Type 2 diabetes mellitus: answering the call for need-sensitive, evidence-based interventions

Type 2 diabetes mellitus (T2DM) is a major global health issue with socioeconomic consequences. It is associated with macro- and microvascular complications, and increases mortality.1 Globally, it is estimated that around 463 million adults (aged 20 to 79 years) are living with diabetes.1 Type 2 diabetes mellitus is the most common type of diabetes, accounting for approximately 90% of all diabetes cases worldwide.1 Some ethnic groups are at greater risk of developing T2DM, for example, Asian, African-Caribbean, and Black African–origin people.1 There is unacceptable variation in the prevention and management of T2DM, with poor national economic and health systems worsening the situation.2,3 The countries with the highest number of people with diabetes are China and India.1 This is likely an underestimation of the burden in low- and middle-income countries (LMICs) because it is estimated that more than three out of four adults have diabetes and four out of five adults have undiagnosed diabetes.1 Around 87% of diabetes-related deaths occur in LMICs, but only one-third of health expenditure in these countries is related to diabetes.1

The management of T2DM across the world centers on using evidence-based interventions, which are recommended in good-quality clinical guidelines for controlling blood glucose levels in people with T2DM. This mainly includes pharmacological interventions, including Western medicines, and complex non-pharmacological interventions, such as diet and physical activity for self-management.4 However, the assumption of a one-size-fits-all model made by many health care providers is too restrictive in controlling blood glucose levels in people with T2DM. It is likely that there are people whose needs are unmet, and other approaches for preventing and managing T2DM, such as evidence-based regional diets and physical activities and indigenous therapies, should be considered. The content, structure, and delivery methods of such interventions should also be need-sensitive and evidence-based. These approaches should go beyond the biomedical model and take into account individual- and country-level factors known to influence the needs, such as culture, religion, and psychological factors (eg, anxiety, stress), which are addressed in the qualitative review by Nixon et al. in this issue.5

In many parts of the world, people use traditional therapies, such as Ayurveda, traditional Chinese medicine, and yoga, for preventing and managing a range of short- and longer-term conditions, including T2DM.6-9 One of the main reasons for the widespread use of traditional therapies is their alignment with people’s respective health beliefs and culture.6 Also, the popularity of traditional therapies may be because Western medicines, including those for T2DM management, are perceived to have concerning side effects and are costly, and there may be a fear of the mode of administration (eg, injections).6 Thus, there is a need to consider these issues when developing, evaluating, and implementing interventions for T2DM prevention and management.

It should be noted that many traditional therapies are not evidence-based and may have serious adverse effects.10 Unfortunately, in many parts of the world, the scaling up of such need-sensitive interventions is typically conducted with no or inadequate evaluation of the intervention, which is likely to lead to inefficient use of scarce resources and, most importantly, could lead to harm.10 Therefore, the intervention must be need-sensitive as well as evidence-based.

In continuation with the global effort to tackle diabetes, the need of the hour is to move beyond the one-size-fits-all biomedical model and to develop, evaluate, and implement need-sensitive, evidence-based interventions to prevent and manage T2DM among different population groups.

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JL-B is a senior associate editor for JBI Evidence Synthesis and was not involved in the decision-making process for this editorial.
KC declares no conflict of interest.
DOI: 10.11124/JBIES-21-00113

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