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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 (see pages 50-51) 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           Mar 2, 2009 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 11).

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                  Mar 2, 2009 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

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                Mar 2, 2009 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    16 Pat. Registration Data
3  Comments                10 Audit Status           17 Pat. Face Sheet
4  Health Summary          11 Flow Sheet             18 Send Mail Message
5  Last Visit              12 Case Summary           19 (Make a Referral)
6  Other PCC Visit         13 Edit Problem List      20 Diagnosis
7  Medications             14 Lab Profile            21 Print Letter
Select Action: Quit//
```

Update Complications List

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)
```

Master List

What: The Master List allows you to sort and select register patients by one or more of the following variables:

1. Age
2. Case manager
3. Current community
4. Patient
5. Public Health Nurse
6. Sex
7. Status
8. 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. Your choice: **7** (status)
5. Do you want to sort by a particular STATUS? No// **Y**
6. Your choice: **U** (unreviewed)
7. Within STATUS, want to sort by another attribute? No// **YES**
8. Your choice: **4** (patient)
9. Do you want to sort by a particular PATIENT? No// **N**
10. Within PATIENT, want to sort by another attribute? No// **N**
11. Store Report Result as Search Template? NO// **NO**
12. DEVICE: HOME// **<Enter>** to view on screen or **PRINTER NAME**, such as **SLAVE** or **S-O**, to print

Note: If you sort by a field that is blank for some patients (example: case manager), the patients with blanks will not show up on your master list.

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

                           REPORT SORTING UTILITY

        The MASTER LIST report can be sorted by one or more
        of the following attributes.  '<==' indicates a mandatory selection.

        1) AGE                                5) PUBLIC HEALTH NURSE
        2) CASE MANAGER                       6) SEX
        3) CURRENT COMMUNITY                  7)
        4) PATIENT                            8) WHERE FOLLOWED

        Sorting by: STATUS

        Your choice: 4
```

****
IHS DIABETES REGISTER REGISTER
****
MASTER LIST

SORTED BY: STATUS, then PATIENT
CONFIDENTIAL PATIENT DATA

REPORT DATE: JUN 22,2005 PAGE: 1

CHART	PATIENT	CASE MANAGER	PHN	NEXT REVIEW
	STATUS: ACTIVE			
7614	ADANFYALD,BARBARA A			09/09/2005
11271	ADAR,JOAN M			
7475	BALGERDA,JOHNELLE			06/03/2005
40198	BORGAR,LARRY T			01/30/2004
40782	BREI,BONNIE JOAN			01/08/2005
22097	BUGANUFF,TASHINA N L			
40247	BUORESSE,LARRY A SR			12/15/2004
26308	CUTTE,CONNIE A			06/03/2005
40535	D'AEGLA,MELANIE J			09/16/2005
28376	DEVYS,GREG O	ADAMS,G		10/16/2004
15120	EKARS,KATRINA H			12/15/2004
36126	FYNNYCOM,FAYE LAROSE			
12070	FYSHAR,RODNEY W			12/15/2004
23589	GAURGA,DANIELLE M			12/15/2004
9505	HYLBORN,AUDREY M			06/03/2005
2364	JECKSUN,MORRIS GRANT			
10710	JUHN,BRET D			
14017	LADASME,LINDSAY M			
23727	LYNA,SHARLENE R			12/15/2004
29320	MARRYTT,CYNTHIA			
19727	MUNTAS DA'UCE,DANA MARIE			
9647	MURELAS,CINDY			
26241	NAATHAR,PEGGY L			
20243	NARYE,ARLISSA			
8770	PAERSUN,WILLIAM PAUL			
19901	PARKYNS,TAMMIE L			
10818	RADHURN,MARY GAIL			
14024	RENTZ,ALBERT F			
4422	SMITH,MARYANNE			
35038	TYTCHEONARWA,EDNA O			
40837	UBYA,NICOLE L			
36021	VAZYNE,MARC W			
34757	VENN,JOEL W			
14229	WALDUN,GLENDA L			
19064	WYLLERD,CARISSA L			
32295	ZYNK,SHARLA M			

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: **DM09** 2009 Diabetes Program Audit ...
3. Select 2009 Diabetes Program Audit Option: **DM09** Run 2009 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

```
 ASSESSMENT OF DIABETES CARE, 2009       DATE AUDIT RUN: Apr 09, 2009  Page: 1

Audit Period Ending Date: Dec 31, 2008
Facility Name: TRAINING HC                      Area: 70 SU: 82 FACILITY: 10
# of ACTIVE Pts in Registry: 229
Does your community receive SDPI grant funds?  Don't know
REVIEWER: DH                        Community: PENDLETON
TRIBAL AFFIL: 248 RED LAKE BAND OF CHI     STATE of Residence: OR
CHART #: 32491    DOB: Jan 05, 1957    SEX: FEMALE
PRIMARY CARE PROVIDER:  LEE,DONNIE MD
DATE OF DIABETES DIAGNOSIS:
  DM Reg:   Problem List:   1st PCC DX:
Diabetes Type:
  DM Register:   Problem List:   PCC POV's:

TOBACCO USE: 3  Not Documented
  Referred for (or provided) Cessation Counseling:

HEIGHT:
Last WEIGHT:       BMI:

HTN (documented DX): 2  No
Last 3 BLOOD PRESSURES:
```

```
EXAMINATIONS (during audit period)
  FOOT EXAM-complete:              2  No
  EYE EXAM (dilated/fundus):       2  No
  DENTAL EXAM:                     2  No

EDUCATION (in past year)
  Diet Instruction:        4  None
  Exercise Instruction:    2  No
  DM Education (Other):    2  No

DM THERAPY     Select all that currently apply:
   X  1 Diet & Exercise Alone
      2 Insulin
      3 Sulfonylurea (glyburide, glipizide, repaglinide, nateglinide, others
      4 Metformin
      5 Acarbose
      6 Glitazones
      7 Incretin Mimetics
      8 DPP4 inhibitors
      9 Amylin Analogues
      10 Refused/Unknown

ACE Inhibitor/ARB Use: 2  No
Aspirin/Antiplatelet Therapy: 2  None
Lipid Lowering Agent:         4  None

IMMUNIZATIONS
  Flu vaccine (past yr):           2  No
  Pneumococcal Ever:               2  No
  Td in past 10 yrs:               2  No
  PPD Status:                      4  Unknown
    If PPD Pos, INH Tx Complete:
    If PPD Neg, Last PPD:

Date of Last ECG:

LABORATORY DATA   (most recent values obtained during 12 mo audit period)

  HbA1c:                    5.7            May 22, 2008     HEMOGLOBIN A1C
  Creatinine:
    Estimated GFR:          2  No
  Cholesterol:
  HDL Cholesterol:
  LDL Cholesterol:
  Triglycerides:

Most recent urine protein testing during 12 month audit period:

URINE TESTED FOR PROTEIN:   1  Yes         May 01, 2008     MICRAL

SPECIFIC TESTING DONE:
     1 Quantitative Albumin:Creatinine Ratio (UACR)
       UACR value:
     2 Semi-quantitative UACR
     3 Protein:Creatinine Ratio (UPCR)
  X  4 Other Quantitative test (e.g. 24 hr urine albumin)
                            N              May 01, 2008     MICRAL
     5 Found to have 1+ protein or more on standard UA dipstick
     6 Other non-quantitative test

MENTAL HEALTH
  Does pt have depression as an active problem?
       2  No
  If 'No', has pt been screened for depression in the past year?
       2  No
Local Option question:
```

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 annuallly 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: **DM09** 2009 Diabetes Program...
3. Select 2009 Diabetes Program Audit Option: **DM09** Run 2009 Diabetes ...
4. Checking for Taxonomies to support the 2009 Audit: HIT RETURN: **<ENTER>**
5. Enter the Official Diabetes Register: **IHS DIABETES** (or name of register)
6. Does your community receive SDPI grant funds: **2 or 3** (1 is only necessary when submitting your annual audit to IHS)
7. Enter the Audit Date: **T** for today or enter exact date
8. Run the audit for: P// **C** Members of a CMS Register
9. Enter the Name of the Register: **IHS DIABETES** (or name of register)
10. Do you want to select register patients with a particular status? Y// **YES**
11. Which status: A// **<Enter>** for Active, or type other status
12. Limit the audit to a particular primary care provider? N// **<Enter>** for no
13. Limit the patients who live in a particular community? N// **<Enter>** for no
14. Do you want to select: A// **<Enter>** for ALL Patients selected so far
15. Enter Print option: 1// **3** Cumulative Audit Only
16. Demo Patient Inclusion/Exclusion: 3// **<Enter>**
17. 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

```
DM09    Run 2009 Diabetes Program Audit
D9TC    Check Taxonomies for the 2009 DM Audit
D9TU    Update/Review Taxonomies for 2009 DM Audit
EAUD    Run the 2009 Audit w/predefined set of Pts
        ----------------------------------------
PR09    Run 2009 PreDiabetes/Metabolic Syndrome Audit
PDTC    Check Taxonomies for the 2009 Pre-Diabetes Audit
PDTU    Update/Review Taxonomies for 2009 PreDiab Audit
```

*** HEALTH STATUS OF DIABETIC PATIENTS ***
TRAINING HC
Reporting Period: Jan 01, 2008 to Dec 31, 2008

449 patients were reviewed	n	Percent
Gender		
Female	202	45%
Male	247	55%
Age		
<15 yrs	0	0%
15-44 yrs	94	21%
45-64 yrs	238	53%
65 yrs and older	117	26%
Diabetes Type		
Type 1	9	2%
Type 2	440	98%
Unknown		
Duration of Diabetes		
Less than 10 years	269	60%
10 years or more	148	33%
Diagnosis date not recorded	31	7%
Weight Control (BMI)		
Normal (BMI<25.0)	22	5%
Overweight (BMI 25.0-29.9)	81	18%
Obese (BMI 30.0 or above)	337	75%
Height or Weight missing	9	2%
Blood Sugar Control		
HbA1c <7.0	184	41%
HbA1c 7.0-7.9	76	17%
HbA1c 8.0-8.9	45	10%
HbA1c 9.0-9.9	31	7%
HbA1c 10.0-10.9	21	5%
HbA1c 11.0 or higher	35	8%
Undocumented	57	13%
Mean Blood Pressure		
<120/<70	40	9%
120/70 - <130/<80	108	24%

130/80 - <140/<90	121	27%
140/90 - <160/<95	72	16%
160/95 or higher	18	4%
BP category Undetermined	90	20%
Tobacco use		
Current Tobacco User	144	32%
Counseled - Yes	53	37%
Counseled - No	91	63%
Counseled - Refused	0	0%
Not a current tobacco user	296	66%
Tobacco use not documented	9	2%
DIABETES TREATMENT		
Diet and Exercise Alone	126	28%
Insulin	103	23%
Sulfonylurea	121	27%
Metformin	180	40%

Sample Cumulative Diabetes Audit

Acarbose/Miglitol	31	7%	
Glitazone	103	23%	
Incretin mimetics (Byetta)	4	1%	
DPP4 inhibitors (Januvia, Galvus)	0	0%	
Amylin analogues (Symlin)	0	0%	
Any Oral med combination	108	24%	
Any Insulin + other med combination	63	14%	
Unknown/Refused	4	1%	
ANTIPLATELET THERAPY			
Aspirin or Antiplatelet Rx	274	61%	
None	171	38%	
Refused or Adverse reaction	4	1%	
ACE INHIBITOR (OR ARB) USE			
Use in pts with overt proteinuria	14	79%	
Use in pts with known hypertension	242	71%	
LIPID LOWERING AGENT USE			
Use in pts with total chol >=240	21	59%	
Use in pts with LDL chol > 100	67	51%	
Of the 220 pts taking a lipid agent:			
Statin drug prescribed	152	69%	
Non-statin drug prescribed	22	10%	
Statin AND non-statin prescribed	46	21%	
Refused or Adverse Reaction	4	1%	
EXAMS - Yearly			(% refused)
Foot Exam - Neuro & Vasc	220	49%	(0%)
Eye Exam - Dilated	198	44%	(0%)
Dental Exam	193	43%	(0%)
IMMUNIZATIONS			(% refused)
Flu Vaccine - yearly	292	65%	(6%)
Pneumovax - once	341	76%	(3%)
Tetanus/Diptheria (q 10 yrs)	337	75%	(2%)
LABORATORY EXAMS			
Was urine protein testing performed during audit period?			
Yes	297	66%	
No	152	34%	
Refused	0	0%	
Of the 297 pts tested:			
Quantitative Alb:Creat Ratio	116	26%	
Semi-quantitative Alb:Creat Ratio	55	12%	
Protein:Creat Ratio	41	9%	
Other quantitative test	55	12%	
1+ protein or more on standard dipstick	30	21%	
Other non-quantitative test	0	0%	
Of the 201 pts tested with an A:C ratio or with 1+ protein or more on std UA dipstick:			
Normal urine albumin	104	52%	
Microalbuminuria	42	21%	
Overt proteinuria	8	4%	
Creatinine obtained in the past 12 months	358	80%	
Creatinine >= 2.0 mg/dl	347	77%	
Creatinine < 2.0 mg/dl	11	2%	
Creatinine not tested/unknown	91	20%	

Estimated GFR documented during audit period	247	55%
Total Cholesterol obtained in the past 12 months	319	71%
Desirable (<200 mg/dl)	220	49%
Borderline (200-239 mg/dl)	63	14%
High (240 mg/dl or more)	36	8%
Not tested/unknown	130	29%
LDL Cholesterol obtained in the past 12 months	296	66%
LDL <100 mg/dl	166	37%
LDL 100-129 mg/dl	81	18%
LDL 130-160 mg/dl	36	8%
LDL >160	13	3%
Not tested/unknown	153	34%
HDL Cholesterol obtained in the past 12 months	274	61%
HDL <35 mg/dl	49	11%
HDL 35-45 mg/dl	109	24%
HDL 46-55 mg/dl	67	15%
HDL >55	49	11%
Not tested/unknown	175	39%
Triglycerides obtained in the past 12 months	305	68%
TG <150 mg/dl	112	25%
TG 150-199 mg/dl	63	14%
TG 200-400 mg/dl	99	22%
TG >400 mg/dl	31	7%
Not tested/unknown	144	32%
EKG (Age 30 and above)		
Performed in past 3 years	207	46%
Performed in past 5 years	278	62%
Ever performed	346	77%
Tuberculosis Status		
PPD +,INH treatment complete	9	2%
PPD +, untreated/incomplete or tx unknown	58	13%
PPD -, placed since DM dx	135	30%
PPD -, placed before DM dx	45	10%
PPD status unknown	198	44%
PPD -, date of Dx or PPD date unknown	4	1%
PPD Refused		

DIABETES-RELATED EDUCATION - Yearly			(% refused)
Diet Instruction by any provider	166	37%	(1%)
Diet Instruction by RD	76	17%	
Exercise Instruction	148	33%	(0%)
Other Diabetes Education	189	42%	(0%)
Any of above Self-Management Topics	251	56%	

DEPRESSION identified as an active dx		
Yes	148	33%
No	301	67%
Of the 301 pts without an active dx of depression, proportion screened for depression in past year:		
Screened	96	32%
Not Screened	203	67%
Refused Screening	2	1%

End of report.

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

