

A Practical Guide to Addressing Mental Health in People With Diabetes for the Diabetes Care and Education Specialist

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In the United States, 21% of individuals are affected by mental health disorders.¹ Individuals with diabetes are at greater risk for depression and other psychosocial challenges compared to the general population. With the COVID-19 pandemic, researchers have found an increase in the prevalence of depressive and generalized anxiety symptoms and psychological distress in people with diabetes (PWD), highlighting the need for mental health support.²⁻⁴

Diabetes care and education specialists (DCEs) have identified depression, anxiety, diabetes distress, mild cognitive impairment (MCI), intellectual disabilities, maladaptive eating behaviors, dementia, and psychotic disorders as mental health conditions most commonly encountered in practice.⁴ In a recent survey, most DCEs reported feeling somewhat comfortable knowing when to refer a person with diabetes (PWD) to a mental health professional.⁴ A general lack of mental health resources and access to mental health professionals were reported as barriers in the provision of care related to mental health for PWD.⁴ It is important for DCEs to feel equipped to support PWD who are also experiencing mental health concerns.

Referrals to a psychologist, social worker, or psychiatrist are common interventions for individuals with diabetes who are experiencing mental health concerns. However, an appropriate

referral does not end the interaction between DCEs and individuals identified with these difficulties. Diabetes care and education specialists need resources that complement the psychosocial management of PWD. The development of enhanced sensitivity to mental health concerns, including reduced stigma and awareness of appropriate mental referral opportunities, may equip DCEs to more fully offer a holistic, person-centered approach to PWD and improve coordination and continuity across health care disciplines.

This article aims to provide DCEs with a practical guide to help support persons with or at risk for diabetes and concurrent psychosocial concerns. This article is also a powerful affirmation of the strong commitment of the ADCES to pursue holistic, comprehensive diabetes self-management education and support (DSMES) for PWD.

Psychosocial Considerations for PWD

People with diabetes experience increased mental health conditions compared to the general population.³ The most common concerns that need to be assessed include depression, diabetes distress, anxiety, disordered eating/eating disorders, and short- and long-term neurocognitive changes associated with hypoglycemia and hyperglycemia⁵ (Table 1). Recently, events like the COVID-19 pandemic

Table 1 Assessment and Management of Diabetes-Related Psychosocial Conditions.⁶

Type of Clinical Presentation	Assessment Tools	Clinical Thresholds	Referral or Treatment Options
Diabetes-related distress	Diabetes Distress Scale (DDS) Fisher L, Hessler DM, Polonsky WH, Mullan J. When is diabetes distress clinically meaningful? Establishing cut points for the Diabetes Distress Scale. <i>Diabetes Care</i> . 2012;35:259-64.	Mean item scores are calculated across all items and within each subscale (range 0-3.0). Scores of 0-2.0 are considered little to no distress, 2.1-2.9 moderate distress, and >3.0 high distress associated with elevated A1C. DDS-17: mean item score \geq 3.0	Problem-solving approaches to identify barriers, address educational gaps, and identify strategies for proximal next steps.
	Problem Areas in Diabetes (PAID) Polonsky WH, Fisher L, Earles J, et al. Assessing psychosocial distress in diabetes: development of the Diabetes Distress Scale. <i>Diabetes Care</i> . 2005;28(3):626-631.		
Depression	Patient Health Questionnaire (PHQ-9) Spitzer RL, Williams JBW, Kroenke K, et al. Utility of a new procedure for diagnosing mental disorders in primary care: the PRIME-MD 1000 study. <i>JAMA</i> . 1994;272:1749-1756.	Designed to be a screening tool to identify likely cases of clinically meaningful depression. Items are summed to form a total score. Scores >10 are considered clinically meaningful.	Referral for additional assessment by a mental health professional
	Ask Suicide-Screening Questions (ASQ) Horowitz LM, Bridge JA, Teach SJ, et al. Ask Suicide-Screening Questions (ASQ): a brief instrument for the pediatric emergency department. <i>Arch Pediatr Adolesc Med</i> . 2012;166(12):1170-1176.	Ages 10-24 y	
Generalized anxiety disorder	Beck Anxiety Inventory Beck AT, Steer RA. <i>Beck Anxiety Inventory Manual</i> . Psychological Corporation; 1993.	A score of 0-9 indicates minimal symptoms, 10-16 indicates mild symptoms, 17-29 indicates moderate level of anxiety symptoms, and 30-63 indicates severe anxiety symptoms.	Referral for additional assessment by a mental health professional
	Generalized Anxiety Disorder-7 (GAD-7) Spitzer RL, Kroenke K, Williams JBW, Lowe B. A brief measure for assessing generalized anxiety disorder: the GAD-7. <i>Arch Intern Med</i> . 2006;166(10):1092-0977.	Mild anxiety symptoms are associated with a score of 5-9, score of 10-14 correlates with moderate anxiety, score >15 correlates with severe anxiety.	Referral for additional assessment by a mental health professional
Fear of hypoglycemia	Gonder-Frederick L, Schmidt K, Vajda K, Greear M, Singh H, Shepard J, Cox D. Psychometric properties of the Hypoglycemic Fear Survey-II for adults with type 1 diabetes. <i>Diabetes Care</i> . 2011;34:801-806.		Problem-solving approaches to identify barriers, address educational gaps, and identify strategies for proximal next steps If symptoms persist, referral to a mental health professional for additional assessment and treatment
Disordered eating behaviors	Markowitz J, Butler DA, Volkening LK, Antisdell J, Anderson BJ, Laffel L. Brief screening tool for disordered eating in diabetes: internal consistency and external validity in a contemporary sample of pediatric patients with type 1 diabetes. <i>Diabetes Care</i> . 2010;33(3):495-500.	A clinical cutoff score of >20 indicates the need for a more extensive evaluation of disordered eating behaviors, adherence to regimen (particularly medication dosing), and psychological well-being.	Referral for additional assessment by a mental health professional
Anorexia nervosa/bulimia	Garner DM. <i>The Eating Disorder Inventory-3: Professional Manual</i> . Psychological Assessment Resources, Inc; 2004.	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.	Referral for additional assessment by a mental health professional
Serious mental illness (eg, schizophrenia)			Referral for additional assessment by a mental health professional

have also been shown to have a negative impact on some of these components of mental health in individuals with diabetes, such as worsened depressive and anxiety symptoms.^{2,3}

Depression

People with diabetes report higher rates of depression than the general population, with the Centers for Disease Control and Prevention reporting that 21.3% of adults with type 1 diabetes and 27% of adults with type 2 diabetes are affected by elevated depressive symptoms compared to 7.6% of persons over aged 12 years in the general population.^{6,7} Studies have found 8% to 15% of adults with diabetes experience depression of disabling severity.⁸ Similarly elevated rates of depression and heightened risk for suicidal ideation and thoughts of self-harm are found in adolescents with diabetes.⁹⁻¹³

Taken collectively, PWD have a 2 to 3 times increased likelihood of experiencing depression than individuals without diabetes.¹⁴ Research on the course of depression in PWD suggests that depressive episodes are longer in duration and more persistent than those observed in the general population. Table 2 shows the symptoms associated with depression. Recent research has noted that the average duration of a major depressive episode was 92 weeks in a sample of adults with type 2 diabetes compared to 22 weeks

in a general population sample.^{15,16} For adults with type 2 diabetes, data reflect relapse rates of approximately 79% once an episode of depression develops.¹⁷

Data also reflect that depression has a bidirectional relationship with diabetes. Depression occurring prior to the onset of type 2 diabetes confers a 38% increased risk of developing type 2 diabetes later in life.¹⁸ Likewise, the development of type 1 or type 2 diabetes confers an increased risk of depression.¹⁹ However, the duration of episodes of depression is comparable whether the depressive episode occurs before or after the onset of diabetes.¹⁵ Although the research about the duration of depression is from the late 1990s and early 2000s, the known impact of depression on diabetes outcomes is significant. Elevated depressive symptoms and depression are associated with worsened glycemic management and increasing glycemic excursions, greater severity of the full range of diabetes complications, inconsistent diabetes self-management behaviors, more significant functional disability, and greater risk of earlier mortality.²⁰⁻²⁴

