

**Regional differences in type 2 diabetes prevention priorities for women with previous gestational diabetes: A multi-methods consensus study**

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## Original Research

## Regional differences in type 2 diabetes prevention priorities for women with previous gestational diabetes: A multi-methods consensus study

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## ABSTRACT

**Objectives:** To identify values, principles, and research priorities for type 2 diabetes mellitus (T2DM) prevention in women with previous gestational diabetes mellitus (GDM) across five regions, and evaluate the appropriateness of modified Delphi and nominal group consensus methods in diverse cultural settings.

**Study design:** Mixed-methods.

**Methods:** Health professionals and women with previous GDM from five regions were invited to participate in the priority-setting activities according to a modified Delphi process and nominal group technique. The Child Health and Nutrition Research Initiative was used to develop the assessment criteria, which included answerability, effectiveness, deliverability, the maximum potential for improving the health and well-being of postpartum mothers, and the effect on equity. Participants ranked items in three rounds of the Delphi process. Evaluation surveys and semi-structured interviews were conducted to understand participants' experiences of the process. **Results:** Fifty health professionals and 50 women with previous GDM participated in the priority-setting process and evaluation survey, with 11 individuals also taking part in interviews. Regional differences emerged in priority rankings for values and principles. Africa emphasised cost-effectiveness and capacity building; the Americas prioritised people-centred approaches and continuity of care; Asia focused on equity-driven services and family support; Europe highlighted combating misinformation; Oceania emphasised planning skills. Consensus methods were feasible and acceptable across the regions.

**Conclusion:** T2DM prevention priorities for women with a history of GDM vary across geographical regions, suggesting a need for local and tailored approaches for effective implementation. Consensus approaches involving the community in implementation efforts are acceptable across diverse geographical contexts.

## 1. Introduction

Diabetes mellitus is a significant threat to the health and well-being

of individuals, families, societies, and countries worldwide.<sup>1</sup> Currently, more than one in nine (11.1 %) adults aged 20–79 years are living with diabetes.<sup>1</sup> The International Diabetes Federation estimate the

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prevalence of diabetes will increase to 12.5 % by 2050.<sup>1</sup> A study based on Global Burden of Disease 1990–2019 data reported that type 2 diabetes mellitus (T2DM) had increased globally, with the highest growth rate in low- and middle-income countries.<sup>2</sup> According to the 2025 International Diabetes Federation report, 4 in 5 adults with diabetes live in low- and middle-income countries.<sup>1</sup> In high-income countries, T2DM disproportionately affects individuals in lower socioeconomic quintiles and those living in deprived areas.<sup>3</sup> When ranked according to disease prevalence, the regions with the highest to the lowest prevalence of diabetes were the Middle East and North Africa (17.6 %), North America and the Caribbean (15.1), the Western Pacific (12.4 %), South and Central America (11.5 %), Europe (9.8 %) and Africa (5.0).<sup>1</sup> For women, a sex-specific risk factor of T2DM is gestational diabetes mellitus (GDM), a glucose intolerance first recognised during pregnancy.<sup>4</sup> GDM confers a tenfold increased risk of developing T2DM later in life.<sup>5</sup> Similar to T2DM, there are significant regional disparities in the prevalence of GDM, with the highest rates in the Middle East and North Africa (27.6 %) and South-East Asia (20.8 %), followed by the Western Pacific (14.7 %) and Africa (14.2 %). Meanwhile, North America recorded the lowest prevalence (7.1 %), preceded by Europe (7.8 %).<sup>6</sup>

The evidence of effectiveness in T2DM prevention is well established in certain populations.<sup>7–9</sup> Lifestyle interventions that encompass diet and physical activity can reduce the risk of developing T2DM including in women with a history of GDM by 24 %–43 %, especially if started within three years postpartum.<sup>7–9</sup> However, the implementation of T2DM prevention in the general population is dismal, at less than 5 % of those with diagnosed prediabetes referred to a diabetes prevention program with no data available for women with a history of GDM.<sup>10</sup> There is also a lack of data on the implementation of T2DM prevention following GDM from low and middle-income countries.<sup>11</sup> Failing to understand the intricate challenges of the broader social contexts and systems necessary to address global diabetes inequities could contribute to growing disparities between populations.<sup>12,13</sup> To address this inequity, there is an urgent need to understand the diversity of implementation priorities across different geographical settings.

