



Indian Health Service

**Division of Diabetes
Treatment and Prevention**



IHS Diabetes Care and Outcomes Audit
Audit 2024 Reports
2/27/2024



Today's Audit Topics

1. What are they and how to get them
2. Changes for 2024
3. Reading reports, including how statistics are calculated
4. Reviewing reports and graphs for potential data issues

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**Area Diabetes Consultants and
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Abbreviations

- **ADC** = Area Diabetes Consultant
- **AI/AN** = American Indian/Alaska Native
- **Audit** = IHS Diabetes Care and Outcomes Audit
- **BP** = Best Practice = SDPI Diabetes Best Practice
- **DDTP** = IHS Division of Diabetes Treatment and Prevention
- **DMS** = RPMS Diabetes Management System
- **GPRA** = Government Performance and Results Act
- **EMR** = Electronic Medical Record (RPMS or other)
- **I/T/U** = IHS, Tribal, and Urban
- **RKM** = Required Key Measure
- **RPMS** = IHS Resource and Patient Management System
- **SDPI** = Special Diabetes Program for Indians
- **SOS** = SDPI Outcomes System

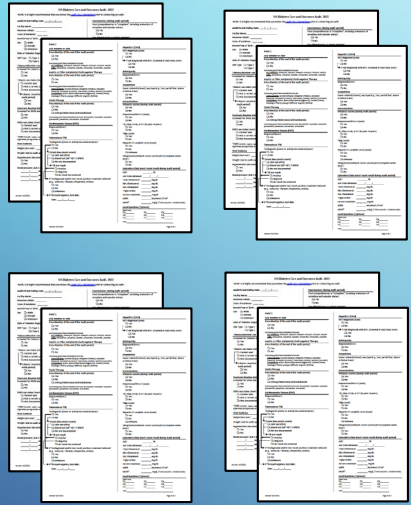
Audit Report Basics

WebAudit Input and Output

Input=data file or paper forms

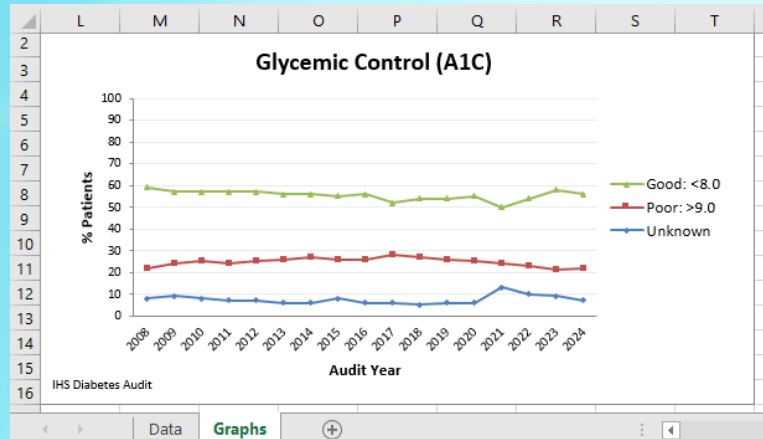
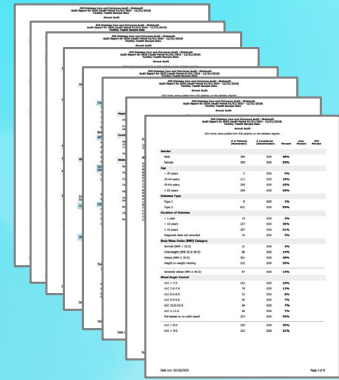
Output=reports and graphs

```
Audit2024DemoData_N5.txt - Notepad
File Edit Format View Help
AUDITDATE^FACILITYNA^REVIEWER^STATE^MOB^YOB^SEX^DODX^DMTYPE^TOBSCREEN^TOBACCOUSE^TOBCOUNSEL^ENDSSCREEN^ENDSUSE^FEI
12/31/2022^DEMODATA^KLS^NM^3^1963^2^1/19/2012^2^1^2^  ^1^2^5^3.78^171^1^127^80^126^81^105^62^1^1^1^2^1^1^1^2^2^1^
12/31/2022^DEMODATA^KLS^NM^3^1953^1^11/3/1995^2^1^2^  ^1^2^5^0.91^133^1^153^88^134^64^151^77^1^1^1^2^1^1^1^2^1^1^
12/31/2022^DEMODATA^KLS^NM^5^1964^2^3/1/1985^2^1^2^  ^1^2^5^4^180^1^123^73^136^97^128^84^1^1^1^2^2^1^4^1^1^2^1^1^2^1^
12/31/2022^DEMODATA^KLS^NM^3^1957^1^6/10/2011^2^1^2^  ^1^2^5^0.63^160^1^147^74^138^81^157^71^1^1^1^2^1^1^1^2^1^1^2^2^1^
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Diabetes WebAudit

- Facility Administration**
Enter facility information and lock data.
- Data Processing**
Submit (entry or upload), view, download, and check data.
- Reports**
Generate reports and graphs.





What are Audit Reports (capital R)

- The Audit Report (capital R) provides a basic summary of the data elements in the Audit for *each* year.
- Results are presented as the number and percent of patients who ‘meet’ each report item. For example, 63% of Audited patients have blood pressure <130/<80.
- Audit Reports can be obtained from the WebAudit or RPMS/DMS and possibly other EMR systems.
 - Results should be the same IF run on the same patients and at the same date and time. Exception: minor differences due to rounding.
 - IHS and Area results are provided on the WebAudit version, once all data are final.

Other Audit reports (lowercase R)

- Other Audit summary reports (lowercase r) for each year are available via the WebAudit and/or RPMS:
 - SDPI Key Measures: WebAudit and RPMS
 - Means: WebAudit only
- Graphs of Audit results over time for selected measures are available via the WebAudit only.
 - Trends Graphs
 - Means Graphs

How to get Audit reports

1. **If you *do* have access to the WebAudit and/or RPMS:**
 - a. WebAudit: <https://www.ihs.gov/diabetes/audit/>
 - b. RPMS: <https://www.ihs.gov/diabetes/audit/audit-rpms-dms-information/>
2. **If you *do not* have WebAudit or RPMS access:**
 - a. Request from your facility
 - b. Contact your [Area Diabetes Consultant](#)

NOTE: WebAudit access is limited to individuals who participate in conducting Audits OR as determined by facility staff. RPMS/DMS access is determined by facility staff.

Audit Report - WebAudit

IHS Diabetes Care and Outcomes Audit - WebAudit
DRAFT Audit Report for 2024 (Audit Period 01/01/2023 - 12/31/2023)
Facility: Test02 Sample Data

Annual Audit

75 charts were audited from 150 patients determined to be eligible by Test02 Sample Data.
Unless otherwise specified, time period for each item is the 12-month Audit Period.