Approximately 25% to 50% of individuals with comorbid diabetes and depression will receive a mental health diagnosis and form of treatment.^{17,25} Because there may be overlap between depression and diabetes distress, follow-up for a positive depression screen should include diabetes distress screening. Depression can be treated effectively in a PWD using tailored behavioral interventions and standard antidepressant medications. Evidence from multiple clinical trials has demonstrated that cognitive behavioral therapy (CBT) delivered through individual counseling or telehealth-based therapy sessions effectively improves depression outcomes.²⁶⁻²⁸ A combination treatment of CBT and antidepressant medication has shown effectiveness in improving depression outcomes.²⁸ The combination of CBT and community-based exercise interventions tailored for diabetes and delivered by community mental health and exercise professionals is the

Table 2 Symptoms Associated With Depression.¹²¹

Depressed mood
Loss of interest or pleasure in activities/relationships
Changes in appetite and/or weight (increase or decrease)
Changes in sleep (increase or decrease)
Decrease in energy and/or motivation
Psychomotor slowing or agitation
Difficulty with concentration, memory, and decision-making
Feelings of worthlessness, helplessness, and/or excessive guilt
Negative thinking and hopelessness
Irritability
Somatic symptoms
Thoughts of death, including suicidal ideation, intent, and/or plan

only modality that has shown effectiveness in improving depression and A1C values.²⁶

The DCES should feel comfortable providing education on the co-occurrence of diabetes and depression symptoms. They should be prepared to screen all individuals with diabetes for depression symptoms and to refer individuals who exhibit symptoms consistent with depression to an appropriate professional for assessment, diagnosis, and management of depression through therapy services, medication, or both.⁴

Diabetes Distress

The various burdens associated with diabetes and its management combined with the stress or anxiety of disease progression and complications can result in diabetes distress. Self-management activities such as blood glucose monitoring (BGM), medication dosing and administration, engaging in physical activity, and choosing eating patterns to achieve glucose targets often feel overwhelming for PWD.^{30,31}

Diabetes distress has a reported prevalence of 33% to 50%.^{8,14} Individuals who develop diabetes distress often have difficulty maintaining optimal self-care behaviors and higher A1C values.²⁹ Furthermore, diabetes distress is present in approximately a third of adolescents and may also affect parents of youth with diabetes, resulting in similar adverse outcomes.^{31,32}

Diabetes care and education specialists should routinely administer assessments for diabetes distress in PWD, especially those who are not meeting individualized goals or experiencing complications (see Table 1). Individualized diabetes education focused on particular self-management topics may help individuals with diabetes distress improve relevant outcomes. Continued difficulty with self-management behaviors warrants referral to a mental health professional for further assessment.⁷

Anxiety

Adults with diabetes have been found to have elevated rates of anxiety symptoms and conditions, including generalized anxiety disorder

(GAD) and anxiety presentations specific to living with diabetes or acute diabetes complications (eg, fear of needles, fear of hypoglycemia).³³ Similarly, youth with type 1 and type 2 diabetes are at risk for elevated anxiety levels.³⁴

Rates of anxiety symptoms are 20%, with higher rates observed in studies that have measured anxiety symptoms using symptoms checklists or questionnaires such as the GAD-7. Similar rates have been observed in adults with type 1 and type 2 diabetes, with evidence pointing to the persistence of anxiety symptoms over time.³⁵⁻³⁷ In addition, posttraumatic stress disorder has been found in earlier studies to be associated with an increased risk for the development of type 2 diabetes.³⁸⁻⁴⁰

The impact of anxiety symptoms can be significant for a PWD. Anxiety is associated with inconsistent diabetes self-management behaviors, decreased quality of life in general, and elevated A1C values. Anxiety specific to the experience of diabetes, such as fear of hypoglycemia or needle phobia, can significantly impede self-care activities.⁴¹⁻⁴³ For example, fear of hypoglycemia is associated with intentional insulin omission or underdosing insulin to prevent low blood glucose (BG) values and associated counter-regulatory hormonal symptoms (eg, the fight or flight response).³⁹ Fear of needle sticks can affect BGM, insulin injections, and the placement of devices, such as continuous glucose monitoring sensors and insulin pumps.⁴³

Cognitive behavioral therapy (CBT) and mindfulness training are the treatments of choice for individuals who are experiencing anxiety disorders that impair social, occupational, or medical self-care functioning.⁴³ Systematic desensitization approaches that allow PWD to reestablish trust with their BGM and insulin delivery devices can effectively help PWD reestablish improved self-care. For example, BG awareness training is an empirically validated CBT approach for identifying physical and neuroglycopenic symptoms of hypoglycemia and hyperglycemia early in the course so that PWD

can use them as cues for BGM.⁴⁴ Diabetes care and education specialists should be aware of the approaches mentioned here and refer individuals exhibiting symptoms consistent with anxiety to the appropriate mental health professional.

Disordered Eating and Eating Disorders

Food and eating behaviors are central in treating and managing type 1 and type 2 diabetes. Managing diabetes requires a heightened awareness of food amounts, types, and effects on glucose levels that is idiopathic and not typical of individuals without diabetes. Food is also proactively used as medicine to counterbalance the effect of insulin and physical activity on BG levels.

Decision-making associated with food choices in conjunction with the need to eat at times that are not necessarily dictated by hunger cues can contribute to a complicated relationship with food that may result in disordered eating behaviors (maladaptive feeding behaviors related to diabetes self-management) or psychiatric eating disorders (ie, anorexia nervosa, bulimia, binge eating disorder).⁴⁵ Individuals with diagnosable eating disorders necessarily have disordered eating behaviors, although some individuals with disordered eating may not meet the threshold for a diagnosable condition. The maladaptive patterns, even if not diagnosable as an eating disorder, continue to have important implications for PWD and their DCEs.

Rates of disordered eating behaviors are as high as 51.8% among samples of PWD that primarily consist of females with type 1 diabetes compared to 48.1% for adolescents without diabetes.^{46,47} Similarly, rates of psychiatric eating disorders are more elevated in adolescents and adults with type 1 and type 2 diabetes compared to sample populations without diabetes.⁴⁷ Globally, the prevalence of psychiatric eating disorders among teens and adults with type 1 and type 2 diabetes is estimated at 6.4%, with bulimia and binge eating disorders occurring at higher rates than anorexia.⁴⁸ The prevalence among teens and adults with type 1 and type 2 diabetes is estimated

at 6.4%, with bulimia and binge eating disorders occurring at higher rates than anorexia.⁴⁷⁻⁴⁹

Treating disordered eating behaviors should involve DCEs addressing gaps in education and examining aspects of the treatment regimen that may be contributing to disordered eating. For example, individuals who may be chasing their insulin with food (eating to avoid hypoglycemia) will benefit from a review of insulin prescriptions in conjunction with the timing of eating, physical activity, and insulin action to reduce the need to eat unwanted calories.

Treating eating disorders typically requires intensive psychological treatment that includes conventional CBT approaches that address thoughts, emotional distress, and behavioral choices related to eating, body image, and weight using a multidisciplinary approach.^{26,28} Adults with binge eating disorder may also benefit from evaluation of the appropriateness of medications (eg, glucagon-like peptide-1 [GLP-1] agonists) to address physiologic mechanisms that suppress signaling for satiety and promote grazing and binge eating behaviors.⁵⁰ It is important to note that more sophisticated medications that more readily allow one to modulate eating patterns through hunger cues are available.⁵¹

Substance Use Disorder

The relationship between diabetes and substance use disorders (SUDs) is complex, and research findings have been mixed.⁵² Some studies have suggested that individuals with diabetes may have slightly higher rates of SUDs compared to the general population, and other studies have not found a significant association.⁵³ Socioeconomic disparities may impact the co-occurrence of diabetes and SUDs given, for example, the elevated risk for type 2 diabetes coupled with the elevated risk for some SUDs among underresourced populations. Furthermore, PWD who experience diabetes distress may turn to substances as a way to cope with the challenges and stress associated with their diabetes diagnosis and/or its management.

