Diabetes Trends in the U.S.: Results from the National Health and Wellness Survey

by Kathy Annunziata and Nikoletta Sternbach

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Diabetes has been described as an insidious disease and a major public health concern. The number of people with diabetes is expected to increase substantially in the coming decades. According to the International Diabetes Federation, as of 2013 about 382 million people worldwide have diabetes, a figure expected to increase 55% to 592 million by 2035.\(^1\) The estimated number of adults with diabetes (diagnosed and undiagnosed) in the U.S. alone is expected to increase 64% by 2025.\(^2\) These increases pose a medical and societal cost burden in the hundreds of billions of dollars.\(^2,^3\)

Using data from the U.S. National Health and Wellness Survey (NHWS), a patient-reported, cross-sectional study conducted in the U.S. since 1998, the demographic characteristics and treatment patterns of type 2 diabetes (T2D) patients were examined to document how the patient profile has changed over the last several years.

In 2013, based on the NHWS results, the overall prevalence of diagnosed T2D was 10% (or as many as 22.6 million adults), with an additional 9.6% (20 million adults) having been told by a physician that they are at risk for developing diabetes, have high blood sugar, or have signs of early diabetes among those without diabetes. The overall prevalence of 10% aligns well with other established sources like the American Diabetes Association (9.3% prevalence for 2012).\(^4\)

Some trends among U.S. adults with T2D have remained steady. For example, the proportion of patients who are overweight or obese has remained fairly constant. However, some changes have occurred in the profile of patients. For example, the percentage of T2D patients who are men (53.1% in 2006 to 55.6% in 2013) and non-white (30.3% in 2006 to 33.3% in 2013) has increased. Also, patients are diagnosed slightly earlier (at 48.4 years in 2013 compared with 49.9 years of age in 2006).

Overall treatment rates have risen slightly, with the proportion of patients who are using an oral medication, insulin or non-insulin injectable rising from 80.4% in 2006 to 82.5% in 2013. However, among those treated, aggressive treatment has become more common. Insulin usage has increased from 18.9% in 2006 to 24.9% in 2013 (see Figure 1).

Although the level of control has not improved among patients with T2D in the U.S., patients’ awareness of their condition has. In 2006, only 26.6% of patients were aware of their glycated hemoglobin level (HbA1c), which more than doubled to 56.4% in 2013 (Figure 2). HbA1c is an important metric used by clinicians to get an overall picture of a patient’s average blood sugar levels over a period of time. Maintenance of a patient’s HbA1c level is important as it is associated with reduced risk for future complications. Patients’ awareness of their levels facilitates adherence and ultimately improves outcomes. Within the NHWS trends, only 18% of Hispanics were aware of their HbA1c in 2006 compared with 49% who were aware in 2013. Similarly, only 23% of African-American T2D patients were aware in 2006 compared with 44% in 2013.
Patients' lack of awareness of their HbA1c levels is associated with higher direct and indirect costs.

2013. Patients who are aware of their HbA1c levels are more likely to be older adults with a better socioeconomic profile and have higher likelihood of being treated for the disease than those who are unaware.

Still, a substantial portion of patients (41.3% in 2013) continue to not know their HbA1c levels, suggesting more can be done to increase patient awareness and education. Other research using NHWS has found that when holding demographics and health history constant, lack of awareness was noted as being associated with poorer mental health (adjusted means = 48.30 vs. 49.66) and health utilities (adjusted means = 0.70 vs. 0.68, p < 0.05) as measured by the SF36-v2 scale. Additionally, lack of awareness was also associated with higher indirect costs in terms of absences from work, impairment while working, and activity impairment (Figure 3) and direct costs, such as hospitalizations. Those who were unaware of their HbA1c were less likely to be currently treating their disease and had fewer physician visits than patients who were aware.5

Figure 2: HbA1c Awareness Levels of U.S. Adults with Type 2 Diabetes (2006-2013)

Figure 3: Adjusted Mean Level of Impairment between Those Who Are Aware and Unaware of Their HbA1c Level.
Conclusion

As diabetes prevalence is projected to grow in the coming years, the medical and societal burdens are expected to increase. From a policy and healthcare standpoint, it is important to take into consideration the current number of T2D patients (as well as the potential number of future patients) and how the profile of these patients is changing over time. Diabetes is a complex medical condition, requiring consistent care and adherence to medications in order to keep blood levels under control. Increasing treatment rates in the U.S. – particularly with insulin – suggest that doctors are aggressively treating their patients’ disease. The younger age at diagnosis as seen in U.S. patients may have implications in terms of treatment at younger ages and for a longer duration. The most encouraging trend, however, may be the increased awareness of HbA1c levels among patients, which could reflect that patients are more knowledgeable of the disease than they were in the past. Improved patient awareness of HbA1c levels may ultimately have a number of long-term societal benefits, such as reduced direct and indirect costs as well as improved health outcomes, and a reduction in microvascular and macrovascular complications.

References


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About the Authors

Kathy Annunziata
Ms. Annunziata leads the U.S. analytical team who provides expertise and guidance on the National Health and Wellness Survey.

Ms. Annunziata has over 20 years of experience in survey research, particularly in health-related studies. During her tenure at Kantar Health, her work has focused primarily on analyses from the National Health and Wellness Survey databases (U.S., EU, China, Japan, Russia, and Brazil). She has co-authored over 50 posters and papers presented at national pharmaceutical research symposiums on a variety of therapeutic areas.

Ms. Annunziata received her M.A. in Sociology (concentration in Demography) from Fordham University, NY.

Nikoletta Sternbach
Ms. Sternbach holds the position of Senior Research Services Analyst and has seven years of experience in survey research. At Kantar Health, her work primarily focuses on analyses from 10 geographies captured by the National Health and Wellness Survey. She has co-authored 14 posters on a variety of therapeutic areas such as pain, diabetes and hepatitis C.

Ms. Sternbach received her B.A. in International Marketing from Pace University in New York.