

COMMENT ON GREGORY ET AL.

COVID-19 Severity Is Tripled in the Diabetes Community: A Prospective Analysis of the Pandemic's Impact in Type 1 and Type 2 Diabetes. Diabetes Care 2021;44:526–532

David M. Maahs,¹ G. Todd Alonso,² Mary Pat Gallagher,³ and Osagie Ebekozien⁴

Diabetes Care 2021;44:e102 | https://doi.org/10.2337/dc20-3119

We commend Gregory and colleagues for their well-designed prospective study to quantify and contextualize the risk for coronavirus disease 2019 (COVID-19)related hospitalization and illness severity in type 1 (and type 2) diabetes (1). High-quality data such as these are required to inform public health approaches, including defining the risk of severe acute respiratory syndrome coronavirus 2 infection and health outcomes in people with diabetes. Indeed, these data inform a JDRF campaign (https:// www.jdrf.org/coronavirus) advocating for prioritization of people with type 1 diabetes for COVID-19 vaccinations.

However, as pointed out in a recent Diabetes Care Commentary (2), data from adults should not be extrapolated to the pediatric population, especially for COVID-19, as outcomes differ significantly by age (3). In the article by Gregory et al. (1), age was the strongest risk factor for illness severity; only 8 of 40 people with type 1 diabetes were <18 years of age. Additional analyses, clinical profiles, and outcomes on these 8 people <18 years old with type 1 diabetes and COVID-19 could help inform policy decisions and answer questions such as whether youth with type 1 diabetes have increased risk for severe illness and poor outcomes compared

e-LETTERS – COMMENTS AND RESPONSES

with their peers without diabetes. Moreover, the authors report no cases of COVID-19 in youth with type 2 diabetes <18 years of age, a group for whom few data have been reported.

Larger pediatric data sets, for example, the ongoing T1D Exchange COVID-19 multicenter surveillance study (4), will be required to inform public health decisions in youth with type 1 diabetes. As of December 2020, over 270 type 1 diabetes patients <18 years old with COVID-19 have been entered in the T1D Exchange COVID-19 registry by more than 35 participating pediatric centers in the U.S. (www.t1dexchange.org/COVID19). There has been no recorded death or mechanical ventilation in this cohort, similar to international reports (5).

Therefore, it is extremely important to base public health messages about COVID-19 in the pediatric diabetes population on data from this age group, not on extrapolation from data in adults with diabetes. Families need to understand how emerging data apply to their children and adolescents with type 1 diabetes. Communications that do not clarify the role of age may inappropriately raise concerns and lead to unintended consequences.

Duality of Interest. D.M.M. has had research support from the National Institutes of Health, JDRF, National Science Foundation, and the Leona M. and Harry B. Helmsley Charitable Trust, and his institution has had research support from Medtronic, Dexcom, Insulet, Bigfoot Biomedical, Tandem, and Roche. D.M.M. has consulted for Abbott, Aditxt, the Leona M. and Harry B. Helmsley Charitable Trust, Sanofi, Novo Nordisk, Eli Lilly, Medtronic, Insulet, and Dompe. No other potential conflicts of interest relevant to this article were reported.

References

- 1. Gregory JM, Slaughter JC, Duffus SH, et al. COVID-19 severity is tripled in the diabetes community: a prospective analysis of the pandemic's impact in type 1 and type 2 diabetes. Diabetes Care 2021;44:526–532
- 2. DiMeglio LA, Albanese-O'Neill A, Muñoz CE, Maahs DM. COVID-19 and children with diabetes—updates, unknowns, and next steps: first, do no extrapolation. Diabetes Care 2020;43:2631–2634.
- 3. CDC COVID-19 Response Team. Coronavirus disease 2019 in children United States, February 12–April 2, 2020. MMWR Morb Mortal Wklv Rep 2020:69:442–425
- 4. Ebekozien OA, Noor N, Gallagher MP, Alonso GT. Type 1 diabetes and COVID-19: preliminary findings from a multicenter surveillance study in the U.S. Diabetes Care 2020;43:e83–e85
- 5. Cardona-Hernandez R, Cherubini V, Iafusco D, Schiaffini R, Luo X, Maahs DM. Children and youth with diabetes are not at increased risk for hospitalization due to COVID-19. Pediatr Diabetes. 26 November 2020 [Epub ahead of print]. DOI: 10.1111/pedi.13158

¹Lucile Packard Children's Hospital, Stanford University, Stanford, CA

²Barbara Davis Center for Diabetes, University of Colorado, Aurora, CO

³Hassenfeld Children's Hospital at NYU Langone, New York, NY

⁴T1D Exchange, Boston, MA