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Abstract:
The COVID-19 pandemic has created conditions which heighten risk for child abuse. As key players in times of crisis, pediatric emergency medicine providers must be equipped with the tools to recognize, respond to, and mitigate risk of child abuse. An exploration of the scientific literature, stakeholder organization reports and lay press was undertaken to understand the impact of large-scale U.S. crises, including infectious disease, financial downturn, natural disaster, and violence, on child abuse risk and inform prevention strategies. Review of the literature suggests a relationship between crises and child abuse risk, though gaps in the research remain. We outline the role of pediatric emergency medicine providers in partnering with communities in organizing and advocating for systems that better protect children and strengthen families.

Keywords: child abuse; child abuse prevention; COVID-19; disaster; crisis

The COVID-19 pandemic has intensified numerous socioeconomic stressors and inequities which have placed children at heightened risk for abuse. At times of crises, children are among the most vulnerable, both because of their lack of agency and the need for a safe and stable environment conducive to achieving critical developmental milestones.

Soon after widespread implementation of social distancing measures to mitigate the spread of COVID-19, child health professionals raised concerns about the secondary effect of unreported child abuse. Heightened family stressors, loss of the watchful eyes of school officials due to school closures, limited access to health providers, and decreased support from family and friends created cumulative risk for vulnerable children. Education personnel are the largest source of reports to child protective services (CPS; 20.5%), followed by law enforcement personnel, social services, medical personnel, relatives, parents, and others. While cross-sector efforts mobilized to address basic child health needs such as delayed immunizations and food insecurity, systematic efforts to address child abuse have been lacking in the COVID-19 response, despite known risks. Crisis management and pediatric disaster preparedness plans have not prioritized child abuse intervention or prevention.

Child abuse needs to be a forethought rather than an afterthought for health providers during times of crisis. To better equip emergency medicine (EM) providers with the requisite tools, the objectives of this article are to:

1. Draw on lessons learned from past crises in understanding the risk of child abuse associated with the current pandemic and future crises.
2. Delineate the role of EM providers in child abuse prevention, using a pediatric disaster preparedness framework.
3. Emphasize the need for health providers to advocate for policies and practices which strengthen children’s safety net.

CRISES AND CHILD ABUSE

An exploration of the literature and lay press was undertaken to better understand the association between major crises in the US and child physical and sexual abuse. Types of crises which have been analyzed in association with child abuse are infectious disease, financial, natural disasters, and mass violence, all of which have overlapping features with the COVID-19 pandemic. Key features of the outlined crises, relevant to child abuse as a public health issue, are: (a) conditions of vulnerability, (b) insufficient capacity to cope with negative effects on physical, mental, and social well-being, and (c) socio-economic disruption.

There is a focus on studies examining the associations between crises and factors that place children at greater risk for abuse. Risk factors for child abuse extend beyond the immediate household of a child and can be conceptualized using a public health bidirectional nesting forces model wherein a child is nested in a family, which is nested in a neighborhood, in a community, and in a wider culture and society.

The following is a summary of findings, beginning with infectious disease crises and the COVID-19 pandemic. The terms crisis and disaster have been used interchangeably to describe COVID-19.

Infectious Disease Crises

The global fear and uncertainty associated with pandemics create an environment that may exacerbate or trigger violence against children. Literature examining an association between child abuse and prior infectious disease crises in the US, including the H1N1 “swine flu” pandemic, H5N1 “bird flu” pandemic threat and the Ebola outbreak, is limited. A study by Brooks et al found that parents and children quarantined during H1N1 had more post-traumatic symptoms compared to those not quarantined, supporting concern of crisis related social isolation as a potential stressor. The 1918 influenza pandemic predates establishment of child abuse mandated reporting laws in the United States.

