

Nashville Area Aggregate Diabetes Report 2006



Produced by
Nashville Area Diabetes Program/Tribal Epidemiology Center
Tribal Health Program Support Section
United South and Eastern Tribes, Inc. (USET)
in partnership with the
USET Tribes

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The contributing USET Tribal Health Program Support and Tribal Epidemiology Center staff members for this years' Nashville Area Diabetes Report and its sister I/T/U specific diabetes reports include: Dianna Richter, Jim Marshall, Byron Jasper, and John Mosely Hayes.

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Executive Summary

The IHS Nashville Area consists of 27 federally recognized Tribes in the eastern United States. The United South and Eastern Tribes, Inc (USET), a federally recognized Tribal organization, is located in Nashville, Tennessee and represents 24 of these 27 Tribes. For the Nashville Area there are approximately 60,000 American Indian Alaska Natives (AI/AN) residing on or near reservations located in 12 different states (from Maine to southern Florida to eastern Texas), with another 75,000 AI/ANs residing in urban areas. USET operates an IHS contracted Area Diabetes Program which provides consultative support to 22 of the 24 Tribal programs in the Nashville Area. These 22 Tribal programs receive funding under the IHS Special Diabetes Program for Indians (SDPI).

The trends and comparisons in this baseline report describe the health status of individuals with diabetes in the Nashville Area, hence providing Tribal leaders, health administrators and clinicians with information to improve their diabetes programs, support those in the community with diabetes, and target their health care dollars. The Nashville Area Aggregate Diabetes Report has accompanying sister Diabetes Reports for each I/T/U; the aggregate report has a more in-depth introduction and methodology section to which the readers of I/T/U specific reports should refer. The data used to make this baseline report come from two different sources; data from I/T/Us participating in the IHS Diabetes Audit program and data from I/T/Us participating in the USET Diabetes Surveillance Project.

The format for the aggregate report includes:

- an Introduction Section presenting an overview of the AI/AN diabetes public health problem within the Nashville Area IHS;
- a Methods Section explaining the logic underlying the calculations, the limitations of the data, and the process of the IHS diabetes audit and USET diabetes surveillance project;
- a two part Findings Section –
 - Part 1: Diabetes Audit Results: describes comparisons between the Nashville Area audit data to the national All IHS audit data across fiscal years 2003-2005, and,
 - Part 2: USET Diabetes Surveillance Project Results: describes comparisons of the aggregate of the USET diabetes surveillance project data across fiscal years 2002-2004;
- the Recommendations Section with suggestions for consideration based upon the results presented in the findings section; and,
- Appendices that include a compendium of resources and the raw data used to create the charts presented in the findings section.

The sister Diabetes Reports for each I/T/U are bound separately. The intent is for each I/T/U to receive only their data, hence the separate document. The sister I/T/U reports are formatted similarly to the aggregate report with a few exceptions. The methods section describes additional methodological issues pertaining to the I/T/U specific report. The two part findings section reflects the use of different comparison groups:

- Part 1: I/T/U specific Diabetes Audit Results: compares the I/T/U's audit results across FY 2003-2005 and with Nashville Area 2005 and All IHS 2005 aggregate data;
- Part 2: I/T/U specific USET Diabetes Surveillance Project Results: compares the I/T/U's data to overall USET data across FY2002-2004. For the surveillance project data, All

Races state and national data are presented for comparison when available for the I/T/U reports.

The aggregate level Nashville Area AI/AN age adjusted (US Census 2000 population) diabetes prevalence rates from FY2002-2004 were stable, ranging from 13.8% to 14.3%, which was almost three times higher than the US All Races rates which ranged from 4.9% to 5.1%. Diabetes prevalence rates calculated for the I/T/U specific levels showed a wide variance, ranging from a high of 21% to a low of 7.5%. There are limitations to these prevalence estimates. First, we were unable to account for individuals with undiagnosed diabetes. Second, we lack data on diabetic AI/ANs who did not visit IHS or Tribal health facilities at least once within three-years of a particular year being studied. Nevertheless, the steady prevalence of diabetes in the Nashville Area and a rate that is nearly three times the US All Races rate reflects the existing large and disproportionate burden of diabetes in this population.

The methodology generating the data presented in our report's Findings Part 1: Diabetes Audit Results sub-section is based on the annual IHS diabetes audit process. Under this process a random sample from an I/T/U's list of active diabetic patients in sufficient number to provide an estimate within 10% of the true rate (at a 90% level of certainty). Some sites complete the audit on the total diabetic population and do not use a sample. After the data is collected at the area level, it is sent to contractor who does the initial data collection/manipulation/cleaning. Summary reports from each Area and for all IHS Areas are weighted according the size of the diabetic population attending each facility and the number of records sampled. Thus in our report, all Nashville Area and all IHS aggregate level results were adjusted, but I/T/U specific results were not.

The methodology generating the data presented in our report's Findings Part 2: USET Diabetes Surveillance Project sub-section is based on mining the facility's RPMS by way of either Q-Man search logic using diagnostic (ICD-9) and/or procedure (CPT) coding or by conducting manual chart reviews. All patients must meet the definition for user population to be included in this analysis, which means for a particular year a patient must have used an I/T/U service within the past three years and be AI/AN. Prevalence is obtained when a patient is diagnosed or a procedure is performed at any time before or during a designated year. Incidence data are obtained only if the patient is diagnosed or the procedure is performed in the same year as a designated year.

Diabetes Audit data analysis findings are summarized as follows:

- A trend reflecting an increase in the percent of patients with longer duration of diabetes disease is noted. Duration of diabetes disease will place an added burden on the Tribal health care delivery systems and resources, due to an increase in diabetic related complications, such as kidney disease, cardiovascular disease (CVD), retinopathy, and amputations.
- To help with the interpretation of the burden of diabetes on the population and health care system, it is noted that as the AI/AN population increases so may the number of diagnosed diabetic cases but not necessarily with a parallel increase in prevalence due to the expanding denominator. In such cases it is important to recognize that an absolute increase in case load or health event is important in itself, even without an increase in prevalence.
- The percent of the Nashville Area patients with ideal glycemic control ($A1c < 7$) is not improving significantly.