LETTER

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. 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 in paediatric ED attendances.

Children frequently present to PEDs with illnesses that do not require emergency medical 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 vulnerable population. 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. 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 presentations may not be seen in children from collateral damage from the COVID-19 response than from COVID-19.

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 in paediatric ED attendances.

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

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

Online supplementary table available.

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.
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

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