COVID-19

While the full impact of the COVID-19 crisis on children is unknown, findings extrapolated from the scientific literature and lay press support health providers’ concerns of heightened risk for child abuse, primarily physical abuse in young children, and unreported sexual abuse. Pertinent findings are described as follows:

Evidence of heightened risk for child physical abuse during COVID-19

A surge in severe child physical abuse, particularly in young children, presenting to hospitals was reported by pediatricians in some states early in the pandemic. A report by the Centers for Disease Control of US Emergency Department (ED) visits from January 2019 to September 2020, found that ED visits for child abuse and neglect decreased by 53% during the pandemic, with the largest decline in children 5 to 11 years old. However, the proportion of child abuse and neglect related ED visits resulting in hospitalization significantly increased during the pandemic. While the report did not stratify by maltreatment type, physical abuse in young children is the most common type of maltreatment resulting in hospitalization. These findings are further supported by Kovler et al, who reported an increase in the proportion of young children with physical abuse related injuries evaluated at a Level 1 trauma center early in the pandemic.

Immediate financial strain in vulnerable families and communities may be a key contributor to increased risk for physical abuse during COVID-19. New hotspots for child physical abuse and neglect emerged in at-risk neighborhoods in Los Angeles, using spatio-temporally analyzed law enforcement data from the first several months of the pandemic. Neighborhood risk factors included severe housing insecurity and school absenteeism. An online survey of parents of school aged children (4-10 years old) found that those who experienced job loss during the pandemic exhibited increased physically abusive behavior towards their children. Physically abusive behaviors ranged from corporal punishment (ie, spanking) to severe assault (ie, hitting as hard as possible). Parental depression and prior physically abusive behavior were significant predictors.

Evidence for heightened risk for child sexual abuse during COVID-19

While reports to CPS decreased precipitously, these statistics may not accurately reflect child abuse rates during the pandemic. The National Hotline Consortium reported increased outreach by children for concerns of abuse during the pandemic. RAINN (Rape, Abuse, and Incest National Network), a national sexual assault hotline, reported an increase in calls from minors early in the
pandemic. Many (79%) disclosed residing with the abuser during quarantine. 28, 29 Childhelp, a confidential support hotline for adults and children, reported a 40% increase in the total number of contacts in May 2020 compared to May 2019. Approximately half of the websites and chat contacts were initiated by adolescents 13 to 17 years old for abuse concerns, consisting of emotional (38%), physical (32%), and sexual (12%) abuse. 30 Most youth reported they may not have contacted the hotline if the digital option was not available. 31 The National Center for Missing and Exploited Children (NCMEC) reported increases in reports of online sexual exploitation of children. 32 “Online enticement reports” and CyberTipline reports increased by 98% and 63% respectively, from January to October 2020, compared to 2019. 32 This surge raised concern amongst health professionals of an associated increase in child sex trafficking during the pandemic.

Evidence of heightened risk factors for child abuse during COVID-19

Individual child risk factors

Young children and those with special needs (ie, disabilities and mental health problems) are vulnerable to child abuse as they may increase caregiver burden. 16 During the COVID-19 pandemic, children with mental health problems lost access to peer support, school counselors, and community mental health services. 17, 33 According to the Centers for Disease Control, the proportion of mental health ED visits increased by 24% for children (5-11 years old) and by 31% for adolescents (12-17 years old) from April to October 2020 among all pediatric ED visits. 33 A national survey found that 1 in 7 parents reported worsening of their child’s behavioral health since March 2020. 34 Children with disabilities lost access to special education services, increasing parental stress and risk for physical abuse. 35 Children with disabilities are also more vulnerable to sexual abuse. 36 Child protection professionals expressed concern that perpetrators of sexual abuse may have increased access to children due to school closures and single working mothers in need of childcare. 5, 37 An increase in accidental injuries and ingestions have also been reported in young children, indicating inadequate supervision during the pandemic. 38

Parent and family risk factors

Parental risk factors for child abuse include substance abuse, mental health issues, singledom, and low income. Family risk factors include social isolation, intimate partner violence (IPV), and family stress. 16 Parental access to mental health and substance abuse treatment was reduced during the COVID-19 pandemic. 39 Nearly 50% of parents with children less than 18 years old reported negative impacts to their mental health due to coronavirus related stress. 40 A study by Borg et al found that 1 in 10 parents reported worsening of their own mental health alongside worsening of their child’s behavioral health. Parents of younger children (less than 5 years old) and those who lost childcare were most at risk. 34 Several states reported an increase in IPV-related arrests and reports. 41

