

# A Practical Approach to Mental Health for the Diabetes Care and Education Specialist

*Reviewed by the Professional Practice Committee*

## Current State of Affairs

In the United States, 17.9% of individuals are affected by mental illness.<sup>1</sup> Individuals with diabetes are at greater risk for depression and other psychosocial difficulties as compared to the general population. Diabetes care and education specialists have identified depression, anxiety, diabetes distress, mild cognitive impairment, intellectual disabilities, maladaptive eating behaviors, dementia, and psychotic disorders as mental health conditions most commonly encountered in practice.<sup>2</sup> In a recent survey, most diabetes care and education specialists reported feeling somewhat comfortable knowing when to refer a person with diabetes to a mental health professional.<sup>2</sup> A general lack of mental health resources or access to mental health professionals were reported as struggles in the provision of care related to mental health for people with diabetes.<sup>2</sup>

Referrals to a psychologist, social worker, or psychiatrist are common interventions for individuals with diabetes who are identified with mental health concerns. However, an appropriate referral does not end the interaction between diabetes care and education specialists and individuals identified with these difficulties. Diabetes care and education specialists need to be equipped with resources that complement the psychosocial management for people with diabetes. The objective of this paper is to provide diabetes care and education specialists with a practical guide to help support persons with or at risk for diabetes and concurrent psychosocial concerns.

## Psychosocial Considerations for People with Diabetes

It is now well-understood that the prevalence of co-morbid mental health conditions is higher in people with diabetes than the general population. The most common conditions include depression, anxiety, disordered eating/eating disorders and short- and long-term neurocognitive changes associated with hypo- and hyperglycemia<sup>3</sup> (Table 1).

### Depression

From 2009 – 2012, the Centers for Disease Control and Prevention reports that 7.6% of persons aged

12 years and over in the United States experienced moderate to severe depressive symptoms in the last two weeks.<sup>4</sup> Elevated depressive symptoms affect one in four adults with diabetes with rates ranging from 21.3% in adults with type 1 diabetes to 27% in adults with type 2 diabetes.<sup>5</sup> Rates of depression in adults with diabetes range from 8-15% representing severity of depression that involves impairment in social or occupational functioning.<sup>5</sup> In youth with type 1 diabetes, 13-23% experience depressive symptoms with elevated levels of vulnerability.<sup>6,7</sup> Research on suicidal ideation among adolescents with type 1 diabetes revealed that 27% exhibited moderate to high risk for depression and 8% endorsed thoughts of self-harm.<sup>8</sup> Youth with type 2 diabetes are also at risk of depression with rates ranging from 8% to 22%.<sup>9</sup>

Research on the course of depression in people with diabetes suggests that depressive episodes are longer in duration and more persistent than those observed in the general population (Table 2). 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.<sup>10,11</sup> Relapse rates of depression have been found to be approximately 79% once an episode of depression develops.<sup>12</sup>

Depression has been found to have a bidirectional relationship with diabetes. Depression that occurs prior to the onset of type 2 diabetes confers a 38% increased risk of developing type 2 diabetes later in life.<sup>13</sup> Likewise, the development of type 1 or type 2 diabetes confers an increased risk of developing depression.<sup>14</sup> The duration of episodes of depression are comparable whether the depressive episode comes before or after the onset of diabetes.<sup>10</sup> The impact of depression on diabetes outcomes is significant. Elevated depressive symptoms and depression are associated with worsened glycemic management and greater glycemic excursion, greater severity of the full range of diabetes complications, inconsistent persistence to diabetes self-management behaviors, greater functional disability and greater risk of earlier mortality.<sup>15-20</sup>

Depression can be treated effectively in people with diabetes using tailored behavioral interventions and standard antidepressant medications. Recent evidence from multiple clinical trials has demonstrated that the use of cognitive behavioral therapy (CBT) delivered through individual counseling or telephone-based therapy sessions is effective in improving depression outcomes.<sup>21-24</sup> A combination treatment of CBT counseling and antidepressant medications has shown effectiveness in depression outcomes.<sup>25</sup> The combination of CBT and community-based exercise interventions tailored for diabetes and delivered by community mental health and exercise professionals is the only modality that has shown effectiveness in improving both depression and A1C values.<sup>21</sup>

Diabetes care and education specialists should feel comfortable providing education on the co-occurrence of diabetes and depression. Diabetes care and education specialists should screen all individuals with diabetes for depression and refer individuals who exhibit symptoms consistent with depression to an appropriate provider for assessment and management of depression through therapy services, medication or both.<sup>3</sup>

