COMMENTS AND RESPONSES

Comment on: Bopp et al. Routine Data Sources Challenge International Diabetes Federation Extrapolations of National Diabetes Prevalence in Switzerland. Diabetes Care 2011;34:2387–2389

We note with interest the approach of Bopp et al. (1) in providing conservative estimates for the prevalence of diabetes in Switzerland and welcome their critical comparison with the 2010 figures from the International Diabetes Federation (IDF) Diabetes Atlas. They show that IDF figures were over twice as high as their estimates.

The authors rightly point out that prevalence data on diabetes from many countries are scarce. In providing national, regional, and global estimates, decisions need to be made on which study or studies are used for a particular country. If a high-quality, up-to-date, nationally representative study in which glucose was measured (either fasting, or better still as part of an oral glucose tolerance test) is available, then that is the obvious choice. But that is not the case for the vast majority of countries, and the choices fall around using less than ideal studies from the same country (where these exist) or in extrapolating from studies done in countries judged to be similar.

IDF has been working to improve the transparency and reproducibility of how studies are chosen to provide the prevalence estimates for a particular country and has implemented a new approach for the fifth edition of the IDF Diabetes Atlas (2). Within the database of prevalence studies (published and unpublished) maintained by IDF, each is scored for quality against a number of criteria, including age of the study, representativeness, method of identifying diabetes, and so on. The scores used were derived from an expert consultation using the analytic hierarchical process (3). If there is no high-quality study for a given country, which was the case for almost half of the 215 countries and territories included in the fifth edition (2011) of the IDF Diabetes Atlas, results from a "data region" are used as a proxy. A data region represents countries in the same geographical area, of the same economic status (based on the World Bank classification), and the same predominant ethnicity.

When this process was used to determine which study or studies to use for Switzerland for 2011, a nationally representative study from Switzerland of known diabetes was scored as the highest quality study available (4), and an adjustment was made for unknown diabetes. The proportion assumed to have unknown diabetes is based on high scoring studies in the same data region (3) and in this case is around 35%. Using this approach, the total number of adults estimated to have diabetes in Switzerland is approximately 424,000, of which 155,000 are estimated to have undiagnosed diabetes. This total number is considerably lower than 630,000 who were estimated to have diabetes in Switzerland in the fourth edition of the IDF Diabetes Atlas, an estimate that was based on extrapolating from studies in Germany (5) and is closer to the conservative estimates of Bopp et al.

We have published full details of the newly implemented approach to choosing studies from which to estimate national, regional, and global diabetes prevalence (3), and critical comments and suggestions on these would be most welcome.

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