Indian Health Service
Diabetes Care and Outcomes Audit

Audit 2023
Instructions

January 2023

Indian Health Service
Division of Diabetes Treatment and Prevention
https://www.ihs.gov/diabetes/

Table of Contents

Preface

Welcome to Audit 2023!

If you have not previously participated in an Indian Health Service (IHS) Diabetes Care and Outcomes Audit ("Diabetes Audit" or "'Audit"), **please read these instructions carefully before beginning** your Audit activities.

Even if you are already familiar with the Annual Diabetes Audit process, there are some changes and updated resources for 2023. The sections below provide a brief summary of this year's changes and Quick Start Directions.

Additional resources are available on the [Audit website](https://www.ihs.gov/diabetes/audit/audit-resources/).[1]

What's New for Audit 2023?

Depression:

1. Input:
    a. Skip pattern removed and order of items changed (now screening first for all, then diagnosis for all).
    b. Depression diagnosis now requires documentation of active depression during the Audit period.
2. Report:
    a. "Mental Health" section renamed to "Depression".
    b. In "Depression" section, four report items replaced with three new ones.
        i. Screened during Audit period
        ii. Active diagnosis during Audit period
        iii. Screened during Audit period and/or active diagnosis
    c. In "Diabetes-Related Conditions" section, one report Item replaced with new one: Active diagnosis during Audit

DM Therapy: Added new medication, Tirzepatide [Mounjaro] to input and report.

Pneumococcal immunization: Changed to count any of the current vaccines (PCV20, PCV15, PPSV23), ever. PCV13 does not count.

Hepatitis B immunization: New vaccine, PreHevbrio® (3-dose series), added.

Other: Minor changes to labels and formatting on the Audit form and Audit Report.

Due Date for Audit 2023

Data must be submitted via the WebAudit and locked **no later than March 15, 2023.**

---

[1] https://www.ihs.gov/diabetes/audit/audit-resources/

Quick Start Directions

Electronic Audits

Using the IHS Resource and Patient Management System (RPMS):

1. Select *Diabetes Management System* (menu item **DMS**).

2. Select *Audit Setup* (menu item **AS**).

   a. Select *Patients with DM Diagnosis and not on Register* (menu item **DXNR**) to find patients seen at your facility but are not currently on your diabetes register.

   b. Select *List Possible Inactive Pts* (menu item **INA**) to identify patients who are no longer being seen at your facility but are still marked as active in the diabetes register.

   c. Select *Check Taxonomies for the 2023 DM Audit* (menu item **TC**) and review the output.

   d. If updates are needed, use *Update/Review Taxonomies for 2023 DM Audit* (menu item **TU**).

   e. Select *2023 Data Quality Check Report* (menu item **DQC**) and review the output. Make corrections or edits to data and taxonomies, as necessary.

3. Return to the DMS Main Menu, and select *Audit Reporting* (menu item **AR**).

4. Select *2023 Diabetes Audit* (menu item **DM23**).

5. Enter the Audit Date (this is the ending date of the one-year Audit period, also known as the Audit period end date). The date for the 2023 Annual Audit submitted to IHS Division of Diabetes is **12/31/2022**.

6. Select the template or register that includes all of the eligible patients for your Annual Audit.

7. Select patients with a particular status, if necessary.

8. Decide which of the eligible patients to include in your Audit, using the following options:

   a. You can limit the Audit to a particular provider or a particular community (select *"No"* for the 2023 Annual Audit).

   b. You can include only Indian/Alaska Native patients, only Non-Indian/Alaska Native patients, or all patients (select *"1"* to include only Indian/Alaska Native patients for the 2023 Annual Audit).

   c. You can include or exclude pregnant patients in the Audit (select "*E*" to exclude pregnant patients for the 2023 Annual Audit).

   d. You can include all or a random sample of the patients selected so far (select *"A"* to include all patients for the 2023 Annual Audit).

9. Select *option 2* to create an Audit Export File to upload into the WebAudit. This file is in delimited text format. Note the total number of eligible patients to be included in the file, which will be entered into the WebAudit.

   a. Enter a name for the Audit Export File to be created. Write this name down.

   b. Select "*E*" to exclude DEMO patients from the 2023 Annual Audit.

10. Access the WebAudit and enter the Facility Information. See Section 4, p. 10.

11. Obtain the Audit Export File and upload it to the WebAudit. See Section 4, p.10.

12. Review and edit the data, as necessary. See Section 6, p.14.

13. Review the *Audit Report* and, if desired, other reports. See Section 7, p.15.

14. Once all review and editing are complete, "lock" the data for the facility. See Section 8, p.15.

Using electronic medical record (EMR) software other than RPMS:

1. Contact the Audit team (diabetesaudit@ihs.gov) and your [Area Diabetes Consultant](https://www.ihs.gov/diabetes/about-us/area-diabetes-consultants-adc/)[2] to let them know that you are planning to conduct an electronic Audit and request resources.

2. Work with IT and other personnel at your facility to identify eligible patients with diabetes and create an electronic Audit data file in the format specified for Audit 2023 (see Appendix A, p.17).

3. Follow steps 10-14 above.

Manual Audits

1. From a registry or other listing of diabetes patients at your facility that meet the Audit inclusion and exclusion criteria, randomly select the appropriate number of charts to review. See Section 5, p.11.

2. Review the 2023 Audit form and instructions, including Appendix B on p.25, with all chart reviewers.

3. Review and complete an Audit 2023 paper form for each chart selected. Be sure to provide data for all relevant items.

4. Access the WebAudit and enter the facility information. See Section 5, p.13.

5. Enter the data from each paper Audit form into the WebAudit. See Section 5, p.13.

6. Review and edit the data, as necessary. See Section 6, p.14.

7. Review the Audit Report and, if desired, other reports. See Section 7, p.15.

8. After all data has been entered, and review and editing are complete, "lock" the data for the facility. See Section 8, p.15.

---

[2] https://www.ihs.gov/diabetes/about-us/area-diabetes-consultants-adc/

Section 1. Introduction

The Indian Health Service (IHS) Diabetes Care and Outcomes Audit is a process for assessing diabetes care and health outcomes for American Indian and Alaska Native (AI/AN) people with diagnosed diabetes. The *Diabetes Standards of Care and Resources for Clinicians and Educators*[3] provide the basis for the Audit. Together, these resources can help IHS, tribal, and urban (I/T/U) facilities work towards providing the highest quality of care for all diabetes patients.

To conduct an Audit, facility staff gather data for patients with diabetes by one of two methods:

1. **Electronic Audit:** Extraction of data from an electronic medical record (EMR) system into a data file formatted according to the specifications for the current year. Upload the data file into the central database via the WebAudit "Upload Data" tool.

    a. The IHS Resource and Patient Management System (RPMS) Diabetes Management System (DMS) includes tools for creating this data file.

    b. Other EMR systems may also be programmed to create these data files. These include, but are not limited to: Allscripts, Athena, Cerner, eClinicalWorks, Epic, Greenway, i2i, NextGen,

2. **Manual Audit:** Manual chart review, where staff physically examine the medical record for each patient and complete a paper Audit form. Enter data from the Audit forms manually into the central database via the WebAudit "Data Entry" tool.

Generally, active diabetes patients receiving the majority of their primary care at the facility are eligible for inclusion in the Audit. For electronic Audits, all eligible patients should be included. For manual Audits, guidance for determining the number of charts and selecting patients and charts is provided in this document, along with standard definitions for each data item.

