>**
18. Won't you queue this? Y// **<enter>**

Wait a few minutes, then ask your site manager to retrieve the data file for you. It is usually saved in the spub directory (they will know what this is). To get it to you, they should save the file to a secure network drive — please do not send this identified patient information in unencrypted email.

Upload to WebAudit and check for errors

- For audit links, including WebAudit, go to www.diabetes.ihs.gov and click on "Audit" under "Resources" in the navigation list on the left.
- If you don't have one already, request a WebAudit account.

19. Log in, then click on **Diabetes WebAudit**, then click on **Upload Data** and follow the instructions there.
20. Run the Data Quality Check. This will identify any values in your audit data that are unusually or impossibly high or low.
21. Review errors from the Data Quality Check. Some may be actual values (for example, high triglycerides). These can be left as they are.
22. Correct any actual errors (for example, a height of 12 inches) **in RPMS/EHR, not in WebAudit.** That way, your patient records will be more complete.

- If you see multiple errors with the same lab test, this is usually because (1) the lab is in the wrong taxonomy, or (2) the lab put a phrase such as "see comments" in the result field. If (1), fix the taxonomy before you create a new data file. If (2), note the chart numbers and correct values and save them for correction by hand in WebAudit (see below).

Repeat, if needed

If you had errors and corrected them in RPMS/EHR, you will need to create and upload a new data file (repeat previous steps).

Make final corrections and lock the data

- If you found errors that you were unable to correct in RPMS/EHR, you can go to "Data Entry" and correct them on the individual records, which are identified by chart number.
- Use the Facility Administration section of WebAudit to enter
  - the total number of patients (same as your number of records unless you used a sample)
  - your SDPI grant number
- When your audit is complete, remember to "lock" the records so that IHS will know to retrieve the final file. You should receive a confirmation email within minutes.

Existing Registers on Your System

Note: You will need access to the Case Management System (CASE, CMS, or ACM) to do this, or work with your site manager.

How: From the RPMS main menu:

1. Select IHS Core Option: **CASE** or **CMS** (depends on how your system is set up)
2. Select Case Management System Option: **CR** (Create/Modify Register Structure)

You should see a list of all the registers on your system.

To exit, hit enter.

If the name has the word DIABETES in it, the register can be used with the Diabetes Management System.

Before you can use a register, you must be added as an authorized user. Only the register creator can add users.

Finding & Changing the Register Creator

How: From the RPMS Main Menu:

1. Select Menu Option: **CMS**
2. Select CASE MANAGEMENT SYSTEM Option: **ECR**
3. Select Register: <Enter the name of your register here>
4. REGISTER CREATOR: LASTNAME,FIRSTNAME// **<Enter>** to keep the same creator or **NEWLASTNAME,NEWFIRSTNAME** to change the creator

```
Select Register: IHS PRE-DIABETES
REGISTER TYPE: IHS PRE-DIABETES       ABBREVIATION: DM
  DATE ESTABLISHED: DEC 07, 2010      REGISTER DEVELOPER: POSTMASTER
  VIEW ALL LIST ENTRIES: NO           PCC PROBLEM LIST: YES
  ALLOW LAYGO FOR LIST ENTRIES: NO    RESTRICT CATEGORY USE: YES
ELEMENTS: COMPLICATIONS
ELEMENTS: DIAGNOSES
ELEMENTS: RISK FACTORS
ELEMENTS: REGISTER DATA
ELEMENTS: DIAGNOSTIC CRITERIA
ELEMENTS: CASE REVIEW DATES
  REGISTER CREATOR: HEAD,DON
AUTHORIZED USER: KAKUSKA,ERIK
AUTHORIZED USER: HEAD,DON
AUTHORIZED USER: LOPEZ,KERRI

REGISTER CREATOR: HEAD,DON//
```

How: From the Diabetes Management System main menu:

1. Select Diabetes Management System Option: RM Register Maintenance
2. Select Register Maintenance Option: US User setup
3. Which one: 1 Add/Remove DMS Authorized User
4. Select NEW DMS User: LAST NAME, FIRST NAME
5. Do you wish to REMOVE LAST NAME, FIRST NAME as an Authorized User of the Diabetes Management System? NO
6. Remove LAST NAME, FIRST NAME's REGISTER MANAGER AUTHORITY? Enter YES or NO depending on whether this user is allowed manager authority.
7. Which one: "^" to return to the main menu.

OR

How: From the Case Management System main menu:

1. Select Case Management System Option: AU Add authorized users
2. REGISTER: IHS DIABETES (or the name of your diabetes register)
3. Select AUTHORIZED USER: LAST NAME, FIRST NAME
4. Are you adding LAST NAME, FIRST NAME as a new AUTHORIZED USER (the 3RD for this CMS REGISTER TYPE)? Y
5. Select AUTHORIZED USER: <ENTER> to exit or LAST NAME, FIRST NAME to enter another user

Creating a New Register

DIABETES
- ☐ **Type 1**
- ☐ **Type 2**

STATUS
- ☐ **Active**
- ☐ **Inactive**
- ☐ **Transient**
- ☐ **Deceased**

An analogy

Creating a register is like making a bunch of stickers that you can put on patient charts.

Adding patients to the register is like putting those stickers on charts.

Running reports is like reviewing charts that have certain stickers on them.

Creating a New Register (cont.)

You have three options for creating a register. For all options, from the main RPMS MENU:

1. Select IHS Core Option: **CASE** or **CMS** (depending on your menus -- both are for the CASE MANAGEMENT SYSTEM

Option 1: Install Pre-Diabetes Register (PDM)

Select to create a register called IHS PRE-DIABETES with the fields listed in column 3 on the next page. You can create the register and rename it (if you wish) using CR - Option 3.

Option 2: Install IHS Diabetes Register (IDR)

Select to create a register called IHS DIABETES with the fields listed in column 1 on the next page. You can create the register and rename it (if you wish) using CR - Option 3.

Option 3: Create/Modify Register Structure (CR)

Use this option to create a diabetes register, or to rename either type of register created with PDM or IDR.

1. Select Case Management System Option: **CR**
2. Register: <SOMETHING> **DIABETES** (Typically IHS DIABETES)
   IMPORTANT: The name must include the word DIABETES or PRE-DIABETES so that you can use it with DMS.
3. Are you adding 'IHS DIABETES' as a new CMS REGISTER TYPE? No // **Y**
4. REGISTER NAME: IHS DIABETES // <enter> to confirm or different name to change
5. DATE ESTABLSD: <today's date>
6. REGISTER CREATOR: LASTNAME,FIRSTNAME of person responsible for register
7. HEALTH SUMMARY DISPLAY: **Y** (regular Health Summary will show Diabetes Care Summary at the end for patients on the register)
8. BRIEF DESCRIPTION: (optional--a sentence to describe the purpose of the register)
9. 'A' to ADD, 'D' to DELETE ... ==> **<enter>**
   (note: DMS will take care of these options for you, so you can skip this step)

ALL OPTIONS: Next steps (required)

1. Add YOURSELF and anyone else who needs to use the register as an authorized user (see "Adding Users to Your Register" section of this manual).
2. Users must also have security keys for DMS (see "Allocating Security Keys for DMS").
3. To use the register, go to DMS — DIABETES MANAGEMENT SYSTEM. If more than one register exists on your system, you will be prompted to specify which register.
4. There are no patients on a new register. To add them, use PM — PATIENT MANAGEMENT.

