Summary of Revisions: *Standards of Medical Care in Diabetes—2020*

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GENERAL CHANGES

The field of diabetes care is rapidly changing as new research, technology, and treatments that can improve the health and well-being of people with diabetes continue to emerge. With annual updates since 1989, the American Diabetes Association (ADA) has long been a leader in producing guidelines that capture the most current state of the field.

*Although levels of evidence for several recommendations have been updated, these changes are not outlined below where the clinical recommendation has remained the same. That is, changes in evidence level from, for example, **E** to **C** are not noted below. The 2020 Standards of Care contains, in addition to many minor changes that clarify recommendations or reflect new evidence, the following more substantive revisions.*

SECTION CHANGES

Section 1. Improving Care and Promoting Health in Populations

(https://doi.org/10.2337/dc20-S001)

Additional information was included on the rising cost of medications, particularly insulin.

A new section "Migrant and Seasonal Agricultural Workers" was added to discuss the challenges of managing type 2 diabetes specific to this group.

Section 2. Classification and Diagnosis of Diabetes

(https://doi.org/10.2337/dc20-S002)

The debate as to whether slowly progressive autoimmune diabetes with an adult onset should be termed latent autoimmune diabetes in adults is now acknowledged.

A new recommendation (2.8) was added regarding testing for prediabetes and/or type 2 diabetes for women with overweight or obesity and/or who have one or more additional risk factors for diabetes who are planning a pregnancy.

Additional considerations were added to the section "Cystic Fibrosis–Related Diabetes" (CFRD) regarding the use of A1C tests to detect CFRD.

The 2020 Standards of Care includes a new section on "Pancreatic Diabetes or Diabetes in the Context of Disease of the Exocrine Pancreas" to describe this form of diabetes and its diverse set of etiologies.

The "Gestational Diabetes Mellitus" (GDM) section was revised, and the two-step approach for screening and diagnosing GDM no longer includes National Diabetes Data Group criteria.

Section 3. Prevention or Delay of Type 2 Diabetes

(https://doi.org/10.2337/dc20-S003)

On the basis of a new consensus report, "Nutrition Therapy for Adults With Diabetes or Prediabetes: A Consensus Report" (https://doi.org/10.2337/dci19-0014), published in April 2019, the section "Nutrition" was updated and a new recommendation (3.3) was added to recognize that a variety of eating patterns are acceptable for people with prediabetes.

Additional resources and information were added regarding the National Diabetes Prevention Program, Medicare Diabetes Prevention Programs, and the Centers for Disease Control (CDC) Diabetes Prevention Impact Tool Kit. More information was added on the risk reduction certain groups experienced with metformin use, based on 15-year follow-up data from the Diabetes Prevention Program Outcomes Study.

Section 4. Comprehensive Medical Evaluation and Assessment of Comorbidities

(https://doi.org/10.2337/dc20-S004)

The autoimmune diseases recommendation (4.12) was modified, and a new recommendation was added (4.13) with autoimmune thyroid disease and celiac disease screening guidance differentiated, and more information on the prevalence of and screening for these diseases has been added to the text.

Because infection with hepatitis C virus is associated with a higher prevalence of type 2 diabetes, discussion was added regarding glucose metabolism and eradication of hepatitis C virus infection.

The title of the hearing impairment section was changed to "Sensory Impairment," and new information was added, including content on impairment of smell.

Evidence was updated in the section "Periodontal Disease."

The section "Psychosocial/Emotional Disorders," including anxiety disorders, depression, disordered eating behavior, and serious mental illness, was moved to Section 5 "Facilitating Behavior Change and Well-being to Improve Health Outcomes" (https://doi.org/10.2337/dc20-S005), in order to combine it with existing psychosocial guidance found in that section.

Section 5. Facilitating Behavior Change and Well-being to Improve Health Outcomes

(https://doi.org/10.2337/dc20-S005)

The title of this section was previously "Lifestyle Management" and was changed to more appropriately emphasize how effective behavior management and psychological well-being are foundational to achieving treatment goals for people with diabetes.

The section "Nutrition Therapy" was updated to include guidance and evidence presented in "Nutrition Therapy for Adults With Diabetes or Prediabetes: A Consensus Report" (https://doi.org/10.2337/dci19-0014), published in May 2019.

Because of the emerging evidence from the CDC on deaths related to e-cigarettes, more information was added discouraging their use.

Recommendations and supporting evidence on anxiety disorders, depression, disordered eating behavior, and serious mental illness previously found at the end of Section 4 were moved to Section 5 and are included under "Psychosocial Issues." More information on psychosocial screening for social determinants of health and significant changes in life circumstances was also added.

