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Editorial

Toward the Goal of Understanding and Tackling the Social Determinants of Diabetes

Diabetes cannot be understood purely by research into biological and lifestyle factors. Significant social determinants of health (SDOH), such as income, employment and housing, play a critical role yet remain under-studied. Indigenous, racialized, LGBTQ2S+ and low-income communities are disproportionately impacted by diabetes. These inequalities are shaped by the distribution of money, power and resources, and were propelled to the fore during the COVID-19 pandemic. Understanding and mitigating the impact of social determinants of diabetes are urgent priorities given the prevalence and economic cost of the disease. This special issue, the first of its kind for the *Canadian Journal of Diabetes*, brings together multifaceted research on the profound social determinants that affect people living with type 1 and type 2 diabetes. This is a crucial step toward understanding and tackling disparities in diabetes research, care and policy.

Income Inequalities

Poverty and material deprivation have far-reaching effects on health, yet income inequalities have not been sufficiently studied. In their cohort study, Comeau et al (pages 561–568) quantify the role of income inequalities as a major predictor of earlier readmissions to hospital for adults with type 1 and type 2 diabetes and selected concordant conditions, in the context of universal coverage for primary care physician services. The time between potentially avoidable hospitalizations related to diabetes, hypertension and congestive heart failure was significantly reduced for individuals in the most affluent income quintile compared with the least affluent. The authors highlight that people in salaried employment had significantly lower risks of earlier rehospitalization for diabetes and concordant conditions compared with nonsalaried people.

Low socioeconomic status can add to the challenges of managing diabetes and, in their cross-sectional analysis focussing specifically on type 1 diabetes, Talbo et al (pages 569–577) evaluate the association between socioeconomic status, diabetes management and risk of complications. They found that lower education level was associated with cardiovascular diseases, depression, nephropathy and higher glycated hemoglobin (A1C). Lower income was associated with higher A1C, retinopathy, neuropathy, nephropathy, severe hypoglycemia and depression, and unemployment was associated with retinopathy and neuropathy. Participants with public insurance were more likely to report having diabetic ketoacidosis and neuropathy. The authors recommend further longitudinal research to explore intervention and prevention strategies that acknowledge and attempt to address these inequalities.

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Neighbourhood and Housing

Focussing on the pediatric diabetes population, Parker et al (pages 586–593) explore the use of patient portals (PPs) to engage youth and families in their diabetes care. PPs are secure online personal health information platforms that connect patients and their parents/carers to portions of their medical record. They have been shown to improve patient satisfaction; health outcomes, including A1C; and therapeutic alliance between patients and physicians—highlighting the crucial importance of equitable access. Associations between SDOH and PP access had not been explored in pediatric type 1 diabetes, but the authors shed light on how inactive PP status is associated with greater material deprivation and residential instability in this population.

In their work, McSweeney et al (pages 594–601) also examine the role of residential instability in the access to care and care of individuals living with diabetes and experiencing homelessness. Homeless people can encounter unique barriers to accessing diabetes specialty care in Canada; in the study, 96 health and social care providers across 5 Canadian cities identify several major barriers. Participants discussed competing priorities and negative experiences with specialists, including long wait times from referral to appointment, the location of clinics, specialists' limited understanding of patients' social situations and medication coverage and the out-of-pocket costs related to some specialist care. Addressing these unique barriers to care is a challenge in this population. Diabetes specialty clinics at community health centres and providing physician-to-physician direct referrals are potential solutions.

Gender, Age and Education

Sociodemographic determinants of health include gender, age, education and income—all of which affect an individual's ability to manage their diabetes. In their qualitative study, Jones et al (pages 620–627) explore differences in participants' accounts of living with diabetes by gender, age, race and ethnicity, type of diabetes and other key demographics, using an intersectional lens that considers diverse socioeconomic locations and identities. “Resilience” was a key feature in participants' lives. Supportive relationships, a feeling of agency and social acceptance contributed to resilience, whereas unsupportive relationships; a lack of agency; and experiences of stigma, discrimination and microaggressions were confounders. The authors describe how those who experience discrimination—including women, older individuals and racialized people—may experience multiple marginalization, which calls for greater support and investment in the factors that contribute to resilience.

