

Long COVID in children poorly understood by doctors

21 July 2021



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The clinical definition of long COVID in children is at present very limited and poorly understood by doctors, according to a new report published today [21 July]. The report also found that symptoms typically associated with long COVID were having a significant physical and psychological impact on children's day-to-day lives. Long COVID is commonly used to describe signs and symptoms that continue or develop after acute COVID-19.

The report, led by the University of Bristol, is the first step in a COVID-19 testing in schools study to obtain opinions and experiences of long COVID from different groups of people.

"Enhancing the utilization of COVID-19 testing in schools' is an ongoing Health Data Research UK (HDR UK), Office for National Statistics and UK Research and Innovation (UKRI)-funded study that will bring together the Bristol-based COVID-19 Mapping and Mitigation in Schools (CoMMInS)1 study, Electronic Patient Records, and the COVID-19 Schools Infection Survey (SIS)2 to address additional questions not initially included in the individual studies. One of these questions is the extent and features of long COVID in [children](#).

The views about long COVID in children were collected from seven [young people](#) aged 13- to 18-years-old, five families whose children, aged 10- to 16-years-old, have long COVID or suspected long COVID, and four GPs and three pediatricians, between 9 March and 30 April 2021.

Diagnosis of long COVID in children

Doctors said that long COVID in children is not well defined, and it may be difficult to distinguish between long COVID and other conditions. Doctors still need to understand whether long COVID is a new condition, or a group of conditions like post-viral fatigue, which is already recognized and can arise after common infections, such as the flu and glandular fever.

Symptoms of long COVID in children

Young people, and families of children with long COVID or suspected long COVID, said that feeling sick or stomach pain, extreme tiredness, and headaches were the symptoms they would rank as most 'harmful.'

The families also said their children were experiencing many, and often very severe, symptoms of long COVID, and that the symptoms experienced were more wide-ranging than those currently listed on the NHS website for long COVID. It is not yet clear what is causing the unusual symptoms.

Prevalence and long-term impact of long COVID in children

It is not known how many children have or will develop long COVID. To date, studies that have attempted to measure this suggest it is rare, however, a lack of clinical understanding of long COVID including no agreed clinical definition has made this difficult.

The families said they had struggled to get a diagnosis and treatment for their children. They also said that long COVID symptoms were having a significant impact on their children's day-to-day lives both physically and psychologically, and that some of the children had missed [school](#) because of the symptoms. Families wanted to know why the set of symptoms were being experienced, and why their children in particular had developed them.

Asymptomatic infections and long COVID

Young people were concerned about not showing COVID-19 symptoms and passing the infection to older or vulnerable people without realizing. The risk of long-term health outcomes among children with COVID-19 infection could be overestimated if those events are more likely with severe COVID-19 infection, and severe infection is more likely to be diagnosed.

Re-infection

Re-infection in children is possible but very rare. Even so, how often re-infection happens might be underestimated if infections are not always recorded. Young people thought that there needed to be more awareness of the possibility of re-infection. There was also concern among families about the impact of re-infection on long COVID symptoms.

Caroline Relton, Professor of Epigenetic Epidemiology and Director of the Bristol Population Health Science Institute at the University of Bristol, joint lead for CoMMInS and one of the lead authors of the report, explained: "The opinions we gathered further highlight that it is difficult to count the number of children with long COVID on the basis of diagnoses alone while long COVID in children remains poorly defined.

"There are added complications of studying long COVID in children, when it is sometimes difficult to disentangle what might be the result of experiencing infection from what might result from the wider impact of experiencing the pandemic. Isolation, school closures, disrupted education and other influences on family life could all have health consequences. Defining the extent of the problem

in children and the root causes will be essential to helping provide the right treatment and to aid the recovery of young people who are suffering."

Andrew Morris, Director of Health Data Research UK (HDR UK), said: "This study demonstrates a significant step in helping expand our understanding of COVID-19 in school children and is another terrific example of why access to health data is crucial for vital research that informs the response to the COVID-19 pandemic. The HDR UK and ONS National Core Studies have supported the UK Health Innovation Gateway to provide a common entry point for researchers to discover and request access to UK health datasets for vital research that is improving people's lives."

Professor Punam Mangtani, co-investigator of the Schools Infection Survey (SIS) at LSHTM, added: "It's fantastic to see the data from our landmark study being used in other valuable work, helping us learn more about the impact on COVID-19 on children in the UK. SIS helped us to understand the transmission of COVID-19 within schools and between schools and the community but, as demonstrated here, the rich data collected will have use far beyond our study."

Dr. Shamez Ladhani, Consultant Paediatrician at PHE and study lead for the Schools Infection Survey (SIS), said: "The Schools Infection Survey has provided important evidence of the risk of COVID-19 transmission in schools among students and staff.

"The study has also established a well-defined group of students and staff for follow-up. This provides a unique opportunity to develop our understanding around long COVID in children."

The report, which will feed into the COVID-19 testing in schools study, suggests that looking at GP and hospital visits, and school attendance, could be a more useful and achievable way of assessing how COVID-19 has affected children. However, there needs to be awareness of the extent to which healthcare is accessed according to need, and absence from school due to self-isolation, which will affect what is being measured. Also, the impact on children with milder symptoms

could be missed. Feeling sick or stomach pain, extreme tiredness, and headaches will be important symptoms to consider in the study. The study researchers will also need to bear in mind that some health measures such as asymptomatic infection and re-infections are not always recorded as not everyone with COVID-19 [infection](#) is necessarily tested.

More information: Long COVID in children: A report summarising the views of young people, parents and doctors, [commins.org.uk/documents/Long- ...-report-21_07_21.pdf](https://commins.org.uk/documents/Long-...-report-21_07_21.pdf)

Provided by University of Bristol

APA citation: Long COVID in children poorly understood by doctors (2021, July 21) retrieved 22 October 2021 from <https://medicalxpress.com/news/2021-07-covid-children-poorly-understood-doctors.html>

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