

# European study finds hospitalization rates for RSV infections among infants have been higher than expected

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A report published this week in the medical journal *The Lancet Respiratory Medicine* by Dutch and British scientists is the first international study to accurately estimate the health care burden of healthy infants hospitalized with the respiratory syncytial virus (RSV). The publication is timely in that it arrives amid an epidemic of respiratory infections, particularly RSV, among children across the United States, with a record number of hospital admissions.

Their data, gathered from July 2017 to July 2020, showed that one in 56 infants (1.8 percent) across several European countries—Spain, Finland, Netherlands, Scotland, and England—born at term and without any medical co-morbidities like heart, lung, or kidney dysfunctions had been hospitalized for RSV infection before their first birthday, a figure twice as high as they had expected. Most of these infants were, in fact, under three months of age, and one in 18 of these admissions required care in an intensive care unit.

As the Centers for Disease Control and Prevention (CDC) has noted, in pre-COVID pandemic periods, upwards of 80,000 children under the age of five are hospitalized in the US annually for RSV. Those at greatest risk from RSV infections include premature infants born before 37 weeks, infants younger than six months of age, as well as those with congenital lung or heart disease who are under two. However, weakened immune systems can contribute to the severity of infections. This fact is critical to appreciate as COVID-19 is known to cause immune dysregulation despite the mildness of the infection.

According to published CDC data on COVID seroprevalence (finding of infection through blood tests) among children, as of late August 2022, it is estimated at over 86 percent. Placing this into context, precisely one year previously, in November 2021, that figure was at 43 percent. At least half of COVID infections among children have occurred in the last 12 months. The current seroprevalence for those 0-4 years of age, the most vulnerable to RSV infections, is 81 percent.

Despite the repeated dogma that children only have mild disease, evidence is emerging that COVID can cause

dysregulation of critical immune cells known as T-cells, which can be prematurely aged through infections with SARS-CoV-2. Not only can these T-cells then lead to unrecognized organ damage, but the exhaustion of those hyperactivated T-cells means they cannot guard against other pathogens.

In a report published in January 2022 in *Nature Immunology*, the authors found that immune dysfunction persisted for at least eight months after COVID, even in mild to moderate disease. In patients with Long COVID, chronic activation of a subset of T-cells persisted, leading to the observation that “SARS-CoV-2 infection exerts unique prolonged residual effects on the innate and adaptive immune systems and that this may be driving the symptomology known as Long COVID.”

They summarized, “Our data indicate an ongoing, sustained inflammatory response following even mild-to-moderate acute COVID-19, which is not found following prevalent [non-SARS-CoV2] coronavirus infection ... These observations describe an abnormal immune profile in patients with COVID-19 at extended time points after infection and provide clear support for the existence of a syndrome of Long COVID.”

Further research into the interplay between previous SARS-CoV-2 infections and susceptibility to illness and other infections is urgently needed. Still, there is little interest by the CDC and health officials in such investigations. The implication here, however, is that the pseudo-scientific premise of “immunity debt,” the speculation that pandemic prevention measures stopped children from encountering the virus before, thus leading to severe infections presently, is used as an attempt to dissuade putting forth any policy that calls for employing public health measures to prevent these respiratory illnesses.

Advocates of “immunity debt,” like Emily Oster, an economist at Brown University who has been a vociferous opponent of any mitigation measures against the SARS-CoV-2 virus, have essentially blamed school closures and lockdowns for the current epidemic of respiratory illnesses among children. Oster has continued to defend her unfounded position that the health risks of in-school spread were relatively low and loss in educational progress too high to warrant such mitigation measures.

Ample evidence has emerged on the role children have played in the community transmission of COVID through school settings, bringing it back into homes, and through their parents and other family members, onwards into workplaces. The surge in COVID infections among children last year also saw the highest rates of death among the most vulnerable. And now, with the complete lifting of every mitigation measure in schools, it is no surprise that children's hospitals across the country are inundated. Additionally, the severity of these illnesses may be compounded by the impact of recent COVID infections on their immune systems.

