

Identifying and Addressing the Social Determinants of the Incidence and Successful Management of Type 2 Diabetes Mellitus in Canada

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There is an increased awareness that health can be profoundly affected by a myriad of social, environmental and economic factors and that good health means more than just good physical health.¹

The statement above from the *Canadian Diabetes Association* illustrates how Canadian health researchers and policy-makers are recognizing the importance of various social determinants of population health.²⁻⁴ These factors include income and its distribution, housing and food security, and the quality of physical and social environments.^{5,6} But diabetes-related research on its causes and prevention activities continues to be focussed on biomedical and lifestyle risk factors with little if any attention given to these broader issues.^{7,8} The same appears to hold true when issues of management and control are explored. In the case of type 2 diabetes (referred to as diabetes in this paper) – the most prevalent form of the disease^{9,10} and the centre of attention of the “diabetes epidemic” – disease associations, public health, and other health workers continue to espouse the benefits of appropriate diet, adequate exercise, and weight control as a population-wide strategy in its prevention and management.¹⁰⁻¹⁴

Much of the focus of prevention and management is highly medicalized.¹³ High-risk individuals are urged to seek medical attention; a physician or other allied health professional will screen the individual for biomedical risk factors, prescribe (if necessary) diabetes controlling medications, advise on the adoption of a healthy lifestyle, and then monitor disease management. Even more recent approaches utilizing a multidisciplinary team approach still have at their core the modification of individual risk behaviours.

The overwhelming proportion of related research into incidence and management has similar foci: identify how individual risk factors predispose an individual to diabetes and/or examine degree of patient compliance to the management regimen. These traditional approaches persist even though our understanding of how social determinants of health profoundly influence the incidence and management of this disorder is growing.¹⁵

The gap is huge between governmental, public health association, and disease association statements about the importance of social determinants of health, and actual research and care practice.⁶ The social determinants of diabetes incidence and management cannot continue to be seen as mere background noise.¹⁶ The causal relationship between income levels and health status – with income level often included only in research as classification cate-

gories – warrants special attention.¹⁷ It is becoming apparent that a disproportionate number of low-income people suffer from diabetes and incur problems with its management.¹⁸⁻²²

Indeed, Wilkins and colleagues note that since the mid 1980s, there has been a virtual explosion in mortality due to diabetes in low-income urban communities in Canada.²³ The deteriorating social and economic environment in Canada – increasing levels of income, housing, and food insecurity – also directs attention to the health-threatening effects associated with the deteriorating state of various social determinants of health.²⁴⁻²⁶ Yet there has been little, if any, attention paid by the research community to identifying why low-income communities should be manifesting such an alarming increase in mortality.

Low-income Canadians are at higher risk for diabetes.^{18,19} This is especially the case for females, Aboriginals, and non-white Canadians.^{18,27-31} In Ontario, low-income women are four times more likely to be burdened by diabetes than high-income women while lower-income and lower-middle-income males have a 45% increased risk.¹⁸ Rates of diabetes among Aboriginals are at epidemic proportions, 3-5 times greater than the Canadian average.²⁸ Much of this can be attributed to Aboriginals experiencing poorer social determinants of health associated with lower socio-economic status relative to the rest of the Canadian population.³¹

In contrast to the somewhat singular focus upon behavioural pathways involving diet and activity, innovative researchers are identifying the pathways by which material deprivation³²⁻³⁴ during early and later life,³⁵⁻⁴⁰ as well as stress associated with income, housing, and food insecurity directly influence the incidence of, and successful management of diabetes.^{15,20,41-43} Yet diabetes prevention and management activities and messages continue to ignore these important social determinants of health in favour of individualized behavioural risk factors.²⁰

Even when a behavioural focus is adopted, it is apparent that diabetes prevention and management interventions are needed at various levels.¹⁰ These should not merely involve individual or population-level attention to biomedical and lifestyle risk factors, but also to the social determinants

La traduction du résumé se trouve à la fin de l'article.

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of these risk factors. Social organization plays a major role in determining the presence of risk factors – which do not occur in isolation but are frequently clustered^{34,44} – associated with both the incidence and successful management of diabetes. Additionally, social organization – in the form of income level, employment and work conditions, and general levels of societal support – in itself accounts for a significant proportion of variation in the incidence of diabetes and probably also in its successful management.¹⁵ Social organization is especially important when issues of food availability, income and housing insecurity, and the stresses associated with all of the preceding, combine with the particular vulnerability of women with diabetes to influence the management of this disease.²⁰

Income level accounts for an additional 26% greater risk of diabetes among Canadians, independent of behavioural risk factors which themselves are determined in large part by income levels.²⁷ Moreover, the UK Whitehall Studies found 90% of the variation in the presence of the metabolic syndrome – an important precursor of the incidence of type 2 diabetes – is unexplained by behavioural indicators of tobacco use, physical inactivity, and alcohol consumption. Adding an obesity measure – itself determined by social factors – accounts for an additional 22% of predictability in men, but only 1% in women. A full 68% of male variance, and 89% of female variance in the incidence of the syndrome is therefore unexplained by these factors.⁴¹ These findings should provide an impetus for diabetes researchers and health care professionals to explore the ways in which social organization – especially income adequacy and related factors – affects the incidence and management of diabetes, particularly among low-income Canadians.

The renowned British epidemiologist Geoffrey Rose emphasized that education would in itself never be enough to prevent disease since inequalities in health status reflect the ways in which societies are organized.⁴⁵ It is the material context of day-to-day life – with significantly strong effects of income inadequacy – that determines health.⁴⁶⁻⁵⁴ This certainly appears to be the case in the incidence and management of diabetes.⁵⁵⁻⁵⁹

The dire projections of an impending diabetes epidemic in Canada call for an expanded focus upon the social determinants of the incidence and management of this profoundly health-threatening disease. Progress in controlling this disorder requires focus on the material conditions of everyday life and how these influence its incidence and course. This will require more than the traditional public health focus upon exhorting people to make healthier choices and comply with physician and public health management regimens. There is increasing evidence about how social determinants of health such as income, housing and food insecurity get under the skin to determine health. Type II diabetes appears to be a disease that is particularly susceptible to the effects of these factors. Are we prepared to seriously identify means of reducing the incidence and improving the management of Type II diabetes by applying this knowledge to this important public health issue?

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