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Evaluation of press releases for chronic traumatic encephalopathy research over the last twenty years

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Research which associates exposure to repetitive head impacts (RHI) and/or traumatic brain injuries (TBI) with CTE are oft-discussed on social media platforms and tend to get more news coverage in the popular media. One strategy to communicate research findings to the public is by issuing a press release, which reflects a personalized statement about a given study and its importance to the scientific community. The purpose of this study was to investigate the number of press releases published on CTE research over the last 20 years and the rate of publishing press releases by different research entities (i.e., Universities, research institutes, scientific publishers, etc.). Descriptive statistics are provided for the number of press releases for the overall search and by publishing entity. Rates of press releases during the football “season” (August–January) are reported. Of additional interest were the number of press releases published within 1 week of notable professional American football events, such as the Super Bowl, the rookie draft, and combine. Overall, 102 press releases about CTE research were published from October 22nd, 2009 to July 11th, 2025. There were 8 press releases within 1 week of the Super Bowl (7.8%), 9 within 1 week of the rookie draft (8.8%), 5 within 1 week of the combine (5.0%), 46 in the football season (45.1%). Overall, press releases were more likely to meet at least 1 of those criteria than not ($n = 67$; 65.7% [95% CI: 55.6, 74.8%], $p = 0.002$). From 2009 (the year of the first published press release) to 2025, Boston University issued a significantly greater proportion of press releases compared to all other institutions combined ($n = 50$; 49.0% [95% CI: 39.0, 59.1%], $p < 0.001$). The next most frequent institutions were American Academy of Neurology ($n = 7$; 6.9%), JAMA Network ($n = 6$; 5.9%), and Mass General Brigham Hospital ($n = 4$; 3.9%). Amongst only Universities/research institutions, the most frequent press releases came from Boston University ($n = 50$; 62.5%), Mass General Brigham Hospital ($n = 4$; 5.0%), University Health Network ($n = 2$; 2.5%), and University of California Los Angeles ($n = 2$; 2.5%). The results of this study show there is a significant disparity in the number of press releases for CTE research across research entities. A disparity this wide in direct press engagements has the potential to create an information monopoly that can skew public understanding. Given the ramifications of CTE research, efforts should be made by multidisciplinary experts to actively join the national conversation and contribute original research on the issue.

KEYWORDS

American football, chronic traumatic encephalopathy, media, press release, traumatic brain injury

Introduction

Chronic traumatic encephalopathy (CTE) has captured the public's attention since the release of the first case report identifying the neuropathology in a former professional American football player 20 years ago (Omalu et al., 2005). Research which associates exposure to repetitive head impacts (RHI) and/or traumatic brain injuries (TBI) with CTE are oft-discussed on social media platforms and tend to get more news coverage in the popular media (Eagle and Okonkwo, 2023; Wolfson et al., 2020). One strategy to communicate research findings to the public is by issuing a press release, which reflects a personalized statement about a given study and its importance to the scientific community. The frequency with which research groups issue press releases about study findings could conceivably influence public knowledge and perceptions about a certain topic (Autzen, 2014). This is potentially problematic as the scientist does not have explicit control of the wording used by news agencies that identify the press release and use it to compose a news story (Sumner et al., 2014). As a result, the public's perception of a phenomenon could be incomplete if overly influenced by certain subgroups of a broader field.

These issues may be particularly relevant to CTE research and media coverage, as studies show a disproportionate amount of information obtained by athletes about CTE comes from news stories or social media (Wolfson et al., 2020; Beidler et al., 2021). This has led to a significant minority of amateur and professional contact sports athletes reporting the belief that CTE, and the clinical symptoms associated with it during life, are inevitable (Baugh et al., 2017). These conclusions are not scientifically supported, but they nevertheless have the potential to influence symptomatic people who have been exposed to RHI and/or TBI. The purpose of this study was to investigate the number of press releases published on CTE research over the last 20 years and the rate of publishing press releases by different research entities (i.e., Universities, research institutes, scientific publishers, etc.). Given the association between CTE research and professional American football (which gets considerably more media coverage in the United States than any other sport) (Billings et al., 2020), timing of press releases with notable annual events in professional American football were also investigated.