	# of Patients (Numerator)	# Considered (Denominator)	Percent	Area Percent	IHS Percent
Birth Sex					
Male	47	75	63%		
Female	28	75	37%		
Unknown	0	75	0%		
Age					
< 20 years	1	75	1%		
20-44 years	20	75	27%		
45-64 years	32	75	43%		
≥ 65 years	22	75	29%		
Diabetes Type					
Type 1	5	75	7%		
Type 2	70	75	93%		
Duration of Diabetes					
< 1 year	2	75	3%		
< 10 years	48	75	64%		
≥ 10 years	13	75	17%		
Diagnosis date not recorded	14	75	19%		

First several items
from page 1 of 8

Audit Report – RPMS/DMS

LAB

Oct 30, 2023

Page 1

IHS Diabetes Care and Outcomes Audit - RPMS Audit
Audit Report for 2024 (Audit Period 01/01/2012 to 12/31/2012)
Facility: 2021 DEMO HOSPITAL (INST)
Annual Audit

620 patients were audited

Unless otherwise specified, time period for each item is the 12-month Audit Period

First several items

	# of Patients (Numerator)	# Considered (Denominator)	Percent
*** NOTE: 6 Patients were not included in this report because their <u>date</u> of onset was after the Audit period end date.			
Birth Sex			
Male	242	620	39%
Female	378	620	61%
Unknown	0	620	0%
Age			
<20 years	26	620	4%
20-44 years	101	620	16%
45-64 years	280	620	45%
>=65 years	213	620	34%
Diabetes Type			
Type 1	18	620	3%
Type 2	602	620	97%

Audit Report – General Info

- Results are presented as the number and percent of patients who ‘meet’ each report item.
- Items may be reported for:
 1. All patients
 2. A subgroup of patients: items reported for subgroups are indicated by keywords “In” or “If” (e.g., In patients aged 40-75). Some are also indented.
 3. Both of the above
- Order is *not* the same as the Audit Form.
- Patients with missing values for an item are counted in the denominator for *most* items.
- There are some changes to Audit Report every year. Some years these are minor, others more extensive.

Audit Report Changes for 2024

Audit Report Changes

- **When:** Audit Report (capital R) changes are made each year for the Annual Audit.
- **Why**
 1. **Currency** - To align with IHS and other national standards and reports, such as, IHS GPRA measures.
 2. **Consistency** – To be consistent with other materials from IHS and the Division of Diabetes.
 3. **Clarity** - To facilitate understanding of each item on the report.
 4. **Completeness** - To provide all the necessary information for interpreting the report items.

Audit Report Changes for 2024

1. **General:** Minor changes to wording for some items.
2. **Specific items:** Details on following slides.
 - a. Changes:
 - i. Gender
 - ii. Tobacco/Nicotine Use
 - iii. Blood Pressure
 - b. Added: SDPI RKM items

Gender

2023

Input

Sex: 1 Male
 2 Female
 3 Unknown

Report

Gender			
Male	40	89	45%
Female	49	89	55%

Input

2024

Birth Sex 1 Male
 2 Female
 3 Unknown

NOTE: Input values and logic remain the same. Changes are to labels and addition of new report item.

Report

Birth Sex			
Male	43	89	48%
Female	45	89	51%
Unknown	1	89	1%

Tobacco/Nicotine Use: Input

2023

Tobacco/Nicotine Use

Screened for tobacco use (during Audit period):

1 Yes
 2 No

Tobacco use status (most recent):

1 Current user
 2 Not a current user
 3 Not documented

Tobacco cessation counseling/education received (during Audit period):

1 Yes
 2 No

Electronic Nicotine Delivery Systems (ENDS)*

Screened for ENDS use (during Audit period):

1 Yes
 2 No

ENDS use status (most recent):

1 Current user
 2 Not a current user
 3 Not documented

*ENDS include: vapes, vaporizers, vape pens, hookah pens, electronic cigarettes (e-cigarettes or e-cigs), and e-pipes.

2024

Tobacco/Nicotine Use (during Audit period)

Tobacco

Screened for tobacco use:

1 Yes
 2 No

Tobacco user:

1 Yes
 2 No

Tobacco cessation counseling/education received:

1 Yes
 2 No

Electronic Nicotine Delivery Systems (ENDS)*

Screened for ENDS use:

1 Yes
 2 No

ENDS user:

1 Yes
 2 No

*ENDS include: vapes, vaporizers, vape pens, hookah pens, electronic cigarettes (e-cigarettes or e-cigs), and e-pipes which contain nicotine.

1. **Timeframe:** Now during Audit period for all (previously use could be prior)
2. **Skip pattern:** Added for tobacco and ENDS screening

Tobacco/Nicotine Use: Report

2023

Tobacco and Nicotine use			
Tobacco use screening during Audit period			
Screened	64	89	72%
Not screened	25	89	28%
Tobacco use status (most recent)			
Current tobacco user	22	89	25%
In current users, counseled?			
Yes	11	22	50%
No	11	22	50%
Not a current tobacco user	67	89	75%
Tobacco use not documented	0	89	0%
Electronic nicotine delivery system (ENDS) use screening during Audit period			
Screened	49	89	55%
Not screened	40	89	45%
ENDS use status most recent			
Current ENDS user	0	89	0%
Not a current ENDS user	63	89	71%
ENDS use not documented	26	89	29%
Current user of both tobacco and ENDS	0	89	0%
Current user of tobacco and/or ENDS	22	89	25%

2024

Tobacco and Nicotine Use			
Tobacco use			
Screened	524	578	91%
If screened, user	93	524	18%
If user, counseled	85	93	91%
Electronic nicotine delivery system (ENDS) use			
Screened	331	578	57%
If screened, user	1	331	0%
User of both tobacco and ENDS*	1	330	0%
User of tobacco and/or ENDS*	52	330	16%

*Excludes patients not screened for both tobacco and ENDS use

Blood pressure categories: report only

Blood pressure (last 3 during Audit period):

____/____ mmHg

____/____ mmHg

____/____ mmHg

NOTE: Input remains the same – up to three values per patient. See Instructions and Data File Specifications for details.

Report Changes

Blood Pressure (BP) - Based on one value or mean of two or three values

2023

<140/<90

140/90 - <160/<100

160/100 or higher

BP category undetermined

2024

<130/<80

130/80 - <140/<90

140/90 - <160/<100

160/100 or higher

BP category undetermined

140/<90

Blood pressure changes: other report sections

Hypertension

Diagnosed ever		
Diagnosed hypertension and mean BP <140/<90		
Diagnosed hypertension and ACE inhibitor or ARB currently prescribed	52	68

Note: Red box highlights 'Add new item: Diagnosed hypertension and mean BP <130/<80' with an arrow pointing to the 'Diagnosed ever' row.

