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BRIEF19

A daily review of covid-19 research and policy

RESEARCH BRIEFING

First proven covid-19 reinfection described in detail. Is this likely to be common?

A case report was published in *The Lancet Infectious Disease* describing a genomic-confirmed SARS-CoV-2 reinfection. A 25-year old male in Nevada was first diagnosed with covid-19 on April 18, 2020. His symptoms included sore throat, cough, headache, nausea, and diarrhea. He was symptomatic until April 27th after which he remained asymptomatic until May 28th. Between April 27th and May 27th he had two negative covid-19 tests. On May 28th, he again had symptoms consistent with covid-19 including low oxygen levels, which had not occurred previously. In other words, it appears that the second infection was *worse* than the first.

The researchers used two different next-generation sequencing methods to confirm that the viral SARS-CoV-2 strains that infected the patient were genetically distinct. Although it is possible that the patient may have only been infected once and the SARS-CoV-2 virus merely mutated, the genetic discordance between the two samples was much greater than could reasonably be accounted for by such short-term evolutionary mutations.

This case implies that a prior covid-19 infection does *not* guarantee immunity. Although this is the only confirmed, peer-reviewed case in the literature, it is worrisome that this possibility exists. That said, it mis likely that only a small fraction of patients are susceptible to re-infection, and that this will not be a common problem. The absence of many such cases so far is reassuring. Nor is this without precedent. There is a subset of people who can have chickenpox over and over, though most people are immune after one bout. *—Joshua Niforatos MD*

POLICY BRIEFING

What's in a name? All about Emergency Use Authorizations.

At *Brief19*, we have extensively covered various Emergency Use Authorizations (EUAs) that the Food and Drug Administration (FDA) has issued since the start of the pandemic, but we have not stopped to take a closer look at what an EUA truly is. Until now.

The FDA states that EUA authority allows the FDA "to help strengthen the nation's public health protections against CBRN [chemical, biological, radiological, or nuclear] threats by facilitating the availability and use of MCMs]means medical countermeasure] needed during public health emergencies." The legal ability to issue EUAs was granted to the FDA under the Federal Food, Drug and Cosmetic Act, which allows the FDA commissioner the broad ability to allow unapproved products or unapproved uses during an emergency to diagnose, treat, or prevent serious or life-threatening conditions when there are no "adequate, approved, and available" options. Many of the EUAs granted since the start of the pandemic mention the public health emergency declared on January 31, 2020, but such an announcement itself does not endow the agency with the ability to grant EUAs indiscriminately. Of note, the FDA publishes guidelines for all manufacturers applying for EUAs in terms of data, oversight, and any other requirements for consideration. *The Food and Drug Administration*. *—Joshua Lesko, MD*