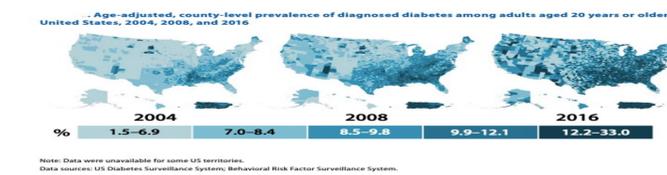


# An Upsurge of Type 2 Diabetes in the United States

Sneha Das  
Department of Health Administration, College of Health Professions, Texas State University

## Background

Diabetes mellitus, commonly known as diabetes, is a metabolic disorder in which the body has high blood sugar levels for a long time due to a lack of or ineffective use of insulin hormone, which regulates blood sugar (CDC, 2020). Diabetes is a growing health concern in all nations of the world. It is a non-communicable disease that is the ninth leading cause of death globally (WHO, 2021) and an increasing cause of disability. It is the seventh leading cause of death in the U.S. (CDC, 2020). More than 34 million Americans have diabetes which means that one in ten individuals has diabetes (CDC, 2020). The number of people affected by diabetes has doubled in the last 20 years (CDC, 2020). Diabetes has different types based on the factor causing it. Type 1 diabetes is an autoimmune disease in which the insulin-producing cells are destroyed in the pancreas by the body's immune system. Since the body fails to produce insulin, people with Type 1 diabetes are dependent on insulin (CDC, 2020). Approximately 5-10% of people have Type 1 diabetes (CDC, 2020). Type 2 diabetes is the most common form of diabetes. In this type, the body fails to use insulin properly. This type of diabetes can be controlled by healthy eating and exercise; some people with Type 2 diabetes may also require medication or insulin. 90-95% of people who have diabetes have Type 2 diabetes (CDC, 2020). Prediabetes is when blood sugar levels are higher than usual but not high enough to be considered type 2 diabetes (CDC, 2020). Additionally, approximately 88 million adults, or more than 1 in 3 Americans, have prediabetes (CDC, 2020). In addition, statistics from the CDC report suggest that 7.3 million Americans are unaware of their diabetes diagnosis due to a lack of awareness of one's risk or the intervention availability to reduce the risks barrier, which aids in rise of diabetes. This disease burdens individuals, families, and society physically, emotionally, and economically which can be prevented through lifestyle changes and medicine.



## Methods

The magnitude of diabetes is measured through the National Diabetes Statistics Report, a publication of the CDC. This report provides information on the prevalence and incidence rate of diabetes and prediabetes, including risk factors, complications, death, and costs (CDC, National Diabetes Statistics Report, 2020). Data from the Agency for Healthcare Research and Quality (AHRQ), the Indian Health Service (IHS), various data systems of the CDC, and the U.S. Census Bureau are used to estimate the prevalence and incidence rate of diabetes (National Diabetes Statistics Report, 2020). Percentages and the total number of people with diabetes and prediabetes are derived from the National Health and Nutrition Examination Survey (NHANES), National Health Interview Survey (NHIS), IHS National Data Warehouse (NDW), Behavioral Risk Factor Surveillance System (BRFSS), United States Diabetes Surveillance System (USDSS), and U.S. resident population estimates (National Diabetes Statistics Report, 2020). The assessment process of diabetes is ongoing and continuous because of new challenges and changes in health determinants. Combining data from both surveys and health system interactions to improve surveillance could help paint a fuller picture of this disease. The CDC, the Department of Health and Human Services (HHS), and ADA actively monitor diabetes-related statistics and provide awareness programs and risk assessments to identify the risk factors of the disease. These organizations provide an accurate, periodic assessment of the health status. The resources and diabetes assessment toolkit are provided on their websites. Whereas the diabetes collaborative registry, such as the diabetes prevention recognition program (DPRP), is an effective tool that can help maintain population health by coordinating patient care across specialties to drive improvement in outcomes, by identifying opportunities to close gaps in diabetes care and achieve health equity (CDC DPRP, 2021).

## Findings

The success of a diabetes prevention program is measured through an evaluation method that should be based on how the data and evidence are collected. Process and outcome measures involve the use of different types of data. Process evaluation is examined based on how a program was developed or implemented. The structure of the program and operation are also discussed in the process evaluation. Whereas outcome evaluation can examine whether the outcome derived are desirable or not. As the evaluation measures are used to measure changes, data should be collected over time. However, the most appropriate methods to evaluate a diabetic program will depend on the program model, type of evaluation methods, data collecting strategies, and other factors such as participant data, program process, health outcomes. The organizations working together to combat diabetes have a national quality forum that is based on the performance metrics for quality assurance and benchmarking (Schneiders, 2019). Measurement recommendations such as body weight, waist circumference, HbA1c, and total energy intake are used to monitor the efficiency and effectiveness of the programs (Schneiders, 2019). The diabetes prevention program provides practical tools and resources to prevent diabetes by encouraging lifestyle and dietary changes. However, it lacks communication strategies and fails to reach out to the population. Another barrier is the lack of funding which restricts providing resources to the population. In addition, lack of training and education of personnel is also identified as a barrier.