Best practice in priority-setting would include those with lived experiences alongside health professionals.<sup>14</sup> Involving women with lived experience (WWLE) of GDM in diabetes prevention research significantly improves the sustainability of intervention outcomes.<sup>15</sup> However, this is not a common occurrence as those with lived experience are often under-involved in GDM intervention research.<sup>16</sup> In particular, there is no precedent of their involvement in GDM research in low-income countries.<sup>15</sup> Cultural differences can influence active participation in group discussion, particularly for women of culturally diverse backgrounds.<sup>17</sup> This may be further confounded with the Hawthorne effect, where WWLE may adjust their responses based on perceived expectations when engaging with health professionals in a discussion together.<sup>18</sup> When involving participants from diverse cultural, professional, and gender backgrounds in research, it is essential to ensure equitable contributions from all individuals and that the findings genuinely reflect their perspectives.<sup>19</sup> It is unclear if these cultural nuances may affect the appropriateness of the use of established consensus approaches across diverse settings.

Therefore, this study had two primary objectives: (1) to identify and compare values, principles, and research priorities for T2DM prevention in women with previous GDM across Africa, the Americas, Asia, Europe, and Oceania; and (2) to evaluate the cultural appropriateness and effectiveness of modified Delphi and nominal group consensus methods across diverse geographical and cultural settings.

## 2. Materials and methods

This is a secondary analysis of a multi-methods study involving three rounds of priority-setting activities and post-workshop evaluation using surveys and semi-structured interviews. Researchers, health professionals providing care to postpartum women and women with a

history of GDM in the past five years from the five United Nations Geoscheme regions of the world: Africa, Americas, Asia, Europe and Oceania were recruited.<sup>20</sup> Details of the methods, rationale, and the consensus development process are published elsewhere.<sup>21</sup>

Briefly, eligibility for participation in the priority-setting activities included WWLE of GDM in the past five years but no current diabetes; and health professionals who were involved in the care of the women with GDM. The PROGRESS (place of residence, race/ethnicity/culture/language, occupation, gender/sex, religion, education, socioeconomic status, and social capital) criteria were used to recruit individuals from diverse backgrounds.<sup>22</sup> The modified Delphi process and Nominal Group Techniques were used to determine the values, principles, and priorities.<sup>23,24</sup> The sample size was determined based on nominal group technique recommendations (8–12 participants per group) and Delphi study guidelines suggesting 10–50 experts per domain. We aimed for 20 participants per region (10 health professionals, 10 WWLE of GDM) to ensure adequate representation whilst maintaining manageable group dynamics. All materials were translated into local languages with back-translation verification. Local researchers familiar with cultural contexts facilitated sessions. Pre-workshop briefings addressed cultural communication styles and participation expectations.

### 2.1. The priority-setting activities process

Twelve values and principles and 28 research priorities were identified based on inputs from The Global Strategy for Women's, Children's and Adolescents' Health 2016–2030; the Australia's National Women's Health Strategy 2020–2030<sup>25</sup>; the Non-communicable Diseases Alliance's (NCD) A Call to Action<sup>26</sup>; systematic reviews; past interviews with postpartum individuals<sup>27–30</sup>; and additional inputs from the participants ([Supplementary Table 1](#)).

#### 2.1.1. Pre-workshop ranking

Prior to the workshop, an online survey was emailed to all participants to gather basic information. Using a modified Delphi format, participants were then asked to rank priorities according to Child Health and Nutrition Research Initiative (CHNRI) criteria,<sup>31</sup> from highest to lowest, with 1 being the top (first) priority. Additionally, participants could suggest other priorities not listed.

#### 2.1.2. The workshop activity

Consensus workshops were conducted for each region on Zoom (Version 5.11.3). The Nominal Group Technique was used to achieve consensus. Participants were divided into small groups of 3–5 to discuss preworkshop rankings. Following these discussions, the total group of participants reconvened to re-rank priorities based on the new insights. Discussions were video-recorded and the recordings were professionally transcribed. Transcripts were open-coded and analysed for themes using reflexive thematic analysis. Analyses were performed on NVivo 12 (Lumivero, Denver, USA). A six stage approach—familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining themes, and writing up—was utilised to inductively generate themes.<sup>32</sup>

#### 2.1.3. Post-workshop (consensus/final ranking)

Workshop results from each region were shared with participants via an online survey after the sessions. Participants were tasked with independently re-ranking the priorities, considering the CHNRI criteria and the discussions from the workshop. For each priority, mean ranking scores were calculated, with lower scores indicating a higher priority. This paper presents regional differences in the values, principles and research priorities after the discussion. As most of the values and research topics listed in the first five lists were similar for all regions, we used a value/principle or research topic uniquely listed by participants from a particular region in the top five priorities to define regional differences.

