

# The Importance of Addressing Depression and Diabetes Distress in Adults with Type 2 Diabetes

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People with type 2 diabetes often experience two common mental health conditions: depression and diabetes distress. Both increase a patient's risk for mortality, poor disease management, diabetes-related complications, and poor quality of life. The American Diabetes Association and the U.S. Preventive Services Task Force recommend routine evaluations for these conditions in adults for optimal disease management and prevention of life-threatening complications. However, barriers exist within primary care and specialty settings that make screening for depression and diabetes distress challenging. Depression and diabetes distress influence diabetes self-care and diabetes control and barriers in clinical care practice that can hinder detection and management of psychosocial issues in diabetes care. This paper highlights opportunities to increase mental health screenings and provides strategies to help providers address depression and diabetes distress in patients with type 2 diabetes.

**KEY WORDS:** diabetes; depression; diabetes distress; primary care; providers.

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Approximately 30 million people or 12.2% of the US adult population have diabetes.<sup>1</sup> Diabetes self-care (diet, physical activity, and medication adherence) is critical to controlling hemoglobin A1C (HbA1c), blood pressure, and cholesterol levels and for the prevention or delay of diabetes-related complications.<sup>2</sup> Depression and diabetes distress can impede control of these factors, and both are common conditions in people with type 2 diabetes.<sup>3, 4</sup> Depression is present in about one in five adults with type 2 diabetes.<sup>5–7</sup> Diabetes distress affects almost one third of adults with type 2 diabetes.<sup>3</sup> Diabetes distress is distinct from depression, as it results from the emotional burden (e.g., worry, frustration, anger, burnout) of

managing type 2 diabetes.<sup>5, 8</sup> Depression and diabetes distress can also overlap; about 4.5% of adults with diabetes screen positively for both.<sup>9</sup> Moreover, depression or depressive symptomatology exacerbates diabetes-related distress, with both conditions negatively affecting glycemic control.<sup>9</sup>

In people with type 2 diabetes, depression and diabetes distress are both associated with increased risk for mortality, work absenteeism, poor disease management, and poor health outcomes.<sup>5, 10</sup> Depression also increases the risk for macrovascular complications (e.g., coronary artery disease, peripheral arterial disease, stroke).<sup>11</sup> People with type 2 diabetes who experience either depression or diabetes distress also risk developing microvascular complications (e.g., retinopathy, neuropathy, nephropathy).<sup>4</sup> Health systems, such as the Veterans Administration and Kaiser Permanente and others, institute regular screening for depression in primary care.<sup>12, 13</sup> Yet, in systems without universal screening, these mental health conditions often go unrecognized or undertreated in people with type 2 diabetes.<sup>14</sup>

For optimal disease management, as well as the prevention of life-threatening complications, the American Diabetes Association emphasizes the recognition, treatment, and management of depression and diabetes distress in people with type 2 diabetes.<sup>15, 16</sup> Early recognition, routine screening, and the use of evidence-based treatment approaches for depression and diabetes distress can improve control of HbA1c, blood pressure, and cholesterol, as well as overall health, and results in medical cost savings.<sup>16, 17</sup>

## THE INFLUENCE OF DEPRESSION AND DIABETES DISTRESS ON DIABETES MANAGEMENT AND SELF-CARE

Poor control of HbA1c, blood pressure, and cholesterol is associated with poor medication adherence. Compared to non-depressed patients with type 2 diabetes, those with depression are twice as likely to have poor adherence to medication for blood glucose, blood pressure, and cholesterol.<sup>18</sup> Additionally, patients with high psychological distress, low social support, and low self-efficacy have symptoms associated with poorer diabetes self-care.<sup>19</sup> Targeted, individualized behavioral interventions addressing these

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three psychosocial factors may help improve diabetes self-care and patient outcomes.

A recent meta-analysis examined psychological (stress, depression, anxiety, coping), motivational (self-efficacy), and behavioral factors (adherence to diet, physical activity, medication, glucose self-monitoring, and appointment keeping) as predictors of self-care behaviors among adults with type 2 diabetes.<sup>20</sup> Depression contributed to significantly lower physical activity and dietary adherence, while high stress levels predicted lower medication adherence.<sup>20</sup> Additionally, motivational factors, such as self-efficacy and coping, positively correlated with better glycemic control. The authors conclude that interventions focused on depression and self-efficacy could improve metabolic control and diabetes self-management.