```
                *** 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]  Apr 09, 2009 **********
DIABETES PATIENT CARE SUMMARY                  Report Date:  Apr 09, 2009
Patient Name:  DEMO,PATIENT BOY    HRN: 999995
Age:  34      Sex:  M          Date of DM Onset:
Dob:  Jan 05, 1975             DM Problem #: *** NONE RECORDED ***
**NOT ON DIABETES REGISTER**  Primary Care Provider:
Last Height:
Last Weight:                                  BMI:
Tobacco Use:  NON-TOBACCO USER  Mar 09, 2009
HTN Diagnosed:  No
ON ACE Inhibitor/ARB in past 6 months: No
Aspirin Use/Anti-platelet (in past yr):  No
Last 3 BP:     None recorded        Is Depression on the Problem List?
                                         No
                                    If no, Depression Screening in past year?
                                         No
In past 12 months:
Diabetic Foot Exam:    No
Diabetic Eye Exam:     No
Dental Exam:           No

SMBG: No Evidence in the past year
DM Education Provided (in past yr):
  Last Dietitian Visit:

Immunizations:
Flu vaccine since August 1st:  No
Pneumovax ever:                No
Td in past 10 yrs:             No
Last Documented PPD:
Last TB Status Health Factor:                    Last CHEST X-RAY:
EKG:

Laboratory Results (most recent):
HbA1c:                    5.7            May 22, 2008  HEMOGLOBIN A1C
Next most recent HbA1c:   5              May 19, 2008
Nephropathy Assessment
  Urine Protein:          T              May 12, 2008  URINE PROTEIN
  Microalbuminuria:
  A/C Ratio:
  Creatinine:
  Estimated GFR:
Total Cholesterol:        234            Sep 26, 2007  CHOLESTEROL
  LDL Cholesterol:        108            Sep 26, 2007  LDL CHOLESTEROL
  HDL Cholesterol:        47             Sep 26, 2007  HDL
  Triglycerides:          90             Sep 26, 2007  TRIGLYCERIDE

DEMO,PATIENT BOY                 DOB: 1/5/1975       Chart # 999995
```

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   Flu Shot                 32   Pneumovax
         33   Td/Tdap                  34   PPD
       4      ALL Lab Tests------------------------------------
         41   LDL Cholesterol          42   HDL Cholesterol
         43   Cholesterol              44   Triglyceride
         45   Creatinine               46   Hemoglobin A1c
         48   Estimated GFR            49   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.

```
FOLLOW-UP REPORT              Mar 02, 2009 10:17:24          Page:    1 OF 3
     IHS DIABETES REGISTER Register - Active Patients
     Follow-up Report: ALL FOLLOW-UP NEEDS                      Page: 1
     (For Patients due now or within the next 30 days)
     REPORT DATE: MAR 02,2008
COMMUNITY     PATIENT                      HRN    STATUS
--------------- ------------------------- ------ --------------------
ALBANY        SELCHANBARG,JUNE E         10346   *NO* UA/Urine Protein on record
ALBANY        SELCHANBARG,JUNE E         10346   *NO* MICROALBUMIN on record.
ALBANY        STATTAR,VICTORIA LYNN      37666   *NO* FOOT EXAM on record.
ALBANY        STATTAR,VICTORIA LYNN      37666   *NO* UA/Urine Protein on record
ALBANY        STATTAR,VICTORIA LYNN      37666   *NO* MICROALBUMIN on record.
ALOHA         DUNAI,CLARIA JOAN          40220   *NO* EXERCISE ED on record.
ALOHA         DUNAI,CLARIA JOAN          40220   *NO* MICROALBUMIN on record.
ASTORIA       MUNTAS DA'UCE,DANA MARIE   19727   *NO* FOOT EXAM on record.
ASTORIA       MUNTAS DA'UCE,DANA MARIE   19727   *NO* HGB A1C on record.
ASTORIA       MUNTAS DA'UCE,DANA MARIE   19727   *NO* UA/Urine Protein on record
AURORA        WURKMEN,MARILYN D          26635   *NO* FOOT EXAM on record.
AURORA        WURKMEN,MARILYN D          26635   last EYE EXAM MAR 18,2003
AURORA        WURKMEN,MARILYN D          26635   last PAP SMEAR JUL 26,2002
BANKS         AVAI,ROWEN L JR            38316   *NO* TRIGLYCERIDE on record.
BANKS         AVAI,ROWEN L JR            38316   *NO* MICROALBUMIN on record.
BEAVERTON     HOYSMEN,KATHLEEN           40222   last FOOT EXAM AUG 21,2003
BEAVERTON     HOYSMEN,KATHLEEN           40222   *NO* EYE EXAM on record.
BEAVERTON     STUNA,SHIELA D             36973   *NO* UA/Urine Protein on record
BEAVERTON     STUNA,SHIELA D             36973   *NO* MICROALBUMIN on record.
BINGEN        VAZYNE,MARC W              36021   *NO* FOOT EXAM on record.
CANYONVILLE   WYLLERD,CARISSA L          19064   *NO* MICROALBUMIN on record.
CASCADIA      SAEMEN,RANDY G             37065   *NO* FOOT EXAM on record.
CLACKAMAS     RENTZ,ALBERT F             14024   *NO* MICROALBUMIN on record.
CORVALLIS     TYTCHEONARWA,EDNA O        35038   *NO* FOOT EXAM on record.
COTTAGE GROVE   BOZZERD,DORA C           39194   *NO* MICROALBUMIN on record.
CRABTREE      BENKS,JAMES E              8897    *NO* FOOT EXAM on record.
DALLAS        CUTTE,CONNIE A             26308   *NO* MICROALBUMIN on record.
DALLAS        MURRYSUN,JACK M            39455   *NO* FOOT EXAM on record.
DALLAS        PATARSUN,REGINA L          27265   *NO* MICROALBUMIN on record.
DALLAS        RUBBLE,BARNEY JOE          500002  *NO* FOOT EXAM on record.
DALLAS        RUBBLE,BARNEY JOE          500002  *NO* EYE EXAM on record.
DAYTON        ERNULD,TERESA ANNALEE      32200   *NO* UA/Urine Protein on
record
DAYTON        FYNNYCOM,FAYE LAROSE       36126   *NO* MICROALBUMIN on record.
ESTACADA      CREYN,TY CHRISTIAN         22545   *NO* FOOT EXAM on record.
ESTACADA      CREYN,TY CHRISTIAN         22545   *NO* MICROALBUMIN on record.
EUGENE        BREI,BONNIE JOAN           40782   *NO* FOOT EXAM on record.
EUGENE        BREI,BONNIE JOAN           40782   *NO* MICROALBUMIN on record.
EUGENE        BUORESSE,LARRY A SR        40247   last FOOT EXAM AUG 21,2003
EUGENE        MERSUNATTA,RACHAEL C       37478   *NO* MICROALBUMIN on record.
EUGENE        NAATHAR,PEGGY L            26241   *NO* FOOT EXAM on record.
EUGENE        NYCKALSUN,MARCI B          26192   *NO* UA/Urine Protein on
record
GASTON        MARRYTT,RALPH C            36401   *NO* EXERCISE ED on record.
GASTON        MARRYTT,RALPH C            36401   *NO* MICROALBUMIN on record.
GATES         BERTUW,BARRY               38876   *NO* FOOT EXAM 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** ADD/EDIT DMS Letters
2. Select Action: Quit// **2** ADD Letter
3. NAME OF LETTER: **FOLLOW UP** (this is an example name)
4. Are you adding 'FOLLOW UP' as a new DMS LETTER (the 29TH)? No// **Y**
5. 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.)

Letter Inserts

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

This list of inserts is updated periodically. To see all the inserts in RPMS, choose number 4 in step 2 above.

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

|7|

|1| |2|
|3|

DEAR |1| |2|,

OUR RECORDS SHOW THAT YOU ARE DUE FOR THE FOLLOWING DIABETES RELATED CARE:

     |5|

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===>
```

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 a single form 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**, as **SLAVE** or **S-O**, to print

March 2,2009

FLORENCE ADANFYALD
2084 MCCOY NE
WS CAMPUS, OR 97305

DEAR FLORENCE ADANFYALD,

OUR RECORDS SHOW THAT YOU ARE DUE FOR THE FOLLOWING DIABETES RELATED CARE:

FOOT EXAM	last FOOT EXAM JUN 7,2004
EYE EXAM	last EYE EXAM FEB 28,2004
PAP SMEAR	last PAP SMEAR JUN 7,2004
EXERCISE ED	last EXERCISE ED JUL 27,2004
TD	*NO* TD on record.
PPD	last PPD JUL 27,2004
CHOLESTEROL	last CHOLESTEROL JUL 5,2004
HGB A1C	last HGB A1C AUG 16,2004
UA/Urine Protein	*NO* UA/Urine Protein on record.

PLEASE CALL THE CLINIC AT (555) 555-5555,TO MAKE YOUR APPOINTMENT.

THANK YOU,

RACHEL SMITH
DIABETES COORDINATOR

Patient & Statistical Reports - Patient

What: This report option produces lists of patient information (for ACTIVE patients only). Patient reports are available for the following categories:

1) REGISTER DATA: A brief summary of patient name, chart, DOB, provider, etc.
2) COMPLICATIONS: A list of patients' complications (as displayed in Patient Management)
3) DIAGNOSES: A list of patients' type of diabetes
4) FAMILY MEMBERS: [This option will not work for most sites]
5) PCC PROBLEM LIST: [This option does not work]
6) CASE REVIEW DATE: Can print the last review and next review in a specified range
7) CASE COMMENTS: Prints the narrative entered under #3 in Patient Management

A second step lets you sort by other categories (these are different for each option, but include case manager, sex, etc.) and select specific groups (ex: a particular case manager). The difference between 'Patient' and 'Statistical' reports is in the output.

Why: For case management. These reports mainly make use of the information entered under 'Patient Management'.

When: Monthly, 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 Register Reports Option: **PR** Patient and Statistical Reports
4. Report Option ==> **2** Complication
5. Your choice: **2** COMPLICATION
6. Do you want to sort by a particular COMPLICATION? No// **<Enter>**
7. Within COMPLICATION, want to sort by another attribute? No// **<Enter>**
8. 'P'atient or 'S'tatistical report? ==> **P** Patient
9. Store Report Result as Search Template? NO// **<Enter>**
10. DEVICE: HOME// **<Enter>** to view on screen or **PRINTER NAME**, such as **SLAVE** or **S-O**, to print

#1: Register data

```
    ***************** CONFIDENTIAL REGISTER STATUS DATA *****************
 CLIENT:  PERKAR,SUSAN                                  CHART:  22467
FOLLOWD:                      DOB:  04/02/1955            AGE:  53 YRS
PROVIDR:                   STATUS:  ACTIVE            PRIORITY:
    MGR:  HEAD,DON             PHN:                       COMM:  PORTLAND

    ***************** CONFIDENTIAL REGISTER STATUS DATA *****************
 CLIENT:  MYLLS,MYRNA J                                 CHART:  32491
FOLLOWD:  CHEMAWA ALCOHOL E    DOB:  08/06/1957            AGE:  50 YRS
PROVIDR:  LEE,DONNIE MD     STATUS:  ACTIVE            PRIORITY:
    MGR:  HEAD,DON             PHN:                       COMM:  PORTLAND
```

#2: Complications, sorted by complication

```
                            COMPLICATIONS
                         SORTED BY: COMPLICATION
-------------------------------------------------------------------------
CHART   PATIENT                    COMPLICATION                      STATUS
=========================================================================
10815   AVENS,RAYMOND W            BORDERLINE HYPERTENSION
11271   ADAR,JOAN M                BORDERLINE HYPERTENSION              B
7475    BALGERDA,JOHNELLE          CHRONIC FOOT ULCER
2364    JECKSUN,MORRIS GRANT       CHRONIC FOOT ULCER                   D
8897    BENKS,JAMES E JR           CHRONIC FOOT ULCER                   A
40535   D'AEGLA,MELANIE J          FIXED PROTEINURIA
19489   DYUNNA,THOMAS R            FIXED PROTEINURIA
```

#3: Diagnoses

