

CFAHR Evidence Brief

Investigating dysphagia, dysphonia and laryngeal hypersensitivity in Whiplash Associated Disorder

Authors and Affiliations

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Alignment with [Metro South Health Research Strategy 2019 - 2024](#)

- Build research capability
- Increase research capacity
- Embed research in clinical services
- Translate research to better health
- Research excellence

Alignment with [Allied Health Research Capability & Development Strategy 2021 - 2025](#)

- Engage staff as research consumers
- Enable staff as research generators
- Build research-enabling infrastructure and strategic processes
- Strengthen leadership in research and innovation
- Enhance internal research collaboration and synergy
- Strengthen partnerships with consumers and external stakeholders

Alignment with [Allied Health Research Capability & Development Strategy 2021 - 2025](#)

- Standard 1 – Clinical Governance
- Standard 2 – Partnering with consumers
- Standard 3 – Preventing and controlling healthcare-associated infection
- Standard 4 – Medication safety
- Standard 5 – Comprehensive care

ICARE² values



- Standard 6 – Communicating for safety
- Standard 7 – Blood management
- Standard 8 – Recognising and responding to acute deterioration

Practice Issues

Non-specific self-reports of dysphagia and dysphonia have been reported by people with whiplash associated disorder (WAD) following motor vehicle collision (MVC). Despite this, the degree and nature of these problems, their possible functional and psychological consequences, and potential mechanistic drivers remain poorly understood. At present, due to both a paucity of evidence, and limitations in the methodology of the few existing studies, there remains limited clinical information regarding these under-recognised features of WAD. Hence, the aim of this research was to investigate the degree and nature of dysphagia, dysphonia and laryngeal sensory symptoms following whiplash, their impact on wellbeing and participation, and explore potential mechanisms.

Evidence

The research achieved the aim of demonstrating dysphagia, dysphonia and laryngeal hypersensitivity exist after whiplash as previously under-recognised features of WAD. Findings have provided insight into the nature of these problems, their far-reaching impact, and the barriers which exist to identify and manage them. Although mechanisms are still unknown, some findings from this thesis suggest that problems may be more likely to occur in those with poor recovery and high levels of co-morbid disability. Specifically, the scoping review identified eighteen relevant papers, most of which (68%) had poor quality ratings. Incidence of swallow-related problems was 2-29%, with a range of swallowing problems described. The review highlighted significant gaps in existing literature and the need for more explicit inquiry. In a second study comprising this research, self-reported dysphagia was found in 50% of n=60 at least once in 12-months. In 31 participants analysed longitudinally, average dysphagia handicap worsened between early and late stages of recovery. There was no relationship between dysphagia presence and recovery status, however, all dysphagic participants demonstrated overall poor recovery. The study highlighted an incidence higher than expected however that further work is needed to understand specific features of post-whiplash dysphagia and its' mechanisms. Finally, qualitative analysis of semi-structured interviews highlighted that: 1) A range of features of dysphagia and dysphonia exist after whiplash with varied clinical course; 2) Activity and participation in swallow and voice activities have changed; 3) There are psychological and emotional impacts; 4) Features of laryngeal hypersensitivity co-exist, and 5) There are barriers to management. These insights have broadened what is currently known about post-whiplash sequelae and have identified the need for early detection and management.

Practice Change

This research provides new knowledge and insights to extend current understanding of the post-whiplash recovery profile. Findings increase healthcare professional awareness that these previously under-recognised issues exist and have far-reaching impacts on wellbeing and participation. Considerable work needs to be done to minimise current barriers, to prompt early and accurate identification, and to explore the various biopsychosocial mechanisms which may be contributing to these presentations. However, the preliminary, yet novel findings enable considerations for practice change. Ultimately, findings bring us closer to both improving our understanding of this common and enigmatic condition and expanding the horizon for speech pathology management of dysphagia, dysphonia, and laryngeal hypersensitivity.

Publication/s

Stone, D., Ward, E.C., Bogaardt, H., Heard, R., Martin-Harris, B., Smith A., Elliott, J. E. (2021). Self-Reported Dysphagia and Pharyngeal Volume following Whiplash Injury. *Dysphagia*, 36(6), 1019-1030. <https://doi.org/10.1007/s00455-020-10233-9>

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<http://dx.doi.org/10.1080/09638288.2022.2098395>

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Metro South Health Research Strategy 2019 – 2024 https://qheps.health.qld.gov.au/data/assets/pdf_file/0012/2325000/research-strategy.pdf

Allied Health Research Capability & Development Strategy 2021– 2025 <https://metrosouth.health.qld.gov.au/sites/default/files/allied-health-research-strategy.pdf>

National Safety and Quality Health Service Standards <https://www.safetyandquality.gov.au/sites/default/files/migrated/Overview-of-the-NSQHS-Standards-second-edition.pdf>