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## Child Protection Concern in Patients during the COVID-19 Lockdown

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### Introduction

Prior pandemics, economic recession and parental employment are well-documented risk factors for child maltreatment [1, 2]. The COVID-19 pandemic caused major economic and social shifts, thus exacerbating these risk factors. Social isolation during the pandemic lockdown removed protective factors for child maltreatment. Additional risk factors include reduced parental social support, and lack of oversight from teachers and school nurses from school closures. Stay at home public health and government enforced orders potentially left victims trapped with abusers. Few studies have quantified the effects of COVID-19 on child maltreatment rates in admitted patients.

We sought to determine the incidence and types of child protection concern (CPC) among inpatients during the COVID-19 lockdown compared to the matched timeframe in 2019.

### Methods

#### *Setting*

Children's Health Ireland (CHI) at Crumlin is a multiuniversity-affiliated tertiary care centre with 190 paediatric beds, and CHI at Tallaght is a secondary care centre with 38 paediatric beds. Due to restructuring of service, the two hospitals amalgamated during the lockdown in 2020.

#### *Data and Design*

Patients were identified via referrals to the social work department for CPC assessment. Patients referred to social work, but not admitted to hospital were excluded. CPC was defined as concern that a child is at risk of being abused, neglected or that their welfare is at risk. The concern was strong enough to trigger referral for further assessment by a general paediatrician and the social work department. Some injuries triggering referral were deemed accidental or due to medical causes after review.

We retrospectively quantified the number of inpatients referred for CPC, and reviewed the charts for characteristics between March 13 to August, 2020 during the lockdown and the matched timeframe in 2019. Ethical approval was granted from Research Ethics Committee at CHI at Crumlin and Tallaght.

Proportions of CPC referrals were compared using the chi-squared test. Statistical significance was defined as  $p < 0.05$ .

### Results

A total of 4,607 hospital admissions were observed in 2020 compared to 7,728 in 2019. 86 inpatients were referred for CPC in 2020 compared to 163 in 2019 ( $p=0.35$ ). Inpatient CPC made up 1.9% of total hospital admissions in 2020 and 2.1% in 2019.

54.7% (47/86) of referrals for CPC were female in 2020 and 54.0% (88/163) in 2019. Over 10 year olds accounted for the majority in both years; 33.7% (29/86) in 2020 and 36.2% (59/163) in 2019.

Child welfare concern accounted for 61.6% (53/86) of referrals in 2020 and 75.5% (123/163) in 2019 ( $p=.023$ ). Physical abuse concern accounted for 52.3% (45/86) referrals in 2020 compared to 11.0% (18/163) in 2019 ( $p<.001$ ). Emotional abuse concerns in 2020 accounted for 7.0% (6/86) referrals in 2020 versus 1.2% (2/163) in 2019 ( $p=.015$ ). Referrals due to concern for neglect (33.7% (29/86) in 2020 versus 25.2% (41/163) in 2019 ( $p=0.15$ )) and sexual abuse (4.7% (4/86) in 2020 versus 3.1% (5/163) in 2019 ( $p=0.52$ )) were also noted.

48.8% (42/86) of CPC referrals in 2020 involved two or more types of CPC per case compared to 13.5% (22/163) in 2019 ( $p<.001$ ).

57.0% (49/86) referrals for CPC presented with an injury in 2020 versus 44.2% (72/163) in 2019 ( $p=0.055$ ). In Table 1, we see a greater proportion of burns, skeletal surveys, unwitnessed injuries and parental use of physical discipline in 2020 compared to 2019. The proportion of head injury, bruising and haematomas were reduced in 2020 versus 2019. No statistically significant differences in the proportion of fractures, lacerations, intracranial haemorrhage, retinal haemorrhage, head computed tomography (CT) performed, and delayed presentation were observed.

No significant differences were noted in suicidal ideation and deliberate self-harm, reported arguments between family, difficult behaviour, underlying psychiatric history, underlying autism or developmental disorder, domestic abuse, parental intoxication and drug usage (Table 2).

## Discussion

This study quantified and characterized referrals for CPC among inpatients during the lockdown. With reports of increased incidence of abusive head trauma during the pandemic, we hypothesized there would be an increase in CPC referrals among inpatients during the lockdown [3]. Contrary to our hypothesis, there was an insignificant reduction in referrals for CPC among inpatients in 2020 ( $n=86$ ) compared to 2019 ( $n=163$ ) ( $p=0.35$ ). Our finding is consistent with a decline in hospital admissions for child physical abuse during the pandemic reported by Kaiser et al. in a multicentre study in the United States involving 52 children's hospitals [4]. To the best of our knowledge, no data regarding CPC among inpatients from European institutions is available.

