

Disappearing act: COVID-19 and paediatric emergency department attendances

A 73%–88% reduction in paediatric emergency department (PED) presentations has been reported during the severe acute respiratory syndrome coronavirus 2

(SARS-2-CoV-2) pandemic.¹ The magnitude of this decrease suggests that a combination of biological, psychological and social factors influence the decisions of families to attend PED.

Our hospital is the busiest PED in Ireland, with ~55 000 emergency department (ED) attendances/year. Ireland's first SAR-2-CoV-2 case was reported on 29 February; schools/childcare facilities were closed on 12 March; and a stay-at-home order was issued on 27 March. As of 18 May, only 402 of the 24 036 total cases of SARS-CoV-2 in Ireland were children aged <14 years (1.6%), with 36 hospitalised, 2 requiring intensive care unit care and no reported deaths in children.

A single-centre retrospective review of presentations for March and April 2018, 2019 and 2020, covering the three phases of the national response, was undertaken (figure 1). Information was extracted from the PED system, Symphony.

Attendances reduced dramatically compared with the same 2-month period in 2018–2019. General practice and urgent care presentations also declined during this period. In 2018, there were 8199 ED presentations (681 admissions); in 2019, there were 9133 presentations (630 admissions); and in 2020, there were 4434 presentations (374 admissions), representing an almost 50% reduction on the preceding 2 years (table 1). Based on the Irish Children's Triage System, the acuity of presentations has remained similar in proportion to the attendances.² Category 1 presentations remained stable at 0.7%–0.8%, and a slight increase in category 2 presentations was seen in 2020 (20.3%) compared with 18.4% and 17.9% in 2018 and 2019.

Children frequently present to PEDs with illnesses that do not require emergency care. This may be due to parental anxiety or difficulty accessing community medical services. Our data show a significant decrease in presentations to PED across nearly all categories. This is likely related to a combination of factors, such as a reduction in presentations widely accepted as mediated by viral exposure (wheeze, bronchiolitis and febrile convulsions); reduction in school-related stress (headaches and abdominal pain); and parents deciding to stay at home due to fear of attending during the pandemic, with non-emergent conditions (neonatal feeding issues, vasovagal episodes and non-anaphylactic allergic reactions). Injuries, scalds, ingestions and foreign bodies became less common, possibly due to fewer outdoor activities and more supervision by parents. Significant mental health issues, such as depression, reduced slightly despite concerns regarding increased stresses on this

Table 1 Emergency department attendances categorised and percentage reduction in 2020 compared with preceding 2 years⁴

	March+April 2018	March+April 2019	March+April 2020	Percentage change in 2018 and 2019
Injury and poisoning	2651	2691	1488	-43.9%; -44.7%
Respiratory illnesses	1742	1742	864	-50.4%; -50.4%
Digestive disorders	915	1033	449	-50.9%; 56.5%
Nervous system disorders	195	187	104	-46.6%; -44.4%
Mental health+safeguarding	118	113	83	-29.7%; -26.5%
Surgical	222	183	133	-40%; -27.3%
Emergency/life-threatening	26	23	19	-26.9%; -17.4%
Total attendances	8199	9133	4434	-45.9%; -51.45%

Online supplementary table available.

vulnerable population.³ Acuity of presentations remained stable, with a slight increase in category 2 presentations, suggesting that parents and referring doctors were able to overcome reluctance to attend when absolutely necessary.

Pandemic-related delay of life-altering presentations is a major social and political concern currently; many paediatricians worry that more deaths will be seen in children from collateral damage from the COVID-19 response than from COVID-19.¹ This review has not demonstrated significant delays in the most serious presentations (leukaemia and space occupying lesions), with most of the disappearing attendances related to mild conditions due to non-specific viral triggers or stresses in normal life. Despite not seeing a delay in

oncological presentations during the review period, it should be noted that, due to their latency, these changes will require longer periods of measurement to definitively exclude.