Community risk factors

Community violence, concentrated neighborhood disadvantage (ie, high poverty and unemployment rates) and poor social connections are risk factors for child abuse. 16 Mothers of school-aged children have been disproportionately affected by high unemployment rates during the pandemic, with Black women most affected. 2 Neighborhoods in urban counties with the greatest proportion of poor, racial and ethnic minorities were most affected by COVID-19. 42 Increases in gun violence were seen in urban communities 43, 44, alongside record high gun sales. 45

FINANCIAL CRISSES

The Great Recession of 2007-2009 has been the largest economic downturn in the history of the United States since the Great Depression. Economic strain is associated with family risk factors for abuse, including binge drinking, 49 IPV, 50 and adverse mental health effects. 51, 52 The most studied type of child abuse in relation to the Great Recession has been abusive head trauma (AHT), with mixed findings likely due to varied methods for data collection and analysis. Multiple studies analyzing hospital admission data have found evidence for increased rates of AHT during the recession, 53, 54 with elevated incidence lingering for a period after the recession. 55 On the contrary, a study looking at
national trends of AIIT found no significant changes during the recession.56

According to a study of the Great Recession using National Child Abuse and Neglect Data System (NCANDS) data, an increase in reports for child physical abuse following state job losses was found, peaking 4 to 6 months subsequent to onset of unemployment. No change in reports for child sexual abuse was found, indicating possible lack of association between child sexual abuse and financial strain.57 An inconsistent relationship was found in a study of child maltreatment reports and multiple economic stressors in 7 states.58 The hypothesis that physical abuse would show stronger associations with economic stressors than sexual abuse was not supported by this study.59

A longitudinal cohort study found that mothers reported increased high frequency spanking60 and physical aggression toward their children during the Great Recession.61 The presence of a social father (nonbiological father figure) was associated with elevated risk, compared to households with no father or a biological father. The authors theorized that an unrelated partner may create added stress for the mother due to lack of assistance with childcare.62

**NATURAL DISASTERS**

Several natural disasters have been studied for association with child abuse, with mixed results. An increase in hospital admissions for both inflicted and noninflicted traumatic brain injury in children less than 2 years old was found during the 6 month period following Hurricane Floyd (North Carolina, 1999).61 Curtis et al found increased reports of child physical and sexual abuse up to 11 months following Hurricane Hugo in South Carolina and the Loma Prieta Earthquake in California, which both occurred in 1989. Conversely, these researchers found that reports of child physical and sexual abuse decreased following Hurricane Andrew in Louisiana in 1992.62

Hurricane Katrina in 2005 has been the most recognized large-scale natural disaster in the United States. Only anecdotal reports of child physical and sexual abuse could be found in association with this disaster. However, there are studies documenting an increase in IPV following Hurricane Katrina.63

**COMMUNITY AND MASS VIOLENCE**

Exposure to community violence is associated with child abuse and other forms of violence in children.66,67 The 9-11 terrorist attack in New York City has been the most well recognized large-scale violent event in the United States. While no studies could be found directly examining child abuse rates in association with 9-11, adults with a history of child maltreatment and exposed to 9-11 were found to be at increased risk for substance abuse and mental health problems.68 These findings add to the notion of cumulative risk as a contributor to adverse long-term health. Studies have found an increase in firearm sales following mass shootings, 9-11, and other times of social unrest and violence in the United States, which has the potential to cause injury to children.45,69

**CHILD ABUSE PREVENTION IN DISASTER PREPAREDNESS**

Emergency care providers are uniquely positioned to mitigate risk of child abuse in times of crisis. The role of the EM provider must expand beyond reporting to facilitating ongoing care, support, and monitoring of vulnerable children. Child abuse prevention in the ED can be conceptualized using a 4 phased pediatric disaster preparedness framework.70

**Phase 1 - Preparedness:** During this phase, the goal of the provider should not be limited to ensuring children are injury-free but should include optimizing child and family well-being and reducing vulnerability to abuse. EM providers can do the following:

