Psychosocial Care for People With Diabetes: A Position Statement of the American Diabetes Association

Complex environmental, social, behavioral, and emotional factors, known as psychosocial factors, influence living with diabetes, both type 1 and type 2, and achieving satisfactory medical outcomes and psychological well-being. Thus, individuals with diabetes and their families are challenged with complex, multifaceted issues when integrating diabetes care into daily life. To promote optimal medical outcomes and psychological well-being, patient-centered care is essential, defined as “providing care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions” (1). Practicing personalized, patient-centered psychosocial care requires that communications and interactions, problem identification, psychosocial screening, diagnostic evaluation, and intervention services take into account the context of the person with diabetes (PWD) and the values and preferences of the PWD.

This article provides diabetes care providers with evidence-based guidelines for psychosocial assessment and care of PWD and their families. Recommendations are based on commonly used clinical models, expert consensus, and tested interventions, taking into account available resources, practice patterns, and practitioner burden. Consideration of life span and disease course factors (Fig. 1) is critical in the psychosocial care of PWD. This Position Statement focuses on the most common psychological factors affecting PWD, including diabetes distress and psychological comorbidities, while also considering the needs of special populations and the context of care.

GENERAL CONSIDERATIONS IN PSYCHOSOCIAL CARE

Recommendations

- Psychosocial care should be integrated with collaborative, patient-centered medical care and provided to all people with diabetes, with the goals of optimizing health outcomes and health-related quality of life. A
- Providers should consider an assessment of symptoms of diabetes distress, depression, anxiety, and disordered eating and of cognitive capacities using patient-appropriate standardized/validated tools at the initial visit, at periodic intervals, and when there is a change in disease, treatment, or life circumstance. Including caregivers and family members in this assessment is recommended. B
- Consider monitoring patient performance of self-management behaviors as well as psychosocial factors impacting the person’s self-management. E
- Consider assessment of life circumstances that can affect physical and psychological health outcomes and their incorporation into intervention strategies. E
- Addressing psychosocial problems upon identification is recommended. If an intervention cannot be initiated during the visit when the problem is identified, a follow-up visit or referral to a qualified behavioral health care provider may be scheduled during that visit. E

Practitioners should identify behavioral/mental health providers, ideally those who are knowledgeable about diabetes treatment and the psychosocial aspects of diabetes, with whom they can form alliances and use for referrals (Table 1) in the psychosocial care of PWD. Ideally, psychosocial care providers should be embedded in diabetes care settings. Shared resources such as electronic health records, management data, and patient-reported

1Office of Behavioral and Social Science Research, National Institutes of Health, Bethesda, MD
2Indiana University School of Medicine, Indianapolis, IN
3Johns Hopkins School of Medicine, Baltimore, MD
4Yeshiva University and the Albert Einstein College of Medicine, Bronx, NY
5Stanford University, Stanford, CA
6Loyola University Maryland, Baltimore, MD
Corresponding author: Deborah Young-Hyman, younghyad@od.nih.gov.

This position statement was reviewed and approved by the American Diabetes Association Professional Practice Committee in September 2016 and ratified by the American Diabetes Association Board of Directors in October 2016.

© 2016 by the American Diabetes Association. Readers may use this article as long as the work is properly cited, the use is educational and not for profit, and the work is not altered. More information is available at http://www.diabetesjournals.org/content/license.

See accompanying articles, pp. 2122, 2141, 2149, 2158, 2165, 2174, 2182, 2190, and 2197.
information regarding adjustment to illness and life course issues facilitate providers' capacity to identify and remediate psychosocial issues that impede regimen implementation and improve diabetes management and well-being. Care models that take into account cultural influences, as well as personal, family, and community resources, and tailor care to the core values and lifestyle of the individual are more likely to be successful (2). Regardless of how the diabetes care team is constituted, the PWD is central to the care process. If a PWD cannot act on behalf of him/herself in the care process, a support person needs to be identified to participate in treatment decisions and facilitate disease management. It is also important that providers enlist members of the patient's social support network to aid in the identification, prevention, and resolution of psychosocial problems.

Medical management of diabetes requires patient implementation of a treatment regimen. Thus, psychosocial factors impacting self-care such as diabetes distress (burdens of diabetes and its treatment, worries about adverse consequences), lack of social and economic resources, and tailor care to the core values and lifestyle of the individual are more likely to be successful (2). Regardless of how the diabetes care team is constituted, the PWD is central to the care process. If a PWD cannot act on behalf of him/herself in the care process, a support person needs to be identified to participate in treatment decisions and facilitate disease management. It is also important that providers enlist members of the patient’s social support network to aid in the identification, prevention, and resolution of psychosocial problems.

Medical management of diabetes requires patient implementation of a treatment regimen. Thus, psychosocial factors impacting self-care such as diabetes distress (burdens of diabetes and its treatment, worries about adverse consequences), lack of social and economic resources, and tailor care to the core values and lifestyle of the individual are more likely to be successful (2). Regardless of how the diabetes care team is constituted, the PWD is central to the care process. If a PWD cannot act on behalf of him/herself in the care process, a support person needs to be identified to participate in treatment decisions and facilitate disease management. It is also important that providers enlist members of the patient’s social support network to aid in the identification, prevention, and resolution of psychosocial problems.