Facilities are encouraged to review their Audit results in a team setting and use them to identify strengths and areas needing improvement. Facility staff can then establish priorities and develop an action plan with a timetable for reevaluation.

The Division of Diabetes recommends conducting an Audit annually or even more frequently, to monitor care patterns and changes over time. Once each year, facilities submit Audit data to the IHS Division of Diabetes for centralized processing and analysis, referred to as the Annual Diabetes Audit or Annual Audit. The data are aggregated and used to generate reports with nationwide information for IHS leadership, Congress, and other stakeholders. Using a uniform process and standardized definitions provides consistency and allows valid comparison of each facility's results with the results for their Area and all Areas combined.

---

[3] https://www.ihs.gov/diabetes/clinician-resources/soc/

Section 2. Identifying Patients to Audit: Inclusions and Exclusions

A critical task in performing the Audit is determining which diabetes patients to include. General guidance for identifying these patients is provided below.

First, identify patients who meet **all** of the following criteria:

1. Have a diagnosis of diabetes mellitus.

2. Are American Indian or Alaska Native.

3. Have **at least one visit** (in person or telehealth) to any of the following clinics during the one-year Audit period (numbers in parentheses are IHS specific clinic codes):

    a. General (01)
    b. Diabetic (06)
    c. Internal Medicine (13)
    d. Pediatric (20)
    e. Family Practice (28)
    f. Chronic Disease (50)
    g. Endocrinology (69)

Then, **exclude** patients who:

1. Received the majority of their primary care during the Audit period outside of your facility.

2. Are currently on dialysis AND received the majority of their primary care during the Audit period at the dialysis unit.

3. Died before the end of the Audit period.

4. Were pregnant during any part of the Audit period.

5. Have prediabetes (as determined by documented diagnosis or impaired fasting glucose [IFG], impaired glucose tolerance [IGT], or elevated A1C level).

6. Moved permanently or temporarily before the end of the Audit period.

Section 3. Electronic Auditing vs. Manual Chart Review

Information on diabetes care elements and outcome measures may be collected in one of two ways:

1. Extracting data from an electronic medical record system into a data file formatted according to the specifications for the current year (an electronic Audit).

2. Manually reviewing medical charts and completing paper forms (a manual Audit). Although RPMS is most commonly used for electronic Audits, other systems may also be able to extract data for an electronic Audit.

Table 1 provides a comparison of electronic vs. manual Audits.

Table 1. Key Characteristics of Electronic vs. Manual Audits

Task or Characteristic	Electronic	Manual
Diabetes registry review and update	Yes	Yes
Chart review	No	Yes
Form completion	No	Yes
Data entry	No	Yes
Taxonomy review and update	Yes	No
Human judgment dependent	No	Yes
Computer system dependent	Yes	No
Instructions	Section 4, p.8	Section 5, p.11

There are pros and cons for both methods. In particular,

Electronic:

1. Accuracy is subject to proper documentation, coding, and data entry in RPMS or other system.
2. Requires time and attention for initial set up, including understanding and updating code lists, known as taxonomies in RPMS.
3. Usually requires less time once initial set up is complete.
4. May require troubleshooting, including manual review of selected charts, if results are very different from what is observed or expected or if potential errors are found.

Manual:

1. Accuracy is subject to proper documentation in the paper or electronic chart.
2. Usually requires more time.
3. Not subject to limitations of electronic medical record systems.

The IHS Division of Diabetes encourages the use of electronic Audits whenever feasible.

Facilities wishing to transition from a manual to an electronic Audit should initially run simultaneous manual and electronic Audits to compare the results. These results should be very similar, if not identical. If the results for any of the Audit elements are different, the reason needs to be found and addressed. Once these differences are resolved, electronic auditing can then be used as the primary source of Audit data.

Once your facility decides what type of Audit to conduct, see the appropriate section of these instructions: Section 4 on p.8 for electronic Audits or Section 5 on p.11 for manual Audits.

Section 4. Performing an Electronic Audit

RPMS and some other electronic medical record systems are capable of extracting Audit data from their databases into a data file formatted for uploading into the WebAudit.

This section provides a brief, step-by-step synopsis of the Audit process using the RPMS Diabetes Management System (DMS). More detailed information is available in the DMS Audit User Addendum and User Manuals. Links to both of these documents are available on the Audit resources webpage.[1]

In order to use the DMS application you need to have the proper access keys, otherwise, the necessary menu items will not be available to you. Contact your local RPMS site manager if you need assistance.

a. Creating an Audit Data File Using RPMS DMS

Preparation:

1. In the DMS menu, select **AS** for *Audit Setup* to review and update taxonomies for medications, lab tests, and education topics to ensure they are present, accurate, and complete.

2. Prepare a list of all patients that meet the Audit inclusion/exclusion criteria (Section 2, p.7). This can be done in a number of ways, including:

   a. Review and update the diabetes register, as needed, so that it includes only eligible patients or some way to identify eligible patients (e.g., by status).

   b. Create a template of the diabetes patients at your facility that meet the Audit criteria.

3. Run and review the DMS Data Quality Check Report (menu item DQC) and fix as many errors as possible. This report lists potential errors in the data extracted for your Audit - the same errors checked for by the WebAudit Data Quality Check. In addition, the DMS version of the report includes patient identifiers, which the WebAudit version does not.

Create Audit data file:

1. In the DMS menu, select **AR** for *Audit Reporting*.

2. Select **DM23** for the 2023 Diabetes Audit. Note: If **DM23** is not on your menu, then the DMS patch for Audit 2023 has not yet been installed. Ask your RPMS site manager to install BDM Version 2.0 Patch 15.

3. Enter Audit Date, which is the ENDING date of the one-year Audit period. For the 2023 Annual Audit submitted to the IHS Division of Diabetes, enter **12/31/2022** to use the prior calendar year as the Audit period (January 1 – December 31, 2022).

4. Select the template or register that includes all of the eligible patients for your Annual Audit.

5. Select patients with a particular status, if necessary.

6. Determine which patients to include in your Audit, using the following options:

   a. Limiting to a particular provider or a particular community (select *"No"* for the 2023 Annual Audit data submitted to the IHS Division of Diabetes).

   b. Including only Indian/Alaska Native patients, only Non-Indian/Alaska Native patients, or all patients (select "1" to include only Indian/Alaska Native patients for the 2023 Annual Audit).

   c. Including or excluding pregnant patients in the Audit (select "E" to exclude pregnant patients for the 2023 Annual Audit).

   d. Including all or a random sample of the patients selected so far (select "A" to include all patients for the 2023 Annual Audit).

7. Select option *"2"* to create an Audit Export File that can be uploaded into the WebAudit. This file is in delimited text format. Note the total number of eligible patients to be included in the file as it will be entered into the WebAudit.

8. Provide a name (3-20 characters) for the Audit Export File. It is recommended that the name not include any spaces; underscores can be used instead. For example, you might use MyFacilityName_AnnualAudit2023.

9. The program will ask if everything is OK to proceed; enter "Y//Yes".

10. Select "E" to exclude DEMO patients from the 2023 Annual Audit.

11. You will be asked if you want to queue this request. It is recommended that you enter "Y//Yes".

12. A data file with the name provided in step 8 above will be created.

The file will be saved in the directory noted on the screen. You will probably need the RPMS site manager or other IT professional to retrieve the file and forward it to you. Keep track of the file name and where you put it! You might want to make a new folder called "Audit Files" on your desktop or in My Documents and save the file there.

