



# Patients with diabetes and impaired glucose tolerance

## *Is it feasible to screen for depression?*



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People with type 2 diabetes have double the risk of depression.<sup>1</sup> This poses a significant potential burden as 8% of Australians aged over 25 years have diabetes, and 16% have impaired glucose tolerance (IGT).<sup>2</sup> This association may be cause or effect, or both. Depression may be a risk factor for the development of diabetes,<sup>3</sup> and may contribute to additional functional impairment, poorer diet, medication noncompliance, and increasing susceptibility to diabetes.<sup>4-6</sup>

The diabetes incentive scheme was implemented in February 2002 within our practice, under the commonwealth funded Practice Incentive Program. As a result, we deliver a higher level of care for diabetes, with each patient receiving: a 12 month review, an enhanced primary care plan,<sup>7</sup> annual podiatrist review, access to a dietician 3-4 times per year, lifestyle education, and a 3 monthly appointment for anticipatory diabetic care. Impaired glucose tolerance patients also receive, as a part of their annual enhanced primary care plan,<sup>7</sup> an annual review appointment where they are screened for fasting blood sugar levels. In addition, we also provide screening for depression, and describe here our clinical

**Table 1. Sample characteristics**

Demographic or clinical characteristic	Overall (n=70)	Type 2 diabetes (n=30)	IGT (n=40)
Age: mean (SD)	66 (11)	70 (9.5)	63 (11.3)
Gender: male (n, %)	38 (54)	15 (50)	23 (58)
Currently using antidepressants (n, %)	8 (11)	1 (3)	7 (18)
Diabetes or IGT diagnosed >2 years (n, %)	39 (56)	21 (75)	18 (45)
Beck Depression Scale-II Mean (SD)	9 (9.7)	7 (7.0)	10 (11.3)
<b>Subgroups (n, %)</b>			
Minimal (0-13)	53 (76)	24 (80)	29 (73)
Mild (14-19)	7 (10)	3 (10)	4 (10)
Moderate (20-28)	5 (7)	3 (10)	2 (5)
Severe (29-63)	5 (7)	0	5 (13)

experiences using the Beck Depression Inventory-II (BDI-II) questionnaire.<sup>8</sup> The BDI-II has been found to be an effective self report screening test for major depression in diabetic patients.<sup>9</sup>

## Methods

We asked patients with either type 2 diabetes or IGT waiting for their 12 month general practitioner review during February-March 2004 to complete the BDI-II. All provided verbal consent. The practice nurse noted any unusually high scores

(particularly items relating to suicide) and drew the GP's attention to it. Subsequently, the psychologist with the local mental health service formally scored the BDI-II and provided the GP with feedback.

## Results

The questionnaire was completed by 70 patients (*Table 1*). The BDI-II depression scores for most patients were in the 'minimal' range. However, while the overall levels of depression reported by the two groups were comparable, eight (20%) of

the 40 IGT patients were either currently taking antidepressant medication or were in the 'severe' range, compared with only one (3%) of the 30 type 2 patients ( $p < 0.05$ ). Patients with IGT were also younger, while the overall mean depression score was lower for males (mean 7, SD: 7.3) than for females (mean 12, SD: 11.6), ( $p < 0.05$ ). Those taking antidepressants had been doing so for an average of 2.8 years (SD: 1.2) and had a mean depression score of 22 (SD: 16.3).

## Discussion

This study has limitations: the sample was small and it was only a pilot study conducted in a single general practice. This makes it difficult to generalise the findings to other settings. We found it easy to implement the standardised self report assessments for depression among patients who were potentially vulnerable to this during chronic care delivery. Other instruments we might have used include the primary care version of the BDI,<sup>10</sup> and composite anxiety/depression measures such as the Kessler-10.<sup>11</sup> The potential to expand liaison between GPs and local mental health services, and to examine possible factors contributing to higher rates of current depression for IGT patients, or lower levels for those with type 2 diabetes, could be explored further. Perhaps our detection and treatment in this practice was already optimal. This might be because of more regular contact with primary care.<sup>12</sup>

### Implications of this study for general practice

- It is feasible to screen for depression in primary care when managing patients with chronic disease such as diabetes.
- This might be one pathway for better collaboration with local mental health services

Conflict of interest: none.

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