

## Editorial

# Depression and type 2 diabetes mellitus: what we can learn from the Trinidad and Tobago experience

Rohan G Maharaj BSc MBBS MHSc DM FCCFP

Senior Lecturer, Unit Coordinator, Unit of Public Health and Primary Care, The University of the West Indies, St Augustine, Trinidad and Tobago

In Trinidad and Tobago, a developing nation in the Caribbean, the prevalence of type 2 diabetes mellitus (T2DM) has been self-reported at 16.7%, which places it in the top six countries in the Americas. Among those with T2DM at three clinics in Trinidad, the average prevalence of depression is as high as 26.8%. Survey and audit data from the primary healthcare services have identified that the current approach to combating the T2DM epidemic has not worked. These services, although extremely successful in the 'classical' public health paradigm where immunisation and maternal and child health services are provided, fail in the situation of chronic disease and depression (itself a chronic disease). It is possible that our current T2DM efforts are hampered by our lack of attention to the depressive challenges faced by diabetic patients. This article provides evidence from international and regional research and argues for a shift to a greater patient-centred, rather than the current population-centred, approach to diabetes and depression in the public healthcare system in Trinidad.

## T2DM is prevalent and increasing in Trinidad and Tobago

In the Caribbean, the epidemiological transition from infectious to chronic non-communicable diseases has been fully described.<sup>1</sup> In 2001, the Pan American Health Organization (PAHO) reported that with a population prevalence rate of 12.7% for T2DM, Trinidad and Tobago was among the top six countries in the Americas.<sup>2</sup> A 2005 national survey of community dwelling adults reported that 17.6% had been told by their doctor that they had T2DM.<sup>3</sup> This

latter represents the second highest prevalence of T2DM in the northern hemisphere after the Pima Indians in the USA.

## T2DM control and monitoring is poor in Trinidad and Tobago

Research indicates that we are not doing well in T2DM control; in a public health centre-based population in 2001, 85% of the diabetic patients had an glycosylated haemoglobin (HbA1c) level > 7%.<sup>4</sup> In an audit in 2002, 72% of diabetics had poor glycaemic control with random glucometer readings > 200 mg%, and only 2% had HbA1c levels tested.<sup>5</sup> In a study from 2005, although there was an improvement in the increased use of tests among diabetics attending health offices and increased recording of diet and exercise advice, 'there were no changes in control of blood glucose, blood pressure or body weight'.<sup>6</sup> More recently a chart audit reported that HbA1c levels were available in fewer than 5% of patients.<sup>7</sup>

## Depression is prevalent among T2DM in Trinidad and Tobago

Recently, research illustrated the growing recognition of a burden of mental health in primary care settings in Trinidad plus an ageing population.<sup>8-12</sup> Surveys have made the link between depression and T2DM, the author has found that an average of 26.8% of patients with T2DM in three primary care settings<sup>8,9,11</sup> have significant depressive symptoms.

## Is it possible that our challenge in addressing T2DM is in lack of attention to depression?

Extensive searches of PubMed and MedCarib databases and hand-searching of regional conference abstracts revealed one report on whether patients with depression and diabetes succumb more rapidly to their T2DM complications in Trinidad and Tobago. This retrospective cohort of 231 patients with T2DM found that there were no statistically significant differences between depressed and non-depressed patients in blood pressure, HbA1c levels, body weight, serum cholesterol or other markers that might suggest increased morbidity.<sup>13</sup> However, there was poor control across both groups, e.g. HbA1c was 10.6% in depressed patients vs 10% in non-depressed patients. In the international literature, however, the link between depression and diabetes has been well documented.<sup>14</sup> Depression in T2DM has been associated with poor medication and adherence,<sup>15,16</sup> poor glycaemic control,<sup>17</sup> less physical activity, an unhealthy diet and lower adherence to medicines for chronic diseases,<sup>18</sup> and with an increased prevalence of complications in T2DM.<sup>19</sup> In people diagnosed with T2DM, depression increases the risk of macrovascular complications,<sup>20</sup> and even death.<sup>21,22</sup>

## From population-based initiatives towards patient-centred approaches

Although there is, at this point, mixed evidence on the treatment of depression and its success in creating metabolic T2DM outcomes,<sup>23</sup> at least one randomised controlled trial suggests that the use of selective serotonin re-uptake inhibitors such as fluoxetine among diabetics with depressive symptoms can result in improvement in the patients' HbA1c levels in as little as 6 months.<sup>24</sup> Treatment for depression has also been found to result in weight reduction and improvements in diabetic neuropathy,<sup>25</sup> reduce functional disability, alleviate psychological distress and increase overall well-being.<sup>26</sup> These are all worthy end points for Trinidad and Tobago T2DM patients. Trinidad and Tobago primary care physicians need to pay more attention to the mental health of their T2DM patients and taking a patient-centred approach can assist by allowing us to pay attention to the psychological

state of our T2DM patients. The main elements of being patient-centred are as follows:

- exploring the patient's main reason for the visit, their concerns and need for information
- seeking an integrated understanding of the patients' world – that is, their whole person, emotional needs and life issues
- finding common ground on what the problem is and mutually agreeing on management
- enhancing prevention and health promotion
- enhancing the continuing relationship between the patient and the doctor.