Chronic Kidney Disease (CKD) (In age ≥ 18 years)

CKD ²		
CKD ² and mean BP <140/<90		
CKD ² and ACE inhibitor or ARB currently prescribed	14	
CKD ² and GLP-1 receptor agonist currently prescribed	4	
CKD ² and SGLT-2 inhibitor currently prescribed	3	

Note: Red box highlights 'Add new item: CKD[2] and mean BP <130/<80' with an arrow pointing to the 'CKD²' row.

Combined Outcomes Measure

Patients age ≥40 years meeting ALL of the following criteria: A1C <8.0, Statin currently prescribed*, and mean BP <140/<90	18	77	23%
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*Excludes patients with an allergy, intolerance, or contraindication

Note: Red box highlights 'Replace with: Patients age ≥40 years meeting ALL of the following criteria: A1C <8.0, Statin currently prescribed, and mean BP <130/<80' with an arrow pointing to the table row.*

Blood pressure/tobacco changes: other report sections (1)

Cardiovascular Disease (CVD)

CVD diagnosed ever	40	89	45%
CVD and mean BP <140/<90			55%
CVD and not current tobacco user			
CVD and aspirin or other antiplatelet/anticoagulant therapy currently prescribed	26	40	65%
CVD and GLP-1 receptor agonist currently prescribed	7	40	18%
CVD and SGLT-2 inhibitor currently prescribed	4	40	10%
CVD and statin currently prescribed* *Excludes patients with an allergy, intolerance, or contraindication	24	38	63%

Replace with: CVD and mean BP <130/<80

Replace with:
CVD and not tobacco user*
*Excludes patients not screened for tobacco use

Blood pressure/tobacco changes: other report sections (2)

Diabetes-Related Conditions (In age \geq 18 years)			
Severely obese (BMI \geq 40.0)	14	89	16%
Hypertension diagnosed ever	68	89	76%
Current tobacco user	22	89	25%
CVD diagnosed ever	40	89	45%
Retinopathy diagnosed ever	14	89	16%
Lower extremity amputation ever, any type (e.g., toe, partial foot, above or below knee)	7	89	8%
Active depression diagnosis during Audit period	3	89	3%
CKD stage 3-5	10	89	11%
Number of diabetes-related conditions			
Diabetes only	7	89	8%
Diabetes plus:			
One	28	89	31%

Delete this item

Remove TOBACCO (current tobacco user) from calculation for all six items in this section

Added: two new medications

□7 SGLT-2 inhibitor [bexagliflozin (*Brenzavvy*), canagliflozin (*Invokana*), dapagliflozin (*Farxiga*), empagliflozin (*Jardiance*), ertugliflozin (*Steglatro*), sotagliflozin (*Inpefa*)]

Added: SDPI RKM items (1)

Immunizations		
Influenza vaccine during Audit period	41	89
Pneumococcal vaccine (PCV15, PCV20, or PPSV23) - ever	69	89
Td/Tdap/DTaP/DT - past 10 years	59	89
Tdap - ever	76	89
If not immune, hepatitis B complete series - ever	47	88
Immune - Hepatitis B	1	89
In patients age \geq 50 years Shingrix/recombinant zoster vaccine (RZV) complete series - ever	25	70

← Add new item: Hepatitis B complete series ever or immune to hepatitis B

Added: SDPI RKM items (2)

Tuberculosis (TB) Status

TB diagnosis documented ever and/or positive test result ever	7
If not diagnosed, TB test done ever (skin test or blood test)	48
If TB diagnosis documented and/or positive test result, treatment initiated ever	4

Add new item:
TB test done ever or TB diagnosed ever

Hepatitis C (HCV)

Diagnosed HCV ever	7	89	8
In patients not diagnosed with HCV and age \geq 18 years, screened ever			0

Add new item:
HCV test done ever or HCV diagnosed ever

SDPI RKM Report: Blood Pressure Control RKM

Blood Pressure (BP) Control

BP <140/<90 mmHg (one value or mean of 2 or 3 values)

Replace with:

BP <130/<80 mmHg (one value or mean of 2 or 3 values)



How to read Audit Reports

Audit 2024 Report Header - WebAudit

IHS Diabetes Care and Outcomes Audit - WebAudit
DRAFT Audit Report for 2024 (Audit Period 01/01/2023 - 12/31/2023)
Facility: Test02 Sample Data

Annual Audit

75 charts were audited from 150 patients determined to be eligible by Test02 Sample Data. Unless otherwise specified, time period for each item is the 12-month Audit Period.

- 2024: Audit “version”
- 01/01/2023-12/31/2023: Audit (time) period for which data are reviewed
- Annual (vs. Interim) Audit
- Number of patients included out of how many eligible

Example 1: One response – Foot exam

Audit Form – page 1

IHS Diabetes Care and Outcomes Audit, 2024

NOTE: It is highly recommended that you review the [Audit 2024 Instructions](#) prior to conducting an Audit.

Audit Period Ending Date: / /

Facility Name:

Reviewer Initials:

State of residence:

Month/Year of Birth: /

Birth Sex: Male
 Female
 Unknown

Date of Diabetes Diagnosis: / /

DM Type: Type 1
 Type 2

Tobacco/Nicotine Use (during Audit period)

Tobacco
Screened for tobacco use:
 Yes
 No

Tobacco user:
 Yes
 No

Tobacco cessation counseling/education received:
 Yes
 No

Electronic Nicotine Delivery Systems (ENDS)*

Screened for ENDS use:
 Yes
 No

ENDS user:
 Yes
 No

*ENDS include: vapes, vaporizers, vape pens, hookah pens, electronic cigarettes (e-cigarettes or e-cigs), and e-pipes which contain nicotine.

Vital Statistics

Height (last ever): ft in

Weight (last in Audit period): lbs

Hypertension (documented diagnosis ever):
 Yes
 No

Blood pressure (last 3 during Audit period):
 / mmHg
 / mmHg
 / mmHg

Version: 7/24/2023 Page 1 of 2

Examinations (during Audit period)

Foot (comprehensive or "complete", including evaluation of sensation and vascular status):
 Yes
 No

Eye (united exam or retinal imaging):
 Yes
 No

Dental:
 Yes
 No

Depression

Screened for depression (during Audit period):
 Yes
 No

Depression an active diagnosis (during Audit period):
 Yes
 No

Education (during Audit period)

Nutrition:
 RD
 Other } Both RD and Other
 None

Physical activity:
 Yes
 No

Other diabetes:
 Yes
 No

Diabetes Therapy

Select all prescribed (as of the end of the Audit period):
 None of the following
 Insulin
 Metformin (Glucophage, others)
 Sulfonylurea (glipizide, glyburide, glimepiride)
 DPP-4 inhibitor (sitagliptin [Trinorin], linagliptin [Trasveo], saxagliptin [Onglyse], alogliptin [Lodine])
 GLP-1 receptor agonist (semaglutide [Trulicity], exenatide [Byetta, Bydureon], liraglutide [Victoza, Saxenda], bexmetotide [Aduvyo], tirzepatide [Mounstro, Zepbound])
 SGLT-2 inhibitor (dapagliflozin [Farxiga], empagliflozin [Jardiance], canagliflozin [Invokana], ertugliflozin [Stegade], empagliflozin [Jardiance], empagliflozin [Stegade])
 Pioglitazone (Actos) or rosiglitazone (Avandia)
 Tirzepatide (Mounstro)
 Acarbose (Precose) or miglitol (Glyset)
 Repaglinide (Prandin) or nateglinide (Tbrand)
 Pramlintide (Symlin)
 Bromocriptine (Cycloset)
 Colesevelam (Welchol)

CONTINUED ON PAGE 2. Be sure to complete both pages for all Audited patients.