Section 6. Glycemic Targets

(https://doi.org/10.2337/dc20-S006)

Based on the publication "Clinical Targets for Continuous Glucose Monitoring Data Interpretation: Recommendations From the International Consensus on Time in Range" (https://doi.org/10.2337/dci19-0028) published in June 2019, new recommendations (6.4 and 6.5) were added on use of the ambulatory glucose profile (AGP) report and time in range (TIR) for assessment of glycemic management. A discussion of AGP reports, time in range, and glucose management indicators follow the new recommendations. An example of an AGP report was also added (**Fig. 6.1**).

Table 6.1 was replaced with a simplified estimated average glucose table.

More discussion on the importance of reducing therapeutic inertia in the management of hyperglycemia and cardiovascular disease was included in the section "A1C and Cardiovascular Disease Outcomes."

Also new to "A1C and Cardiovascular Disease Outcomes" is the strategy to introduce sodium–glucose cotransporter 2 inhibitors or glucagon-like peptide 1 (GLP-1) receptor agonists in patients with cardiovascular disease meeting A1C goals for cardiovascular benefit.

A new recommendation (6.11) on screening patients who are taking medication that can lead to hypoglycemia for hypoglycemia unawareness was introduced.

Intranasal glucagon and glucagon solution for subcutaneous injection were included in the section "Hypoglycemia" due to their recent approval by the U.S. Food and Drug Administration (FDA).

This section was modified to include a new discussion on the use of continuous glucose monitoring technology in hypoglycemia prevention.

Section 7. Diabetes Technology

(https://doi.org/10.2337/dc20-S007)

This section was reorganized into three broad categories titled "Self-Monitoring of Blood Glucose," "Continuous Glucose Monitors," and "Insulin Delivery." Within these revised sections, emphasis has been made on how there is no "one-size-fits-all" approach to technology use in people with diabetes. Due to the rapidly changing field of diabetes technology, the recommendations in each category have been revised, and more evidence has been added to support the recommendations throughout.

Section 8. Obesity Management for the Treatment of Type 2 Diabetes

(https://doi.org/10.2337/dc20-S008)

The body mass index (BMI) calculation recommendation (8.1) was modified to recommend annual BMI calculations rather than at every patient encounter. More discussion was added on how providers measure and record patient weight, including recommendations on how to manage these encounters to maximize patient comfort and engagement. Other considerations—like access to food and individual's motivation level—were added to the section "Lifestyle Interventions."

Section 9. Pharmacologic Approaches to Glycemic Treatment

(https://doi.org/10.2337/dc20-S009)

A discussion was added on access to analog insulins and how there are multiple approaches to insulin treatment, with the goal of keeping patients safe and avoiding diabetic ketoacidosis and significant hypo- or hyperglycemia.

New evidence and a recommendation (9.6) were added on early combination therapy for type 2 diabetes to extend the time to treatment failure based on findings from the VERIFY trial.

FDA approval of oral semaglutide has been included in the discussion of combination therapies.

Figure 9.1 has been revised to include the latest trial findings on GLP-1 receptor agonists and SGLT2 inhibitors. It now suggests that these drugs should be considered for patients when atherosclerotic cardiovascular disease (ASCVD), heart failure, or chronic kidney disease predominates independent of A1C.

Figure 9.2 has been simplified to more easily guide providers through intensification to injectable therapies.

Section 10. Cardiovascular Disease and Risk Management

(https://doi.org/10.2337/dc20-S010)

This section is endorsed for the second consecutive year by the American College of Cardiology.

Blood pressure targets for pregnant patients with pre-existing hypertension have been changed in the interest of reducing the risk for accelerated maternal hypertension and minimizing fetal growth impairment.

Recommendations for statin treatment (primary and secondary prevention, 10.19–10.28) have been revised to minimize ASCVD risk and to align with the "2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA Guideline on the Management of Blood Cholesterol: Executive Summary: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines" (https://doi.org/10.1016/j.jacc.2018.11.002), published in June 2019.

Discussion of REDUCE-IT was added to the section "Treatment of Other Lipoprotein Fractions or Targets," and a new recommendation (10.31) was included on considering icosapent ethyl for reducing cardiovascular risk.

Recommendations for treatment of cardiovascular disease (10.43a, 10.43b, 10.43c) are now individualized based on patients' existing ASCVD, risk of ASCVD, diabetic kidney disease, or heart failure.

Discussion of the trials CANVAS, CANVAS-Renal, CREDENCE, DECLARE-TIMI 58, REWIND, and CARMELINA were added to the section "Glucose-Lowering Therapies and Cardiovascular Outcomes."