- Ensure access to preventive and mental health care, including telehealth,71 and communicate concerns to relevant providers.
- Partner with communities to integrate child abuse recognition and prevention into disaster preparedness plans, create centralized location for access to support resources, and provide education on trauma informed first response systems.72
- Advocate for newborn home visitation, housing stability, food security, universal broadband access, affordable childcare, equitable health systems, safe green spaces, and poverty reduction measures.73

**Phase 2 - Response:** Response is a time for heightened recognition of child abuse and children at risk for abuse. EM providers can do the following:

- Ask children and families how they are coping, screen for family stressors and abuse, refer to accessible support services, and encourage utilization of informal and formal supports.74
• Work with communities to implement coordinated response strategies focused on child abuse prevention and recognition.\textsuperscript{72,74} Maintaining communication with vulnerable children is critical to helping them stay connected and access support.\textsuperscript{18} Digital crisis support platforms can be scaled, such as mental health chat hotlines for adolescents and video home visitation calls for parents of young children.\textsuperscript{75}

• Ensure that crisis management processes consider safety from abuse in home quarantine and other public health measures.\textsuperscript{18}

**Phase 3 - Mitigation:** Mitigation is an opportunity to decrease the impact of the crisis and its secondary effects on vulnerable children. EM providers can do the following:

• Continue to ask children and families how they are coping, screen for abuse and family stressors, and refer to accessible support services

• Foster a community of supportive adults to monitor high-risk children and promote protective factors.

• Collaborate with community organizations, schools, local governmental agencies, parent groups, faith-based leaders, medical societies, and other stakeholders to ensure coordinated and effective child abuse recognition and prevention strategies.

**Phase 4 - Recovery:** The recovery phase can be classified into short-term and long-term. The goal of the short-term phase is to return to “normal.” During the long-term phase, EM providers can work with communities to assess how existing crisis management protocols impacted children and make changes in preparation for future crises.

**SUMMARY**

The COVID-19 pandemic and subsequent measures to mitigate community spread have heightened the risk for child abuse, exposed serious gaps in child protection systems, and underscored the critical need for systematized prevention practices. A substantial body of cross-sector work points towards a relationship between large scale crises and increased risk for child abuse, primarily physical abuse. There are few studies analyzing child sexual abuse in relationship to crises in the United States. Varied research methodologies, lack of population level data, and reliance on child protection services reporting data limit the ability to more thoroughly define risk.

Given that EDs are hubs for crisis management, EM providers can play an integral role in child abuse prevention. A pediatric disaster preparedness approach can be employed, with an emphasis on the preparedness phase to bolster children’s safety net. EM providers can advocate for vulnerable children on clinical, community, and legislative policy levels. On a clinical level, providers can screen for stressors and connect children and families to support. On a community level, providers can partner with stakeholders to ensure support services are trauma informed and accessible. On a legislative level, providers can advocate for policies that promote child and family well-being.

Front line providers have the opportunity to nurture the environment in which children grow, so that when the inevitable storm comes to pass, the child will not only survive, but thrive within a stronger family, community, and society.

**DECLARATION OF COMPETING INTEREST**

None.

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**REFERENCES**

1 Center on Budget and Policy Priorities. Tracking the COVID-19 recession’s effects on food, housing, and employment hardships. Available at: https://www.cbpp.org/research/poverty-and-inequality/tracking-the-covid-19-recessions-effects-on-food-housing-and. Accessed 11-21-2020.

2 Long H, Van Dam A, Fowers A, et al. The covid-19 recession is the most unequal in modern US history. Washington Post 2020. September 30Available at https://www.washingtonpost.com/graphics/2020/business/coronavirus-recession-equality/. Accessed 10-27-2020.

3 Abedi V, Olulana O, Avula V, et al. Racial, economic, and health inequality and COVID-19 infection in the United States. J Racial Ethnic Health Dispar 2020. doi:10.1007/s40615-020-00833-4.

