INDIAN HEALTH SERVICE
National Pharmacy and Therapeutics Committee
Formulary Brief: ***Type 2 Diabetes Guidelines Review***
-January 2025-

Background:

The Indian Health Service (IHS) National Pharmacy and Therapeutics Committee (NPTC) provided a comprehensive evaluation of current Type 2 Diabetes Mellitus guidelines. Following committee deliberation and review, the NPTC made **no modifications** to the IHS National Core Formulary.

Diabetes mellitus is a chronic, heterogeneous metabolic disorder with a complex pathogenesis. It is characterized by elevated blood glucose levels (hyperglycemia) resulting from abnormalities in insulin secretion, insulin action, or both. Diabetes is further classified into Type 1 (β-cell destruction), Type 2 (insulin resistance/deficiency), gestational, and secondary causes. The most prevalent of these, and the primary focus of this meeting guidelines review, is Type 2, which accounts for 90 to 95% of all cases.[1]

The prevalence and incidence of diabetes in the U.S. remain significant. In 2021, 38.4 million people of all ages, or 11.6% of the U.S. population, had diabetes. An estimated 97.6 million adults aged 18 years or older had prediabetes, and 1.2 million new cases of diabetes, or 5.9 per 1,000 people, were diagnosed. Among younger populations, 18,169 children and adolescents younger than age 20 had Type 1 diabetes, while 5,293 children and adolescents aged 10 to 19 had Type 2 diabetes. The American Indian/Alaska Native (AI/AN) population remains the most impacted racial group, with a prevalence rate of 16% (Confidence Interval: 12.1 – 20.6).[3]

Diabetes contributes to blindness, kidney failure, heart attacks, strokes, and lower limb amputations. Worldwide, it is responsible for two million deaths related to kidney disease and approximately 11% of cardiovascular-related deaths.[4]

Diabetes risk factors include smoking (22%), overweight and obesity (89%), physical inactivity (32%), A1C greater than 7% (47.4%), high blood pressure (greater than 130 mmHg, 80.6%), high cholesterol levels, ethnic background, family history of diabetes, age, and polycystic ovary syndrome. In the U.S., coexisting conditions and complications include emergency department visits (16.8 million cases), hospitalizations, kidney disease, vision impairment, diabetes-related deaths (8th leading cause of death), and a substantial economic burden amounting to $413 billion in 2022.[3]

Discussion:

The presentation included a review of the American Diabetes Association (ADA) 2025 Standards of Care in Diabetes, guidelines of the American Association of Clinical Endocrinologists (AACE), the U.S. Preventive Services Task Force (USPSTF), and the American College of Physicians, as well as international guidelines from the Canadian Diabetes Association and the National Institute for Health and Care Excellence.

As of this review, diagnostic criteria remain unchanged. Four acceptable diagnostic approaches include A1C greater than or equal to 6.5%, fasting plasma glucose of 126 mg/dL or higher, oral glucose tolerance test result of 200 mg/dL or higher after two hours following oral intake of 75 grams of anhydrous glucose dissolved in water, and an individual with classic symptoms of hyperglycemia or hyperglycemic crisis with a random glucose level greater than or equal to 200 mg/dL.[2]

The ADA has consistently provided annual updates for the past several decades. A summary of the updates could be found at *https://diabetesjournals.org/care/issue/48/Supplement_1.* Notable revisions in the 2025 ADA guidelines include:

- *Consideration of continuous glucose monitor (CGM) use for adults with type 2 diabetes on glucose-lowering agents other than insulin*
- *Guidance on actions to take during circumstances of medication unavailability, such as medication shortages*
- *Additional guidance on the use of Glucagon-Like Peptide-1 (GLP-1) receptor agonists beyond weight loss for heart and kidney health benefits*
- *Guidance on continuation of weight management pharmacotherapy beyond reaching weight loss goals*
- *Key updates highlighting potentially harmful medications in pregnancy and guidance for appropriately modifying the care plan*

Both the ADA and AACE emphasize the importance of full vaccination according to CDC's Advisory Committee on Immunization Practices-recommended schedules. The USPSTF has issued a "B" recommendation for screening asymptomatic adults aged 35 to 70 years who are overweight or obese for prediabetes.[6] Glycemic goals remain largely

consistent across guidelines, with an emphasis on individualized care. A more stringent goal (A1C < 6.5%) is recommended for patients with a short duration of diabetes and generally good health, while higher A1C targets may be appropriate for older individuals or those with complex medical conditions.[2,7]

Metformin remains the first-line pharmacotherapy due to its efficacy and safety profile, unless contraindicated by significant comorbidities. For patients with additional conditions such as obesity, severe hyperglycemia, cardiovascular disease, or a history of hypoglycemia, individualized therapy incorporating formulary agents such as Sodium-Glucose Cotransporter 2 (SGLT2) inhibitors (e.g., empagliflozin) and GLP-1 receptor agonists (e.g., semaglutide) is preferred. The GLP-1 receptor agonists are widely recommended for their glycemic and weight management benefits, in addition to cardiovascular improvements. Similarly, SGLT2 inhibitors provide benefits beyond glycemic control, particularly for patients with cardiovascular or kidney disease. Guidelines also support the use of alternative therapies when these preferred agents are contraindicated, unavailable, or unaffordable.

Advancements in diabetes technology are significantly aiding both patients and healthcare providers in diabetes management. Real-time CGM is now recommended for individuals with Type 2 diabetes who are using glycemic-controlling medications other than insulin.

Nutrition and physical activity remain essential components of diabetes management, reinforcing the importance of lifestyle interventions in comprehensive diabetes care.

Findings:

Rates of diabetes continue to rise globally, with prevalence expected to increase sharply over the coming decades, especially among younger populations and underserved groups such as AI/AN communities. Complex and innovative treatments, including newer pharmacological agents, are reaching broader patient populations, though access remains a challenge in many regions. Rapid advancements in diabetes management technology, such as CGMs and insulin pumps, are transforming care and are endorsed by leading national and international guidelines as tools to achieve glycemic target goals. Individualized treatment plans, supported by multidisciplinary care teams and shared decision-making, consistently lead to the best outcomes. Prevention remains critical, with public health initiatives targeting healthier lifestyles to reduce the incidence of Type 2 diabetes, particularly in high-risk populations.

If you have any questions regarding this document, please contact the NPTC at IHSNPTC1@ihs.gov . For more information about the NPTC, please visit the NPTC website.

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