Stored in the register		
Diabetes Register (IDR)	**Both types of register**	**Pre-Diabetes Register (PDM)**
Diagnosis Gestational DM Imp Glucose Tolerance (IGT) Type 1 Type 2 **Complications** CVA (Stroke) End Stage Renal Disease Fixed Proteinuria High Risk Foot Hypertension Laser Tx for Retinopathy Major Amputation(s) Minor Amputation(s) Retinopathy **+ [Any you add]**	**Register data (modified in Patient Management, #1)** Register Status Where followed (clinic name) Register provider Case manager Contact Entry date (i.e. when added to register) Last review [date] Next review [date]	**Diagnosis** Gestational DM Imp Fasting Glucose (IFG) Imp Glucose Tolerance (IGT) Metabolic Syndrome Other Abnormal Glucose Type 1 Type 2 **Complications** Acquired Acanthosis Nigricans CVA (Stroke) End Stage Renal Disease Fixed Proteinuria High Risk Foot Hypertension Laser Tx for Retinopathy Major Amputation(s) Minor Amputation(s) Morbid Obesity Obesity - NOS Polycystic Ovaries Proteinuria Retinopathy **+ [Any you add]**

Stored in the main database (PCC), but viewable through register reports		
Registration information Problem list Measurements: Height, weight, BMI, blood pressure Tobacco use & counseling Hypertension Exams: Foot, eye, dental	Patient education Depression as active diagnosis Depression screening Diabetes medications ACE/ARB use Antiplatelet therapy Lipid lower agents TB testing	ECG Immunizations: Flu, pneumovax, Td or Tdap Labs: HbA1c, serum creatinine, estimated GFR, cholesterol, HDL, LDL, triglycerides, urine protein testing
What people see in the regular record of a patient who is on a diabetes register		
On the health summary: Diabetes patient care supplement (DPCS) shows up at the end In iCare: Register name displays in the individual patient's record		

Allocating Security Keys for DMS

From your Site Manager's menu:

Choose **MENU MANAGEMENT**

Choose **KEY MANAGEMENT**

Choose **ALLOCATION OF SECURITY KEYS**

Allocate key: **AMQQZMENU**

Another key: **AMQQZCLIN**

Another key: **AMQQZEMAN**

Another key: **AMQQZMGR**

Another key: **AMQQZPROG**

Another key: **AMQQZRPT**

Another key: **BDMZMENU**

Another key: **BDMZ REGISTER MAINTENANCE**

Another key: **BDMZ SWITCH OLD DX ENTRIES**

Another key: **BDMZEDIT**

Another key: [Enter]

Holder of key: [LAST NAME, FIRST NAME]

Another holder: [Enter] or [Enter Another User]

<You've selected to following holders:

(User Name)

You are allocating keys. Do you wish to proceed? YES// [Enter]

<Key is being assigned to:

(User Name)

You will also need to go into Edit User and give user an "M" in the File Manager Access Code.

For the DMS GUI (Visual DMS) there are two SECONDARY MENU OPTIONS under Edit User:

SECONDARY MENU OPTIONS: BDMGRPC

SYNONYM: BDMG

SECONDARY MENU OPTIONS: BMXRPC

SYNONYM: BMX

What: You can change your diabetes register's list of complications by adding, editing, or deleting complications from the overall list. Common complications are added automatically when the DMS is installed. (This changes your register; to edit an individual's list of complications, see page 9.)

Why: To identify, track, and address specific complications for your patient population with diabetes.

When: When setting up a register, or when your tracking needs change.

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **RM** Register Maintenance ...
2. Select Reports Option: **CL** Complications List ...
3. Select Action: **2** Add Complication
4. Name of New Complication: Type specific complication here...Example: **Hypertension, Obesity, CVA, etc.**
5. OK?: **Yes**
6. Select Action: Quit// **<Enter>**

If you add ICD-9 codes to the Complications List, whenever a patient from your register has a visit with one of those codes, the complication will automatically be added to that patient's record.

7. At the prompt, type **1** Edit Complication.
8. Choose from the complication you want to add an ICD-9 code to from the numbered list, and **<enter>**
9. If you want to edit the name of the complication, type in the new name. If you do not want to edit the name, **<enter>**
10. To see a list of all ICD codes currently assigned to a complication, enter one question mark [**?**] at the 'Select ICD Diagnoses' prompt.
11. Enter the ICD-9 code you want to assign to the complication. For example, for Retinopathy, type in the code 250.50. (Each code will have to be input individually. You will not be able to put in a range of codes.)
12. Once finished, **<enter>** at the prompt, to return to the Complications List.

To delete an ICD code from a complication, enter the ICD code at the 'Select ICD DIAGNOSES' prompt, press <ENTER> to accept that code, and then type @ to delete the ICD code.

```
COMPLICATION: DEPRESSION//
Select ICD DIAGNOSES: 296.00// 301.13
CYCLOTHYMIC DISORDER
          ...OK? Yes//   (Yes)

  ICD DIAGNOSES: 301.13// @
   SURE YOU WANT TO DELETE THE ENTIRE ICD
DIAGNOSES? Y  (Yes)
```

Check Taxonomies

What taxonomies are for

Some items in RPMS are entered the same way in every clinic that uses RPMS. ICD-9 codes, for example, are standardized internationally, so that R73.09 (ICD-10) always means impaired fasting glucose, no matter where you are.

Other RPMS items differ from one facility to the next. Lab tests and drugs are two examples. One site might call its fasting glucose test "Fasting glucose" and another would call it "Glucose, fasting." A person would recognize these two descriptions as the same test, but a computer would not. RPMS needs to be programmed to categorize these items correctly. This is done using taxonomies.

Taxonomies are the lists that tell RPMS what belongs in each category. For example, many patients with prediabetes may receive prescriptions for metformin. These prescriptions are not entered as "metformin," but rather as a specific name and type of metformin, along with a dose level. RPMS needs to reference a list to recognize all of those types and dose levels as "metformin."

When you run a report, such as the audit report, RPMS searches its patient records for any of those items. If a patient has received any of the metformin prescriptions on the list, the audit report will reflect that.

```
 DM AUDIT METFORMIN DRUGS

Items currently defined to this taxonomy:
     METFORMIN HCL  500 MG TABLETS
     METFORMIN 500MG XR
     METFORMIN 1000MG

Press enter to continue:
```

Example of a drug taxonomy on the RPMS training server.

Look at the taxonomy check in your audit report

How: Each time you run an audit report, the system checks for empty taxonomies or panel tests that should not be included.
(You can also run the taxonomy check alone in the DM18 audit menu using TC18.)

```
In order for the 2018 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 ACARBOSE DRUGS] has no entries
DRUG taxonomy  [DM AUDIT AMYLIN ANALOGUES] has no entries
LABORATORY TEST taxonomy  [DM AUDIT CHOLESTEROL TAX] contains a panel test: LIPID PANEL and
should not.
ADA CODE taxonomy  [DM AUDIT DENTAL EXAM ADA CODES] has no entries
DRUG taxonomy  [DM AUDIT GLP-1 ANALOG DRUGS] has no entries
DRUG taxonomy  [DM AUDIT LOVAZA DRUGS] has no entries
LABORATORY TEST taxonomy  [DM AUDIT P/C RATIO TAX] has no entries
LABORATORY TEST taxonomy  [DM AUDIT TB LAB TESTS] has no entries
```

Some common error messages. Only the panel test error message needs to be dealt with. The rest are for medications or labs not used at this facility.

TB LAB TESTS refers to blood tests for tuberculosis, not PPD skin tests.

