Invited Review

At last a roadmap for research in diabetes in pregnancy for the coming decade

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One of the most accurate estimates for the global burden of diabetes in pregnancy (DiP) comes from the International Diabetes Federation (IDF).¹ One in every six births occurs to a woman with diabetes representing 16.6% of all pregnancies. About 16% of affected pregnancies are in women with established pregestational diabetes (PGDM) and 84% in women with gestational diabetes (GDM). In women with PGDM, the number affected by type 2 diabetes continues to increase. In the United Kingdom and Ireland, about 50% and 30%, respectively, of women with PGDM attending antenatal clinics now have type 2 diabetes.²³ Overall DiP affects 16 million pregnancies globally on an annual basis. As well as the adverse impact of diabetes on the index pregnancy for both the mother and her baby, we are also increasingly aware of its impact on the life-long risk of diabetes and obesity for both and the associated economic burden for economies.

Since the St Vincent declaration of 1989,⁴ clinicians and researchers have worked tirelessly to examine new screening tests,⁵ new technologies for glucose monitoring and insulin delivery,⁶ new treatments and new processes for health care delivery to women pregnant or contemplating pregnancy. These contributions undoubtedly have helped to close the gap on rates of adverse pregnancy outcomes between women with and without diabetes. However, despite our best efforts, we still have not reached our desired goal of outcome equivalence. Is this because we are not asking the correct research questions or not asking the correct people for their opinion, namely, women with diabetes?

It is thus timely to read the article by Ayman and colleagues in this issue of the journal The top ten research priorities in DiP according to women, support networks and healthcare professionals. I congratulate the authors on this rigorously conducted and important piece of work on a number of fronts. Firstly, the methodology is rigorous in accordance with the published James Lind Guidebook. The authors demonstrate how they adhered to the methodology with JLA facilitation and oversight. Secondly, it is remarkable that such a substantial and important body of work has been completed and published during a global pandemic. Thirdly, it is important to see that 68% and 80% representation in the first and second surveys was from nonhealthcare professionals demonstrating the very wide representation and inclusivity the authors secured. However, they acknowledge that despite their best efforts, representation of some ethnic minority groups particularly Black and Black British was below that expected, based on population statistics. The authors distilled 60 questions to a manageable list of 10 by applying a rigorous open and unbiased scoring system. The result is a list of the top 10 research priorities in DiP. The list includes the following:

- Diabetes technology at any stage in pregnancy.
- The best test for diabetes during pregnancy.
- Diet and lifestyle interventions for diabetes management.
- Emotional and wellbeing needs of women.
- Safe birth at full term.
- Postnatal care.
- Diagnosis and management of diabetes late in pregnancy.
- Prevention of diabetes in women after GDM.
- Labour and birth experiences and choices.
- Improving planning for pregnancy.

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Interestingly, many of these top 10 priorities are in keeping with previous prioritisation exercises conducted in 2018. The Diabetes in Pregnancy Study Group (DPSG) of the European Association for the Study of Diabetes (EASD) cites the use of technologies, examining approaches to pre-pregnancy care, importance of weight management in women with GDM and prevention of type 2 diabetes post-GDM amongst their top priorities. The National Institute of Diabetes and Digestive and Kidney workshop (NIDDK) in its opinion paper on priorities in GDM identifies a knowledge gap in determining the best test for diagnosis of diabetes and the best treatments for glucose management in pregnancy. Finally, International Federation of Gynaecology and Obstetrics (FIGO) in their analysis of research priorities identifies knowledge gaps in the best test for diagnosis of diabetes, evaluation of lifestyle interventions and postpartum follow up of women and their offspring with a focus on diabetes prevention. The current paper by Ayman has identified the emotional and wellbeing needs of women as an important priority not identified in previous publications. The rigorous inclusivity of their methodology has allowed this important area to reach the top 10. This is an important neglected area in clinical practice, and identification of it now as a research priority will add momentum to establishing it also as a priority in clinical practice.

Concentrating our efforts on the priority research questions identified by Ayman and colleagues over the coming years will be important. In addition, making the best use of our research effort and gaining value for money for the research funding invested are critical. With this in mind, researchers should be encouraged to use published core outcome sets when planning trials and interventions. This will ensure that each researcher includes a minimum dataset thus facilitating evidence synthesis and eliminating research redundancy. In addition, the voice of women with diabetes is crucial to our ongoing research efforts. Women need to be included at all stages of the research discussion from planning to execution through to publication. Patient reported outcomes hitherto not often reported are likely to gain momentum over the coming decade. This will also ensure that our research efforts are meaningful to the lives of the women we care for.

On behalf of the clinical and research community in DiP, I thank Ayman and all those who contributed to this important work and ensuring it reached publication despite the COVID 19 pandemic. This work should be our roadmap for the coming decade. It is now up to us the clinicians, researchers and funders to collaborate and harmonise efforts to find answers for these priority questions. Journal editors must also play their part ensuring that articles addressing these priority areas come to publication. In so doing, we can improve the lives and health of this important patient group we are fortunate enough to care for.

CONFLICT OF INTEREST
The author has no conflict of interest.

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