### SCREENING RECOMMENDATIONS FOR DEPRESSION AND DIABETES DISTRESS

The U.S. Preventive Services Task Force recommends universal screening for depression.<sup>21,22</sup> The American Diabetes Association<sup>15</sup> recommends regular depression and diabetes distress screenings, particularly if patients with type 2 diabetes experience comorbidities, diabetes-related complications, changes in life events, or changes in their diabetes treatment plan. Additionally, the American Diabetes Association<sup>15</sup> and others<sup>23</sup> recommend that all patients with type 2 diabetes receive education and support to acknowledge that distress is common among people with diabetes.

Although recommendations by the American Diabetes Association and the U.S. Preventive Services Task Force emphasize the need for routine evaluation of adults for mental health conditions, barriers to specific screening for depression and diabetes distress still exist.<sup>22,24</sup> These barriers often occur at the patient, provider, and practice level (see Table 1). For instance, patients who have type 2 diabetes and diabetes

distress or depression may experience stigma or shame about having these conditions. Therefore, they may not be as open to talk about the emotional challenges they face in managing type 2 diabetes. Also, patients may not recognize the symptoms they have as being related to depression or diabetes distress.<sup>24</sup> All of these factors influence whether people with type 2 diabetes express concern about depressive symptomatology or distress with their providers or whether patients get the care they need to address mental health conditions.<sup>24</sup>

Prior to national recommendations to do universal depression screening, studies in primary care settings found depression being recognized in only about 50% of patients with this condition.<sup>25-27</sup> More recent data show that depression screening rates remain low among patients with type 2 diabetes in particular, especially if there is no documented history of depression.<sup>14</sup> Unfortunately, in a study that examined 71 health care providers' approaches to screening and treating patients with type 2 diabetes for depression, only half reported ever using a depression screening tool in their practice.<sup>28</sup> Limited training may be one reason providers do not address the mental health issues of their patients with diabetes. Also, providers may consider psychosocial concerns to be out of their area of expertise, which can influence whether they screen or refer patients for mental health consultations.<sup>24</sup> All providers experience competing demands for their limited time with patients, which makes it difficult to conduct mental health assessments.<sup>28</sup> Providers caring for patients with diabetes may also have trouble distinguishing somatic symptoms of depression or diabetes distress from symptoms of physical illness, which can make it hard to provide an accurate diagnosis.<sup>29</sup>

Barriers to screening for depression and diabetes distress also exist at the practice level. If a practice does not have access to mental health specialists, mental health screening tools, or a reminder system to alert providers to screen for mental health conditions on a routine basis, depression and diabetes distress may go undetected.<sup>14,28</sup>

**Table 1 Perceived Barriers and Strategies to Address Psychological Conditions in Primary Care and Specialty Settings**

	Perceived barriers	Strategies to address barriers
Patient level	Stigma about mental health conditions Denial of depression or diabetes distress Lack of knowledge about depressive symptomatology or diabetes distress	Educate patients with diabetes about depression and diabetes distress Inform patients about educational resources for depression and diabetes distress and mental health services available
Provider level	Lack of or inadequate mental health training Workload demands or time constraints Managing physical condition (e.g., diabetes) takes up providers' time Perception of mental health issues being out of providers' area of expertise or responsibility Perception that patients may not follow through with mental health referral	Identify and participate in mental health trainings available for primary care providers Identify ways to incorporate evidence-based guidelines into clinical practice Explore ways to effectively manage and address mental health conditions during diabetes clinic visits
Practice level	Lack of access to mental health specialists Lack of access to diabetes distress, depression, and other mental health assessment tools Lack of a reminder system	Explore opportunities to assess patients' mental health concerns in regular diabetes clinic visits Identify ways to develop alert systems in electronic health records for depression and diabetes distress screenings

## SCREENING TOOLS TO ASSESS DEPRESSION AND DIABETES DISTRESS

Numerous validated assessment tools are available to screen for depression severity and diabetes distress. A common screener and diagnostic tool for depression is the Patient Health Questionnaire-9, which performs well in patients with and without type 2 diabetes.<sup>30–32</sup> A Patient Health Questionnaire-9 cutoff score of 10 or higher is acceptable for detecting major depressive disorder 88% of the time.<sup>30</sup>