Learning about these shifts in attendance may offer an opportunity to find alternative ways of supporting families outside the PED in the future.

Lisa Dann,¹ John Fitzsimons,¹ Kathleen M Gorman,^{2,3} Jonathan Hourihane,^{1,4} Ikechukwu Okafor¹

¹Emergency Department, Temple Street Children's University Hospital, Dublin, Ireland

²Department of Neurology and Clinical Neurophysiology, Temple Street Children's University Hospital, Dublin, Ireland

³Department of Paediatrics, University College Dublin School of Medicine and Medical Science, Dublin, Ireland

⁴Department of Paediatrics, Royal College of Surgeons in Ireland, Dublin, Ireland

Correspondence to Dr Ikechukwu Okafor, Emergency Department, Temple Street Children's University Hospital, Dublin, Ireland; Ikechukwu.Okafor@cuh.ie

Twitter Kathleen M Gorman @lilkatg

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.

This article is made freely available for use in accordance with BMJ's website terms and conditions for the duration of the covid-19 pandemic or until otherwise determined by BMJ. You may use, download and print the article for any lawful, non-commercial purpose (including text and data mining) provided that all copyright notices and trade marks are retained.

© Author(s) (or their employer(s)) 2020. No commercial re-use. See rights and permissions. Published by BMJ.

► Additional material is published online only. To view, please visit the journal online (<http://dx.doi.org/10.1136/archdischild-2020-319654>).

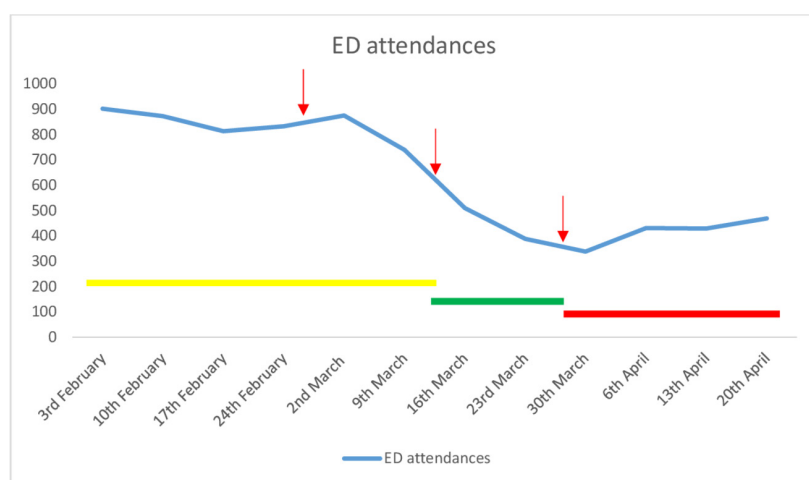


Figure 1 Presentations correlating with public health response phases. Yellow denotes the containment phase; green denotes the delay phase; and red denotes the stay-at-home phase). Arrows indicate first case, school closure and commencement of stay-at-home phase. ED, emergency department.



To cite Dann L, Fitzsimons J, Gorman KM, et al. *Arch Dis Child* 2020;**105**:810–811.

Accepted 19 May 2020

Published Online First 9 June 2020

Arch Dis Child 2020;**105**:810–811.

doi:10.1136/archdischild-2020-319654

REFERENCES

- Lazzerini M, Barbi E, Apicella A, et al. Delayed access or provision of care in Italy resulting from fear of COVID-19. *Lancet Child Adolesc Heal* 2020.
- Available: <https://www.hse.ie/eng/services/publications/clinical-strategy-and-programmes/emp-irish-childrens-triage-system.pdf>
- Golberstein E, Wen H, Miller BF. Coronavirus disease 2019 (COVID-19) and mental health for children and adolescents. *JAMA Pediatr* 2020. doi:10.1001/jamapediatrics.2020.1456
- McDermott KW, Stocks C, Freeman WJ. *Overview of pediatric emergency department visits, 2015, 2018.*