Please remember that electronic files containing patient data are confidential and need to be handled accordingly.

b. Creating an Audit Data File Using an Electronic Medical Record System Other Than RPMS DMS

Because all electronic medical record systems have different structures and functionality, it is critical to review the Audit 2023 data file format and DMS Audit 2023 logic before proceeding. Detailed specifications for the Audit data file can be found in Appendix A on p.17. DMS Audit logic is available in the DMS Addendum on the [Audit resources webpage](#).[1] Additional resources are available from the Audit team, on request (diabetesaudit@ihs.gov).

c. Uploading the Audit Data File to the WebAudit

For further information about the WebAudit visit the IHS Division of Diabetes [Audit website](#).[4]

To upload a data file:

1. Request a WebAudit account if you do not already have one.

2. Log in to the WebAudit.

3. Select "Facility Administration" from the main or left hand menu. Then select "Enter Facility Information".

4. Select an Audit Type. For the Annual Audit submitted to the Division of Diabetes, you will select "Annual Audit". For all other Audits, select "Interim Audit". Click on the "Go" button.

5. Enter the number of patients that meet the inclusion and exclusion criteria in Section 2, p.7.

6. Click on the "Submit" button.

7. Select "Upload file for this facility" from the onscreen menu or click on "Data Processing" in the left hand menu, then select "Upload Data".

---

[4] https://www.ihs.gov/diabetes/audit/

8. Individuals with access to multiple facilities will need to select a Facility.

9. Select the electronic medical record system used to create your data file.

10. Click on the "Choose File" button and navigate to your data file, then click on the "Open" button.

11. Click on the "Upload File" button.

12. If the data file upload is successful, you will receive a message on the screen to that effect.

13. If the upload is unsuccessful, you will receive an error message and details about the problems found.

14. Once the file has been successfully uploaded, proceed with checking the data quality, if you have not already done so in DMS (see Section 6, p.14).

15. Generate and review the Audit Report (see Section 7, p.15).

16. When all editing and corrections have been completed, "lock" the data (see Section 8, p.15).

Section 5. Performing a Manual Chart Audit

a. Sample Size Determination

For manual auditors, the time requirements of the chart review process generally make it impractical to review all eligible diabetes patients. As such, a random sample may be selected for inclusion in the Audit. The number needed for statistically valid results depends on the number of diabetes patients at your facility that meet the eligibility criteria for the Audit (see Section 2, p.7).

Table 2 (Sample Sizes) on the following pages lists the minimum number of charts you need to review to be reasonably sure that a difference from a previous or subsequent Audit is a real change and not just due to chance. For example, if your facility has 1000 eligible patients with diabetes, you will need to audit at least 63 charts.

b. Sample Size Calculation Details

The Audit sample sizes in Table 2 were calculated using the following method:

Sample size = n/(1+(n/population)) where n = Z*Z(P(1-P)/D*D)

Sample size = number to be randomly selected from population of eligible diabetes patients

Population = number of diabetes patients that meet the criteria for inclusion in the Audit

P = true proportion of Audit element in the population (since this is not known exactly, it is taken as 50% [i.e., 0.5] as the most conservative value)

D = (Maximum) difference between sample mean and population mean (Table 2. Sample Sizes lists *within ± 10%* and *within ± 5%*, which corresponds to a D value of 0.1 and 0.05, respectively)

Z = area under normal curve corresponding to the desired confidence level:

Confidence	Z
0.90	1.645
0.95	1.960
0.99	2.575

Reference: Kish (1995)

Table 2. Audit Sample Sizes

Population (# eligible diabetes patients)	90% Certainty Within 10% (Recommended)	90% Certainty Within 5%	95% Certainty Within 10%	95% Certainty Within 5%
<30	all	all	all	all
30	21	27	23	28
40	25	35	28	36
50	29	42	33	44
60	32	49	37	52
70	34	56	40	59
80	37	62	44	66
90	39	68	46	73
100	40	73	49	79
110	42	78	51	86
120	43	83	53	91
130	44	88	55	97
140	46	92	57	103
150	47	96	59	108
160	48	101	60	113
170	48	104	61	118
180	49	108	63	123
190	50	112	64	127
200	51	115	65	132
220	52	121	67	140
240	53	127	69	148
260	54	133	70	155
280	54	138	72	162
300	55	142	73	168
320	56	147	74	175
340	56	151	75	180
360	57	154	76	186
380	57	158	77	191
400	58	161	77	196
420	58	165	78	201
440	59	168	79	205
460	59	170	79	209
480	59	173	80	213
500	60	176	81	217
525	60	179	81	222
550	60	181	82	226
575	61	184	82	230
600	61	186	83	234
650	61	191	84	241
700	62	195	84	248
800	62	202	86	260
900	62	208	87	269
1000	63	213	88	278
2000	65	238	92	322
3000	66	248	93	341
4000	67	253	94	350
5000	67	257	94	357
6000+	67	259	95	361

c. *Chart Selection*

Charts should be selected using a systematic random sampling process, as follows:

    i.   Prepare a list of the diabetes patients at your facility that meet the eligibility criteria in Section 2, p.7, of these instructions.

    ii.   Determine your sample size using Table 2 above.

    iii.   Divide the number of patients on your list from step i above by the sample size determined in step ii above to get the sampling interval, called k.

    iv.   Randomly select the first chart to audit from the first k records.

    v.   Select every kth chart after that one on the list.

Example: Suppose you need to select 69 charts from a list of 1000 patients.

    1.   Divide 1000 by 69, to get k=14.4, which is rounded down to 14. So you must select one chart out of every 14.

    2.   Use any method of random chance to determine which one of the first 14 patients on the list should be selected. For example, you could number 14 pieces of paper with 1 through 14 and have someone draw one. If the number is 5, select the fifth patient on the list and then every 14th patient after that (19, 33, 47, etc.).

Note: It is important to track down charts for all selected patients to minimize bias in your sample.

d. *Completing the Audit Form*

The 2023 Audit form is available on the IHS Division of Diabetes [Audit resources webpage](#).[1]

Review the medical chart for each selected patient to obtain the necessary information, using the information in Appendix B on p.25 as a guide. If you cannot find a result in the chart, then for the purposes of the Audit, apply the old dictum: *"If it is not documented, it did not happen."*

Finally, please remember that all medical records and completed Audit forms are confidential documents and need to be handled with discretion for personal health information. Do not leave charts and forms unattended. Store completed forms in a secure location.

e. *Instructions for WebAudit Data Entry and Processing*

Data entry is done via the internet-based WebAudit. To access the WebAudit you must connect to the internet via a web browser, such as Chrome.

For further information about the WebAudit, visit the IHS Division of Diabetes [Audit website](#).[4]

To complete data entry:

    1.   Request a WebAudit account, if you do not already have one.

    2.   Log in to the WebAudit.

    3.   Select "Facility Administration" from the left hand or onscreen menu, then select "Enter Facility Information".

    4.   Select an Audit Type. For the Annual Audit submitted to the Division of Diabetes, you will select "Annual Audit". For all other Audits, select "Interim Audit". Click on the "Go" button.

