COMMENTS AND RESPONSES

Response to Comment on: Zhang et al. A1C Level and Future Risk of Diabetes: A Systematic Review. Diabetes Care 2010;33: 1665–1673

Robinson and Abdel-Motagally (1) compared their findings from FINDRISC, an individual study, to our summary estimates from a systematic review (2) and concluded that our A1C review overestimated future diabetes incidence. Although their findings add to our understanding of the A1C level–incident diabetes relationship, their conclusion was based on comparing a single study with a summary estimate from multiple studies. Our systematic review summarized a heterogeneous set of studies in which the annualized diabetes incidence ranged from 0.1% at A1C <5.0% to 54.1% at A1C ≥6.1%. The findings of Robinson and Abdel-Motagally were actually quite consistent with some of the individual studies in our review, particularly Droumaguet et al. (3). In fact, most studies included in our review had a higher relative risk across A1C strata and a higher absolute risk for A1C >6% than those in the study by Robinson and Abdel-Motagally. For example, for A1C in the 5.5–5.9% and 6.0–6.5% ranges, they found, respectively, incidences of 6% and 9%. For the same A1C, Pradhan et al. (4) found a respective incidence of 16% and 45.5%. Although a single outlying study can bias a systematic review, the sensitivity analyses we conducted demonstrated that our results remained consistent when any single study was eliminated, indicating that our findings were not driven by a single outlying study.

Selvin et al. (5) recently examined the relationship between A1C levels and future risk of diabetes and reported findings similar to but a bit larger than ours. Thus, instead of concluding that our review overestimates incidence rates, one should conclude that variation exists between studies of the relationship between A1C and diabetes incidence. Finally, we reanalyzed our data, including the results of Robinson and Abdel-Motagally and the results of Selvin et al. We found very little difference in the resulting incidence curve (data not reported).

We appreciated Robinson and colleagues' effort in exploring the relationship between A1C level and future risk of diabetes.

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DOI: 10.2337/dc10-2155

The findings and conclusions in this article are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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Acknowledgments—This study was supported by the Centers for Disease Control and Prevention.

No potential conflicts of interest relevant to this article were reported.

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