## Anxiety

Adults with diabetes have been found to have elevated rates of anxiety symptoms and conditions including generalized anxiety disorder (GAD) and anxiety presentations that are specific to the lived experience of living with diabetes or acute diabetes complications (e.g. fear of needles, fear of hypoglycemia).<sup>26</sup> Similarly, youth with diabetes are

at risk for elevated levels of anxiety.<sup>27</sup> Rates of anxiety symptoms are 20% with higher rates observed in studies that have measured anxiety symptoms using symptoms checklists or questionnaires (e.g. GAD-7). Similar rates have been observed in people with type 1 and type 2 diabetes with evidence pointing to the persistence of anxiety symptoms over time.<sup>26, 28-29</sup> In addition, post-traumatic stress disorder (PTSD) has been found in early studies to be associated with an increased risk for the development of type 2 diabetes.<sup>30,31</sup>

The impact of anxiety symptoms can be significant for the person with diabetes. Anxiety is associated with inconsistent persistence to diabetes self-management behaviors, decreased quality of life and worsened A1C values. Anxiety that is specific to the experience of diabetes, such as fear of hypoglycemia or needle phobia, can serve as a significant impediment to self-care activities.<sup>32</sup> For example, fear of hypoglycemia is associated with intentional insulin omission or under-dosing insulin, in an effort to prevent low blood glucose (BG) values and associated counter-regulatory hormonal symptoms (e.g. fight or flight response).<sup>33</sup> Fear of needle sticks can affect self-monitoring of blood glucose (SMBG), insulin injections, and the placement of devices, such as continuous glucose monitoring sensors and insulin pumps.<sup>34</sup>

Cognitive behavioral therapy and mindfulness training are the treatments of choice for individuals who are experiencing anxiety disorders that impair social, occupation or medical self-care functioning.<sup>35-37</sup> Systematic desensitization approaches to allow the person with diabetes to re-establish trust with their BG and/or insulin devices can be effective in re-establishing levels of self-care. Blood Glucose Awareness Training (BGAT) is an empirically validated cognitive behavioral therapy approach to the early identification of physical and neuroglycopenic symptoms of hypo- and hyperglycemia that can be used by people with diabetes as cues for SMBG.<sup>38</sup> Diabetes care and education specialists should be aware of the existence of the aforementioned approaches and refer individuals exhibiting symptoms consistent with anxiety to the appropriate mental health provider.

## Disordered Eating and Eating Disorders

Food and eating behaviors play a central role in the treatment and management of type 1 and type 2 diabetes. The management of diabetes requires a heightened awareness of food amounts, types and effect on glycemia that is idiopathic and not typical of individuals without diabetes. Food is also proactively used as medicine to counterbalance the glycemic effects of insulin and physical activity. Decision-making associated with food choices, in conjunction with the need to eat at times that are not dictated by hunger cues, can contribute to an idiopathic relationship with food which may result in disordered eating behaviors (maladaptive feeding behaviors related to diabetes self-management) or psychiatric eating disorders (e.g. anorexia nervosa, bulimia, binge-eating disorder).<sup>39</sup>

Rates of disordered eating behaviors are as high as 51.8% in samples that have been primarily females with type 1 diabetes, compared to 48.1% in adolescents without diabetes.<sup>39</sup> 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. The prevalence is estimated at 6.4%, with bulimia and binge eating disorders occurring at higher rates than anorexia.<sup>39-41</sup>

Treatment for disordered eating behaviors should involve diabetes care and education specialists 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' 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.

The treatment of eating disorders typically requires intensive psychological treatment that includes conventional cognitive behavioral therapy approaches that address thoughts, emotional distress and behavioral choices related to eating, body image and weight using a multidisciplinary approach.<sup>41,42</sup> Adults with binge eating disorder may also benefit from evaluation of the appropriateness of medications (e.g. GLP-1 inhibitors) to address physiologic mechanisms that suppress signaling for satiety and promote grazing and binge eating behaviors.<sup>43</sup>

## Diabetes Distress

The variety of burdens associated with diabetes and its self-management (e.g. monitoring blood glucose, frequent medication dosing or administration, engaging in physical activity, and choosing eating patterns), combined with the stress or anxiety of disease progression and complications, can result in diabetes distress.<sup>43,44</sup> Diabetes distress has a reported prevalence of 18-45%.<sup>3</sup> Individuals who develop diabetes distress have difficulty maintaining healthy self-care behaviors and have higher A1C values.<sup>45</sup> Furthermore, diabetes distress is present in approximately one-third of adolescents and may also affect parents of youth with diabetes, resulting in similar negative outcomes.<sup>46,47</sup>

Diabetes care and education specialists should routinely administer assessments for diabetes distress in people with diabetes, especially in those who are not meeting individualized goals or who are experiencing complications (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 behavioral health provider for further assessment.<sup>3</sup>

## 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. People with diabetes, as compared to people without diabetes, 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.<sup>48,49</sup> Diabetes is also associated with a higher risk of mild cognitive impairment (MCI), which is the stage of cognitive decline between normal cognitive aging and dementia.<sup>50</sup> Racial and ethnic minorities with diabetes have a higher risk of both MCI and dementia than their white counterparts with diabetes.<sup>50,51</sup>

