

# PEDIATRICS

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

## Mitigating Armed Conflict Casualties in Children

Tom Adamkiewicz, MD, FRCP(C), MSCR, and Jeffrey Goldhagen, MD, MPH

**DOI:** 10.1542/peds.2020-027847

**Journal:** *Pediatrics*

**Article Type:** Pediatrics Perspectives

**Citation:** Adamkiewicz T, Goldhagen J. Mitigating armed conflict casualties in children. *Pediatrics*. 2020; doi: 10.1542/peds.2020-027847

This is a prepublication version of an article that has undergone peer review and been accepted for publication but is not the final version of record. This paper may be cited using the DOI and date of access. This paper may contain information that has errors in facts, figures, and statements, and will be corrected in the final published version. The journal is providing an early version of this article to expedite access to this information. The American Academy of Pediatrics, the editors, and authors are not responsible for inaccurate information and data described in this version.

## Mitigating Armed Conflict Casualties in Children

Tom Adamkiewicz MD, FRCP(C), MSCR<sup>a</sup> and Jeffrey Goldhagen, MD, MPH<sup>b</sup>

**Affiliations:**

a) Department of Family Medicine, Morehouse School of Medicine; Atlanta, GA

b) Department of Pediatrics, University of Florida, Jacksonville, FL

\*

**Address correspondence to:** Tom Adamkiewicz, Perimeter Pediatrics, Atlanta, 3020

Mercer University Drive, Atlanta GA, 30341, [tadamkiewicz@msm.edu], 404-697-0726.

**Funding Source:** No funding was secured for this study.

**Financial Disclosure:** The authors have no financial relationships relevant to this article to disclose.

**Conflict of Interest:** The authors have no conflicts of interest to disclose.

**Abbreviations:** UN, United Nations; US, United States; ISIS, Islamic State of Iraq, and Syria; UK, United Kingdom; ISSOP, International Society for Social Pediatrics and Child Health.

The 2019 annual UN Report on Children and Armed Conflict identified 10,173 child casualties and 4,019 children killed in armed conflicts the preceding year.<sup>1</sup> Most of these children were victims of "internationalized" conflicts, defined as internal conflicts where one or more third party governments are involved with combat personnel.<sup>2</sup> Five such protracted conflicts involve the US and allied armies (Afghanistan, Syria, Yemen, Somalia, Mali). These account for 69% of total reported child casualties and 64% of children killed. We present examples of how children continue to be harmed in armed conflicts, as well as practical suggestions for how pediatricians can help reduce the impact of armed conflicts on children.

Children are inadvertently harmed in conflicts. However, many civilians, including children, are injured, or killed due to policies and compromises made by military operation planners. For example, ISIS used civilians as human shields in urban areas. To expedite the operation to eliminate ISIS in Iraq and Syria while limiting US ground troops, US government policy makers increased the "non-combatant casualty value", the number of civilians allowed to be killed per air strike.<sup>3</sup> By 2018 at least 1139 civilians, including children, were killed in that operation over a 4 year period, many died as buildings collapsed from airstrikes, undoubtedly an underestimation as onsite investigations were not conducted.<sup>3</sup>

Indiscriminate use of arms, lack of accountability and deliberate targeting of civilian populated areas increase risks to children. In 2015, among 1953 casualties in children reported by the UN in Yemen, 60% were due to airstrikes<sup>1</sup> with armament manufactured by the US, UK, and other allies. Yet the US government curtailed training in precision targeting for coalition pilots flying over Yemen.<sup>4</sup> Subsequently, a school bus with over 40 children was bombed.<sup>4</sup> In 2019, 12% of the 1447 child casualties in Yemen were from airstrikes.<sup>1</sup> In 2019 Syrian and Russian forces targeted civilian populations, with air attacks on medical and other civilian facilities over an area the size of Luxembourg in Idlib, terrorizing civilians.<sup>1</sup> Among the 1454 child casualties in Syria, 35% were from airstrikes.<sup>1</sup> In addition, according to the UN, non-state actors in Yemen and Syria, working with outside states, restricted access to humanitarian care and demanded payments from fleeing civilians, among other human right abuses.<sup>1</sup>