Sociodemographic factors such as age, female sex, education and household income are also associated with the levels of physical activity undertaken by adults with type 2 diabetes. In their cross-sectional study, Booth et al (pages 578–585) show that few males, and even fewer females, met Diabetes Canada physical activity guidelines. Older age, female sex, lower income, current or former smoker and overweight/obesity were factors associated with lower levels of moderate-to-vigorous physical activity. Females <65 and males ≥65 years of age were at highest risk of low physical activity.

Previous research has shown that peer support is an effective way of promoting diabetes self-management. Much less attention has been paid, however, to the role of peer leaders in a program's success, that is, to the individuals who deliver an intervention. In their randomized controlled study of 52 peer leaders, Afshar et al (pages 553–560) explore the personality characteristics that differentiate effective peer leaders from ineffective ones in the context of a 12-month telephone-based type 2 diabetes self-management intervention. They describe how effective peer leaders reported lower diabetes distress and scored higher on extroversion—indeed, extroversion emerged as the best personality predictor of peer leader effectiveness. They also discuss how their data were used to produce a peer leader selection model based on demographic and personality characteristics. Peer education may have particular potential in disadvantaged communities in complementing diabetes care without being a large additional strain on health systems.

Race and Ethnicity

Type 2 diabetes disproportionately affects racialized and low-income populations, inequities that impact the life course in myriad ways. The prevalence of gestational diabetes mellitus (GDM) is significantly higher in Indigenous populations in Canada than in non-Indigenous groups. In their study, Elamurugan et al (pages 628–639) synthesize literature on GDM among Indigenous peoples, including research into the social and structural determinants that contribute to the higher prevalence in this group. Seven themes related to GDM in Indigenous populations are identified from a synthesis of 44 articles, including systemic barriers as well as Indigenous perceptions and concerns. The authors suggest that culturally appropriate health care and improved screening practices may help to reduce the high prevalence of GDM and improve health outcomes in Indigenous communities across Canada.

Culturally appropriate support is also discussed in the qualitative study by D'Silva et al (pages 611–619) on the SDOH that impact South Asian patients with type 2 diabetes. South Asians in Canada have a higher prevalence of type 2 diabetes than other ethnic groups, often attributed to lifestyle and behavioural factors; however, those factors ignore important social, economic and systemic aspects that influence prevalence of the disease, including policies and practices that reinforce systemic racism. Community, social and health-care service providers discuss the challenges that people with type 2 diabetes face associated with immigration, the

settlement process, labour policies and job market disparities. These often take priority for families and focus away from diabetes management tasks. Poor working conditions also affect self-management. Participants shed light on how socioeconomic status reduces access to health care and medication in this population, and also how social, economic and cultural barriers impact diet and exercise.

The challenges faced by Black, single parents caring for a child with type 1 diabetes—an under-researched, under-represented group—are the focus of the article by Morone et al (pages 602–610). In their study, a group of parents generated a list of SDOH-related barriers, which included lack of emotional and physical support for parent and child, pain management with medication administration, clinical team empathy and communication, and the economic burden of food costs. The authors recommend routine assessment of family social support and resources, better integration of community-based social services into clinical health encounters and training for clinicians in communication and bias as starting points to address the needs of racial and ethnic minority families.

Addressing SDOH in Diabetes Care and Research

Much more research and resources are needed to address the SDOH that constrain the lives of people with diabetes and their families, often with far-reaching consequences. This special issue—a starting point, a call for action—shines a spotlight on the varied and intersecting social determinants at the root of health inequities. SDOH are modifiable, and each article in this issue suggests ways to start addressing them.

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