Diabetes Asia Journal
Vol. 2, Issue 1, April 2025, Edition: Online
Publisher: Diabetes Asia Journal under JHRC
eISSN: 3048-8192
Cross Ref DOI: https://doi.org/10.62996/daj.54042025
Journal Homepage: https://diabetesasia.org/journal/

Review Article

IDF atlas 2025: Global Diabetes Prevalence and Gestational Diabetes Mellitus

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Submitted: *20 April 2025; Accepted: 26 April 2025; Published: 28 April 2025*

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Introduction

India is one of the seven countries and territories in the IDF South-East Asia region, a pivotal area in the fight against diabetes. Currently, a staggering 589 million people around the globe are living with diabetes, with 107 million of them in the SEA region alone. Alarmingly, projections indicate that this number could surge to 185 million by 2050. It is crucial that we address this growing health crisis with urgency and commitment.

Diabetes in India (2024)

In India, total adult population 947,373,600 and 10.5% in age group 20 to 79 are suffering from Diabetes with 89,826900 adults' cases.
Diabetes has reached pandemic levels, and India has become the diabetes capital, with 89.8 million people affected in 2024 (10.5% of the population). This number is projected to rise to 156.7 million by 2050(Figure1). It is crucial to shift our focus towards primordial prevention of diabetes. We need a reliable test for predicting gestational diabetes mellitus (GDM) so that timely and appropriate interventions can be initiated [1].

CVD and Diabetes

It is vital to acknowledge the substantial elevation in the relative risk of cardiovascular disease (CVD) events in women grappling with diabetes, primarily due to the comparatively low baseline risk observed in their counterparts without the condition. However, men with Type 2 diabetes (T2D) confront an even greater absolute risk of CVD, underscoring a critical disparity in outcomes between genders. Alarmingly, individuals who develop T2D at a younger age—specifically those under 40—face an exponentially higher lifetime absolute risk than those whose diagnoses occur later in life. This heightened risk is intricately linked to the growing obesity epidemic and the prolonged duration of exposure to various risk factors, which inevitably compounds their vulnerability.

Figure 1. Findings from studies indicate that, compared to those without diabetes, people in T2D face

