The IHS Diabetes Care and Outcomes Audit: 2023 Results

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11/8/2023
Today’s topics

1. Audit overview and process
2. Annual Audit 2023 results
3. Questions
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
- **EMR** = Electronic Medical Record (RPMS or other)
- **GPRA** = Government Performance and Results Act
- **IHS** = Indian Health Service
- **I/T/U** = IHS, Tribal, and Urban
- **OIT** = IHS Office of Information Technology
- **RPMS** = IHS Resource and Patient Management System
- **SDPI** = Special Diabetes Program for Indians
Audit Overview and Process
What is the Audit?

• A process for assessing diabetes care and health outcomes for American Indian and Alaska Native (AI/AN) people with diagnosed diabetes.

• Annual data collection and reporting by I/T/U facilities
  – Timeframe: previous calendar year (e.g., Audit 2023 is for Jan 1-Dec 31, 2022)
  – Data submission: February-March
  – Data review and cleaning, report preparation: April-July
  – Final results: ~fall (distributed following approval from IHS)
Why Audit?

To work towards the goal of providing all diabetes patients with the highest quality of care, as outlined in the IHS Diabetes Standards of Care and Resources for Clinicians and Educators.

• For participating facilities: Results provide important feedback about medical care and education for diabetes patients.

• National and Area Audit reports: Provide summaries of key outcomes that assess overall care and health status of AI/AN diabetes patients.
IHS Diabetes Standards of Care and Resources for Clinicians and Educators

Diabetes Standards of Care and Resources for Clinicians and Educators
The Diabetes Standards of Care and Resources for Clinicians and Educators are intended to provide guidance to clinicians and educators as they care for American Indian and Alaska Native people who have or are at risk for type 2 diabetes. Use the Recommendations At-a-Glance as a quick reference. For each diabetes care topic, click on the link below to find regularly-updated recommendations, useful clinical tools and resources, and patient education materials.

Diabetes Care Topics by Group

- Prevention, Diagnosis, & Management
- Diabetes-Related Conditions
- Education & Nutrition
- Immunizations & Screenings
- Pregnancy/Youth/Elders
- Social & Behavioral Health

All Diabetes Care Topics
- Alcohol and Other Substance Use
- Alcohol and Other Alcohol-Related Therapy
- Foot Care
- Chronic Care Management
- Older Adults and Patients with Multiple Comorbidities

https://www.ihs.gov/diabetes/clinician-resources/soc/
Annual Audit Goals

• Collect the best possible data. Audit team provides:
  – Materials and guidance to ensure statistical integrity
  – Training and technical assistance

• Make results available to participating facilities. Audit team provides:
  – Annual summary report for each year
  – Trends over time (graphs)
1. **Preparation** (Audit team)
   a. Determine changes to data items and reports based on new science and revised standards.
   b. Update materials with these changes.

2. **Update software**
   a. RPMS: OIT and DDTP
   b. Other EMRs: Facility and/or system dependent

3. **Collect data** (Facilities)
   a. Identify eligible patients with diabetes (all or a random sample).
   b. Gather data for these patients by one of two methods.
      i. Electronic Audit: Extract data from an EMR in specified format.
Annual Audit Process (2)

4. **Submit data to DDTP and review** (round 1 - Facilities)
   a. Via secure web-based system (WebAudit) hosted on IHS servers for centralized processing and storage.
   b. Review using tools in WebAudit and/or RPMS. Make corrections, as needed.

5. **Review data round 2** (Area Diabetes Consultants)
   a. Use WebAudit data quality tools and reports.
   b. Work with facilities to make corrections, as necessary.

6. **Review data round 3** (DDTP)
   a. Program and review additional data quality reports.
   b. Make corrections, as necessary.

7. **Access and review final facility reports** (All)

8. **Prepare Area and Overall summary reports** (DDTP)
Audit assesses >40 outcomes, including:

**Process:** Exams, education, immunizations, medications

**Clinical measures:** Blood pressure, height, weight, lab results (A1c, lipids)

**Complications:** CVD, CKD, retinopathy, TB

**Note**
- Most are for 12-month Audit period, but some look back longer or shorter.
- There are changes (almost) every year!
How are results provided via the WebAudit?

Input = data file or paper forms

Output = reports and graphs
# Report Details

**(Sample Data and Sections)**

<table>
<thead>
<tr>
<th></th>
<th># of Patients (Numerator)</th>
<th># Considered (Denominator)</th>
<th>Percent</th>
<th>Area Percent</th>
<th>IHS Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>305</td>
<td>647</td>
<td>47%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>342</td>
<td>647</td>
<td>53%</td>
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<td></td>
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<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>&lt; 20 years</td>
<td>2</td>
<td>647</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-44 years</td>
<td>110</td>
<td>647</td>
<td>17%</td>
<td></td>
<td></td>
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<tr>
<td>45-64 years</td>
<td>278</td>
<td>647</td>
<td>43%</td>
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<tr>
<td>≥ 65 years</td>
<td>257</td>
<td>647</td>
<td>40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Diabetes Type</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 1</td>
<td>8</td>
<td>647</td>
<td>1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 2</td>
<td>639</td>
<td>647</td>
<td>99%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Duration of Diabetes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 1 year</td>
<td>20</td>
<td>647</td>
<td>3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 10 years</td>
<td>255</td>
<td>647</td>
<td>39%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥ 10 years</td>
<td>375</td>
<td>647</td>
<td>58%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagnosis date not recorded</td>
<td>17</td>
<td>647</td>
<td>3%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Audit History

• Timeline
  – 1980s: First local Audits conducted.
  – 1997: DDTP created a centralized database with data from all 12 IHS Areas.