4 Lundberg M, Wuerml A.. Children and youth in crisis: protecting and promoting human development in times of economic shocks, Washington, DC: World Bank; 2012. Available at https://openknowledge.worldbank.org/handle/10986/9374 Accessed 12/2/21.

5 Agrawal N. The coronavirus could cause a child abuse epidemic. New York Times; 2020. Available at https://www.nytimes.com/2020/04/07/opinion/coronavirus-child-abuse.html Accessed 10-27-2020.
6 Woodall C.. As hospitals see more severe child abuse injuries during Coronavirus, ‘the worst is yet to come. USA Today; 2020. Available at https://www.usatoday.com/story/news/nation/2020/05/13/hospitals-seeing-more-severe-child-abuse-injuries-during-coronavirus/3116395001 Accessed 10-27-2020.

7 Schmidt S, Natanson H.. With kids stuck at home, ER doctors see more severe cases of child abuse. Washington Post 2020. Available at https://www.washingtonpost.com/education/2020/04/30/child-abuse-reports-coronavirus/ Accessed 10-27-2020.

8 Ingram J.. Has child abuse surged under COVID-19? Despite alarming stories from ERs, there’s no answer. NBC News 2020. Available at https://www.washingtonpost.com/education/2020/04/30/child-abuse-reports-coronavirus/ Accessed 10-27-2020.

9 Humphreys KL, Myint MT, ZeanaH.. Increased risk for family violence during the COVID-19 pandemic. Pediatrics 2020;146:1–3.

10 Campbell AM.. An increasing risk of family violence during the COVID-19 pandemic: strengthening community collaborations to save lives. Forensic Sci Inter Rep 2020;100089. doi:10.1016/j.fsir.2020.100089.

11 US Department of Health & Human Services Administration on children, youth, and families, Children’s Bureau. Child Maltreatment 2018. Available at https://www.acf.hhs.gov/cb/research-data-technology/statistics-research/child-maltreatment Accessed 10-27-2020.

12 Jengo M.. AAP urges vaccination as rates drop due to COVID-19. AAP News; 2020. Available at https://www.aappublications.org/news/2020/05/08/covid19vaccinations050820 Accessed 10-27-2020.

13 US Department of Agriculture. USDA provides flexibilities to ensure kids receive meals this fall. Available at: https://www.usda.gov/media/press-releases/2020/06/25/usda-provides-flexibilities-ensure-kids-receive-meals-fall. Accessed 11-2-2020.

14 Needle S, Wright JL.. American Academy of Pediatrics Disaster preparedness advisory council, committee on pediatric emergency medicine. Ensuring the health of children in disasters. Pediatrics 2015;136:e1407–17.

15 United Nations Office for Disaster Risk Reduction. 2009 UNISDR terminology on disaster risk reduction. Geneva, Switzerland: United Nations; 2009. Available at https://www.unisdr.org/publication/2009-unisdr-terminology-disaster-risk-reduction Accessed 12/20/2020.

16 Centers for Disease Control and Prevention. Child abuse and neglect, risk and protective factors. Available at:https://www.cdc.gov/violenceprevention/childabuseandneglect/riskprotectivefactors.html#Risk%20Factors%20for%20Victimization. Accessed 10-29-2020.

17 Greeley CS.. Child maltreatment prevention in the era of coronavirus disease 2019. JAMA Pediatr 2020;174(11):e202776.

18 Peterman A, Potts A, O’Donnell M, et al. Pandemics and violence against women and children. CGD working paper 528, Washington, DC: Center for Global Development; 2020. Available at https://www.cgdenv.org/sites/default/files/pandemics-and-vawg-april2.pdf Accessed 12/20/2020.

19 Brooks SK, Webster RK, Smith LE, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. Lancet 2020;395(10227):912–20.

20 North Texas hospital reports spike in severe child abuse cases; believe linked to stress from Coronavirus pandemic. CBS News Dallas-Ft. Worth; 2020. Available at https://dfw.cbslocal.com/2020/03/20/texas-hospital-spoke-severe-child-abuse-cases-coronavirus/ Accessed 10-29-2020.