5. Enter the number of patients that meet the inclusion and exclusion criteria in Section 2, p.7.

6. Click the "Submit" button.

7. Select "Enter data for this facility" from the onscreen menu or click on "Data Processing" from the left hand menu, then select "Data Entry".

8. Individuals with access to multiple facilities will need to select a Facility.

9. Enter the data from each paper Audit form one at a time, taking care to complete every item. To expedite data entry, use the keyboard as much as possible, including:

    a. <Tab> key to move to the next field.

    b. <Shift><Tab> to move to the previous field.

    c. Number keys to enter responses from selection lists (e.g., type the number "1" for Sex=1:Male).

10. When all data on a form have been entered, click on the "Save" button at the bottom of the screen. The system will check for obvious errors. If any are found, they will be noted on the screen.

    Note: If your data entry session is interrupted for more than 20 minutes and you do not click on the "Save" button, you will be logged off and will lose the current record's unsaved data.

11. Once all of the Audit forms have been entered, proceed with checking the data quality (see Section 6, p.14).

12. Generate and review the Audit Report (see Section 7, p.15).

13. When all editing and corrections have been completed, the data may be "locked" (see Section 8, p.15).

Section 6. Data Review and Editing

There may be errors in your Audit data, whether you uploaded a data file or entered data manually. The WebAudit has a tool that check your data for many different errors.

To use the data checking tool, go to the WebAudit, select "Data Processing" from the left hand menu, then select "Data Quality Check." Follow the onscreen directions to generate a report of Potential Data Errors. The errors will be listed in a table, with a brief explanation of each one. Keep in mind that some potential errors may not be true errors; they could be extreme but accurate values (such as a person weighing over 500 pounds).

To correct an error, click on the "Edit" icon in the leftmost column of the errors table, which will take you to a screen showing all of the data for the selected record. Make the necessary correction(s) and then click on the "Save" button at the bottom of the screen.

If a potential error turns out to contain an accurate value, consider adding a comment to that effect using the "Add Comment" button in the rightmost column of the errors table.

Note that if you already used the DMS Data Quality Check report to identify potential errors and corrected as many as possible in RPMS, the WebAudit Data Quality Check report should only include those that you were not able to correct in RPMS, if any.

Section 7. Generating Reports and Graphs

The WebAudit provides several reports, including the Audit Report, Means Report, and SDPI Key Measures Report. Graphs are also available via the WebAudit, including Trends and Means.

All of the reports and graphs may be generated from data that was either uploaded or manually entered. Current and previous years' reports are available for any year with data submitted.

To generate a report:

1. Select "Reports" from the left hand menu or main menu, then select "Audit Reports".
2. Select an Audit Type. For the Annual Audit, you will select "Annual Audit". For all other Audits, select "Interim Audit". Click on the "Go" button.
3. Select the desired year, and then click on the "Go" button.
4. Select the desired report(s) and click on the "View Report(s)" button.
5. The selected report(s) will appear on the screen. You may need to scroll down the page to view the entire report(s).
6. To print or save the report to your computer, click on the "Download PDF Version" link at the top of the report, on the right side. The report will open as a PDF document. Use your browser's print and save options, as needed.

To generate graphs:

1. Select "Reports" from the left hand menu or main menu, then select "Trends Graphs" or "Means Graphs".
2. Select an Audit Type. For the Annual Audit, you will select "Annual Audit". For all other Audits, select "Interim Audit" then click on the "Go" button.
3. Click on the "Create Report" button.
4. When the report is ready, a button will appear on the screen that says "Open Report in Excel"; click on this button. Depending on what browser you are using, you may need to download the Excel file and then open it or it may automatically open to the "Graphs" tab. Select the "Data" tab to see the results in table format.
5. Copy, print, or edit the graphs using Excel menus and options, as needed.

Carefully reviewing the results in the Audit Report and graphs is another good way to check for potential errors in your Audit data. In particular, very low (close to 0) or very high (close to 100) percentages may indicate problems with the data, as can big changes in results from the previous year. If any such problems are found, review your medical records and taxonomies (if performing an electronic Audit) or your data forms and medical charts (if performing a manual Audit). Contact your Area Diabetes Consultant[2] or the Audit team (diabetesaudit@ihs.gov) if you are unable to resolve any problems.

Section 8. Finalizing ("Locking") Data

When the data have been reviewed and corrected and are as complete and accurate as possible, they can be "locked". Once locked, no further additions or changes can be made, so data should not be locked until you are confident that no further edits are necessary. Locking also submits the data to the IHS Division of Diabetes.

To lock the data:

1. Log in to the WebAudit.
2. Select "Facility Administration" from the left hand or main menu select then "Lock Facility Data".
3. Follow the instructions on the screen.

Section 9. Resources/Links

IHS Division of Diabetes Audit Website – Form, Instructions, WebAudit access, and other information
https://www.ihs.gov/diabetes/audit/

Diabetes Standards of Care and Resources for Clinicians and Educators
https://www.ihs.gov/diabetes/clinician-resources/soc/

RPMS Diabetes Management System manuals
Link on this webpage: https://www.ihs.gov/diabetes/audit/audit-rpms-dms-information/

Area Diabetes Consultant Contact Information
https://www.ihs.gov/diabetes/about-us/area-diabetes-consultants-adc/

Contact the IHS Division of Diabetes Audit Team
diabetesaudit@ihs.gov

Section 10. References

Kish, Leslie. *Survey Sampling*. Wiley-Interscience, 1995. Print.

Appendix A. IHS Diabetes Care and Outcomes Audit Data File Specifications for 2023

General Information

1. **Data File Format:** Delimited text, with the following general requirements.
   a. Delimiter **must** be the ^ symbol, not a tab, space, or any other character.
   b. Line 1 contains the Audit field names in the order they appear below.
   c. Lines 2 and beyond contain the data, with each line representing a single record/patient.
   d. All records must contain a value or a placeholder for all fields. If there is no value for a field (because data are missing or due to skip pattern), the place holder is one blank space between the delimiters (i.e., ^ ^).
   e. Do not submit anything other than a blank space for missing or unknown data (e.g., not 0).

2. **Data Fields**:
   a. A list of Audit 2023 fields and basic details/requirements for each is provided on subsequent pages of this document.
   b. Extracting accurate data for many fields requires additional information, some of which is available in the Audit documentation.
   c. Other information is specific to the health record system being used and must be determined locally, including documentation of medications and education.

3. **Additional Information and Resources**
   a. Audit website: https://www.ihs.gov/diabetes/audit/
   b. Contact the Audit team via email: diabetesaudit@ihs.gov

List of Audit Data Fields

Order	Field Name	Description	Timeframe	Format/Values/Units	Comments
1	AUDITDATE	Ending date of the Audit period - 12/31/2022 for Annual Audit 2023	N/A	mm/dd/yyyy	
2	FACILITYNA	Name or abbreviation for the facility	N/A	Character (max length=20)	
3	REVIEWER	Reviewer's initials	N/A	Character (max length=3)	
4	STATE	Postal abbreviation for last known state of residence	N/A	Character (max length=2)	Do not populate if patient's address is outside of the US (e.g., in Canada).
5	MOB	Month of birth	N/A	# with value 1-12	
6	YOB	Year of birth	N/A	yyyy	

7	SEX	Gender	N/A	# field with:
				1=Male
				2=Female
				3=Unknown	

8.	DODX	Date of diabetes diagnosis	N/A	mm/dd/yyyy	If only year is known, use value 07/01/yyyy. If only month and year are known, use 15 for the day. Leave blank if year or entire date is unknown.