Political barriers, and a lack of adequate medical care and evacuation resources result in further harm. A review of pediatric combat trauma care observed that over 80% of children died at the scene of the attack or during transportation to a health facility.<sup>5</sup> Children are more likely to incur head trauma compared to adults, and often suffer from complex injuries (face, eyes, trunk, vasculature, extremities, burns)—requiring prolonged admissions, repeated surgeries, intensive and expert multidisciplinary care in secure, well-equipped medical facilities.<sup>5</sup> Recent studies were conducted in countries neighboring conflict zones, such as Turkey, or in military trauma units.<sup>5</sup>

In contrast, non-military data on combat trauma care from inside conflict areas is limited. A recent study examined hospital conditions during urban sieges in Syria.<sup>6</sup> Personnel reported shortages in medicine, equipment, electricity, and lack of staff (including neurosurgeons), often working in underground facilities to avoid airstrikes.<sup>6</sup> Although

difficult to collect, information related to access to quality tertiary and quaternary care inside and/or across borders is necessary to optimize the care of these children.

As the world's largest purveyor of arms, since year 2002 the US has exported between \$15 and \$75 billion in arms per year—representing up to 4 to 5% of its total annual exports.<sup>7</sup> Economic interests often drive these sales.<sup>7</sup> Though the US government is legally required to prevent arms sales to states that use them indiscriminately, an analysis found no correlation between the size of arms sales and human rights abuses or bloody civil wars committed by purchasing states.<sup>7</sup> A fraction of military expenditures in Yemen could cover its emergency humanitarian needs,<sup>1</sup> yet these remain unmet.

### **Role of pediatricians**

Pediatricians and related child health organizations have critical roles to play in advocating for and implementing policies and practices that prevent and mitigate harm to children involved in armed conflict. Some of these were outlined in an AAP Policy Statement and Technical Report on the *Effects of Armed Conflict on Children*,<sup>8,9</sup> and in the International Society for Social Pediatrics and Child Health (ISSOP) Beirut *Declaration on the Prohibition of Harm to Children in Armed Conflict*.<sup>10</sup> These can be summarized as follows.

#### *Cura in bello* (care during conflicts)

Improved and accountable healthcare of the injured:

- *Medical care.* Pediatricians, surgeons, emergency medicine and pediatric intensive care subspecialists, should consult private and public sector entities to support the implementation of prompt rescue and evacuation protocols for injured children, and access to safe medical centers capable of caring for them across age and injury spectra. Existing regional referral centers of excellence should be equipped and supported to ensure state of the art care of injured children. If such facilities are unavailable, these should be established with local partners.
- *Reporting of medical treatment and outcomes.* Pediatricians with proper expertise should help develop ethical, innovative, and rigorous reporting methods for governmental and international organizations, including the UN, to document childhood injuries, care provided, and outcomes.
- *Deter airstrikes.* Pediatricians should advocate that UN Security Council permanent members place monitors inside all medical facilities serving civilians and children, especially in “internationalized” armed conflicts, to deter airstrikes.

Mitigation of harm during armed conflicts:

- *Safe environments.* Pediatricians should advocate that children in armed conflicts have access to necessities for optimal development, including shelter, sanitation, food, water, schooling, and jobs for parents, as well as primary health care, treatment for chronic illnesses, and mental health support.
- *Casualty reporting.* US and allied nations pediatricians should advocate for enforceable and accurate casualty counts of all civilian victims in all countries where US and allied nations' armaments are sold or used. Reports should include

number of children and women injured or killed, as National Defense Authorization Act requirements to improve policies that ensure their protection.