Medical management of diabetes requires patient implementation of a treatment regimen. Thus, psychosocial factors impacting self-care such as diabetes distress (burdens of diabetes and its treatment, worries about adverse consequences), lack of social and economic resources, and tailor care to the core values and lifestyle of the individual are more likely to be successful (2). Regardless of how the diabetes care team is constituted, the PWD is central to the care process. If a PWD cannot act on behalf of him/herself in the care process, a support person needs to be identified to participate in treatment decisions and facilitate disease management. It is also important that providers enlist members of the patient’s social support network to aid in the identification, prevention, and resolution of psychosocial problems.
<table>
<thead>
<tr>
<th>Topic area</th>
<th>Measure title</th>
<th>Citations</th>
<th>Description</th>
<th>Validated population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Sheikh JI, Yesavage JA. Geriatric Depression Scale (GDS): recent evidence and development of a shorter version. Clinical Gerontologist 1986;5:165–172</td>
<td>15-item measure was developed to assess depression in older adults</td>
<td>Adults (ages 55–85 years)</td>
</tr>
</tbody>
</table>

Continued on p. 2129
<table>
<thead>
<tr>
<th>Topic area</th>
<th>Measure title</th>
<th>Citations</th>
<th>Description</th>
<th>Validated population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eating disorders</td>
<td>Eating Disorders Inventory–3 (EDI-3)</td>
<td>Garner DM. <em>Eating Disorder Inventory-3: Professional Manual</em>. Odessa, FL, Psychological Assessment Resources, 2004</td>
<td>2 interview and self-report surveys aimed at the measurement of psychological traits or symptom clusters relevant to the development and maintenance of eating disorders</td>
<td>Females (ages 13–53 years)</td>
</tr>
<tr>
<td>Diabetes Treatment and Satiety Scale (DTSS-20)</td>
<td>Diabetes Treatment and Satiety Scale (DTSS-20)</td>
<td>Young-Hyman D, Davis C, Grigsby C, Looney S, Peterson C. Development of the Diabetes Treatment and Satiety Scale. <em>Diabetes 2011;60(Suppl. 1): A218</em></td>
<td>20-item self-report measure that assesses perception of satiety and fullness in the context of food intake, physical activity, medication dosing, and glycemic levels</td>
<td>Youth (ages 10–17 years) with type 1 diabetes</td>
</tr>
</tbody>
</table>

*Continued on p. 2130*
<table>
<thead>
<tr>
<th>Topic area</th>
<th>Measure title</th>
<th>Citations</th>
<th>Description</th>
<th>Validated population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cognitive assessment toolkit</td>
<td>Cordell CB, Borson S, Boustani M, et al. Alzheimer’s Association recommendations for operationalizing the detection of cognitive impairment during the Medicare Annual Wellness Visit in a primary care setting. <em>Alzheimers Dement</em> 2013;9:141–150</td>
<td>Designed for use during a medical office visit to screen for cognitive impairment in older adults (includes informant interviews also)</td>
<td>Adults</td>
</tr>
</tbody>
</table>

*Continued on p. 2131*
other psychological states (e.g., depression, anxiety, eating disorders, cognitive impairment) (3), as well as health literacy and numeracy, should be monitored. To detect problems early and prevent health deterioration, all PWD should be evaluated at the initial visit and on a periodic basis going forward even if there is no patient specific indication (4). In addition, evaluation is indicated during major disease and life transitions, including the onset of complications and significant changes in treatment (i.e., initiation of insulin pump or other forms of intensification) or life circumstances (i.e., living arrangements, job, and significant social relationships), with prospective monitoring for 6 months (a period of increased risk) (5).

All care providers should include queries about well-being in routine care. Standardized and validated tools (Table 2) for psychosocial monitoring, assessment, and diagnosis can be used by providers in a stepped sequence with positive findings leading to further evaluation, starting with informal verbal inquiries for monitoring followed by questionnaires for assessment (e.g., PHQ-9) and finally by structured interviews for diagnosis (e.g., Structured Clinical Interview for the DSM-V). For example, the diabetes care provider can ask whether there have been changes in mood during the past 2 weeks or since their last visit. Further, providers should consider asking whether there are new or different barriers to treatment and self-management, such as feeling overwhelmed or stressed by diabetes or other life stressors. Positive responses can be probed with additional questions and/or use of standardized measures to inform assessment and guide the selection of appropriate interventions.

When referral is warranted (Table 1), formal diagnostic assessments and interviews should be conducted by a qualified behavioral health provider familiar with the care of PWD. Standardized, age- and literacy-appropriate assessment and diagnostic tools should be used (Table 2). These established measures were selected from a wider literature on the basis of the scientific rigor used in their development and the availability of norms for clinical use. The recommendation of specific measures for clinical use is beyond the scope of this

<table>
<thead>
<tr>
<th>Table 2—Continued</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic area</td>
</tr>
<tr>
<td>Adherence to self-care</td>
</tr>
</tbody>
</table>

Young-Hyman and Associates 2131
statement. Care providers should implement interventions to address the day-to-day problems of living with diabetes, particularly diabetes-related distress related to self-management behaviors, as well as diabetes-related family conflict (6–8). Support from a behavioral health provider may be effective when difficulties are persistent. However, as soon as there is indication of a diagnosable psychological condition, consultation and/or referral should be sought with a provider having the appropriate mental health expertise. Standardized/validated intervention strategies specific to PWD should be utilized whenever possible.

PSYCHOSOCIAL ISSUES IMPACTING DIABETES SELF-MANAGEMENT

Recommendations
- People with diabetes should be evaluated and receive training until they attain competence in diabetes self-care skills and the use of technologies at the time of diagnosis, annually, if/when complications arise, and if/when transitions in care occur. The diabetes care team is encouraged to directly and regularly assess these self-management behaviors. E
- Providers should consider the burden of treatment and patient levels of confidence/self-efficacy for management behaviors as well as level of social and family support when making treatment recommendations. B

While following treatment regimens consistently improves A1C (9–12), the impact is modest. Multiple factors other than patient behavior affect diabetes treatment outcomes, including adequacy of medical management, duration of diabetes, weight gain, and other health-related (e.g., comorbid illness and concomitant medication) and social-structural factors (e.g., poverty, access to care, health insurance coverage) (13–16). Therefore, it is not appropriate to automatically attribute suboptimal A1C and adverse events such as hypoglycemia (17) solely to self-management behaviors without their direct assessment.

