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The Enigma of Depression in Diabetes

Arie Nouwen, University of Birmingham, UK

Cathy E. Lloyd, The Open University, UK.

It is now widely accepted that people with diabetes are more likely to experience symptoms of depression compared with people without this chronic disease [1,2]. When diagnostic criteria are used (DSM-IV, ICD-10), the prevalence of depressive disorders in diabetes has been estimated at around 10%, which is twice as common as in the general population. When self-report questionnaires are used the prevalence has been found to be even higher at 26%, suggesting that there are high rates of sub-threshold clinically significant psychological distress in diabetes populations [1].

However, recent findings indicate that the relationship between diabetes and depression is somewhat of an enigma. For example, compared to the general population, the prevalence of depression does not seem greater in people who have undiagnosed diabetes [3]. Although the reasons for this discrepancy are currently unknown, it is possible that people who are unaware of having diabetes have fewer diabetes complications than those who have been formally diagnosed (diabetes complications are a risk factor for the development of depression,[4]. Alternatively, people unaware of having diabetes are also not cognizant of the full burden of caring for the condition. Further research is clearly needed.

The enigma of depression in diabetes becomes greater considering the fact that the incidence (number of new cases) of depression is not significantly higher than in the general population [5]. While good news for the majority of diabetes patients, it does confirm earlier observations for people with diabetes who have a history of

depression, that the mood disorder is likely to last longer and/or recur more often in those who have diabetes [6]. A final piece of the enigma is that there is now firm evidence that depression increases the chances of developing diabetes with a recent meta-analysis [5] estimating the odds at 1.60 (1.37–1.88).

Whatever the nature of the relationship between the two conditions, depression in diabetes is associated with poorer self-care [7], impaired glycaemic control [8], an increased risk of developing diabetes-related complications, especially cardiovascular complications [9], increased mortality [10] and higher health care expenditure [11]. Although no UK data are available, studies in other countries have shown total health care expenditure for individuals with diabetes and diagnosed with depression was 4.5 times higher than that for individuals without depression [12]. To put this into perspective, the lifetime cost of health care for patients with diabetes has been calculated to be more than double that for an equivalent non-diabetic population [13].

Given these adversities, it is not surprising that clinical guidelines (including the UK General Practice Quality and Outcomes Framework) now recommend that all patients with diabetes undergo regular screening for . Following an international symposium on depression and diabetes at the European Association for the Study of Diabetes (EASD) annual congress, and under the auspices of the Association for the Improvement of Mental Health Programme, a group of individuals from diverse global professional organizations (e.g. World Organisation of Family Doctors, World Psychiatric Association, International Council of Nurses, Psychosocial Aspects of Diabetes Study Group), came together to commit to working to improve outcomes for patients with co-morbid diabetes and depression. At this meeting the Dialogue on Diabetes and Depression was formed, and a diverse group of specialists and

stakeholders agreed to work together in order to understand the current state of knowledge about diabetes and depression, and to set the agenda for future research and care in this field. To date, eight working groups have been formed and are currently bringing together evidence on the epidemiology, pathogenesis and treatment of co-morbid diabetes and depression.

Notwithstanding these international collaborative efforts, there are already some data indicating the efficacy of particular methods of identifying individuals with diabetes and depression. Case-finding instruments, such as the Center for Epidemiologic Studies Depression scale (CES-D, [14]) have proven to be effective in screening for depression in primary care settings [15], and also to be suitable for use in people with diabetes [16].

Whilst routine administration of depression self-report questionnaires with feedback to physicians may not lead directly to increased intervention provision, the inclusion of a formal diagnosis along with provision of treatment support (e.g., knowledge and resources) may substantially increase the number of patients being treated for depression [17]. Whether treatment is sought and prescribed following feedback of depressive symptoms or diagnosis of major depressive disorder, depends on interactions between health-care provider, patient and context variables. General practitioners are more likely to refer for treatment or initiate treatment when depressive symptomatology is severe [18], or when psychological problems and major stressors are suspected (e.g., marital disruption, unemployment).

Goals for treating depressed diabetes patients are two-fold: (1) remission or improvement of depressive symptoms; and (2) improvement of the often poor glycaemic control, which is generally considered as fundamental to the management of diabetes, in order to prevent or delay long-term complications. Treatment of depression may

have a positive effect on levels of motivation to manage activities of daily living, to take physical exercise and to adhere to dietary management and medication regimes. However, there are only a handful of randomised controlled trials on the treatment of depression in people with diabetes and these are small-scale studies. Results so far seem to suggest that cognitive behaviour therapy and anti-depressant medication are as effective in people with major depressive disorder (MDD) and diabetes as in those with MDD without diabetes, with, in some instances, additional beneficial effects on glycaemic control [19]. However, with over 10% of the diabetes population being depressed, a stepped treatment approach seems necessary to cope with the number of depressed people with diabetes.

