COMMENTS AND RESPONSES

Accuracy of Administrative Coding for Type 2 Diabetes in Children, Adolescents, and Young Adults

Response to Ding et al.

We appreciate that Ding et al. (1) have added to the dialogue regarding the validity of methods that assess diabetes status in research. Our analysis (2) of administrative data showed that among children, adolescents, and young adults in a large children's hospital, the positive predictive value (PPV) for type 2 diabetes of a type 2 diabetes ICD-9-CM code was low (16.0%), whereas the PPV for type 1 diabetes of a type 1 diabetes ICD-9-CM code was high (96.0%). Among adult women, Ding et al. (1) report that the PPV for type 2 diabetes of self-reported diabetes was high (91%) and contrast this with the low PPV of type 2 diabetes ICD-9-CM codes in our study (2). However, a higher prevalence of type 2 diabetes in the adult population compared with the pediatric population could account for some of the difference in the PPVs observed in these two studies.

In our study (2), we analyzed the PPV of type 2 and type 1 diabetes ICD-9-CM codes separately to highlight potential problems in using such codes to differentiate forms of diabetes in children. Distinguishing type 1 and type 2 diabetes at diagnosis in children can be challenging, as children have become increasingly overweight (3) and as some children with phenotypic characteristics of type 2 diabetes have pancreatic autoimmunity (4). As type 2 diabetes ICD-9-CM codes include "unspecified" diabetes, pediatric clinicians may use these codes early in the clinical course until a definitive diagnosis has been established, and this practice may contribute to misclassification. These diagnostic challenges may not be present to the same extent in adults. Identifying valid tools to differentiate type 1 and type 2 diabetes in children remains a priority to facilitate initiation of the most appropriate therapy at diagnosis and to study the natural history of these disorders. Ding et al. report the validity of self-reported type 2 diabetes among adult women. Exploring the validity of self-reported type 1 diabetes in their cohort and the validity of self-reported type 1 and type 2 diabetes in a pediatric cohort would further add to the usefulness of their findings and would broaden the applications in pediatric research.

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