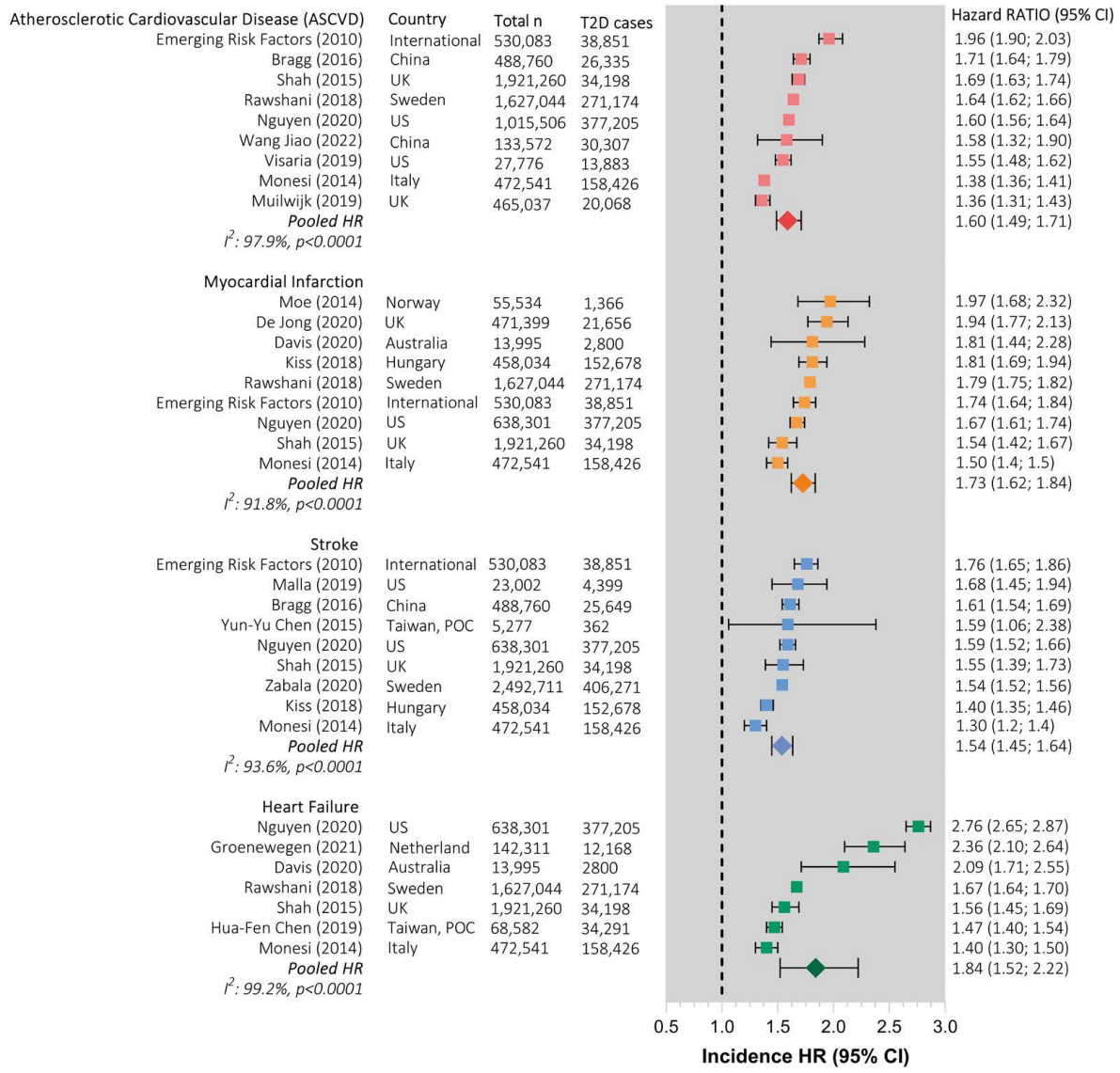
Credit: IDF atlas 2025

In the UK, compelling evidence reveals that individuals with pre-diabetes or undiagnosed diabetes present cardiovascular risks that are 11% (ranging from 2% to 30%) and an alarming 20% (ranging from 4% to 38%) higher, respectively, even after accounting for traditional risk factors. However, a significant limitation of this research is the glaring absence of data from low- and middle-income countries (LMICs) [2], a gap that obscures our understanding of the true impact of non-fatal CVD among T2D patients in these regions.

The sobering reality is that heart-related mortality rates among people with diabetes are exceedingly high in low-income countries (LICs), reaching 5.7 deaths per 1,000 person-years. This stark contrast is even more pronounced when compared to middle-income countries (MICs), where the rate stands at 2.2, and high-income countries (HICs), which report only 1.0. This compelling evidence powerfully illuminates the urgent need to confront the undeniable link between diabetes and cardiovascular diseases[2]. It is imperative that we prioritize early detection, thorough management, and robust public health interventions to effectively mitigate these escalating risks. As the global prevalence of diabetes continues its alarming ascent, addressing its cardiovascular repercussions must emerge as a central concern for healthcare systems and policymakers worldwide.

The studies included in this analysis span several countries, including Australia, China, Hungary, Italy, Sweden, Taiwan (POC), the UK, and the US. Together, these studies encompass over 6.3 million individuals, among whom more than 1.02 million have been diagnosed with Type 2 Diabetes (T2D) and have reported incidents of cardiovascular disease (CVD). These significant findings were meticulously combined in a comprehensive meta-analysis (Figure 2), highlighting the urgent need to address the link between T2D and CVD on a global scale [3,4].

Figure 2. A meta-analysis on the risk of atherosclerotic cardiovascular disease, stroke, myocardial infarction, and heart failure in person with type 2 diabetes compared to those without [3,4].



Credit: IDF atlas 2025

Individuals with prediabetes face nearly double the unadjusted risk of cardiovascular disease (CVD), primarily due to abnormal levels of conventional risk factors. While HbA1c offers some insight, it adds little to cardiovascular risk predictions. Addressing these underlying factors is essential for effective CVD prevention and management [5,6].

Prevalence of Gestational Diabetes Mellitus

Over 3.4 million people died as a result of diabetes in 2024. This corresponds to 9.3% of global deaths from all causes. In 2024, it is projected that 23.0 million live births (19.7%) to women will experience some form of hyperglycemia in pregnancy. Notably, 79.2% of these cases will be linked to gestational diabetes (GDM). Comparatively, 11% will stem from diabetes diagnosed prior to pregnancy, while 9.9% will result from diabetes (including type 1 and type 2) first identified during pregnancy. The variations in these statistics compared to previous editions of the IDF Diabetes Atlas are attributed to advances in detection methods before and during pregnancy. Detailed methodologies are available in Chapter 2. There are significant regional disparities in the prevalence of hyperglycemia in pregnancy (HIP) [7].

Table 1. Global estimates of hyperglycaemia in pregnancy in 2024.

Global live births in women aged 20-49 years	118.5 million
Global prevalence of HIP	19.7%
Number of live births affected in millions	23.0 million
Proportion of cases due to GDM	79.2%
Proportion of cases due to other types of diabetes first detected in pregnancy	9.9%
Proportion of cases due to diabetes detected prior to pregnancy	11.0%

Credit: IDF Atlas 2025

The Southeast Asia Region stands out with the highest age-standardized prevalence at 31.7%, in stark contrast to only 13.8% in the Africa Region. A staggering 89.5% of hyperglycemia in pregnancy cases occur in low- and middle-income countries, where access to antenatal care is severely restricted. The prevalence of HIP escalates sharply with increasing maternal age, reaching its peak at nearly half (49.2%) among women aged 45-49 years. It is important to note that this age group has fewer pregnancies overall. Due to higher fertility rates among younger women, nearly half (43.5%) of all HIP cases (10.2 million) will arise in women under the age of 30 [7].

Conclusion

A staggering one in five live births is impacted by some form of HIP, accounting for 23 million live births worldwide. This highlights a significant and urgent public health issue that demands our attention

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- **Funding: Not received.**

- **Informed Consent** N/A
- **Conflict of Interest Statement**

  The author declared “No Conflict of Interest” with this publication.

- **Additional Information**

- **DOI:** https://doi.org/10.62996/daj.54042025

Cite this Article:
Nilanjan Dam[1], Abhishek Verma[2], Abhimanyou Singh Jasrotia[3], Garima[4], Jaya Bajpai[5], Nitin[6], Rishabh kumar[7]. **IDF atlas 2025: Global Diabetes Prevalence and Gestational Diabetes Mellitus.** Diabetes Asia Journal; 2(1): 21-25. https://doi.org/10.62996/daj.54042025