9	DMTYPE	Diabetes type	N/A	# field with:
				1=Type 1
				2=Type 2 (or uncertain)	

10	TOBSCREEN	Screened for tobacco use	Audit period	# field with:
				1=Yes
				2=No	

11	TOBACCO	Tobacco use status	Most recent	# field with:
				1=Current user
				2=Not a current user
				3=Not documented	

12	TOBCOUNSEL	Tobacco cessation counseling/education received	Audit period	# field with:
				1=Yes
				2=No
					Populate only if TOBACCO value is 1=Current user.

13	ENDSSCREEN	Screened for electronic nicotine delivery system (ENDS) use during Audit period	Audit period	# field with:
				1=Yes
				2=No
					ENDS include: vapes, vaporizers, vape pens, hookah pens, electronic cigarettes (e-cigarettes or e-cigs), and e-pipes.

Order	Field Name	Description	Timeframe	Format/Values/Units	Comments

14	ENDSSTATUS	ENDS use status	Most recent	# field with:
				1=Current user
				2=Not a current user
				3=Not documented	

15	FEET	Last recorded height - feet part	Last ever	# with up to 2 decimal places	If height is provided as feet and inches, be sure to provide a value for both fields: FEET and INCHES.
16	INCHES	Last recorded height - inches part	Last ever	# with up to 2 decimal places	If height is provided as total in inches only, FEET field should not be populated (i.e., do not submit 0 or any other value).
17	WEIGHT	Weight in lbs	Last in Audit period	# with 0 decimal places	Truncate to nearest whole pound

18	HTNDX	Hypertension diagnosed	Ever	# field with:
				1=Yes
				2=No	

19	SYST1	Most recent systolic blood pressure (mmHg)	Audit period	# with 0 decimal places	
20	DIAST1	Most recent diastolic blood pressure (mmHg)	Audit period	# with 0 decimal places	
21	SYST2	Next most recent systolic blood pressure BP (mmHg)	Audit period	# with 0 decimal places	
22	DIAST2	Next most recent diastolic blood pressure (mmHg)	Audit period	# with 0 decimal places	
23	SYST3	Third most recent systolic blood pressure (mmHg)	Audit period	# with 0 decimal places	
24	DIAST3	Third most recent diastolic blood pressure (mmHg)	Audit period	# with 0 decimal places	

25	FOOTEXAM	Complete diabetic foot exam including evaluation of sensation and vascular status	Audit period	# field with:
				1=Yes
				2=No	

26	EYEEXAM	Dilated retinal exam or retinal imaging exam	Audit period	# field with:
				1=Yes
				2=No	

27	DENTALEXAM	Dental exam including examination of teeth and gingiva	Audit period	# field with:
				1=Yes
				2=No	

28	DEPSCREEN2	Screened for depression	Audit period	# field with:
				1=Yes
				2=No
					Change for 2023: Skip pattern removed, so this field now should be populated for all patients.

Order	Field Name	Description	Timeframe	Format/Values/Units	Comments

29	DEPDX2	Active diagnosis of depression	Audit period	# field with:
				1=Yes
				2=No
					Change for 2023: Includes active diagnosis during Audit period only.

30	DIETINSTR	Nutrition education	Audit period	# field with:
				1=Yes by RD
				2=Yes by non-RD
				3=Yes by RD & non-RD
				4=None	

31	EXERCISE	Physical activity education	Audit period	# field with:
				1=Yes
				2=No	

32	DMEDUC	Diabetes education other than nutrition and physical activity	Audit period	# field with:
				1=Yes
				2=No	

33	TXNONE	None of the listed diabetes medications prescribed	As of the end of the Audit period	# field with:
				1=Yes
				2=No
					-If value for this field=1:Yes, then all other TX fields should=2:No.
					-If all other TX fields=2:No, then value for this field should=1:Yes.

34	TXINSUL	Prescribed any insulin	As of the end of the Audit period	# field with:
				1=Yes
				2=No	

35	TXMETFORM	Prescribed metformin	As of the end of the Audit period	# field with:
				1=Yes
				2=No
					Includes Glucophage, others

36	TXSUREA	Prescribed a sulfonylurea	As of the end of the Audit period	# field with:
				1=Yes
				2=No
					Includes glipizide, glyburide, glimepiride

37	TXDPP4	Prescribed a DPP-4 inhibitor	As of the end of the Audit period	# field with:
				1=Yes
				2=No
					Includes alogliptin (Nesina), linagliptin (Tradjenta), saxagliptin (Onglyza), sitagliptin (Januvia)

38	TXGLP1MED	Prescribed a GLP-1 receptor agonist	As of the end of the Audit period	# field with:
				1=Yes
				2=No
					Includes dulaglutide (Trulicity), exenatide (Byetta, Bydureon), liraglutide (Victoza, Saxenda), lixisenatide (Adlyxin), semaglutide (Ozempic, Rybelsus, Wegovy)

39	TXSGLT2	Prescribed an SGLT-2 inhibitor	As of the end of the Audit period	# field with:
				1=Yes
				2=No
					Includes canagliflozin (Invokana), dapagliflozin (Farxiga), empagliflozin (Jardiance), ertugliflozin (Steglatro)

Order	Field Name	Description	Timeframe	Format/Values/Units	Comments
40	TXGLIT	Prescribed pioglitazone [Actos] or rosiglitazone [Avandia]	As of the end of the Audit period	# field with: 1=Yes 2=No	
41	TXTIRZEP	Prescribed tirzepatide [Mounjaro]	As of the end of the Audit period	# field with: 1=Yes 2=No	Added for 2023.
42	TXACARB	Prescribed acarbose [Precose] or miglitol [Glyset]	As of the end of the Audit period	# field with: 1=Yes 2=No	
43	TXSUREALK	Prescribed repaglinide [Prandin] or nateglinide [Starlix]	As of the end of the Audit period	# field with: 1=Yes 2=No	
44	TXAMYLIN	Prescribed injectable pramlintide [Symlin]	As of the end of the Audit period	# field with: 1=Yes 2=No	
45	TXBROMO	Prescribed bromocriptine [Cycloset]	As of the end of the Audit period	# field with: 1=Yes 2=No	
46	TXCOLESEV	Prescribed colesevelam [Welchol]	As of the end of the Audit period	# field with: 1=Yes 2=No	
47	ACE	Prescribed an ACE inhibitor or ARB	As of the end of the Audit period	# field with: 1=Yes 2=No	Commonly prescribed medications include: **ACE Inhibitors:** benazepril (Lotensin), captopril, enalapril (Vasotec, Epaned), fosinopril, lisinopril (Prinivil, Zestril), ramipril (Altace), **ARBs:** candesartan (Atacand), irbesartan (Avapro), losartan (Cozaar), telmisartan (Micardis), olmesartan (Benicar), valsartan (Diovan, Prexxartan)
48	ASPIRIN	Prescribed aspirin or other antiplatelet/ anticoagulant therapy	As of the end of the Audit period	# field with: 1=Yes 2=No	Commonly prescribed medications include: **Antiplatelets:** aspirin, aspirin/dipyridamole (Aggrenox), cilostazol (Pletal), clopidogrel (Plavix), prasugrel (Effient), ticagrelor (Brilinta) **Anticoagulants:** apixaban (Eliquis), dabigatran (Pradaxa), edoxaban (Savaysa), enoxaparin (Lovenox), rivaroxaban (Xarelto), warfarin (Coumadin)

Order	Field Name	Description	Timeframe	Format/Values/Units	Comments

49	LLSTATIN2	Prescribed a statin therapy	As of the end of the Audit period	# field with:
				1=Yes
				2=No
				3= Allergy/intolerance/ contraindication
					-Look for yes, then allergy or intolerance or contraindication, then no.
					