In type 1 diabetes, children under age 12 may be at risk of cognitive dysfunction. Associated risk factors include early age at disease onset (before ages 5-7 years), repeated episodes of severe hypoglycemia, and poor glycemic management.<sup>48,52</sup> Middle-aged adults with type 1 diabetes (ages 40 years to 60 years) are also at increased risk of cognitive dysfunction, with microvascular complications as a primary risk factor.<sup>53</sup>

In type 2 diabetes, cognitive dysfunction is observed in adults 40 years of age and older, and primary risk factors for cognitive dysfunction may be vascular risks (e.g. atherosclerotic disease, cerebrovascular disease, history of stroke), as well as poor glycemic management and hyperinsulinemia.<sup>48,54</sup> People with type 2 diabetes who are over age 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 risk of cognitive impairment due to microvascular complications, vascular risk factors, poor glycemic management, and hyperinsulinemia as other contributors.<sup>47,54</sup>

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 been found to exhibit mild decrements in academic abilities and information processing speed.<sup>55,56</sup> In middle and older aged adults, type 2 diabetes is associated with dysfunction in fine motor skills, executive function, speed of information processing, verbal memory, and visual memory.<sup>57</sup> Cognitive dysfunction in working memory and information processing speed have been associated with poorer performance of instrumental activities of daily living (IADL) in type 2 diabetes.<sup>58</sup>

Changes in cognitive skills of information processing, fine motor skills, memory, and executive functions may impact the speed, accuracy, and/or reliability of diabetes self-management. Cognitive dysfunction may present as self-reported concerns about thinking skills, family-reported concerns, observed changes in performance of everyday life activities and diabetes self-management behaviors, or changes in mood or personality.

If changes in cognition are observed or suspected in a person with diabetes, referral to a provider for further evaluation and treatment is indicated.<sup>59</sup> Older adults with diabetes should receive an annual dementia screening. Provider trainings and guidance are available for dementia screening in primary care, utilizing routine visits or the Medicare Annual Wellness Visit.<sup>60,61</sup> Table 3 contains categories of providers that are available for referrals for cognitive evaluation and treatment, as well as types of services provided.

When a person with diabetes has mild cognitive dysfunction, or has been diagnosed with MCI, the

educator 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. Available consensus criteria for adapting educational information for persons with lower health literacy are also effective in reducing language processing demand for people with mild cognitive impairment.<sup>62,63</sup>

In people with diabetes with confirmed degenerative dementia, the primary tasks of the educator are to monitor changes in their ability to perform diabetes self-management as dementia progresses. The educator will help determine what self-care adjustments are needed when carrying out daily functional and self-management activities, as cognitive impairment progresses. At the early stages of dementia, the educator can assist the individual and family in identifying a caregiver. Training or retraining of caregivers is indicated as dementia progresses to ensure caregivers are prepared with the knowledge, skills, and problem solving required for assisting with their diabetes management.

### Serious Mental Illness

Individuals diagnosed with serious mental illness (SMI) (e.g. schizophrenia spectrum, bipolar disorder, major depressive disorder) experience reduced life expectancy of 10-25 years. For instance, persons diagnosed with schizophrenia spectrum die at about 3.5 times the rate of the general population.<sup>64</sup> Historically, poor living conditions may have been a primary contributor to the mortality disparities, however currently the leading factor accounting for reduced life expectancy is poor outcomes related to high rates of cardio-metabolic disease.<sup>65</sup> Persons with serious mental illness are 2-3 times more likely to develop diabetes than the general population.<sup>65</sup> 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 a dramatic reduction in life expectancy as schizophrenia/schizoaffective disorder.<sup>66,67</sup>

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 serious mental illness.<sup>68,69</sup> Despite large-scale public anti-stigma campaigns, there continue to be

common views that persons with serious mental illness are dangerous and people express high rates of desire for social distance from them.<sup>70</sup> These stigmatizing beliefs are found in the general public, as well as in individuals with diabetes and their healthcare providers.<sup>71</sup> Stigmatizing beliefs 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 illness may contribute to reduced self-esteem, reduced belief in possibilities for self-management, and increased hopelessness.<sup>72</sup> Rates of stigma in health care providers (HCPs) is of particular concern, as some have suggested that this contributes to unequal provision of diabetes care to people with SMI.<sup>73</sup> Consistent with this concern, persons with SMI are much more likely to develop diabetes, however they are less likely to be screened for elevated A1C or hyperlipidemia. Once diagnosed with diabetes, they are less likely to be referred for retinal exams, foot care, and renal testing; and are less likely to be prescribed a range of diabetes medications (e.g. statins, ACE inhibitors, angiotensin receptor blockers). Of particular concern to diabetes care and education specialists, these individuals are also less likely to receive diabetes education than individuals with diabetes alone.<sup>74,75</sup>

