# OP-0256 – Global and regional diabetes prevalence: estimates for 2019 and projections for 2030 and 2045

**Pouya Saeedi,[1] Paraskevi Salpea[1], Suvi Karuranga[1], Inga Petersohn[1], Belma Malanda[1], Stephen Colagiuri[2], Rhys Williams[3]**

[1]International Diabetes Federation, Belgium, [2]The University of Sydney, School of Medicine, Australia, [3]Diabetes Research Unit Cymru, Swansea University, Swansea, United Kingdom

## Background

Diabetes is among the 10 leading causes of death worldwide and has an impact, not only at the individual level, but also at the family and societal level. The International Diabetes Federation (IDF) Diabetes Atlas has, since 2000, been providing essential information on the estimated and projected prevalence of diabetes worldwide. Both estimates and projections have drawn attention to the importance and growing impact of diabetes in all countries and regions.

## Aim

The aim of the most recent (9th) edition of the *IDF Diabetes Atlas* is to provide the updated estimates and projections of diabetes, including previously undiagnosed diabetes.

## Methods

The quality of the suitable studies was assessed based on their representation, study year, sample size, method of diagnosis and type of publication. High-quality data sources, published between 1990 and 2018, representing 138 countries were identified. For countries without high quality in-country data sources, diabetes estimates were extrapolated from countries in the same IDF Region and with similar geography, economy, ethnicity and language. Logistic regression was used to generate smoothed age-specific diabetes prevalence estimates (including previously undiagnosed diabetes) in adults aged 20–79 years.

## Results

The global diabetes prevalence in 2019 is estimated to be 9.3%, equal to 463 million people with diabetes. This number is projected to reach 578 million by 2030 and 700 million by 2045 (Figure 1).

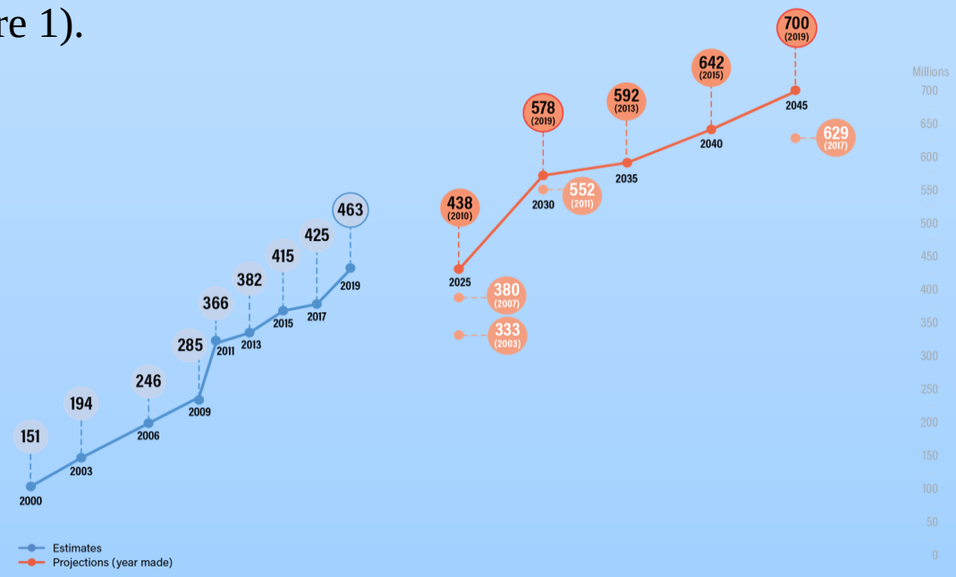


**Figure 1.** Estimations and projections of the number of people (20-79 years) with diabetes in different IDF Diabetes Atlas editions (millions)

Among the seven IDF Regions, North America and Caribbean has the highest crude prevalence of diabetes (13.3%), followed by the Middle East and North Africa (12.8%), Western Pacific (9.6%), South and Central America (9.4%), Europe (8.9%) and South-East Asia (8.8%), while Africa has the lowest prevalence (3.9%). China (116 million), India (77 million) and the United States of America (31 million) are countries with the largest number of people living with diabetes.

The Region with the highest prevalence of undiagnosed diabetes is Africa, where 59.7% of all people living with diabetes are unaware of their condition. In the North America and Caribbean Region the level of undiagnosed diabetes is the lowest (37.8%) (Figure 2).

