Mental health and type 2 diabetes

Recommendations

Recommendation	Reference	Grade*
Routinely monitor people with diabetes for diabetes distress, particularly when treatment targets are not met and at the onset of diabetes complications	1 American Diabetes Association, 2019	B
Providers should consider assessment for symptoms of diabetes distress, depression, anxiety, disordered eating and cognitive capacities using patient-appropriate standardised and validated tools at the initial visit, at periodic intervals, and when there is a change in disease, treatment, or life circumstance; including caregivers and family members in this assessment is recommended	1 American Diabetes Association, 2019	B
People with diabetes with any of the following should be referred to specialised mental health care professionals: • significant distress related to diabetes management • persistent fear of hypoglycaemia • psychological insulin resistance • psychiatric disorders (ie depression, anxiety, eating disorders)	2 Diabetes Canada, 2018	D, consensus
Collaborative care by inter-professional teams should be provided for people with diabetes and depression to improve: • depressive symptoms • adherence to antidepressant and non-insulin glucose-lowering medications • glycaemic control	2 Diabetes Canada, 2018	A, level 1
Psychosocial interventions such as the following should be integrated into diabetes care plans: • motivational interventions • stress management strategies • coping skills training • family therapy • case management	2 Diabetes Canada, 2018	D, consensus C, level 3 A, level 1A A, level 1B B, level 2
Antidepressant medication should be used to treat acute depression in people with diabetes and for maintenance treatment to prevent recurrence of depression	2 Diabetes Canada, 2018	A, level 1/ level 1A
*Refer to 'Explanation and source of recommendations' for explanations of the levels and grades of evidence.		

Clinical context

People with diabetes can face a number of psychosocial challenges, which can change over the course of their lives with the condition (Figure 1). It is common for people with diabetes to sometimes feel overwhelmed, guilty or frustrated by the considerable burden of self-care and management required by diabetes. They might also feel worried about their current or future diabetes management and health outcomes,[3] and can face stigma, discrimination or a lack of understanding from friends or family members about their condition.

Diabetes distress is a clinically recognised emotional response to living with diabetes and the medical, financial and social impacts of diabetes. Other common diabetes-specific psychological responses are fear of hypoglycaemia and psychological insulin resistance (refer below).

In addition, people with diabetes are more likely to experience other mental health problems:

- Diabetes has a bi-directional relationship with some psychological conditions, particularly major depression (however, the mechanisms of this relationship are as yet unknown).[2]
- Anxiety disorders and disordered eating are more common in people with diabetes.[4]
- People with psychotic disorders (eg schizophrenia) have significantly increased rates of type 2 diabetes.[4]

Diabetes distress and other psychological conditions can negatively affect health outcomes due to sub-optimal self-management and glycaemic outcomes.[3,5,6]

General practitioners (GPs) also need to be aware that the metabolic effects of some psychotropic medications (eg the antipsychotic medications olanzapine and clozapine)[7] can increase the complexity of type 2 diabetes management or add additional burdens such as obesity (refer to the section 'Managing multimorbidity in people with type 2 diabetes').

Figure 1. Psychosocial challenges experienced by people with diabetes at different phases of life

Phase of living with diabetes	Continuum of psychosocial issues and behavioural health disorders in people with diabetes	
	Non-clinical (normative) symptoms and behaviours	**Clinical symptoms and behaviours**
Behavioural health disorder prior to diabetes diagnosis	None	• Mood and anxiety disorders • Psychotic disorders • Intellectual disabilities
Diabetes diagnosis	Normal course of adjustment reactions, including distress, fear, grief, anger, initial changes in activities, conduct or personality	• Adjustment disorders*
Learning diabetes self-management	Issues of autonomy, independence and empowerment. Initial challenges with self-management demonstrate improvement with further training and support	• Adjustment disorders* • Psychological factors affecting medical condition†
Maintenance of self-management and coping skills	Periods of waning self-management behaviours, responsive to booster educational or supportive interventions	• Maladaptive eating behaviours • Psychological factors† affecting medical condition
Life transitions impacting disease self-management	Distress and/or changes in self-management during times of life transition‡	• Adjustment disorders* • Psychological factors affecting medical condition†
Disease progression and onset of complications	Distress, coping difficulties with progression of diabetes/onset of diabetes complications impacting function, quality of life, sense of self, roles, interpersonal relationships	• Adjustment disorders* • Psychological factors affecting medical condition†
Ageing and its impact on disease and self-management	Normal age-related forgetfulness, slowed information processing and physical skills potentially impacting diabetes self-management and coping	• Mild cognitive impairment • Alzheimer's disease or vascular dementia
	All care-team members (general practitioners, nurses, diabetes educators, dietitians) and other behavioural providers	**Behavioural or mental health providers (psychologists, psychiatrists, clinical social workers, certified counsellors or therapists)**
	Providers for psychosocial and behavioural health intervention	