Acknowledgments

The Dialogue on Diabetes and Depression (DDD) is an international collaborative effort addressing problems related to the co-morbidity of diabetes and depression. It aims to review the evidence and experience relevant to co-morbidity of diabetes and depression in order to define gaps in knowledge and formulate strategies for priority research and action in this field. The initiative is directed by the participating organizations including the American Association of Clinical Endocrinologists, the American Diabetes Association, the Asociacion Latinoamericana de Diabetes, the Chinese Diabetes Association, Diabetes UK, the European Association for the Study of Diabetes / Psychosocial Aspects of Diabetes, the Global Alliance of Mental Illness Advocacy Network (GAMIAN) – Europe, the International Council of Nurses, the International Society for Affective Disorders, the International Society of Behavioural Medicine, World Federation for Mental Health, the World Organization of Family Doctors (Wonca), and the World Psychiatric Association as well as the Joslin Diabetes Center, the Lilly Research Laboratories, the Lundbeck Institute, and the Trimbos Instituut. It is expected that the participating organizations and institutions will also undertake research and educational activities identified by the reviews of knowledge that the DDD initiative has undertaken.

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References

1. [Anderson RJ](#), [Freedland KE](#), [Clouse RE](#), [Lustman PJ](#). (2001), The prevalence of comorbid depression in adults with diabetes: a meta-analysis. *Diabetes Care*. 24:1069-78
2. [Ali S](#), [Stone MA](#), [Peters JL](#), [Davies MJ](#), [Khunti K](#). (2006). The prevalence of comorbid depression in adults with Type 2 diabetes: a systematic review and meta-analysis. *Diabet Med*. 23:1165-73
3. [Knol MJ](#), [Heerdink ER](#), [Egberts AC](#), [Geerlings MI](#), [Gorter KJ](#), [Numans ME](#), [Grobbee DE](#), [Klungel OH](#), [Burger H](#). (2007). Depressive symptoms in subjects with diagnosed and undiagnosed type 2 diabetes. *Psychosom Med*. 69:300-5
4. [de Groot M](#), [Anderson R](#), [Freedland KE](#), [Clouse RE](#), [Lustman PJ](#). (2001). Association of depression and diabetes complications: a meta-analysis. *Psychosom Med*. 63: 619-30
5. [Mezuk B](#), [Eaton WW](#), [Albrecht S](#), [Golden SH](#). (2008). Depression and type 2 diabetes over the lifespan: a meta-analysis. *Diabetes Care*. 31: 2383-2390
6. Lustman PJ, Griffith LS, Freedland KE, Clouse RE. (1997). The course of major depression in diabetes. *Gen Hosp Psychiatry*. 19: 138-143
7. Gonzalez JS, Safren, SA; Cagliero E, Wexler DJ et al. (2007). Depression, self-care, and medication adherence in type 2 diabetes: relationships across the full range of symptom severity. *Diabetes Care*. 30:2222-2227
8. Lustman [PJ](#), [Anderson RJ](#), [Freedland KE](#), [de Groot M](#), [Carney RM](#), [Clouse RE](#) (2000). Depression and poor glycemic control: a meta-analytic review of the literature. *Diabetes Care*. 23:934-942

9. Lloyd CE, Kuller LH, Ellis D, Becker DJ, Wing RR, Orchard TJ. (1996). [Coronary artery disease in IDDM. Gender differences in risk factors but not risk.](#) *Arterioscler Thromb Vasc Biol.* 16: 720-726
10. Katon WJ, Rutter C, Simon G, Lin EH, Ludman E, Ciechanowski P, et al. (2005). [The association of comorbid depression with mortality in patients with type 2 diabetes.](#) *Diabetes Care.* 28: 2668-2672
11. [Egede LE, Zheng D, Simpson K.](#) (2002). Comorbid depression is associated with increased health care use and expenditures in individuals with diabetes. *Diabetes Care.* 25: 464-470
12. Egede LE. (2007). Major depression in individuals with chronic medical disorders: prevalence, correlates and association with health resource utilization, lost productivity and functional disability. *Gen Hosp Psychiatry.* 29: 409-416
13. Bagust A, Hopkinson PK, Maier W, Currie CJ. (2001). An economic model of the long-term health care burden of Type II diabetes. *Diabetologia.* 44: 2140-2155
14. Radloff LS, Locke BZ. (1986). The community mental health assessment survey and the CES-D scale. In: MM Weissman, JK Myers, CE Ross: Community surveys of psychiatric disorders. *Surveys in Psychosocial Epidemiology.* 4: 177-189
15. Mulrow C, Williams JW, Gerety MB, Raminéz G, Montiel OM, Kerber CL. (1995). Case-finding instruments for depression in primary care settings. *Ann Intern Med* 122: 913-921
16. [Hermanns N, Kulzer B, Krichbaum M, Kubiak T, Haak T.](#) (2006). How to screen for depression and emotional problems in patients with diabetes: comparison of screening characteristics of depression questionnaires, measurement of diabetes-specific emotional problems and standard clinical assessment. *Diabetologia.* 49: 469-477

17. Gilbody SM, House [AO](#), [Sheldon TA](#). (2001). Routinely administered questionnaires for depression and anxiety: systematic review. *BMJ*. 322: 406-409
18. Coyne JC, Schenk TL, Fechner-Bates S. (1995). Nondetection of depression by primary care physicians reconsidered. *Gen Hosp Psychiat*. 17: 3-12
19. [Lustman PJ](#), [Clouse RE](#). (2002). Treatment of depression in diabetes: impact on mood and medical outcome. *J Psychosom Res*. 53: 917-924