21 Partap A, Coffman J, Camp T.. Child abuse rising in Fort Worth amid coronavirus. Here’s what you can do to help. Fort Worth Star Telegram; 2020. Available at https://www.star-telegram.com/opinion/opn-columns-blogs/other-voices/article242420876.html Accessed 12-9-2020.

22 Swedo E, Idalikadar N, Lecmis R, et al. Trends in US emergency department visits related to suspected or confirmed child abuse and neglect among children and adolescents aged <18 years before and during the COVID-19 pandemic — United States, January 2019–September 2020. Morb Mortal Wkly Rep 2020;69:1841–7.

23 Quiroz HJ, Parreco J, Easwaren L, et al. Identify populations at risk for child abuse: a nationwide analysis. J Pediatr Surg 2020;55:135–9.

24 Kovler ML, Ziegfeld S, Ryan LM, et al. Increased proportion of physical child abuse injuries at a level I pediatric trauma center during the COVID-19 pandemic. Child Abuse Negl 2020;104756. doi:10.1016/j.chiabu.2020.104756.

25 Barboza GE, Schiamberg LB, Pachl L.. A spatiotemporal analysis of the impact of COVID-19 on child abuse and neglect in the city of Los Angeles, California. Child Abuse Negl 2020;104710.1–15.

26 Lawson M, Piel MH, Simon M.. Child maltreatment during the COVID-19 pandemic: consequences of parental job loss on psychological and physical abuse towards children. Child Abuse Negl 2020;110:1–11.

27 RAINN. The National hotline consortium: impacts of COVID-19 on crisis hotlines, 2020. Available at: https://www.rainn.org/sites/default/files/Hotline%20Consortium%20HOUSE%20CC%20.pdf Accessed 10-29-2020.

28 RAINN. For the first time ever, minors make up half of visitors to National Sexual Assault Hotline; 2020. Available at https://www.rainn.org/news/first-time-ever-minors-make-half-visitors-national-sexual-assault-hotline Accessed 10-29-2020.

29 Lopez E.. Amid pandemic, more than half of calls to national sexual assault hotline are from children. Alive 2020;11. Available at https://www.11alive.com/article/news/health/coronavirus/amid-the-pandemic-more-than-half-of-calls-to-national-sexual-assault-hotline-are-from-children/85-c8f3af97-2244-458b-8104-da372bd575d Accessed 10-29-2020.

30 Childhelp. Hotline Impact Report: FY 2020. Available at: https://www.childhelp.org/wp-content/uploads/2020/10/Hotline-Impact-Report-FY20.pdf. Accessed 11-21-2020.

31 Wolfersteig W, Moreland D, Diaz M, et al. Prevent abuse of children text and chat hotline (PACTEC) project: quarterly data report. 2020. Available at: https://www.childhelp.org/wp-content/uploads/2020/10/PACTECH-QR-October-2020_10.16.20.pdf. Accessed 11-21-2020.

32 National Center for Missing & Exploited Children. COVID-19 and missing & exploited children. Available
at: https://www.missingkids.org/blog/2020/covid-19-and-missing-and-exploited-children. Accessed 11-21-2020.

33 Leeb RT, Bitsko RH, Radhakrishnan L, et al. Mental health-related emergency department visits among children aged <18 years during the COVID-19 pandemic — United States, January 1–October 17, 2020. MMWR Morb Mortal Wky Rep 2020;69:1675–80.

34 Patrick SW, Henkhaus LE, Zickafoose JS, et al. Well-being of parents and children during the COVID-19 pandemic: a national survey. Pediatrics 2020;146(4):e2020016824. doi: 10.1542/peds.2020-016824.

35 Levine H. As school returns, kids with special needs are left behind. New York Times; 2020. Available at https://www.nytimes.com/2020/09/16/parenting/school-reopening-special-needs.html. Accessed 11-21-2020.

36 Centers for Disease Control and Prevention. Child maltreatment among children with disabilities. Available at: https://www.cdc.gov/ncebd/ddisabilityandsafety/abuse.html. Accessed 11-2-2020.