Provider communications with patients/families should acknowledge that multiple factors impact glycemic management but also emphasize that following collaboratively developed treatment regimens and recommended lifestyle changes can significantly improve disease outcomes and well-being (14,18–20). Thus, the goal of provider–patient communication should be to empower the PWD without blaming them for “noncompliance” when the outcomes of self-management are not optimal.

The familiar term, noncompliance, denotes a passive, obedient role for PWD in “following doctor’s orders” that is at odds with the active role PWD are asked to take in directing the day-to-day planning, monitoring, evaluation, and problem-solving involved in diabetes self-management (21). Patient perceptions about their own ability, or self-efficacy, to self-manage diabetes are one important psychosocial factor related to improved diabetes self-management and treatment outcomes in diabetes (22–26) and should be a target of ongoing assessment and treatment planning.

Suboptimal self-management may be due to functional limitations (e.g., blindness, problems with dexterity, low health literacy and numeracy), lack of appropriate diabetes education, forgetting and disruption in routines, or psychosocial barriers, such as inadequate family and/or social support, misinformation or inaccurate beliefs about illness and treatment, emotional distress/depressive symptoms, or deficits in problem-solving or coping skills (23,27–30). Therefore, individual needs should be evaluated so that interventions can be tailored to the problem (31–35). Self-report measures are available and can be used in most practice settings (see Table 2). Using a nonjudgmental approach that normalizes periodic lapses in self-management may help minimize patients’ resistance to reporting problems with self-management.

Making healthy food choices on a daily basis is among the most difficult aspects of diabetes self-care (36). Current medical nutrition therapy guidelines promote flexible and healthy eating patterns personalized to the individual rather than defining a wide range of behaviors as dietary “nonadherence” (37). Self-monitoring of food intake may help the individual with diabetes become more aware of their own eating patterns while providing information that helps the registered dietitian nutritionist assist with meal planning and develop personalized dietary recommendations. Through monitoring, it is important to assess for disordered eating behaviors (see DISORDERED EATING BEHAVIOR: CLINICAL AND SUBCLINICAL).

DIABETES DISTRESS

Recommendation
- Routinely monitor people with diabetes for diabetes distress particularly when treatment targets are not met and/or at the onset of diabetes complications. B

Diabetes distress is very common and is distinct from a psychological disorder (38–40). The constant behavioral demands (medication dosing, frequency, and titration; monitoring blood glucose, food intake and eating patterns, and physical activity) of diabetes self-management and the potential or actuality of disease progression are directly associated with reports of diabetes distress (39). Its prevalence is reported to be 18–45% with an incidence of 38–48% over 18 months (41). High levels of diabetes distress significantly impact medication-taking behaviors and are linked to higher A1C, lower self-efficacy, and poorer dietary and exercise behaviors (39,41,42). It may be helpful to provide counseling regarding expected diabetes-related versus generalized psychological distress at diagnosis and when disease state or treatment changes (43).

About one-third of adolescents with diabetes develop diabetes distress, which may be associated with declines in self-management behaviors and suboptimal blood glucose levels (44). Parents of children with type 1 diabetes are also prone to diabetes distress (45), which could impact their ability to provide psychological and diabetes management support for their child.

Diabetes distress should be routinely monitored (46) using patient-appropriate validated measures (Table 2). If diabetes distress is identified, the person should be referred for diabetes education to address areas of diabetes self-care that are most relevant to the patient and have the most impact on diabetes outcomes. People whose self-care remains impaired after tailored diabetes education should be referred by their care team to a
behavioral health provider for evaluation and treatment.

**PSYCHOLOGICAL COMORBIDITIES**

Prevalence of clinically significant psychopathology in PWD ranges across diagnostic categories, and some diagnoses are considerably more common in PWD than in those without the disease (47–52). Symptoms, both clinical and subclinical, that interfere with the person’s ability to carry out diabetes self-management must be addressed.

**Depression**

**Recommendations**
- Providers should consider annually screening all patients with diabetes and/or a self-reported history of depression for depressive symptoms with age-appropriate depression screening measures, recognizing that further evaluation will be necessary for individuals who have a positive screen. B
- Beginning at diagnosis of complications or when there are significant changes in medical status, consider assessment for depression. B
- Referrals for treatment of depression should be made to mental health providers with experience using cognitive behavioral therapy, interpersonal therapy, or other evidence-based treatment approaches in conjunction with collaborative care with the patient’s diabetes treatment team. A

History of depression, current depression, and antidepressant medication use are risk factors for the development of type 2 diabetes, especially if the individual has other risk factors such as obesity and family history of type 2 diabetes (53–55).

Elevated depressive symptoms and depressive disorders affect one in four patients with type 1 or type 2 diabetes (47). Thus, routine screening for depressive symptoms is indicated in this high-risk population including people with prediabetes (particularly those who are overweight), type 1 and/or type 2 diabetes, gestational diabetes mellitus, and postpartum diabetes. Regardless of diabetes type, women have significantly higher rates of depression than men (56).

Routine monitoring with patient-appropriate validated measures (Table 2) can help to identify whether referral is warranted. Remission of depressive symptoms or disorder in adult patients suggests the need for ongoing monitoring of depression recurrence within the context of routine care (53).

Integrating mental and physical health care can improve outcomes. The mental health provider should be incorporated into the diabetes treatment team when a patient is in psychological therapy (talk therapy) (57). Incorporation of a physical activity regimen into routine self-management has also been shown to improve the health and mental well-being of PWD (58,59). Please refer to the Position Statement of the American Diabetes Association (ADA) on physical activity/exercise and diabetes (60) for additional information.