Both internalized stigma and stigma held by HCPs can contribute to expectancy effects, wherein either or both parties have limited hope for positive health outcomes or improved self-management behavior. In these instances, the individual with SMI may come to 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 adjusted, people with SMI have equal to better therapeutic persistence and diabetes outcomes than their counterparts without SMI.<sup>76,77</sup>

One piece of conventional wisdom suggests that psychotic symptoms must be addressed prior to diabetes intervention. This view is problematic and not supported by the available evidence. A portion of persons with SMI experience persistent 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 healthcare providers in development of effective

self-management plans. As a result, when working with persons experiencing SMI, collaboration and consultation with mental health professionals may be particularly useful.<sup>78</sup>

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, a range of treatment options are available for persons diagnosed with SMI. Promotion of recovery is now the standard for treatment, in contrast to traditional approaches which focus primarily at stabilization and reduced adverse events. Pharmacological approaches are commonly offered, as well as a range of psychosocial interventions, including psychotherapy, skills training, family interventions, supported employment and peer support.

### **Pharmacologic Effects of Medications**

Multiple factors contribute to higher morbidity rates for diabetes in persons with mental illness. Poorer diet, sedentary lifestyles, and increased use of substances such as tobacco have been linked to insulin resistance and cardiovascular disease. Contributing factors for poor outcomes include hypertension, dyslipidemia, and obesity. The burden of increased morbidity and mortality is linked to poor access to healthcare services, stigma, and poor identification of medical conditions within psychiatric services.<sup>79</sup> Finally, the number of pharmacological treatment options may contribute to the development of or exacerbate cardio-metabolic 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 or schizoaffective disorder. Antipsychotic treatment is segmented into first generation (typical) antipsychotics or second generation (atypical) antipsychotics. Second generation antipsychotics have become the most commonly prescribed class due to reduced risk of movement disorders, which is a frequent side effect of first-generation agents. Additionally, second-generation antipsychotics are approved for use with bipolar disorders and can be prescribed as a component of treatment for major depressive

disorder and anxiety disorders. Particularly in light of this expansion of use, providers must be aware of adverse effects associated with these agents, particularly metabolic syndrome associated with second-generation antipsychotics.<sup>80</sup>

The pharmacologic mechanism responsible for metabolic syndrome due to antipsychotics remains uncertain; however, it is clear that metabolic syndrome seems to have a higher correlation with certain second-generation antipsychotics compared to others. Two of the most common second-generation agents with the most significant impact on weight gain are clozapine and olanzapine. Alternatively, agents such as aripiprazole and lurasidone seem to have a lower incidence of metabolic syndrome.<sup>81</sup> Based on the varying responses to this medication class, the American Psychiatric Association (APA) has recommended that all individuals receiving second-generation antipsychotics should receive metabolic monitoring at baseline, 3 months and annually thereafter.

### Other Psychotropic Agents

Metabolic syndrome is an adverse effect unique to the second-generation antipsychotics, however, there are other psychotropic agents that have adverse effects that can antagonize cardiovascular health in individuals with mental illness. Lithium and divalproex sodium/valproic acid are mood stabilization agents that are frequently used in the treatment of 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 (SSRIs), serotonin norepinephrine reuptake inhibitors (SNRIs), mirtazapine and tricyclic antidepressants (TCAs) may also lead to weight gain.<sup>82</sup> 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 above. Conversely, medications used to help manage cardiovascular health have the potential to 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 has been shown to result in significantly longer nicotine abstinence rates when compared to placebo, nicotine replacement therapy or bupropion.<sup>83</sup>

Since 2007, case reports of neuropsychiatric effects, including suicidal ideation, mood and behavior disturbances and depression have surfaced with the use of varenicline and bupropion. In 2009, both medications were mandated by the Food and Drug Administration to carry a box warning about the risk of these neuropsychiatric effects. A multitude of 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 patch and placebo was conducted in a large population of people with and without psychiatric disorders. No increase in neuropsychiatric events were observed in this study for study participants taking varenicline or bupropion as compared to use of the nicotine patch or placebo.<sup>84</sup>

In light of the aforementioned evidence, diabetes care and education specialists may consider the use of varenicline or bupropion in people with underlying psychological disorders. Individuals should also be counseled on the potential risk of neuropsychiatric effects associated with these medications, with the recommendation to notify a mental health provider should these symptoms occur.

### Cognitive Impairment Due to Statin Therapy

It is estimated that almost 40 million Americans take statins to reduce the risk of cardiovascular events. Underserved populations are less likely to be on a statin, although the exact prevalence of statin use in individuals affected by mental illness is unknown.<sup>85</sup> Statins are associated with significant cardiovascular benefits, although adverse effects such as hyperglycemia and cognitive effects have affected some individuals taking this class of medications. The evidence on the effect of statin use on cognitive impairment or psychological disorders is mixed, ranging from forgetfulness to complete blackouts.<sup>86-101</sup>

The conflicting evidence on statins and cognitive impairment should not prevent diabetes care and education specialists from recommending statin use

in people with diabetes. The decision to avoid or discontinue statin use in people with diabetes who report cognitive side effects should be made on an individualized basis, weighing risk versus cardiovascular benefit.