Run the LMR report to list lab/medications and their taxonomies

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **RP** (Reports ...)
2. Select Reports Option: **LMR**
3. Do you wish to list: **L** (for LAB TESTS) or **M** (for MEDICATIONS)
4. Enter beginning Date for Search: **1/1/18** (go back at least to the beginning of the year)
5. Enter ending date for Search: **T** (shortcut for today's date)
6. Do you wish to: P// <enter> to print or B to browse

Hint: If you choose BROWSE, you can use the PL ("Print List") command to print the entire report.

```
Jan 16, 2018                                                          Page 1
                        LAB TESTS Used at TRAINING
                    Date Range:  Jan 01, 2017 - Dec 31, 2017
LAB TEST NAME                    IEN      # DONE    UNITS        RESULT
     TAXONOMIES
-------------------------------------------------------------------------
1 HOUR GLUCOSE (PRENATAL GLUCO  1255           12  mg/dL        74
17-HYDROXYPROGESTERONE          616             1  ng/dL        54
1HR GTT                         471             2  mg/dL        215
COMPUTED URINE PROTEIN          1665302         1  mg/24Hr      2115
CORTISOL                        114             1  mcg/dL       9.4
CREATININE                      173         2,128  mg/dL        .9
     DM AUDIT CREATININE TAX
CREATININE CLEARANCE            1242            1
CREATININE,URINE                9999171         7  mls          2.0
CYSTINE                         432             1               NORMAL
CYSTINE,URINE                   1665330         1
CYTOLOGY                        296            19               lipoma
D-DIMER                         1665407         1               <250
...


Jan 16, 2018                                                          Page 1
                      MEDICATIONS (DRUGS) Used at TRAINING
                    Date Range:  Jan 01, 2017 - Dec 16, 2017
MEDICATION/DRUG NAME             IEN      # DONE
     TAXONOMIES
-------------------------------------------------------------------------
...
IBUPROFEN 400MG TABLET          305            531
IBUPROFEN 800MG TABLET          84015        1,538
IBUPROFEN SUSPENSION 100MG/5ML  84584           40
INDOMETHACIN 25MG CAPSULE       306            119
INSULIN NPH U-100               5177           216
     DM AUDIT INSULIN DRUGS
INSULIN REG.U-100               5176           216
     DM AUDIT INSULIN DRUGS
IPRATROPIUM BROMIDE HFA INHALE  84071          197
IRBESARTAN 300MG TABLET         84557          329
ISOMETHEPTENE/DICHLORO/APAP 65  84267          100
LISINOPRIL 10MG TABLET          84332          773
     DM AUDIT ACE INHIBITORS
LISINOPRIL 20MG TABLET          84333          541
     DM AUDIT ACE INHIBITORS
```

IEN: Internal Entry Number, a unique identifier used by the lab/pharmacy for that kind of test/medication.

Example: Wrong item in the taxonomy

If the wrong items are in the wrong taxonomies, you may see values that look weird on reports.

Excerpt of an individual audit report

```
LABORATORY DATA during audit period
Total Cholesterol:   179. mg/dl    Oct 20, 2017     CHOLESTEROL
HDL Cholesterol:      43. mg/dl    Oct 20, 2017     HDL (CHOLESTEROL)
LDL Cholesterol:     179. mg/dl    Oct 20, 2017     CHOLESTEROL
Triglycerides:       408. mg/dl    Mar 15, 2017     TRIGLYCERIDE
```

The name of the test is printed on the right. Here, you can see that CHOLESTEROL is in the LDL taxonomy because it is showing up on the LDL line.

Why this happened

```
DIABETES TAXONOMY UPDATE      Nov 7, 2017 17:17:43
Updating the DM AUDIT LDL CHOLESTEROL TAX taxonomy

1)  LDL
2)  CHOLESTEROL

          Enter ?? for more actions
A    Add Taxonomy Item    R    Remove an Item
Select Action:+//
```

This shows the LDL CHOLESTEROL taxonomy. You can get here by following steps 1-5 below.

Solution: Delete the extra items from the taxonomy.

How: From the Diabetes Management System Main Menu:

1. Select Diabetes Management System Option: **DA** (Diabetes QA Audit Menu ...)
2. Select Diabetes QA Audit Menu Option: **DM18** (2015 Diabetes Program Audit ...)
3. Select 2012 Diabetes Program Audit Option: **TU18** (Update/Review Taxonomies for 2018)
4. Select Action:+// **S** (Select Taxonomy)
5. Which Taxonomy: (1-44): **28** (DM AUDIT LDL CHOLESTEROL)
7. Select Action:+//R (Remove an Item)
8. Remove Which Item (1-5): 2
9. Are you sure you want to remove the LDL CHOLESTEROL lab test? N// Y
10. Select Action:+//Q (Quit)

The corrected taxonomy

```
DIABETES TAXONOMY UPDATE      Mar 7, 2017 17:19:25
Updating the DM AUDIT LDL CHOLESTEROL TAX taxonomy

1)  LDL

          Enter ?? for more actions
A    Add Taxonomy Item    R    Remove an Item
Select Action:+//
```

(Continued on next page)

Individual audit report after correction

```
LABORATORY DATA during audit period
Total Cholesterol:   179. mg/dl    Oct 20, 2017    CHOLESTEROL
HDL Cholesterol:     43. mg/dl     Oct 20, 2017    HDL (CHOLESTEROL)
LDL Cholesterol:     85. mg/dl     Mar 15, 2017    LDL
Triglycerides:       408. mg/dl    Mar 15, 2017    TRIGLYCERIDE
```

Example: Missing taxonomy item

When you know that patients are receiving care that is not showing up on reports, the taxonomy may need to be updated.

Excerpt from a cumulative audit report

```
DIABETES TREATMENT
       Diet and Exercise Alone                    31        42%
       Insulin                                     8        11%
       ...
       Metformin                                  25        34%
```

Diet & Exercise is high, and metformin is low.

If you need a reference point, use the sample cumulative audit in this manual.

Solution: Add the missing item(s)

1. Run the LMR report for medications, as described in the previous section, to get the name(s) of the missing tests.

```
                    MEDICATIONS (DRUGS) Used at TRAINING
                  Date Range:  Jan 01, 2017 - Apr 16, 2018
MEDICATION/DRUG NAME            IEN      # DONE
     TAXONOMIES
-------------------------------------------------------------------
METAMUCIL WAFERS                84636         3
METFORMIN 1000 MG TABLET        84567       431
METFORMIN HCL 500MG TABLET      84486       714
     DM AUDIT METFORMIN DRUGS
METHADONE 10MG TAB              319         348
```

This metformin 1000 mg tablet should be in the METFORMIN taxonomy, but there is no taxonomy listed under it.

2. Select Diabetes Management System Option: **DA** (Diabetes QA Audit Menu ...)
3. Select Diabetes QA Audit Menu Option: **DM18** (2018 Diabetes Program Audit ...)
4. Select 2012 Diabetes Program Audit Option: **TU18** (Update/Review Taxonomies for 2018)
5. Select Action:+// **S** (Select Taxonomy)
6. Which Taxonomy: (1-44): **30** (DM AUDIT METFORMIN)
7. Select Action:+// **A** (Add Taxonomy Item)
8. Select DRUG GENERIC NAME: **METFORMIN 1000 MG TABLET**
9. Select Action:+// **Q** (Quit)

Update taxonomies at least once a year, or when —

— Elements of care are not showing up on patient summaries, even though you know that the patient received them.

