

# THE LANCET

## Child & Adolescent Health

### **Supplementary appendix**

This appendix formed part of the original submission. We post it as supplied by the authors.

Supplement to: Gurdasani D, Akrami A, Bradley VC, et al. Long in COVID children.  
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**Table 1: Summary of long COVID prevalence studies in children**

	CLoCk study <sup>1</sup>	ONS study <sup>2</sup>	Buonsenso et al. <sup>3</sup>	Miller et al. <sup>4</sup>	Radke et al. <sup>5</sup>	Molteni et al. <sup>6</sup>
Study design	Case-control study, England	Community-based sampling from the UK	Community-based, Italy.	Household cohort, England and Wales,	55 randomly selected schools, Switzerland	Symptom based survey using Zoe symptom tracker app
Representativeness	More females and older children (16-17-yr-olds) responded	Sampled, and weighted to be representative of UK population	Convenience sample. Children with severe neuro-cognitive impairment excluded	Non-representative, higher socio-economic status	Randomly sampled schools	Poor representation of ethnic minorities. Higher SES
Case ascertainment	SARS-CoV-2 test positive between Jan 2021 and March 2021 and test-negative controls	Asymptomatic and symptomatic PCR positivity	PCR positivity	PCR positivity and serology	Positive serology	Symptom based, PCR positivity
Sample size	23,048 cases, and 27,798 controls	3,403 2-16 yr old with positive PCR test)	129 <=18 years PCR positive > 30 days prior	4,678 (175 with confirmed infection)	1,355 (109 seropositive)	1,734 (PCR or LFD positive) and 1,734 controls
Response rate	13.4%	Unclear	Unclear, convenience sample	Unclear	54%	25%
Symptoms assessed directly	20 symptoms	(1)12 symptoms, and (2) self-reported persistent symptoms	41 (Assessment by paediatricians)	Open ended only	?8 (unclear)	19 symptoms + free text
Prevalence among infected	At 3 months: 66.5 (any symptoms) 30.3% (3+ symptoms)	One or more of 12 symptoms At 5 weeks: 3.8% (2-11 yrs) 4.8% (12-16 yrs) At 12 weeks: 0.7% (2-11 yrs) 1.2% (12-16 yrs)	<=18 years 42.6% at >60 days	<=17 year olds 4.6% at 4 weeks	In 6-16 year olds: 9.4% at 4 weeks 3.7% at 12 weeks	In 5-17 year olds: 4% at 4 weeks, 1.8% at 12 weeks

		Self-reported long COVID At 4 weeks: 1.9% (2-11 yrs) 4.7% (12-16 yr)  At 12 weeks: 1.7% (2-11 yrs) 5.7% (12-16 yr)				
Prevalence in controls	53.3% (any symptoms) 16.2% (3+ symptoms)	At 5 weeks: 2.1% (2-11 yrs) 1.1% (12-16 yrs)	No control group	<=17 year olds 1.7% at 4 weeks	In 6-16 year olds: 9.7% at 4 weeks 2.2% at 12 weeks	In 5-17 year olds: 0.9% at 4 weeks
Gaps allowed	Waxing and waning allowed. No criteria for gaps.	2 consecutive follow ups without symptoms	Unspecified	Unspecified-relapsing and remitting symptoms considered	Unclear in reported methodology	1 week
Follow up	Retrospective: 3 months after positive or negative test	Weekly up to 4 weeks, and monthly up to a year.	Assessed on average 5.4 months later.	Retrospective – recall from February 2020.	Retrospective: 5-7 months previously.	Up to 5 months, Last report considered symptom resolution.
Comments on biases	Test negatives may have had other viral illnesses, recall bias, poor response rate (direction of bias depends on whether healthy individuals more or less likely to have participated)	Limited number of symptoms assessed, recall bias, asymptomatic acute infections assessed. Likely underestimate	Possible overestimation, retrospective, lack of controls, ascertainment of cohort unclear, possible selection bias and recall bias.	Likely underestimate Non-representative, retrospective, misclassification bias, no direct assessment of symptoms.	Likely underestimate Misclassification due to serological testing, retrospective nature, recall bias, and limited symptoms reporting.	Likely underestimate Non-representative, poor response, common symptoms not assessed, relapsing and remitting nature not considered.

## References

- 1 Stephenson T, Pereira S, Shafran R et al. Long covid—the physical and mental health of children and non-hospitalised young people 3 months after SARS-CoV-2 infection; a national matched cohort study (The CLoCk) Study.2021. doi:10.21203/rs.3.rs-798316/v1
- 2 Office for National Statistics. Technical article: Updated estimates of the prevalence of post-acute symptoms among people with coronavirus (COVID-19) in the UK: 26 April 2020 to 1 August 2021
- 3 Buonsenso D, Munblit D, De Rose C, et al. Preliminary evidence on long COVID in children. *Acta Paediatr* 2021; **110**(7): 2208-11
- 4 Miller F NV, Navaratnam AMD Shrotri M, Kovar J, Hayward AC. Prevalence of persistent symptoms in children during the COVID-19 pandemic: evidence from a household cohort study in England and Wales. *MedRxiv* 2021.
- 5 Radtke T, Ulyte A, Puhan MA, Kriemler S. Long-term Symptoms After SARS-CoV-2 Infection in Children and Adolescents. *JAMA* 2021.
- 6 Molteni E SC, Canas LS, Bhopal SS, Hughes RC, Antonelli M. Illness duration and symptom profile in symptomatic UK school-aged children tested for SARS-CoV-2. *The Lancet Child and Adolescent Health* 2021.