



# The impact of the consensus statement on abusive head trauma in infants and young children

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## Abstract

It seems paradoxical that facts, data and science are still considered controversial despite the harrowing death of a multitude of people from coronavirus disease 2019 (COVID-19), an unparalleled health care crisis of our lifetime. In addition, while scientists are desperately attempting to produce a vaccine for COVID-19, a large segment of the populace still believes in conspiracies related to vaccines. Therefore, it is not surprising that the diagnosis of abusive head trauma (AHT) faces similar challenges — the difference being that AHT challenges are mostly in the realms of law courts rather than actual clinical management of these infants. Against this backdrop, the Child Abuse Imaging Committee of the Society for Pediatric Radiology (SPR) collaborated with other leading experts to develop the consensus statement on AHT. This consensus statement has had a significant impact since its publication. It is now endorsed by 17 multinational, multidisciplinary organizations. The consensus statement has helped educate the diverse stakeholders of AHT and has helped further our understanding of AHT and the issues related to it. This could serve as the template for developing future consensus documents.

**Keywords** Abusive head trauma · Child abuse · Consensus statement · Imaging · Infants

## Introduction

It is ironic that in the current coronavirus disease 2019 (COVID-19) environment — where at the time of writing this article there had been more than 9.9 million cases and 237,000 deaths from COVID-19 in the United States — the science, evidence and facts are still considered controversial [1]. We have been working at “warp speed” to develop a vaccine for COVID-19 together with 165 organizations around the world to halt the pandemic, but the measles–mumps–rubella (MMR) vaccine–autism controversy still lingers and similar anti-vaccination groups are also agitating against the COVID-19 vaccine [2–5]. A recent Gallup poll revealed that 1 in 3 Americans is reluctant to get vaccinated, even if a vaccine is approved by the U.S. Food and Drug Administration (FDA) and is available at no cost [6].

We are well aware of the devastating effects of the MMR vaccine–autism controversy, first espoused by Wakefield et al. [7] in a *Lancet* article. The article was subsequently retracted and the science thoroughly debunked [8]. As a direct fallout, Dr. Wakefield lost his medical license to practice, for serious professional misconduct [9]. The expectation was that the bad science would be laid to rest. However, the controversy lives on, further enabled by powerful social media influencers and fringe proponents of this MMR vaccine–autism myth in the medical science world. These have included films such as *Vaxxed* and news articles in reputed journals and mainstream media platforms [10]. It has found mention on *The Oprah Winfrey Show* and was even discussed during a 2016 presidential political debate [11, 12]. These theories, in effect, have acquired a zombie-like state, where they are sustained by conspiracy theorists even after being debunked. The consequences have been devastating, with resurgence of measles outbreaks all over the globe. Measles was supposedly eradicated in USA but has made a comeback with multiple deaths [13].

We are seeing a similar template being followed with the abusive head trauma (AHT) diagnosis. There have been high-profile news reports on the Cable News Network (CNN) and in *The New York Times*, along with governmental reports such

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as that by the Swedish Agency for Health Technology Assessment and Assessment of Social Services (SBU), that have discredited the diagnosis of AHT and turned it into a legal controversy [14, 15]. There is similarly a small group of physicians that has created a Potemkin village of unsubstantiated alternative diagnoses, without any factual basis [16, 17]. However, as noted in an editorial, the Wakefield report is considered a fraud, whereas the SBU report is considered a limited review of AHT with an artificial view of traumatic shaking and of limited clinical value in the real world of clinical practice [18]. The deficiencies of the SBU report have been highlighted in many reviews [18–21].

## Consensus statement

In response, the Child Abuse Imaging Committee of the Society for Pediatric Radiology (SPR), under the guidance of Dr. Tom Slovis, collaborated with a broad-based team of multidisciplinary multinational authors with expertise in abusive head trauma to develop a consensus statement on abusive head trauma [22]. These authors were experienced in their specialty; had numerous publications, presentations and grants; and were actively engaged in clinical work including managing children with AHT.

The questions considered in the document include [22]:

- What are the causes of head injury in infants and young children? Why has AHT terminology evolved (shaken baby syndrome, battered child, abusive head trauma, etc.)?
- What are the presenting features of AHT?
- How is the diagnosis of AHT made?
- What unsubstantiated alternative diagnoses are being proffered in the court (e.g., cerebral sinovenous thrombosis, hypoxic–ischemic injury, lumbar puncture, dysphagia, birth-related injury and benign enlargement of subarachnoid spaces)?
- What is the role of the multidisciplinary child protection team in the determination of AHT?
- What issues allow the misconceptions to be perpetuated in the courtroom?
- What can be done to provide the court accurate information about the state of medical knowledge in AHT?

## Endorsements

This consensus statement has been supported and endorsed by multiple organizations worldwide [22, 23]. We are pleased to report that two additional organizations have endorsed the statement. These are the Society of German-speaking Pediatric Radiologists (GPR) and the Pediatric Society of

New Zealand. This makes a total of 17 multinational multidisciplinary organizations that have endorsed the consensus statement on AHT in young infants and children (Table 1).

## Impact

We have had a tremendous response from the clinical community worldwide, as reflected by their endorsements and positive feedback. At this writing, the consensus statement had been downloaded more than 13,000 times and was in the 98th percentile of all articles being tracked by Altmetric; it had been cited 63 times and had an Altmetric score of 108 [24]. At this writing, the consensus statement was ranked number 1 of 1,520 outputs from the *Pediatric Radiology* journal. It has been cited in and influenced legal rulings [25].

This confirms that there was a critical need for this professional-society-led consensus document. Furthermore, this statement has the potential to significantly impact the lives of vulnerable children and their caregivers.

## Conclusion

Abusive head trauma is an established medical diagnosis with well-defined clinical criteria, but it represents a complex medico-legal challenge. The acceptance, endorsement and application of the consensus statement on AHT, successfully around

**Table 1** Organizations that have endorsed the consensus statement on abusive head trauma in infants and children

Organizations
1. Society for Pediatric Radiology (SPR)
2. European Society of Paediatric Radiology (ESPR)
3. American Society of Pediatric Neuroradiology (ASPNR)
4. American Academy of Pediatrics (AAP)
5. European Society of Neuroradiology (ESNR)
6. American Professional Society on the Abuse of Children (APSAC)
7. Swedish Paediatric Society
8. Norwegian Pediatric Association
9. Japanese Pediatric Society
10. Executive Committee of the American College of Radiology (ACR)
11. Sociedad Latinoamericana de Radiología Pediátrica (SLARP)
12. Société Francophone d'Imagerie Pédiatrique et Périnatale (SFIPP)
13. American Association for Pediatric Ophthalmology and Strabismus (AAPOS)
14. Asian and Oceanic Society for Paediatric Radiology (AOSPR)
15. Australian & New Zealand Society for Paediatric Radiology (ANZSPR)
16. Society of German-speaking Pediatric Radiologists (GPR)
17. The Pediatric Society of New Zealand

the world by multidisciplinary organizations, demonstrates the utility of consensus statements that are coordinated and developed by professional societies.

## Compliance with ethical standards

**Conflicts of interest** Dr. Choudhary is a medical expert in child abuse cases.

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