Audit Report – page 4

IHS Diabetes Care and Outcomes Audit - Web Audit
DRAFT Audit Report for 2024 (Audit Period 01/01/2023 - 12/31/2023)
Facility: Test02 Sample Data
Annual Audit

75 charts were audited from 150 patients determined to be eligible by Test02 Sample Data. Unless otherwise specified, time period for each item is the 12-month Audit Period.

	# of Patients (Numerator)	# Considered (Denominator)	Percent	Area Percent	IHS Percent
Statin Prescribed (continued)					
In patients with diagnosed CVD and/or age 40-75 years					
Yes*	32	58	55%		
Allergy, intolerance, or contraindication	1	59	2%		
*Excludes patients with an allergy, intolerance, or contraindication					
Cardiovascular Disease (CVD)					
CVD diagnosed ever	16	75	21%		
CVD and mean BP <130/<80	5	16	31%		
CVD and not current tobacco user*	11	15	73%		
*Excludes patients not screened for tobacco use					
CVD and aspirin or other antiplatelet/anticoagulant therapy currently prescribed	9	16	56%		
CVD and GLP-1 receptor agonist currently prescribed	4	16	25%		
CVD and SGLT-2 inhibitor currently prescribed	3	16	19%		
CVD and statin currently prescribed*	13	16	81%		
*Excludes patients with an allergy, intolerance, or contraindication					
Retinopathy					
Diagnosed ever	9	75	12%		
Lower Extremity Amputation					
Any type ever (e.g., toe, partial foot, above or below knee)	7	75	9%		
Exams					
Foot exam - comprehensive	25	75	33%		
Eye exam - united exam or retinal imaging	30	75	40%		
Dental exam	20	75	27%		
Diabetes-Related Education					
Nutrition - by any provider (RD and/or other)	23	75	31%		
Nutrition - by RD	7	75	9%		
Physical activity	47	75	63%		
Other diabetes education	23	75	31%		
Any of above	52	75	69%		

Date run: 02/12/2024 Page 4 of 8

Examinations (during Audit period)

Foot (comprehensive or "complete", including evaluation of sensation and vascular status):

- Yes
 No



Exams

Foot exam - comprehensive

25 75 33%

Example 1 continued – Foot exam

Exams	# of Patients (Numerator)	# Considered (Denominator)	Percent
Foot exam - comprehensive	25	75	33%

- Percent calculation for foot exams:

$$\frac{25}{75} = 0.33$$
$$0.33 * 100 = 33\%$$

Numerator = 25 = number of patients Audited that had a foot exam

Denominator = 75 = number of patients Audited

- All patients either had a foot exam documented or not.

Example 2: Number put in a category – A1C

Audit Form – page 2

PAGE 2

ACE Inhibitor or ARB
 Prescribed (as of the end of the Audit period):
 Yes
 No

Commonly prescribed medications include:
 ACE Inhibitors: benazepril, captopril, enalapril, fosinopril, lisinopril, ramipril
 ARBs: candesartan, irbesartan, losartan, olmesartan, telmisartan, valsartan

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

Commonly prescribed medications include:
 Antiplatelets: aspirin (Biqin), clopidogrel (Plavix), prasugrel (Effient), ticagrelor (Brilinta)
 Anticoagulants: apixiban (Eliquis), dabigatran (Pradaxa), edoxaban (Savelle), rivaroxaban (Xarelto), warfarin (Coumadin)

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

Allergy/intolerance/contraindication
 Allergy/intolerance/contraindication

Commonly prescribed medications include: atorvastatin, fluvastatin, lovastatin, pitavastatin, pravastatin, rosuvastatin, simvastatin

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

Tuberculosis (TB)
 TB diagnosis (latent or active) documented (ever):
 Yes
 No

TB test done (most recent):
 Skin test (PPD)
 Blood test (QFT-GIT, T-SPOT)
 No test documented

TB test result:
 Positive
 Negative
 No result documented

If TB diagnosed and/or test result positive, treatment initiated (e.g., isoniazid, rifampin, rifapentine, others):
 Yes
 No
 Unknown

If TB result negative, test date:
 Date: ____/____/____

Version: 7/24/2023

Hepatitis C (HCV)
 HCV diagnosed (ever):
 Yes
 No

If not diagnosed with HCV, screened at least once (ever):
 Yes
 No

Retinopathy
 Diagnosed (ever):
 Yes
 No

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

Immunizations
 Influenza vaccine (during Audit period):
 Yes
 No

Pneumococcal [PCV15, PCV20, or PPSV23] (ever):
 Yes
 No

Td, Tdap, DTaP, or DT (in past 10 years):
 Yes
 No

Tdap (ever):
 Yes
 No

Hepatitis B complete series (ever):
 Yes
 No
 Immune

Shingrix/recombinant zoster vaccine (RZV) complete series (ever):
 Yes
 No

Laboratory Data (most recent result during Audit period)
 A1C: _____ %
 A1C Date obtained: ____/____/____

Total Cholesterol: _____ mg/dL
 HDL Cholesterol: _____ mg/dL
 LDL Cholesterol: _____ mg/dL
 Triglycerides: _____ mg/dL
 Serum Creatinine: _____ mg/dL
 eGFR: _____ mL/min/1.73 m²
 UACR: _____ mg/g (Quantitative urine albumin-to-creatinine ratio)

Local Questions [Optional]
 Select one:
 1 2 3 4 5 6 7 8 9
 Text: _____

Page 2 of 2

Audit Report – page 1

PHS Diabetes Care and Outcomes Audit – Washburn
 DRAFT Audit Report for 2024 (Audit Period 6/1/2023 – 12/31/2023)
 Facility: Washburn Sample Data

Annual Audit
 75 charts were audited from 100 patients determined to be eligible by Test02 Sample Data.
 Unless otherwise specified, time period for each item is the 12-month Audit Period.