Substance abuse can affect the cardiovascular

system, kidneys, and the peripheral vascular system. Additionally, alcohol, opiates, cocaine, and other stimulants can lead to hyperglycemia by disrupting insulin secretions and precipitate ketoacidosis.⁵³⁻⁵⁵ Cannabis use can affect glucose metabolism while also impacting appetite.⁵⁶ Additionally, illicit drugs and alcohol and nicotine may interfere with the effectiveness of diabetes medications and negatively impact self-care, leading to variable glycemic levels. Consequently, PWD who also use substances may have a higher rate of adverse effects, longer hospital visits, and more frequent and severe health complications.⁵⁵

People with diabetes with co-occurring SUDs require comprehensive and integrated care that addresses both conditions simultaneously.^{57,58} This requires a multidisciplinary team that provides both medical and psychological support. People with co-occurring diabetes and SUD are less likely to seek care than PWD without SUD.⁵⁹ Screening, Brief Intervention and Referral to Treatment is an evidence-based 3-step approach that includes screening for SUDs, providing a brief intervention, and referring for treatment. Periodic SUDs screenings should be completed and may target nicotine use (eg, Fagerstorm Test for Nicotine Dependence), alcohol dependence (eg, Alcohol Use Disorders Identification Test, CAGE, T-ACE during pregnancy), and broad substance use (eg, Alcohol Smoking and Substance Involvement Screening Test). Screenings should be followed by interventions including motivational interviewing to assess individuals' readiness for change. Lastly, care plans should be developed by an integrated team and include appropriate referrals. Treatment plans should also take glycemic variability due to SUDs into consideration. Given the complex risks associated with SUDs for PWD, it is imperative for DCEs to identify and support individuals with co-occurring disease states.

Cognitive Dysfunction and Dementia

Type 1 and type 2 diabetes are associated with cognitive dysfunction in older adults, with cognitive declines of aging evidenced earlier in those with diabetes than in the general

population. Compared to people without diabetes, PWD have a 73% increased risk of all types of dementia, a 127% increased risk of vascular dementia, and a 56% increased risk of Alzheimer's disease.⁶⁰⁻⁶² Diabetes is also associated with a higher risk of MCI, the stage of cognitive impairments between normal age-related cognitive decline and dementia.⁶³ Cognitive dysfunction may present as self-reported concerns about thinking skills, family-reported concerns, observed changes in the performance of everyday life activities and diabetes self-management behaviors, or changes in mood or personality.

Children with type 1 diabetes under aged 12 years may be at risk for cognitive dysfunction. Associated risk factors include early age at disease onset (before aged 5 to 7 years), repeated episodes of severe hypoglycemia, and extreme glycemic variability.^{60,64} Middle-aged adults with type 1 diabetes (aged 40 to 60 years) are also at increased risk of cognitive dysfunction, with microvascular complications as a primary risk factor.⁶⁴

In type 2 diabetes, cognitive dysfunction is observed in adults aged 40 years and older. Primary risk factors for cognitive dysfunction include vascular risks (atherosclerotic disease, cerebrovascular disease, history of stroke), unsuccessful achievement of glucose targets, and hyperinsulinemia.^{65,66} People with type 2 diabetes who are over aged 60 years may exhibit significantly higher rates of cognitive impairment than their counterparts without diabetes. In this age group, macrovascular disease may contribute the most to the risk of cognitive impairment due to microvascular complications, vascular risk factors, extreme glycemic variability, and hyperinsulinemia.^{65,66} Additionally, individuals with diabetes from underrepresented racial and ethnic groups have a higher risk of MCI and dementia than their White counterparts with diabetes.^{59,60}

Although the vast majority of individuals with diabetes will demonstrate similar cognitive abilities as those without diabetes, some children, adolescents, and young adults with

type 1 diabetes have exhibited mild decrements in academic skills and information processing speed.⁶⁷⁻⁶⁹ In middle-aged and older adults, type 2 diabetes is associated with dysfunction in fine motor skills, executive function, speed of information processing, verbal memory, and visual memory.⁷⁰ Cognitive dysfunction in working memory and information processing speed have been associated with a lower performance of instrumental activities of daily living in people with type 2 diabetes.⁷¹

Changes in cognitive skills, including information processing, fine motor skills, memory, and executive functions, may impact the speed, accuracy, and reliability of diabetes self-management. Older adults with diabetes should receive an annual dementia screening. If changes in cognition are observed or suspected in a PWD of any age, a referral to a professional for further evaluation and treatment is indicated.⁷² Screening for MCI can be completed in primary care setting, with positive screens indicating need for more through neuropsychological testing. More detailed professional training and guidance are available for dementia screening in primary care, utilizing routine visits or the Medicare annual

wellness visit.^{73,74} Table 3 contains categories of professionals available for referrals for cognitive evaluation and treatment and types of services provided.

When a PWD has mild cognitive dysfunction or has been diagnosed with MCI, the DCES should be aware of resources and methods available for presenting information appropriate for their understanding. Printed instructional materials can aid in information processing and reduce dependence on recall. Consensus criteria for adapting educational information for persons with lower health literacy also effectively reduce language processing demands for people with MCI.^{75,76}

In PWD with confirmed degenerative dementia, the primary task of the DCES is to monitor changes in their ability to perform diabetes self-management tasks and other self-care behaviors as dementia progresses. As cognitive impairment progresses, the DCES will help determine the necessary self-care adjustments to promote the completion of daily functional and self-management activities safely. In the early stages of dementia, the DCES can assist the individual and family in identifying a caregiver. Training or

Table 3 Referrals and Services for Cognitive Evaluation and Treatment.⁷²

Referrals for Cognition Services	Services Provided
Primary care professional or geriatrician	<ul style="list-style-type: none"> ○ Identification and treatment of acute medical condition(s) that cause reversible cognitive dysfunction (eg, delirium, polypharmacy, virus/pneumonia, or electrolyte, metabolic, or chemical imbalances) ○ Dementia screening and orders for full dementia workup (eg, labs, neuroimaging, cognitive evaluation) ○ Monitoring of cognitive decline
Neuropsychology or psychiatry	<ul style="list-style-type: none"> ○ Formal evaluations to identify, quantify, and diagnose type of cognitive dysfunction and differential diagnoses (eg, normal changes with aging, mild cognitive impairment, dementia subtypes, depression vs dementia); full batteries completed by neuropsychologists; psychiatric professionals may be equipped to offer neurocognitive screening ○ Cognitive rehabilitation for compensatory strategy training or remediation, as appropriate ○ Counseling on adapting to and coping with cognitive changes ○ Pharmacological treatment for early dementia (psychiatry)
Occupational therapy	<ul style="list-style-type: none"> ○ Formal evaluations of the effect of cognitive dysfunction on activities of daily living, instrumental activities of daily living, and disease self-management behaviors ○ Therapy and adaptive methods to maximize functional independence with activities of daily living, instrumental activities of daily living, and disease self-management behaviors or to train caregivers in assistance of these behaviors.

retraining of caregivers is critical as dementia progresses to ensure caregivers are prepared with the knowledge, diabetes management skills, and problem-solving skills required to assist individuals with their diabetes management. People with diabetes who reside in short- or long-term supervised settings may require complete diabetes management by individuals with limited knowledge of diabetes care. Diabetes care and education specialists should be prepared to provide ongoing guidance and support.