```
-------------------------------------------------------------------------------
CHART   PATIENT               DIAGNOSIS                    DX DATE    SEVERITY
===============================================================================
999991  DEMO,NON BEN          TYPE 2                       02/05/2007
22467   PERKAR,SUSAN          TYPE 2                       05/02/1998 NORMAL
32491   MYLLS,MYRNA J         TYPE 2                       09/09/1996 MODERATE
28605   MURELAS,ELAINA M      TYPE 2                       03/05/2008 MODERATE
```

#6: Case review date

```
-------------------------------------------------------------------------------
CHART   PATIENT               CASE MANAGER           LAST REVIEW    NEXT REVIEW
===============================================================================
19683   MASTATH,SHONN R                              03/05/2008     03/05/2008
```

Patient & Statistical Reports - Statistical

What: This report option produces summary counts of patients (for ACTIVE patients only). Statistical reports are available for the following categories:

2) COMPLICATIONS: A list of patients' complications (as displayed in Patient Management)
3) DIAGNOSES: A list of patients' type of diabetes

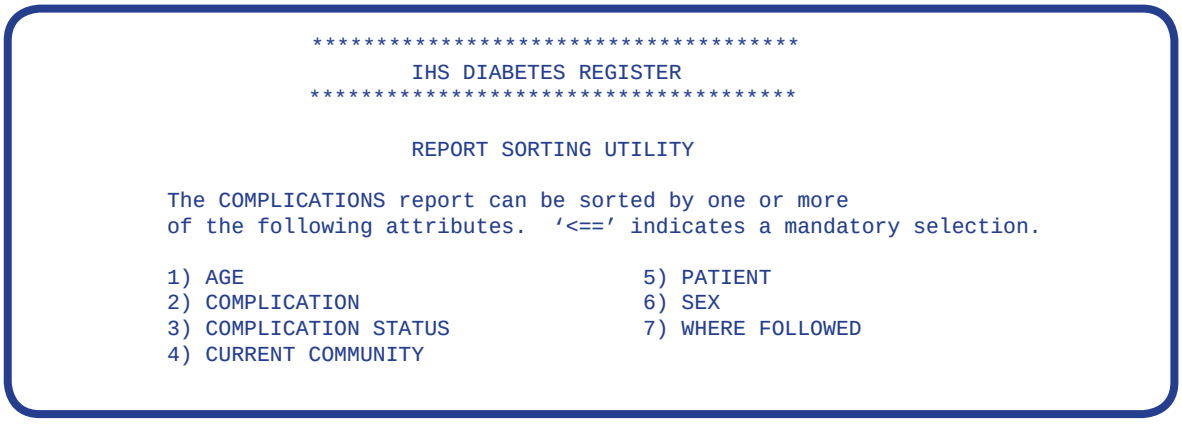
A second step lets you choose categories to sort by, which produces subtotals in your report. You are asked whether you want a patient or statistical report. A response of **"S"**, for statistical, results in a display of patient counts without a detailed patient listing.

Why: This report may be used for program planning and case management. It allows you to generate patient information based on the variables listed above. For example, it will generate a report that illustrates which complication is most prevalent at your site.

When: Monthly, 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 Register Reports Option: **PR** Patient and Statistical Reports
4. Report Option ==> **2**
5. Your choice: **2** COMPLICATION
6. Do you want to sort by a particular COMPLICATION? No// **<Enter>**
7. Within COMPLICATION, want to sort by another attribute? No// **<Enter>**
8. 'P'atient or 'S'tatistical report? ==> **"S"** Statistical
9. Store Report Result as Search Template? NO// **<Enter>**
10. DEVICE: HOME// **<Enter>** to view on screen or **PRINTER NAME**, such as **SLAVE** or **S-O**, to print



```
COUNT COMPLICATIONS                                  JAN 27,2009  15:13    PAGE 1
          COMPLICATION
-------------------------------------------------------------------------------

               COMPLICATION: CORONARY ARTERY DISEASE
SUBCOUNT  3
               COMPLICATION: CVA (STROKE)
SUBCOUNT  4
               COMPLICATION: END STAGE RENAL DISEASE
SUBCOUNT  2
               COMPLICATION: FIXED PROTEINURIA
SUBCOUNT  2
               COMPLICATION: HIGH RISK FOOT
SUBCOUNT  3
               COMPLICATION: HYPERLIPIDEMIA
SUBCOUNT  7
               COMPLICATION: HYPERTENSION
SUBCOUNT  14
               COMPLICATION: LEA
SUBCOUNT  3
               COMPLICATION: MINOR AMPUTATION(S)
SUBCOUNT  1
               COMPLICATION: NEUROPATHY
SUBCOUNT  2
               COMPLICATION: OBESITY
SUBCOUNT  15
               COMPLICATION: RETINOPATHY
SUBCOUNT  1
               COMPLICATION: TOBACCO USE
SUBCOUNT  13

COUNT     70
```

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

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

      Select Patients based on which of the above:  (1-47):
```

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

       <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):  (1-56):
```

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

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

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

Sort Patients by which of the above:  (1-25):
```

Sample GEN Reports

Detailed Patient Listing: All patients with status and last visit date

This report was created by SEARCHING for all patients (hit <enter> without choosing any search criteria), PRINTING name, chart #, register status, and patient's last visit, and SORTING by register status. This can be useful for periodically cleaning up register statuses.

```
PATIENT NAME          HRN           STATUS      LAST VISIT
-------------------------------------------------------------------

DUCK,VANESSA R        TRN-29696     ACTIVE      MAR 05, 2008
ABRACADABRA,MISTY     TRN-660020    ACTIVE      JAN 11, 2007
ABUNE,KATHLEEN S      TRN-25634     DECEASED    SEP 15, 2004
DUCK,DONALD P         TRN-800022    INACTIVE    AUG 11, 2006
```

Sub-counts and total counts: Eligibility status of active patients

This report was created by SEARCHING for patients whose register status was 'active', choosing 'S' for Sub-counts and Total count, and requesting SUB-COUNTS by eligibility status.

```
                        CASE MANAGEMENT PATIENT LISTING                Page 1
                              IHS DIABETES REGISTER
                       PATIENT SUB-TOTALS BY:  Eligibility Status
-------------------------------------------------------------------------------

Eligibility Status:
          CHS & DIRECT                              41
          DIRECT ONLY                               77


Total Patients 118
```

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

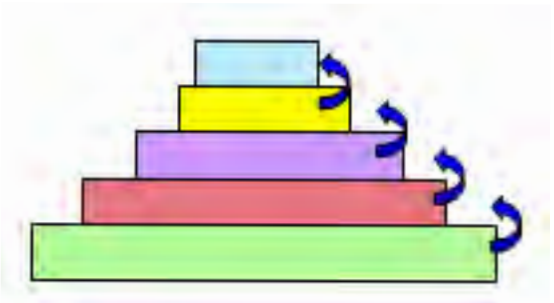
Data-Informed Prevention – ability to focus prevention efforts based on objective data

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

General

Type ^ to go back one screen (Shift+6)
Type ^^ to go back to the menu
Keep CAPS LOCK on
When you want to exit, type the word **HALT** at a menu prompt to close your session

Menus

To go up one menu level, press **Enter** at the menu prompt (Select MENU NAME Option:)
To jump to an option that is not on your current menu, type a **^** before the option. Example: **^DMS**
... after an option means there is another menu under it
To leave RPMS, type **HALT** at a menu prompt
To leave RPMS and come back to the same point later, type **CONTINUE** at a menu prompt and **YES** when asked if you want to halt and continue with this option later

Entering Information

RPMS recognizes partial entries
Enter names as LASTNAME,FIRSTNAME
Instead of a name, you may use the chart number, DOB, SSN
Two slashes // mean this is the default answer
– Hit **Enter** for the default
Bring up the last patient you were working on by hitting the **Spacebar** and **Enter**
To delete the contents of a field, enter @

Help

? to list all available options
?? to list available options and their names
??? for a brief description of each option
???? for extended help

Screen Editor (looks like this →)

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

F1, E to exit and save
F1, Q to exit without saving
F1, H for help
Arrow keys (→←↑↓) to move around

Dates

RPMS recognizes many date formats, e.g. FEB 13, 2007 or 02/13/07 or 02-13-07
Entering **T** will fill in today's date
T+ a number will add that many days to today's date,
e.g. **T+10** = 10 days from now
T- a number is that number of days ago,
e.g. **T-365** = 1 year ago
T+40W = 40 weeks from today
T-3M = 3 months ago (etc.)

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 040509**
11. Are you adding 'DRH DM REG 040509' 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 040509**
6. Your choice (1-4): 1// **2** (Living pts must not be a member of the DRH DM REG 040509 cohort)
7. Attribute of PATIENT: **DX**
8. Enter DX: **250.00-250.93**
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** (JAN 05, 2009)
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.

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

Maintaining the Diabetes Register

Overview

Maintaining the diabetes register is important, since you want to have the most accurate information about your patients available. Using the following tools of the Diabetes Management System can assist you in keeping your register clean and up to date with patient information, statuses and Primary Care Providers.

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.

1. Open RPMS
2. Go to **DMS** Diabetes Management System
3. Go to **RP** Reports Menu...
4. Go to **RR** Register Reports...
5. Select **GEN** Register Patient General Retrieval (Lister)
6. Do you want to use a PREVIOUSLY DEFINED REPORT? N// **<enter>**
7. Select Patients based on which of the above: (1-48): **9,20** (for Living Patients and Register Status)
8. ENTER Register Status: **ACTIVE**
9. ENTER Register Status: **INACTIVE**
10. ENTER Register Status: **<enter>**
11. Would you like to select additional PATIENT criteria? N// **<enter>**
12. Choose type of report: D// **<enter>** (for Detailed Patient Listing)
13. Select print item(s): (1-57): **1,2,25,23** (for Patient Name, Patient Chart #, Register Status, and Patient's Last Visit)
14. Enter Column Width for Patient Name (suggested: 20): (2-80): 20// **<enter>**
15. Enter Column Width for Patient Chart # (suggested: 12): (2-80): 12// **<enter>**
16. Enter Column Width for Register Status (suggested: 10): (2-80): 10// **<enter>**
17. Enter Column Width for Patient's Last Visit (suggested: 18): (2-80): 18// **<enter>**
18. Enter Column Width for Patient Name (suggested: 20): (2-80): 20// **<enter>**
19. Would you like to select additional PRINT criteria? N// **<enter>**
20. Sort Patients by which of the above: (1-26): **13** (for Register Status)
21. Do you want a separate page for each Register Status? N// **<enter>**
22. Would you like a custom title for this report? N// **<enter>**
23. Do you wish to SAVE this SEARCH/PRINT/SORT logic for future use? N// **<enter>**
24. DEVICE: HOME// **<enter>** to view on screen or PRINTER NAME to print
25. Right Margin: 80// **<enter>**

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 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
```

Maintaining the Diabetes Register (3)

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?

GEN Report to list Primary Care Provider

This GEN report will list the living patients on your register, with the Primary Care Provider that they have been assigned to. It will also list patients who are not assigned to a Primary Care Provider.

1. Open RPMS
2. Go to **DMS** Diabetes Management System
3. Go to **RP** Reports Menu...
4. Go to **RR** Register Reports...
5. Select **GEN** Register Patient General Retrieval (Lister)
6. Do you want to use a PREVIOUSLY DEFINED REPORT? N// **<enter>**
7. Select Patients based on which of the above? (1-48): 9 and **<enter>**
8. Would you like to select additional PATIENT criteria? NO// **<enter>**
9. Choose Type of Report: D// **<enter>** (for Detailed Patient Listing)
10. Select print item(s): (1-57): **1,2,24** (for Patient Name, Patient Chart #, and Primary Care Provider)
11. Enter Column Width for Patient Name (suggested: 20): (2-80): 20// **<enter>**
12. Enter Column Width for Patient Chart # (suggested: 12): (2-80): 12// **<enter>**
13. Enter Column Width for Primary Care Provider (PCC) (suggested: 15): (2-80): 15// **<enter>**
14. Would you like to select additional PRINT criteria? N// **<enter>**
15. Sort Patients by which of the above: (1-26): **7** (for Primary Care Provider)
16. Do you want a separate page for each Primary Care Provider (PCC)? N// **<enter>**
17. Would you like a custom title for this report? N// **<enter>**
18. DEVICE: HOME// **<enter>** to view on screen, or **PRINTER NAME**, to print
19. Right Margin: 80// **<enter>**

```
            CASE MANAGEMENT PATIENT LISTING   Page 1
                 IHS DIABETES REGISTER
PATIENT NAME          HRN           PRIMARY PROVIDE
-----------------------------------------------------

DONN,SHEILA J         TRN-40457     --
BRADY,MARSHA          TRN-660204    --
HUFFMEN,DANIEL B      TRN-11949     LEE,DONNIE MD
MOUSE,MICKEY          TRN-700227    LEE,DONNIE MD
AWESOMEPOWER,DUDE OF  TRN-199422    LEE,DONNIE MD
SMITH,HICKORY         TRN-400000    NURRE,MARK MD
SMYTH,LEONARD L       TRN-31511     STONER,J

