Obesity soars among low-income US children and teenagers during early COVID-19 pandemic

May 7 2022

Credit: Unsplash/CC0 Public Domain

During the first six months of the COVID-19 pandemic, the proportion of children and adolescents from low-income families with overweight

or obesity increased markedly, according to new research being presented at this year's European Congress on Obesity (ECO) in Maastricht, Netherlands (4-7 May). The study is by Ihuoma Eneli, MD, MS, FAAP, Director of the Center for Healthy Weight and Nutrition at the Nationwide Children's Hospital and Professor of Pediatrics at The Ohio State University in Columbus, Ohio, and colleagues.

The cohort study of over 4,500 young people (aged 2-17 years) from a large primary care network in the State of Ohio is one of the first to present findings on how the COVID-19 pandemic impacted weight change in young people from lower socioeconomic groups.

Childhood obesity has long been a major health concern in the U.S., and the researchers say that the early pandemic months of full lockdowns may have compounded the problem, further widening racial/ethnic disparities in obesity.

"The early months of school closures, bans on social gatherings, disruptions to sleep and lack of exercise, increased screen time and snacking, as well as heightened stress and anxiety created the perfect storm for having issues with weight gain," says Professor Eneli.

She continues, "We know that excess weight gain during childhood is difficult to reverse, and if left unchecked, can have serious health consequences such as type 2 diabetes, as well as higher odds of having obesity as an adult. Poverty makes both obesity and its negative health effects more likely, and access to obesity care is disproportionately lower in minority populations. These new data underscore why urgent action is needed to close the gap between the most and least deprived to ensure every child has an equal chance to grow up healthy."

For this study, researchers analyzed electronic medical record data from young people aged 2–17 years, attending a large network of 12 primary

care clinics in the Nationwide Children's Hospital in the State of Ohio. The network provides care for more than 100,000 young people, most of whom receive public insurance like Medicaid.

In total, 4,509 young people whose weight and height had been recorded at least once during clinic visits before the pandemic (1 January to 30 March 2020) and at least once during the early pandemic (1 June to 30 September 2020) were included in the analyses comparing how BMI and weight category changed after the onset of the COVID-19 pandemic, and whether these changes differed by sex, age group, race/ethnicity, after adjusting for visit type and time lapse. Youth with complex chronic conditions were excluded from the study.

The researchers found that the proportion of youth with overweight, obesity, or severe obesity increased from 38% to 45% before the pandemic; and declined by almost 6% in the healthy weight category.

Overall, around 1 in 5 young people gained at least 5 kg (more than 4% gained at least 10 kg) and increased their BMI by at least 2 units. Average (median) weight gain was highest among young people with severe obesity, who gained on average almost 6kg.

Interestingly, among underweight youth, over 45% switched to the healthy weight category, with a median (average) weight gain of over 2 kg.

Further analyses found that younger children (2–9 years), girls, and ethnic-minority youth were more likely to change to a worse weight category. For example, children aged between 2 and 9 years old were almost twice as likely to move up to a higher weight category (eg, healthy weight to overweight, or obesity to severe obesity) than 14-17 year old teenagers. Similarly, Hispanic children and teenagers were twice as likely to move up a weight category than their White peers (see table

1 in paper linked below).

According to Professor Eneli: "This study reflects findings from the early 3-6 months during the pandemic. As families and communities began to adapt, the trajectory of weight change later during the pandemic may differ and deserves further study. Along with several negative pandemic-related consequences on child health (e.g., increased mental health concerns, food insecurity, deficits in immunization coverage and school performance), addressing the excessive weight gain should be a top priority for families, administrators, or policymakers."

The authors note that this is an observational study that is limited to a single primary care network in the U.S., which limits the generalisability of the findings. In addition, the researchers cannot rule out the possibility that other unmeasured factors such as lifestyle behaviors and sleep patterns may have affected the results.

Provided by European Association for the Study of Obesity