Cure ante bellum (cure before armed conflicts)

- *Deconfliction strategies.* Pediatricians should advocate for policies that prevent armed conflicts, and when armed conflicts occur, that military operations prioritize the protection of children.
- *Corporate responsibility.* Protection of children against harm in armed conflicts should be the priority of corporate governance of institutions linked directly or indirectly to arms procurement. Child health professionals should ensure personal investments, and those of organizations in which they are members and institutions who contribute to their pension funds, are ethical and socially responsible—as related to investment in the arms industry.
- *Collaborate and advocate.* Pediatricians should engage, learn from, and collaborate across health care disciplines as well as with educators, international humanitarian law experts, government and non-governmental organizations, corporate leaders, and the military. Advocacy should focus on feasible evidence-based goals that maximize benefit, equity, prudence, feasibility, and transparency.

Individual actions

- Actions by individuals can include: provide appropriate health care to children of displaced/refugee families in their practices; become familiar with the evolving nature of armed conflicts, international humanitarian law and government policies that may lead to civilian injuries; join groups or organizations that work in conflict mitigation; write to government representatives; examine personal investments.

We hope pediatricians and concerned parties will join and work together to reduce harm to children impacted by armed conflict.

**Acknowledgments**

We thank Iman Nuwayhid, MD, MPH, Yvon Heller MD; Miguel Abboud, MD; Elif N Özmert MD, PhD; Tony Waterston, MD, FRCPCH; Kasbar Tashdjian, MD; Nick Spencer, FRCPCH; Barbara Rubio MD; Charles Oberg, MD, MPH, for their insightful contributions and comments for the ISSOP Beirut Declaration and in the preparation of this manuscript. We are also thankful for fruitful comments from expert reviewers. We acknowledge and thank the participants of the 2019 ISSOP Beirut conference for their helpful discussions and inspiring work; along with refugee children and families throughout the world, whose strength offers hope. We also acknowledge Mrs. RayKay Watley for her assistance in the preparation and editing of the manuscript. Our hearts go out to the citizens of Beirut following the explosion of August 4, 2020.