### Assessment and Referral

The daily demands of the disease process and management can have a significant psychological impact on people with diabetes. In turn, these psychological sequelae can negatively impact both self-care in general, and diabetes care specifically.<sup>102</sup> Researchers have identified a link between depression and sub-optimal diabetes self-management.<sup>103</sup> The ADA and ADCES have also highlighted the critical role of diabetes self-management education and support (DSMES) given potential psychosocial benefits, including the reduction of depression.<sup>104</sup> Mental health services can help promote the use of effective coping strategies.

Identifying the primary reason for mental health referral is important because it can promote the selection of appropriate resources. Similar to other professions, mental health professionals have diverse areas of expertise (Table 6). Recently, the American Diabetes Association and American Psychological Association have partnered to offer continuing education credit for licensed mental health professionals interested in providing mental health care to people with diabetes.<sup>105</sup> This program aims to, “fill the gap and growing need for mental health professionals trained in the complexities of diabetes management and effective treatment strategies specific to people with diabetes.”<sup>105</sup> If emotional support is the primary referral question, a referral to a clinical psychologist, marriage and family therapist or social worker may be optimal. Some psychiatrists also provide counseling. Furthermore, school-based counseling with a school psychologist or other school-based mental health provider 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 assessment with a school psychologist is another option for students who are experiencing academic challenges. Given the unique impact of diabetes on individuals, mental health professionals with working knowledge about

diabetes may be beneficial. For example, a professional experienced in the treatment of diabetes-related psychological issues may anticipate the possible impact of variable BG levels on emotional, behavioral, academic and cognitive functioning (e.g., mood symptoms, attention/concentration, motivation, energy). In 2018, the American Diabetes Association (ADA) launched the Mental Health Provider Directory, an online directory of mental health professionals with working knowledge about diabetes (Table 4). This directory includes a list of mental health professionals who work with adults and/or children with diabetes. Telehealth options are also available.

Sometimes, dissatisfaction with mental health services can result in refusal to access or continue mental health treatment. A good fit between the mental health provider and individual with diabetes is an important component of a productive, helpful experience. If possible, the individual with diabetes may consider consulting with several mental health providers before committing to ongoing mental health services with a specific mental health provider. When an individual with diabetes or their caregiver reports that mental health services have not been helpful, it is important to promote a discussion about factors that led to this experience with mental health services. Validation of the individual’s experience is important to gain better understanding. To better understand the individual’s experience, it may help to start with an open-ended question such as, “Can you tell me more about your experience with the mental health provider?” Follow-up questions may include:

- What did you find helpful?
- What was not helpful?
- Did you feel that the mental health provider understood and was receptive to addressing your needs?
- Would you consider sharing your concerns and continuing to work with your current provider? If not, would you consider working with a provider that you feel better suits your needs?

If the individual is not interested in continuing to work with their current mental health provider, it may be important to consider if a contributing factor was the provider’s knowledge about diabetes. While psychological sequelae may both stem from and

negatively impact diabetes self-management, the barriers are sometimes both diabetes-related (e.g., diabetes burnout, diabetes distress) and non-diabetes-related (e.g., financial stress, relationship issues). Therefore, the provider's knowledge about diabetes may or may not be significant for the individual seeking treatment. If the individual desires to continue mental health services with a different provider, the diabetes care and education specialist or designated diabetes care team professional may assist by providing additional resources. If the individual does not desire to continue mental health services with the current or new provider and is not at imminent risk for self-harm or harm to others, the diabetes care and education specialist and team are encouraged to continue the behavioral assessment including related psychological factors and openness to seek mental health services in the future. If the individual is determined to be at risk for self-harm or harm to others, assessment and intervention is needed.

### Emergent Situations, Suicidal Ideation

The complexity of diabetes management for individuals with clinical or subclinical mental health symptoms is heightened when an insulin-requiring individual presents with suicidal ideation. Individuals with type 1 diabetes cannot live without insulin, however use of insulin may be avoided or utilized in excess for the purpose of self-harm.<sup>106,107</sup> Diabetes care and education specialists may or may not have experience working with people with mental health issues depending upon their discipline and setting. A mental health emergency can be defined as any time a person is in immediate danger to others or themselves. However, other examples of an impending mental health emergency may include those listed in Table 7.