Serious Mental Illness

Individuals diagnosed with severe mental illness (SMI; eg, schizophrenia spectrum, bipolar disorder, major depressive disorder) experience a reduced life expectancy of 10 to 25 years. For instance, persons diagnosed with schizophrenia die at about 3.5 times the rate of the general population.⁷⁷ Historically, inadequate living conditions may have been a primary contributor to the mortality disparities; however, the current leading factor accounting for reduced life expectancy is negative outcomes related to high rates of cardiometabolic disease.⁷⁸ This reduction in life expectancy is also seen with bipolar disorder and major depressive disorder due to natural causes; however, these disease states do not seem to have as dramatic a reduction in life expectancy as schizophrenia/schizoaffective disorder.⁷⁹⁻⁸¹

Adding to the challenges facing those diagnosed with SMI, stigma remains a pervasive problem in all quarters of society. Although stigma exists toward all forms of mental health problems, rates of stigma are highest for those with conditions referred to as SMI.^{82,83} Despite large-scale, public anti-stigma campaigns, there continue to be common views that persons with SMI are dangerous, and people express strong desires for social distance from them.⁸³ These stigmatizing beliefs are found in the general public, other individuals with diabetes, and their health care professionals (HCPs).⁸⁴ Stigmatizing views held by people experiencing mental health problems may contribute to failure to

acknowledge the need for help or follow through with recommended referrals to mental health services. Additionally, the internalized stigma of mental health illness may contribute to reduced self-esteem, reduced belief in possibilities for self-management, and increased hopelessness.⁸⁵

Rates of stigma among HCPs are of particular concern given that some have suggested that this contributes to the unequal provision of diabetes care to people with SMI.⁸⁶ Consistent with this concern, persons with SMI are 2 to 3 times more likely to develop diabetes; however, they are less likely to be screened for elevated A1C or hyperlipidemia.⁸⁷ Once diagnosed with diabetes, they are less likely to be referred for retinal exams, foot care, and renal testing, and they are less likely to be prescribed a range of diabetes medications (eg, statins, ACE inhibitors, angiotensin receptor blockers).^{87,88} People with diabetes with a co-occurring diagnosis of schizophrenia are more likely to experience a diabetes-related hospital admission. Of particular concern to DCEs, these individuals are also less likely to receive diabetes education than individuals with diabetes alone.^{85,86}

Both internalized stigma and stigma held by HCPs can contribute to expectancy effects, wherein both parties may have limited hope for positive health outcomes or improved self-management behavior. In these instances, the individual with SMI may be viewed as incompetent or expected to be unwilling to follow up with focused self-care. However, there is evidence that when treatment expectations are not negatively adjusted, people with SMI have equal to better therapeutic persistence and diabetes outcomes than their counterparts without SMI.⁸⁷⁻⁹⁰

Conventional wisdom suggests that psychotic symptoms must be addressed before diabetes interventions are implemented. This view is problematic and not supported by the available evidence. A portion of persons with SMI experience persistent mental health symptoms for decades; for these individuals, waiting until psychiatric symptoms abate may mean

forestalling quality diabetes care indefinitely, which further contributes to the dramatic mortality disparities in persons with SMI.

Many with persistent psychotic symptoms can still partner effectively with HCPs in developing effective self-management plans. As a result, when working with persons experiencing SMI, collaboration and consultation with mental health professionals may be particularly useful.⁹¹ In some instances, the functional impairments in instrumental activities of daily living may serve as barrier to self-management of diabetes. In these situations, diabetes professionals may wish to partner with professional and natural supports to collaborate on plans to ensure that the person's diabetes and psychiatric symptoms are being addressed concurrently rather than to delay access to diabetes education and treatment.

Despite a long history of pessimism regarding the course of SMI, current mainstream understanding recognizes the wide variability of outcomes and the much more hopeful possibilities for recovery for many persons with SMI. Accordingly, various treatment options are available for persons diagnosed with SMI. Promotion of healing is now the standard for treatment, in contrast to traditional approaches, which focus primarily on stabilization and reduced adverse events. Pharmacological approaches are commonly offered, as are a range of psychosocial interventions, including psychotherapy, skills training, family interventions, supported employment, and peer support. Some efforts have been made at developing psychosocial interventions to assist people with both diabetes and schizophrenia to improve their self-management abilities, although future work is needed in developing and implementing strategies aimed at the important intersection of diabetes and SMI.

Pharmacologic Effects of Medications

Multiple factors contribute to higher morbidity rates for PWD with mental health disorders. Unhealthy dietary patterns, sedentary lifestyles, and increased use of substances such as tobacco

have been linked to insulin resistance and cardiovascular disease. Contributing factors for negative outcomes include hypertension, dyslipidemia, and obesity. The increased morbidity and mortality burden can be related to a lack of access to health care services, stigma, and nonrecognition of medical conditions within psychiatric services.⁹² Finally, a number of pharmacological treatment options may contribute to developing or exacerbating cardiometabolic problems. Following is a review of the most common issues related to cardiovascular and metabolic problems associated with psychiatric treatments.

Emphasis on Antipsychotics

Antipsychotic medications remain the most common treatment for psychotic spectrum disorders such as schizophrenia and schizoaffective disorder. Antipsychotic treatment segments into first-generation (typical) antipsychotic medications and second-generation (atypical) antipsychotic medications. Second-generation antipsychotic medications have become the most commonly prescribed class due to reduced risk of movement disorders, a frequent side effect of first-generation agents. In light of this use expansion, professionals must be aware of the adverse effects of these agents, particularly the association of metabolic syndrome with second-generation antipsychotic medications.^{93,94}

The pharmacologic mechanism responsible for metabolic syndrome due to antipsychotic medications remains uncertain; however, metabolic syndrome seems to have a higher correlation with certain second-generation antipsychotic medications than others. Based on the varying responses to this medication class, the American Psychiatric Association has recommended that all individuals receiving second-generation antipsychotic medications should receive metabolic monitoring at baseline, 3 months, and annually thereafter. Management of metabolic parameter abnormalities should focus on initiating medications with cardiovascular benefits, such as GLP-1 agonists

or sodium-glucose cotransporter-2 inhibitors, if appropriate.⁹⁵⁻⁹⁷

Other Psychotropic Agents

Metabolic syndrome is an adverse effect unique to second-generation antipsychotic medications. However, other psychotropic agents also have adverse effects that can antagonize cardiovascular health in individuals with mental health disorders. For example, lithium and divalproex sodium/valproic acid are mood-stabilizing agents of frequent use in treating bipolar disorder. Both agents can potentially cause increased appetite and weight gain. Additionally, the use of various antidepressant medications, such as selective serotonin reuptake inhibitors, serotonin-norepinephrine reuptake inhibitors, mirtazapine, and tricyclic antidepressants, may also lead to weight gain.⁹⁸ Diabetes care and education specialists must continue to be aware of these adverse effects due to their potential impact on an individual's cardiovascular health.

Neuropsychiatric Adverse Effects of Smoking Cessation Treatment

Psychotropic medications can have a negative impact on cardiometabolic health, as described previously. Conversely, medicines used to help manage cardiovascular health can adversely affect mental health.