*With depressed mood, anxiety, or emotion and conduct disturbance

†Personality traits, coping style, maladaptive health behaviours or stress-related physiological response

‡Examples include changing schools, moving, job/occupational changes, marriage or divorce, experiencing loss

Source: Adapted with permission from Young-Hyman D, de Grood 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;39:2126–40.

Diabetes distress

Diabetes distress is a condition distinct from other psychological disorders and is estimated to affect 18–45% of people with diabetes.[4] Severe diabetes distress is experienced by 20% of people with insulin-treated type 2 diabetes and 11% of those with non–insulin-treated type 2 diabetes.[8]

Although some symptoms often overlap with depressive symptoms, diabetes distress is a separate psychological condition that should be assessed for separately (Table 1).[9] It is associated with sub-optimal diabetes self-care and glycaemic outcomes.[3,6]

Causes of diabetes distress differ between individuals, but are commonly related to the following domains:[10]

- emotional and cognitive distress – for example:
  - worries about long-term diabetes-related complications
  - fears about loss of quality of life
  - guilt, anger, frustration or burnout associated with the ongoing need for care
- interpersonal distress – for example:
  - feeling unsupported or misunderstood by loved ones
- regimen or management distress – for example:
  - difficulty keeping up with dietary recommendations
  - stress from changes to treatment (eg changing from oral to injectable therapy)
  - stress related to the need for ongoing glucose self-monitoring
  - fear associated with reviews of glycated haemoglobin (HbA1c) and not achieving target levels
- distress arising from interactions with healthcare professionals – for example:
  - feeling that treating clinicians don't understand concerns or take them seriously.

Psychological insulin resistance

Psychological insulin resistance refers to a person's strong negative thoughts and feelings about starting, using or intensifying insulin therapy.[2]

This may be due to fear and anxiety about having to self-administer injections, concerns about insulin and its effects (eg hypoglycaemia or weight gain) or misplaced beliefs (eg that requiring insulin means they have failed to self-manage their diabetes or that the condition has become much more serious).

The National Diabetes Services Scheme (NDSS) and Diabetes Australia have developed resources to support people starting and using insulin to manage their diabetes:

- *Starting insulin* (booklet)
- 'Concerns about starting insulin' (fact sheet).

Fear of hypoglycaemia

Experiences of hypoglycaemia, especially severe (requiring assistance) or nocturnal episodes, can be traumatic. Some level of concern about hypoglycaemia is adaptive and is a motive to respond to low glucose levels on time. However, fear of

hypoglycaemia (extreme fear in response to risk or occurrence of hypoglycaemia) can lead to unhelpful strategies to avoid hypoglycaemia, such as:

- maintaining a higher blood glucose level (compensatory hyperglycaemia)
- treating perceived symptoms without confirming hypoglycaemia by self-monitoring.

Left unmanaged, in the long term these behaviours can affect glycaemic outcomes and reduce quality of life. Technology such as continuous glucose monitoring or flash monitoring may help people who are averse to finger-pricking.

Other psychological and psychiatric conditions

Other mental health conditions that can affect or are affected by diabetes include major depression, schizophrenia spectrum disorders, bipolar disorder, eating disorders and anxiety.[2]

In practice

Given the high prevalence of diabetes distress and other mental health conditions, patients with type 2 diabetes should be assessed at the initial visit, at periodic intervals (eg at annual review) and when there is a change in condition, treatment or life circumstance. It is recommended to assess for diabetes distress, depression, anxiety, disordered eating, and cognitive capacities.[1,4] GPs may decide to prioritise assessment of conditions according to each patient's phase of living with diabetes (Figure 1) – for example, assessing for cognitive impairment in older patients.

Information and guidance about how to have conversations with people about diabetes and mental health, including tips for using the screening tools detailed below, can be found in the NDSS publication *Diabetes and emotional health: A handbook for health professionals supporting adults with type 1 or type 2 diabetes*.

