Type 2 Diabetes Patient Characteristics by Race/Ethnicity

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ABSTRACT

The American Diabetes Association/European Association for the Study of Diabetes (ADA/EASD) guidelines suggest the management and treatment of type 2 diabetes mellitus (T2DM) can be impacted by many factors such as age, comorbidities, hypoglycemia risk, and treatment adherence. Understanding how the T2DM disease burden differs across race/ethnic groups may aid in individualization of treatment.

Using data from 2011 patient-reported US National Health and Wellness Survey (NHWSS), we characterized the T2DM population by profiling patients by race/ethnicity (White, African American [AA], Hispanic, or Other). NHWSS results were stratified, then weight-adjusted to reflect the demographic composition of the total adult population (based on Census data for gender, age, race/ethnicity, and educational attainment).

Of the total 7,828 T2DM patients, 73% were White, 11% were AA, 6% were Hispanic, and 6% were Other (includes Asian American and American Indian [AI]). The top 3 comorbidities per group were the same for the 3 predominant groups: hypertension (62% White, 64% AA, 55% Hispanic), high cholesterol (66% White, 58% AA, 55% Hispanic), and pain (51% White, 50% AA, 51% Hispanic). However, significantly more Whites reported high cholesterol than AAs and Hispanics (P = 0.002 and P = 0.001, respectively). 63% to 79% of White, AA, and Hispanic patients with T2DM reported body mass index (BMI) ≥30 kg/m² -10% of all patients except Asian Americans reported BMI <25 kg/m². Furthermore, Hispanics reported lower medication adherence than Whites (57.4% vs 65% adherence; P = 0.008); adherence among AAs was 63%. Hypoglycemia was reported by 54% of Whites, 15% of Hispanics, and 49% of AAs.

Understanding the characteristics of patients with T2DM by race/ethnicity can provide insights on the types of diabetes management challenges that different patient populations may face. These observations may encourage providers to engage minority populations in their health care management and tailor education to the individual.

BACKGROUND

The minority populations have historically been disproportionately represented in type 2 diabetes mellitus (T2DM) care. The Department of Health and Human Services (HHS) has a plan to monitor and improve these trends in disparities through the Agency for Healthcare Research and Quality and the HHS Action Plan to Reduce Health Disparities.1 Announced in April 2011, the plan outlines goals and actions that HHS will take to decrease health disparities among racial and ethnic minorities.

T2DM is a chronic disease that is heavily influenced by individual behaviors including diet, exercise, and medication adherence.2 An understanding of these behaviors is important for a more complete management of T2DM patients.

Having a thorough understanding of the clinical and diabetes-related characteristics of T2DM patients by race/ethnicity is an important prerequisite to address the total care of each patient. Differences that are identified may help improve providers’ awareness of potential opportunities for more individualized treatment, counseling, and patient engagement.

OBJECTIVE

To characterize the T2DM population, from a patient perspective, by profiling patients on clinical and behavioral characteristics by race/ethnicity.

METHODS

Data for these analysis were taken from the 2011 US National Health and Wellness Survey (NHWSS), a cross-sectional, self-administered, Web-based survey given to a sample of adults (≥18 years) identified through a Web-based consumer panel and maintained by Lightspeed Research. Data was randomized stratified sampling framework – The sample is representative of the adult population in the United States. Data for this analysis were collected during Q1 through Q3, 2011 – Of the total population of 71,157 subjects, 7,828 adults aged ≥18 years were identified with T2DM

RESULTS

Those individuals who self-identify in minority race/ethnicity categories were younger than Whites (Table 1). Among the >90 self-reported comorbidities, high cholesterol and hypertension were the top comorbidities in all races/ethnicities (Table 2). AAs and Hispanics (AA, AI, Asian American, Hispanic) patients with T2DM reported body mass index (BMI) ≥30 kg/m²; <10% of all patients except Asian Americans reported BMI <25 kg/m². Furthermore, Hispanics reported lower medication adherence than Whites (57.4% vs 65% adherence; P = 0.008); adherence among AAs was 63%. Hypoglycemia was reported by 54% of Whites, 15% of Hispanics, and 49% of AAs.

DISCUSSION AND CONCLUSIONS

This analysis reports the similarities and differences in demographic and diabetes-related characteristics of T2DM patients from a patient perspective. The most notable differences included:

- A higher proportion of Whites reporting a diagnosis of high cholesterol and any lifetime prescription cholesterol treatment
- A higher proportion of younger patients in the minority race/ethnicities
- A higher proportion did not know their HbA1c status in the minority groups (AA, AI, Asian American, Hispanic)

The overarching majority (60%) of all race/ethnic groups reported being obese with BMI >30, with the exception of the Asian American population. Hispanics and AIs reported the lowest adherence to medication compared to Whites.

- A significantly higher proportion of AIs reported experiencing hypoglycemia compared to Whites
- Although the total US diabetes population is growing, there are differences in patient reports of certain comorbidities, medication adherence, and prevalence of obesity that can be observed by race/ethnicity
- Understanding the characteristics of patients with T2DM by race/ethnicity can provide insights on the types of diabetes management challenges that different patient populations may face.
- A true opportunity for individualized counseling and education can be informed by race/ethnicity trends such as HbA1c and weight education, especially for minorities.

This observations may encourage providers, payers, advocacy groups, and policy makers to engage minority populations in their health care management and tailor education to the individual.

REFERENCES


9. Janssen Scientific Affairs, LLC.  The authors retained full editorial control over the content of the poster.

This analysis was supported by Janssen Scientific Affairs, LLC. Technical editorial assistance was provided by Shannon O’Sullivan, of MedErgy, and was funded by Janssen Scientific Affairs, LLC.

ACKNOWLEDGMENT

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FIGURES

Figure 1. Comorbidities/conditions reported by race/ethnicity.

Figure 2. Comorbidities of interest: chronic kidney disease and congestive heart failure.

Figure 3. BMI of T2DM by race/ethnicity.