- Individuals with depression may experience thoughts and feelings of hopelessness, helplessness and suicidal ideation. The results of a recent meta-analysis was suggestive of an increased risk of suicide for people with diabetes.<sup>108</sup> While the relationship between risk for suicide and diabetes has been explored, researchers have not established that a definitive connection exists.<sup>109-111</sup> Every diabetes care and education specialist should be able to recognize an individual at increased risk of suicide, a mental health emergency, as well as how to seek urgent help and available resources.
- According to the 2016 ADA Psychosocial Position Statement, several scenarios encountered when

assessing people with diabetes may require a referral for a mental health evaluation and treatment.<sup>3</sup> For example, candidates for bariatric surgery should undergo a mental health assessment before undergoing this procedure. For individuals who exhibit severe depression and suicidal ideation, surgery should be postponed given the psychosocial adjustment associated with rehabilitation from surgery and recommended post-surgery changes in lifestyle. In general, significant changes in diabetes treatment should also be carefully considered and possibly avoided given both the associated emotional adjustment and cognitive demands (learning curve).

The presence of elevated depressive symptoms and risk for self-harm can be assessed in several ways. First, the individual or caregiver may make statements about a gradual or sudden decrease in diabetes self-care. Upon further discussion, the educator may be informed that the individual is exhibiting symptoms of depression and/or thoughts of self-harm. Second, depression screening can help identify individuals who may require additional mental health intervention, including possible measures to ensure the individual's safety. Age-appropriate depression screening measures are available and may be used by non-mental health professionals. For example, the Patient Health Questionnaire (PHQ), Child Depression Inventory (CDI), and Geriatric Depression Scale (GDS) are common depression screening measures. Measures specifically designed to assess risk for self-harm are also available and include the Ask Suicide-Screening Questions (ASQ) and the Columbia-Suicide Severity Rating Scale (C-SSRS).<sup>112-115</sup>

When risk for self-harm is identified, safety considerations for ongoing diabetes care are critical. The following steps may be taken to promote safety for people at risk for self-harm:<sup>109</sup>

- Refer the individual to your team's designated team member (e.g., social worker, 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 who are at risk for self-harm and/or harm to others, and who are unable to seek care on a voluntary basis. 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 healthcare team does not have a designated staff person and/or if the staff person is not available, call 911 or arrange for the individual to be transported to the closest emergency room for a self-harm risk assessment. If your county has a department of mental health access number, this may be another option.

- 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 individual does not have access.
  - Caregiver(s) to secure objects that may be used to inflict self-harm (e.g., knives, razors)
  - Caregiver(s) to monitor individual on an ongoing basis and to manage their diabetes. The administration of insulin after the consumption of carbohydrates may be indicated to avoid intentional hypoglycemia as a means for self-harm.
  - If the individual is suspected to be at risk for self-harm and/or harm to other(s), caregiver(s) will transport them to the closest emergency room or call 911.
- Diabetes care and education specialists can play an important role in subsequent support and follow-up care. Follow-up care may include:
  - More frequently scheduled appointments to assess diabetes management and related behavioral and psychosocial factors
  - Identified adult who can provide support by monitoring the individual's diabetes care

Diabetes care and education specialists should be psychosocially minded, ensuring access to in-the-moment consultation with appropriate mental health professionals or having a list of community resources that individuals can be referred to for psychiatric/psychological counseling and help. It is also important to follow up to determine whether the person with diabetes and/or the family has followed

through with the recommendations. In light of diabetes care and education specialists practicing in a variety of settings, all diabetes care and education specialists must be aware of the risks, signs and symptoms, and emergent factors for suicide or other psychiatric emergencies.

### **Effective Communication with Individuals with Diabetes About Mental Health**

Stigma and negative attitudes associated with seeking mental health care has been identified as one of many barriers associated with treatment access and utilization.<sup>111</sup> Communication with individuals about mental health can promote an individual's response to recommendations associated with mental health care and support. Specifically, communication about mental health services is one of several important components necessary for optimal diabetes management. In this regard, diabetes care and education specialists are in a position to either combat or reinforce stigmatizing views of mental illness. Given the unfounded nature of negative beliefs about mental illness and the unequal provision of health care, it is incumbent upon diabetes care and education specialists to engage in practice that minimizes the negative impact of stigma. It is important to reflect, to attempt to identify personal biases regarding persons with mental illness. This can help promote the perception that attention to the psychological aspects of diabetes is important for all people living with diabetes and that the person is not being singled out because they are perceived as having personal problems or issues.

DSMES should always be individualized, but no automatic modification should be made based on the presence of a psychiatric diagnosis. Instead, the same quality of diabetes education should be offered to persons with mental illness as would be to people with diabetes alone. 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, non-stigmatizing language. Practitioners should be equipped to challenge commonly held stigmatizing beliefs

expressed by people with diabetes or colleagues. For instance, beliefs that people with serious mental illness 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 illness with sincere regard and optimism, including explicit optimism for the possibilities of diabetes self-management.