Total Patients 108
```

Submitting the Electronic IHS Audit through WebAudit

Overview

Submitting the audit usually encompasses three parts, one for reviewing the records of patients that will be included in your submitted audit, one for creating the .rec file using your EHR/RPMS, and one for uploading the file to WebAudit.

Part A: Print individual and cumulative audits for review

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: **DM09** (*2009 Diabetes Program Audit...*)
4. Select 2009 Diabetes Program Audit Option: **DM09** (*Run 2009 Diabetes Program Audit*)
5. End of taxonomy check. HIT RETURN **<enter>**
6. Enter the Official Diabetes Register: **IHS DIABETES**
7. Does your community receive SDPI grant funds: **3**
8. Enter the Audit Date: 12/31/2008 (*Choose one date and use it every time*)
9. Run the Audit for: P// **C** (*Members of a CMS Register*)
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. Do you want to select: A// **<enter>** (*ALL patients selected so far*)
13. Enter Print option: 1// **4** (*Both Individual and Cumulative Audits*)
14. Do you wish to print the Patient's Name on the audit sheet? N// (*Your choice: Y for Yes or N for No*)
15. Demo Patient Inclusion/Exclusion: E// **<enter>**
16. DEVICE: HOME// (*enter the name of your printer here*)
17. Right Margin: 80// **<enter>**
18. *Use the individual audits to look for missing items in the patient records. Consider highlighting missing items directly on the individual audit sheets. Remember that for DM Therapy, "Diet and exercise alone" is the default and may be a missing value. On the cumulative audit, note any categories with very low or zero percentages - this might be the result of a taxonomy problem. Input any items from your chart review into EHR/RPMS.*

Part B: Run the cumulative audit to save a .rec file

18. From the main menu, go to **DMS** Diabetes Management System (*may also be listed as BDM*)
19. Select Diabetes Management System Option: **DA** (*Diabetes QA Audit Menu...*)

20. Select Diabetes QA Audit Menu Option: **DM09** (*2009 Diabetes Program Audit...*)
21. Select 2009 Diabetes Program Audit Option: **DM09** (*Run 2009 Diabetes Program Audit*)
22. End of taxonomy check. HIT RETURN: **<enter>**
23. Enter the Official Diabetes Register: **IHS DIABETES**
24. Does your community receive SDPI grant funds: **1** (*Yes*)
25. Enter the SDPI Grant #: (*enter the grant number here*)
26. Enter the Audit Date: 12/31/2008 (*Choose one date and use it every time*)
27. Run the audit for: P// **C** (*Members of a CMS Register*)
28. Limit the audit to a particular primary care provider? N// **<enter>**
29. Limit the patients who live in a particular community? N// **<enter>**
30. Do you want to select: A// **<enter>** (*ALL Patients selected so far*)
31. Enter the Print Option: 1// **2** (*Create EPI INFO file*)
32. Enter the name of the FILE to be Created (3-8 characters): (*Enter a short name, example: DMCLINIC. 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. You do not need to add .rec at the end. The computer will do that for you.*)
33. Write down the name of the file, example: DMCLINIC.rec
34. Is everything ok? Do you want to continue? Y// **<enter>**
35. Demo Patient Inclusion/Exclusion: E// **<enter>**
36. Won't you queue this? Y// **<enter>**

Part C: Upload to WebAudit and conduct data quality checks as needed, then lock for submission.

- Ask your site manager to retrieve the file from step 32 for you. They can probably save it to a network drive.

- Upload the file to WebAudit. Go to the WebAudit system using your login (there are links at www.dmaudit.com and at http://www.diabetes.ihs.gov), click on **Diabetes WebAudit**, then click on **Upload Data** and follow the instructions there.

- Run the Data Quality Check. You can also download your data to Excel.

- Make any corrections in EHR/RPMS. That way, your patient records will be more complete. When you finish corrections, repeat Parts B and C to upload your records to WebAudit.

- Use the Facility Adminstration section of WebAudit to enter the total number of active patients on your diabetes register and your SDPI grant number. When your audit is complete, remember to "lock" the records so that IHS will know to retrieve the final file.

Adding Users to Your Diabetes Register

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

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

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

IHS Diabetes Audit Medications

DM THERAPY

Insulin

Insulin, REG Insulin, NPH Insulin, Lente Insulin, Ultralente Insulin
Insulin aspart (NovoLog), Novolin, Novopen
Lispro (Humalog)
Glargine (Lantus)

Sulfonylureas

Acetohexamide (Dymelor)
Chlorpropamide (Diabinese)
Glyburide (DiaBeta, Micronase, Glynase)
Glipizide (Glucotrol, Glucotrol XL)
Glimepiride (Amaryl)
Tolazamide (Tolinase)
Tolbutamide (Orinase)

Also in this category, for purposes of the audit:
Repaglinide (Prandin)
Nateglinide (Starlix)
Metformin + Glipizide (Metaglip)
Metformin + Glyburide (Glucovance)

Metformin

Metformin (Glucophage)
Metformin + Glyburide (Glucovance)
Metformin + Glipizide (Metaglip)
Metformin + Rosiglitazone (Avandamet)

Acarbose (Precose) or miglitol (Glyset)

Glitazones

Pioglitazone (Actos)
Troglitazone (Rezulin)
Rosiglitazone (Avandia)
Metformin + Rosiglitazone (Avandamet)

Incretin mimetics

Exenatide (Byetta)

DPP4 inhibitors

Sitagliptin (Januvia, Galvus)

Amylin analogues

Pramlintide (Symlin)

SELF MONITORING Prescriptions

Glucose test strips and monitors of all types (Advantage, One-Touch, Precision, Chemstrip, Accuchek)
Lancet

ANTIPLATELET Therapy

Clopidogrel (Plavix)
Ticlopidine (Ticlid)
Heparin (Heparin)
Warfarin (Coumadin)
Cilistazol (Pletal)
Dipyridamole (Persantine)
Aspirin + Dipryridamole (Aggrenox)

Aspirin drugs: Aspirin (abbreviated ASA)
Aspirin-containing products (Verasa, Rubrasa)

ACE INHIBITORS/ARBs

Benazepril (Lotensin)
Moexipril (Univasc)
Captopril (Captoten)
Perindopril (Aceon)
Enalapril (Vasotec)
Quinapril (Accupril)
Fosinopril (Monopril)
Ramipril (Altace)
Lisinopril (Prinivil, Zestril)
Trandolapril (Mavik)

Angiotensin II receptor blockers (ARBs):

Candesartan (Atacand)
Losartan (Cozaar, Hyzaar)
Eprosartan (Teveten)
Valsartan (Diovan)
Irbesartan (Avapro)
Telmisartan (Micardis)

LIPID LOWERING AGENTS

Statin lipid lowering agents:

Atorvastatin (Lipitor)
Lovastatin (Mevacor)
Cerivastatin (Baychol)
Pravastatin (Pravachol)
Fluvastatin (Leschol)
Simvastatin (Zocor)
Rosuvastatin calcium (Crestor)

Other classes of lipid lowering agent:

Nicotinic acid/niacin (Niacor, Niaspan, Advicor)
Fenofibrate (Tricor)
Gemfibrozil (Lopid)
Colestipol (Colestid)
Cholestyramine (LoCholest, Questran)
Ezetimibe (Zetia)
Colesevelam (Welchol)
Clofibrate (Atromid-S)

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.*

Common RPMS Data Entry Codes for Diabetes

Patient education (PED) codes

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
CURRENT SMOKELESS
CURRENT SMOKER & SMOKELESS
PREVIOUS SMOKER
PREVIOUS SMOKELESS
EXPOSURE TO ENVIRONMENTAL TOBACCO SMOKE
CEREMONIAL USE ONLY
SMOKER IN HOME
SMOKE FREE HOME

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 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

DM AUDIT ALT TAX

ALT
SGPT

DM AUDIT AST TAX

AST
SGOT

DM AUDIT CHOLESTEROL TAX

Cholesterol
Screen,Cholesterol
Total Cholesterol

DM AUDIT CREATININE TAX

Creatinine
Serum Creatinine

DM AUDIT GLUCOSE TESTS TAX

Glucose
Finger Stick Glucose
Blood Sugar
Accuchek
Fasting Glucose
Whole Blood Glucose
Capillary Glucose
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 HGB A1C TAX

A1C
Hgb A1C
Hemoglobin A1C
Glycosylated Hgb
A1cNow

DM AUDIT LDL CHOLESTEROL TAX

LDL
LDL Cholesterol
Direct LDL
LDL (Calc)

DM AUDIT TRIGLYCERIDE TAX

Triglyceride

DM AUDIT MICROALBUMINURIA TAX

Microalbumin
Albumin
Urine Albumin
Microalbumin, Urine
Microalbumin Random
Micral
Micro

DM AUDIT URINALYSIS TAX

Urinalysis
Urinalysis HLD
Urine Dipstick
Urine (Dipstick)
UA or U/A
UA Dipstick or U/A Dipstick
UA Complete or U/A Complete

DM AUDIT URINE PROTEIN TAX

Urine Protein 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

BGP QUANT URINE PROTEIN

This is a GPRA taxonomy, part of the Clinical Reporting System (CRS)

_Protein
Urine mg/dL
24 Hr Urine Protein
Urine Protein/24 Hr
Microalbumin/24 Hr
Quant Urine Protein

DM AUDIT A/C RATIO TAX

Microalbumin/Creatinine Ratio measured in actual numeric values (mg/g Creat)

Microalbumin/Creatinine Ratio
A/C Ratio
Albumin/Creatinine Ratio
A:C
M-Alb/Creatinine
A/C (may be entered as _A/C, -A/C, *A/C)

DM AUDIT SEMI QUANT UACR

Microalbumin/Creatinine Ratio reported as a semi-quantitative test. The most commonly reported results are <30, 30-300, or >300 mg/d Creat.

BGP GPRA ESTIMATED GFR TAX

Estimated GFR
Calculated GFR
_GFR, Estimated
_GFR Africn Am
_GFR Non Afr Am

DM AUDIT P/C RATIO TAX

Protein/Creatinine Ratio
P/C Ratio

About 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 790.21 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."

```
 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.

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.

Fixing taxonomies

Taxonomies allow RPMS to be flexible, but that strength can also be a weakness. Your reports will have problems if (1) your taxonomy is missing items, or (2) you have the wrong item in the wrong taxonomy.

Example 1: Missing taxonomy items

Patient Donald Duck has a prescription for aspirin as an anti-platelet therapy, but his individual audit shows:

```
Aspirin/Anti-Platelet Therapy: None
```

In the PATIENT MANAGEMENT (PM) screen, Medications (#7) shows the aspirin prescription, but DIABETES Medications (#8) does not.

PM #7: Shows all medications

```
 Patient's Medications    Aug 7, 2009 16:17:47

01/10/2009 ASPIRIN 81MG E.C. QTY: 100  DAYS:

01/10/2009 METFORMIN 500MG XR  QTY: 25  DAYS:

01/02/2008 ASPIRIN 81MG E.C.  QTY: 100  DAYS:

05/13/2004 PENICILLIN VK 250MG QTY: 31 DAYS: 10
            T2T NOW THEN T1T TID F10D

   - Previous Screen Q Quit ?? for More Actions

Select Action:Quit//
```

PM #8: Shows only medications from diabetes taxonomies

```
 Patient's Medications    Aug 7, 2009 16:19:07

01/10/2009 METFORMIN 500MG XR  QTY: 25  DAYS:


(The two prescriptions for aspirin should show
here. The fact that they are missing indicates
that they are missing from the diabetes aspirin
drug taxonomy.)


   - Previous Screen Q Quit ?? for More Actions

Select Action:Quit//
```

Solution: Add ASPIRIN 81MG E.C. to the DM AUDIT ASPIRIN DRUGS 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: **DM09** (2009 Diabetes Program Audit ...)
3. Select 2009 Diabetes Program Audit Option: **PRTU** (Update/Review Taxonomies for 2009 PreDiab)
4. Select Action:+// **<enter>** (to display next page and find DM AUDIT ASPIRIN DRUGS)
5. Select Action:+// **S** (Select Taxonomy)
6. Which Taxonomy: (1-26): **19**
   (DM AUDIT ASPIRIN DRUGS)
7. Select Action:+//A (Add Taxonomy Item)
8. Select DRUG GENERIC NAME: ASPIRIN 81MG E.C.
9. Select Action:+//Q (Quit)

After the taxonomy update:

Individual audit shows:

```
Aspirin/Anti-Platelet Therapy: Aspirin
```

PM #7: Shows all medications

```
Patient's Medications    Aug 7, 2009 16:22:42

01/10/2009 ASPIRIN 81MG E.C. QTY: 100  DAYS:

01/10/2009 METFORMIN 500MG XR  QTY: 25  DAYS:

01/02/2008 ASPIRIN 81MG E.C.  QTY: 100  DAYS:

05/13/2004 PENICILLIN VK 250MG QTY: 31 DAYS: 10
           T2T NOW THEN T1T TID F10D

   - Previous Screen Q Quit ?? for More Actions

Select Action:Quit//
```

PM #8: Shows only medications from diabetes taxonomies

```
Patient's Medications    Aug 7, 2009 16:25:23

01/10/2009 ASPIRIN 81MG E.C. QTY: 100  DAYS:

01/10/2009 METFORMIN 500MG XR  QTY: 25  DAYS:

01/02/2008 ASPIRIN 81MG E.C.  QTY: 100  DAYS:



   - Previous Screen Q Quit ?? for More Actions

Select Action:Quit//
```

Example 2: Wrong item in the taxonomy

If the wrong items are in the wrong taxonomies, you may see values that look "weird" on reports. Cholesterol is a common example.