— Results look weird (too high, too low, or exactly the same as another test)

— Percentages on the cumulative audit are unexpectedly high or low

— A new patch has been installed

IHS Diabetes Audit Medications

DM THERAPY

Insulin

Any Insulin product in Drug File – Insulin, REG, NPH, Lente, Ultralente, Insulin Lispro (Humalog), Insulin Glargine (Lantus), Insulin Detemir (Levimir)
Insulin Aspart (Novolog), Insulin Glulisine (Apidra), Inhalable Insulin (Affreza, Exubera – discontinued 2007), Pre-Mixed Insulins (70/30, 75/25)

Sulfonylureas

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)

Sulfonylurea-like

Nateglinide (Starlix)
Repaglinide (Prandin)
Repaglinide + Metformin (PrandiMet)

Metformin

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)

Acarbose (Precose) or miglitol (Glyset)

Glitazones (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

Incretin mimetics

Exenatide (Byetta, Bydureon)

DPP4 inhibitors

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)

Amylin analogs

Pramlintide (Symlin)

GLP-1 analogs

Albiglutide (Tanzeum)
Dulaglutide (Trulicity)
Liraglutide (Victoza)

Bromocriptine (Parlodel, Cycloset)

Colesevelam (Welchol)

ACE INHIBITORS/ARBs

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 hydrochlorothizide (Avalide)
Losartan (Cozaar)
Losartan and hydrochlorothiazide (Cozaar)
Olmesartan (Benicar)
Telmisartan (Micardis)
Valsartan (Diovan)
Valsartan and hydrochlorothizide (Diovan/HCT)

ANTIPLATELET Therapy

Any non-aspirin anti-platelet product including Heparin and Warfarin (Coumadin)
Apixaban (Eliquis)
Aspirin and Dipyridamole (Aggrenox)
Cilistazol (Pletal)
Clopidogrel (Plavix)
Dabigatran Etexilate (Pradaxa)
Dipyridamole (Persantine)
Edoxaban (Sarvaysa)
Ticagrelor (Brilinta)
Ticlopidine (Ticlid)
Prasugrel (Effient)
Rivaroxaban (Xarelto)
Vorapaxar (Zontivity)
Aspirin (abbreviated ASA)
Aspirin-containing products (Verasa, Rubrasa)

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 (Juvisync)

SGLT-2
Canagliflozin (Invokana)
Dapagliflozin (Farxiga)
Empagliflozen (Jardiance)

Lab Taxonomies

Labs vary from clinic to clinic. You want to make sure that:

1. Your lab taxonomies contain the names of labs as they are used at your facility
2. You include the name of the measurement or result, and not the panel that the test belongs to

The list below gives some suggestions of how the given lab tests might appear in different facilities.

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

DM AUDIT CHOLESTEROL TAX
Cholesterol, Total Cholesterol, _Cholesterol, POC Cholesterol

DM AUDIT CREATININE TAX
(Note: Does NOT include 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
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 TESTS
Note: You do NOT need to add PPDs to this taxonomy; they will be picked up by the audit.

QFT-G, T SPOT-TB, Quantiferon GOLD

DM AUDIT TRIGLYCERIDE TAX
Triglyceride, POC Triglyceride, _Triglyceride

Pre-2015 Audit Lab Taxonomies

You may wish to run reports that depend on these taxonomies for historical purposes, or because they contain indicators you are interested in. In previous years, for example, the audit reports included self-monitoring of blood glucose and Pap tests.

DM AUDIT GLUCOSE TESTS TAX
Glucose, Fasting Glucose, Finger Stick, Glucose, Whole Blood Glucose, Blood Sugar, Capillary Glucose, Accuchek, Lifescan

DM AUDIT FASTING GLUCOSE TESTS TAX
Fasting Glucose, Glucose, Fasting, FBS, DM AUDIT 75G 2 HR GLUCOSE, Glucose, 2 Hr P 75GM, 2 HR GTT, 75G 2Hr Glucose

DM AUDIT URINE PROTEIN TAX
Urine Protein as reported on Urine Dipsticks. This is a semi-quantitative test and is usually reported as:
Urine Protein, Ur Protein, Protein, Urine, Urine Protein Screen, Urine Protein (Spot), Protein Level, Urine, _Urine Protein

DM AUDIT P/C RATIO TAX
(measured in g/g)
Protein/Creatinine Ratio, P/C Ratio, Micro

DM AUDIT SEMI QUANT UACR
Microalbumin/Creatinine Ratio reported as a semi-quantitative test, e.g. Clinitek test strips. The most commonly reported results are <30, 30-300, or >300 mg/d creat.

NON HDL-TESTS

DM AUDIT URINALYSIS TAX
Urinalysis, Urinalysis HLD, Urine Dipstick, Urine (Dipstick), UA or U/A, UA Dipstick or U/A Dipstick, UA Complete or U/A Complete

Patient education (PED) codes

Nutrition/diet education
(DM AUDIT DIET EDUC TOPICS taxonomy)

DM-N Nutrition
DM-DIET (no longer used, but include in taxonomy for historical purposes)
DMC-N (*Balancing Your Life* curriculum)
Balancing Your Food Choices curriculum:
DMC-N-FL (Session 1: Intro to Food Labels)
DMC-N-CC (Session 2: Carbohydrage Counting)
DMC-N-EL (Session 3: Exchange Lists)
DMC-N-FS (Session 4: Food Shopping)
DMC-N-HC (Session 5: Healthy Cooking)
DMC-N-EA (Session 6: Eating Away from Home)
DMC-N-AL (Session 7: Use of Alcohol)
DMC-N-D (Session 8: Evaluating Diets)

Exercise education
(DM AUDIT EXERCISE EDUC TOPICS)

DM-EX Exercise
DMC-EX (*Balancing Your Life* curriculum)

Other diabetes education
(DM AUDIT OTHER EDUC TOPICS)

Any DM- or DMC- codes not in the previous lists

Tobacco cessation education topics
(DM AUDIT SMOKING CESS EDUC taxonomy)

Cessation can also be entered as a health factor

TO-Q or **TO-QT** Tobacco - Quit
TO-LA Tobacco - Lifestyle Adaptations

Depression screening education codes
Dep. screening can also be entered as POV V79.0 or exam code 36 - Depression Screening

DEP-SCR SCREENING
SB-SCR SCREENING

or other education codes starting with:

DEP- (depression)
SB- (suicidal behavior)
GAD- (generalized anxiety disorder)
BH- (behavioral and social health)
PDEP- (postpartum depression)

Health factor (HF) codes

Tobacco use health factors
(DM AUDIT TOBACCO HLTH FACTORS taxonomy)

NON-TOBACCO USER
CURRENT SMOKER, EVERY DAY
CURRENT SMOKER, SOME DAY
CURRENT SMOKER, STATUS UNKNOWN
CURRENT SMOKELESS [chewing/dip]
SMOKELESS TOBACCO, STATUS UNKNOWN
PREVIOUS (FORMER) SMOKER
PREVIOUS (FORMER) SMOKELESS
NEVER SMOKED
NEVER USED SMOKELESS TOBACCO
EXPOSURE TO ENVIRONMENTAL TOBACCO SMOKE
CEREMONIAL USE ONLY
SMOKER IN HOME
SMOKE FREE HOME
SMOKING STATUS UNKNOWN

Tobacco cessation counseling health factors
(DM AUDIT CESSATION HLTH FACTOR taxonomy)

Cessation can also be entered as education

CESSATION-SMOKELESS
CESSATION-SMOKER

Tuberculosis (TB) health factors – use ONLY if a patient has diagnosis of TB
(DM AUDIT TB HEALTH FACTORS)

TB - TX UNTREATED
TB - TX INCOMPLETE
TB - TX COMPLETE
TB - TX IN PROGRESS
TB - TX UNKNOWN

Exams (EX) and Historical exams (HEX)