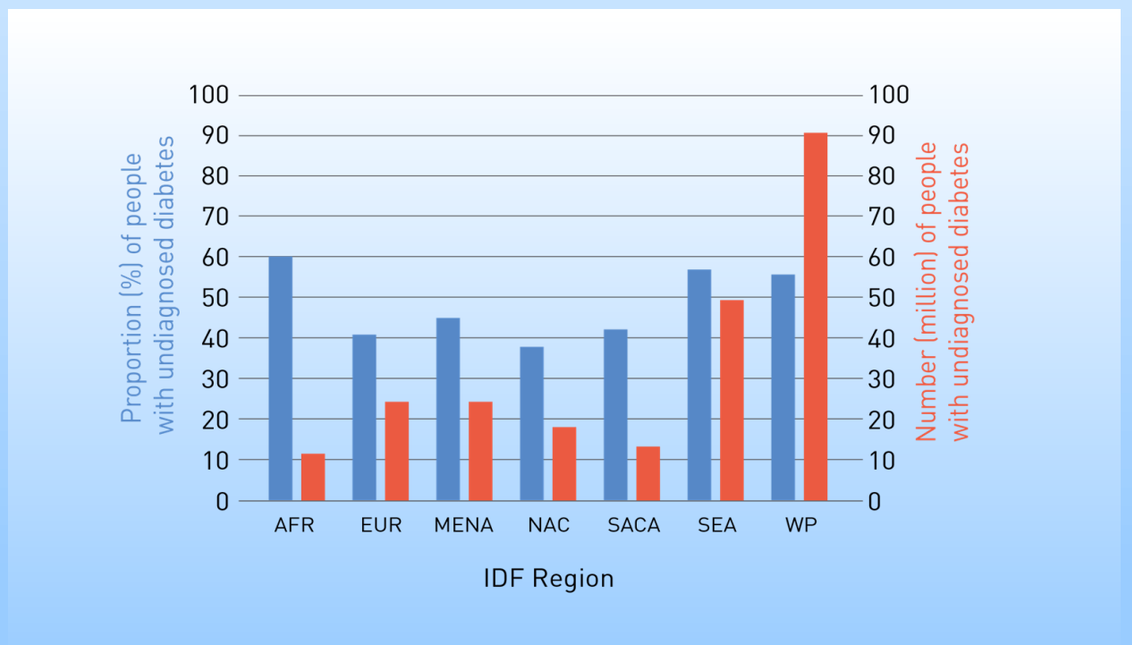


**Figure 2.** Number and proportion of adults (20-79 years) with undiagnosed diabetes per Region, 2019

Diabetes prevalence is higher in urban (10.8%) than rural (7.2%) areas (Figure 3), and in high-income countries (10.4%) compared to low-income countries (4.0%).

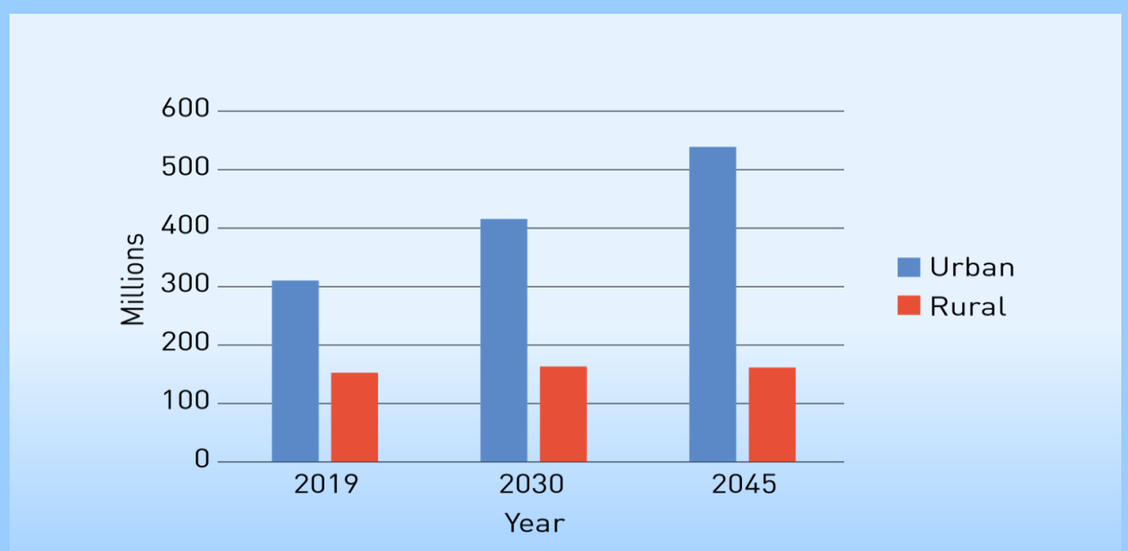


**Figure 3.** Number of people with diabetes (20–79 years) living in urban and rural areas, 2019, 2030 and 2045

## Conclusion

The recent diabetes estimates and future projections confirm that a large number of people are living with the condition worldwide. It has also once more become obvious that there is a considerable variation in diabetes estimates across IDF Regions. Even though high-income countries have the highest prevalence of diabetes, special attention should be paid to Regions undergoing demographic and epidemiological transition to ensure the availability of appropriate prevention and treatment options to reduce the impact of diabetes.

## References

International Diabetes Federation. IDF Diabetes Atlas, 9th edn. Brussels, Belgium: International Diabetes Federation, 2019.

**Abbreviations of IDF Regions:** AFR: Africa; EUR: Europe; MENA : Middle East and North Africa; NAC : North America and Caribbean; SACA: South and Central America; SEA: South East Asia; WP: Western Pacific

**Conflicts of Interest**: The 9th edition of the IDF Diabetes Atlas has been produced thanks to educational grants from Pfizer and MSD Alliance. With the additional support of Lilly Diabetes and Novo Nordisk.