Varenicline is a partial nicotine agonist used to help with smoking cessation by decreasing the urge to smoke. Bupropion is a dopamine/norepinephrine-reuptake inhibitor used as an antidepressant and smoking cessation aid. Varenicline use results in significantly longer nicotine abstinence rates than placebo, nicotine replacement therapy, or bupropion.^{99,100}

Since 2007, case reports of neuropsychiatric adverse effects, including suicidal ideation, mood or behavior disturbances, and depression, have surfaced with the use of varenicline and bupropion. In 2009, the Food and Drug Administration mandated companies manufacturing varenicline and bupropion to place a black-box warning on the drug packaging. The

alert described the risk of these neuropsychiatric effects. Many studies have examined these effects since that time and have not found significant increases in neuropsychiatric adverse effects in individuals taking either agent. Furthermore, a randomized controlled trial examining the neuropsychiatric safety risk and efficacy of varenicline and bupropion with nicotine patches and a placebo was conducted in a large population of people with and without psychiatric disorders. No increase in neuropsychiatric events was observed in this study for participants taking varenicline or bupropion compared to using the nicotine patch or placebo.¹⁰⁰

In light of the aforementioned evidence, DCESSs should be aware about the use of varenicline or bupropion in people with underlying psychological disorders. The DCESS or other professional needs to counsel each PWD receiving a prescription for these medications about the potential risk of neuropsychiatric effects associated with these medications. Medication counseling must include the recommendation to notify a mental health professional should these symptoms occur.

Cognitive Impairment Due to Statin Therapy

Estimates reflect that almost 40 million Americans take statins to reduce the risk of cardiovascular events. Individuals from racial and ethnic minority populations are less likely to be on a statin.¹⁰¹ However, the exact prevalence of statin use in individuals affected by mental health disorder is unknown.¹⁰¹ Statins are associated with significant cardiovascular benefits. Still, adverse effects, such as hyperglycemia and cognitive effects, have affected some individuals taking this class of medications. The evidence on the impact of statin use on cognitive impairment or psychological disorders is mixed, ranging from forgetfulness to complete blackouts.¹⁰²⁻¹¹⁷

The conflicting evidence on statins and cognitive impairment should not prevent DCESSs from recommending statin use in PWD. The decision to avoid or discontinue statin use in PWD who report cognitive side effects should be made

individually, weighing risk versus cardiovascular benefit.

Emergent Situations, Suicidal Ideation

The complexity of diabetes management for individuals with clinical or subclinical mental health symptoms heightens when an insulin-requiring individual presents with self-injurious behavior and/or suicidal ideation. For example, individuals with type 1 diabetes cannot live without insulin; however, the use of insulin may be avoided or utilized in excess for self-harm.^{118,119} DCESs may or may not have experience working with people with mental health concerns, depending on their discipline and setting. Any time a person is an immediate danger to others or themselves, this constitutes a mental health emergency. However, other examples of an impending mental health emergency may include those listed in Table 4.

Individuals with depression may experience thoughts and feelings of hopelessness, helplessness, and suicidal ideation. The results of a recent meta-analysis were suggestive of an increased risk of suicide for PWD.¹²⁰ Through thorough exploration of the relationship between risk for suicide and diabetes, researchers have been unable to establish that a definitive connection exists.¹²⁰⁻¹²⁷ Every DCES should be able to recognize an individual at increased risk of suicide or a mental health emergency and know

how to seek urgent help and identify available resources.

There are several methods of assessing the presence of elevated depressive symptoms in a PWD and evaluating the risk of self-harm. First, the individual or caregiver may make statements about a gradual or sudden decrease in diabetes self-care. Upon further discussion, the PWD may inform the DCES that they are experiencing symptoms of depression or thoughts of self-harm. Second, depression screening can help identify individuals who may require additional mental health intervention, including measures to ensure the individual’s safety. Non-mental health professionals may use age-appropriate depression screening measures to obtain additional depression evaluation for these individuals. For example, the Patient Health Questionnaire, Child Depression Inventory, and Geriatric Depression Scale are common depression screening tools. Other measures specifically designed to assess risk for self-harm are also available and include the Ask Suicide-Screening Questions and the Columbia-Suicide Severity Rating Scale.¹²⁸⁻¹³¹

When there is an identifiable risk for self-harm, safety considerations for ongoing diabetes care are critical. The DCES may take the following steps to promote safety for people at risk for self-harm¹³²:

- Refer the individual to your team’s designated team member (eg, social worker, psychologist, psychiatrist) to help determine if an involuntary psychiatric assessment is warranted (Table 5). Each state has legal criteria for involuntary mental health treatment for individuals at risk for self-harm or harm to others who are unable to seek care voluntarily. For example, California uses the Welfare and Institutions Code (WIC) 5150 for adults who may require involuntary psychiatric care. The corresponding code for children is CA WIC 5585.
- If your health care team does not have a designated staff person or if the staff person is not available, call 911 or arrange

Table 4 Signs and Symptoms of an Impending Mental Health Emergency.¹³¹

Talking about wanting to die or to kill themselves
Looking for a way to kill themselves, like searching online or buying a gun
Talking about feeling hopeless or having no reason to live
Talking about feeling trapped or in unbearable pain
Talking about being a burden to others
Increasing the use of alcohol or drugs
Acting anxious or agitated; behaving recklessly
Sleeping too little or too much
Withdrawing or isolating themselves
Showing rage or talking about seeking revenge
Extreme mood swings

for transportation of the individual to the closest emergency room for a self-harm risk assessment. Rely on your county department of mental health access number if this option is available.

- Develop a safety plan with the individual's caregiver if this is an option. The safety plan may include:
 - Caregiver(s) to secure medications to ensure that the individual does not have access to pharmaceuticals.
 - Caregiver(s) to secure objects that the PWD can use to inflict self-harm (knives, razors).
 - Caregiver(s) to monitor the individual on an ongoing basis and manage their diabetes. The caregiver(s) may use a continuous glucose monitor with a share/follow feature to identify unsafe BG patterns and/or administer insulin after the PWD consumes foods or beverages that may include carbohydrates.
 - If the individual is suspected to be at risk for self-harm or harm to other(s), the caregiver(s) may transport them to the closest emergency department or call 911 to address the PWD's transport needs.
 - If a PWD is hospitalized due to risk for self-harm, insulin administration

by staff may be necessary to avoid intentional hypoglycemia as a means of self-harm. The PWD may need additional safety measures to minimize the risk of intentional hypoglycemia, such as transitioning the individual from insulin pump therapy to multiple daily injections, using an insulin pump feature to "lock out" the individual from delivering insulin, and/or using a continuous glucose monitor with a share/follow feature to identify unsafe BG patterns.

- Anyone experiencing diabetes burnout, depression, or anxiety should be given the number for the Suicide and Crisis Lifeline (988).

Diabetes care and education specialists are often frontline interventionists. They must become comfortable having conversations about psychosocial needs, facilitating in-the-moment consultation with appropriate mental health professionals, and providing community resources for psychiatric/psychological counseling. It is also essential to follow up to determine whether the PWD or the family has accessed the recommended resources. Considering DCEs practicing in various settings, they must all be aware of the risks, signs, and symptoms of hyperglycemia and hypoglycemia and emergent factors for suicide or other psychiatric

Table 5 Situations That Warrant Referral of a Person With Diabetes to a Mental Health Professional for Evaluation and Treatment.⁶

If self-care remains impaired in a person with diabetes distress after tailored diabetes education
If a person has a positive screen on a validated screening tool for depressive symptoms
In the presence of symptoms or suspicions of disordered eating behavior, an eating disorder, or disrupted patterns of eating
If intentional omission of insulin or oral medication to cause weight loss is identified
If a person has a positive screen for anxiety or fear of hypoglycemia
If a serious mental illness is suspected
In youth and families with behavioral self-care difficulties, repeated hospitalizations for diabetic ketoacidosis or significant distress
If a person screens positive for cognitive impairment
Declining or impaired ability to perform diabetes self-care behaviors
Before undergoing bariatric surgery and after if assessment reveals an ongoing need for adjustment support

emergencies and have a plan to respond to the aforementioned issues, including¹²⁵⁻¹³¹ more frequently scheduled appointments to assess diabetes management and related behavioral and psychosocial factors and identifying adults who can provide support by monitoring the individual's diabetes care.