37 Tener D, Marmor A, Katz C, et al. How does COVID-19 impact intrafamilial child sexual abuse? Comparison analysis of reports by practitioners in Israel and the US. Child Abuse Negl 2020;104779:1–12. 10.1016/j.chiabu.2020.104779.

38 Radwan CM. COVID-19: poison control centers report surge in accidental poisonings from cleaning products. Contemp Pediatr 2020. Available at https://www.contemporarypediatrics.com/view/covid-19-poison-control-centers-report-surge-accidental-poisonings-cleaning-products Accessed 10-29-2020.

39 Cioffi CC, Leve LD. Substance use disorder treatment, parenting, and COVID-19. J Substance Abuse Treat 2020;119:108148. doi: 10.1016/j.salt.2020.108148.

40 Panchal N, Kamal R, Orgera K, et al. The Implications of COVID-19 for mental health and substance use. Kaiser Family Foundation; 2020. Available at https://www.kff.org/coronavirus-covid-19/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/ Accessed 10-29-2020.

41 Bosnup B, McKenney M, Elkbuli A. Alarming trends in US domestic violence during the COVID-19 pandemic. Am J Emerg Med 2020;38:2753–5.

42 Adhikari S, Pantaleo NP, Feldman JM. Assessment of community-level disparities in coronavirus disease 2019 (COVID-19) infections and deaths in large US metropolitan areas. JAMA Netw Open 2020;3(7):e2016938.

43 Sutherland M, McKenney M, Elkbuli A. Gun violence during COVID-19 pandemic: paradoxical trends in New York City, Chicago, Los Angeles and Baltimore. Am J Emerg Med 2021;39:225–6.

44 Fuller T, Arango T. Police pin a rise in murders on an unusual suspect: COVID. New York Times; 2020. Available at https://www.nytimes.com/2020/10/29/us/coronavirus-murders.html. Accessed 10-29-2020.

45 Welch M, Haskins R. What COVID-19 means for America’s child welfare system. Brookings; 2020. Available at https://www.brookings.edu/research/what-covid-19-means-for-americas-child-welfare-system/. Accessed 12-13-2020.

46 Stewart N. Child abuse cases drop 51 percent. The authorities are very worried. The New York Times; 2020. Available at https://www.nytimes.com/2020/06/09/nyregion/coronavirus-nyc-child-abuse.html. Accessed 10-29-2020.

47 Lee CK, Goldenstein EG, Wallace CT. Suffering in silence: how COVID-19 school closures inhibit the reporting of child maltreatment. J Public Econ 2020;190:104258. doi: 10.1010/j.jpubeco.2020.104258.

48 Dee TS. Alcohol abuse and economic conditions: evidence from repeated cross-sections of individual-level data. Health Econ 2001;10:257–70.

49 Schneider D, Harknet K, McLanahan S. Intimate partner violence in the great recession. Demography 2016;53:471–505.

50 McInerney M, Mellor JM, Nicholas LI. Recession depression: mental health effects of the 2008 stock market crash. J Health Econ 2013;32:1090–104.

51 Frasquillo D, Matos MG, Salonna F, et al. Mental health outcomes in times of economic recession: a systematic literature review. BMC Public Health 2016;16:115. doi:10.1186/s12889-016-2720-y.

52 Huang MI, O’Riordan MA, Fitzenzrider E, et al. Increased incidence of nonaccidental head trauma in infants associated with the economic recession. J Neurosurg Pediatr 2011;8:171–6.

53 Berger RP, Fromkin JB, Stutz H, et al. Abusive head trauma during a time of increased unemployment: a multicenter analysis. Pediatrics 2011;128:637–43.

54 Wood JN, French BP, Fromkin J, et al. Association of pediatric abusive head trauma rates with macroeconomic indicators. Acad Pediatr 2015;16:224–32.

55 Shananah ME, Zolotor AJ, Parrish JW, et al. National, regional, and state abusive head trauma: application of the CDC algorithm. Pediatrics 2013;132:e1546–53.

56 Scheenck-Fontaine A, Gassman-Pines A. Income inequality and child maltreatment risk during economic recession. Child Youth Serv Rev 2020;112:104926. doi:10.1016/j.childyouth.2020.104926.