Excerpt of an individual prediabetes audit

```
 Cessation Counseling: No
DM THERAPY
Select all that currently apply          MOST RECENT SERUM VALUE IN THE PAST
 X  1 Unknown/Refused/None                12 MONTHS
    2 Metformin                          Total Cholesterol: 140 mg/dl 11/23/2008
    3 Acarbose                           HDL Cholesterol: 45 mg/dl 11/23/2008
    4 Glitazones                         LDL Cholesterol: 140 mg/dl 11/23/2008
    5 Other: Sulfonylurea,               Triglycerides: 150 mg/dl 11/23/2008
        Glyburide, glipizide, etc)
```

This is "weird"

Example: The WRONG way to set up the cholesterol taxonomy

```
PRE-DIAB TAXONOMY UPDATE      Aug 7, 2009 17:17:43
Updating the DM AUDIT CHOLESTEROL TAX taxonomy


1)  CHOLESTEROL
2)  TRIGLYCERIDE
3)  LIPID PROFILE, COMPLETE
4)  HDL CHOLESTEROL
5)  LDL CHOLESTEROL


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

This taxonomy mistakenly tells RPMS that when it is looking for "Total Cholesterol" results, it should look in the fields for triglycerides, HDL, LDL, and the orders for complete lipid panels.

The last results entered will show up as "Total Cholesterol," so you could end up with a total cholesterol of 50, which is actually the HDL level.

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: **DM09** (2009 Diabetes Program Audit ...)
3. Select 2009 Diabetes Program Audit Option: **PRTU** (Update/Review Taxonomies for 2009 PreDiab)
4. Select Action:+// **<enter>** (to display next page and find DM AUDIT CHOLESTEROL)
5. Select Action:+// **S** (Select Taxonomy)
6. Which Taxonomy: (1-26): **22** (DM AUDIT CHOLESTEROL)
7. Select Action:+//R (Remove an Item)
8. Remove Which Item (1-5): 5 (then 4, 3, 2)
9. Are you sure you want to remove the LDL CHOLESTEROL lab test? N// Y
10. Select Action:+//Q (Quit)

Prediabetes audit after correcting the taxonomy

```
 Cessation Counseling: No
DM THERAPY
Select all that currently apply          MOST RECENT SERUM VALUE IN THE PAST
 X  1 Unknown/Refused/None                12 MONTHS
    2 Metformin                          Total Cholesterol: 190 mg/dl 11/23/2008
    3 Acarbose                           HDL Cholesterol: 45 mg/dl 11/23/2008
    4 Glitazones                         LDL Cholesterol: 140 mg/dl 11/23/2008
    5 Other: Sulfonylurea,               Triglycerides: 150 mg/dl 11/23/2008
        Glyburide, glipizide, etc)
```

The corrected the cholesterol taxonomy

```
PRE-DIAB TAXONOMY UPDATE      Aug 7, 2009 17:17:43
Updating the DM AUDIT CHOLESTEROL TAX taxonomy

1)  CHOLESTEROL


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

Signs that you need to update taxonomies:

- 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
- You haven't checked taxonomies in a year or so
- A new patch has been installed (DMS was updated -- this happens about once a year)
- In the Patient Management screen, you see medications from the diabetes audit in #7 Medications but not in #8 DIABETES Medications.
- In the Patient Management screen, you see labs from the diabetes audit in #14 Lab Profile but not in #15 DIABETES Lab Profile.

TIP: If you think you have a problem with your taxonomies, the first thing you should do is:

1. Check the **audit logic.**

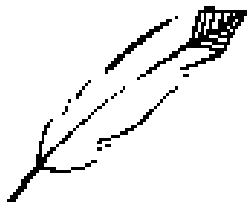
There may be a simple (non-taxonomy) reason for what you're seeing. If taxonomies really are the problem, the audit logic will tell you which taxonomies are involved.

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: **DAL** (Display Audit Logic)

The audit logic is also printed in the final section of this manual.

Section 3: Reference Materials



Indian Health Service Standards of Care
for Adults with Type 2 Diabetes

Diabetes Audit Logic Descriptions

Indian Health Service Standards of Care for Adults with Type 2 Diabetes

Introduction

In 1986, the Indian Health Service (IHS) Division of Diabetes Treatment and Prevention (DDTP) developed its first *IHS Standards of Care for Diabetes*. Over the past 20 years, these guidelines have helped health care professionals provide excellence in diabetes care to American Indians and Alaska Natives (AI/AN).

To keep these guidelines current with the ever-changing field of diabetes care, the IHS DDTP and the Area Diabetes Consultants (ADCs) have developed the *2006 IHS Standards of Care for Patients With Type 2 Diabetes*. The guidelines:

- Address the **unique aspects of care for AI/AN people**.
- Enable health care professionals and other members of a diabetes care team to offer **consistent quality diabetes care to AI/AN adults** with type 2 diabetes.
- Have been **developed using a consensus process** backed by literature review, guided by consultation with scientific experts, and refined with input from health professionals from many disciplines.
- Reflect and support the **concept of a team approach to diabetes care** in our facilities and the communities that surround them.
- Should be used **in the context of the whole patient**, not just a single disease entity.
- Should be used **in the context of a model of care** (such as the Chronic Care Model) that includes elements, which in combination, foster productive interactions between informed patients—who play an active role in their care—and providers with resources and expertise.

The IHS Division of Diabetes endorses and supports the current *American Diabetes Association (ADA) Clinical Practice Recommendations* as the foundation of excellence in diabetes. The *2008 IHS Standards of Care for Patients With Type 2 Diabetes* differ from the ADA clinical practice recommendations by bringing focus to the specific care issues of American Indian and Alaska Native adults with diabetes, placing greater emphasis on the prevention of complications that are most notable in the this population.

As such, these guidelines do not include clinical guidelines on the care of people with type 1 diabetes. The *ADA Standards of Medical Care in Diabetes—2008* thoroughly address the issues of the diagnosis and treatment of type 1 diabetes, and providers are encouraged to refer to these for guidance. The *ADA Standards of Medical Care in Diabetes—2008* are available online (http://care.diabetesjournals.org/content/vol31/Supplement_1).

Part 1: Visit Checklists

1. Components of the initial comprehensive evaluation

The following is an initial clinic visit checklist for a newly diagnosed patient or a patient with pre-existing diabetes but not previously followed in your clinic.

The initial evaluation should also include *Ongoing Management Recommendations* as part of a comprehensive evaluation.

Table 1. Initial Comprehensive Evaluation of Adults with Type 2 Diabetes

Component	Visit Checklist
Diagnosis	☐ Review laboratory test and date of diagnosis of type 2 diabetes
History	☐ Medical and family history ☐ Assessment of lifestyle habits and activity level ☐ Determine CVD co-morbidities: HTN, dyslipidemia, other CVD risk factors ☐ Assess cultural and psychosocial issues ☐ Assess social and economic resources
Screening and assessments	☐ Depression screening ☐ Tobacco use assessment ☐ Evaluate TB status and place PPD if needed
Measurements	☐ Blood pressure and pulse ☐ Height, weight, and waist ☐ Calculated BMI
Comprehensive physical exam	☐ Oral, thyroid palpation, cardiac, pulmonary, abdominal, pulses, extremities to include neurological foot check of sensation with 10-gm monofilament.
Labs and tests	☐ A1c ☐ Fasting lipid profile ☐ ALT, AST, electrolytes, BUN, creatinine, calculated eGFR ☐ TSH once metabolic control established ☐ Urinary albumin, microalbuminuria/creatinine ratio (UACR) ☐ 12-lead electrocardiogram
Medications	☐ Review previous treatments ☐ Review current medications
Referrals	☐ Optometrist or ophthalmologist/retinal photo for eye exam ☐ Registered dietitian or nutritionist ☐ Diabetes educator ☐ Foot specialist if indicated

2. Ongoing management recommendations

Table 2. Components of Care Visits for Adults with Type 2 Diabetes

Component	Checklist
Blood pressure	☐ Assess at every visit ☐ Monitor and adjust therapy to keep BP<130/80 mmHg
Measurements	☐ Weight, recalculate BMI, and monitor trends
Glycemic control	☐ A1C if indicated. Goal: <7% for nonpregnant adults ☐ A1C lower than 6% may benefit select individuals and less stringent goals may be appropriate for others ☐ Review log of patient's SBGM results ☐ Point-of-care capillary blood glucose check if indicated ☐ Monitor and adjust therapy to attain glycemic goals

Kidney function
 	
☐ Annual for screening
☐ More frequently for monitoring of chronic kidney disease
	☐ Estimated eGFR (serum creatinine needed for calculation)
	☐ Urine albumin to creatinine ratio (UACR)
	☐ Preserve kidney function:
	  ☐ Consider ACE inhibitor or ARB
	  ☐ Lower targets for BP control: <120/70 mmHg
	☐ If GFR <60:
	  ☐ Hemoglobin/hematocrit for presence of anemia
	  ☐ Ca, PO4, and PTH to assess metabolic bone disease

Lipids assessment ☐ Annual for screening ☐ More frequently to monitor treatment	☐ Fasting lipoprotein panel (total cholesterol, LDL, HDL, and triglyceride) ☐ LDL target <100 mg/dl ☐ If CVD present, lower LDL <70 mg/dl ☐ HDL target >40 mg/dl in men and >50 mg/dl in women ☐ Triglyceride target <150 mg/dl ☐ If fasting lipids not possible, consider direct LDL, total cholesterol, and HDL
Anti-platelet therapy	☐ Aspirin therapy (75-162 mg/day) for primary prevention in >40 year old people or younger with other risk factors
Visit exams	☐ Directed exam, including routine foot check, according to review of systems ☐ Routine foot check ☐ Annual neurovascular foot exam to include 10-gm monofilament
Immunization status review	☐ Annual influenza immunization ☐ PneumoVax at diagnosis. Re-immunization if ≥65 years, and first dose given before age 65 and if vaccine was administred >5 years prior ☐ Tetanus and diphtheria every 10 years, TDAP should replace a single dose of Td for persons <65 yeras who have not previously received a dose of Tdap ☐ HBV immunization if eGFR <60 or at high risk for HBV ☐ Zoster vaccine for persons ≥60 yeras as a single dose, regardless of reported history of prior herpes zoster episode ☐ Human papillomavirus (HPV) vaccine in all females ≤26 years of age

Table 3. Lifestyle Practice Recommendations

Component	Checklist
Mental and emotional health	☐ Assess depression annually or as clinically indicated using the PHQ-2 or PHQ-9 ☐ Provide timely diagnostic and therapeutic services for anyone with a positive screen
Diabetes self-management education (DSME)	☐ Refer patients and their families for DSME at diagnosis and as needed thereafter. ☐ Refer to diabetes educator to complete an education needs assessment and establish self-management education and care plan.
Medical nutrition therapy (MNT)	☐ Refer patient to a registered dietitian for individualized MNT at diagnosis and as needed thereafter to achieve treatment goals.
Physical activity	☐ Screen and re-assess macrovascular and microvascular complications that may be worsened with physical activity. ☐ Provide and modify exercise prescription based on the medical evaluation. ☐ Provide education on proper footwear. ☐ Evaluate for risk of hypoglycemia, and make appropriate adjustments in pharmaceutical and non-pharmaceutical therapies as needed.
Tobacco	☐ Screen for tobacco use at diagnosis and periodically thereafter. ☐ Advise all patients not to smoke or use tobacco products. ☐ Refer to tobacco cessation program as indicated. Nicotine replacement therapy recommended.
Alcohol and other substance use	☐ Screen for alcohol and substance use at diagnosis and periodically thereafter. ☐ Counsel on appropriate use of alcohol. Moderation is considered one daily drink for adult women and two drinks for adult men. ☐ Refer patients with alcohol or substance abuse to appropriate behavioral health staff or treatment program. ☐ Advise abstention from alcohol for women during pregnancy and for people with medical problems such as pancreatitis, advanced neuropathy, severe hypertriglyceridemia, or alcohol abuse.

Table 4. Lab Testing for Adults with Type 2 Diabetes

Component	Checklist
A1c	☐ Twice yearly in patients who are meeting treatment goals ☐ Quarterly in patients whose therapy has changed or who are not meeting treatment goals ☐ Point-of-care testing for A1c allows for timely decisions on therapy changes
Fasting lipid panel	☐ Fasting lipoprotein panel (total cholesterol, LDL, HDL, and triglyceride) obtained after a 9–12-hour fast ☐ If fasting lipids not possible or reasonable, consider direct LDL, total cholesterol, and HDL ☐ Re-evaluate lipid profiles 6–12 weeks after new therapies are initiated
Serum creatinine with calculated GRF	☐ Measure to estimate GFR regardless of the degree of urine albumin excretion. ☐ Screen annually. If used for monitoring treatment, more frequent screening is recommended.
Albumin to creatinine ratio	☐ Test for protein in urine with albumin to creatinine ratio ☐ Screen annually. If used for monitoring treatment, more frequent screening is recommended.
Liver enzymes	☐ ALT and AST to monitor medication therapy or assess fatty liver
Hemoglobin and hematocrit	☐ Assess for presence of anemia

Table 5. Annual Specialty Referral

Component	Checklist
Dilated eye exam	☐ Retinal exam either through dilated pupils or stereofundus photos
Dental exam	☐ Screen for periodontal disease and examine gums and oral cavity for lesions ☐ Bi-annual dental cleaning

Part 2: Supporting Statements

1. Criteria for the diagnosis of type 2 diabetes in adults

Type 2 diabetes can be diagnosed in one of three ways, a casual plasma glucose or a fasting plasma glucose or a two-hour plasma glucose. The criteria for diagnosis of type 2 diabetes in adults using three plasma blood tests and the corresponding diagnostic values are presented below. For casual plasma glucose, casual is defined as any time of day without regard to time of last meal. Fasting plasma glucose is defined as no caloric intake for at least 8 hours.

In the absence of unequivocal hyperglycemia, confirm these criteria by repeat testing on a different day.