The Problem Areas in Diabetes Scale and the Diabetes Distress Scale are both good measures for detecting diabetes distress.<sup>33</sup> The Problem Areas in Diabetes Scale is a 20-item self-report instrument that focuses on negative emotions related to having diabetes (e.g., fear, anger, frustration) and diabetes burnout.<sup>33</sup> The Diabetes Distress Scale contains 17 items that assess the severity of problems and burden associated diabetes management.<sup>33</sup> In a study of 628 people with both type 1 and type 2 diabetes, 43.6% of the participants reported distress scores over the Problem Areas in Diabetes Scale cutoff of 40 or higher, suggesting clinical distress.<sup>33</sup> The Diabetes Distress Scale, with a cutoff criterion of 3 or higher, was more conservative in detecting distress among study participants compared to the Problem Areas in Diabetes Scale, with the difference being more than 10 percentage points.<sup>33</sup>

## STRATEGIES TO IMPROVE SCREENING FOR DEPRESSION AND DIABETES DISTRESS

Given that multiple barriers can hamper screening for depression and diabetes distress among patients with type 2 diabetes, the use of multiple strategies could help increase screening opportunities in primary care and specialty settings. At the patient level, providing educational information about how common depression and diabetes distress are for people with type 2 diabetes could help educate patients about these mental health conditions. It could also help patients recognize their own emotional needs and become better advocates for their own mental health care, as well as be an opportunity for intervention or referrals, if needed. At the provider level, offering mental health training to providers of patients with diabetes could help them recognize depression and diabetes distress in their patients. Training can also help providers determine whether a mental health consultation is warranted.<sup>24</sup> At the practice level, adding prompts to electronic health records can promote screening for depression and diabetes distress, re-evaluations, treatment, and referrals.<sup>14,25</sup>

## COLLABORATIVE CARE

Providers can use collaborative care to improve diabetes outcomes among their patients with type 2 diabetes.<sup>14,34,35</sup> Collaborative care is a range of complex interventions where multiple health care providers from different professions

provide comprehensive services in a coordinated way to augment primary care.<sup>36</sup> The collaborative care team typically includes a primary care provider (e.g., doctor, nurse), who coordinates care with management staff (e.g., social worker, case manager, psychologist, nurse). The team develops interventions that emphasize the use of problem-solving therapy and antidepressant medication, an increased intensity of care for patients who initially do not respond to depression treatment, and the development of a plan to prevent depression relapse.<sup>34</sup>

Collaborative team members can work together to determine if a patient's care should be adjusted to achieve specific goals and long-term benefits, especially if the patient presents with mental health conditions, such as depression or diabetes distress. Although collaborative care increases costs, studies found improved outcomes among adults with type 2 diabetes and depression and overall medical cost savings (about \$896) for inpatient and outpatient services over a 2-year period compared to usual care.<sup>17</sup>

## USE OF DIABETES SELF-MANAGEMENT EDUCATION AND SUPPORT TO IMPROVE DIABETES OUTCOMES

Diabetes self-management education and support is an evidence-based process that provides people with diabetes with the knowledge, skills, and abilities needed to make informed decisions about their self-care.<sup>37</sup> Studies on diabetes self-management education and support demonstrate its effectiveness in decreasing diabetes distress and depression and improvement in the overall quality of life in people with type 2 diabetes.<sup>37</sup> A study examining the relationship between diabetes distress and glycemic control following participation in diabetes self-management education and support found a reduction in diabetes distress, and that it was associated with a 0.25% reduction in HbA1c over a 6- and 12-month period.<sup>35</sup>

To address diabetes distress, the American Diabetes Association recommends health care providers refer patients to diabetes self-management education and support to focus on individualized diabetes self-care needs, including concerns about their ability to maintain a diabetes treatment regimen and identifying coping strategies (e.g., exploring sense of self-efficacy, social support systems).<sup>16</sup>

## CONCLUSION

Depression and diabetes distress can reduce control of HbA1c, blood pressure, and cholesterol, treatment adherence, and overall health among patients with type 2 diabetes. People with both depression and diabetes distress may be at a higher risk of harm due to inadequate diabetes control than those who have only one of them or do not have either condition. The American Diabetes Association recommends that providers screen patients with diabetes for depression and diabetes distress during their initial visit and periodically thereafter. Incorporating validated depression and diabetes distress screening

instruments into electronic health records simplifies the screening process and the collection of responses from patients, as well as improves the ability of providers to address the mental health needs of their patients. Positive screenings for depression or diabetes distress signal the need to connect patients with additional care, such as a collaborative care team or diabetes self-management education and support services. Evidence summarized here suggests that early screening, prevention, and treatment of depression or diabetes distress can result in better diabetes self-management and improved quality of life for people with type 2 diabetes.

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**Compliance with Ethical Standards:**

**Conflict of Interest:** *The authors declare that they do not have a conflict of interest.*

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