Letter

COVID-19 is not a driver of clinically significant viral wheeze and asthma

At the start of the school year, there is an influx of children with attacks of viral wheeze and asthma who present to children's emergency departments. In the UK, the COVID-19 pandemic has resulted in extensive school lockdowns and the implementation of social distancing measures within schools. We aimed to determine the extent that SARS-CoV-2 has been identified in children admitted to hospital with viral wheeze and/or asthma at the start of the 2020 school year and compare presentation trends to previous years. Leicester was the first city in the UK to have a geographically specific lockdown imposed on it due to higher than average rates of SARS-CoV-2 infection per population size.[1]

We compared 4 years, 2017–2020, and extracted data on presentations to, and admissions from, our tertiary children's emergency department (pre-COVID-19 attendances were 60000 per year) for the first 4 weeks of the school year (table 1). An admission was defined as a decision to admit to a hospital or short stay bed. In accordance with government guidance, only children who are admitted to hospital receive SARS-CoV-2 swabs. The evaluation was registered with the hospital audit and improvement committee (10786).

In 2020, there were no positive SARS-CoV-2 samples in children admitted with attacks of viral wheeze or asthma during the start of the school year. Our data would indicate, in our locality, SARS-CoV-2 is not playing a role in the annual spike in viral wheeze and asthma admissions. There is a risk of a type 2 error of interpretation due to the relatively small sample size, but the complete absence of positive results lead us to believe this is unlikely. Our department has previously demonstrated an overall very low rate of SARS-CoV-2 in admitted children that would support these findings.[2] Our conclusion also presumes a similar asthma severity phenotype each year that we believe is a reasonable assumption due to the very similar numbers of presentations and outcomes across years.

Table 1 Breakdown of presentations (viral wheeze and asthma combined) per year

Time frame	Presentations	Admitted (%)	Intensive care admissions
2017 (23/8–20/9)	187	123 (65.7)	1
2018 (30/8–27/9)	290	187 (64.5)	3
2019 (29/8–26/9)	229	139 (60.7)	2
2020 (24/8–21/9)	237	133 (56.1)	1

Damian Roland ,[1,2] **Kah Wee Teo,**[3] **Srini Bandi,**[4] **David Lo,**[5] **Erol A Gaillard**[6]

[1]Paediatric Emergency Medicine Leicester Academic (PEMLA) Group, Leicester Royal Infirmary, Leicester, UK
[2]SAPPHIRE Group, Health Sciences, Leicester University, Leicester, United Kingdom
[3]Children's Respiratory Department, Leicester Royal Infirmary, Leicester, UK
[4]Department of Paediatrics, Leicester Royal Infirmary, Leicester, UK
[5]Department of Respiratory Sciences, Leicester NIHR Biomedical Research Centre (Respiratory theme), University of Leicester, Leicester, UK
[6]Department of Infection, Immunity and Inflammation, University of Leicester, Leicester, UK

Correspondence to Dr Damian Roland, Children's Emergency Department, University Hospitals of Leicester NHS Trust, Leicester LE1 5WW, UK; dr98@le.ac.uk

Twitter Damian Roland @damian_roland

Contributors DR: conceived the idea aided by data collated by KWT. SB, DL and EAG reviewed initial manuscripts, and all authors agreed a final version.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; internally peer reviewed.

To cite Roland D, Teo KW, Bandi S, *et al*. *Arch Dis Child* 2021;**106**:e22.

Accepted 9 October 2020
Published Online First 16 October 2020

Arch Dis Child 2021;**106**:e22.
doi:10.1136/archdischild-2020-320776

ORCID iD
Damian Roland http://orcid.org/0000-0001-9334-5144

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