Plasma blood tests	Diagnostic values
Casual plasma glucose	≥200 mg/dl plus symptoms of diabetes: — Polyuria — Polydypsia — Unexplained weight loss
Fasting plasma glucose	≥126 mg/dl
Two-hour plasma glucose	≥200 mg/dl during a 75 g oral glucose tolerance test (OGTT)

There has been interest in the use of A1C values for screening and identification of pre-diabetes and diabetes. However, no clear cut off for diagnosis has been established. The IHS Division of Diabetes and the ADA currently do not recommend its use for screening or diagnostic purposes.

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

To display audit logic, including previous years' Audit Logic Descriptions, log onto DMS, then:

Select Diabetes Management System Option: **DA** (Diabetes QA Audit Menu ...)
Select Diabetes QA Audit Menu Option: **DAL** (Display Audit Logic)
Select PCC MAN REPORTS DM AUDIT TEXT AUDIT YEAR: [enter the 4-digit year, e.g. 2008]

Type S and then enter the number of the item that you wish to view.

AUDIT DATE

This is the date of the audit. The user supplies this date. It is used as the ending date to calculate the time range when looking for values. For example, if the audit date is September 30, 2009 then data is examined during the year prior to this audit date (October 1, 2008 to September 30, 2009).

Individual Audit: The audit date is displayed. eg.: SEPTEMBER 30, 2009

Cumulative Audit: N/A

EPI Info Export: The audit date is exported in MM/DD/YYYY format.

FACILITY NAME

This is the name of the facility at which the audit is being run.

Individual Audit: The name of the facility is displayed.

Cumulative Audit: N/A

EPI Info Export: The name of the facility is exported. Length is 20.

AREA

This is the 2 digit IHS Area code for this facility. Taken from the LOCATION table.

Individual Audit: The area code is displayed. E.g. 10

Cumulative Audit: N/A

EPI Info Export: The area code is exported.

SERVICE UNIT

This is the 2 digit IHS Service Unit code for this facility. Taken from the LOCATION table.

Individual Audit: The service unit code is displayed. E.g. 10

Cumulative Audit: N/A

EPI Info Export: The service unit code is exported.

FACILITY CODE

This is the 2 digit facility code for this facility.

Individual Audit: The facility code is displayed. E.g. 01

Cumulative Audit: N/A

EPI Info Export: The facility code is exported.

#OF PATIENTS ON DM REGISTER

This is the number of active patients on the diabetes register. The user is prompted to enter the name of their register.

Individual Audit: The total number of active patients in the register is displayed.

Cumulative Audit: The total number of active patients in the register is displayed

EPI Info Export: The total number of active patients in the register is exported.

SDPI GRANT FUNDS

Does your community receive SDPI grant funds? Yes or No. This data is prompted for when running the audit, the user provides the data. If the answer is yes, the user is requested to enter the grant number.

Individual Audit: Yes or No is displayed, along with grant number, if entered.

Cumulative Audit: N/A
EPI Info Export: 1 for Yes or 2 for No exported along with grant number, if entered.

REVIEWER
Initials of the person who ran the audit.
Individual Audit: The initials are displayed.
Cumulative Audit: N/A
EPI Info Export: The initials of the person running the audit are exported.

TRIBAL AFFILIATION/TRIBAL ENROLLMENT CODE
The patient's tribe code as entered in Patient Registration.
Individual Audit: 3 digit tribe code and name of tribe display
Cumulative Audit: N/A
EPI Info Export: 3 digit tribe code

STATE
This is the state in which the patient resides at the time the audit was done.
Individual Audit: state abbreviation is displayed
Cumulative Audit: N/A
EPI Info Export: state abbreviation passed to EPI

COMMUNITY
Community of Residence of the patient. This item only displays on the RPMS Individual Audit sheet. It is not a part of the official IHS audit.
Individual Audit: The name of the patient's current community from patient registration is displayed.
Cumulative Audit: N/A
EPI Info Export: N/A

CHART NUMBER
Health record number of the patient at the facility at which the audit is run.
Individual Audit: The chart number is displayed.
Cumulative Audit: N/A
EPI Info Export: The patient's chart number is exported.

DOB
The patient's Date of Birth.
Individual Audit: The date of birth is displayed.
Cumulative Audit: The age of the patient is calculated from the audit date and used in the age tally on the Cumulative Audit.
EPI Info Export: The DOB in MM/DD/YYYY format is exported. Calculated age is also exported.

GENDER
Gender of the patient.
Individual Audit: MALE or FEMALE
Cumulative Audit: A tally by gender is displayed on the Cumulative Audit.
EPI Info Export: 1 = Male 2 = Female

PRIMARY CARE PROVIDER
The name of the primary care (designated) provider documented in RPMS.
Individual Audit: The name of the primary care provider is displayed.
Cumulative Audit: N/A
EPI Info Export: N/A

DATE OF DIABETES DIAGNOSIS/DURATION OF DM

The diabetes onset date. This date is used in the calculation of the duration of diabetes.

Individual Audit: 3 different dates are displayed to the user:

- The date of onset from the Diabetes Register.
- The earliest date of onset from all diabetes related problems on the problem list. The problem list is scanned for all problems in the ICD9 code range 250.00-250.93.
- The 1st recorded diagnosis (POV) of diabetes in PCC. ICD9 codes: 250.00-250.93.

Cumulative Audit: When calculating the duration of diabetes, the earliest of the date of onset from the diabetes register or the problem list date of onset is used. Duration of diabetes is calculated from that date to the date of the audit. If neither the date of onset in the register or the date of onset in the problem list is recorded, the duration of diabetes is not calculated. The first diagnosis date from POV is not used.

EPI Info Export: The earliest date found from the Diabetes register or the problem is exported. Format: MM/DD/YYYY

DM TYPE/TYPE OF DIABETES

The computer audit uses the following logic in determining the type of diabetes: (once a 'hit' is made, no further processing done)

1. If the diagnosis documented in the Diabetes Register is NIDDM the type is assumed to be Type 2.
2. If the diagnosis documented in the Diabetes Register is "TYPE II" the type is assumed to be Type 2.
3. If the diagnosis documented in the Diabetes Register contains a '2' the type is assumed to be Type 2.
4. If the diagnosis documented in the Diabetes Register contains IDDM the type is assumed to be type 1.
5. If the diagnosis documented in the Diabetes Register contains a '1' the type is assumed to be Type 1.
6. If no diagnosis is documented in the Diabetes Register, or it does not contain any of the above strings the problem list is then scanned. If any diabetes diagnosis on the problem list has a 5th digit of 0 or 2 then the type is assumed to be 2. If any diabetes diagnosis on the problem list has a 5th digit of 1 or 3 then the type is assumed to be type 1.
7. If no diagnosis exists on the problem list or in the diabetes register, then the last PCC purpose of visit related to diabetes is reviewed. If it contains a 5th digit of 0 or 2 then the type is assumed to be Type 2, if the 5th digit is a 1 or 3 then the type is assumed to be type 1.

Individual Audit: 4 items are displayed:

1. The logic described above is used to determine the type of diabetes and is displayed after the prompt "Diabetes Type".
2. If the type of Diabetes is documented in the Diabetes Register, it is displayed.
3. If Diabetes is listed on the PCC Problem List the diagnoses codes are displayed.
4. The type of diabetes is determined from the last PCC purpose of visit and is displayed.

Cumulative Audit: The logic described above is used in the Cumulative Audit.

EPI Info Export: The logic described above is used and a 1 or 2 is exported to the EPI file.

TOBACCO USE

Tobacco use status of the patient. The tobacco use is determined in the following way:

1. The last documented of the following items in the audit year is found:

A. Health Factor in the TOBACCO Category. The following are the Health factors in the TOBACCO Category:

NON-TOBACCO USER	SMOKER IN HOME
CURRENT SMOKER	SMOKE FREE HOME
CURRENT SMOKELESS	CESSATION-SMOKELESS
CURRENT SMOKER & SMOKELESS	CESSATION-SMOKER
PREVIOUS SMOKER	CEREMONIAL USE ONLY
PREVIOUS SMOKELESS TOBACCO	EXPOSURE TO ENVIRONMENTAL TOBACCO SMOKE

B. The PCC Problem list and purpose of visits are scanned for any of the following diagnoses:
Diagnoses contained in the BGP GPRA SMOKING DXS taxonomy
305.1-305.13
649.00-649.04
V15.82

C. Any Education Topic recorded during the audit year that meets the following criteria:
Topic subject is "TO" e.g. TO-DISEASE PROCESS (TO-DP)
Topic category is "TO" e.g. ASM-TOBACCO (ASM-TO)
Topic subject is any of the following diagnosis codes:
305.1-305.13
649.00-649.04
V15.82

D. Any visit with Dental ADA code 1320 documented.

E. Any visit with the following CPT codes documented:
BGP SMOKING CPTS taxonomy
99406-99407
1034F-1036F
G0375-G3076

The last documented of the above items during the audit period is used to determine if the patient is a current user or not. If none of the above are found then the value is 3 Not Documented.

2. If the value found is one of the following then the value is 2 Not a Current User:

Smoker in Home	Previous Smoker
Ceremonial Use Only	Previous Smokeless
Non-Tobacco User	V15.82
Exposure to Environmental Tobacco	305.13
Smoke Free Home	1036F

For all others the value is 1 Current User.

Individual Audit: The logic described above is used to display one of the following 3 statements plus the date and item found:

1 Current User
2 Not a current user
3 Not Documented

Cumulative Audit: The logic above is used to tally tobacco use.

EPI Info Export: The logic described above is used to export a 1, 2 or 3 value.

TOBACCO CESSATION COUNSELING

If the patient is a current tobacco user whether or not they were offered cessation counseling is determined in the following manner:

1. The patient's health factors recorded in the past year are reviewed for a recorded health factor that is contained in the DM AUDIT CESSATION HLTH FACTOR taxonomy or any tobacco health factor that contains the word "CESSATION" If one is found then a value of 1 - Yes is displayed.
2. All recorded patient education provided to the patient is reviewed. If any topic in the DM AUDIT SMOKING CESS EDUC taxonomy or any topic with a mnemonic starting with TO-Q, or a topic TO-LA is found then a value of 1 - Yes is displayed.
3. If the patient had a visit to clinic 94 - Tobacco Cessation clinic in the year prior to the audit date then a 1 - Yes is displayed.
4. If the patient had a dental visit with an 1320 ADA code recorded a 1 - Yes is displayed.
5. If the patient had a refusal of any education topic in the DM AUDIT SMOKING CESS EDUC taxonomy or a refusal of topic TO-Q or TO-LA then a value of 3 - Refused is displayed.
6. If none of the above are found, a 2 - No is displayed.

Individual Audit: the logic above is applied and the value and date are displayed.

Cumulative Audit: the value found is tallied

EPI Info Export: value of 1, 2 or 3 is exported.

HEIGHT

The last recorded Height value and the date the height was taken.

Individual Audit: The height must have been recorded anytime prior to the audit date and is displayed along with the date the height was done.

Cumulative Audit: N/A

EPI Info Export: The last recorded height prior to the audit date is passed to the EPI record.

WEIGHT

The last recorded weight value on a non-prenatal visit and the date the weight was taken.

Individual Audit: The weight must have been recorded prior to the audit date and not be on a visit on which one of the diagnoses was prenatal care.

Cumulative Audit: N/A (See BMI)

EPI Info Export: The last recorded weight prior to the audit date is passed to the EPI record

BMI

BMI is calculated in the following way: If the patient is over 19 (20 and above) the last weight in the year prior to the audit date is found. The last height recorded after their 19th birthday is found. BMI is calculated based on these 2 values. If the patient is 19 or under the last height and weight taken on the same date in the year prior to the audit date are found and used in calculating BMI.

Individual Audit: BMI is displayed.

Cumulative Audit: BMI is used and percentages of overweight and obese patients are calculated. If the patient did not have a height or weight recorded as described above they fall into the "BMI could not be calculated" category. The percentages don't add up to 100. The obese patients are included in the overweight category as well.

EPI Info Export: BMI as calculated above is passed to the EPI record.

HYPERTENSION DOCUMENTED

Is a Diagnosis of hypertension documented? If Hypertension is on the problem list or the patient has had at least 3 visits with a diagnosis of hypertension.

Individual Audit: A 1 - Yes or 2- No is displayed.

Cumulative Audit: Used in the ACE Inhibitor tally.

EPI Info Export: A 1 (Yes) or a 2 (No) is passed to the EPI record.

BLOOD PRESSURES

The last 3 recorded Blood Pressure values and dates. BP's taken in the ER (ER Clinic) are skipped.

Individual Audit: The last 3 BP's in the year prior to the audit date that were taken on non-ER clinic visits are displayed.

Cumulative Audit: If the patient had 3 documented BP's they are used to determine Blood Pressure control in the Cumulative Audit.

EPI Info Export: The last 3 systolic and diastolic values as well as the mean of the systolic values and diastolic values are passed on to the EPI record.

FOOT EXAM - COMPLETE

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

1. A documented DIABETIC FOOT EXAM,COMPLETE (CODE 28) is searched for in the year prior to the audit date. If found, no other processing is done.

2. A visit on which a podiatrist (provider class codes 33 - PODIATRIST, 84 - (PEDORTHIST) or 25 - CONTRACT PODIATRIST) that is not a DNKA visit is searched for in the year prior to the audit date. If found, it is assumed the exam was done and no further processing is done.
3. A visit to clinic 65 - PODIATRY clinic that is not a DNKA is searched for in the year prior to the audit date. If found, no other processing is done.
4. If none of the above are found, a documented refusal (REF) or No Response to Followup (NRF) of a diabetic foot exam is searched for. If found, value is "Refused"
5. If none of the above is found, or "Not Medically Indicated" has been documented the value is "No".