28 DIABETIC FOOT EXAM,COMPLETE
03 DIABETIC EYE EXAM
30 DENTAL EXAM
36 DEPRESSION SCREENING

Results

N NORMAL/NEGATIVE
A ABNORMAL

ICD-9 Codes for DMS and QMAN Searches

DIABETES and PRE-DIABETES DIAGNOSES	
Type 1 and Type 2 diabetes	**250.00-250.93**
Type 1 diabetes	All 250 codes with a 5th digit of 1 or 3
Not stated as uncontrolled	250.01, 250.11, 250.21, 250.31, 250.41, 250.51, 250.61, 250.71, 250.81, 250.91
Uncontrolled	250.03, 250.13, 250.23, 250.33, 250.43, 250.53, 250.63, 250.73, 250.83, 250.93
Type 2 diabetes	All 250 codes with a 5th digit of 0 or 2
Not stated as uncontrolled	250.00, 250.10, 250.20, 250.30, 250.40, 250.50, 250.60, 250.70, 250.80, 250.90
Uncontrolled	250.02, 250.12, 250.22, 250.32, 250.42, 250.52, 250.62, 250.72, 250.82, 250.92
Diabetes Screening	V77.1
Metabolic syndrome, pre-diabetes	277.7
Abnormal glucose	790.21-790.29
Impaired fasting glucose (IFG)	790.21
Impaired glucose tolerance (IGT) test (oral)	790.22
Other abnormal glucose	790.29
Gestational Diabetes (GDM)	648.80-648.84
DIABETES COMPLICATIONS	
End Stage Renal Disease (ESRD)	585, V56.0 (hemodialysis encounter), V45.1 (s/p hemodialysis)
Lower Extremity Amputation (LEA)	895.0-897.7, V49.70-V49.77 (s/p LEA)
Hypertension (HTN)	401.0-405.99
Retinopathy	250.50-250.53, 362.01-362.02
Laser treatment for retinopathy	CPT 67228
Neuropathy	250.60-250.63, 337.1, 355.9, 357.2
Proteinuria (includes microalbuminuria)	791.0
Hyperlipidemia (cholesterol or triglycerides)	272.0-272.4
Stroke (CVA)	436
Transient Ischemic Attack (TIA)	435.9
Heart Attack (MI)	410.00-410.92 (acute MI)
Tuberculosis	010.00-018.96, 137.0-137.4, 795.5, V12.01
Non-compliance with medical treatment	V15.81
RISK FACTORS FOR DIABETES and RISK BEHAVIORS	
Obesity	278.00
Morbid obesity for surgical treatment	278.01
Acanthosis nigricans	701.2
Family history of diabetes	V18.0
Polycystic ovarian syndrome (PCOS)	256.4
Lack of exercise	V69.0
Inappropriate eating habits	V69.1
Smoking	305.1-305.13, V15.82 (history of smoking)
Depression	296.*, 300.*, 301.13, 308.3, 309.*, 311.*

DIABETES and PRE-DIABETES DIAGNOSES	
Type 1 and Type 2 diabetes	
Type 1 diabetes	E10.10-E10.9
With complications... E10.10-E10.8	ketoacidosis, nephropathy, CKD, retinopathy, diabetic cataract, neuropathy, amytrophy, peripheral angiopathy, arthopathy, dermatitis, foot/skin ulcer, periodontal disease, hypoglycemia, hypersmolarity, unspecified
Without complications	E10.9
Type 2 diabetes	E11.01-E11.9
With complications... E11.01-E11.8	ketoacidosis, nephropathy, CKD, retinopathy, diabetic cataract, neuropathy, amytrophy, peripheral angiopathy, arthopathy, dermatitis, foot/skin ulcer, periodontal disease, hypoglycemia, hypersmolarity, unspecified
Without complications	E11.9
Diabetes Screening	Z13.1
Metabolic syndrome, pre-diabetes	E88.81
Abnormal glucose	R73.09
Impaired fasting glucose (IFG)	R73.01
Impaired glucose tolerance (IGT) test (oral)	R73.02
Other abnormal glucose	R73.09
Gestational Diabetes (GDM)	O24.410-O24.439
DIABETES COMPLICATIONS	
End Stage Renal Disease (ESRD)	I12.0, I13.11, I13.2, N18.6
Lower Extremity Amputation (LEA)	T87.33-T87.54
Hypertension (HTN)	I10, I15.0-I15.9, I27.0-I27.2, I87.301-I87.399, I97.3, K76.6
Retinopathy	E08.311-E08.359, E09.311-E09.359, E10.311-E10.359, E11.311-E11.359, E13.311-E13.359
Neuropathy	E08.40, E08.43, E09.40, E09.43, E10.40, E10.43, E11.40, E11.43, E13.40, E13.43
Proteinuria (includes microalbuminuria)	N06.0-N06.9, R80.0-R80.9
Hyperlipidemia (cholesterol or triglycerides)	E78.2-E78.5
Stroke (CVA)	G46.3, G46.4
Transient Ischemic Attack (TIA)	G45.8, G45.9
Heart Attack (MI)	I21.01-I25.2
Tuberculosis	A15.0-A15.9, A17.89, A17.9, A18.01-A18.89, A19.0-A19.9, B90.0-B90.9, J65, O98.011-O98.03, P47.0
Non-compliance with...	Z91.11 (dietary regimen), Z91.14 (medication regimen), Z91.15 (renal dialysis), Z91.19 (medical treatment)
RISK FACTORS FOR DIABETES and RISK BEHAVIORS	
Obesity	E66.01-E66.9
Acanthosis nigricans	L83
Family history of diabetes	Z83.3
Polycystic ovarian syndrome (PCOS)	E28.2
Lack of physical exercise	Z72.3
Inappropriate eating habits	Z72.4

Section 3: Reference Materials

Indian Health Service

Standards of Care and Clinical Practice Recommendations:

Type 2 Diabetes

Diabetes Audit Logic Descriptions

(Excerpt) Table 1. IHS Standards of Care for Type 2 Diabetes Summary

Component	Care/Test/Screening	Frequency ("At diagnosis"=when diabetes is diagnosed)
General Recommendations for Care	Perform diabetes-focused visit Review care plan: assess goals/strengths/barriers Assess nutrition, physical activity, BMI, and growth in youth	Every 3-6 months Each diabetes visit, revise as needed Each diabetes visit
Self-Management Education (DSME)	Refer to diabetes educator	At diagnosis, then every 6-12 mo., or more as needed
Medical Nutrition Therapy (MNT)	Refer for MNT provided by a registered dietitian	At diagnosis and at least yearly, or more as needed
Glycemic Control	Check A1C, individualize goal: e.g., < 7%, 7-8%, 8-9%, etc. Review goals, medications, side effects If prescribed, review SMBG data	Every 3-6 months Every diabetes visit Every diabetes visit
CVD Risk Reduction	Prescribe statin with lifestyle therapy regardless of LDL level Check lipid profile LDL < 100 mg/dL (optimal goal), LDL < 70 mg/dL (for very high risk) Non-HDL cholesterol < 130 mg/dL, < 100 mg/dL (for very high risk) Assess smoking/oral tobacco use Aspirin therapy 75-162 mg/day (unless contraindicated)	Adults with CVD; age > 40 y. with ≥ 1 CVD risk factor Annually. If abnormal, follow current NCEP guidelines. Each visit: Ask, Advise, Assess, Assist, Arrange Known CVD/PAD; 10-year CVD Risk > 10%
Blood Pressure	Check blood pressure Individualize goal: e.g., < 130/80 mmHg, < 140/90 mmHg Youth goal: Varies with age	Every visit
Kidney Care	Check urine albumin/creatinine ratio (UACR) for albuminuria using a random urine sample (normal < 30 mg/g; micro 30-300 mg/g; macro > 300 mg/g) Check serum creatinine and estimate GFR If HTN, prescribe ACE Inhibitor or ARB unless contraindicated	At diagnosis, then annually At diagnosis, then annually
Eye Care	Retinal camera photo or dilated eye exam by an ophthalmologist or optometrist	At diagnosis, then annually; or as directed by eye specialist
Foot Care	Visual inspection of feet with shoes and socks off Perform comprehensive lower extremity/foot exam Screen for PAD (consider ABI)	Each diabetes visit; stress daily self-exam At diagnosis, then annually At diagnosis, then annually
Oral Care	Inspection of gums/teeth Dental exam by dental professional	At diagnosis, then at diabetes visits At diagnosis, then every 6 -12 months
Autonomic Neuropathy	Assess CV symptoms; resting tachycardia, exercise intolerance, orthostatic hypotension Assess GI symptoms; gastroparesis, constipation, diarrhea Assess sexual health/function for men and women	At diagnosis, then annually At diagnosis, then annually At diagnosis, then annually
Emotional Health	Assess emotional health; screen for depression, substance abuse	At diagnosis, then annually
Immunizations	Influenza vaccine Pneumococcal vaccine Hepatitis B immunization	Annually Once < 65 y. Re-immunize if ≥65 y. and 1st dose given before age 65 and if vaccine was administered > 5 y. prior. Unvaccinated adults < 60 y.
Preconception, Pregnancy, and Postpartum Care	Ask about reproductive intentions/assess contraception Provide preconception counseling Screen for undiagnosed type 2 diabetes Screen for GDM in all women not known to have diabetes Screen for type 2 diabetes in women who had GDM	At diagnosis, and then every visit 3-4 months prior to conception At first prenatal visit At 24-28 weeks gestation At 6-12 weeks postpartum, then every 1-3 y. lifelong