57 Millett L, Lanier P, Drake B. Are economic trends associated with child maltreatment? Preliminary results from the recent recession using state level data. Child Youth Serv Rev 2011;33:1280–7.

58 Brooks-Gunn J, Schneider W, Waldfogel J. The great recession and the risk for child maltreatment. Child Abuse Negl 2013;37:721–9.

59 Schneider W, Waldfogel J, Brooks-Gunn J. The great recession and risk for child abuse and neglect. Child Youth Serv Rev 2017;72:71–81.

60 Keenan HT, Marshall SW, Nocera MA, et al. Increased incidence of inflicted traumatic brain injury in children after a natural disaster. Am J Prev Med 2004;26:189–193.

61 Curtis T, Miller BC, Berry EH. Changes in reports and incidence of child abuse following natural disasters. Child Abuse Negl 2000;24:1151–62.

62 Brandenburg MA, Watkins SM, Brandenburg KL, et al. Operation Child-ID: reuniting children with their legal guardians after Hurricane Katrina. Disasters 2007;31:277–87.

63 Klein A. Preventing and responding to sexual violence
in natural disasters: a planning guide for prevention and response. Louisiana Foundation Against Sexual Assault & National Sexual Violence Resource Center; 2008. Available at https://www.nsvrc.org/sites/default/files/Publications_NSVRC_guides_Sexual-Violence-in-Disasters_A-planning-guide-for-prevention-and-response.pdf Accessed 12/20/20.

65 Schumacher JA, Coffey SF, Norris FH, et al. Intimate partner violence and Hurricane Katrina: predictors and associated mental health outcomes. Violence Vict 2010;25:588–603.

66 Finkelhor D, Turner H, Ormrod R, et al. Children’s exposure to violence: a comprehensive national survey. US Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention; 2009. Available at https://www.ncjrs.gov/pdfs/ojjdp/227744.pdf Accessed 12/20/20.

67 Margolin G, Vickerman KA, Ramos MC, et al. Youth exposed to violence: stability, co-occurrence, and context. Clin Child Fam Psychol Rev 2010;12:39–54.

68 Meyers JL, Lowe SR, Eaton NR, et al. Childhood maltreatment, 9/11 exposure, and latent dimensions of psychopathology: a test of stress sensitization. J Psychiatr Res 2015;68:337–45.

69 Liu G, Wiebe DJ. A time-series analysis of firearm purchasing after mass shooting events in the United States. JAMA Netw Open 2019;2(4):e191376. doi:10.1001/jamanetworkopen.2019.1736.

70 Chung S, Foltin G, Schonfeld DJ, et al. Pediatric disaster preparedness and response topical collection: part one, Itasca, IL: American Academy of Pediatrics; 2019. Available at https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Children-and-Disasters/Pages/Pediatric-Terrorism-And-Disaster-Preparedness-Resource.aspx Accessed 12/20/20.

71 Badawy SM, Radovic A.. Digital approaches to remote pediatric health care delivery during the COVID-19 pandemic: existing evidence and a call for further research. JMIR Pediatr Parent 2020;3(1):e20049. doi:10.2196/20049.

72 Self-Brown S, Anderson P, Edwards S, et al. Child maltreatment and disaster prevention: a qualitative study of community agency perspectives. West J Emerg Med 2013;14:401–7.

73 American Academy of Pediatrics. Poverty & child health: advocacy. Available at: https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/poverty/Pages/Advocacy.aspx. Accessed 11-24-2020.

74 The National Child Traumatic Stress Network. Parent/caregiver guide to helping families cope with the coronavirus disease 2019 (COVID-19). Available at: https://www.netsn.org/resources/parent-caregiver-guide-to-helping-familiescope-with-the-coronavirus-disease-2019. Accessed 11-24-2020.

75 Healthy Families America. What makes a virtual home visit a visit? Available at: https://www.healthyfamiliesamerica.org/hfa-response-to-covid-19/what-makes-a-virtual-home-visit-a-visit/. Accessed 12-13-2020.