

LETTER

Lockdown: more domestic accidents than COVID-19 in children

Long-term home isolation due to lockdown measures to prevent the spread of the COVID-19 outbreak bears the potential for increased risk of domestic accidents in children, as an additional collateral damage of this pandemic.¹⁻³

Hence, we aimed to assess the frequency and severity of presentations for domestic accidents between 8 March, when lockdown measures were enforced in our region, and 20 April 2020 compared with the corresponding period during the previous year.

We searched the paediatric emergency department (PED) electronic database for injury presentations related to trauma, poisoning, burns and foreign bodies (in the respiratory/gastrointestinal tract, or in the ear/nose/throat), as well as any presentations flagged as domestic injury at triage. We reviewed the identified records to accurately select injuries sustained in the household. We excluded children <1 year of age, as they most commonly stay at home independently of whether lockdown measures are in place or not. We also excluded self-inflicted injuries or intentional poisonings.

The primary outcomes were the frequency of presentations and hospitalisations for domestic accidents. We calculated incidence rates for the study outcomes by dividing the number of cumulative presentations and admissions by the number of

days for each time period. We used an overdispersed Poisson regression model to estimate the incidence rate ratio (IRR) and relative 95% CI of the study outcomes in the two periods. For the analysis on hospitalisations by type of accidents we also used the Firth's bias reduction method to avoid infinite estimates that can be caused by the low number of cases observed.

The trend of overall PED presentations and presentations for domestic accidents since the start of the year for 2019 and 2020 is reported in figure 1A,B, respectively. IRRs for domestic accidents presentations, related hospitalisations and hospitalisations by domestic accident category are reported in table 1. Of the 11 trauma-related hospitalisations during the lockdown period seven were limb fractures; three were head trauma-related injuries, including an epidural and subdural haematoma, a facial fracture requiring surgery and a concussion with associated skull fracture; a thoracic trauma with lung contusion. Three children had a severe mechanism of injury (two crash injuries under metal gates and a fall from 3-metre height). The four poisoning-related admissions were due to ingestion of caustic cleaning products (two patients), inhalation of fumes resulting from combining cleaning products (one patient, requiring intensive care for non-invasive ventilation and inotropic support for distributive shock) and one case of toxic ingestion of paracetamol (a toddler swallowed the entire contents of the bottle).

In the same period the total number of children with confirmed COVID-19 seen at our PED was only eight. Of these, six were hospitalised, of whom three were

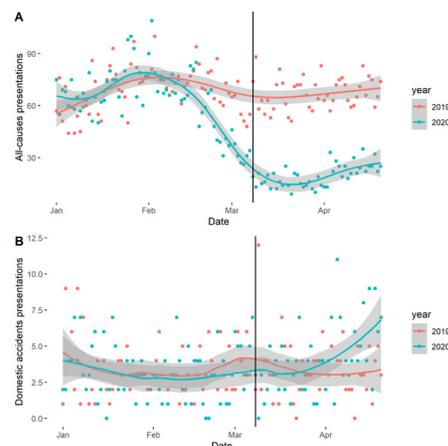


Figure 1 Daily number of PED presentations (A) and PED presentations for domestic accidents (B) in Padova from 1 January to 20 April in 2019 and 2020. The vertical line corresponds to 8 March. Trends were smoothed using a local regression. PED, paediatric emergency department.

younger than 6 months, only one needed supplemental oxygen and none needed intensive care.

Our data show that the number and severity of PED presentations for domestic accidents has significantly increased during the lockdown period compared with the previous year. We acknowledge our results are limited by the single-centre design and the low absolute numbers of study outcomes, with the possibility that small variations in numbers in each period could affect the effect size of our findings. However, we believe they are useful to raise awareness that domestic accidents are posing a higher threat to children's health than COVID-19. Home safety and

Table 1 Comparison of paediatric emergency department presentations and hospitalisations for domestic accidents, overall and by domestic accident category, during the COVID-19 outbreak lockdown and the corresponding period of the previous year

	Study period 8 March–20 April 2020	Control period previous year 8 March–20 April 2019	P value
Total number of PED presentations >1 year	796	2917	
Total number of presentations for domestic accidents >1 year	178	148	
Total number of hospitalisations for domestic accidents >1 year	20	4	
IRR (95% CI) for domestic accident presentations		1.2 (1.0 to 1.5)	0.09
IRR (95% CI) for domestic accident hospitalisations		5.0 (1.7 to 14.6)	0.003
Trauma			
Hospitalisations/presentations	11/148	2/117	
IRR (95% CI) for hospitalisations		4.6 (1.2 to 18.1)	0.03
Poisoning			
Hospitalisations/presentations	4/14	0/11	
IRR (95% CI) for hospitalisations		9.0 (0.5 to 167.2)	0.14
Burns			
Hospitalisations/presentations	2/12	1/11	
IRR (95% CI) for hospitalisations		1.7 (0.2 to 12.6)	0.62
Foreign bodies			
Hospitalisations/presentations	3/24	1/12	
IRR (95% CI) for hospitalisations		2.3 (0.3 to 15.8)	0.39

IRR, incidence rate ratio; PED, paediatric emergency department.

injury prevention measures in the household environment must be reinforced at the community and emergency department level alongside infection control measures for this pandemic.⁴

Silvia Bressan,¹ Elisa Gallo,² Francesca Tirelli,³ Dario Gregori,² Liviana Da Dalt¹

¹Division of Paediatric Emergency Medicine, Department of Women's and Children's Health, University of Padova, Padova, Italy

²Epidemiology and Public Health, Department of Cardiac, Thoracic and Vascular Sciences and Public Health, University of Padova, Padova, Italy

³PhD Program, Department of Women's and Children's Health, University of Padova, Padova, Italy

Correspondence to Dr Silvia Bressan, Department of Women's and Children's Health, University of Padova Faculty of Medicine and Surgery, Padova 35128, Italy; silviabress@gmail.com

Contributors LDD and SB conceived the study with input from DG, FT and EG. SB and FT retrieved and reviewed the medical records. EG and DG analysed

and interpreted the data. All authors reviewed and interpreted data. SB drafted the manuscript, which was revised by all authors.

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.

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To cite Bressan S, Gallo E, Tirelli F, *et al.* *Arch Dis Child* Epub ahead of print: [please include Day Month Year]. doi:10.1136/archdischild-2020-319547

Accepted 20 May 2020

Arch Dis Child 2020;0:1–2.

doi:10.1136/archdischild-2020-319547

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