## 2.2. Evaluation: survey

At the end of the priority-setting activities, an online survey was conducted to gather participants' feedback on the benefits they gained, how helpful they found the activity, and how it contributed to the prevention of T2DM among women with a history of GDM. Responses were based on satisfaction rankings on a scale of 1 (not satisfied at all) to 7 (very satisfied). Participants were also asked to rank a list of factors that contributed to their (dis)satisfaction.

## 2.3. Evaluation: semi-structured interviews

Eleven participants, including six health professionals and five WWLE of GDM from five regions, were randomly selected for semi-structured evaluation interviews. These interviews were conducted individually on Zoom to gather their experiences with the priority-setting activities, which aimed to inform participatory methods for developing diabetes prevention initiatives in various regions, languages, and cultural settings. These interviews were also video-recorded, and the recordings were professionally transcribed. The transcripts were then open-coded and analysed for themes using reflexive thematic analysis, with the analyses performed using NVivo 20.3 (Lumivero, Denver, CO, USA).

## 3. Results

### 3.1. Participant characteristics

A total of 50 health professionals and 50 WWLE from 11 countries: Australia, Canada, Denmark, Ethiopia, India, Ireland, Nigeria, Rwanda, the United Arab Emirates, the United Kingdom, and the United States of America participated in the priority setting activities. The mean age of the participants was 33.6 (SD = 3.3) years (Table 1).

### 3.2. Values and principles

The top two principles and values, combining input from WWLE of GDM and health professionals, are universal access and evidence-based approaches. Universal access was ranked as the highest principle and value across Africa, Americas, and Asia, and second highest in Europe and Oceania. Evidence-based approaches followed closely, ranked as the most important principle and value in Europe and Oceania and second ranked in Africa (Table 2).

Regarding region-specific principles and values, Africa uniquely emphasised cost-effectiveness. Americas and Asia valued human-rights-based approaches, while Europe and Americas highlighted a people-centred approach (Table 2).

### 3.3. Research priorities

The combined ranking results of WWLE and health professionals for research priorities indicate that the highest overall priority was stress and mental well-being, followed by information on exercise and diet. Regarding regional differences: Africa emphasised the involvement of health professionals in supporting postpartum individuals, while the Americas uniquely prioritised continuity of care from preconception through the postpartum period. Asia recognised the importance of social support from family, and Europe focused on combating misinformation and disinformation surrounding diet, exercise, sleep, and stress. Oceania, meanwhile, prioritised planning and organisational skills for women (Table 3).

### 3.4. Evaluation of priority setting activities

#### 3.4.1. Surveys

A total of 75 participants (33 health professionals and 42 WWLE of

**Table 1**  
Demographic characteristics of participants.

Variable	WWLE of GDM n = 50 Number (%)	Health professionals n = 50 Number (%)
Region		
Africa	8 (16.0)	10 (20.0)
Americas	2 (4.0)	7 (14.0)
Asia	14 (28.0)	16 (32.0)
Europe	10 (20.0)	8 (16.0)
Oceania	16 (32.0)	9 (18.0)
Mean age (years)	33.6 ± 3.3	Not recorded
Age of youngest child		
1 year or less	28 (56.0)	Not applicable
2 years	6 (12.0)	Not applicable
3 years	6 (12.0)	Not applicable
4 years	7 (14.0)	Not applicable
5 years	2 (4.0)	Not applicable
Education level		
Secondary/high school	5 (10.0)	Not recorded
Diploma/Advanced diploma	3 (6.0)	Not recorded
Graduate/postgraduate degree	41 (82.0)	Not recorded
Not stated	1 (2.0)	Not recorded
Occupation		
No paid job/homemaker	8 (16.0)	Not applicable
Clerical or trade job	2 (4.0)	Not applicable
Associate professional job	5 (10.0)	Not applicable
Professional job	34 (68.0)	Not applicable
Not stated	1 (2.0)	Not applicable
Private health insurance		
Yes	24 (48.0)	Not applicable
No	26 (52.0)	Not applicable
Number of years since qualification		
5 years or less	Not applicable	3 (6.0)
6–10 years	Not applicable	12 (24.0)
More than 10 years	Not applicable	34 (68.0)
Gender		
Male	Not applicable	18 (36.0)
Female	Not applicable	32 (64.0)
Area of practice		
Primary care	Not applicable	2 (4.0)
General practice	Not applicable	10 (20.0)
Allied health	Not applicable	2 (4.0)
Community health	Not applicable	2 (4.0)
Public health	Not applicable	7 (14.0)
Clinician	Not applicable	22 (44.0)
Other	Not applicable	4 (8.0)
Area of residence		
Metropolitan/Urban	Not applicable	41 (82.0)
Rural	Not applicable	8 (16.0)
Remote	Not applicable	1 (2.0)
Working with this population		
Culturally & linguistically diverse	Not applicable	29 (58.0)
Indigenous populations	Not applicable	14 (28.0)
Rural population	Not applicable	22 (44.0)

