Supplemental Online Content

Fang M, Wang D, Selvin E. Prevalence of type 1 diabetes among US children and adults by age, sex, race, and ethnicity. *JAMA.* Published online April 4, 2024. doi:10.1001/jama.2024.2103

eMethods.

eReferences.

This supplemental material has been provided by the authors to give readers additional information about their work.

eMethods

Calculation of type 1 diabetes in US youth

Information about youth was collected from an adult proxy (typically a parent) who was knowledgeable about the health status of a youth participant. Adult proxies were asked if the youth they had ever been diagnosed with diabetes by a doctor or health professional. However, diabetes type was not ascertained. In 2021, the Centers for Disease Control (CDC) used a two-step process to estimate the prevalence of type 1 diabetes in NHIS youth.[1]

First, CDC investigators calculated the proportion of all cases of diabetes in youth that were type 1 diabetes using published estimates from the SEARCH for Diabetes in Youth (SEARCH) study.[2] SEARCH is one of the largest US-based study of diabetes in youth, with electronic health records data on ~3.5 million youth. Second, the CDC calculated the proportion of youth in the NHIS that self-reported having any diabetes. To approximate the prevalence of type 1 diabetes, CDC investigators multiplied the prevalence of any diabetes in youth by the proportion of all diabetes cases that was type 1 diabetes calculated from SEARCH. In this study, we used this approach to calculate the prevalence of type 1 diabetes in NHIS youth, overall and across subgroups

Sample weights

Following recommendations from the National Centers for Health Statistics, we used NHIS survey weights designed to reduce nonresponse bias and to generate estimates representative of the noninstitutionalized US population.[3] NHIS researchers developed weights with Recursive Partitioning for Modeling Survey Data. This approach automatically explores complex interactions between different measures and can account for the complex survey design used in

the NHIS (e.g, stratification and clustering). Area-level factors (e.g., characteristics of a county) and paradata (administrative data collected when attempting to contact selected households, such as day of the month) associated with study participation and key health outcomes were included in the Recursive Partitioning for Modeling Survey Data analyses.

e**References**

1. Center for Disease Control and Prevention. National Diabetes Statistics Report - Appendix. (https://www.cdc.gov/diabetes/data/statistics-report/appendix.html#tabs-1-6).
2. Lawrence JM, Divers J, Isom S, et al. Trends in prevalence of type 1 and type 2 diabetes in children and adolescents in the US, 2001-2017. JAMA 2021;326(8):717-727.
3. National Center for Health Statistics. 2021 National Health Interview Survey Description. 2022. (https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHIS/2021/srvydesc-508.pdf).