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### Investigation of Emergency Department Visits and Hospitalization Rates of Child Physical Abuse at Cooper University Hospital Prior to and During the COVID-19 Pandemic

Afeerah Ahmad  
*Rowan University*

Rachel Silliman Cohen  
*Rowan University*

Laura Brennan  
*Rowan University*

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# Investigation of Emergency Department Visits and Hospitalization Rates of Child Physical Abuse at Cooper University Hospital Prior to and During the COVID-19 Pandemic

*Afeerah Ahmad, Rachel Silliman Cohen, MD, Laura Brennan, MD*

**CARES Institute, Rowan University School of Osteopathic Medicine Stratford, NJ 08084**

## INTRODUCTION

The COVID-19 pandemic has been detrimental for children. Many families have experienced stressors, including unemployment, financial hardship, and familial illness. These factors all pose increased risk for child physical abuse. Limitations in child welfare services affected investigations and provision of services to high-risk families. The extent to which the rates of physical abuse in NJ have been affected is unknown. We sought to answer the question of whether the COVID-19 pandemic affected the severity of physical abuse and the incidence of physical abuse presenting to Cooper University Hospital.

## HYPOTHESIS

We hypothesized that there would be a higher proportion of severe child physical abuse cases presenting to the hospital during the COVID-19 pandemic as compared to prior to the pandemic.

## METHODS

We completed a retrospective chart review in which records for patients under 18 years old were extracted from Cooper University's EMR based on ICD-10 codes that identified child physical abuse or the presence of a child abuse pediatrics (CAP) consult. We collected data on hospitalization, demographics, and severity of injuries. The primary outcome variable was the injury severity score (ISS), a validated measurement tool to classify injury severity.

## RESULTS

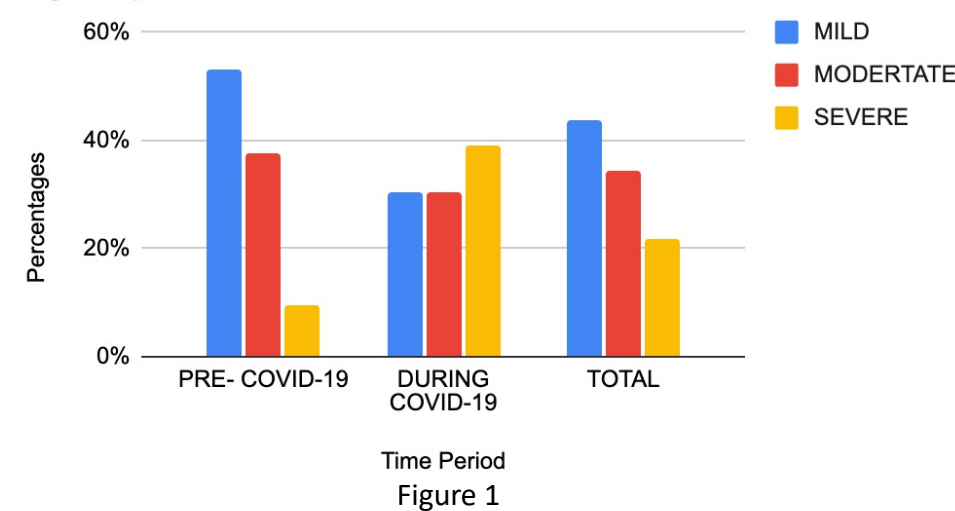
Our analysis indicated that gender and race demographics were similar prior to and during the pandemic (Table 1). The median age of abused children significantly increased during COVID-19. There was a statistically significant increased incidence of severe cases of physical abuse, with an increase in mean ISS, during COVID-19 (Figure 1, Figure 2).

Race and Gender Demographics			Pre-COVID-19	During COVID-19	Total
Gender	Male	Count	16	17	33
		Percent	50%	73.90%	60%
	Female	Count	16	6	22
		Percent	50%	26.10%	40%
p value					0.074
Race	White	Count	8	3	11
		Percent	25%	13%	20%
	Black	Count	11	5	16
		Percent	34.40%	21.70%	29.10%
	Other	Count	13	15	28
		Percent	40.60%	65.20%	50.90%
p value					0.194

Table 1

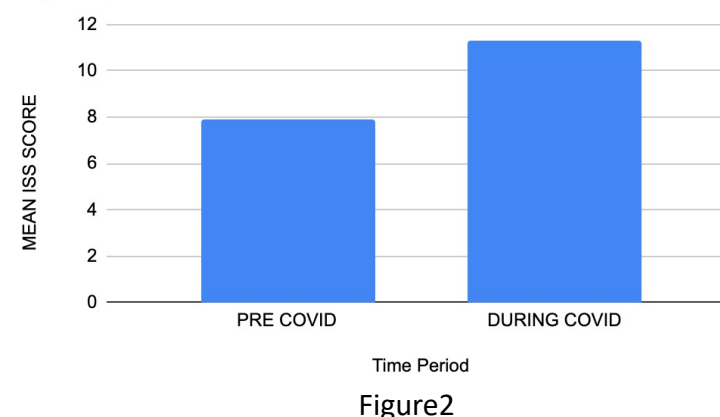
### ISS Categories

Figure 1 p=0.027\*



### Mean ISS

Figure 2 p=0.039\*



## DISCUSSION and CONCLUSION

As hypothesized, there was an increase in severity of child abuse cases presenting for hospitalization during the COVID-19 pandemic. These findings may indicate that there was a true pandemic-related increase in the severity of abuse. This may also indicate that patients with mild injuries did not present to the emergency department due to pandemic-related factors, including shelter-in-place practices. It may indicate a decreased identification of mild injuries by schools, pediatricians and other routine childhood contacts. The increase in median age during the COVID-19 pandemic may indicate that younger children, who are more vulnerable, failed to receive care during this time; it may also indicate that older children who were at home instead of at school were more susceptible to abuse than they previously were.

Study limitations included that we did not include other types of maltreatment, limiting the generalizability of the results. In addition, medical providers tend to underutilize appropriate ICD-10 codes for the diagnosis of abuse, making identification of cases more difficult. As such, our data may underestimate the true incidence of the hospital evaluations of abuse.

These results are invaluable in understanding childhood abuse during these unprecedented times and can help inform child welfare policies in the future.

## KEY REFERENCE

Ghosh R, Dubey MJ, Chatterjee S, Dubey S. Impact of COVID -19 on children: special focus on the psychosocial aspect. *Minerva Pediatric*. 2020 Jun;72(3):226-235. doi: 10.23736/S0026-4946.20.05887-9. PMID: 32613821.