	# of Patients (Denominator)	# Compliant (Numerator)	Percent	Area Percent	SD
Birth Sex					
Male	47	75	63%		
Female	28	75	37%		
Unknown	0	75	0%		
Age					
< 20 years	1	75	1%		
20-44 years	20	75	27%		
45-64 years	32	75	43%		
≥ 65 years	22	75	29%		
Diabetes Type					
Type 1	5	75	7%		
Type 2	70	75	93%		
Duration of Diabetes					
< 1 year	2	75	3%		
< 10 years	48	75	64%		
≥ 10 years	13	75	17%		
Diagnosis date not recorded	14	75	19%		
Body Mass Index (BMI) Category					
Normal (BMI < 25.0)	9	75	12%		
Overweight (BMI 25.0-29.9)	17	75	23%		
Obese (BMI ≥ 30.0)	40	75	53%		
Height or weight missing	9	75	12%		
Severely obese (BMI ≥ 40.0)	6	75	8%		
Blood Sugar Control					
A1C < 7.0	28	75	37%		
A1C 7.0-7.9	14	75	19%		
A1C 8.0-8.9	8	75	11%		
A1C 9.0-9.9	7	75	9%		
A1C 10.0-10.9	1	75	1%		
A1C ≥ 11.0	4	75	5%		
Not tested or no valid result	13	75	17%		
A1C < 8.0	42	75	56%		
A1C > 9.0	12	75	16%		

Date run: 02/12/2024 Page 1 of 8

Laboratory Data (most recent result during Audit period)

A1C: _____ %

Blood Sugar Control			
A1C < 7.0	28	75	37%
A1C 7.0-7.9	14	75	19%
A1C 8.0-8.9	8	75	11%
A1C 9.0-9.9	7	75	9%
A1C 10.0-10.9	1	75	1%
A1C ≥ 11.0	4	75	5%
Not tested or no valid result	13	75	17%
A1C < 8.0	42	75	56%
A1C > 9.0	12	75	16%



Example 2 continued – A1C

	# of Patients (Numerator)	# Considered (Denominator)	Percent
Blood Sugar Control			
A1C < 7.0	28	75	37%
A1C 7.0-7.9	14	75	19%
A1C 8.0-8.9	8	75	11%
A1C 9.0-9.9	7	75	9%
A1C 10.0-10.9	1	75	1%
A1C ≥ 11.0	4	75	5%
Not tested or no valid result	13	75	17%
<hr/>			
A1C < 8.0	42	75	56%
A1C > 9.0	12	75	16%

- Percent calculation for A1C<7.0:

$$\frac{28}{75} = 0.37$$
$$0.37 * 100 = 37\%$$

Numerator = 28 = number of patients Audited with A1C<7.0

Denominator = 75 = number of patients Audited

- Notes:
 - All patients counted in one main category and can also be in <8.0 or >9.0
 - Sum of Percent for all main categories = 100%
 - Important to individualize A1C goals

Example 3: Skip pattern – Tobacco Use

Audit Form – page 1

IHS Diabetes Care and Outcomes Audit, 2024

NOTE: It is highly recommended that you review the [Audit 2024 Instructions](#) prior to conducting an Audit.

Audit Period Ending Date: / /

Facility Name: _____

Reviewer Initials: _____

State of residence: _____

Month/Year of Birth: /

Birth Sex: Male
 Female
 Unknown

Date of Diabetes Diagnosis: / /

DM Type: Type 1
 Type 2

Tobacco/Nicotine Use (during Audit period)

Tobacco

Screened for tobacco use:

1 Yes
 2 No

Tobacco user:

1 Yes
 2 No

Tobacco cessation counseling/education received:

1 Yes
 2 No

Electronic Nicotine Delivery Systems (ENDS)*

Screened for ENDS use:

1 Yes
 2 No

ENDS user:

1 Yes
 2 No

*ENDS include: vapes, vaporizers, vape pens, hookah pens, electronic cigarettes (e-cigarettes or e-cigs), and e-pipes which contain nicotine.

Vital Statistics

Height (last ever): _____ ft _____ in

Weight (last in Audit period): _____ lbs

Hypertension (documented diagnosis ever):

1 Yes
 2 No

Blood pressure (last 3 during Audit period):

_____/_____/_____ mmHg

_____/_____/_____ mmHg

_____/_____/_____ mmHg

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Audit Report – page 2

IHS Diabetes Care and Outcomes Audit - WebChart
DRAFT Audit Report for 2024 (Audit Period 01/01/2023 - 12/31/2023)
Facility: Test02 Sample Data
Annual Audit

75 charts were audited from 150 patients determined to be eligible by Test02 Sample Data.
Unless otherwise specified, time period for each item is the 12-month Audit Period.

	# of Patients (Numerator)	# Considered (Denominator)	Percent	Area Percent	SIS Percent
Blood Pressure (BP) - Based on one value or mean of two or three values					
<130/<80	10	75	24%		
130/80 - <140/<90	34	75	45%		
140/90 - <160/<100	14	75	19%		
160/100 or higher	3	75	4%		
BP category undetermined	6	75	8%		
<140/<90	52	75	69%		
Hypertension					
Diagnosed ever	49	75	65%		
Diagnosed hypertension and mean BP <130/<80	10	49	20%		
Diagnosed hypertension and mean BP <140/<90	31	49	63%		
Diagnosed hypertension and ACE inhibitor or ARB currently prescribed	34	49	69%		
Tobacco and Nicotine Use					
Tobacco use					
Screened	66	75	88%		
If screened, user	18	66	27%		
If user, counseled	17	18	94%		
Electronic nicotine delivery system (ENDS) use					
Screened	41	75	55%		
If screened, user	1	41	2%		
User of both tobacco and ENDS*	0	41	0%		
User of tobacco and/or ENDS*	11	41	27%		

*Excludes patients not screened for both tobacco and ENDS use

Date run: 02/12/2024

Page 2 of 8

Tobacco/Nicotine Use (during Audit period)

Tobacco

Screened for tobacco use:

1 Yes
 2 No

Tobacco user:

1 Yes
 2 No

Tobacco cessation counseling/education received:

1 Yes
 2 No

Tobacco and Nicotine Use

Tobacco use					
Screened	66	75	88%		
If screened, user	18	66	27%		
If user, counseled	17	18	94%		



Example 3 continued – Tobacco Use

	# of Patients (Numerator)	# Considered (Denominator)	Percent
Tobacco and Nicotine Use			
Tobacco use			
Screened	66	75	88%
If screened, user	18	66	27%
If user, counseled	17	18	94%

Screened

$$66 / 75 = 0.88$$

$$0.88 * 100 = 88\%$$

Numerator = 66 = number of patients Audited that were Screened

Denominator = 75 = number patients Audited

If screened, user

$$18 / 66 = 0.27$$

$$0.27 * 100 = 27\%$$

Numerator = 18 = number of patients Audited that were Screened **and** are Users

Denominator = 66 = number patients Audited that were Screened

If user, counseled

$$17 / 18 = 0.94$$

$$0.94 * 100 = 94\%$$

Numerator = 17 = number of patients Audited that were Screened **and** are Users **and** were Counseled

Denominator = 18 = number of patients Audited that were Screened **and** are Users

