The IHS Diabetes Care and Outcomes Audit: 2021 Results

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IHS Division of Diabetes Treatment and Prevention
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Today’s Topics

1. Audit overview and process
2. COVID-19 and diabetes care
3. Audit 2021 results
4. Questions
Commonly Used Abbreviations

- **ADC**: Area Diabetes Consultant
- **AI/AN**: American Indian and Alaska Native
- **Audit**: IHS Diabetes Care and Outcomes Audit
- **DDTP**: IHS Division of Diabetes Treatment and Prevention
- **DMS**: RPMS Diabetes Management System
- **EMR**: Electronic Medical Record (System)
- **GPRA**: Government Performance and Results Act
- **I/T/U**: IHS/Tribal/urban
- **OIT**: Office of Information Technology
- **RPMS**: 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 2021 is for Jan 1–Dec 31, 2020)
  - Data submission: February-March
  - Data review and cleaning, report preparation: April–July
  - Final results: summer (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 to help improve medical care and education for people with diabetes.
- **National and Area Audit reports**: Provide summaries of key outcomes that assess care processes and health status of AI/AN diabetes patients.
IHS Diabetes Standards of Care and Resources for Clinicians and Educators

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

• Collect the best possible data, DDTP provides:
  – Materials and guidance to ensure statistical integrity
  – Training and technical assistance
• Make results readily available to participating facilities
  – Annual summary report for each year
  – Trends over time (graphs)
• A note about Audit 2021: Impact of COVID-19
Annual Audit Process

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** (DDTP and OIT)

3. **Gather and review data** (Facilities)
   a. Identify eligible patients with diabetes (all or a sample).
   b. Gather data for these patients by one of two methods.
      i. Electronic Audit: Extract data from an EMR. (For facilities using RPMS, IHS OIT programs a DMS patch.)
   c. Review data quality and, as necessary, make corrections.
Annual Audit Process (cont.)

4. **Submit data to DDTP (Facilities)**
   a. Via secure web-based system (WebAudit) hosted on IHS servers for centralized processing and storage.

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

6. **Review data part 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 vs. GPRA

<table>
<thead>
<tr>
<th></th>
<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>
<td>Demonstrate that IHS is using funds effectively toward meeting its mission.</td>
</tr>
<tr>
<td><strong># of diabetes outcomes</strong></td>
<td>Over 40</td>
<td>5</td>
</tr>
</tbody>
</table>
| **Who does it**      | I/T/U facilities associated with an SDPI grant                                   | -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](#)                                                                                          |
Audit Assesses More Than 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 outcomes are for 12 month Audit period, but some look back longer or shorter.
- There are changes (almost) every year!
How are Results Provided to Facilities?

Input = data file or paper forms

Output = reports and graphs
## Report Details
(Sample Data and Sections)

<table>
<thead>
<tr>
<th>Gender</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>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>
<td></td>
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<table>
<thead>
<tr>
<th>Age</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>&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>
</tr>
<tr>
<td>45-64 years</td>
<td>278</td>
<td>647</td>
<td>43%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥ 65 years</td>
<td>257</td>
<td>647</td>
<td>40%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diabetes Type</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>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>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Duration of Diabetes</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>&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>
A Little Bit of History

- First local Audits were conducted in the 1980s.
- In 1997, DDTP created a centralized Audit database with data from all 12 IHS Areas.
Participating Facilities

Number of Participating Facilities

# of Facilities


323 in 2021
How Are National Audit Results Used?

https://www.ihs.gov/sdpi/reports-to-congress/
COVID-19
COVID-19 and Diabetes Around the Globe

- COVID-19 infection associated with increase in new diagnoses of diabetes\(^1\)
- More severe illness in people with COVID-19 infection and chronic disease, including diabetes\(^2\)
- “Long COVID” Syndrome and Diabetes\(^3\)

COVID-19 and Diabetes

How was Diabetes Care Impacted in Indian Country?
Audit 2021 Results

- **Participation:** Sites participating, charts reviewed
- **Process:** Screenings, exams, education, immunizations
- **Clinical measures:** Blood pressure, lab results (A1C, lipids)
- **Complications:** CVD, CKD, retinopathy

Show me the numbers!
Process Outcomes
Foot, Eye, and Dental Exams
Health Education

Education

% Patients

- Any Education
- Diabetes
- Physical Activity
- Nutrition

Years: 1997 to 2021
Depression Diagnosis and Screening

Of patients without depression diagnosis, % who were screened

Diagnosed

% Patients

Immunizations
Clinical Measures
Blood Sugar Control

Blood Sugar Control (A1c)

% Patients

<8%

>9%

Unknown

Mean A1c

![Graph showing the mean A1c levels from 1997 to 2021]

- The graph illustrates the trend of mean A1c levels over the years, showing a decrease from 1997 to 2007, followed by fluctuation.
Blood Pressure Control

Blood Pressure Control* (<140/<90 mmHG)

% Patients


Hypertension diagnosed
BP <140/<90
BP not documented
Mean Blood Pressure

Source: IHS Diabetes Care and Outcomes Audit
LDL Cholesterol Screening
Mean Cholesterol
Complications
Cardiovascular Disease

Cardiovascular Disease (CVD)

% Patients

Retinopathy

% Patients

2018 2019 2020 2021
Complications:
Chronic Kidney Disease
New cases of kidney failure decreased by 54% in AI/AN adults.
Incidence of Diabetes-related ESKD among Adults Aged ≥18 Years by Race or Ethnicity, 2000–2016.
UACR Done

![Graph showing UACR Done](image-url)
CKD Testing and Diagnosis

CKD Testing and Diagnosis (Age ≥18 Years)

- eGFR and UACR done
- 51%

- CKD (eGFR<60 and/or UACR =>30)
- 31%

% Patients

ACE Inhibitor/ARB Use
AI/AN (Audit) vs. US

- **ACE/ARB (adults with diabetes):**
  - AI/AN (2018) = 68%
  - US NHANES (2015-2018)$^1$ = 60%

- **UACR testing (adults with diabetes):**
  - AI/AN (2018) = 64%
  - US Medicare beneficiaries (2018)$^2$ = 50%


$^2$Healthy People 2030
Diabetes Medications
Summary

- There have been tremendous improvements in diabetes outcomes for AI/AN people.
- Despite COVID-19 impact on AI/AN communities, Audit data suggests that facilities worked hard to provide routine diabetes care.
- Facilities can use their Audit data to help identify:
  - aspects of diabetes care impacted by COVID-19
  - opportunities to improve their care processes.
Audit Resources

• Website: https://www.ihs.gov/diabetes/audit
  – Materials and documentation: Form, Instructions, Checklists, RPMS/DMS
  – 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/
Free Clinical Resources from DDTP!

- **Diabetes Standards of Care**
  - New look and resources
  - Focused on AI/AN patients

- **CME/CE Training**
  - Live and on demand (over 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)
Diabetes Audit Team

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DMS Technical Lead

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Area Diabetes Consultants and Support Staff
Questions?