



Gestational Diabetes

Improving women's health outcomes through interventions and preventative strategies

Key Policy Recommendations

- **Community-based screening programmes** to improve screening attendance, particularly among women with limited access to healthcare.
- Develop **guidelines** recommending screening for physical and mental health-related complications following a diagnosis of gestational diabetes.
- Design and implement **interventions** which can introduce **sustainable lifestyle changes** that are cost-effective and easy to adhere to.
- Deliver **effective education** to healthcare professionals about the increased risk of health complications following a diagnosis of gestational diabetes, the importance of screening women, and how best to communicate this risk.
- **Support community programmes** which provide **education to women** with a history of gestational diabetes, **and their families**.

The impact of gestational diabetes

Gestational diabetes is a type of diabetes that first occurs during pregnancy, and disappears after giving birth. Women who have been diagnosed with gestational diabetes during pregnancy are almost **ten times more likely to develop type 2 diabetes** (Vounzoulaki *et al.*, 2020), compared to women not diagnosed with gestational diabetes during pregnancy.

Screening for type 2 diabetes, following a pregnancy affected by gestational diabetes, can help prevent or identify type 2 diabetes in its early stages, improving health outcomes. However, screening rates for type 2 diabetes following pregnancy complicated by gestational diabetes are low, with **fewer than 1 in 4 women attending the annual screening recommended by the NICE guidelines**. (Vounzoulaki *et al.*, 2022).

Women with gestational diabetes also have an increased risk of future **heart disease, high blood pressure, and depression**. (Kramer *et al.*, 2019, Daly *et al.*, 2018, Wilson *et al.*, 2020) There are currently **no recommendations in NICE guidelines** for the screening of these conditions.

The **risk of developing physical and mental health related complications** following a diagnosis of gestational diabetes **differs by both ethnicity and socioeconomic status**, highlighting **inequalities in outcomes** for women of Black and South Asian ethnicity (Vounzoulaki *et al.*, 2024). **South Asian** women are more likely to **develop type 2 diabetes**, and Black women are more likely to develop hypertension compared to White women with a history of gestational diabetes. (Vounzoulaki *et al.*, 2024).

A need to improve health and care for women diagnosed with gestational diabetes during pregnancy aligns with maternal health, postnatal physical/mental health follow-up and support, and reducing disparities; all highlighted as priority areas in the **Women's Health Strategy** (DHSC, 2022).

The case for action

Women previously diagnosed with gestational diabetes are almost **ten times more likely to develop type 2 diabetes**. (Vounzoulaki *et al.*, 2020) The risk is **higher than a decade ago** (previously 7 times more likely) (Bellamy *et al.*, 2009).

Fewer than 25% of women with a history of gestational diabetes are receiving the recommended annual **glucose screening** (Vounzoulaki *et al.*, 2022).

Women with additional risk factors were more likely to be screened for type 2: **older age** at gestational diabetes diagnosis (**nearly 2 times higher odds**), prescribed medication for gestational diabetes (**2 times higher odds**) and polycystic ovary syndrome (**1.2 times higher odds**). (Vounzoulaki *et al.*, 2022).

Women with gestational diabetes are almost ten times more likely to develop type 2 diabetes (Vounzoulaki *et al.*, 2020)

However, it is important that all women receive post-partum follow-up as an opportunity for prevention, considering the increased costs. **Type 2 diabetes costs £8.8 billion in direct and £13 billion in indirect costs**, and that is expected to increase by 2035. (Hex *et al.*, 2012).

The **risk of developing type 2 diabetes** in women with a history of gestational diabetes is **nearly 2 times higher** in **South Asian** compared to White women. (Vounzoulaki *et al.*, 2024).

Women of **Black ethnicity** are **3 times more likely to be diagnosed with hypertension** following a pregnancy affected by gestational diabetes; **Black and South Asian** women have a **reduced risk** of being diagnosed with **depression** compared to White. (Vounzoulaki *et al.*, 2024).

Evidence base

The evidence was gathered from unique research conducted within the Leicester Real World Evidence Unit, Diabetes Research Centre, University of Leicester, funded by NIHR ARC East Midlands. This investigated the impact of gestational diabetes on maternal health, and highlighted the following:

1. Women with gestational diabetes have a nearly tenfold greater risk of type 2 diabetes compared to those without a diagnosis.

This emerged from our research estimating the risk of type 2 diabetes in women with a history of gestational diabetes summarising findings from global studies.

2. Less than 25% of women with a history of gestational diabetes receive the recommended screening for type 2 diabetes following birth.

Using routinely collected UK data from general practices and hospitals, our study suggested that fewer than a quarter of these women receive screening.

3. South Asian and Black ethnicity are associated with an increased risk of type 2 diabetes and hypertension, respectively, compared to White.

Analysing routinely collected data, our study found that the risk of physical and mental health related complications following a diagnosis of gestational diabetes differs between ethnic groups. Additionally, this study found that:

4. The risk of health complications including type 2 diabetes, hypertension and depression increases with increasing level of deprivation.

These findings highlight **stark inequalities** in post-partum care for these women.

Implementation

On the basis of the findings generated from these unique studies, the following four key initiatives would deliver major improvements in outcomes. These could be implemented without the need for significant resource allocation to address the problem:

1. Opportunities for screening and follow-up

It is important to provide opportunities for community-based screening in multi-ethnic populations, for type 2 diabetes as well as heart disease, high-blood pressure, and depression.

Additionally, within primary care, women's health checks can be arranged during baby health appointments, which facilitates attendance. This will allow women to equally access support and care, and improve health outcomes.

Type 2 diabetes costs £8.8 billion in direct and £13 billion in indirect costs, and that is expected to increase by 2035 (Hex *et al.*, 2012)

2. Comprehensive guidelines

In current guidelines, post-partum screening is focused on type 2 diabetes, with no mention of other health complications despite the increasing evidence.

There is a need to incorporate screening for other conditions in guidelines, taking into account individual risk factors including ethnicity and socioeconomic status.

3. Sustainable interventions

It is essential to introduce culturally appropriate lifestyle changes (diet, exercise) in ways that can be sustained over time. As women are faced with time constraints due to the responsibilities of motherhood, we need to design interventions that are tailored to their needs.

Technology and interventions with an eHealth component (i.e. mobile applications) can facilitate this.

4. Education for patients and healthcare professionals

We need to ensure that healthcare professionals are aware of the impact of gestational diabetes on maternal health and communicate risk using appropriate language.

Additionally, we need to ensure that women are aware of this risk, and of the importance of screening and adopting lifestyle changes. Training, communication and events bringing together clinicians and researchers are important to achieve this.

Community events, as well as educational material (i.e. leaflets, videos) provided in different languages, can increase accessibility reaching a wider audience.

This policy briefing paper was produced by Dr Elpida Vounzoulaki, Epidemiologist at the Leicester Real World Evidence Unit, Diabetes Research Centre, University of Leicester, with the support of the University of Leicester Institute for Policy.



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