					-Commonly prescribed medications include: atorvastatin, fluvastatin, lovastatin, pitavastatin, pravastatin, rosuvastatin, simvastatin

50	CVDDX	Diagnosed cardiovascular disease (CVD)	Ever	# field with:
				1=Yes
				2=No	

51	TBDX	Tuberculosis (TB) diagnosis (latent or active) documented (ever)	Ever	# field with:
				1=Yes
				2=No	

52	TBTESTDONE3	Most recent skin (PPD) or blood test for tuberculosis (TB) with valid result	Most recent ever	# field with:
				1=Skin test (PPD)
				2=Blood test (QFT-GIT, T-SPOT)
				3= No test documented
					-Populate only if TBDX value is 2=No.
					
					-If more than one test is documented, use the most recent.

53	TBTESTRSLT2	TB test result	Most recent	# field with:
				1=Positive
				2=Negative
				3=No result documented
					Populate only if TBTESTDONE3 value is 1=Skin test or 2=Blood test.

54	TBINHTX2	TB treatment initiated (isoniazid, rifampin, rifapentine, others)	Ever	# field with:
				1=Yes
				2=No
				3=Unknown
					Populate only if TBDX is 1=Yes or TBTESTRSLT2 is 1=Positive.

55	TBTESTDATE	Date of last TB test	Ever	mm/dd/yyyy	Populate only if TBTESTRSLT2 is 2=Negative. If only year is known, use value 07/01/yyyy. If only month and year are known, use 15 for the day. Leave blank if year or entire date is unknown.

56	HCVDX	Diagnosed hepatitis C (HCV)	Ever	# field with:
				1=Yes
				2=No	

57	HCVSCREEN2	If not diagnosed with HCV, screened for HCV at least once	Ever	# field with:
				1=Yes
				2=No
					Populate only if HCVDX is 2=no.

Order	Field Name	Description	Timeframe	Format/Values/Units	Comments

58	RETINOPDX	Diagnosed retinopathy	Ever	# field with:
				1=Yes
				2=No	

59	LEA	Lower extremity amputation, any type (e.g., toe, partial foot, above or below knee)	Ever	# field with:
				1=Yes
				2=No	

60	FLUVAX2	Influenza vaccine	Audit period	# field with:
				1=Yes
				2=No	

61	PNEUMO	Pneumococcal vaccine (PCV15, PCV20, or PPSV23)	Ever	# field with:
				1=Yes
				2=No
					Change for 2023: Now also includes PCV15 and PCV20 in addition to PPSV23. PCV13 does not count.

62	TD2	Tetanus (Td, Tdap, DTaP, or DT) vaccine	Past 10 years	# field with:
				1=Yes
				2=No	

63	TDAP2	Tdap vaccine	Ever	# field with:
				1=Yes
				2=No	

64	HEPBVAX2	Hepatitis B complete series	Ever	# field with:
				1=Yes
				2=No
				3=Immune
					-Either complete 2-dose series or complete 3-dose series counts.
					-Change for 2023: Now includes Prevhebrio.

65	SHINGLESVAX	Shingrix/recombinant zoster vaccine (RZV) complete series	Ever	# field with:
				1=Yes
				2=No
					-Complete series for Shingrix is 2 doses.
					-Note: Zostavax vaccine does not count for this item.

66	HBA1C	HbA1c test result (%)	Most recent in Audit period	# with 1 decimal place	
67	HBA1CDATE	Date of most recent HbA1c	Most recent in Audit period	mm/dd/yyyy	If only year is known, use value 07/01/yyyy. If only month and year are known, use 15 for the day. Leave blank if year or entire date is unknown.
68	CHOLVALUE	Total cholesterol value (mg/dL)	Most recent in Audit period	# with 0 decimal places	
69	HDLVALUE	HDL cholesterol value (mg/dL)	Most recent in Audit period	# with 0 decimal places	
70	LDLVALUE	LDL cholesterol value (mg/dL)	Most recent in Audit period	# with 0 decimal places	
71	TRIGVALUE	Triglyceride value (mg/dL)	Most recent in Audit period	# with 0 decimal places	

Order	Field Name	Description	Timeframe	Format/Values/Units	Comments
72	CREATVALUE	Serum creatinine value (mg/ dL)	Most recent in Audit period	# with up to 2 decimal places	
73	EGFRVALUE	Estimated GFR (eGFR) value	Most recent in Audit period	# with 1 decimal place	-Use documented value, if available.
74	UPACRVAL	Quantitative urine albumin/creatinine ratio (UACR) value (mg/g)	Most recent in Audit period	# with up to 2 decimal places	
75	LOCAL	Local question	N/A	#, single digit, 1-9	This field may be left blank for all patients if the facility does not choose to populate it.
76	LOCALEXT	Extended local question	N/A	Character (max length=50)	This field may be left blank for all patients if the facility does not choose to populate it.
77	AGE	Patient age in years at time of AUDITDATE	N/A	# with maximum of 3 digits and no decimal places	Calculate as: integer part of difference in days between AUDITDATE and date of birth, divided by 365.25

Appendix B. 2023 Diabetes Audit Data Element Descriptions

1) Audit Period Ending Date: Ending date of the one-year (365-day) Audit period as mm/dd/yyyy. **Use 12/31/2022 for the Annual Audit submitted to the IHS Division of Diabetes in 2023.**

2) Facility Name: Facility's name or abbreviation. This is for confirmation purposes only, since the WebAudit will automatically supply and display the name.

3) Reviewer Initials: Initials of person who did the medical chart review (maximum of three letters).

4) State of Residence: The two-character postal abbreviation for the State in which the patient resides. If the patient lives outside of the United States (e.g., in Canada), leave blank.

5 & 6) Month and Year of Birth (Required): Patient's month (2 digits) and year (4 digits) of birth.

7) Sex (Required): Patient's biological sex.

> (1) Male
> (2) Female
> (3) Unknown

8) Date of Diabetes Diagnosis: Date the patient was first diagnosed with diabetes. If only the year is known, enter the middle of that year (i.e., "07/01/<year>"). If only the month and year are known, enter the middle day of that month (i.e., 15). Leave blank if year or entire date is unknown.

9) DM Type: Patient's diabetes type. If uncertain, mark as (2) Type 2. Keep in mind that not all insulin-using patients have Type 1 Diabetes – in fact, most of them have Type 2 Diabetes.

> (1) Type 1
> (2) Type 2

Tobacco/Nicotine Use

10) Screened for tobacco use (during Audit period): Was patient screened for tobacco use as documented in the health summary, problem list, or flow sheet?

> (1) Yes
> (2) No

11) Tobacco use status (most recent): Patient's most recent documented status of tobacco use (cigarettes, chewing tobacco, snuff, etc.) taken from the health summary, problem list, or flow sheet.

> (1) Current user
> (2) Not a current user
> (3) Not documented

12) Tobacco cessation counseling/education received (during Audit period): Did patient receive tobacco cessation counseling and/or education or referral for counseling during the Audit period? Answer only if tobacco use status is "(1) Current user."