The Social Determinants of Health, Mental Health Conditions, and Community Support

Social determinants of health (SDoH) are defined as conditions that affect a person's ability to live a healthy, happy, and stable life.¹³³⁻¹³⁵ They are known drivers of inequities with multifactorial contributors, including an inequitable distribution of resources, adverse childhood experiences, systemic racism, social support, cultural factors, and stable employment, among others. SDoH directly affect a person's ability to manage their mental and physical health. The 2024 ADA Standards of Care deliberately draw attention to SDoH in the management of diabetes. These recommendations guide educators to assess and appropriately address food insecurity, social support, and housing insecurity.¹³⁶ To properly take care of a person with chronic conditions like diabetes and persistent mental health disorders, it is important to understand how SDoH can exacerbate these conditions.

Poverty is associated with stressors on mental health, including stress, anxiety, and depression. Marginalized people are under chronic stress while battling inequities. These constant stressors include the fear of not making ends meet, attaining stable housing, and the difficulty in gaining economic prosperity.¹³³ Diabetes in combination with depression can decrease a person's motivation and their productivity and even limit their educational attainment.^{134,135} This magnifies their inability to stay employed and decreases their desire to manage their health. This cycle can cause a person to stay impoverished and disadvantaged, which can lead to a further decline in their mental health and overall health.

Additionally, stress from SDoH can cause a biological response that further declines health.

Allostatic load and overload are the clinical outcomes that result from the cumulative burden of chronic stress.¹³⁶ The physical manifestations of stress result in negative health outcomes, including elevated blood pressure, increased cortisol release, and elevated glucose levels.^{137,138} Elevated cortisol levels for an extended period of time can lead to increased glucose levels.^{137,138} Although this association requires more research and literature to fully understand the longitudinal implications of the relationship, it is important to manage stress to help manage glucose levels.

Socioeconomic Status

As a component of the SDoH, socioeconomic status is a strong predictor of the onset and severity of diabetes and the presence of mental health disorders.^{134,138} One major reason for this correlation is that a person's health is influenced by their ability to access health care and nutritious foods, use transportation to appointments, and have stable housing. Additionally, a person's ability to gain economic prosperity through their education and earn a meaningful wage is associated with the severity of their diabetes. This risk is associated with a person's income in relation to the federal poverty line.¹³⁸

There is no literature to evaluate the change in A1C from a change in socioeconomic status; however, there is evidence that shows an association between literacy and A1C. Adapting self-management educational tools for literacy level shows a statistically significant decrease in A1C for adults with type 2 diabetes.^{139,140} This illustrates the importance of individualizing education tools to each patient's literacy level in addition to providing comprehensive evidence-based behavioral self-management interventions. Although it is important to provide individuals with tools and education adapted to their literacy level, DCESs should not assume low intelligence for individuals with lower literacy levels or lower literacy levels for individuals with lower socioeconomic status. The DCES should, however, be sensitive to the potential impact of socioeconomic status and literacy level on

outcomes, use language that avoids scientific jargon but still invites shared decision-making, and tailor their interventions to align with the unique needs that may be associated with low socioeconomic status and/or low literacy level.

Access to Health Care

Health care is an SDoH that impacts both diabetes and mental health care. Health care is defined as the ability to access and afford quality care.¹³⁴ There are a multitude of factors that affect access to care; however, one of the strongest predictors of quality care is insurance status. Uninsured people are less likely to be properly diagnosed or treated for their conditions.¹⁴¹ This is important because people who do not have a primary care professional tend to have a higher A1C and more emergency department visits.¹⁴² The cost of appointments and medications is often a barrier to a PWD receiving proper care.¹⁴³ Although some of these factors are outside of the control of a DCES in an individual clinical context, there remain some actions they can take to optimize access to health care. The DCES should practice in a manner that decreases the stigma of mental health and addresses SDoH whenever applicable because this stigma can contribute to avoidance of accessing care that is available. When deciding which glucose-lowering agents to give a PWD, consideration should be given to cost, balanced with individual medication profile, effect on other co-occurring conditions, and outcomes. Additionally, treatment plans should be individualized, and education should be robust.

Physical Environment

Another barrier that affects mental health and diabetes management is housing and physical environment. Unstable housing leads to an increase in diabetes-related complications because it makes it difficult for PWD to incorporate diabetes management into their everyday routines.¹⁴³ Consistent housing offers a PWD a safe place to monitor their glucose levels and store their medications. Injectable diabetes medications often require storage in a refrigerator

and require safe storage that is out of reach for children. Additionally, housing provides a place for a PWD to store and prepare nutritious foods. To improve physical environments for PWD, DCESs should provide information for local shelters and provide referrals to social workers or community health workers (CHWs).

Food Environment

In addition to housing, it is important to assess a person's food environment because this can affect their diabetes management and mental wellness. Food environment is defined as a person's proximity and ability to access affordable and nutritious foods. People who are unhoused or living near or below the federal poverty line often live in food deserts and/or experience food insecurity. Many of these individuals only have access and the ability to afford fast food restaurants with limited nutritious selections. There is an established association between the prevalence of type 2 diabetes and food access. Geographic locations with more food stores and full-service restaurants are linked to lower rates of diabetes.¹⁴⁴ Additionally, the concern of not knowing where a person's next meal will come from can create a major source of anxiety and fear. To combat food insecurity, it is recommended to connect PWD to food pantries. The intervention of food pantries and banks can improve A1C, increase consumption of nutritious foods, improve one's ability to take medications as prescribed, and reduce distress.^{145,146}

Community Support

To properly promote the optimal care of a person's health, it is important to influence all factors that can affect their health. The "health triangle" illustrates this by urging the importance of assessing a person's social, physical, and emotional health.¹⁴⁷ Social and community support is an integral part of improving chronic diseases such as diabetes and mental health. A lack of community and social support has been linked to an increase in negative diabetes-related outcomes and mortality.^{135,148} As aforementioned, the 2023

ADA Standards of Care recommend providing patients with self-management support from appropriate staff, with specific attention toward CHWs.¹³⁶

Community and social support can be provided through different mediums of support, including community organizations, faith communities, and CHWs.¹⁴⁸ Community resources can impact the outcomes of PWD and mental health disorders by raising awareness and prevention, creating a healthy environment, and conducting activities that help manage diabetes and stress. Community and faith organizations can create partnerships to recruit participants and improve accessibility to tools for early detection and interventions. A CHW can improve mental and physical health by offering lived experience to extend support and increase access to care. CHWs can improve outcomes for patients by connecting them with care, reducing costs, and providing support. When possible, a person should be connected to a CHW to help improve their health management.

Researchers recommend varying the type of support offered to meet individual needs and preferences (group, in person, online, telephone).¹⁴⁸ Individuals from underrepresented racial and ethnic populations may be more likely to rely on support from members of the community, whereas White populations prefer to seek support from health care professionals.¹⁴⁸ It is important to consider that community support interventions can affect clinical outcomes.

Effective Communication About Mental Health

When providing diabetes education, it is important for DCEs to maintain optimism and hope for their patients. Practitioners should also be aware of any personal stigmatizing beliefs or biases they may have about people with mental health disorders. DCEs should be ready to openly discuss psychosocial challenges and available mental health services in addition to diabetes care. This discussion should not isolate the PWD but instead, encourage the idea that mental wellness is an important aspect of treatment for all.

Stigma and negative attitudes associated with seeking mental health care have been identified as one of many barriers associated with treatment access and utilization. DCEs must communicate with individuals about mental health, access, and utilization of services. That type of communication promotes an individual's openness to new information about treatment, self-care, and support. Specifically, communication about mental health services is one of several important components necessary for optimal diabetes management. In this regard, DCEs are in a position to either combat or reinforce stigmatizing views of mental health disorders. Given the unfounded nature of negative beliefs about mental health disorders and the unequal provision of health care, it is incumbent upon DCEs to engage in a practice that minimizes the negative impact of stigma. It is important to reflect and attempt to identify personal biases regarding persons with mental health disorders. This can help promote the perception that attention to the psychological aspects of diabetes is important for all PWD and that the person is not being singled out because they are perceived as having personal problems or issues.