**Anxiety Disorders**

**Recommendations**
- Consider screening for anxiety in people exhibiting anxiety or worries regarding diabetes complications, insulin injections or infusion, taking medications, and/or hypoglycemia that interfere with self-management behaviors and in those who express fear, dread, or irrational thoughts and/or show anxiety symptoms such as avoidance behaviors, excessive repetitive behaviors, or social withdrawal. Refer for treatment if anxiety is present. B
- People with hypoglycemia unawareness, which can co-occur with fear of hypoglycemia, should be treated using Blood Glucose Awareness Training (or other evidence-based similar intervention) to help re-establish awareness of hypoglycemia and reduce fear of hypoglycemia. A

Anxiety symptoms and diagnosable disorders (e.g., generalized anxiety disorder [GAD], body dysmorphic disorder, obsessive compulsive disorder [OCD], specific phobias, and posttraumatic stress disorder [PTSD]) are common in PWD (61); the Behavioral Risk Factor Surveillance System estimated the lifetime prevalence of GAD to be 19.5% in people with either type 1 or type 2 diabetes (62). Common diabetes-specific concerns include fears related to hyperglycemia (63,64), not meeting blood glucose targets (61), and insulin injections or infusion (65). General anxiety is a predictor of injection-related anxiety and associated with fear of hypoglycemia (FoH) (64,66).

Preoccupation with an imagined defect in appearance associated with having diabetes that interferes with social, occupational, or other important areas of function may reflect body dysmorphic disorder (51). When ideas and symptoms (e.g., perceived deficits in strength, attractiveness, and sexual function) do not reach the level of clinical diagnosis, identification of these beliefs provides a context for provider education about disease processes, reframing disease processes as distinct from the emotional response to having diabetes and questioning the inevitability of health decline. Onset of complications presents another critical point where these thoughts/beliefs can occur and may require re-education and disease-based counseling (67).

If the PWD exhibits excessive diabetes self-management behaviors well beyond what is prescribed or needed to achieve glycemic targets, reports repetitive negative thoughts about inability to prevent poor health outcomes, and/or has related thoughts and behaviors that interfere with other functions of daily living, the PWD may be experiencing symptoms of OCD (68). OCD symptoms can represent generalized anxiety or be diabetes specific, and referral to a mental health professional (such as a psychiatrist) familiar with OCD treatment should be considered, especially if diabetes re-education does not prove effective in reducing obsessive thoughts, behaviors, or feelings of general anxiety. Caution should be exercised in diagnosing OCD-like symptoms, as regimen behaviors contain similar characteristics, such as repetition, and are aimed at achieving control over a perceived threat.

FoH and hypoglycemia unawareness often co-occur, and interventions aimed at treating one often benefit both (69). FoH may explain avoidance of behaviors associated with lowering glucose such as increasing insulin doses or frequency of monitoring. If FoH is
identified and a person does not have symptoms of hypoglycemia, a structured program, Blood Glucose Awareness Training, delivered in routine clinical practice can improve A1C, reduce the rate of severe hypoglycemia, and restore hypoglycemia awareness (70,71). Such improvements in disease state have been shown to reduce diabetes distress and improve psychological well-being (69,72,73).

Occurrence of severe hypoglycemia has been shown to be associated with PTSD and PTSD-like and panic disorder symptoms (74,75). The potential for increased prevalence of PTSD and panic disorder in this population, though not well studied, is intuitive given the potentially life-threatening nature of the disease, particularly for those who use exogenous insulin. Given that potential stimuli for PTSD-like symptoms are recurrent for PWD, PTSD should be considered among other anxiety disorders.

Disordered Eating Behavior: Clinical and Subclinical

**Recommendations**

- Providers should consider re-evaluating the treatment regimen of people with diabetes who present with symptoms of disordered eating behavior, an eating disorder, or disrupted patterns of eating.
- Consider screening for disordered or disrupted eating using validated screening measures when hyperglycemia and weight loss are unexplained by self-reported behaviors related to medication dosing, meal plan, and physical activity.

Estimated prevalence of disordered eating behaviors and diagnosable eating disorders in PWD varies (51,76,77). PWD with diagnosable eating disorders have high rates of comorbid psychiatric disorders (78). People with type 1 diabetes and eating disorders have high rates of diabetes distress and FoH (79). For people with type 1 diabetes, insulin omission causing glycosuria in order to lose weight is the most commonly reported disordered eating behavior (80,81), and in people with type 2 diabetes, bingeing (excessive food intake with an accompanying sense of loss of control) is most commonly reported. For people with type 2 diabetes treated with insulin, intentional omission is also frequently reported (82). Binge eating disorder has been found to be more likely in PWD than in the nondiabetes population, though studies of prevalence in specific diabetes samples show varying rates (77,83). Other diagnostic categories of eating disorders have a very low prevalence in PWD (77).

Potential confounders to the identification of symptoms of disordered eating are behaviors that are prescribed as part of treatment (e.g., carbohydrate counting and calorie restriction), behaviors or effects that are part of the disease (e.g., loss of control over satiety regulation secondary to disease processes), and adverse effects of treatment such as excessive hunger secondary to hypoglycemia. When evaluating symptoms of disordered or disrupted eating in PWD, etiology and motivation for the behavior should be considered (51,84). For example, missed insulin injections as a result of suboptimal self-management differ significantly from intentional medication omission to produce weight loss. Assessment and screening of disordered and disrupted eating requires methods that account for treatment prescription, regimen behaviors, and diabetes-specific eating problems attributable to disease processes (see Table 2). If night eating syndrome, which is recurrent eating at night either after awakening from sleep or excessive eating after dinner, is diagnosed, changes to the medication regimen are required until maladaptive eating patterns can be modified (85). Adjunctive medication such as glucagon-like peptide 1 receptor agonists (86) may not only help individuals meet glycemic targets but also help regulate hunger and food intake, thus having the potential to reduce uncontrollable hunger and bulimic symptoms.