The decline in referrals for CPC among inpatients in 2020 was proportional to the overall reduction in total paediatric hospital admissions. Despite the amalgamation of the two paediatric hospitals and emergency departments, a 40% reduction in total admissions was observed during the 2020 lockdown; 4,607 admissions in 2020 compared to 7,728 in 2019. The lower number of admissions is consistent with lower emergency department (ED) presentations during the pandemic in Ireland and the United States, which may be due to reduced accessibility to referral services and avoidance behaviour [4, 5]. ED and hospital avoidance is problematic if it places a child at risk [5]. The public health message discouraged children from attending the hospital during the lockdown, and the sharp drop in hospital attendances suggests avoidance occurred.

The higher proportion of CPC involving two or more types of concern per case in 2020 (48.8% versus 13.5% in 2019 ( $p<.001$ )) suggests that the cases in 2020 were more complex. Despite the reduction in referrals for CPC during the pandemic, the increase in complexity of the CPC placed increased demands on child protection teams. The reason for increased complexity in cases referred for CPC in 2020 is unexplained. Possible explanations are that lower complexity cases, which would have diluted complexity if they were admitted, may not have been presenting to hospital due to avoidance behaviour or it may have been a reflection of compromised detection of CPC [4, 5]. Another explanation is that there was a true decline in low complexity CPCs presenting to hospital as substantial decreases in psychosocial and injury presentations to the affiliated EDs were recorded during the same study period [5].

The limitations of our study include that it only captures a small portion of CPC, namely those warranting hospital admission. The outcome of CPC assessments were often not documented, hence our study only captures the entry point into child protection assessment not final classification (e.g. diagnosis with accidental injury, child abuse or undetermined). Our study was limited to the initial lockdown of the pandemic and made a comparison with one previous year. It was not possible to quantify the threshold for CPC referral at the two centres prior to the pandemic, thus our study was subject to biases of retrospective studies and the amalgamation of centres. Further studies of CPC referrals in the community, over a longer period and of CPC assessment outcomes is warranted to provide a more comprehensive picture of CPC during the pandemic.

## Conclusions

The pandemic lockdown has affected the referral patterns for CPC in that there was a decline in admitted patients referred with CPC. However, the demands on the child protection teams were greater during the lockdown as the referrals for CPC were complex compared to the previous year. Continued availability of child protection resources, clinician awareness of COVID-specific child protection issues, and safe reopening of school is paramount during the pandemic.

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**Table 1 Characteristics of Referrals for CPC Presenting with Injury**

	<b>2019 (n=49)</b>	<b>2020 (n=72)</b>	
<b>Characteristics</b>	<b>n (%)</b>	<b>n (%)</b>	<b>p value</b>
<b>Injury Type</b>			
Burn	4 (5.6)	24 (49.0)	<.001
Head Injury	57 (79.2)	10 (20.4)	<.001
Fracture	10 (13.9)	9 (18.4)	0.51
Bruise	32 (44.4)	7 (14.3)	<.001
Laceration	11 (15.3)	2 (4.1)	0.051
Haematoma	18 (25)	2 (4.1)	.002
Intracranial Haemorrhage	0 (0)	1 (2.0)	
Retinal Haemorrhage	0 (0)	1 (2.0)	
<b>Radiological Investigation</b>			
Skeletal Survey	9 (5.5)	15 (17.4)	.014
Head CT	13 (18.1)	14 (28.6)	0.17
<b>Injury Circumstances</b>			
Unwitnessed Injury	29 (17.8)	30 (34.9)	.024
Parental Use of Physical Discipline	1 (0.6)	6 (7.0)	.012
Delayed Presentation	22 (13.5)	9 (10.5)	0.13

**Table 2 Additional Characteristics of Referrals with CPC**

	<b>2019 (n=163)</b>	<b>2020 (n=86)</b>	
<b>Characteristics</b>	<b>n (%)</b>	<b>n (%)</b>	<b>p value</b>
Suicidal Ideation or Deliberate Self Harm	46 (28.2)	20 (23.3)	0.70
Argument Between Family Members	20 (12.3)	16 (18.6)	0.18
Difficult Behaviour	17 (10.4)	13 (15.1)	0.28
Underlying Psychiatric History	43 (26.4)	14 (16.3)	0.071
Underlying Autism or Developmental Disorder	17 (10.4)	13 (15.1)	0.28
Domestic Abuse	6 (3.7)	5 (5.8)	0.44
Parental Intoxication or Drug Use	4 (2.5)	2 (2.3)	0.95