WWLE: Women with lived experience, GDM: Gestational diabetes mellitus

GDM) completed the evaluation survey. The evaluation suggests that the priority-setting activities had an overall positive experience by the participants across the regions. As presented in [Supplementary Table 3](#), 48/75 (64 %) of the participants indicated that they learned more about the process of selecting priorities as a group, 43/75 (57 %) mentioned that they learned more about the issues of preventing diabetes in individuals who have had GDM, while 18 women (24 %) indicated that they met new people that helped them work in diabetes prevention ([Supplementary Table 3](#)).

On a satisfaction ranking scale from 1 (not satisfied at all) to 7 (very satisfied), 71 out of 75 participants (94.7 %) indicated satisfaction with the priority-setting activity (a score of 5 or above). There were no regional differences in the median scores, with all regions reporting median score between 6.0 and 7.0 (Africa: 6.5; Americas: 6; Asia: 7;

**Table 2**

Top rankings of values and principles underlying research for diabetes prevention after gestational diabetes by women who had GDM and health professionals across five continents (n = 100).

Values and Principles	Women who had GDM (n = 50)					Health professionals (n = 50)					Combined				
	Af	Am	As	Eu	Oc	Af	Am	As	Eu	Oc	Af	Am	As	Eu	Oc
Universal access	1	3	1	1	2	1	1	1	1	2	1	1	1	2	2
Evidence-based	2	2	5	2	1	2	2	4	2	1	2	4	4	1	1
Equity-driven		1	4	3	4		3		5	3		2	5	4	3
Country-led solutions	4			4	3	4				4	4				3
Sustainability	3		3		5	3		4	4	5	3		2	5	4
Cost-effectiveness	5					5					5				
People-centred approach		4		5			2	3				3	3	3	
System-based solutions		5													
Human-rights-based			2				5	5			5	3			5
Joined-up care									3						

Abbreviations: Af, Africa; Am, America; As, Asia; Eu, Europe; Oc, Oceania.

**Table 3**

Top rankings for research priorities for diabetes prevention after gestational diabetes by women who had GDM and health professionals across five continents (n = 100).

Research priorities	Women who had GDM (n = 50)					Health professionals (n = 50)					Combined				
	Af	Am	As	Eu	Oc	Af	Am	As	Eu	Oc	Af	Am	As	Eu	Oc
Stress and mental well being	2		1	1	1	3		1	2	1	2	1	1	1	1
Information on exercise and diet	1		5	2	3 <sup>c</sup>	1	1	4		3	1	3	4	2	3
Exercise after childbirth	3	3	2			4 <sup>a</sup>		2			3		2		
How to involve health professionals to support postpartum individuals	4					2					4				
Lactation and breastfeeding	5	4			3 <sup>c</sup>	5		5	2	4	5				
The physical environment for healthy eating		1		5			2		5			2		5	
Sedentary behaviours		2	3	3				3		5			3		5
Mother's sleep & Infant sleep		1 <sup>a</sup>	4 <sup>b</sup>	4	4 & 5 <sup>d</sup>										
Continuity of care from pre-conception through to pregnancy and postpartum							4					4			
Interventions that work in light of the social determinants of health (food security, built environment)							3					5			
Planning and organization skills					2					2					2
Screen time		5													
Social support from family													3		
Information/misinformation and education about diet, exercise, sleep and stress									1					4	
What works for prevention? Prevention intervention effectiveness research (e. g. lifestyle, pharmacotherapy)							5								

Abbreviations: Af, Africa; Am, America; As, Asia; Eu, Europe; Oc, Oceania.