    (1) Yes
    (2) No

Electronic Nicotine Delivery Systems (ENDS)
ENDS include: vapes, vaporizers, vape pens, dab pens, dab rings, mods, pod-mods, hookah pens, electronic cigarettes (e-cigarettes or e-cigs), and e-pipes.

13) Screened for ENDS use (during Audit period): Was patient screened for ENDS use as documented in the health summary, problem list, or flow sheet?

    (1) Yes
    (2) No

14) ENDS use status (most recent): Patient's most recent documented status of ENDS use taken from the health summary, problem list, or flow sheet.

    (1) Current user (documented as a current or cessation ENDS user)
    (2) Not a current user (documented as a previous ENDS user or never used ENDS)
    (3) Not documented

For additional information about tobacco and ENDS, see the IHS Diabetes Standards of Care.[5]

Vital Statistics

15 & 16) Height (last ever): Patient's last ever documented height in inches or in feet and inches. Fractional parts of an inch may be entered in decimal form with up to two decimal places (for example, 63 and ½ inches = 63.5, 71 and ¾ inches = 71.75).

17) Weight (last in Audit Period): Patient's weight in pounds as a whole number with no decimal places.

18) Hypertension (documented diagnosis ever): Does patient have diagnosed hypertension, as documented by problem list diagnosis or three visits with a diagnosis of hypertension ever?

    (1) Yes
    (2) No

19-24) Blood pressure (last 3 during Audit period): Patient's last blood pressures **obtained in a non-ER setting during the Audit period,** up to a maximum of three obtained on different days**.** If there are multiple blood pressure readings recorded on the same day, choose the last reading recorded. For reporting purposes, mean blood pressure will be calculated using the last two or three readings. If only one reading is available, it is used in place of mean blood pressure. For additional information about blood pressure, see the IHS Diabetes Standards of Care.[6]

Examinations (during Audit period)

25) Foot (comprehensive or "complete" including evaluation of sensation and vascular status): Did patient have a comprehensive ("complete") foot exam during the Audit period that included evaluation of sensation and vascular status?

    (1) Yes
    (2) No

For additional information about foot exams, see the IHS Diabetes Standards of Care.[7]

26) Eye (dilated exam or retinal imaging): Did patient have an eye exam during the Audit period that included a dilated eye exam or retinal imaging?

    (1) Yes
    (2) No

For additional information about eye exams, see the IHS Diabetes Standards of Care.[8]

27) Dental: Did patient have a dental exam conducted by a dental professional during the Audit period that included examination of the gingiva and mucosal surfaces? Dental records may be kept separate from the medical records at your facility and will need to be located for review.

    (1) Yes
    (2) No

For additional information about dental exams, see the IHS Diabetes Standards of Care.[9]

Depression

28) Screened for depression (during Audit period): Was patient screened for depression during the Audit period using the Patient Health Questionnaire (PHQ), Zung, Beck, or similar depression screening scale, or was it otherwise documented that patient was assessed for possible depression?

    (1) Yes
    (2) No

29) Active diagnosis of depression (during Audit period): Does patient have depression documented as an active diagnosis during the Audit period?

    (1) Yes
    (2) No

For additional information about depression, see the IHS Diabetes Standards of Care.[10]

---

[7] https://www.ihs.gov/diabetes/clinician-resources/soc/foot-care1/
[8] https://www.ihs.gov/diabetes/clinician-resources/soc/eye-care1/
[9] https://www.ihs.gov/diabetes/clinician-resources/soc/oral-care1/
[10] https://www.ihs.gov/diabetes/clinician-resources/soc/depression1/

Education (during Audit period)

30) Nutrition: Nutrition or diet education provided to patient during the Audit period, according to provider type.

   (1) RD=Registered dietitian only
   (2) Other=Non-RD provider only
   (3) Both RD and Other
   (4) None=No nutrition or diet instruction documented

31) Physical Activity: Did patient receive physical activity or exercise education during the Audit period?

   (1) Yes
   (2) No

32) Other diabetes: Other than diet or exercise, did patient receive education during the Audit period on any topic(s) related to diabetes?

   (1) Yes
   (2) No

For additional information about documenting education using RPMS, visit the IHS Patient Education webpage.[11]

Diabetes Therapy

Document *all* prescribed from the list below (as of the end of the Audit period).

- If you are unsure about any medications used at your facility, check with your pharmacist.
- For combination medications such as Glucovance (glyburide + metformin), Janumet (sitagliptin + metformin), and others, be sure to mark 1:Yes for all components.
- Electronic Audit notes (for RPMS only):
  - Diabetes medications that are active (have been filled or refilled) in the six months prior to the Audit period end date are included.
  - If none of the listed diabetes medications are found, then the first item "None of the following" is marked as 1:Yes by default.

1. **(33)** None of the following [Note that if this item is selected during WebAudit data entry, all other Diabetes Therapy choices will be automatically marked as 2:No.]
2. **(34)** Insulin [all forms, including insulin aspart (NovoLog), degludec (Tresiba), detemir (Levemir), glargine (Lantus), lispro (Humalog), others]
3. **(35)** Metformin [Glucophage, others]
4. **(36)** Sulfonylurea [glipizide, glyburide, glimepiride]
5. **(37)** DPP-4 inhibitor [alogliptin (Nesina), linagliptin (Tradjenta), saxagliptin (Onglyza), sitagliptin (Januvia)]

---

[11] https://www.ihs.gov/forproviders/patiented/

6. **(38)** GLP-1 receptor agonist [dulaglutide (Trulicity), exenatide (Byetta, Bydureon), liraglutide (Victoza, Saxenda), lixisenatide (Adlyxin), semaglutide (Ozempic, Rybelsus, Wegovy)]
7. **(39)** SGLT-2 inhibitor [canagliflozin (Invokana), dapagliflozin (Farxiga), empagliflozin (Jardiance), ertugliflozin (Steglatro)]
8. **(40)** Pioglitazone [Actos] or rosiglitazone [Avandia]
9. **(41)** Tirzepatide [Mounjaro]
10. **(42)** Acarbose [Precose] or miglitol [Glyset]
11. **(43)** Repaglinide [Prandin] or nateglinide [Starlix]
12. **(44)** Pramlintide [Symlin]
13. **(45)** Bromocriptine [Cycloset]
14. **(46)** Colesevelam [Welchol]

ACE Inhibitor or ARB

47) Prescribed (as of the end of the Audit period): Was patient prescribed ACE inhibitor or angiotensin II receptor blocker (ARB) medication as of the end of the Audit period?

(1) Yes
(2) No

- Commonly prescribed medications include:
  - **ACE Inhibitors**: benazepril (Lotensin), captopril, enalapril (Vasotec, Epaned), fosinopril , lisinopril (Prinivil, Zestril), ramipril (Altace)
  - **ARBs**: candesartan (Atacand), irbesartan (Avapro), losartan (Cozaar), olmesartan (Benicar), telmisartan (Micardis), valsartan (Diovan, Prexxartan)
  - **Note:** For combination medications such as lisinopril + HCTZ (Zestoretic), losartan + HCTZ (Hyzaar), amlodipine + benazepril (Lotrel), and others, be sure to mark 1:Yes for ACE or ARB.

- Electronic Audit note (for RPMS only): Medications that are active (have been filled or refilled) in the six months prior to the Audit period end date are included.