Diagnostic Criteria for Type 2 Diabetes

Recommendations for Diagnosing Type 2 Diabetes

- Use the criteria below to diagnose type 2 diabetes in non-pregnant patients:
  - Hemoglobin A1C (A1C) ≥ 6.5%; or
  - Fasting plasma glucose (FPG) ≥ 126 mg/dL, where FPG is defined as no caloric intake for at least 8 hours; or
  - 2-hour oral glucose tolerance test (OGTT) ≥ 200 mg/dL; or
  - Casual plasma glucose ≥ 200 mg/dL with symptoms of hyperglycemia, where "casual" is defined as any time of day without regard to time of last meal.
- In the absence of unequivocal hyperglycemia, confirm a positive result by repeat testing on a different day.

→ **Note:** While it is acceptable to **screen** for diabetes using a point-of-care (POC) capillary A1C and/or glucose, diabetes should only be **diagnosed** using laboratory-run tests. In addition, the A1C test alone may be less accurate when used to diagnose diabetes in youth.

Categories of Increased Risk for Diabetes (Prediabetes)

Recommendation for Identifying Patients at Increased Risk

- Use the following criteria to identify patients at increased risk for diabetes:
  - Impaired fasting glucose (IFG) defined as FPG 100-125 mg/dL, **or**
  - Impaired glucose tolerance (IGT) defined as 2-hour OGTT 140-199 mg/dL
- A1C may be used as a screening test. If the result is 5.7-6.4%, perform either a FPG or an OGTT to confirm a diagnosis of prediabetes.

Patients whose blood glucose levels are higher than normal but not high enough to be considered diabetes may be at increased risk for developing diabetes. Patients with impaired fasting glucose or impaired glucose tolerance have been referred to as having "prediabetes." Providers are encouraged to identify patients at increased risk for diabetes so they can start or intensify efforts to prevent progression to diabetes. Diabetes prevention programs for these patients are available throughout AI/AN communities.

→ **Note: The American Diabetes Association (ADA) criteria include use of the A1C alone to identify prediabetes. However, all other major standard-setting diabetes organizations do not recommend using the A1C test alone to identify patients with prediabetes.**

Testing for Diabetes/Prediabetes in Non-pregnant Asymptomatic AI/AN People

Recommendations for Testing for Diabetes/Prediabetes in AI/AN Adults

- Test AI/AN adults at least every 3 years.
- Consider testing more frequently in patients with additional risk factors, including:
  - Overweight/obese (Body Mass Index [BMI] ≥ 25 kg/m2)
  - Family history of type 2 diabetes in first degree relative
  - History of gestational diabetes (GDM) or delivery of a baby weighing > 9 pounds
  - Polycystic ovarian syndrome (PCOS)
  - Cardiovascular disease (CVD)
  - Hypertension
  - HDL cholesterol < 35 mg/dL and/or triglycerides > 250 mg/dL
  - *Acanthosis nigricans.*

Recommendations for Testing for Diabetes/Prediabetes in AI/AN Youth

- Test overweight AI/AN youth (BMI > 85th percentile) with **any** of the following risk factors:
  - Family history of diabetes
  - Signs of insulin resistance or conditions associated with it [e.g., *acanthosis nigricans,* polycycstic ovarian syndrome (PCOS), hypertension, dyslipidemia, small-for-gestational-age (SGA), or large-for-gestational-age (LGA) birth weight]
  - Maternal history of diabetes or gestational diabetes during child's gestation.
- Start testing at-risk children at age 10 years (or younger if puberty occurs earlier).
- Test at-risk children ≤ every 3 years.

→ **Note:** In patients who present with hyperglycemic symptoms, testing for diabetes is warranted regardless of risk factors listed above.

For a copy of the complete version of the IHS Standards of Care visit: www.diabetes.ihs.gov

2018 Diabetes Audit Logic Descriptions

Note: 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 **TU18** (Update/Review Taxonomies for 2018 DM Audit) menu option under the DM18 menu option of the Diabetes Audit menu. View contents of SNOMED lists by using the **VSML** (View a SNOMED List Used by the DM AUDIT) menu option.

AUDIT DATE

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, 2017, data are reviewed for the year prior to this date (January 1-December 31, 2017).

FACILITY NAME

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.)

REVIEWER INITIALS

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.

STATE OF RESIDENCE

This is the state in which the patient resides at the time the Audit is conducted. This is captured from the mailing address.

CHART NUMBER

Health record number of the patient at the facility at which the Audit is run. Note: This item is not included in the Audit Export (Data) File and cannot be uploaded to the WebAudit.

DATE OF BIRTH

The patient's Date of Birth. Obtained from data entered through patient registration. Only the month and year of birth are included in the Audit Export (Data) File and can be uploaded to the WebAudit, along with the age of the patient as of the Audit date.

SEX

The gender of the patient. Obtained from data entered through patient registration.

PRIMARY CARE PROVIDER

The name of the primary care (designated) provider documented in RPMS. Taken from field Primary Care Provider (#.14) of the patient file. Note: This item is not included in the Audit Export (Data) File and cannot be uploaded into the WebAudit.

DATE OF DIABETES DIAGNOSIS

The diabetes onset date. This date is used in the calculation of the duration of diabetes. Users can chose from three different dates:

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 PXRM DIABETES SNOMED subset

The first recorded diagnosis (POV) of diabetes in PCC. ICD codes: SURVEILLANCE DIABETES taxonomy.

Cumulative Audit: When calculating the duration of diabetes, the earliest of the date of onset from the diabetes register or the problem list date of onset is used. Duration of diabetes is calculated from that date to the 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. The first diagnosis date from POV is not used.

Audit Export (Data) File: The earliest date found from the Diabetes register or the problem list is exported. Format: MM/DD/YYYY

DM TYPE

The following logic is used to determine diabetes type. Once a 'hit' is made, no further processing is done.

1. If the diagnosis documented in the Diabetes Register is NIDDM the type is assumed to be Type 2.
2. If the diagnosis documented in the Diabetes Register is "TYPE II" the type is assumed to be Type 2.
3. If the diagnosis documented in the Diabetes Register contains a '2' the type is assumed to be Type 2.
4. If the diagnosis documented in the Diabetes Register contains IDDM the type is assumed to be type 1.
5. If the diagnosis documented in the Diabetes Register is "Type I" the type is assumed to be Type 1.
6. If the diagnosis documented in the Diabetes Register contains a '1' the 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.
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.
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 I.
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 Cumulative Audit. For the Individual Audit and Diabetes Health Summary, "Not Documented" is displayed.