Methods

A search for the term “CTE” or “chronic traumatic encephalopathy” was conducted on July 31st, 2025 on *EurekAlert!*, which is an online, global news release platform operated by the American Association for the Advancement of Science (Zhang et al., 2024). This site provides a platform to post embargoed and then publicly released press statements about new findings in science, medicine and technology. The date, title and publishing entity of the press release was extracted from the search engine and entered in a database. There were no duplicate results in the extracted file.

Descriptive statistics are provided for the number of press releases for the overall search and by publishing entity. Because of the strong association between CTE and American football, rates of press releases during the football “season” (August–January) are reported. Of additional interest were the number of press releases published within 1 week of notable professional American football events, such as the Super Bowl, the rookie draft, and combine. The dates of these events were readily available online. Exact binomial tests with 95% confidence

intervals (95% CI) were used to compare the observed frequencies of press releases during the football season and frequency of press releases being issued from the top publishing university compared to all others (Krishnamoorthy and Peng, 2007). A null hypothesis prevalence of 50% was used to compare the observed frequency of press releases meeting football event criteria. For comparing the top publishing university to all others, the null hypothesis prevalence was set to the average press release rate for all analyzed institutions. Analyses were completed in R.

Results

Overall, 102 press releases about CTE research were published from October 22nd, 2009 to July 11th, 2025 (full list in [Supplementary Table 1](#)). Press releases were most frequently issued by Universities or research institutions ($n = 80$; 78.4%), followed by scientific societies ($n = 10$; 9.8%) and academic publishing companies ($n = 10$; 9.8%). There were 8 press releases within 1 week of the Super Bowl (7.8%), 9 within 1 week of the rookie draft (8.8%), 5 within 1 week of the combine (5.0%), 46 in the football season (45.1%). Overall, press releases were more likely to meet at least 1 of those criteria than not ($n = 67$; 65.7% [95% CI: 55.6, 74.8%], $p = 0.002$).

The frequency of publishing at least 2 press releases by entity during this period can be viewed in [Figure 1](#). From 2009 (the year of the first published press release) to 2025, Boston University issued a significantly greater proportion of press releases compared to all other institutions combined ($n = 50$; 49.0% [95% CI: 39.0, 59.1%], $p < 0.001$). The next most frequent institutions were American Academy of Neurology ($n = 7$; 6.9%), JAMA Network ($n = 6$; 5.9%), and Mass General Brigham Hospital ($n = 4$; 3.9%). Amongst only Universities/research institutions, the most frequent press releases came from Boston University ($n = 50$; 62.5%), Mass General Brigham Hospital ($n = 4$; 5.0%), University Health Network ($n = 2$; 2.5%), and University of California Los Angeles ($n = 2$; 2.5%). All others had one press release.

Discussion

The results of this study show there is a significant disparity in the number of press releases for CTE research across research entities. A disparity this wide in direct press engagements has the potential to create an information monopoly that can skew public understanding (Oreskes and Conway, 2010), regardless of the accuracy of the reporting itself. This phenomenon is not exclusive to CTE; there are numerous incidences of public perception on a scientific topic being overly influenced by press releases from smaller groups of scientists (e.g., the effect of tobacco on health, climate change, etc.) (Oreskes and Conway, 2010). Communicating CTE research findings to the public from a broader number of sources could lead to more balanced reporting and better-informed audiences (Fahy and Nisbet, 2011; Takahashi and Tandoc, 2016).