Aspirin or Other Antiplatelet/Anticoagulant Therapy

48) Prescribed (as of the end of the Audit period):

(1) Yes
(2) No

- Commonly prescribed medications include:
  - **Anticoagulants:** apixaban (Eliquis), dabigatran etexilate (Pradaxa), edoxaban (Savaysa), enoxaparin (Lovenox), rivaroxaban (Xarelto), warfarin (Coumadin)
  - **Antiplatelets:** cilostazol (Pletal), clopidogrel (Plavix), prasugrel (Effient), ticagrelor (Brilinta)
  - **Aspirin:** aspirin, aspirin and dipyridamole (Aggrenox)

- Electronic Audit note (for RPMS only): Only medications that are active (have been filled or refilled) in the six months prior to the Audit period end date are included.

Statin Therapy

49) Prescribed (as of the end of the Audit period):
- (1) Yes
- (2) No
- (3) Allergy/intolerance/contraindication

- Commonly prescribed medications include: atorvastatin (Lipitor), fluvastatin (Lescol, Lescol XL), lovastatin (Mevacor, Altoprev), pitavastatin (Livalo), pravastatin (Pravachol), rosuvastatin (Crestor), and simvastatin (Zocor).
- For combination medication such as ezetimibe + simvastatin (Vytorin) be sure to mark 1:Yes for statin therapy.
- Electronic Audit note (for RPMS only): Only medications that are active (have been filled or refilled) in the six months prior to the Audit period end date are included.

Cardiovascular Disease (CVD)

50) Diagnosed (ever): Does patient have a known diagnosis consistent with CVD? This includes coronary artery disease (CAD), hypertensive heart disease, heart failure, cardiomyopathy, heart dysrhythmias, valvular heart disease, stroke, and/or peripheral vascular disease. See the RPMS/DMS Taxonomy listing on the [Audit resources webpage][1] for additional details.
- (1) Yes
- (2) No

Tuberculosis (TB)

51) TB diagnosis (latent or active) documented (ever): Does patient have a TB diagnosis in chart (problem list, visit diagnoses, or health factor)?
- (1) Yes
- (2) No

52) TB test done (most recent): Patient's most recent TB test that has a valid result. Answer only if TB diagnosed (ever) is "(2) No".
- (1) Skin test (PPD)
- (2) Blood test (QFT-GIT, T-SPOT)
- (3) No test documented

53) TB test result: Result of most recent TB test. Answer only if TB test done is "(1) Skin test (PPD)" or "(2) Blood test (QFT-GIT, T-SPOT)".
- (1) Positive=Last skin or blood test result was positive for TB
- (2) Negative=Last skin or blood test result was negative
- (3) No result documented

54) If TB diagnosed and/or test result <u>positive</u>, treatment initiated (e.g., isoniazid, rifampin, rifapentine, others): Does patient have documentation of treatment being initiated for latent (inactive) or active TB? (Look for documentation of TB treatments in health factors or prescriptions for isoniazid, rifampin, rifapentine, ethambutol, pyrazinamide, or rifabutin.) Answer only if TB diagnosis documented (ever) is "(1) Yes" or TB test result is "(1) Positive".

> (1) Yes
> (2) No
> (3) Unknown

55) If TB result <u>negative</u>, test date: Date of most recent negative TB test as mm/dd/yyyy. Answer only if TB test result is "(2) Negative". If only the month and year are known, enter the middle day of that month (i.e., 15). Leave blank if year or entire date is unknown.

For additional information about tuberculosis, see the IHS Diabetes Standards of Care.[12]

Hepatitis C (HCV)

56) HCV diagnosed (ever): Does patient have a known diagnosis consistent with hepatitis C?

> (1) Yes
> (2) No

57) If not diagnosed with HCV, screened at least once (ever): Screening is performed using the Hepatitis C antibody (anti-HCV) test. Answer only if HCV diagnosed (ever) is "(2) No".

> (1) Yes
> (2) No

For additional informational about HCV, see the IHS Diabetes Standards of Care.[12]

Retinopathy

58) Diagnosed (ever): Does patient have a known diagnosis of retinopathy? See the RPMS/DMS Taxonomy listing on the Audit resources webpage[1] for additional details.

> (1) Yes
> (2) No

For additional information about retinopathy, see the IHS Diabetes Standards of Care.[8]

Amputation

59) Lower extremity (ever), any type (e.g., toe, partial foot, above or below knee):

> (1) Yes
> (2) No

---

[12] https://www.ihs.gov/diabetes/clinician-resources/soc/hepc-tb-screening

Immunizations

60) Influenza vaccine (during Audit period):

    (1) Yes

    (2) No

61) Pneumococcal vaccine [PCV15, PCV20, or PPSV23] (ever): For Audit purposes, administration of PCV15, PCV20, or PPSV23 vaccine meets the criteria for this element.

    (1) Yes

    (2) No

62) Td, Tdap, DTaP, or DT (in past 10 years): Has patient received tetanus and diphtheria immunization in the past 10 years?

    (1) Yes

    (2) No

63) Tdap (ever): Has patient ever received tetanus, diphtheria, and pertussis immunization?

    (1) Yes

    (2) No

64) Hepatitis B complete series (ever): Has patient ever received a complete 3-dose series or 2-dose series depending on vaccine type? Note: 3-dose series includes: Engerix-B®, PreHevbrio®, Recombivax HB®, and Twinrix® vaccines and 2-dose series includes: Heplisav-B® vaccine.

    (1) Yes

    (2) No

    (3) Immune

65) Shingrix/recombinant zoster (RZV) complete series (ever): Has patient ever received a complete 2-dose series of Shingrix® vaccine (recombinant zoster vaccine, RZV)? Note: this vaccine is recommended for patients age 50 years and older.

    (1) Yes

    (2) No

For additional information about immunizations, see the IHS Diabetes Standards of Care.[13]

Laboratory Data (most recent result during Audit period)

66) A1C (%): When entering the result, omit any ">" or "<" signs (for example, enter >14 as 14). Leave blank if test not done during the Audit period.

67) A1C Date obtained: Date most recent A1C was drawn as mm/dd/yyyy. If only the month and year are known, enter the middle day of that month (i.e., 15). Leave blank if year or entire date is unknown.

68-71) Total Cholesterol, HDL Cholesterol, LDL Cholesterol, Triglycerides (mg/dL): Leave blank if test not done during the Audit period.

---

[13] https://www.ihs.gov/diabetes/clinician-resources/soc/immunizations1/

72) Serum Creatinine (mg/dL): Leave blank if test not done during the Audit period.

73) eGFR (mL/min/1.73 m²): Leave blank if result not documented during Audit period.

74) Quantitative Urine Albumin-to-Creatinine ratio (UACR) value (mg/g): If the result came back as too low to detect (may have a < sign in front), enter the value 5.

Local Questions (Optional)

Facilities can formulate their own supplemental Audit question(s), if desired. These may be used to assess an additional aspect of diabetes care of special interest.

75-76) There are two local option questions: a numbered item with responses 1-9 and a text field.

For electronic Audits, responses for these questions can be entered via the DMS Patient Management option. See the DMS Audit Manual on the Audit resources webpage[1] for more information.

For manual Audits, these questions may be printed on the second page of the Audit form. For entry into the WebAudit, "Local Option" fields appear near the bottom of the data entry screen.