Women who had GDM: <sup>a</sup> Infant sleep; <sup>b</sup> Mothers sleep; <sup>c</sup> both voted as third priority; <sup>d</sup> mothers sleep 4th, infant sleep 5th.

Health professionals: <sup>a</sup> combined with sedentary behaviour; infant sleep; <sup>c</sup> mothers sleep.

Oceania: 6.0; Europe: 6.5). The main reasons for satisfaction with participating in the priority-setting activities was the feeling that their contribution was valued 52/75 (69 %), followed by the feeling that they were making a difference and helping others 41/75 (55 %), and meeting new people 41/75 (55 %) (Supplementary Table 4). Participants also highlighted areas for improvement, such as allowing more time for discussion and providing sufficient orientation to the priority-setting process.

A small proportion, 8/75 (10.7 %) indicated that they were not satisfied because of technical issues with Zoom, and another 6/70 (6.7 %) stated that it was difficult fitting the activity around their home or work (Supplementary Table 4).

### 3.4.2. Interviews

Eleven participants (five WWLE of GDM and six health professionals) participated in interviews about their overall experience and decision-making process during the workshop. The positive themes identified from the interviews were: collaborative and inclusive decision-making, engaging and inclusive learning experiences, clear communication, inclusive research practices, effective prioritization strategies and the sense that everyone was on equal footing during the decision-making processes. A male health professional from India expressed the decision-making process as:

“... I think, as per the overall consensus on the decisions made and based on the discussions, there were not many disagreements and actually, I don't think it's a one-sided agreement or one-sided things .... I think everyone has contributed at least once in a while.”

Another WWLE from Nigeria responded to the question of whether everyone was on equal footing during the discussion by saying:

“I say yes, we were all equal.”

While another WWLE from Australia expressed her feeling as:

“I felt heard, and I felt I'm encouraged to share and safe to share.”

The negative themes identified from the interviews were: insufficient preparation for the workshop and insufficiency of the information provided to the participants before the workshop. Language, and power dynamics were mentioned as the main barriers to effective communication and participation. A female health professional from Ethiopia expressed her feeling about time constraint as:

“I felt we needed to give a little more time because some people talk more while others may wait ....”

(Supplementary Table 5).

Consistent with the survey findings, participants expressed similar



feelings across the five content areas—both in terms of being on equal footing with others and whether participating in the activities had helped, or could help, them contribute to knowledge in the field.

#### 4. Discussion

The current study explored values, principles, and research priorities for the prevention of T2DM among women with a history of GDM across diverse regions. Universal access was the most commonly voted value, while stress and mental wellbeing was the top research priority for most of the regions. In terms of values and principles that were voted among the top five by a specific region but not the others, Africa uniquely valued cost-effectiveness. In terms of research priorities, Africa uniquely prioritised involving health professionals to support postpartum individuals; Americas advocated for continuity of care from preconception to the postpartum period; Asia uniquely prioritised research on social support from family; Europe uniquely prioritised addressing misinformation on lifestyle advice; Oceania uniquely prioritised planning and organisational skills for postpartum women.

Regional differences often reflected economic and health systems realities. Africa's emphasis on cost-effectiveness aligns with WHO recommendations for low-resource settings, reflecting limited domestic funding despite political commitments to universal healthcare.<sup>33,34</sup> This highlights the need for cost-effective diabetes prevention strategies in Africa, such as Lifestyle Africa—a community-based diabetes prevention program designed for socioeconomically disadvantaged populations and delivered by community health workers.<sup>35</sup> Africa was also unique in prioritising how to involve health professionals in supporting women in postpartum (capacity building) as a research priority. This may reflect the high prevalence of disrespectful maternity care which can manifest as denial of treatment, neglect of patient needs, intrusive or excessive interventions, forced medical intervention, detention for non-payment, and discriminatory or dehumanising behaviour in some parts of Africa.<sup>36–38</sup> Such experiences can significantly impact preventive services and raise the risk of developing T2DM for women with a history of GDM.<sup>39</sup>

Americas uniquely listed continuity of care from preconception to the postpartum period in the top five research priorities which reflect fragmented healthcare systems.<sup>40</sup> Coherent, long-term person-centred continuity of care requires cross-disciplinary knowledge sharing and system-wide accountability—beyond individual responsibility—across micro, meso, and macro levels.<sup>41</sup> Continuity of maternity care is associated with positive health outcomes among women with or without diabetes during pregnancy.<sup>42,43</sup>