Example 3 continued – Tobacco Use

	# of Patients (Numerator)	# Considered (Denominator)	Percent
Tobacco and Nicotine Use			
Tobacco use			
Screened	66	75	88%
If screened, user	18	66	27%
If user, counseled	17	18	94%

Screened

$$66 / 75 = 0.88$$

$$0.88 * 100 = 88\%$$

Numerator = 66 = number of patients Audited that were Screened

Denominator = 75 = number patients Audited

If screened, user

$$18 / 66 = 0.27$$

$$0.27 * 100 = 27\%$$

Numerator = 18 = number of patients Audited that were Screened **and** are Users

Denominator = 66 = number patients Audited that were Screened

If user, counseled

$$17 / 18 = 0.94$$

$$0.94 * 100 = 94\%$$

Numerator = 17 = number of patients Audited that were Screened **and** are Users **and** were Counseled

Denominator = 18 = number of patients Audited that were Screened **and** are Users

Example 3 continued – Tobacco Use

	# of Patients (Numerator)	# Considered (Denominator)	Percent
Tobacco and Nicotine Use			
Tobacco use			
Screened	66	75	88%
If screened, user	18	66	27%
If user, counseled	17	18	94%

Screened

$$66 / 75 = 0.88$$

$$0.88 * 100 = 88\%$$

Numerator = 66 = number of patients Audited that were Screened

Denominator = 75 = number patients Audited

If screened, user

$$18 / 66 = 0.27$$

$$0.27 * 100 = 27\%$$

Numerator = 18 = number of patients Audited that were Screened **and** are Users

Denominator = 66 = number patients Audited that were Screened

If user, counseled

$$17 / 18 = 0.94$$

$$0.94 * 100 = 94\%$$

Numerator = 17 = number of patients Audited that were Screened **and** are Users **and** were Counseled

Denominator = 18 = number of patients Audited that were Screened **and** are Users

Example 4: All that apply – DM Therapy

Audit Form – page 1

IHS Diabetes Care and Outcomes Audit, 2024

NOTE: It is highly recommended that you review the [Audit 2024 Instructions](#) prior to conducting an Audit.

Audit Period Ending Date: ___/___/2024

Facility Name: _____

Reviewer initials: _____

State of residence: _____

Month/Year of Birth: ___/___

Birth Sex: 1 Male
 2 Female
 3 Unknown

Date of Diabetes Diagnosis: ___/___/___

DM Type: 1 Type 1
 2 Type 2

Tobacco/Nicotine Use (during Audit period)

Tobacco

Screened for tobacco use:
 1 Yes
 2 No

Tobacco user:
 1 Yes
 2 No

Tobacco cessation counseling/education received:
 1 Yes
 2 No

Electronic Nicotine Delivery Systems (ENDS)*

Screened for ENDS use:
 1 Yes
 2 No

ENDS user:
 1 Yes
 2 No

*ENDS include: vapes, vaporizers, vape pens, hookah pens, electronic cigarettes (e-cigarettes or e-cigs), and e-pipes which contain nicotine.

Vital Statistics

Height (last ever): _____ ft _____ in

Weight (last in Audit period): _____ lbs

Hypertension (documented diagnosis ever):
 1 Yes
 2 No

Blood pressure (last 3 during Audit period):
_____/____ mmHg
_____/____ mmHg
_____/____ mmHg

Version: 7/24/2023

Examinations (during Audit period)

Foot (comprehensive or "complete", including evaluation of sensation and vascular status):
 1 Yes
 2 No

Eye (dilated exam or retinal imaging):
 1 Yes
 2 No

Dental:
 1 Yes
 2 No

Depression

Screened for depression (during Audit period):
 1 Yes
 2 No

Depression an active diagnosis (during Audit period):
 1 Yes
 2 No

Nutrition:
 1 RD
 2 Other } 3 Both RD and Other
 4 None

Physical activity:
 1 Yes
 2 No

Other diabetes:
 1 Yes
 2 No

Diabetes Therapy

Select all prescribed (as of the end of the Audit period):

1 None of the following

2 Insulin

3 Metformin [Glucofage, others]

4 Sulfonylurea [glipizide, glyburide, glimepiride]

5 DPP-4 inhibitor [alogliptin (Nesina), linagliptin (Tradjenta), saxagliptin (Onglyza), sitagliptin (Januvia)]

6 GLP-1 receptor agonist [dulaglutide (Trulicity), exenatide (Byetta, Bydureon), liraglutide (Victoza, Saxenda), lixisenatide (Adlyxin), semaglutide (Ozempic, Rybelsus, Wegovy)]

7 SGLT-2 inhibitor [bexagliflozin (Brenzavvy), canagliflozin (Invokana), dapagliflozin (Farxiga), empagliflozin (Jardiance), ertugliflozin (Steglatro), sotagliflozin (Inpefa)]

8 Pioglitazone [Actos] or rosiglitazone [Avandia]

9 Tirzepatide [Mounjaro]

10 Acarbose [Precose] or miglitol [Glyset]

11 Repaglinide [Prandin] or nateglinide [Starlix]

12 Pramlintide [Symlin]

13 Bromocriptine [Cycloset]

14 Colesevelam [Welchol]

CONTINUED ON PAGE 2. Be sure to complete both pages for all Audited patients.

Page 1 of 2



Diabetes Therapy

Select all prescribed (as of the end of the Audit period):

- 1 None of the following
- 2 Insulin
- 3 Metformin [Glucofage, others]
- 4 Sulfonylurea [glipizide, glyburide, glimepiride]
- 5 DPP-4 inhibitor [alogliptin (Nesina), linagliptin (Tradjenta), saxagliptin (Onglyza), sitagliptin (Januvia)]
- 6 GLP-1 receptor agonist [dulaglutide (Trulicity), exenatide (Byetta, Bydureon), liraglutide (Victoza, Saxenda), lixisenatide (Adlyxin), semaglutide (Ozempic, Rybelsus, Wegovy)]
- 7 SGLT-2 inhibitor [bexagliflozin (Brenzavvy), canagliflozin (Invokana), dapagliflozin (Farxiga), empagliflozin (Jardiance), ertugliflozin (Steglatro), sotagliflozin (Inpefa)]
- 8 Pioglitazone [Actos] or rosiglitazone [Avandia]
- 9 Tirzepatide [Mounjaro]
- 10 Acarbose [Precose] or miglitol [Glyset]
- 11 Repaglinide [Prandin] or nateglinide [Starlix]
- 12 Pramlintide [Symlin]
- 13 Bromocriptine [Cycloset]
- 14 Colesevelam [Welchol]

Example 4 continued – DM Therapy

Audit Report WebAudit – page 3

IHS Diabetes Care and Outcomes Audit - WebAudit
DRAFT Audit Report for 2024 (Audit Period 01/01/2023 - 12/31/2023)
Facility: Test02 Sample Data
Annual Audit

75 charts were audited from 150 patients determined to be eligible by Test02 Sample Data.
