Incorporating uncertainty measurement in the IDF Diabetes Atlas methodology for estimating global and national prevalence of diabetes in adults

**Introduction**

Diabetes Mellitus (DM) is a major contributor to the global burden of mortality and morbidity. The International Diabetes Federation (IDF) uses a transparent reproducible methodology to generate global and country level estimates of diabetes prevalence in adults (20–79 years) [1]. However, the methodology used in the 6th Edition produces point estimates and no uncertainty measurements have been reported.

**Methods**

To estimate the potential sources of uncertainty in the DM prevalence estimates and their magnitude, we performed two separate analyses: (1) a simulation study to access raw data uncertainty; (2) a bootstrap analysis of the sensitivity of the global prevalence estimate to the study selection process.

**Results**

The simulation study produced the uncertainty interval of 2.71% wide. In the bootstrap analysis, the most important information was the extreme points in the analysis that composed 2.97% wide range. The total uncertainty interval was constructed as the united area of two measurements and was approximately 4.42% prevalence wide on the global level.

The uncertainty measurement will permit the comparison of IDF results with other sources and over time.

**References**


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