**Serious Mental Illness**

**Recommendations**

- Incorporate monitoring of diabetes self-care activities into treatment goals in people with diabetes and serious mental illness.

Studies of people with serious mental illness, particularly schizophrenia and other thought disorders, show significantly increased rates of type 2 diabetes (87). People with schizophrenia should be monitored for type 2 diabetes because of the known comorbidity. Disordered thinking and judgment can be expected to make it difficult to engage in behaviors that reduce risk factors for type 2 diabetes, such as restrained eating for weight management. Individuals with major psychiatric disorders may need consistent monitoring and oversight in their diabetes management, even if thought disorders remit. Coordinated management of diabetes or prediabetes and serious mental illness is recommended to achieve diabetes treatment targets. In addition, those taking olanzapine require greater monitoring because of an increase in risk of type 2 diabetes associated with this medication (88). Further study is needed to examine the association of other antipsychotic medications with the onset of diabetes and glycemic management (48,89).

**LIFE COURSE CONSIDERATIONS**

PWD are diagnosed earlier (e.g., type 2 diabetes in childhood) (90) and living longer (48). At each point in the life course, providers should consider which resources and accommodations are needed to maximize disease outcomes and well-being. In particular, identification of psychosocial factors influencing self-management are recommended (e.g., culture, environment, social determinants, life roles and responsibilities, and interpersonal dynamics, as well as person-based characteristics such as sex, race/ethnicity, age, language, and socioeconomic status) (91).

**Youth and Emerging Adults**

**Recommendations**

- At diagnosis and during routine follow-up care, consider assessing psychosocial issues and family stresses that could impact diabetes management and provide appropriate referrals to trained mental health professionals, preferably experienced in childhood diabetes.
Given the rapid and dynamic nature of cognitive, developmental, and emotional changes in youth, early detection of depression, anxiety disorders, eating issues, and learning disabilities enhance the range and effectiveness of potential treatment options and may help to minimize adverse effects on diabetes management and disease outcomes.

Providers should consider monitoring youth and their parents about social adjustment (peer relationships) and school performance to determine whether further evaluation is needed. B

Consider assessing youth with diabetes for generic and diabetes-related distress starting at about 7–8 years of age. B

Providers should encourage developmentally appropriate family involvement in diabetes management tasks for children and adolescents, recognizing that premature transfer of diabetes care to the child can result in poor self-management behaviors and deterioration in glycemic management. A

Consider the inclusion of children in consent processes as early as cognitive development indicates understanding of health consequences of behavior. E

Adolescents may have time by themselves with their care provider(s) starting at age 12 years. E

Providers should consider initiating discussions about care transition to an adolescent medicine/transition clinic/adult provider no later than 1 year prior to starting the transfer but preferably during early adolescence (~14 years of age). E

Consider monitoring support from parents/caretakers of emerging adults with diabetes and encouraging instrumental support (e.g., ordering supplies) and collaborative decision making among caregivers. E

Starting at puberty, preconception counseling should be incorporated into routine diabetes clinic visits for all females of childbearing potential. A

Consider counseling males, starting at puberty, regarding adoption of a healthy lifestyle to reduce risk for sexual dysfunction. E

Because youth are dependent on social support systems (family and care providers) and must eventually transition to independent diabetes self-management, their families and related social networks need to be included in psychosocial assessment and treatment (92–94). Parents of children with type 1 diabetes are prone to high rates of depression, especially around the time of diagnosis (95,45). Persistence of parental depression is associated with poorer child adjustment and diabetes management, especially in younger children (96). Teaching family members effective problem-solving and conflict-resolution skills can improve diabetes management and facilitate better glycemic management, with the potential to reduce diabetes distress (92).

The adolescent years are known for disruption in diabetes care and communication between family members, youth, and providers. Hallmarks of normal adolescence are increased independence in decision making and turning to the peer group for validation of self-concept and self-worth. Wishing to “fit in” may contribute to youth hiding or minimizing diabetes care behaviors, thereby compromising management in the school setting (97). Cognitive development and medical decision-making skills will impact a wide variety of risk-taking behaviors and acceptance of self-management behaviors into daily life (98,99). Suboptimal glycemic management should not automatically be attributed to adolescent rebellion or lack of concern for health. A thorough age-appropriate psychosocial evaluation and review of the medical regimen will suggest targets for modification to facilitate self-management and well-being. If the adolescent is resistant to accepting support from clinicians, family, and friends, the possibility of a more serious psychological issue must be considered and evaluated.

Although legal and ethical issues of youth accepting or refusing treatment components (e.g., an insulin pump) has not been extensively studied, these issues will undoubtedly surface in the process of treatment decisions. Thus, the issue of treatment consent must be considered when making regimen choices. Although cognitive abilities vary, the ethical position often adopted is the “mature minor rule,” whereby children after age 12 or 13 years who appear to be “mature” ought to have the right to consent or to withhold consent to general medical treatment, except in cases in which refusal would significantly endanger health (99). Emerging technologies, such as phone and computer transmission of management data, can be useful in maintaining communication of information through non-confrontational channels and may provide a means for youth to communicate directly with care providers as they transition to more independent self-management (100).

Adolescents should have time by themselves with their care provider(s) starting at age 12 years. Care should be taken to respect a teen/young adult’s privacy, as lack of confidentiality is known to negatively affect adolescents’ health behavior, especially regarding what are considered taboo or risky behaviors (101). Discussions with adolescents should include questions about well-being in general, diabetes distress, and risk behaviors (e.g., substance use and sexual activity) (102,103).