If necessary, patients should be referred to a mental health professional, preferably with experience in psychosocial care for people with diabetes (Box 1).[4]

Screening

GPs can identify clinically significant diabetes distress and other mental health issues by having ongoing conversations with patients about how they feel about their diabetes. Informal, open-ended questions can help to get a sense of what the likely problems are for a person. For example:

- 'How is diabetes bothering you at the moment?'
- 'What is the most difficult part of living with diabetes for you?'

If indicated, standardised tools can then be used to further assess for symptoms.

Tools for assessing diabetes distress (Table 1) are freely available.

The Patient Health Questionnaire (PHQ)-2 or PHQ-9 can be used to screen for depressive symptoms.

- A PHQ-2 total score of 3 or more, in a person who is not currently receiving treatment for depression, requires assessment with the PHQ-9.[11]
- PHQ-9 scores are interpreted as follows:[12]
  - 0–4 indicates no depressive symptoms (or a minimal level)
  - 5–9 indicates mild depressive symptoms – these people will benefit from watchful waiting
  - 10–27 indicates moderate-to-severe depressive symptoms – these people will benefit from a more active method of intervention.

If depression is suspected from a PHQ-9, a formal clinical assessment for depression and management should be undertaken.

To effectively use screening tools, GPs should be mindful of the person's health literacy, being sure to explain what the tool is for and how it can help the person receive individualised support.

Table 1. Tools to assess diabetes distress in people with diabetes

Tool	Scoring	Validated population
Problem Areas in Diabetes (PAID)[13]	Patients receive a total score out of 100; a score ≥40 indicates severe diabetes distress	Adults with type 1 and type 2 diabetes Paediatric, teen and parent versions are also available
Diabetes Distress Scale (DDS)[14,15]	A 17-item questionnaire measuring diabetes-specific distress in four domains: emotional burden, interpersonal distress, physician-related distress, and regimen-related distress. A mean score ≥3 in any domain indicates 'high' distress	Adults with type 1 and type 2 diabetes

Management

The '7As' model is a practical way to structure mental health care for people with diabetes, adapted from the '5As' model often used for counselling in other areas (eg smoking cessation, obesity).[9] The 7As model encourages healthcare professionals to:

- be **aware** that people with diabetes might have emotional or mental health problems
- **ask** about these problems, using open-ended questions
- **assess** for emotional or mental health problems using a validated tool
- **advise** patients about identified problems
- **assist** them with developing an achievable action plan
- **assign** care, where appropriate, to another healthcare professional (eg psychologist, diabetes specialist or credentialled diabetes educator)
- **arrange** follow-up care.

More information about this model can be found in the NDSS publication *Diabetes and emotional health: A handbook for health professionals supporting adults with type 1 or type 2 diabetes*.

Versions of this model to specifically manage diabetes distress, fear of hypoglycaemia, psychological barriers to insulin use, depression, anxiety disorders and eating disorders can be found in the NDSS handbook summary cards.

Management of mental health problems should be offered within diabetes care settings and general practices, using current supported care such as mental health care planning. Mental health assessments can form part of a GP Management Plan (GPMP), and psychologist visits can be incorporated into a team care arrangement to help with costs for the patient. Refer to the Services Australia *Education guide: Chronic disease GP Management Plans and Team Care Arrangements* for more information.

Box 1. Referring patients with diabetes to a mental health provider

Patients with diabetes who display any of the following should be referred to a mental health provider:[4]

- diabetes distress and impaired self-care despite tailored diabetes education
- positive screen for depressive symptoms on a validated screening tool
- symptoms or signs of disordered eating behaviour, an eating disorder or disrupted patterns of eating
- deliberate omission of insulin or oral medication to cause weight loss
- positive screen for anxiety or fear of hypoglycaemia on a validated screening tool
- positive screen for cognitive impairment
- declining or impaired ability to self-care.

Patients should be referred before undergoing bariatric surgery, and after, if assessment reveals an ongoing need for adjustment support.[4]

Resources

Patients

The **National Diabetes Services Scheme (NDSS)** and **Diabetes Australia** have a range of resources regarding emotional health and diabetes.

Healthcare professionals

The **NDSS** and **Diabetes Australia** have published *Diabetes and emotional health: A handbook for health professionals supporting adults with type 1 or type 2 diabetes*.

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