Unless otherwise specified, time period for each item is the 12-month Audit Period.

	# of Patients (Numerator)	# Considered (Denominator)	Percent	Area Percent	IHS Percent
Diabetes Treatment					
Number of diabetes medications currently prescribed					
None	18	75	24%		
One medication	21	75	28%		
Two medications	18	75	24%		
Three medications	13	75	17%		
Four or more medications	5	75	7%		
Diabetes meds currently prescribed, alone or in combination					
Insulin	19	75	25%		
Metformin [Glucophage, others]	36	75	48%		
Sulfonylurea [glyburide, glipizide, others]	17	75	23%		
DPP-4 inhibitor [alogliptin (Nesina), linagliptin (Tradjenta), saxagliptin (Onglyza), sitagliptin (Januvia)]	3	75	4%		
GLP-1 receptor agonist [dulaglutide (Trulicity), exenatide (Byetta, Bydureon), liraglutide (Victoza, Saxenda), lixisenatide (Adlyxin), semaglutide (Ozempic, Rybelsus, Wegovy)]	18	75	24%		
SGLT-2 inhibitor [bexagliflozin (Brenzavvy), canagliflozin (Invokana), dapagliflozin (Farxiga), empagliflozin (Jardiance), ertugliflozin (Steglatro), sotagliflozin (Inpefa)]	13	75	17%		
Pioglitazone [Actos] or rosiglitazone [Avandia]	6	75	8%		
Tirzepatide [Mounjaro]	2	75	3%		
Acarbose [Precose] or miglitol [Glyset]	0	75	0%		
Repaglinide [Prandin] or nateglinide [Starlix]	3	75	4%		
Pramlintide [Symlin]	0	75	0%		
Bromocriptine [Cycloset]	1	75	1%		
Colesevelam [Welchol]	0	75	0%		
Statin Prescribed (Currently)					
Yes*	34	74	46%		
Allergy, intolerance, or contraindication	1	75	1%		
In patients with diagnosed CVD					
Yes*	13	16	81%		
Allergy, intolerance, or contraindication	0	16	0%		
In patients age 40-75 years					
Yes*	30	54	56%		
Allergy, intolerance, or contraindication	1	55	2%		

Date run: 02/12/2024 Page 3 of 8



	# of Patients (Numerator)	# Considered (Denominator)	Percent
Diabetes Treatment			
Number of diabetes medications currently prescribed			
None	18	75	24%
One medication	21	75	28%
Two medications	18	75	24%
Three medications	13	75	17%
Four or more medications	5	75	7%
Diabetes meds currently prescribed, alone or in combination			
Insulin	19	75	25%
Metformin [Glucophage, others]	36	75	48%
Sulfonylurea [glyburide, glipizide, others]	17	75	23%
DPP-4 inhibitor [alogliptin (Nesina), linagliptin (Tradjenta), saxagliptin (Onglyza), sitagliptin (Januvia)]	3	75	4%
GLP-1 receptor agonist [dulaglutide (Trulicity), exenatide (Byetta, Bydureon), liraglutide (Victoza, Saxenda), lixisenatide (Adlyxin), semaglutide (Ozempic, Rybelsus, Wegovy)]	18	75	24%
SGLT-2 inhibitor [bexagliflozin (Brenzavvy), canagliflozin (Invokana), dapagliflozin (Farxiga), empagliflozin (Jardiance), ertugliflozin (Steglatro), sotagliflozin (Inpefa)]	13	75	17%
Pioglitazone [Actos] or rosiglitazone [Avandia]	6	75	8%
Tirzepatide [Mounjaro]	2	75	3%
Acarbose [Precose] or miglitol [Glyset]	0	75	0%
Repaglinide [Prandin] or nateglinide [Starlix]	3	75	4%
Pramlintide [Symlin]	0	75	0%
Bromocriptine [Cycloset]	1	75	1%
Colesevelam [Welchol]	0	75	0%

Example 4 continued – DM Therapy

Two sections for this item:

1. Number of medications
2. Which medications

Notes:

- Sum of percentages for section 1=100%
- Sum of percentages for section 2 can be >100% because patients can be on more than one med

	# of Patients (Numerator)	# Considered (Denominator)	Percent
Diabetes Treatment			
1 Number of diabetes medications currently prescribed			
None	18	75	24%
One medication	21	75	28%
Two medications	18	75	24%
Three medications	13	75	17%
Four or more medications	5	75	7%
2 Diabetes meds currently prescribed, alone or in combination			
Insulin	19	75	25%
Metformin [<i>Glucophage</i> , others]	36	75	48%
Sulfonylurea [glyburide, glipizide, others]	17	75	23%
DPP-4 inhibitor [alogliptin (<i>Nesina</i>), linagliptin (<i>Tradjenta</i>), saxagliptin (<i>Onglyza</i>), sitagliptin (<i>Januvia</i>)]	3	75	4%
GLP-1 receptor agonist [dulaglutide (<i>Trulicity</i>), exenatide (<i>Byetta</i> , <i>Bydureon</i>), liraglutide (<i>Victoza</i> , <i>Saxenda</i>), lixisenatide (<i>Adlyxin</i>), semaglutide (<i>Ozempic</i> , <i>Rybelsus</i> , <i>Wegovy</i>)]	18	75	24%
SGLT-2 inhibitor [bexagliflozin (<i>Brenzavvy</i>), canagliflozin (<i>Invokana</i>), dapagliflozin (<i>Farxiga</i>), empagliflozin (<i>Jardiance</i>), ertugliflozin (<i>Steglatro</i>), sotagliflozin (<i>Inpefa</i>)]	13	75	17%
Pioglitazone [<i>Actos</i>] or rosiglitazone [<i>Avandia</i>]	6	75	8%
Tirzepatide [<i>Mounjaro</i>]	2	75	3%
Acarbose [<i>Precose</i>] or miglitol [<i>Glyset</i>]	0	75	0%
Repaglinide [<i>Prandin</i>] or nateglinide [<i>Starlix</i>]	3	75	4%
Pramlintide [<i>Symlin</i>]	0	75	0%
Bromocriptine [<i>Cycloset</i>]	1	75	1%
Colesevelam [<i>Welchol</i>]	0	75	0%

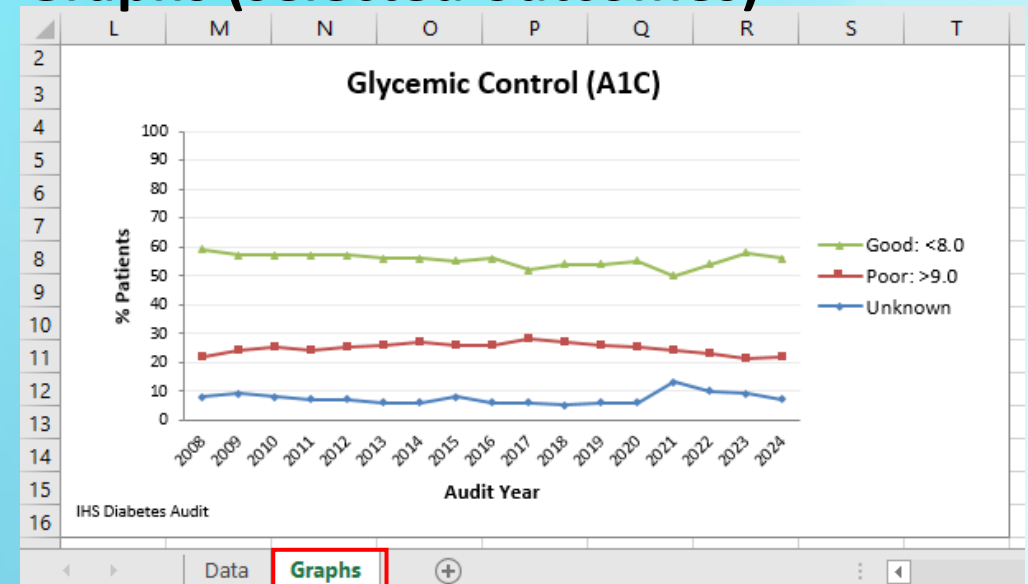
Trends Graphs

- Available in the WebAudit only.