Diabetes care and education specialists work closely with physicians, nurses, dietitians and mental health professionals to empower individuals to manage their diabetes optimally. Diabetes care and education specialists frequently motivate 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 8).

### **Future**

The field of diabetes education would benefit from additional mental health providers, including psychologists, social workers, psychiatrists, and case managers to help serve people with diabetes with a variety of psychosocial conditions. Collaborative efforts, such as the Mental Health Provider Diabetes Education Program between the American Diabetes Association and the American Psychological Association, should continue to expand to optimize psychosocial care for people with diabetes.<sup>105</sup> Furthermore, the available mental health resources must continue to expand to help diabetes care and education specialists meet the needs of people with diabetes.



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<b>Type of Clinical Presentation</b>	<b>Assessment Tools</b>	<b>Clinical Thresholds</b>	<b>Referral or Treatment Options</b>
<b>Diabetes-Related Distress</b>	Fisher, L, Hessler, D.M., Polonsky, W.H., Mullan, J. (2012). When is diabetes distress clinically meaningful? Establishing cut points for the Diabetes Distress Scale. <i>Diabetes Care</i> , 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 Mar; 28(3): 626-631		
<b>Depression</b>	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 provider
	Ask Suicide-Screening Questions (ASQ) Horowitz LM, Bridge JA, Teach SJ, et al. Ask Suicide-Screening Questions (ASQ): A Brief Instrument for the Pediatric	Ages 10-24 years	

	Emergency Department. <i>Arch Pediatr Adolesc Med.</i> 2012;166(12)1170-1176.		
<b>Generalized Anxiety Disorder</b>	Beck, A.T., & Steer, R.A. (1993). Beck Anxiety Inventory Manual. San Antonio, TX: Psychological Corporation.	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 provider
<b>Fear of Hypoglycemia</b>	Gonder-Frederick, L., Schmidt, K., Vajda, K., Greear, M., Singh, H., Shepard, J., Cox, D. (2011). Psychometric properties of the Hypoglycemic Fear Survey-II for adults with type 1 diabetes. <i>Diabetes Care</i> , 34: 801-6.		Problem-solving approaches to identify barriers, address educational gaps and identify strategies for proximal next steps. If symptoms persist, referral to a mental health provider for additional assessment and treatment.
<b>Disordered Eating Behaviors</b>	Markowitz, J., Butler, D.A., Volkening, L.K., Antisdell, J., Anderson, B.J., Laffel, L. <i>Diabetes Care</i> . 2010 Mar; 33(3): 495-500.	A clinical cut-off score of >20 indicates the need for a more extensive evaluation of disordered eating behaviors, adherence to regimen (particularly medication dosing) and psychological wellbeing.	Referral for additional assessment by a mental health provider
<b>Anorexia Nervosa/Bulimia</b>	Garner, D. M. (2004). <i>The Eating Disorder Inventory-3: Professional manual</i> . Odessa, FL: Psychological	2 interview and self-report surveys aimed at the measurement of psychological traits or symptom clusters	Referral for additional assessment by a mental health provider

	Assessment Resources, Inc.	relevant to the development and maintenance of eating disorders.	
<b>Serious Mental Illness (e.g. Schizophrenia)</b>			Referral for additional assessment by a mental health provider

**Table 2. Symptoms Associated with Depression<sup>116</sup>**

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

**Table 3. Referrals and Services for Cognitive Evaluation and Treatment<sup>59</sup>**

<b>Referrals for Cognition Services</b>	<b>Services Provided</b>
Primary Care Provider or Geriatrician	<ul style="list-style-type: none"> <li>○ Identification and treatment of acute medical condition(s) that cause reversible cognitive dysfunction (e.g. delirium; polypharmacy; virus/pneumonia; electrolyte, metabolic, or chemical imbalances)</li> <li>○ Dementia screening and orders for full dementia work-up (e.g. labs, neuroimaging, cognitive evaluation)</li> <li>○ Monitoring of cognitive decline</li> </ul>
Neuropsychology or Psychiatry Provider	<ul style="list-style-type: none"> <li>○ Formal evaluations to identify, quantify, and diagnose type of cognitive dysfunction and differential diagnoses (e.g. normal changes with aging, MCI, dementia subtypes, depression vs dementia)</li> <li>○ Cognitive rehabilitation for compensatory strategy training or remediation, as appropriate</li> <li>○ Counseling on adapting to and coping with cognitive changes</li> <li>○ Pharmacological treatment for early dementia (psychiatry)</li> </ul>
Occupational Therapy	<ul style="list-style-type: none"> <li>○ Formal evaluations of the effect of cognitive dysfunction on ADL's, IADL's and disease self-management behaviors</li> <li>○ Therapy and adaptive methods to maximize functional independence with ADL's, IADL's, and disease self-management behaviors, or to train caregivers in assistance of these behaviors.</li> </ul>