Indeed, these same deluded middle-class layers who incessantly clamor over their position in the pecking order of wealth and prestige offer deranged arguments that germs and microbes are necessary for the well-being of their children. They appear utterly ignorant of the centuries of public health initiatives that have informed scientific comprehension of disease in society and saved the lives of so many children, including their own grandparents.

Any parent who has had to suffer nights of apprehension and anguish helplessly watching their baby gasping for air as their chest retracts to fill their lungs while fighting high fevers and rigors, hoping that their infant will see it through the illness, will be repulsed by the promotion of such insane conceptions as healthy germs.

Worldwide, RSV causes around 33 million acute lower respiratory tract infections annually in children under five. About 10 percent of cases, or 3.2 million children, are hospitalized, and nearly 60,000 die in the hospital. This is especially the case in low-income and middle-income countries where resources are limited. Forty-five percent of all deaths due to RSV occur in children under six months of age. In poorer regions, RSV is the second most common cause of infant mortality.

As the authors of *The Lancet* report said, "Almost half of all acute respiratory illnesses in the first year of life were RSV-associated. The burden of RSV-associated hospitalization was highest in infants younger than three months, with an incidence rate of 3.3 per 1,000 infant months. Children born in autumn had a significantly higher risk of hospitalization than children born in other seasons."

Pediatrician Professor Louis Bont at the Wilhelmina Children's Hospital in the University Medical Center, Utrecht, the Netherlands, underscored the need to bring vaccines to markets that can help lower the burden of disease and alleviate the pressures being sustained by hospitals.

A compilation of the *World Socialist Web Site's* coverage of this global crisis, available in epub and print formats.

Comments by Bont follow the recent announcement by Pfizer on their phase three global maternal immunization trial for its bivalent RSV vaccine. Vaccine effectiveness against severe "medically attended" lower respiratory infection was 82 percent in the first three months of life and almost 70 percent in

the first six months. The vaccines were given to pregnant women as single-dose vaccines to protect their newborns.

Annaliesa Anderson, senior vice president and chief scientific officer of vaccines research and development, said at the press brief on November 1, 2022, "We are thrilled by these data as this is the first-ever investigational vaccine shown to help protect newborns against severe RSV-related respiratory illness immediately at birth." Pfizer is currently seeking FDA approval for its new vaccine.

In the meantime, the European Medicines Agency has recently approved a monoclonal antibody treatment (nirsevimab, brand name Beyfortus) given as an intramuscular injection to prevent or lessen the severity of disease with RSV. The treatment was developed by AstraZeneca and Sanofi. When given before the start of RSV season, it appeared to decrease the risk of medically attended RSV infection by 75 percent, but did not reach statistical significance for hospitalization.

Though the study is a critical contribution to the understanding of respiratory illnesses in children, one crucial finding being overlooked in *The Lancet* report by the media reporting is any mention of what happened when mitigation measures were implemented at the start of the COVID pandemic—the near elimination of RSV.

Interestingly, the authors noted that they had to exclude children born after April 1, 2020 from the study because RSV infections across the European Union plummeted abruptly and remained essentially non-existent throughout the first year of their lives.

As crucial as therapeutics to prevent or treat viral pathogens are in the armament of medicine, the social implications of allowing three-quarters of all pediatric hospital beds in the US to be filled with children infected with RSV and influenza when these can easily be prevented is both a catastrophe and indictment of the capitalist system that bears direct responsibility for these illnesses.

Already the CDC and health officials have declared the current flu season an epidemic, with a further intensification of respiratory illnesses expected. The recent letter penned by 33 medical groups to President Biden is an open confirmation that the health system in the country is in a state of collapse. Still, hardly a word has emerged from the Biden administration on these issues.



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