TOBACCO - SCREENED DURING AUDIT PERIOD

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.

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 diagnosiscontained 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.

TOBACCO USE STATUS

The last documented of the following items is found:

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 2018 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).

*CURRENT SMOKELESS TOBACCO (SMOKELESS - CHEWING/D

**PREVIOUS (FORMER) SMOKELESS TOBACCO (SMOKELESS - CHEWING/D

*CESSATION-SMOKELESS TOBACCO (SMOKELESS - CHEWING/D

SMOKELESS TOBACCO, STATUS UNKNOWN TOBACCO (SMOKELESS - CHEWING/D
**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)

If a factor is found in each of these categories, the one that indicates a tobacco user 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.

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.

3. Dental ADA code 1320 - TOBACCO USE INTERVENTION TO PREVENT DISEASE. If this code is documented the patient is considered a tobacco user.

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. 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.

TOBACCO CESSATION COUNSELING

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 the following criteria:
   a. Begins with TO- (e.g. TO-Q)
   b. Ends in -TO (e.g. CAD-TO)
   c. Begins with any Tobacco User diagnosis (taxonomy is BGP TOBACCO USER DXS) (e.g. 305.1-L)
   d. Begins with any Tobacco User CPT code (e.g. 99407-L)
   e. Begins with a SNOMED code from the PXRM BGP TOBACCO TOPICS, PXRM BGP TOBACCO SMOKER, PXRM BGP TOBACCO SMOKELESS or PXRM BGP QUIT TOBACCO SNOMED code lists. To see a list of these codes use option VSML View a SNOMED List Used by the DM AUDIT which can be found on the DM18 menu.

4. Any of the following CPT codes documented. These indicate tobacco use counseling: CPT code D1320, 99406, 99407, G0375 (old code), G0376 (old

5. Dental ADA code 1320.

The latest documented of the above 5 data elements is displayed along with the date.

If no counseling is found then the system will look for a smoking aid prescribed: 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.

ELECTRONIC NICOTINE (ENDS)-SCREENED DURING AUDIT PERIOD

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.

ENDS USE STATUS

The last documented health factor in the category ELECTRONIC NICOTINE DELIV SYSTEM (ENDS) is found.

Use status is assigned as follows:

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

HEIGHT

The last recorded height value taken on or before the Audit date.

Total height in inches is displayed for the Individual Audit and Diabetes Health Summary.

AUDIT Export (Data) File: 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.

WEIGHT

The last recorded Weight value documented during the Audit period.

AUDIT Export (Data) File: The last recorded weight during the Audit period is exported, truncated to the nearest whole pound.

BMI

BMI is calculated as:

BMI = (weight/height*height) x 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.

Cumulative Audit: The number and percent of patients in each BMI category are calculated. If the patient did not have a height or weight recorded as described above, they are put into the "Height or weight missing" category.

Note: This item is not included in the Audit Export (Data) File.

HYPERTENSION DOCUMENTED

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: PXRM ESSENTIAL HYPERTENSION. To see a list of these codes use option "VSML- View a SNOMED List Used by the DM AUDIT" which can be found on the Diabetes Audit menu.

BLOOD PRESSURES (LAST 1, 2 or 3)

The most recent recorded 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 any one day, the latest one is used.

Cumulative Audit: If two or three blood pressures are available, then the mean is calculated and used to determine the blood pressure category. If only one blood pressure is available, it used to determine the category.

AUDIT Export (Data) File: The blood pressure values obtained above are exported, but mean blood pressure is not.

FOOT EXAM - COMPLETE

The logic used in determining if a comprehensive or complete foot exam has been done is as follows:

1. A documented DIABETIC FOOT EXAM, COMPLETE (CODE 28) is searched for in the year prior to the Audit date. 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.

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.

EYE EXAM (dilated or retinal imaging)

The logic used in determining if a diabetic eye exam has been done is as follows:

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:
    a. EXAM 03 - Diabetic Eye Exam
    b. CPT in the DM AUDIT 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). 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.

DENTAL EXAM

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. 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.

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.

If none of the above are found, the value 2 - No is assigned.

DEPRESSION AN ACTIVE PROBLEM

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.

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. 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.

DEPRESSION SCREENING

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)

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.

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.

NUTRITION INSTRUCTION

The values for the Audit are:

1 RD

2 Other

3 Both RD & Other

4 None

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).

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.

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 PAT ED 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.

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.

PHYSICAL ACTIVITY INSTRUCTION

All visits in the year prior to the Audit date are examined. If there isa 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.

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.

If none of the above is documented, the value is 2 - No

DM EDUCATION (OTHER)

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:

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:

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)

If none of the above is documented, the value is 2 - No

DIABETES THERAPY

For each of the categories of medications listed below, the following logic is used to determine if the patient is currently taking the medication:

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 calulation is done:

days supply times (# of refills +1) (this is the total number of days the presciption covers)

# of days calculated above + issue date (this is the last date the presciption 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 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 medicatons. 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 and a value of 1 - Yes is entered in the Audit Export file. If no medications are found then the None of the following item is marked with an 'X' and a value of 1 - Yes is entered in the Audit Export file for this item while a value of 2 - No is entered for all other therapy items.

Therapy	Taxonomy Name
Insulin	DM AUDIT INSULIN DRUGS
Sulfonylurea	DM AUDIT SULFONYLUREA DRUGS
Rapaglinide	DM AUDIT SULFONYLUREA-LIKE
Metformin	DM AUDIT METFORMIN DRUGS
Acarbose, miglitol	DM AUDIT ACARBOSE DRUGS
Pioglitazone, rosiglitazone	DM AUDIT GLITAZONE DRUGS
GLP-1 meds	DM AUDIT INCRETIN MIMETIC DM AUDIT GLP-1 ANALOG DRUGS
DPP4 inhibitors	DM AUDIT DPP4 INHIBITOR DRUGS
Amylin analogues	DM AUDIT AMYLIN ANALOGUES
Bromocriptine	DM AUDIT BROMOCRIPTINE DRUGS
Colesevelam	DM AUDIT COLESEVELAM DRUGS
SGLT-2 inhibitors	DM AUDIT SGLT-2 INHIBITOR DRUG

ACE INHIBITOR OR ARB

The taxonomy used to find ACE Inhibitors is DM AUDIT ACE INHIBITOR. If any drug in the above listed 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). If the prescription begins with an X the following calulation is done:

   days supply times (# of refills +1) (this is the total number of days the presciption covers)

   # of days calculated above + issue date (this is the last date the presciption 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. The system will go back 10 years to find one of these medicatons. It is assumed that a medication entered as an EHR Outside Medication is active until it is discontinued.

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 "/". If no relevant drugs are found then a 2 - No is assigned.

ASPIRIN/ OTHER ANTIPLATELET/ANTICOAGULANT THERAPY

Two taxonomies are used to find Aspirin and Other Anitplatelet/Anticoagulant therapy: DM AUDIT ASPIRIN DRUGS or DM AUDIT ANTIPLT/ANTICOAG

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.)

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 calulation is done:

days supply times (# of refills +1) (this is the total number of days the presciption covers)

# of days calculated above + issue date (this is the last date the presciption 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. The system will go back 10 years to find one of these medicatons. It is assumed that a medication entered as an EHR Outside Medication is active until it is discontinued.

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 "/".

If no relevant drugs are found then a 2 - No is assigned.