Preconception counseling for females during reproductive years increases knowledge about diabetes-related risk, delays age of sexual initiation, decreases unprotected sex, and improves preconception care and health (104,105). Less research is available regarding sexual health for males, particularly in youth; however, males with diabetes have a threefold increased risk of erectile dysfunction compared with men who do not have diabetes (106,107). Open and factual discussions of these topics facilitate future comfort in disclosing any concerns regarding sexual function. As less frequent attendance to diabetes care visits is typical in the 18- to 30-year-old age-group, screening regarding risk behaviors may be necessary at each visit.

### Adults

#### Recommendations

- In the care of adults with childbearing potential, include a discussion of life choices that could be impacted by diabetes self-management, such as pregnancy and sexual functioning. B
- Providers should consider assessing for the presence of social support providers (e.g., family, peer support, lay diabetes educators/caretakers) who may facilitate self-management behaviors, reduce burden of illness, and improve diabetes and general quality of life. B
As people enter adulthood, establishment of a work role, intimate partnering, childbearing, and parenting are typical life tasks (7). Living with and self-managing diabetes can be expected to impact all life-course decisions for PWD and their partners. PWD may question whether intimate partnering and biological parenthood are viable in the context of their health status (108). High-quality relationships with and diabetes management support from intimate partners improve diabetes-specific and general quality of life, self-management behaviors, and metabolic outcomes (7). Partner roles may change if functional ability is impacted by poor health outcomes (109). Sexual dysfunction is often associated with depression and is routinely reported in clinical encounters (see DEPRESSION). In one study of individuals with type 1 diabetes, sexual dysfunction was reported in as many as 50% of male patients (107). It is beyond the scope of these guidelines to discuss psychosocial issues related to pregnancy and gestational diabetes mellitus (see ref. 110).

Older Adults

Recommendations

- Annual screening for early detection of mild cognitive impairment or dementia is indicated for adults aged 65 years or older. B
- Assessment of neuropsychological function and dementia using available standards for conducting evaluations of dementia and age-related cognitive changes is recommended. E
- Within the primary care setting, a collaborative care model, incorporating structured nurse care management intervention, is recommended for treatment of comorbid depression in older adults with diabetes. A

Older adults with diabetes may be functional and cognitively intact and have significant life expectancy, and they may not require psychosocial care beyond that of younger adults. However, older adults may have issues particular to their age, such as advanced disease, cognitive dysfunction, complex treatment regimens, comorbid health conditions, functional impairment, limited social and financial resources, and depression (111). Meeting glycemic targets may be impacted by unique nutritional requirements, physical limitations (such as reduced sensation), memory loss, and low literacy and numeracy skills. As older adults with diabetes may receive care support from family members and staff at assisted living facilities, during hospitalizations, and in long-term care facilities, the treatment regimen must consider context and caregiver capacities. Support people (e.g., adult children, caretakers) who provide instrumental, social, or emotional support for older adults with diabetes should be included in diabetes management discussions and shared decision making.

Psychosocial targets for intervention include self-management support, access to health care, and financial and emotional support, as well as day-to-day facilitation of physical and mental well-being. Within the primary care setting, older adults with diabetes and comorbid depression are likely to benefit from a collaborative care intervention approach, which uses a nurse care manager supervised by a primary care physician and psychiatrist (58,112,113).

Compared with older adults without diabetes, those with the disease are at an increased risk of mild cognitive impairment (114). A meta-analysis of prospective and observational studies in PWD showed a 73% increased risk of all types of dementia, a 56% increased risk of Alzheimer dementia, and a 127% increased risk of vascular dementia compared with individuals without diabetes (115). For detection of cognitive dysfunction, people >65 years of age should receive cognitive screening annually within routine health care, using recommended procedures and resources for practitioners (Table 2) (116–118). Medical providers should address reversible contributors to cognitive dysfunction including but not limited to depression, combinations of medications, thyroid disease, and delirium (116).

PWD in Need of Special Considerations

People With Diabetes Complications and Functional Limitations

Recommendation

- Care providers should consider routinely monitoring for chronic pain associated with diabetes complications and its impact on quality of life. Appropriate pain management interventions, including referral to a behavioral health provider for pain management strategies, should be provided. B

Diabetes complications, including peripheral neuropathy, foot ulcers, limb amputation, diabetic kidney disease, vision impairment, stroke, and heart attack, are associated with depression, anxiety, reduced autonomy, role impairment, and reduced overall physical function and quality of life (119–122). Fear of complications is a major component of diabetes distress, and depression associated with complications increases mortality (123,124). Care should be taken when discussing rates, causes, and probability of diabetes complications. Providers should acknowledge that discussing complications can be uncomfortable and distressing and should encourage dialogue over multiple visits.

Chronic pain from neuropathy is associated with prevalent psychosocial distress, depression, and sleep disturbance (125,126). Care providers should routinely monitor for chronic pain associated with diabetes complications and its impact on quality of life. Appropriate pain management therapies, including referral to a mental health provider for pain self-management strategies, should be provided.

Onset of diabetes complications threatens independence, self-image, and quality of life. To identify the level of self-care independence and necessary adjunctive supports, providers should evaluate whether individuals have a cognitive impairment impacting the ability to do a task (e.g., poor memory or information processing), a functional limitation that interferes with task performance (e.g., poor motor control or impaired vision), a disability that impacts doing the task without assistance or accommodation (e.g., paralysis or amputation); or a combination of the above (127). Unless limitations are profound and/or formal evaluation clearly determines decreased capabilities, providers should not assume a patient is unable to self-manage. Reassessment of self-management efficacy, abilities, and need for adaptations or assistance is indicated with the onset or worsening of functional limitations or disabilities including vision, hearing, or physical impairment. For example, people with
visual disability may benefit from materials that meet low-vision guidelines (128).

