Diabetes Self-Management Education and Support for Adults with Type 2 Diabetes: **ALGORITHM of CARE**

ADA *Standards of Medical Care in Diabetes* recommends all patients be assessed and referred for:

NUTRITION
Registered dietitian for medical nutrition therapy

EDUCATION
Diabetes self-management education and support

EMOTIONAL HEALTH
Mental health professional if needed

FOUR CRITICAL TIMES TO ASSESS, PROVIDE, AND ADJUST DIABETES SELF-MANAGEMENT EDUCATION AND SUPPORT

1. **AT DIAGNOSIS**
2. **ANNUAL** ASSESSMENT OF EDUCATION, NUTRITION, AND EMOTIONAL NEEDS
3. WHEN NEW **COMPLICATING FACTORS** INFLUENCE SELF-MANAGEMENT
4. WHEN **TRANSITIONS** IN CARE OCCUR

WHEN PRIMARY CARE PROVIDER OR SPECIALIST SHOULD CONSIDER REFERRAL:

- ☐ Newly diagnosed. All newly diagnosed individuals with type 2 diabetes should receive DSME/S
- ☐ Ensure that both nutrition and emotional health are appropriately addressed in education or make separate referrals

- ☐ Needs review of knowledge, skills, and behaviors
- ☐ Long-standing diabetes with limited prior education
- ☐ Change in medication, activity, or nutritional intake
- ☐ HbA_{1c} out of target
- ☐ Maintain positive health outcomes
- ☐ Unexplained hypoglycemia or hyperglycemia
- ☐ Planning pregnancy or pregnant
- ☐ For support to attain or sustain behavior change(s)
- ☐ Weight or other nutrition concerns
- ☐ New life situations and competing demands

CHANGE IN:
- ☐ Health conditions such as renal disease and stroke, need for steroid or complicated medication regimen
- ☐ Physical limitations such as visual impairment, dexterity issues, movement restrictions
- ☐ Emotional factors such as anxiety and clinical depression
- ☐ Basic living needs such as access to food, financial limitations

CHANGE IN:
- ☐ Living situation such as inpatient or outpatient rehabilitation or now living alone
- ☐ Medical care team
- ☐ Insurance coverage that results in treatment change
- ☐ Age-related changes affecting cognition, self-care, etc.

Powers MA, Bardsley J, Cypress M, Duker P, Funnell MM, Fischl AH, Maryniuk MD, Siminerio L, Vivian E. Diabetes Self-management Education and Support in Type 2 Diabetes: A Joint Position Statement of the American Diabetes Association, the American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics. Diabetes Care 2015; 38:1372-1382; The Diabetes Educator 2015;41:417-430; Journal of the Academy of Nutrition and Dietetics 2015;115:1323-1334. (Adapted August 2016)

American Diabetes Association. | AADE American Association of Diabetes Educators | eat right. Academy of Nutrition and Dietetics

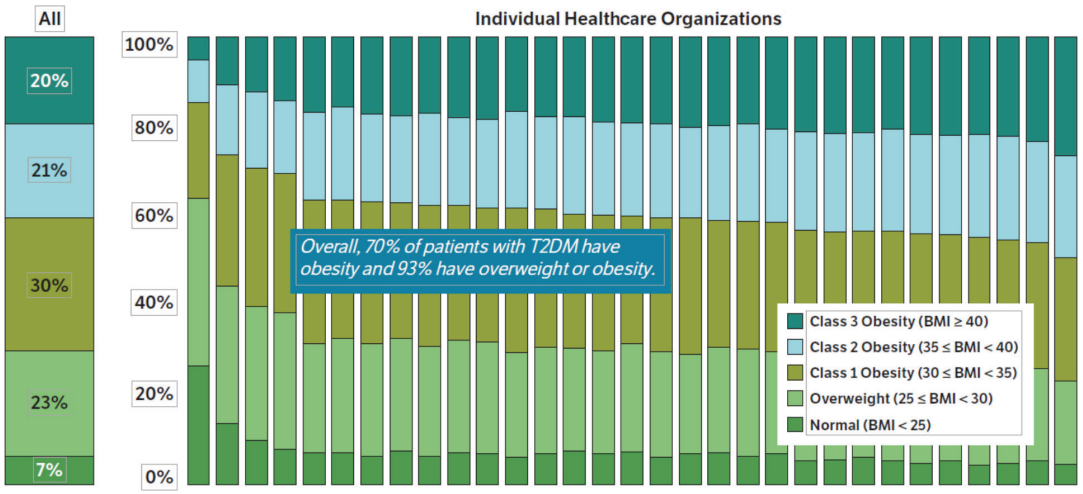
Courtesy of AMGA's Together 2 Goal® Campaign National Partners, American Diabetes Association and American Association of Diabetes Educators.

INSIGHT: WEIGHT LOSS AND MANAGEMENT OF TYPE 2 DIABETES

AMGA ANALYTICS

Obesity is well established as a major, modifiable risk factor in the development of Type 2 diabetes. More than 95% of patients living with Type 2 diabetes in the U.S. are also living with overweight or obesity (CDC 2013) and nearly one-fifth transition in or out of glycemic control over a 12-month period.[1] With this knowledge, AMGA sought to determine how weight loss might be associated with achieving and maintaining glycemic control (A1 < 8%) among patients diagnosed with Type 2 diabetes.