STATIN THERAPY

One taxonomy is used to find Statin therapy: BGP PQA STATIN MEDS If any drug in the above listed 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). If the prescription begins with an X the following calulation is done:

days supply times (# of refills +1) (this is the total number of days the presciption covers)

# of days calculated above + issue date (this is the last date the presciption 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. The system will go back 10 years to find one of these medicatons. 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/documented 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: POV ICD-9: 359.0-359.9, 729.1, 710.5, 074.1; ICD-10: G71.14, G71.19, G72.0, G72.2, G72.89, G72.9, M35.8, M60.80-M60.9, M79.1; 4) any of the following occurring anytime through the end of the Report Period: 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:

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 POV or Problem diagnosis ICD-9: 640.*3, 641.*3, 642.*3, 643.*3, 644.*3, 645.*3, 646.*3, 647.*3, 648.*3, 649.*3, 651.*3, 652.*3, 653.*3, 654.*3, 655.*3, 656.*3, 657.*3, 658.*3, 659.*3, 660.*3, 661.*3, 662.*3, 663.*3, 665.*3, 668.*3, 669.*3, 671.*3, 673.*3, 674.*3, 675.*3, 676.*3, 678.*3, 679.*3, V22.0-V23.9, V28.81, V28.82, V28.89, V72.42, V89.01-V89.09;

ICD-10: (see logic manual for codes), where the primary 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: 1) POV ICD-9: 630, 631, 632, 633*, 634*; ICD-10: O03.9; 2) CPT 59812, 59820, 59821, 59830.

Abortion definition: 1) POV ICD-9: 635*, 636* 637*; ICD-10: O00.*-O03.89, O04.*, Z33.2; 2) CPT 59100, 59120, 59130, 59136, 59150, 59151, 59840, 59841, 59850, 59851, 59852, 59855, 59856, 59857, S2260-S2267; 3) Procedure ICD-9: 69.01, 69.51, 74.91, 96.49; ICD-10: 0WHR73Z, 0WHR7YZ, 10A0***, 3E1K78Z, 3E1K88Z.

CVD

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. 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:

- One diagnosis ever of any code in the BGP CABG DXS taxonomy. The codes are: Z95.1 (ICD-10) Presence of aortocoronary bypass graft V45.81 (ICD-9) AORTOCORONARY BYPASS
- One diagnosis ever of any code in the BGP PCI DXS taxonomy. Codes are: V45.82 (ICD-9) STATUS-POST PTCA Z95.5 (ICD-10) Presence of coronary angioplasty implant and graft Z98.61 (ICD-10) Coronary angioplasty status
- 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.
- 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.

TB TEST DONE

The type of TB Test done is determined in the following way:

1. 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.

2. 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. TB TEST RESULT

If a TB test was done, the test result is determined in the following way:

1. If the patient has a TB health factor recorded, TB on the problem list or any diagnoses of TB documented in the PCC then the test result is assigned as 1 - Positive, no further processing is done. Taxonomy Used is DM AUDIT TUBERCULOSIS DXS.

2. 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, 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. 3. If no result is found then the value assigned is 3 - Unknown/not offered.

TB RESULT POSITIVE, ISONIAZID TX COMPLETE

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

TB RESULT NEGATIVE, TEST DATE

If the value of TB test result is NEGATIVE then the date of the last TB test is displayed.

HEPATITIS C - HCV Diagnosis Ever

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 PXRM 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 - BORN 1945-1965 SCREENED EVER

If the patient has a diagnosis of Hepatitis C this item is skipped. If the patient is not born between 1945 and 1965, a value of 3 - Not born 1945-1965 is assigned.

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.

The V LAB file is scanned for any test contained in the lab test and LOINC taxonomies. The V CPT file is scanned for CPT 86803.

If a lab test or CPT code is found a value of 1 - Yes is assigned.

If a lab test or CPT code is not found a value of 2 - No is assigned.

RETINOPATHY (DIAGNOSED EVER)

If retinopathy is on the problem list or the patient has had at least 1 visits 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: DIABETIC RETINOPATHY

INFLUENZA VACCINE DURING AUDIT PERIOD

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

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. 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.

If neither of the above are found, a value of 2 - No is assigned.

PNEUMOCOCCAL VACCINE EVER

Data is scanned for pneumococcal vaccine any time prior to the Audit date. A pneumococcal vaccine is determined by:

Immunization CVX codes: 33, 100, 109, 133, 152

Diagnoses: V03.82 (there are no ICD10 codes)

CPT codes: BGP PNEUMO IZ CPTS taxonomy (90669, 90670, 90732, G0009, G8115, G9279)

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.

If neither of the above is found, a value of 2 - No is assigned.

Td or Tdap IN PAST 10 YEARS

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 : 1, 9, 20, 22, 28, 35, 50, 106, 107, 110, 112, 113, 115, 120, 130, 132, 138, 139

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.

If neither of the above is found, a value of 2 - No is assigned

Tdap EVER

Immunizations are scanned for a Tdap vaccine ever. A Tdap vaccine is determined by:

CVX code 115

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.

HEPATITIS B 3-DOSE SERIES EVER

Data is scanned for hepatitis B vaccine any time prior to the Audit date. HEP B vaccination is determined by:

CVX codes 8, 42, 43, 44, 45, 51, 102, 104, 110, 132, 146

CPT codes contained in the BGP HEPATITIS CPTS taxonomy: 90636, 90723, 90731, 90740, 90743, G0010, Q3021, Q3023

Vaccinations must be given at least 20 days apart. If three are found, a value of 1 - Yes is assigned.

If less than three vaccines 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.

If three 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.

A1C

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.

Cumulative Audit:

If the result contains a “>” it goes into the 11.0 or higher 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:

HbA1c <7.0

HbA1c 7.0-7.9

HbA1c 8.0-8.9

HbA1c 9.0-9.9

HbA1c 10.0-10.9

HbA1c 11.0 or higher

Not tested or no valid result

HbA1c <8.0

HbA1c >9.0

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.

TOTAL CHOLESTEROL

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.

Cumulative Audit: This result is not used.

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.

HDL CHOLESTEROL

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.

Cumulative Audit:

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

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.

LDL CHOLESTEROL

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.

Cumulative Audit:

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

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.

TRIGLYCERIDES

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.

Cumulative Audit:

The result of the test is examined and is put into the following categories. If the result is blank OR the first digit of the result is not a number then it is put in the "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

Audit Export: 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

SERUM CREATININE

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.

For the cumulative Audit: This item is not reported.

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.

eGFR (ESTIMATED GFR)

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

For the cumulative Audit: 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:

>=60

30-59

15-29

<15

Not tested or no valid result

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.

QUANTITATIVE URINE ALBUMIN CREATININE RATIO (UACR)

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 patient is assigned a value of 1 - Yes for UACR Done. 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.

COMBINED OUTCOMES MEASURE

Assessed only for patients 40 years of age and older. The combined outcome measure displays a 1 - Yes on the Audit if the patient had all of the following during the Audit period: A1c < 8.0, statin prescribed, and mean BP <140/<90. Otherwise a value of 2 - No is assigned.

Note: This item is not included in the Audit Export (Data) File.

e-GFR and UACR

Assessed only for patients 18 years of age and older. For those who had both an e-GFR and a UACR test during the Audit period, a value of 1 - Yes is assigned. Otherwise a value of 2 - No is assigned.

Note: This item is not included in the Audit Export (Data) File.

COMORBIDITY

Comorbidity count is determined by how many of the following problems or conditions each of the patients has:

- Active depression
- Current tobacco use
- Severely obese (BMI 40 or higher)
- Diagnosed hypertension
- Diagnosed CVD
- CKD: eGFR<60 or UACR=>30 mg/g
- Hepatitus C
- Retinopathy

Contact Information

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