DSMES should always be individualized, although modifications should not be made solely based on the presence of a psychiatric diagnosis. Make sure that the same quality of diabetes education is available to persons with mental health disorders as those with diabetes who do not have additional health conditions. Practitioners should be mindful of the risks of diagnostic overshadowing (attributing reports of physical symptoms to psychiatric problems), particularly in people diagnosed with psychotic disorders. Although modifications to communication style should be made based on the individual's particular capacities, practitioners should not assume low intelligence or incomprehension. Throughout all encounters, efforts should be made to consistently use inclusive, nonstigmatizing language. Practitioners

should be equipped to challenge commonly held stigmatizing beliefs expressed by PWD or colleagues. For instance, beliefs that people with serious mental health disorders cannot recover and will remain permanently disabled, are prone to violence, or are unable to find competitive employment remain prevalent. Although these types of beliefs may at times need to be directly challenged, perhaps the most effective way of combating stigma is to approach individuals with mental health disorders with sincere regard and optimism, including explicit optimism for the possibilities of diabetes self-management.

DCESs work closely with physicians, nurses, dietitians, and mental health professionals to empower individuals to manage their diabetes optimally. DCESs frequently encourage people and engage them in problem-solving to identify reasonable goals. These strategies can help empower individuals while decreasing the emotional toll associated with the daily demands of diabetes self-management (Table 6).¹²⁵

Cultural Considerations for Mental Health and Diabetes Care

Diabetes care and education approaches would be strengthened by involving cultural components that can promote learning and patient and family involvement. Cultural practices regarding foods, medical care, celebrations, traditions, and encounters with HCPs can impact individuals’ engagement in healthy self-care behaviors.

Including tribal or cultural components—such as demonstrating healthy meal preparation using foods that are essential sources of nutrition in that group—can be significantly beneficial.

Mental health care is as critical as all other aspects of diabetes care; however, some cultures may not voice symptoms of depression or anxiety. Some cultures may consider symptoms of depression or anxiety to be a sign of weakness or failure. Reviewing facts about diabetes burnout and how it can lead to anxiety or depression can reassure individuals that the subject is safe to discuss. Regardless of the individual’s cultural history, personal or cultural views of mental health may contribute to how the PWD deals with diabetes burnout, complications, and the demands of dealing with this chronic condition.

It is essential to consider mental health symptoms related to diabetes. Although some individuals may feel comfortable discussing these topics with the DCES, others may prefer to discuss them with their religious leader (pastor, minister, priest, rabbi, or another spiritual leader). Regardless of whom they choose to consult regarding diabetes burnout, depression, or anxiety symptoms, the DCES should ask about feelings of emotional distress and any intentions the PWD may have for self-harm. The Suicide and Crisis Lifeline number (988) is accessible in English and Spanish by phone, SMS (texting), chat contact, or through their website, 988lifeline.org. This

Table 6 Psychosocial and Behavioral Support.^a

Assess and address emotional and psychosocial concerns, such as diabetes-related distress and depression
Present that diabetes-related distress and a range of emotions are common and that stress can raise blood glucose and blood pressure levels
Discuss that diabetes self-management is challenging but worth the effort
Support self-efficacy and self-confidence in self-management decisions and abilities
Support action by the patient to identify self-management problems and develop strategies to solve those problems, including self-selected behavioral goal setting
Note that it takes about 2-8 months to change a habit/learn/apply behavior
Address the whole person
Include family members and/or support system in the educational and ongoing support process
Refer to community, online, and other resources

^a©2015 by the American Diabetes Association®. *Diabetes Care*. 2015;38(7):1372-1138. Reprinted with permission from the American Diabetes Association®.

resource is also available for individuals who are deaf and hard of hearing.¹⁴⁹

Nutritional intake plays a significant role in self-care for PWD. The cultural aspects of food and traditions also factor into the dietary intake for PWD. Ask about crucial details involving their cultural background. Does their family have a history of making specific food items for holidays and special events? Can the ingredients for that food item be altered to create a healthier option without interfering with its cultural roots? If modifying the ingredients in a recipe is not optimal, the focus may need to be on healthy food portion sizes. For example, a member of the Jemez Tribe authored a booklet, *In a River Runs Through Us: Inspirations of Wellness*, to demonstrate how one can focus on healthy portions (ie, “This is a good size of frybread. Have it in moderation.”) and emphasize how ancestors used food to help fuel their bodies and activities to live healthy lives.¹⁵⁰ The booklet also features the positive health experiences of indigenous people from different tribes, including personal

and familial benefits. Similarly, programs like The Mayo Clinic Diabetes Meal Plan Recipe website and Prevent Diabetes (Prevangamos la diabetes) offer healthy recipes. Additionally, they focus on preventing diabetes in people of all ages who are at an increased risk for its development or progression.¹⁵¹⁻¹⁵⁴ These programs aim to positively impact behavioral patterns through cooking demonstrations and classes and have resulted in positive dietary and physical activity changes.^{155,156}

Beliefs about medication may also impact an individual’s use of medicine prescribed by their HCP. For example, PWD may fear worsening health from using insulin due to relatives who experienced diabetes-related complications after starting insulin injections. Therefore, the DCES must provide education in a thoughtful and respectful manner about how insulin works. Likewise, PWD may benefit from education about the reduced risk of complications by following prescribed diabetes plans that sometimes include insulin and/or oral medications for improved glycemic outcomes. Talking with the PWD and obtaining more details about worries or concerns before initiating insulin can help the DCES identify potential barriers to optimal diabetes management and improve the likelihood of consistent engagement in prescribed care plans. Over time, explaining individual differences in diabetes care and medications may help encourage the PWD to try insulin or other recommended medications.

Assessment and Referral

The daily demands of the disease process and management can have a significant psychological impact on PWD. In turn, these psychological sequelae can negatively impact both self-care in general and diabetes self-management specifically.¹⁵⁷ Researchers have identified a link between depressive symptoms and suboptimal diabetes self-management.¹⁵⁷ The ADA and ADCES have also highlighted the critical role of DSMES, given potential psychosocial benefits, including the reduction of diabetes distress.^{158,159} Mental health services can help promote the use of

Table 7 Mental Health Professionals and Services Provided.^{125,159}

Mental Health Professionals	Services Provided
Clinical psychologist	Services may include consultation and evaluation of mental health concerns and individual, family, and group psychotherapy. May also conduct psychological assessments, including psychodiagnostic and psychoeducational assessments. Have limited prescribing privileges in a small number of US states.
Marriage and family therapist	Services may include individual, family, couple, or group therapy.
Neuropsychologist	Services may include comprehensive diagnostic assessments to identify specific cognitive strengths and weaknesses.
Psychiatrist	Services may include consultation and evaluation of mental health concerns and the prescription and management of psychotropic medication. May also provide counseling.
School psychologist	Services may include direct support and intervention for students experiencing challenges related to learning. Also conduct psychoeducational assessments to help determine if health or processing issues are significantly impacting the student’s ability to learn.
Social worker	Services may include individual, group, and family therapy and help in identifying medical and financial resources. Social workers are often the designated medical team members who report concerns to the Department of Child and Family Services (Child Protective Services).

adaptive coping strategies and address underlying emotional and behavioral obstacles to effective diabetes management. Some treatment settings, including some primary care settings, hospitals, or academic medical centers, provided integrated care with embedded mental health professionals. Other DCEs operate in settings in which an outside referral is necessary to link the PWD to mental health services.

Identifying the primary reason for a mental health referral is essential because it can promote the selection of appropriate resources. Like other professions, mental health professionals have diverse areas of expertise (Table 7). For example, if emotional support is the primary referral question, a referral to a clinical psychologist, marriage and family therapist, or clinical social worker may be optimal. Some psychiatrists also provide counseling.

