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## Covid-19: US tracker overestimated deaths among children

Jennifer Block

The US's health protection agency has reduced the number of deaths it is attributing to covid-19 by more than 70 000 after what it referred to as "coding logic errors" were highlighted on social media.

On 15 March the Centers for Disease Control and Prevention (CDC) removed 72 277 deaths, including those of 416 children, from its Covid-19 Data Tracker, which has been posting real time data collected from more than two dozen state health departments since April 2020.<sup>1</sup>

The tracker is one of two sources used to report deaths from covid-19 in the US. The other is the National Center for Health Statistics' website, which is also run by the CDC but relies on death certificates for its data.<sup>2</sup>

By mid-March the figures presented by the two sites differed substantially. For example, the Covid-19 Data Tracker put the number of deaths among infants and children aged 0-17 at 1700, while the statistics site stated 900.

The figures have been widely used by media outlets to report on deaths in the US. The UK's *Guardian* newspaper, for example, carried an article on 11 March with the headline, "One-third of all US child Covid deaths occurred during Omicron surge."<sup>3</sup> This cited CDC data to say that 550 children had died from covid-19 in the US in 2022, compared with 1017 children in the preceding 22 months. The *Guardian* later amended the story using figures from the American Academy of Pediatrics, which put child deaths at 179 during 2022, with 735 deaths in the preceding 20 months.<sup>4</sup>

The inaccuracies were picked up by Kelley Krohnert, a former IT programmer from Atlanta, Georgia, on 23 February. "Help needed!!!" she tweeted.<sup>5</sup> "It appears [CDC's] Data Tracker has major issues when it comes to pediatric death reporting. We deserve accurate data when so much is on the line for our kids!"

Krohnert and another mother, Jessica Hockett, had been writing to the CDC with concerns about the data tracker since May.<sup>6</sup> "The Tracker is wrong," posted Hockett.<sup>7</sup>

The CDC did not respond directly to several questions from *The BMJ*, but it attributed the corrections to its own "rigorous quality control measures." The data tracker error occurred "because CDC's algorithm was accidentally counting deaths that were not covid-19 related," said Jasmine Reed, public affairs specialist, in an email. Those numbers "are real time and subject to change," whereas the National Center for Health Statistics "is the most complete source of death data."

### Screening cases

Bob Anderson, chief of the mortality statistics branch at the National Center for Health Statistics who also

served on covid-19 response task forces, told *The BMJ* that this was essentially a case of accidentally capturing deaths "with" rather than "from" covid.

The tracker draws from case reports submitted to local health departments. Any hospital patient with a positive covid result would generate a case report—even a patient with a head trauma, for example. If that patient died the date would be noted and the case report checked to see whether the death was caused by covid-19, to screen out such cases. But the data tracker was capturing any death recorded on these case reports as a covid-19 death.

The tracker is based on the National Notifiable Disease Surveillance System, which "was built mainly to deal with rare diseases" such as measles, explained Anderson. "People at the state and federal level did their best to pull it together, but the fact is the system wasn't built to handle hundreds of thousands of deaths," he said.

The CDC's Estimated Covid-19 Burden page is another source of errors in the 0-17 age bracket. On 1 March, Krohnert pointed to a calculation error in the proportion of estimated child deaths.<sup>8</sup> It was listed as 4%, but Krohnert calculated the CDC's raw numbers in a thread on Twitter as less than 1%. On 4 March the CDC revised the calculation to 0.07%.

*The BMJ* has queried the CDC several times about discrepancies in estimates of infection among ages 0-17, which inexplicably decreased by around a million from May to September 2021 (26 838 244 through May v 25 844 005 through September), even as the delta variant was predominant.

The estimated burden page also showed fewer symptomatic illnesses among the same age group through September (22 030 307) than it previously calculated through May (22 895 857). In all other age groups the numbers increased. The page's content, which has not been updated since November, is sourced by the National Center for Immunization and Respiratory Diseases.

"It's important that people are looking at this and calling out the errors. We want to get it right," said Anderson, adding that CDC employees from various departments had been pulled into the covid response. "They're working 70-80 hour weeks. It's not surprising they might commit an error."

1 Centers for Disease Control and Prevention. COVID Data Tracker. <https://covid.cdc.gov/covid-data-tracker/#demographics>

2 National Center for Health Statistics. Sex and age. [https://www.cdc.gov/nchs/nvss/vsrr/covid\\_weekly/index.htm#SexAndAge](https://www.cdc.gov/nchs/nvss/vsrr/covid_weekly/index.htm#SexAndAge)

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