## Social Implications

Easy and uncomplicated steps should be involved in lowering the risk of diabetes through the program, which can encourage reducing weight, increased physical activity, the inclusion of healthy diets such as the inclusion of whole grains and whole-grain products over refined grains and processed carbohydrate foods and avoiding fad diets reduce or stop sugary drinks. Overall, improving health by changing lifestyles such as stopping smoking, reducing alcohol consumption as the lifestyle change involves behavior changes that work best when families, schools, worksites, healthcare providers, communities, media, the food industry, and government work together to make the healthy choice as an easy choice (ADA, 2021). The policies and programs should inform, educate, and empower diabetic patients and help them to manage the disease. The prevention of diabetes is a viable solution if awareness of the disease is made and interventions such as lifestyle changes are implemented at the right time. Awareness of diabetes risk assessment is essential to reach high-risk individuals who are prone to develop diabetes. Diabetes prevention programs and awareness campaigns are practical tools in controlling and preventing diseases. Still, the issue lies that the patients suffering from the disease are not aware of it. Hence, a policy that can make it necessary for the provider to direct the newly diagnosed diabetic patients towards the resources could be beneficial. The suggestive approach would modify the existing policies by including social media and marketing to reach the patients. However, other recommendations would also include social marketing strategies to promote healthy foods, improve food banks and regulate them as per the dietary requirements of the needy, and reduce the cost of the diabetic drug.



## Conclusion

Diabetes is a chronic, progressive, and costly disease, which can be controlled by self-management, behaviors control, and medication adherence. Medicine nonadherence can lead to uncontrolled diabetes and complications. Policies regarding awareness exist to empower the public to manage the disease. However, a lack of economic resources leads to nonadherence to the treatment. Thus, indicating more funding for diabetic prevention programs. The interventions used in controlling and preventing diabetes is through education and awareness campaign. Therefore, more emphasis should be given to providing resources to individuals who have diabetes. Diabetes can be controlled and prevented by changing lifestyles; accordingly, social marketing should make people aware of the disease and its preventive measures. Awareness and resources such as the construction of parks or fitness centers to promote physical activity can help prevent diabetes. Diabetes prevention programs effectively control the disease by educating and increasing self-awareness, but people affected by it are not aware of the resources available. Thus, patients diagnosed with diabetes should be informed by their providers to use them. Communication strategies should be developed to promote the existing policies to the population by involving stakeholders and social marketing platforms.



## References

ADA. (n.d.). *Diabetes overview: Diabetes Symptoms, Causes, & Treatment* <https://www.diabetes.org/diabetes>  
American Diabetes Association. (2018, May 1). *Economic costs of diabetes in the U.S. in 2017*. *Diabetes Care*. <https://care.diabetesjournals.org/content/41/5/917>  
American Diabetes Association (2021). 1. improving care and promoting health in populations: Standards of medical care in diabetes—2021. *Diabetes Care*, 44(Supplement 1). <https://doi.org/10.2337/dc21-s001>  
Carrillo-Larco, R. M., Ruiz-Alejos, A., Bernabé-Ortiz, A., Gilman, R. H., Smeeth, L., & Miranda, J. J. (2017). Cohort profile: The Peru migrant study—a prospective cohort study of rural dwellers, urban dwellers and rural-to-urban migrants in Peru. *International Journal of Epidemiology*, 46(6). <https://doi.org/10.1093/ije/dyx116>  
Centers for Disease Control and Prevention. (2020, June 11). *What is diabetes?* Centers for Disease Control and Prevention. <http://www.cdc.gov/diabetes/basics/diabetes.html>  
Centers for Disease Control and Prevention. National Diabetes Statistics Report. (2020, August 28). Atlanta, GA: Centers for Disease Control and Prevention, U.S. Dept of Health and Human Services; 2020. <https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf>  
Centers for Disease Control and Prevention Diabetes Prevention Recognition Program. (2021, May 21). *Centers for Disease Control and Prevention Diabetes Prevention Recognition Program Standards and Operating Procedures* <https://www.cdc.gov/diabetes/prevention/pdf/dppr-standards.pdf>  
For a complete list of references, please contact the author.

## Acknowledgements and Contact Information

This poster was prepared for the 13th Annual IRC 2022.

TEXAS STATE UNIVERSITY

The rising STAR of Texas

MEMBER THE TEXAS STATE UNIVERSITY SYSTEM