Asia placed a significant emphasis on family social support. This concern also supports the evidence that family and social support for postpartum women in Asia is decreasing.<sup>44,45</sup> The traditional family structures and support systems in Asian societies usually emphasise collectivism and maintain group harmony.<sup>46</sup> Asian women in the postpartum period benefit more from social support, such as support from family members and close relatives. Studies indicated that in contrast to other women, Asian women are less likely to use external social support.<sup>46</sup> However, the fast-paced nature of modern life, including increased work demands and urbanisation, can reduce the time and availability of family members to provide support.<sup>44,45</sup> This can lead to higher stress levels and a lack of traditional postpartum care practices.<sup>47</sup> A lack of assistance with childcare increases the risk of postnatal depression and is among the key barriers to adherence to lifestyle intervention among postpartum women.<sup>48,49</sup> Strengthening social support is essential for effective T2DM prevention in this group.

Europe focused on misinformation and disinformation as a research priority, acknowledging its threat to public health.<sup>50</sup> The rise of artificial intelligence and online platforms has made it harder for people to verify information.<sup>51–53</sup> As this is critical issue, the World Health Organization (European Region) has developed a Toolkit for tackling misinformation on noncommunicable diseases in 2022.<sup>50</sup> It should be noted that this is

not a unique problem for Europe but was overshadowed by other research topics in other regions.<sup>54,55</sup>

In contrast, Oceania prioritised planning and organisational skills—teaching mothers how to structure daily routines to include exercise and healthy eating. The postpartum period is demanding, with women often find themselves with no time or energy for self-care, and generally tend to put their baby's health first.<sup>56–58</sup> Literature supports the positive impact of interventions that enhance the self-efficacy of women with GDM or a history of GDM in engaging with lifestyle interventions during both pregnancy and the postpartum period. Equipping women with planning skills is therefore essential to help them engage in diabetes prevention activities.<sup>59,60</sup>

The successful implementation of consensus methods across diverse cultural settings—as demonstrated by similar median satisfaction scores and the expression of similar feelings, both in terms of being on equal footing with others and in whether participation helped or could help contribute to knowledge in the field—indicates the adaptability of these approaches when appropriately modified.<sup>61</sup> This reflects consideration of the PROGRESS Plus framework, which accounts for social determinants.

##### 4.1. Strength and limitations

The study highlighted many strengths, along with some notable limitations. First, power differences between WWLE and health professionals was addressed by placing them in separate discussion groups initially, followed by combined groups for further dialogue. Second, participants from all five regions participated, with surveys in local languages and local research assistants as translators, ensuring broad participation. Third, the established Delphi and Nominal Group Techniques were used to achieve consensus and capture each participant's voice.

While this study sought to address the under-representation of low- and middle-income countries in diabetes prevention research<sup>11</sup> through purposive sampling that include Africa and Asia, it is not a complete representation of the voices of every country, culture or language group or health systems in these regions limiting the generalisability of findings beyond similar demographic or geographic. Moreover, the use of the United Nations Geoscheme has its own limitations, as the countries grouped into the same regions have diverse health systems and cultural backgrounds. In addition to this, the uses of online voting surveys and group discussions may have introduced selection bias, favouring participants with higher literacy levels and motivation for change—despite efforts to engage socially disadvantaged individuals from each region.

##### 4.2. Conclusion

This multi-regional consensus study demonstrates both universal priorities and important cultural differences in T2DM prevention approaches for women with previous GDM. While universal access and evidence-based care priorities were shared values, regional differences - Africa's focus on cost-effectiveness, Asia's emphasis on familial social support, Europe's concerns on misinformation, and Americas' priority on continuity of care - highlight the need for locally adapted implementation strategy plans. In developing these plans, Delphi and nominal group techniques proved feasible and acceptable across diverse cultural settings when appropriately adapted, offering a model for inclusive global health research. These findings provide a framework for developing culturally responsive diabetes prevention programmes that honour both universal health principles and local values.

##### Author statements

##### Ethical approval

The Monash University Human Research Ethics Committee approved

the study (Ref: xxx/xxxx).

### Credit author statement

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### Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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### Abbreviations

CHNRI	Child Health and Nutrition Research Initiative
GDM	Gestational diabetes mellitus
NCD	Non-communicable diseases
PROGRESS	Place of residence, race/ethnicity/culture/language, occupation, gender/sex, religion, education, socioeconomic status, and social capital
T2DM	Type 2 diabetes mellitus
WWLE	Women with lived experience

### Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.puhe.2025.106011>.

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