

## **Children and the use of emergency departments during the COVID-19 pandemic: where did the pain end up?**

### ***To the Editors:***

Pain is one of the most common symptoms in children and underly ~80% of the cases presenting to emergency departments (EDs).<sup>1</sup> Recent studies highlighted a change in the overall attendance to EDs during the lockdown for the coronavirus disease 2019 (COVID-19).<sup>2</sup> Stimulated by these findings, we decided to investigate the number and characteristics of children presenting with pain to Italian EDs during the lockdown. All EDs participating in the “Pain In Paediatric Emergency Room” (PIPER) study group<sup>3</sup> were invited to fill-in an online structured questionnaire on the period between 01 and 31 March, 2020. The questionnaire was sent by email on 01 April and reminders were sent every two weeks for two months. The results are presented as median and interquartile range or as absolute frequency and percentage.

A total of 33 (63%) out of 52 centers of the PIPER group participated in the study. The results of the survey are given in Table 1. Children presenting to EDs for pain were 18% in 2020 and a further 26% reported pain as an accompanying symptom. More than 90% of children with pain were  $\leq 14$  years of age and pain intensity was severe in few cases ( $< 10\%$ ). It was most commonly caused by traumas (32%), while earache and sore throat accounted for 7.6% and 3.8%, respectively. Finally, headache accounted for  $< 5\%$  of cases.

The remarkable reduction ( $\sim 70\%$ ) of EDs visits as compared with the same period in 2019, together with the rather low percentage of pediatric patients with pain in EDs, point out a striking reduction in the use of emergency department for pain among children. The PIPER study group found in 2018 that earache and sore throat accounted for a total of 26% of ED visits and headache for 12%.<sup>3</sup> It is well known that these symptoms are usually caused or associated to infectious diseases. The current data support the hypothesis that the lockdown and, especially, the home-bounding have led to a limitation of all infections spread.<sup>4</sup> However, the overall decrease of pain as a cause for EDs

referring cannot be fully explained by this reason. We speculate that such a reduction is mainly due to a change in the consideration and management of pain among caregivers during the lockdown. On the one hand, it is possible that caregivers were more prone to self-manage the pain and avoid unnecessary hospital visits. On the other hand, it is also possible that some caregivers underscored the importance of pain management due to the fear of COVID-19 hospital infection.

In conclusion, this study suggests that COVID-19 is dramatically changing the attitudes of caregivers in relation to EDs referral for pain. It is of paramount importance to investigate if the changes are associated with underestimation of pain by caregivers and an impairment in healthcare for children, or if they mainly reflect a decrease in inappropriate emergency department use.

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## References

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**Table 1:** Characteristics of children presenting with pain to Emergency Department (EDs) in March 2019 (N=14601). The number of children presenting in the March 2019 was 47272. Data are given as median [and Interquartile Range] or as absolute frequency (and percentage).

<b>Number children managed per center in March 2020</b>	238 [108-524]
<1 months of age	370 (2.5)
1 month -1 year of age	2336 (16)
>1 - <3 years of age	3504 (24)
3 - <6 years of age	3212 (22)
6 - <10 years of age	2774 (19)
10 - <14 years of age	1606 (11)
≥14 years of age	799 (5.4)
<b>Triage Code (priority)</b>	
Not critical	1904 (13)
Mildly critical	10844 (74)
Moderately critical	1757 (12)
High critical	92 (0.6)
<b>Pain present at admission</b>	6424 (44)
Pain as reason for presentation	2384 (16)
Pain as accompanying symptom	2908 (20)
Pain killer administrated before the visit to emergency department	814 (9)
<b>Type of pain</b>	
Headache	321 (4.9)
Sore throat	533 (8.3)
Earache	488 (7.6)
Thoracic pain	244 (3.8)
Abdominal pain	1353 (21)
Traumatic pain	2061 (32)
Other pain	1423 (22)
<b>Pain intensity</b>	
Mild	4304 (67)
Moderate	1606 (25)
Severe	514 (8.0)