Bariatric Surgery

**Recommendations**

- People presenting for bariatric surgery should receive a comprehensive mental health assessment by a professional familiar with weight-loss interventions and postbariatric surgery behavioral requirements. B
- If psychopathology is evident, particularly suicidal ideation and/or significant depression, postponement of surgery should be considered so that patient suffering can be addressed before adding the burden of recovery and lifestyle/psychosocial adjustment. E
- For people who undergo bariatric surgery, consider assessment for need of ongoing mental health services to help them adjust to medical and psychosocial changes postsurgery. C

Bariatric surgery supports weight loss in people with severe obesity, often with adjunctive remission of type 2 diabetes (129,130). People presenting for bariatric surgery have increased rates of depression and other major psychiatric disorders compared with healthy people and are prone to clinically significant body image disorders, sexual dysfunction, and suicidal behavior (131). Psychosocial well-being and depression, anxiety, and self-care behaviors should be an essential component of the pre- and postsurgical evaluation and monitored during the year after surgery (132).

People with preoperative psychopathology should be assessed at regular intervals following surgery to optimize control over psychiatric conditions and to ensure that psychiatric symptoms do not interfere with weight loss and/or lifestyle change. History of eating patterns, disordered eating behaviors, and clinically significant eating disorders, including night eating syndrome, should be evaluated and monitored pre- and postsurgically at regularly scheduled medical management visits. Bariatric surgery in and of itself does not alleviate psychiatric symptoms, but it may result in remission of food addiction among those who were extremely obese (133).

**CONCLUSIONS: PSYCHOSOCIAL CARE IN CONTEXT**

PWD must master many complex tasks and behaviors to successfully incorporate diabetes care into daily life. Disease management cannot be successful unless the lifestyle and emotional status of the individual is taken into consideration. As detailed in this Position Statement, routine monitoring and screening for diabetes distress, depression, anxiety, eating issues, and appropriate levels of social and family support, as well as contextual factors that impede implementation of care, are clearly indicated. Effectiveness of regimen and care provision will be enhanced by the inclusion of behavioral health services into the diabetes treatment team. Collaborative care shows the most promise for supporting physical and behavioral health outcomes.

The integration of screening into clinical settings, with appropriate referrals to qualified mental health professionals for reasons noted in Table 1, can improve outcomes. Challenges to accomplishing this standard of care are considerable, including too few qualified mental health professionals who understand living with diabetes and medical care models that are not conducive to team care. Those in most need, the disadvantaged lower socioeconomic level families, have the poorest access to diabetes services (134). The psychosocial services recommended are reimbursable for mental health providers in routine medical care under Centers for Medicare & Medicaid Services (CMS). In addition, new CMS reimbursement is planned for the Collaborative Care Model in routine care. With changing laws mandating minimum standards and payment for diabetes care services (135) and the availability of low-cost insurance that also reimburses preventive services, this balance is changing, allowing the practitioner to incorporate previously unsupported services into routine practice. Knowing how to evaluate and treat common psychosocial issues that impact PWD can inform routine care. The integration of psychosocial care and ensuring access to services will benefit the PWD and the care team.

Acknowledgments. The process leading to a Position Statement regarding guidelines for the psychosocial care of PWD originated during the tenure of Dr. Richard Rubin as President, Health Care & Education, ADA, 2006–2007. His leadership in the field of behavioral diabetes helped establish the importance of psychosocial care for success in promoting the health and well-being of those affected by diabetes. The authors also thank Dr. David Marrero, President, Health Care & Education, ADA, 2013–2015, for his support of this effort.

The authors acknowledge the following contributors to the book Psychosocial Care for People with Diabetes, which provided the foundation material for this article: Linda Gonder-Frederick, Daniel Cox, Sarsimran Singh, Jaclyn Shepard, Clarissa Holmes, Christopher Ryan, Garry Welch, Sofia Zagarian, Paula Trief, Lori Laffel, Judith Wylie-Rosett, Brook Bailey, Thomas Wadden, Lucy Faulconbridge, David Sarwar, Richard Rubin, Tim Wysocki, Barbara Anderson, David Marrero, Jill Weissberg-Benchell, Suzanne Bennett Johnson, and Linda Delahanty.

**Funding.** M.D.G. was funded in part by the National Institute of Diabetes and Digestive and Kidney Diseases (R18-DK-052765). J.S.G. is supported by grants from the National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health (R01-DK-104845, R18-DK-098742, and P30-DK-111022).

The content and views represent those of the authors and do not represent the position of the National Institutes of Health.

**Duality of Interest.** F.H.-B. is a member of the ADA Board of Directors. K.H. has served as a consultant to Bigfoot Biomedical and Johnson & Johnson Diabetes Institute and has received research support from Dexcom. M.P. has received research grants from Bristol-Meyers Squibb, Genentech, and Novo Nordisk; has received consulting fees from AstraZeneca, Calibra, Genentech, Eli Lilly, and Novo Nordisk; has received speaking honoraria from Novo Nordisk; and has participated in advisory panels for GlaxoSmithKline, Eli Lilly, and Novo Nordisk. No other potential conflicts of interest relevant to this article were reported.