• “Non-RPMS” Electronic Audits
  – 2011: n=13
  – 2023: n=73
## Audit vs. GPRA

<table>
<thead>
<tr>
<th>Diabetes Audit</th>
<th>Government Performance and Results Act (GPRA)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>Assess health care and outcomes for AI/AN people with diabetes</td>
</tr>
<tr>
<td><strong># of diabetes measures</strong></td>
<td>&gt;40</td>
</tr>
</tbody>
</table>
| **Who does it** | I/T/U facilities associated with an SDPI grant (required) and others (optional) | -IHS and Urban facilities (required)  
- Tribal facilities (optional) |
| **Who is in it** | AI/AN people with diabetes | Patients from participating facilities as defined for each measure |
| **Data source** | I/T/U facilities gather and submit data to DDTP | IHS National Data Warehouse |
| **More information** | [Audit website](#) | [GPRA website](#) |
Number of Reporting Facilities

Source: IHS Diabetes Care and Outcomes Audit
Number of Charts Audited

Source: IHS Diabetes Care and Outcomes Audit

>135K in 2023
How are national Audit results used? (1)

https://www.ihs.gov/sdpi/reports-to-congress/
How are national Audit results used? (2)

https://www.ihs.gov/sdpi/fact-sheets/
Audit 2023 Results

**Participation:** Sites participating, charts reviewed

**Process:** Screenings, exams, education, immunizations

**Clinical measures:** Blood pressure, lab results (A1C, lipids)

**Complications:** CVD, CKD, retinopathy, LEA

*How can we use them?*
Process Outcomes
Source: IHS Diabetes Care and Outcomes Audit
Source: IHS Diabetes Care and Outcomes Audit
Immunizations

![Immunization Graph]

- **Pneumococcal**
- **Influenza**

**Source:** IHS Diabetes Care and Outcomes Audit
Clinical Measures
Blood Sugar Control (A1C)

% Patients

- <8%
- >9%
- Unknown

Source: IHS Diabetes Care and Outcomes Audit
Blood Pressure Control* (<140/<90 mmHg)

*2010-2016: Patients with 2 or 3 blood pressure values. 2017-2023: Patients with 1, 2, or 3 blood pressure values.

Source: IHS Diabetes Care and Outcomes Audit
Mean Blood Pressure

*2010-2016: Patients with 2 or 3 blood pressure values. 2017-2023: Patients with 1, 2, or 3 blood pressure values.

Source: IHS Diabetes Care and Outcomes Audit
Mean LDL Cholesterol

Source: IHS Diabetes Care and Outcomes Audit
Complications
Selected Measures for Patients with Diagnosed CVD

Note: Axis range is 20-85 instead of 0-100.
Source: IHS Diabetes Care and Outcomes Audit
% Patients

Audit Year

2018 2019 2020 2021 2022 2023

Source: IHS Diabetes Care and Outcomes Audit
Lower Extremity Amputation

% Patients

Audit Year

Source: IHS Diabetes Care and Outcomes Audit
Complications: Chronic Kidney Disease
Incidence of diabetes-related ESKD among adults aged ≥18 years by race or ethnicity, 2000–2016.

Nilka Ríos Burrows et al. Dia Care 2020;43:2090-2097

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CKD Testing and Diagnosis (Age ≥18 Years)

- eGFR and UACR done
- CKD (eGFR<60 and/or UACR =>30)

Source: IHS Diabetes Care and Outcomes Audit
ACE Inhibitor/ARB Use

% Patients

- Patients with Known Hypertension
- Patients with Elevated Urine Albumin/CKD
- All Patients

Audit Year

Source: IHS Diabetes Care and Outcomes Audit
Selected Diabetes Medications

Note: Axis range is 0-65 instead of 100.
Source: IHS Diabetes Care and Outcomes Audit
Summary

• IHS Diabetes Audit data has demonstrated major improvements in diabetes care and outcomes for AI/AN people over time.
• Programs can use their Audit data to help:
  – Identify opportunities to improve care
  – Monitor progress in achieving goals
Audit Resources

- **Website:** [https://www.ihs.gov/diabetes/audit](https://www.ihs.gov/diabetes/audit)
  - Materials and documentation: Form, Instructions, Checklists, RPMS/DMS manual
  - Training: Live, recorded, DMS
  - Other information and resources

- **Audit team (WebAudit & general questions):** email diabetesaudit@ihs.gov
- **Area Diabetes Consultants/Area Audit Support**
- **OIT Service Desk (RPMS questions & support):** [https://www.ihs.gov/Helpdesk/](https://www.ihs.gov/Helpdesk/)
Free clinical resources from DDTP!

- **Diabetes Standards of Care**
  - Focused on AI/AN patients
  - More than 30 topics

- **CME/CE Training**
  - Live and on demand (>50 topics)

- **Treatment Algorithms (6 topics)**
  - Concise information for point of care reference
  - Print or view online or on a mobile device

And much more! [www.ihs.gov/diabetes](http://www.ihs.gov/diabetes)
Reference

Diabetes Audit Team

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Area Diabetes Consultants and Support Staff
Questions?