**References**

1. UN. Children and armed conflict. Report of the Secretary-General: A/69/926–S/2015/409, <https://reliefweb.int/sites/reliefweb.int/files/resources/N1510923.pdf>; A/70/836–S/2016/360, <https://reliefweb.int/sites/reliefweb.int/files/resources/N1611119.pdf>; A/72/361–S/2017/821, <https://reliefweb.int/sites/reliefweb.int/files/resources/N1726811.pdf>; A/72/865–S/2018/465, [https://www.un.org/ga/search/view\\_doc.asp?symbol=S/2018/465&Lang=E&Area=UND OC](https://www.un.org/ga/search/view_doc.asp?symbol=S/2018/465&Lang=E&Area=UND OC); A/73/907–S/2019/509, [https://www.un.org/ga/search/view\\_doc.asp?symbol=S/2019/509&Lang=E&Area=UND OC](https://www.un.org/ga/search/view_doc.asp?symbol=S/2019/509&Lang=E&Area=UND OC) (accessed 6-19 December 2019); A/74/845–S/2020/525. <https://undocs.org/en/S/2020/525> (accessed 6 July 2020); S/2018/969, Security Council 30 October 2018, Children and armed conflict in the Syrian Arab Republic Report of the Secretary-General. <https://undocs.org/S/2018/969>.; Report of the Independent International Commission of Inquiry on the Syrian Arab Republic. A/HRC/44/61 [https://www.ohchr.org/EN/HRBodies/HRC/RegularSessions/Session44/Documents/A\\_HRC\\_44\\_61\\_AdvanceUneditedVersionFINAL.docx](https://www.ohchr.org/EN/HRBodies/HRC/RegularSessions/Session44/Documents/A_HRC_44_61_AdvanceUneditedVersionFINAL.docx) (accessed 11 July 2020); A/HRC/45/31. <https://undocs.org/A/HRC/45/31> (accessed 15 September 2020); S/2019/453, Security Council 3 June 2019, Children and armed conflict in Yemen Report of the Secretary-General. [https://www.un.org/ga/search/view\\_doc.asp?symbol=S/2019/453&Lang=E](https://www.un.org/ga/search/view_doc.asp?symbol=S/2019/453&Lang=E) (accessed 619 December 2019); Yemen, Situation Report, Last updated: 3 Sep 2020. <https://reliefweb.int/sites/reliefweb.int/files/resources/Situation%20Report%20-%20Yemen%20-%20203%20Sep%202020.pdf> (accessed 26 September 2020); A/HRC/45/6 Situation of human rights in Yemen, including violations and abuses since September 2014; Comprehensive report of the Group of Eminent International and Regional Experts on Yemen. <https://www.ohchr.org/Documents/HRBodies/HRCouncil/GEE-Yemen/2020-09-09-report.pdf> (accessed 9 September 2020). 2015-2020.
2. Håvard S, Rustad SA, Urdal H, Nygård HM. Trends in Armed Conflict, 1946–2018. <https://www.prio.org/utility/DownloadFile.ashx?id=1858&type=publicationfile> (accessed 11 November 2019). *Conflict Trends, PRIO, Oslo*. 2019;3 (ISBN: 978-82-7288-992-9 (print); 978-82-7288-993-6 (online)).
3. Shifrin N. ‘Systemic shortfalls’ obscure true civilian cost of U.S. airstrikes against ISIS. <https://www.pbs.org/newshour/show/systemic-shortfalls-obscure-true-civilian-cost-of-u-s-airstrikes-against-isis> (accessed 7 December 2019). *PBS*. 2018.
4. Oakford S. One American’s Failed Quest to Protect Civilians in Yemen. <https://www.theatlantic.com/international/archive/2018/08/yemen-saudi-airstrike-school-bus/567799/> (accessed 7 December 2019). *The Atlantic*. 2018.
5. Milwood Hargrave J, Pearce P, Mayhew ER, Bull A, Taylor S. Blast injuries in children: a mixed-methods narrative review. *BMJ Paediatr Open*. 2019;3(1):e000452-e000452.
6. Fardousi N, Douedari Y, Howard N. Healthcare under siege: a qualitative study of health-worker responses to targeting and besiegement in Syria. *BMJ Open*. 2019;9(9):e029651.
7. Thrall T, Cohen J, Dorminey C. Perspective Power, Profit, Or Prudence? Us Arms Sales Since 9/11. *Strategic Studies Quarterly*. 2020;Summer

8. Kadir A, Shenoda S, Goldhagen J, Pitterman S. The Effects of Armed Conflict on Children. *Pediatrics*. 2018;142(6):e20182586.
9. Shenoda S, Kadir A, Pitterman S, Goldhagen J. The Effects of Armed Conflict on Children. *Pediatrics*. 2018;142(6):e20182585.
10. International Society for Social Pediatrics and Child Health Position Statement. Beirut Declaration on Prohibition of Harm to Children in Armed Conflict. 23 January 2020. <https://www.issop.org/cmdownloads/beirut-declaration-on-prohibition-of-harm-to-children-in-armed-conflict/>. (accessed August 13 2020). 2020.

**Mitigating Armed Conflict Casualties in Children**  
Tom Adamkiewicz and Jeffrey Goldhagen  
*Pediatrics* originally published online November 18, 2020;

**Updated Information & Services**

including high resolution figures, can be found at:  
<http://pediatrics.aappublications.org/content/early/2020/11/16/peds.2020-027847.citation>

**Permissions & Licensing**

Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:  
<http://www.aappublications.org/site/misc/Permissions.xhtml>

**Reprints**

Information about ordering reprints can be found online:  
<http://www.aappublications.org/site/misc/reprints.xhtml>

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®



# PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

## **Mitigating Armed Conflict Casualties in Children**

Tom Adamkiewicz and Jeffrey Goldhagen

*Pediatrics* originally published online November 18, 2020;

The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://pediatrics.aappublications.org/content/early/2020/11/16/peds.2020-027847.citation>

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 345 Park Avenue, Itasca, Illinois, 60143. Copyright © 2020 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®