Figure 1. BMI Class Distribution by Healthcare Organization



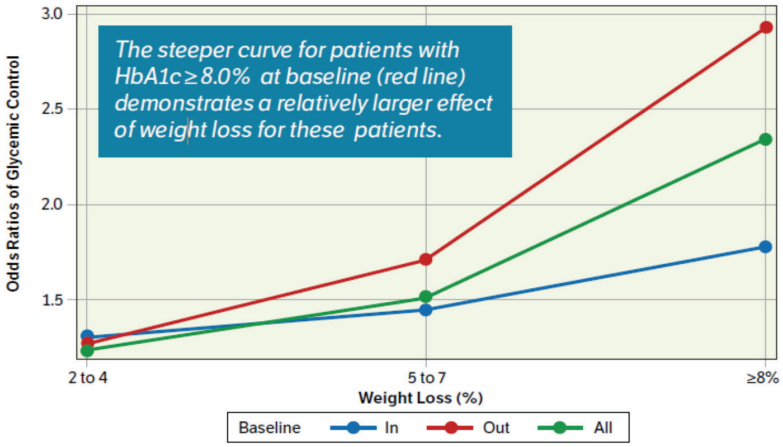
AMGA used longitudinal electronic health record (EHR) data in the Optum® Analytics database[2] from 29 U.S. healthcare organizations (Figure 1) to identify 144,644 adult patients with a diagnosis or evidence of Type 2 diabetes for the analysis. Multivariable regression models were run to examine the magnitude of different categories of weight loss (2-4%, 5-7%, and ≥ 8% of body weight) on achieving and maintaining glycemic control using two models: one for patients considered in glycemic control (A1c < 8.0) and one for patients out of control (A1c ≥ 8.0) at baseline over a 12- to 15-month period.

Small Weight Losses Are Positively Associated with Achieving and Maintaining Glycemic Control

After controlling for sociodemographics, select comorbid conditions, and diabetes medications, weight loss was found to be an independent factor in achieving and maintaining glycemic control in patients living with Type 2 diabetes. Most importantly, even small amounts of weight loss were positively associated with achieving and maintaining glycemic control among both groups of patients with Type 2 diabetes (A1c < 8% and A1c ≥ 8%). However, the effect was significantly larger for patients whose glycemic levels were uncontrolled at baseline

(Figure 2). With a 2–4% loss of body weight, patients with A1c ≥ 8.0 increased their likelihood of moving into control by 27% at follow-up 12 to 15 months later. Their odds increased to 70% with a weight loss of 5–7% of body weight, and finally, 195% if they lost 8% or more of their body weight. Patients in glycemic control at baseline also improved their odds of staying in control by 30% to 78% with a loss of 2% to more than 8% of body weight at follow-up.

Figure 2. Estimated Probability of Glycemic Control by Weight Loss and Baseline Control Status



Patients may be more motivated to reach small, achievable goals in weight loss if they understand the significance this can have on achieving and maintaining glycemic control.

Steps to Help Patients Succeed with Achievable Weight Losses

- Collaborate with front-line health professionals, particularly behavioral health specialists, health coaches, dieticians, navigators, and others who converse with patients with Type 2 diabetes regularly to help them integrate this information into conversations about goal setting with patients when weight loss goals are within reach.

- Target patients with Type 2 diabetes affected by obesity as well as patients who appear "safe" (A1c < 8) but are at higher risk of slipping out of glycemic control[3] in outreach and educational activities and convey the importance of weight management in maintaining glycemic control to prevent progression and complications associated with Type 2 diabetes. *(See INSIGHT: The Leaky Bucket)*

- Incorporate training on obesity and weight loss into continuing education modules for front-line providers working with patients living with Type 2 diabetes. Make sure providers are informed about how to begin conversations about weight, what words to use, and how to communicate effectively about weight in ways that are supportive to patients.

- Utilize pamphlets and other discussion guides, such as *WHY WEIGHT? A Guide to Discussing Obesity and Health with Your Patients*, prepared by the STOP Obesity Alliance in provider trainings. stopobesityalliance.org/wp-content/themes/stopobesityalliance/pdfs/STOP-Provider-Discussion-Tool.pdf

- Start a Medicare Diabetes Prevention Program (MDPP), an expansion of the highly successful Centers for Disease Control and Prevention (CDC) Program pilot. MDPP provides reimbursement for structured behavior change interventions that aim to prevent the onset of Type 2 diabetes among Medicare beneficiaries with prediabetes. innovation.cms.gov/initiatives/medicare-diabetes-prevention-program

- Provide this information to insurers and employers to demonstrate how achievable reductions in body weight for patients with Type 2 diabetes are associated with achieving and maintaining glycemic control to encourage their support for coverage of, access to, and incentives for routine obesity prevention, screening, diagnosis, and treatment.

- Talk to employers about the importance of healthy lifestyles and other workplace incentives to encourage worksites to create or expand healthy programs and environments for employees living with pre-diabetes or diabetes.

References

1. See INSIGHT: Controlling Glucose Levels in Patients with Type 2 Diabetes
2. The study used longitudinal electronic health record (EHR) data from 29 U.S. healthcare organizations who pool their EHR data as part of a national learning collaborative. All organizations in the collaborative use Optum's population health management and risk analytics platform which extracts data for multiple sources, cleans, normalizes and validates it, making it possible to conduct accurate lateral analysis and comparisons. Optum Analytics' clinical database is comprised of longitudinal ambulatory EHR data from 106 million patients treated by 84 US healthcare organizations. The longitudinal patient records are de-identified and become part of one of the largest integrated data warehouses in the U.S., also managed by Optum.
3. See INSIGHT: Controlling Glucose Levels in Patients with Type 2 Diabetes

Developed in partnership with Optum, AMGA's Distinguished Data & Analytics Corporate Collaborator