Furthermore, school-based counseling with a school psychologist or other school-based mental health professional may be a helpful and more easily accessible resource for some. If cognitive or learning challenges are suspected, one should consider a referral to a clinical psychologist or neuropsychologist for a diagnostic assessment. A psychoeducational evaluation with a school psychologist is another option for students experiencing academic challenges.

Given the extraordinary impact of diabetes on individuals, mental health professionals with working knowledge of diabetes may be beneficial. For example, a professional experienced in treating diabetes-related psychological issues may anticipate the possible impact of variable BG levels on emotional, behavioral, academic, and cognitive functioning (mood symptoms, attention or concentration, motivation, and energy). In 2018, the ADA launched the Mental Health Directory, an online directory of mental health professionals with working knowledge of diabetes (Table 8). This directory includes a list of mental health professionals who work with adults and/or children with diabetes. Telehealth options are also available. The ADA also developed free mental

health resources for mental health professionals “to increase experts in the field and ensure support for the psychosocial challenges faced as we continue to help [PWD] and their families thrive.” Specifically, the Diabetes Education 101 for Behavioral Health Professional Program includes free continuing education credits for licensed mental health professionals who provide mental health care to people with or at risk for diabetes.^{158,159} Additional resources include the Diabetes and Emotional Health Workbook and Mental Health Toolkit. Despite the availability of resources aimed to increase the availability of and access to mental health services, access to mental health professionals, whether trained in diabetes care or not, is insufficient. Other significant barriers for many people who need mental health services include the lack of mental health service coverage by an individual’s health insurance and the limited availability of mental health professionals with affordable rates. In addition, many people are reluctant to seek mental health services when referred due to the stigma of a mental health disorder and its treatment. Policy efforts to ensure coverage for mental health services and improve parity with mental health and general medical care have not solved problems associated with access to necessary mental health services. Depending on the person’s location, insurance plan, and complexity of mental health needs, timely access to professionals with specialized expertise can prove challenging. Furthermore, there is a shortage of mental health professionals from underrepresented racial/ethnic groups or who can provide culturally informed care to many underrepresented populations.

There are some strategies that may help facilitate access to appropriate mental health support:

- Become comfortable having discussions that integrate emotional and behavioral content.
- Provide brief education about the role of both depression and anxiety symptoms and disorders and diabetes distress for PWD and the importance and success of an early intervention.

Table 8 Resources for the Psychosocial Constructs of Diabetes.^{6,155}

Mental health and diabetes (available in English and Spanish)	<ul style="list-style-type: none"> • Anger • Stress • Depression • Distress 	<ul style="list-style-type: none"> • Healthy coping • Holiday eating • Lifestyle resources • Medication taking 	https://www.adces.org/docs/default-source/living-with-diabetes/tip-sheets/healthy-coping/healthy-coping-patient-flyer-v-1-(002).pdf?sfvrsn=66036959_0
	<ul style="list-style-type: none"> • Anger • Denial • Depression 	<ul style="list-style-type: none"> • Stress • Diabetes distress 	https://diabetes.org/health-wellness/mental-health
	<ul style="list-style-type: none"> • Caregiver burnout • Depression • Diabetes burnout • Diabetes distress 	<ul style="list-style-type: none"> • Diabulimia • Stress • Suicide risks 	https://beyondtype1.org/mental-health/
	Diabetes and Emotional Health Workbook		https://professional.diabetes.org/professional-development/behavioral-mental-health/MentalHealthWorkbook
	Mental Health Toolkit		https://professional.diabetes.org/professional-development/behavioral-mental-health/behavioral-health-toolkit
Mental health professional education programs and directories	Diabetes Education 101 for the Behavioral Health Professional Program		https://professional.diabetes.org/professional-development/behavioral-mental-health/diabetes-education-101-behavioral-health-provider-program
	ADA Mental Health Directory		https://my.diabetes.org/health-directory
Position statements	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		Powers MA, Bardsley J, Cypress M, et al. <i>Diabetes Care</i> . 2015;38:1372-1382. doi:10.2337/dc15-0730
	Psychosocial Care for People With Diabetes: A Position Statement of the American Diabetes Association		Young-Hyman D, de Groot M, Hill-Briggs F, Gonzalez JS, Hood K, Peyrot M. Psychosocial care for people with diabetes: a position statement of the American Diabetes Association. <i>Diabetes Care</i> . 2016;39:2126-2140. doi:10.2337/dc16-2053
Additional resources	<ul style="list-style-type: none"> • ADA Patient Education Library • ADA Standards of Medical Care in Diabetes • National Standards for Diabetes Self-Management Education and Support 		https://professional.diabetes.org/clinical-support/diabetes-educator-resources
	American Psychological Association		https://apastyle.apa.org/6th-edition-resources/nonhandicapping-language
	Behavioral Diabetes Institute		https://behavioraldiabetes.org/about/
	Center for Diabetes and Mental Health		https://cdmh.org
	Centers for Disease Control and Prevention, Diabetes Public Health Resource		http://www.cdc.gov/diabetes/ https://www.cdc.gov/diabetes/managing/mental-health.html
	National Diabetes Education Program		https://www.niddk.nih.gov/health-information/professionals/clinical-tools-patient-management/diabetes
	National Diabetes Information Clearinghouse		https://www.niddk.nih.gov/health-information/community-health-outreach/information-clearinghouses
	National Institute of Mental Health		http://www.nimh.nih.gov
The Use of Language in Diabetes Care and Education		Primary prevention of type 2 diabetes. <i>Diabetes Educ</i> . 2012;38(1):147-150. doi:10.1177/0145721711431926	

- Have a current community mental health resource list.
- Provide a “warm handoff” when possible (eg, call mental health agency or mental health professional with the PWD, send email to mental health professional with the PWD copied).

Suppose the individual is unable or unwilling to access mental health services and the person is not at imminent risk for self-harm or harm to others, the diabetes care team is encouraged to continue the behavioral assessment with empathy and support for related psychological factors and to address barriers to accessing mental health services. However, if the individual is thought to be at risk for self-harm or harm to others, imminent mental health assessment and intervention are needed.

Future

Individuals with diabetes are at greater risk for depression and other psychosocial challenges compared to the general population. DCEs encounter individuals who are experiencing a wide spectrum of mental health conditions and benefit from resources that promote their sensitivity to mental health concerns and ability to offer holistic, interdisciplinary, centered care. It is essential to increase the knowledge and integration of mental health factors within diabetes care plans. This article serves as a practical guide for DCEs to support persons with or at risk for diabetes and concurrent psychosocial concerns, including depression, diabetes distress, anxiety, disordered eating and eating disorders, SUD, SMI, cognitive dysfunction, and dementia. This guide also addresses pharmacologic effects of medication, emergent situations, including suicidal ideation, SDoH, cultural considerations for mental health and diabetes care, and psychosocial assessment and referral considerations. By implementing these considerations, DCEs can further promote improved quality of life for PWD.

Given the growing number of people affected by and at risk for diabetes, the field of diabetes care and education would benefit

from additional mental health professionals and social service case managers to help serve PWD with psychosocial conditions in a variety of medical and mental health care settings. Creating pipelines of opportunity in the field of diabetes for students interested in health careers can help grow interest in the biopsychosocial complexities of life with diabetes. To increase the reach of existing resources, available mental health tools, such as the ADA’s Diabetes Education 101 for the Behavioral Health Professional Program, must continue to expand to help DCEs meet the needs of PWD in collaboration with other members of the diabetes care team. Furthermore, there are opportunities for DCEs to collaborate and share resources with other health experts by building on guides such as this one, incorporating psychosocial considerations in DCE training programs and professional presentations, and seeking opportunities to work in partnership with professional organizations that focus on diabetes and mental health. By sharing resources and expertise, clinicians will be better equipped to collectively address the complex interplay between diabetes and mental health. In turn, the implementation of this knowledge can enhance the overall quality of life for PWD. ■

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