Individual Audit: If any of the above criteria met, a 1 - Yes is displayed along with one of the following terms:

Diabetic Foot Exam
Podiatrist Visit
Podiatry Clinic Visit

Otherwise, a No or Refused is displayed.

Cumulative Audit: The percentage of those who had the exam (all yes's) and the % who refused is displayed.

EPI Info Export: A 1 (Yes) or a 2 (No) or 3 (Refused) is passed to the EPI record.

EYE EXAM (dilated/fundus)

Has a diabetic eye exam been done? The logic used in determining if a diabetic eye exam has been done is as follows: The system looks for the last documented Diabetic Eye Exam in the patient's computer record. Diabetic Eye Exam is defined as:

EXAM 03 - Diabetic Eye Exam

CPT in the APCH DIABETIC EYE EXAM CPTS (2022F, 2024F, 2026F, 92002-92012, 92210, S3000)

If one is found, no further processing is done. If no exam is found then all visits in the time period are scanned for documentation of CPT code 92002-92015. If none of these CPT codes are found, then all PCC Visits in the year prior to the end of the audit are scanned for a non-DNKA, non-Refraction visit to an Optometrist or Ophthalmologist (24, 79, 08) or an Optometry or Ophthalmology Clinic (17, 18, 64 or A2). If found, then a yes and an indication of what was found is displayed. If none of the above is found, then the refusals file is checked for documentation of a patient refusal or no response to followup of a diabetic eye exam. If found, a note indicating the refusal is displayed. If Not Medically indicated is documented then the value displayed is No-Not Medically indicated.

Individual Audit: If any of the above criteria met, a 1 - Yes is displayed along with one of the following terms: Diabetic Eye Exam

Optometrist/Ophthalmologist Visit
Optometry/Ophthalmology Clinic Visit

Otherwise, a No or Refused is displayed.

Cumulative Audit: The percentage of those who had the exam (all yes's) and the % who refused is displayed.

EPI Info Export: A 1 (Yes) or a 2 (no) or 3 (Refused) is passed to the EPI record.

DENTAL EXAM

Has a dental exam been done? The logic used in determining if a dental exam has been done is as follows:

1. A documented DENTAL EXAM (CODE 30) is searched for in the year prior to the audit date. If found, no other processing is done.
2. A visit to clinic 56 - DENTAL clinic that is not a DNKA is searched for in the year prior to the audit date. If found, no other processing is done.
3. A visit on which a dentist (provider class 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 and no further processing is done.

4. If none of the above is found, a documented refusal of a DENTAL exam is searched for. If found, value is "Refused". If a visit to dental clinic with only an ADA code of 9991 is found, it is documented as a "Refused".
5. If none of the above found, the value is "No". This includes Not Medically Indicated.

Individual Audit: If any of the above criteria met, a Yes is displayed along with one of the following terms:

DENTAL Exam
Dental Clinic Visit
Dentist Visit

Otherwise a No or Refused is displayed.

Cumulative Audit: The percentage of those who had the exam (all yes's) and the % who refused is displayed.

EPI Info Export: A 1 (Yes) or a 2 (no) or 3 (Refused) is passed to the EPI record.

DIET INSTRUCTION

Has diet instruction been given? The values in the audit are:

1 RD
2 Other
3 Both RD & Other
4 None
5 Refused

Logic: All visits in the year prior to the audit date are examined. Chart review visits are skipped. Dental clinic visits are skipped.

- If the primary provider on any visit is a DIETICIAN 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 V65.3 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
Topic ending in -N
Topic ending in -DT
Topic ending in -MNT
Topic beginning with MNT-

The V PAT ED entry is examined and if the provider documented in that entry is a Dietician or Nutritionist the RD is assigned if the provider is blank or not an dietician/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 - 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 a refusal of one of these education topics is documented the value is 5 - Refused. If none of the above is documented, the value is 4 - None

Individual Audit: The value calculated as described above is displayed plus the item found.

Cumulative Audit: Percentages are calculated of who had diet instruction includes values 1-3. The % of the patients who refused is also displayed.

EPI Info Export: A value of 1-5 is passed to the EPI record.

EXERCISE INSTRUCTION

Has exercise instruction been given? The values in the audit are:1 Yes 2 No 3 Refused

Logic: All visits in the year prior to the audit date are examined. If there is a visit on which a patient education topic in the DM AUDIT EXERCISE EDUC TOPICS taxonomy, or any topic ending in "-EX" is documented then a 1 - Yes. No further processing is done. All visits in the year prior to the audit date are examined for a POV of

V65.41 and if one is found a 1 - Yes is displayed. If a refusal of one of these education topics is documented the value is 3 - Refused. If neither of the above is documented, the value is 2 - None

Individual Audit: The value calculated as described above is displayed.

Cumulative Audit: Percentages are calculated of who had exercise instruction includes value of 1. The % of the patients who refused is also displayed.

EPI Info Export: A value of 1-3 is passed to the EPI record.

DM EDUCATION (OTHER)

Has DM Education other than diet/exercise been given? The values in the audit are: 1 Yes 2 No 3 Refused

Logic: All education topics documented in the year prior to the audit date are examined. If the 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 in the DM AUDIT OTHER EDUC topics taxonomy or the name of the topic begins with 250, DM or DMC

If a refusal of one of these education topics is documented the value is 3 - Refused.

If neither of the above is documented, the value is 2 - None

DM THERAPY

All Visits in the 6 months prior to the audit date are reviewed. If any medication in the taxonomy specified is found, then an 'X' is placed by the therapy name. If no medications are found then all documented medication refusals in the past year are reviewed to see if any med within any of the below listed taxonomies was refused. If it was an X is placed beside item 9 - Unknown/Refused. If no medications or refusals are found then the Diet & Exercise Alone item is marked with an 'X'. We are unable to calculate the Unknown/Refused group.

Therapy	TAXONOMY NAME
Insulin	DM AUDIT INSULIN DRUGS
Sulfonylurea	DM AUDIT SULFONYLUREA DRUGS
Metformin	DM AUDIT METFORMIN DRUGS
Acarbose	DM AUDIT ACARBOSE DRUGS
Glitazones	DM AUDIT GLITAZONE DRUGS
Incretin mimetics	DM AUDIT INCRETIN MIMETIC
DPP4 inhibitors	DM AUDIT DPP4 INHIBITOR DRUGS
Amylin analogues	DM AUDIT AMYLIN ANALOGUES

Individual Audit: Each therapy found will have an X next to it. If only a refusal is found the Unknown/Refused column will have an X next to it. If none are found, then the X is placed beside Diet & Exercise Alone.

Cumulative Audit: The patient is put in the appropriate category depending on what therapies are found:

1. Diet and Exercise Alone If no therapy documented/no refusals found.
2. Insulin If insulin is found.
3 Sulfonylurea If sufonylurea is found.
4. Metformin If metformin is found.
5. Acarbose If acarbose is found.
6. Glitazone If glitizones found.
7. Incretin mimetics If incretin mimetics found.
8. DPP4 inhibitors If DPP4 inhibitor found.
9. Amylin Analogues If Amylin Analogue found.
10. Combination of Oral Meds If any 2 of the above oral meds (Incretin and Amylin are not counted as oral Meds) are found but no insulin is found.
11. Combination Oral+Insulin If any one of the oral meds is found plus insulin is found.

12. Unknown/Refused If no meds are found but a refusal is found, Unknown is not calculated.

EPI Info Export: A string containing any of the numbers 1-11 will be sent indicating which therapies were found for this patient. For example, if 3 (sulfonylurea) and 4 (metformin) are found in the time window, a 34 is sent to the EPI file.

ACE INHIBITOR/ARB Use

If any drug in the DM AUDIT ACE INHIBITORS taxonomy has been prescribed in the 6 months prior to the audit date a Yes is displayed. If any of the drugs in the DM AUDIT ACE INHIBITORS taxonomy is documented as refused then it is counted as "Refused". A not medically indicated documentation is considered a No. If none of the above criteria is met, a No is displayed.

Individual Audit: A yes, no or refused is displayed.

Cumulative Audit: Used in the calculation of those with Hypertension and those with proteinuria. For the proteinuria cateogory, the patient must have had either an A/C Ratio with a value >300 or a Semi-Quantitative test with a value of >300.

EPI Info Export: A 1 (Yes) or 2 (No) or 3 (Refused) is passed to the EPI record.

ASPIRIN/ANTI-PLATELET THERAPY

All medications in the past year are reviewed. If any of them are in the DM AUDIT ASPIRIN DRUGS or DM AUDIT ANTI-PLATELET DRUGS taxonomies then a value of 1 - Yes is assigned, no further processing is done.

If there is a documented refusal (non-NMI refusal) of any drug in the DM AUDIT ASPIRIN DRUGS or DM AUDIT ANTI-PLATELET DRUGS taxonomies then a value of 3 - Refused is assigned.

If there is a documented NMI refusal of any drug in the DM AUDIT ASPIRIN DRUGS or DM AUDIT ANTI-PLATELET DRUGS taxonomies then a value of 2 - None is assigned.

If no prescriptions or refusals are found then the following is done to determine if there is an Adverse Reaction documented:

All POVs are searched for diagnoses 995.0-995.3 with an E-code, if found then a value of 3 - Refused/Adverse Reaction is assigned.

All POV's are searched for V14.8 with a provider narrative containing ASPIRIN or ASA, if found a value of 3 - Refused/Adverse Reaction is assigned.

The problem list is searched for V14.8, or 995.0-995.3 with a provider narrative containing ASPIRIN or ASA, if found a value of 3 - Refused/Adverse Reaction is assigned.

The allergy tracking package is searched for any allergy containing the term "ASPIRIN", if found a value of 3 - Refused/Adverse Reaction is assigned.

The allergy tracking package is searched for any drug allergy where the drug has a VA CLASS CODE of CN103, BL100, BL110 or BL117, if found a value of 3 - Refused/Adverse Reaction is assigned.

Individual Audit: The above logic is used and the value is displayed.

Cumulative Audit: The percentage of those who had a value of 1, 2 or 3 is displayed.

EPI Info Export: A 1 (Yes) or a 2 (no) or 3 (Refused) is passed to the EPI record.

LIPID LOWERING AGENT

If any drug in the DM AUDIT LIPID LOWERING DRUGS or DM AUDIT STATIN DRUGS taxonomy has been prescribed in the 6 MONTHS prior to the audit date the following values will be displayed: 1 - Statin 2 - Other 3 - Both . If a refusal of any drug within the above mentioned taxonomies is documented the value 5- Refused is displayed, Otherwise, a No is displayed.

Cumulative Audit: Used in the calculation of those with TOTAL CHOLESTEROL >=240 (if total cholesterol is documented and result can be determined.) Used in the calculation of those with LDL cholesterol > 100 (if LDL is documented and LDL value can be determined).

EPI Info Export: a 1-5 is passed.

FLU VACCINE

Immunizations are scanned for an Influenza vaccine in the 15 months prior to the audit date. If none if found, a documented refusal in the past 15 months is searched for. If neither are found a No is assumed.

Values: Yes, No, Refused.

Logic for determining whether a vaccine has been done in the past 15 months:

Immunization CVX codes: 15, 16, 88, 111
Purpose of Visit (ICD diagnoses: V04.81, V06.6
CPT codes: BGP CPT FLU
ICD procedure: 99.52

Refusals documented in both PCC and the immunization package are reviewed.

Individual Audit: If a flu vaccine is found, a Yes with the date the shot was given is displayed. Otherwise a No or Refused is displayed.

Cumulative Audit: The total number and percentage of those having a Flu Vaccine and the percent who refused is displayed.

EPI Info Export: A 1 (Yes) or 2 (No) or 3 (Refused) is passed to the EPI record.

PNEUMOVAX EVER

Immunizations are scanned for Pneumococcal vaccine anytime prior to the audit date. If none is found, the refusal file is checked for a documented refusal of this vaccination. If neither are found a No is assumed.

Values: Yes, No, Refused.

Logic used to determine if a Pneumovax was done:

Immunization CVX codes: 33, 100, 109
Diagnoses: V06.6, V03.82
CPT codes: BGP PNEUMO IZ CPTS taxonomy
Procedure: 99.55

Refusals documented in both the PCC and the immunization package are reviewed.

Individual Audit: If a pneumovax was found, a Yes with the date the shot was given is displayed. Otherwise a No or Refused is displayed.

Cumulative Audit: The total number and percentage of those having a pneumococcal immunization and the percent who refused is displayed.

EPI Info Export: A 1 (Yes) or 2 (No) or 3 (Refused) is passed to the EPI record.

TD IN PAST 10 YEARS

Immunizations are scanned for any tetanus vaccine in the 10 years prior to the audit date. If none is found, a documented refusal is searched for. If neither are found a No is assumed. Values: Yes, No, Refused. Logic used to find a TD vaccine:

Immunization CVX codes: 1, 9, 20, 22, 28, 35, 50, 106, 107, 110, 112, 113, 115, 120

CPT Codes: 90698, 90700, 90701-90703, 90714-90715, 90718, 90720-90723

Individual Audit: If a tetanus immunization is found, a Yes with the date the shot was given is displayed. Otherwise a No or Refused is displayed.

Cumulative Audit: The total number and percentage of those having a tetanus shot and the percent who refused is displayed.

EPI Info Export: A 1 (Yes) or 2 (No) or 3 (Refused) is passed to the EPI record.

TB STATUS/PPD STATUS

Possible values: POSITIVE, NEGATIVE, UNKNOWN, REFUSED

In determining PDD Status the following logic is used:

1. If the patient has a TB health factor recorded, TB on the problem list or any diagnoses of TB documented in the PCC then the status is POSITIVE, no further processing is done.