Patient-centred care emerged as a full-fledged medical model based on work at the University of Western Ontario in Canada.<sup>27</sup> Although these tasks are not necessarily achieved at every visit, when relational continuity occurs the patient-centred caregiver can attend to them over time.

## Trinidad and Tobago needs a better process of care at primary healthcare centres

### Integration of care

The year 2008 was the 30th anniversary of the Alma Ata convention and the World Health Organization (WHO) reconfirmed its commitment to primary health care in its document, *Now More Than Ever: PHC*.<sup>28</sup> This document redefines the pillars of primary health care as accessibility, comprehensiveness, continuity of care (consisting of informational, management and relational continuity), appropriateness and first contact care; significantly the WHO also included patient-centredness as an important component of primary health care.

### Informational and management continuity and accessibility

It may be fair to say that in Trinidad and Tobago we have informational and management continuity and accessibility based on the extensive network of health centres, but the relational continuity is often lacking because primary care physicians are often moved from one centre to another to fill in for absent colleagues or to fill vacancies. Trinidad and Tobago have 104 primary healthcare centres. But have we maximised the opportunity provided by these health offices? These health centres provide a wide variety of vertically organised services including

maternal and child health, prenatal care, immunisations, well-baby care and chronic non-communicable disease care, and although with the first four of these the evidence points to outstanding results, however, it also suggests that we are not doing a good job with chronic non-communicable diseases.

### Relational continuity

There is good evidence to suggest that interpersonal continuity works in caring for patients with chronic non-communicable diseases. Such a relationship provides better communication, which leads to better recognition of the patient's problems, more accurate diagnosis and better concordance with treatment advice, fewer drug prescriptions, better preventive behaviours, less emergency room use, fewer hospitalisations and lower overall costs.<sup>29</sup> Continuity of care significantly improves the uptake of preventive care such as advice on exercise and dieting,<sup>30</sup> with increased value in psychosocial care and, in one major study on T2DM, improved quality of care.<sup>31</sup>

### Consultation times

Trinidad and Tobago is faced with an ageing of population, increasingly complex medical technology, heightening expectations as a result of public education and increasing public access to information through the internet, and the burgeoning of medical knowledge (~ 72 600 new publications per month in PubMed in 2010–11). It is therefore unreasonable to expect that even a motivated physician can provide adequate community based medical care in 6 minutes (clinics regularly have 40 patients/physician in a morning session), as has been shown to be the case locally.<sup>32</sup>

### Expectation of the effects of a new structure for primary healthcare centres on the outcomes of T2DM and depression/mental health

These findings lead us to advocate the training of primary care workers in the recognition and management of depression, including counselling skills and the development of primary care systems that support a patient-centred approach. These, combined with national policies and public health approaches to nutrition and food security, closer control of multinational fast-food companies with high-impact advertising (ubiquitous with the reduction in trade barriers globally) and of high-fat energy-dense foods,

combined with opportunities in schools and workplaces for increased physical activity will lead to success in tackling the global obesity and T2DM epidemic.<sup>33</sup> To achieve the success we desire there must not be business as usual; consultation times, relational continuity and therefore the numbers of patients seen per healthcare worker in a given session have to be re-assessed.

### Conclusion

In Trinidad and Tobago, a developing nation in the Caribbean, the prevalence of T2DM is very high, with a rate that places it among the top six countries in the Americas. Survey and audit data from the primary healthcare services have identified that the current approach to combating the T2DM epidemic has not worked. These services, although extremely successful in the 'classical' public health paradigm where immunisation and maternal and child health services are provided, fails in the case of chronic disease and mental health (itself a chronic disease). This article argues for a shift to a greater patient-centred approach to better tackle diabetes and depression in the public healthcare system in Trinidad and Tobago.

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#### ADDRESS FOR CORRESPONDENCE

Dr Rohan Maharaj, Senior Lecturer, Unit Coordinator, Unit of Public Health and Primary Care, The Faculty of Medical Science, The University of the West Indies, St Augustine, Trinidad and Tobago. Tel/fax: 645 2018

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