**Table 4. Resources for the Psychosocial Constructs of Diabetes<sup>3</sup>**

Mental Health and Diabetes (Available in English and Spanish)	<ul style="list-style-type: none"> <li>• Anger</li> <li>• Stress</li> <li>• Depression</li> <li>• Distress</li> <li>• Healthy Coping</li> <li>• Holiday Eating</li> <li>• Lifestyle Resources</li> <li>• Medication Taking</li> </ul>	<a href="https://www.diabeteseducator.org/living-with-diabetes/tip-sheets-and-handouts/mental-health">https://www.diabeteseducator.org/living-with-diabetes/tip-sheets-and-handouts/mental-health</a>
	<ul style="list-style-type: none"> <li>• Anger</li> <li>• Denial</li> <li>• Depression</li> <li>• Stress</li> <li>• Diabetes Distress</li> </ul>	<a href="http://www.diabetes.org/living-with-diabetes/complications/mental-health/">http://www.diabetes.org/living-with-diabetes/complications/mental-health/</a>
	<ul style="list-style-type: none"> <li>• Caregiver Burnout</li> <li>• Depression</li> <li>• Diabetes Burnout</li> <li>• Diabetes Distress</li> <li>• Diabulimia</li> <li>• Stress</li> <li>• Suicide Risks</li> </ul>	<a href="https://beyondtype1.org/mental-health/">https://beyondtype1.org/mental-health/</a>
Mental Health Professional Directories	<p>ADA/APA Mental Health Provider Diabetes Education Program</p> <p>ADA Mental Health Provider Directory</p>	<p><a href="http://www.apa.org/health/emphasis/diabetes.aspx">http://www.apa.org/health/emphasis/diabetes.aspx</a></p> <p><a href="https://professional.diabetes.org/ada-mental-health-provider-directory">https://professional.diabetes.org/ada-mental-health-provider-directory</a></p>
Position Statements	Diabetes Self-management Education and Support in Type 2 Diabetes: A Joint Position Statement of the American Diabetes Association, the Association of Diabetes Care & E, and the Academy of Nutrition and Dietetics	Powers MA, Bardsley J, Cypress M, Duker P, Funnell MM, Fischl AH, Maryniuk MD, Siminerio L, Vivian E. Diabetes Care 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. Diabetes Care 2016; 39: 2126-2140. DOI: 10.2337/dc16-2053
Additional Resources	<ul style="list-style-type: none"> <li>• ADA Standards of Medical Care in Diabetes</li> <li>• National Standards for Diabetes Self-Management</li> </ul>	<a href="https://professional.diabetes.org/content/diabetes-educator-resources">https://professional.diabetes.org/content/diabetes-educator-resources</a>

	Education and Support • ADA Patient Education Library	
	The Use of Language in Diabetes Care and Education	Dickinson JK, Guzman SJ, Maryniuk MD, O'Brian CA, Kadohiro JK, Jackson RA, D'Hondt N, Montgomery B, Close KL, Funnell MM. The Use of Language in Diabetes Care and Education. Diabetes Care 2017; 41: 1-10. DOI: 10.2337/dci17-0041
	Center for Diabetes and Mental Health (CDMH)	<a href="https://cdmh.org">https://cdmh.org</a>
	Centers for Disease Control and Prevention, Diabetes Public Health Resource	<a href="http://www.cdc.gov/diabetes/">http://www.cdc.gov/diabetes/</a>
	National Diabetes Education Program	<a href="http://www.ndep.nih.gov">http://www.ndep.nih.gov</a>
	National Diabetes Information Clearinghouse	<a href="http://diabetes.niddk.nih.gov">http://diabetes.niddk.nih.gov</a>
	National Institute of Mental Health	<a href="http://www.nimh.nih.gov">http://www.nimh.nih.gov</a>

**Table 5. Situations that warrant referral of a person with diabetes to a mental health provider for evaluation and treatment<sup>3</sup>**

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

**Table 6. Mental Health Providers and Services Provided**

Mental Health Providers <sup>117</sup>	Services Provided
Clinical Psychologist	Services may include consultation and evaluation of mental health concern and individual, family, and group therapy. May also conduct psychological assessments.
Marriage and Family Therapist	Services may include family or couples' therapy.
Neuropsychologist <sup>118</sup>	Services may include comprehensive diagnostic assessments to identify specific cognitive strengths and weaknesses.
Psychiatrist	Services may include consultation and evaluation of mental health concern and the prescription and management of psychotropic medication. May also provide counseling.

School Psychologist <sup>119</sup>	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; help identify medical and financial resources Social workers are often the designated medial team members who report concerns to the Department of Child and Family Services (Child Protective Services)

<b>Table 7. Signs and symptoms of an impending mental health emergency<sup>115</sup></b>
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

<b>Table 8. Psychosocial and Behavioral Support</b>
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
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