- Two tabs: Data and Graphs.

Data (all 2024 Report items)

	A	B	O	P	Q	R	S	T
1	ITEM#	Report Item [Subgroup, if applicable]	2020%	2021%	2022%	2023%	2024%	DIFF 2024-2023
2	0	Number of Records						
3	1	Gender: Male	41	40	51	45	39	-6
4	2	Gender: Female	59	60	49	55	61	6
5	3	Gender: Unknown	0	0	0	0	0	0
6	4	Age: < 20 years	4	4	0	0	4	4
7	5	Age: 20-44 years	14	15	17	13	16	3
8	6	Age: 45-64 years	41	42	58	37	45	8
9	7	Age: 65 years and older	41	39	25	49	34	-15
10	8	Diabetes Type: 1	3	4	5	1	3	2
11	9	Diabetes Type: 2	96	96	94	99	97	-2
12	10	Duration of Diabetes: < 1 year	0	1	2	1	1	0
13	11	Duration of Diabetes: < 10 years	6	8	38	24	11	-13
14	12	Duration of Diabetes: 10 years or more	55	53	50	64	67	3

Graphs (selected outcomes)



Report Review – General Guidance (1)

1. Print or pull up on screen:

- a. Annual Audit Reports from the WebAudit for 2023 and 2024.
- b. Trends Graphs from the WebAudit.

2. Examine:

a. Number of patients:

- i. Number included in Audit should be equal to or smaller than number of eligible patients.
- ii. Number Audited and eligible for 2024 vs. 2023: Are they similar or “very” different with good reason?

b. Missing data: Are there *unexpectedly* large amounts of missing data for any items?

c. Extreme values: Are there rows with *unexpectedly* low (near 0%) or high (near 100%) values?

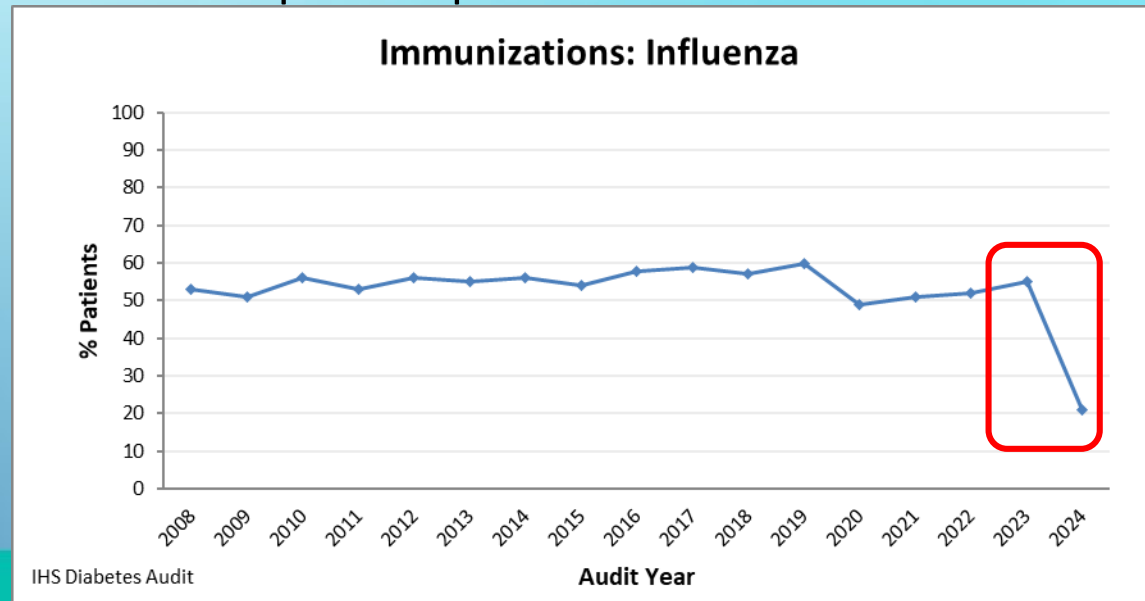
Report Review – General Guidance (2)

3. Review Trends Graphs: Look for “big” changes from 2023 to 2024.

- **Data tab:** Review DIFF 2024-2023 column.

ITEM#	Report Item [Subgroup, if applicable]	2022%	2023%	2024%	DIFF 2024-2023
80	Exams: Foot	51	50	31	-19
81	Exams: Eye	30	29	61	32
82	Exams: Dental	24	27	30	3

- **Graphs tab:** Look for “spikes” up or down from 2023 to 2024.



IHS Diabetes Audit

Audit Year

Prevention



Report Review – General Guidance (3)

4. **If any issues are found during review, correct data as needed in RPMS or in the WebAudit.**
 - i. For Electronic Audits:
 - a. Best to correct in EMR (RPMS or other), create a new data file, and re-upload into the WebAudit.
 - b. If corrections are made in the WebAudit, they may also need to be made in your EMR.
 - c. **NOTE:** Corrections made in WebAudit will be lost if a new data file is uploaded.
 - ii. For Manual Audits, make changes to individual records in the WebAudit.

Audit Resources

1. **Website:** <https://www.ihs.gov/diabetes> -> Select “IHS Diabetes Audit” from menu
 - a. Materials: Form, Instructions, Checklists, RPMS/DMS documentation
 - b. Training: Live, recorded, DMS
 - c. Other information and resources
2. **Support**
 - a. Audit team (WebAudit & general questions): email diabetesaudit@ihs.gov
 - b. [Area Diabetes Consultants](#)/Area Audit Support
 - c. RPMS questions and support (OIT Service Desk): <https://www.ihs.gov/Helpdesk/>
 - d. RPMS recorded training: <https://www.ihs.gov/rpms/training/recording-and-material-library/>



WebAudit Demonstration