The cardiovascular outcomes trials of available antihyperglycemic medications completed after the issuance of FDA 2008 guidelines table (**Table 10.3**) has been divided into three tables by drug class (**Table 10.3*A*** on DPP-4 Inhibitors; **Table 10.3*B*** on GLP-1 receptor agonists; and **Table 10.3*C*** on SGLT2 inhibitors).

Section 11. Microvascular Complications and Foot Care

(https://doi.org/10.2337/dc20-S011)

The recommendation on screening for chronic kidney disease (11.1) has been modified to include twice-yearly screenings for certain patients. A treatment recommendation (11.3) was modified to provide more detail on use of SGLT2 inhibitors and GLP-1 receptor agonists in patients with type 2 diabetes and diabetic kidney disease. A new recommendation (11.5) was added about avoiding discontinuation of RAS blockade in response to minor increases in serum creatinine in the absence of volume depletion.

Additional information on acute kidney injury was added to the section "Chronic Kidney Disease," with information on increased serum creatinine levels.

More findings were added from the CREDENCE trial.

Screening for diabetic retinopathy recommendations (11.16 and 11.17) and supportive text were revised to include consideration of retinal photograph with remote reading or use of a validated assessment tool as a way to improve screening access.

The section "Foot Care" was updated with more evidence on therapeutic footwear and evaluation for peripheral arterial disease.

Figure 11.1 was introduced (in place of 2019 Table 11.1—CKD Stages and Corresponding Focus of Kidney-Related Care) to show the risk of chronic kidney disease progression, frequency of visits, and referral to nephrology according to estimated glomerular filtration rate and albuminuria.

Section 12. Older Adults

(https://doi.org/10.2337/dc20-S012)

Within the section "Neurocognitive Function," more information was added on the importance of assessment for cognitive decline and impairment.

A new recommendation (12.14) urging providers to consider cost of care and insurance coverage when prescribing medications to older adults to reduce the risk of cost-related nonadherence was added to the section "Pharmacologic Therapy." The GLP-1 receptor agonist and SGLT2 inhibitor discussions were expanded in this section as well.

A new section titled "Special Considerations for Older Adults With Type 1 Diabetes" was added to address the treatment of this growing population.

Section 13. Children and Adolescents

(https://doi.org/10.2337/dc20-S013)

To provide more detail for individualizing targets, new A1C goal recommendations (13.21–13.24) were added to the section "Glycemic Control."

In the section "Management of Cardiovascular Risk Factors," the recommendations for screening and treatment of hypertension (13.31–13.35) have been revised and include new criteria for elevated blood pressure. The dyslipidemia testing recommendation (13.36) was also modified, and more evidence was added to the dyslipidemia screening section.

The retinopathy screening recommendation for type 1 diabetes (13.46) has been revised based on new evidence supporting a lower frequency of eye examinations than previously recommended.

A new recommendation (13.67) was added to the section "Pharmacologic Management" for type 2 diabetes due to new evidence and FDA approval of liraglutide in children 10 years of age or older.

A new recommendation (13.76) on pharmacologic treatment of hypertension in type 2 diabetes was also added.

Section 14. Management of Diabetes in Pregnancy

(https://doi.org/10.2337/dc20-S0014)

Greater emphasis has been placed on preconception care for women with diabetes, and a recommendation (14.5) focusing on nutrition, diabetes education, and screening for diabetes related complications was added. A new table (**Table 14.1**) was also added on preconception education, medical assessment, and screening.

Recommendations (14.9–14.12) on use of continuous glucose monitors and measuring glycemia in pregnancy were added to the section "Glycemic Targets in Pregnancy" to provide more information on their utility.

Further discussion has been added regarding when insulin may not be an option for some women with GDM, and how oral agents may play a role in treatment in certain circumstances.

The section "Postpartum Care" was expanded to include recommendations (14.16–14.22) and supporting evidence on postpartum insulin requirements, management of women with a history of GDM and risks of type 2 diabetes, and psychosocial assessment.

Section 15. Diabetes Care in the Hospital

(https://doi.org/10.2337/dc20-S0015)

Discussion of new studies supporting the use of closed-loop insulin delivery with linked pump/sensor devices to control blood glucose was added to the type 1 diabetes section "Transitioning Intravenous to Subcutaneous Insulin."

New evidence was also added to the section "Preventing Admissions and Readmissions."

Section 16. Diabetes Advocacy

(https://doi.org/10.2337/dc20-S016)

No changes have been made to this section.