**References**


41. Aikens JE. Prospective associations between emotional distress and poor outcomes in type 2 diabetes. Diabetes Care 2012;35:2472–2478


quality of life, work productivity, and medica-
tion adherence. Patient Prefer Adherence 2014;
8:683–692
74. Egede LE, Dismuke CE. Serious psychologi-
cal distress and diabetes: a review of the litera-
75. Trief PM, Ouimette P, Wade M, Shanahan P,
Weinstock RS. Post-traumatic stress disorder and
diabetes: co-morbidity and outcomes in a male
76. Pinhas-Hamiel O, Hamiel U, Levy-Shraga Y.
Eating disorders in adolescents with type 1 di-
abetes: Challenges in diagnosis and treatment.
77. Papelbaum M, Appolinário JC, Moreira
RdeO, Ellinger VC, Kupfer R, Coutinho WF. Pre-
valence of eating disorders and psychiatric co-
morbidity in a clinical sample of type 2 diabetes
78. Hudson JI, Hiripi E, Pope HG Jr, Kessler RC.
The prevalence and correlates of eating disor-
ders in the National Comorbidity Survey Repli-
79. Martyn-Nemeth P, Quinn L, Hacker E, Park
H, Kujath AS. Diabetes distress may adversely
affect the eating styles of women with type 1 diabetes.
Acta Diabetol 2014;51:683–686
80. Pinsas-Hamiel O, Hamiel U, Greenfield Y,
et al. Detecting intentional insulin omission for
weight loss in girls with type 1 diabetes mellitus.
Int J Eat Disord 2013;46:819–825
81. Goebel-Fabbri AE, Fikkan J, Franko DL,
Pearson K, Anderson BJ, Weinger K. Insulin re-
striction and associated morbidity and mortality
in women with type 1 diabetes. Diabetes Care
2008;31:415–419
82. Weinger K, Beverly EA. Barriers to achieving
glycemic targets: who omits insulin and why?
Diabetes Care 2010;33:450–452
83. Crow S, Kendall D, Praus B, Thuras P. Binge
eating and other psychopathology in patients with
type II diabetes mellitus. Int J Eat Disord
2003;30:222–226
84. Petersson CM, Fischer S, Young-Hyman D.
Topical review: a comprehensive risk model for
disordered eating in youth with type 1 diabe-
85. Morse SA, Clechanowski PS, Katon WJ, Hirsch IB.
Isn’t this just bedtime snacking? The potential
adverse effects of night-eating symptoms on
treatment adherence and outcomes in patients
86. Garber AJ. Novel GLP-1 receptor agonists for
diabetes. Expert Opin Invest Drugs 2012;
21:45–57
87. Suvisaari J, Perälä J, Saarni SI, et al. Type 2
diabetes among persons with schizophrenia and
other psychiatric disorders in a general popu-
lation survey. Eur Arch Psychiatry Clin Neurosci
2008;258:129–136
88. Koro CE, Fedder DO, L’Italien GJ, et al. As-
sessment of long-term effect of olanzapine and
risperidone on risk of diabetes among pa-
ts with schizophrenia: population based
nested case-control study. BMJ 2002;325:243
89. Schulte PF, Boex JT, Doodeman HJ, van
Haestl IM, Cohen D. Risk of new-onset diabetes
after long-term treatment with clozapine in
comparison to other antipsychotics in patients
with schizophrenia. J Clin Psychopharmacol
2016;36:115–119
90. Dabelea D, Mayer-Davis EJ, Saydah S, et al.;
SEARCH for Diabetes in Youth Study. Prevalence
of type 1 and type 2 diabetes among children
and adolescents from 2001 to 2009. JAMA 2014;
311:1778–1786
disparities in endocrine disorders: biological,
clinical, and nonclinical factors—an Endocrine
Society scientific statement. J Clin Endocrinol
Metab 2012;97:E1579–E1639
Effects of behavioral family systems therapy for
diabetes on adolescents’ family relationships,
treatment adherence, and metabolic control.
J Pediatr Psychol 2006;31:928–938
93. Anderson B, Ho J, Brackett J, Finkelstein D,
Laffel L. Parental involvement in diabetes man-
gement tasks: relationships to blood glucose
monitoring adherence and metabolic control in
young adults with insulin-dependent diabe-
94. Gruhn MA, Lord JH, Jaser SS. Collaborative
approach to diabetes care in children and adoles-
cents differentially predicts outcomes in adolescents with type 1 diabe-
tes. Health Psychol. 21 March 2016 [Epub ahead
of print]
95. Streisand R, Mackey ER, Elliot BM, et al. Pa-
rental anxiety and depression associated with
caring for a child newly diagnosed with type 1
diabetes: opportunities for education and coun-
96. Ducat L, Rubenstein A, Philipson LH, Anderson BJ. A review of the mental health is-
issues of diabetes conference. Diabetes Care
2015;38:333–338
97. Silverstein J, Klingensmith G, Copeland K,
et al.; American Diabetes Association. Care of
children and adolescents with type 1 diabetes:
a statement of the American Diabetes Asso-
98. Kuther TL. Medical decision-making and mi-
nors: issues of consent and assent. Adolescence
2003;38:343–358
99. Coleman DL, Rosoff, PM. The legal authority
of mature minors to consent to general medical
治疗. Pediatrics 2013;131:786–793
100. Driscoll, KA, Young-Hyman, D Use of tech-
nology when assessing adherence to diabetes self-management behaviors. Curr Diab Rep
2014;14:521
101. Peters A, Laffel L; American Diabetes As-
sociation Transitions Working Group. Diabetes
care for emerging adults: recommendations for
transition from pediatric to adult diabetes care
care systems. Diabetes Care 2011;34:2477–2485
102. Hanna KM, Stupiansky NW, Weaver MT,
Slaven JE, Stump TE. Alcohol use trajectories
after high school graduation among emerging
adults with type 1 diabetes. J Adolesc Health
2014;55:201–208
Risky business: risk behaviors in adolescents with
term effects of preconception counseling (PC) dur-
ing adolescence on family planning vigilance (FPV)
in adult women with type 1 diabetes (TID): 15 year
follow-up. Diabetes 2014;63(Suppl. 1):A198
counseling program on intentions and