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**Title: The Missing Piece: The clinical translation of precision diabetes medicine requires precision mental health care: A call to action from the international PsychoSocial Aspects of Diabetes (PSAD) Study Group**

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Diabetes is an increasingly common, long-term condition, requiring 24/7 self-care, and constituting one of the greatest health challenges of our time. As with all ‘wicked problems’, a one-size-fits-all approach to care is doomed to fail.

In 2020, we welcomed the first international consensus report on precision diabetes medicine, which included a section on patient-centred mental health and quality of life outcomes.1 This included the recommendation that, *“in the setting of precision diabetes medicine, providers should assess symptoms of diabetes distress, depression, anxiety, disordered eating and cognitive capacities using appropriate standardized and validated tools at the initial visit, at periodic intervals and when there is a change in disease, treatment or life circumstance (..), information that, when combined with other data, are likely to improve the precision of clinical decision making.”*1

In 2023, the Precision Medicine in Diabetes Initiative (PMDI) published the second international consensus report, on gaps and opportunities for the clinical translation of precision diabetes medicine.2 This report focused on results “*from a systematic evidence review across the key pillars of precision medicine (prevention, diagnosis, treatment, prognosis) in four recognized forms of diabetes (monogenic, gestational, type 1, type 2)*”, to inform the translation of precision medicine research into practice.2 Regrettably, the second consensus omits any such recommendation or discussion of mental health issues. Furthermore, among the “key sources of heterogeneity in diabetes”, only “behaviour” was included, while among the “pillars of precision medicine”, only “lifestyle interventions” were included.2

The first consensus called for “*a rigorous review elucidating effective precision medicine strategies, areas of promise and notable gaps across …[diabetes]… to inform an evidence-based road map to optimize the integration of precision medicine into the global response to the diabetes crisis”.*1 Of the 15 new systematic reviews conducted to inform the second consensus report, none includes the psychosocial aspects of diabetes.1Yet, there is a robust evidence base demonstrating the crucial role of psychosocial factors for people living with, or at risk of, diabetes; and this evidence has only strengthened since the first consensus. For example, a recent umbrella review of 25 systematic reviews of longitudinal studies concluded that common mental disorders, such as depression, anxiety disorders, sleep disorders, and schizophrenia, are associated with increased risks for developing type 2 diabetes.3 Various psychotropic medications can increase weight, and people living with mental disorders often face additional challenges, such as high stress, lowered self-esteem, lack of energy, as well as socioeconomic disadvantage, all of which may compromise health and healthy behaviours, and need to be considered when managing risk for type 2 diabetes.3

Furthermore, in 2020, a special issue of Diabetic Medicine, commemorating the 25th anniversary of the PsychoSocial Aspects of Diabetes (PSAD) study group, included fourteen commissioned reviews of behavioural, psychological, and social aspects of diabetes4. These included diabetes and depression5, diabetes distress6, fear of hypoglycaemia7, disordered eating8, and disordered sleep9, other reviews focused on psychological factors related to the use of medications and diabetes technologies, motivation for self-care, importance of social support, the quality of the patient-clinician communication, and the impact of diabetes and its management on quality of life.4 These reviews summarized the state-of-the-science regarding the inseparable role of psychology in diabetes, including several effective (and cost-effective) interventions based on psychological and behavioural science, none of which are mentioned in the second international consensus report.1

The systematic removal of essential psychosocial factors from a report focused on the ‘gaps and opportunities for the clinical translation’ of precision diabetes medicine, without any clarification, appears to be a step backwards, creating rather than recognising a gap. Given that approximately one in two people will experience mental health problems at some point in their life, and the crucial role that psychology plays in all self-management behaviours and clinician-patient communications, how can any of the four pillars – prevention, diagnosis, treatment or prognosis – be considered precise without recognizing these issues? The PMDI did not consider these omissions among the potential liabilities of a precision medicine approach. The PMDI statement is also out-of-step with other international consensus reports, which recognize the essential role of psychology in diabetes care, such as that published by the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD) focused on the management of type 1 diabetes in adults.10 Section 10 describes psychosocial care, providing an overview of psychological comorbidities that can have a negative impact on diabetes outcomes, and explaining how monitoring of these problems should be integrated in diabetes care.10 Consistent with the studies described above, the ADA/EASD consensus statement not only discusses depression, anxiety, anorexia nervosa, bulimia nervosa, binge eating and intentional insulin omission for weight loss, but also different forms of diabetes-specific emotional distress, such as feeling powerless and overwhelmed by the daily self-care demands, fear of hypoglycaemia, worries about complications, a lack of social support or feeling ‘policed’ by family, friends or co-workers.10 Moreover, the ADA/EASD consensus statement explains how validated questionnaires can be used to ‘flag’ these psychological problems that may require psychological support. It is also emphasized that *“members of the team have a responsibility for providing psychosocial care as an integral component of diabetes care. Preferably, the diabetes care team should include a mental health professional (psychiatrist, psychologist and/or social worker) to advise the team and consult with people with diabetes in need of psychosocial support”.*10 Effective psychological therapies are available, including (online) cognitive behavioural therapy (CBT), mindfulness and interpersonal therapies.10

Thus, it is our consensus that psychosocial factors not only affect risks for and the course of diabetes, but that mental health is as important a goal of precision diabetes medicine as physical health. Nearly every mental disorder has a higher prevalence among people with diabetes. Thus, we contend that precision diabetes medicine must also entail precision mental health care. We therefore encourage the PMDI to incorporate phenotypic psychosocial factors into the next revision of the international consensus report, and everyone to recognise that precision diabetes medicine must include precision mental health care.

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