2. All recorded PPD entries prior to the audit date are gathered. If there are none found then the refusal file is checked. If a refusal is on file then the value is REFUSED. If no refusal is found then the value is UNKNOWN. No further processing is done.
3. The LAST PPD with a reading or result is examined.. If the reading or result is Positive (reading >9) then POSITIVE, if reading or result of last PPD is negative, then NEG, if reading and result of all PPDs are blank then UKNOWN. If no PPD ever recorded, then UNKNOWN or REFUSED if a refusal has been recorded.

Individual Audit: POSITIVE, NEGATIVE, REFUSED or UNKNOWN is displayed.

Cumulative Audit: N/A (SEE TB STATUS BELOW)

EPI Info Export: A 1 (Positive) or 2 (Negative), 3 (Refused) or 4 (Unknown) is passed to the EPI record.

IF PPD POS, INH TX COMPLETE

Is INH treatment complete? If the value of the PPD Status is POSITIVE then the last TB health factor is looked at for determining TB Treatment status.

Individual Audit: The last recorded TB Health factor is displayed. The TB Health factors are:

TB - TX COMPLETE
TB - TX INCOMPLETE
TB - TX UNKNOWN
TB - TX UNTREATED

Cumulative Audit: N/A (SEE TB STATUS BELOW)

EPI Info Export: The last TB health factor is examined and recoded as follows:

1 - Yes if factor is TB - TX COMPLETE
2 - No if factor is TB - TX INCOMPLETE or TB - TX UNTREATED
4 - Unknown if factor is TB - TX UNKNOWN

IF PPD NEG, LAST PPD DATE

If the value of the PPD Status is NEGATIVE then the date of the last PPD is displayed.

Individual Audit: The date of the last PPD is displayed.

Cumulative Audit: N/A (SEE TB STATUS BELOW)

EPI Info Export: If PPD Status is NEGATIVE the date of the last negative PPD is passed to the EPI record.

TB STATUS (TB CODE)

For the Cumulative Audit and EPI export record a TB Status code is calculated. The values of PPD STATUS, TB Treatment Status and date of last PPD are used to determine which category the patient falls into. The values are:

1 - PPD +,INH treatment complete If the PPD Status is Positive and the last recorded health factor is TB - TX COMPLETE then the patient falls into this category.
2 - PPD +, untreated/incomplete or tx unknown If the PPD Status is Positive and the last recorded health factor is TB - TX INCOMPLETE or TX - UNKNOWN or TB - TX UNTREATED then the patient falls into this category.
3 - PPD -, placed since DM dx If the PPD Status is negative and the date of the last PPD is after the date of DM diagnosis, the patient falls into this category. The date of DM diagnosis is taken from the earliest of the register, problem list or first PCC diagnosis.
4 - PPD -, placed before DM dx If the PPD Status is negative and the date of the last PPD is before the date of DM diagnosis, the patient falls into this category. The date of DM diagnosis is taken from the earliest of the register, problem list or first PCC diagnosis.
5 - PPD Status Unknown If the PPD Status is negative but the date of DM diagnosis is unknown the patient falls into this category. (This will more than likely be zero because the patient will have had at least one DM diagnosis).
6 - PPD -, date of DX or PPD Date unknown If the PPD Status is Unknown or Refused, then the patient falls into this category.

Individual Audit: N/A.

Cumulative Audit: The categories as described above are displayed.

EPI Info Export: The TB STATUS code as described above is passed to the EPI record. The codes 1-6 are passed.

EKG

The date of the last EKG before the audit date. EKG is searched for the following ways:

ECG Summary in the V DIAGNOSTIC PROCEDURE file. (This is populated by the EKG mnemonic in data entry).

ICD OPERATION/PROCEDURE codes 89.51, 89.52 or 89.53

CPT Codes: 93000-93024, 93040-93042, 93224-93237, 93268-93268, 93270-93272, 93278-93278

Individual Audit: The date of last EKG is displayed

Cumulative Audit: The date is used to determine % performed in past 3 years, past 5 years and ever.

EPI Info Export: A 1 (Yes) or 2 (No) is passed in one field and the date of the most recent is passed in another field.

HBA1C

The last HbA1c test in the V LAB file is found using the DM AUDIT HGBA1C TAX taxonomy and the BGP HGBA1C LOINC CODES taxonomies.

Individual Audit: The date and result of test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit: The result of the last HbA1c test is examined and is put into the following categories. If the result contains a ">" it goes into the 11.0 or higher category. If the result is blank OR the 1st digit of the result is not a number (and is not a >) then it is put in the Undocumented category since we cannot interpret the result. For example, if the value is "cancelled" will fall into undocumented.

HbA1c <7.0

HbA1c 7.0-7.9

HbA1c 8.0-8.9

HbA1c 9.0-9.9

HbA1c 10.0-10.9

HbA1c 11.0 or higher

Undocumented

EPI Info Export: The value and date of the last HbA1c tests is passed to the EPI record.

CREATININE

The last lab test in the year prior to the audit date that is a member of the DM AUDIT CREATININE TAX taxonomy or the BGP CREATININE LOINC CODES taxonomy is found in V LAB.

Individual Audit: The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit: The result of the test is examined and is put into the following categories. If the result is blank OR the 1st digit of the result is not a number or a "." (as in .5) then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled", it will fall into unable to determine.

Creatinine >= 2.0 mg/

Creatinine < 2.0 mg/dl

Creatinine not tested/unknown

Unable to determine result

EPI Info Export: A 1 or 2 is passed with 1 indicating a test was done and a 2 indicating it was not done. The value of the test is passed in a separate field.

ESTIMATED GFR

To determine whether or not an Estimated GFR was done, 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.

Individual Audit: YES or NO is displayed

Cumulative Audit: Used in the calculation of patients in which an Estimated GFR was obtained.

EPI Info Export: A 1 (Yes) or 2 (No).

TOTAL CHOLESTEROL

The last lab test in the year prior to the audit date that is a member of the DM AUDIT TOTAL CHOLESTEROL TAX taxonomy or the BGP TOTAL CHOLESTEROL LOINC taxonomy is found in V LAB.

Individual Audit: The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit: The result of the test is examined and is put into the following categories. If the result is blank OR the 1st digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled", it will fall into unable to determine.

Desirable (<200 mg/dl)
Borderline (200-239 mg/dl) High (240 mg/dl or more)
Unable to determine result
Not tested

EPI Info Export: A 1 or 2 is passed with 1 indicating a test was done and a 2 indicating it was not done. The value of the test is passed in a separate field.

HDL CHOLESTEROL

The last lab test in the year prior to the audit date that is a member of the DM AUDIT HDL CHOLESTEROL TAX taxonomy or the BGP HDL LOINC CODES taxonomy is found in V LAB.

Individual Audit: The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit: The result of the test is examined and is put into the following categories. If the result is blank OR the 1st digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled", it will fall into unable to determine.

HDL <35 mg/dl
HDL 35-45 mg/dl
HDL 46-55 mg/dl
HDL >55
Unable to determine result
Not tested

EPI Info Export: A 1 or 2 is passed with 1 indicating a test was done and a 2 indicating it was not done. The value of the test is passed in a separate field.

LDL CHOLESTEROL

The last lab test in the year prior to the audit date that is a member of the DM AUDIT LDL CHOLESTEROL TAX taxonomy or the BGP LDL LOINC CODES taxonomy is found in V LAB.

Individual Audit: The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit: The result of the test is examined and is put into the following categories. If the result is blank OR the 1st digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled", it will fall into unable to determine.

LDL <100 mg/dl

LDL 100-129 mg/dl
LDL 130-160 mg/dl
LDL >160
Unable to determine result
Not tested

EPI Info Export: A 1 or 2 is passed with 1 indicating a test was done and a 2 indicating it was not done. The value of the test is passed in a separate field.

TRIGLYCERIDES

The last lab test in the year prior to the audit date that is a member of the DM AUDIT TRIGLYCERIDES TAX taxonomy or the BGP TRIGLYCERIDE LOINC CODES taxonony is found in V LAB.

Individual Audit: The date and result of the test is displayed. If there is no result, the result will be blank but the date will display.

Cumulative Audit: The result of the test is examined and is put into the following categories. If the result is blank OR the 1st digit of the result is not a number then it is put in the Unable to determine result category since we cannot interpret the result. For example, if the value is "cancelled", it will fall into unable to determine.

TG <150 mg/dl
TG 150-199 mg/dl
TG 200-400 mg/dl
TG >400 mg/dl
Unable to determine result
Not tested

EPI Info Export: A 1 or 2 is passed with 1 indicating a test was done and a 2 indicating it was not done. The value of the test is passed in a separate field.

URINE TESTED FOR PROTEIN

The system looks for the following:

1. A test contained in the DM AUDIT A/C RATIO taxonomy, if found then the patient is assigned a value of 1 - Yes and an X is placed by the 1 - Quantitative Albumin:Creatinine Ratio (UACR).
2. A test contained in the DM AUDIT SEMI QUANT UACR taxonomy, if found, the patient is assigned a value of 1 - Yes and an X is placed by the 2 - Semi-Quantitative UACR.
3. A test contained in the DM AUDIT P/C RATIO taxonomy, if found, the patient is assigned a value of 1 - Yes and an X is placed by the 3 - Protein:Creatinine Ratio (UPCR).
4. A test contained in the BGP QUANT URINE PROTEIN taxonomy, if found, the patient is assigned a value of 1 - Yes and an X is placed by the 4 - Other quantitative test.
5. A test contained in the DM AUDIT URINE PROTEIN TAX taxonomy, if found, and the result is 1+ or more, the patient is assigned a value of 1 - Yes and an X is placed by the 5 - Found to have 1+ protein or more on standard UA dipstick.
6. A test contained in the DM AUDIT MICROALBUMINURIA TAX taxonomy, if found, the patient is assigned a value of 1 - Yes and an X is placed by the 6 - Other non-quantitative test.
7. A refusal of any test in the above 7 taxonomies is searched for, if found, the patient is assigned a value of 3 - Refused.
8. If none of the above is found, the patient is assigned a value of 2 - No.

Individual Audit: The above logic is used and the value assigned plus the date, result, and test name are displayed.

Cumulative Audit: The percentage of those who had a value of 1, 2 or 3 is displayed.

EPI Info Export: A 1 (Yes) or a 2 (no) or 3 (Refused) is passed to the EPI record. The test type (1-6) is passed. If the test is in category 1 or 2 then result of the test is passed.

PROTEINURIA

1. The last UACR (Urine Albumin / Creatinine Ratio) lab test in the year prior to the audit date that is a member of the DM AUDIT A/C RATIO TAX taxonomy or the DM AUDIT A/C RATIO LOINC taxonomy is found in V LAB.

2. If no UACR test is found, the system will look for the last UPCR (Urine Protein / Creatinine Ratio) lab test in the year prior to the audit date that is a member of the DM AUDIT P/C RATIO TAX or the DM AUDIT P/C RATIO LOINC taxonomies.

3. If no UACR or UPCR test is found, the system will look for the last other QUANTITATIVE urine protein lab test in the year prior to the audit date that is a member of the BGP QUANT URINE PROTEIN or the BGP QUANT URINE PROT LOINC taxonomies.

Individual Audit: The name of the most recent test from the above search will be displayed as well as the result. If no test during the audit period is found as described in 1-3 above, NONE is displayed.

Cumulative Audit: Method of quantitative urine protein testing (1-3 above or Not Done /Unknown) tallied as well as percent of audit population. Of the patients in which a UACR was obtained and resulted, report number and perecnt in the following categories:

UACR 0-29.99 - Albumin level within normal limits.

UACR 30-299.9 - Microalbuminuria present.

UACR > 299.9 - Overt proteinuria present.

EPI Info Export: A 1 is passed if Urine Albumin / Creatinine Ratio test found. A 2 is passed if Urine Protein / Creatinine Ratio test found. A 3 is passed if Other Quantitative Urine Protein test found. A 4 is passed if no quantitative urine protein test found. Results of latest UACR or UPCR passed. If both UACR and UPCR found, only result of latest UACR passed.

DEPRESSION ON PROBLEM LIST

The patient's problem lists in both PCC and the Behavioral Health module are reviewed for any problem with the following ICD codes: 296.*, 300.*, 301.13, 308.3, 309.*, 311.*, in addition the BH problem list is reviewed for the following problem codes: 14, 15, 18, 24. If no problem found on the problem list then the PCC and BH systems are reviewed for at least 2 diagnoses (POV's) of 300.*, 301.13, 308.3, 309.*, 311.*, 14, 15, 18, 24. If either a problem is found on the problem list or 2 POV's are found then the value on the audit is 1 - Yes. If not, then value of 2 - No is assigned.

DEPRESSION SCREENING

The PCC and Behavioral health databases are reviewed for any of the following documented in the past year:

Return the last recorded depression screening value:

V Exam 36 or Behavioral Health Module Depression Screening
Diagnosis - V POV V79.0
Education Topics - V EDUCATION or Behavioral Health Module
DEP-SCR
V Measurement PHQ2, PHQ9
Behavioral Health Module Diagnosis (POV) of 14.1
Diagnosis in BGP MOOD DISORDERS taxonomy in V POV
Diagnosis in BGP MOOD DISORDERS taxonomy in BH
Problem Code of 14 or 15 in BH

If any of the above is found then a value of 1 - Yes is assigned.

Refusal of Depression Screening is checked in the Refusals file. Exam code 36 must be used to document the refusal.

(No) if no documentation of depression screening found.

Contact Information

This manual was created by the Western Tribal Diabetes Project
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We are always excited to hear from DMS users!