Future studies should incorporate data from multiple press release platforms, such as Medical Xpress, Newswise and Medical News Today. These sites were not utilized in the present work because many are proprietary and do not have a search export function. Cross-referencing across sites and eliminating duplicates may help cast a wider net in press releases, which may not be exhaustive at any single site. Future research could address this gap if their institutions

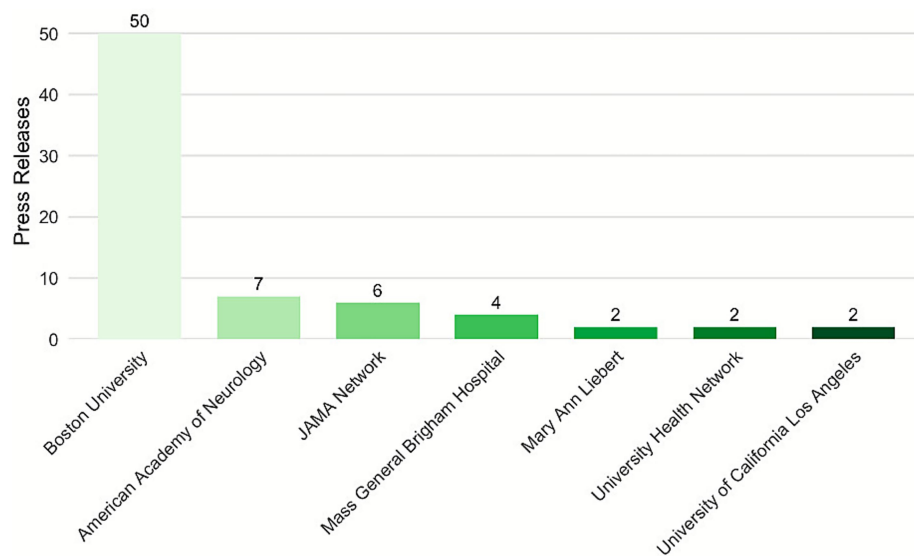


FIGURE 1

Rate of publishing multiple press releases on *EurekAlert!* pertaining to chronic traumatic encephalopathy (CTE) by research entity from 2009–2025.

have a proprietary license to these sites. One limitation of this research is that analysis of press release framing and tone could not be completed. Qualitative analysis may be an interesting avenue of future research to understand how the tone of the press release impacts uptake from the popular media. One can envision the presence of certain “keywords” or “buzz” words may lead to a greater likelihood that a press release would be widely disseminated.

The present study should not be misconstrued as a denial of CTE’s existence nor a minimization of the lived experiences of those who have had a family member with CTE. This should also not be misinterpreted as a negative comment about press releases in science; it is the opposite. The intent of this work is to encourage more balanced reporting by recruiting diverse expertise to actively engage the public on their own CTE research findings. Stakeholders in CTE research (e.g., current or former contact sport athletes, military personnel, and their families) report obtaining a meaningful proportion of their CTE information from media and news sources (Beidler et al., 2021; Schatz et al., 2020; Baugh et al., 2021). Repeated exposure to traumatic media, especially when the news may pertain to one’s own experiences, can dramatically increase stress, anxiety, depression and even lead to new-onset physical ailments (Baugh et al., 2017; Garfin et al., 2020; Holman et al., 2020; Silver et al., 2013). Up to 1 in 3 former professional football players report assuming they have CTE (Grashow et al., 2024). Prevalence of suicidality was 20% higher in players who report assuming they have CTE, compared to players who did not assume they have CTE (Grashow et al., 2024). Completed suicide in adolescent athletes who also assumed they had CTE has been reported, when the cause of their symptoms was a separate, treatable disease with no detectable CTE at autopsy (Surendran and Fainaru-Wada, 2025).

Conclusion

Given the ramifications of CTE research, efforts should be made by multidisciplinary experts to actively join the national conversation and contribute original research on the issue.

Data availability statement

The original contributions presented in the study are included in the article/[Supplementary material](#), further inquiries can be directed to the corresponding author.

Author contributions

SE: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing.

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Conflict of interest

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The author(s) declared that Generative AI was not used in the creation of this manuscript.

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Supplementary material

The Supplementary material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fcomm.2025.1688757/full#supplementary-material>

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