



iCAHE JC Critical Appraisal Summary

Journal Club Details

Journal Club location	FMC
JC Facilitator	Ella T
JC Discipline	Speech Pathology

Article/Paper

Steele, CM & Cichero, JAY 2014, 'Physiological Factors Related to Aspiration Risk: A Systematic Review', *Dysphagia*, vol. 29, pp. 295–304.

Please note: due to copyright regulations CAHE is unable to supply a copy of the critically appraised paper/article. If you are an employee of the South Australian government you can obtain a copy of articles from the [DOHSA librarian](#).

Article Methodology: Systematic Review

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Ques No.	Yes	Can't Tell	No	Comments
1	✓			<p>Did the review address a clearly focused question?</p> <p>This article reports a two-stage literature review process intended to elucidate pathophysiological factors that are documented to occur in association with aspiration and may provide clues regarding the underlying reasons for aspiration. In the first phase, a broad scoping review was undertaken to pinpoint physiological factors of potential relevance. In the second phase, four physiological factors were included in a more focused systematic review of the available literature on swallowing and swallowing disorders.</p>
2	✓			<p>Did the authors look for the appropriate sort of papers?</p> <p>In both the scoping review and the systematic review a search was performed using appropriate search terms and MESH headings in databases (outlined in methods and shown in Fig.1 [p298]).</p> <p>Is it worth continuing? YES</p>
3	✓			<p>Do you think the important, relevant studies were included?</p> <p>Studies were included and information was extracted such as, research design, sample size, research objectives, key findings related to the association between a physiological parameter and aspiration, and a ranking of the level of evidence using the National Health and Medical Research Council of Australia ranking system.</p>
4	✓			<p>Did the review's authors do enough to assess the quality of the included studies?</p> <p>Scoping reviews do not include quality appraisal.</p> <p>The Systematic Review reported that quality appraisal was performed and provided a reference for the QUADAS (see below).</p> <p>The answers to the questions in the systematic review methods and the quality appraisal scores were put into a table that supported the comparison of article quality, methods, results, and level of evidence and informed our interpretation of the literature, this however is not presented in the article.</p> <p>Whiting P, Rutjes AW, Reitsma JB, Bossuyt PM, Kleijnen J. The development of QUADAS: a tool for the quality assessment of studies of diagnostic accuracy included in systematic reviews. BMC Med Res Methodol. 2003;3:25.</p>
5		NA		<p>If the results of the review have been combined, was it reasonable to do so?</p> <p>Results were not combined (meta-analysis)</p>

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6			<p>What are the overall results of the reviews?</p> <p>In the first stage, a broad scoping review was undertaken using search terms for nine different structures involved in oropharyngeal swallowing. In the second stage, based on the results of the initial search, a more focused systematic review was undertaken which explored the association between aspiration and abnormalities in respiratory, tongue, hyoid, and laryngeal function in swallowing.</p> <p>A total of 37 articles underwent detailed quality review and data extraction in the systematic review. The results support measurement of tongue strength, anatomically normalized measures of hyoid movement, bolus dwell time in the pharynx while the larynx remains open, respiratory rate, and respiratory swallow phasing as parameters relevant to aspiration risk.</p>
7			<p>How precise are the results?</p> <p>Precision of the review results cannot be determined based on how the included studies were analysed (i.e. narrative synthesis instead of meta-analysis). Precision is usually determined based on the confidence intervals reported.</p>
8	Journal club to discuss		<p>Can the results be applied to the local population?</p> <p><i>Consider whether</i></p> <ul style="list-style-type: none"> - the patients covered by the review could be sufficiently different to your population to cause concern - your local setting is likely to differ much from that of the review
9			<p>Were all important outcomes considered?</p>
10			<p>Are the benefits worth the harms and costs?</p>
10			<p>What do the study findings mean to practice (i.e. clinical practice, systems or processes)?</p>
11			<p>What are your next steps? (e.g. evaluate clinical practice against evidence-based recommendations; organise the next four journal club meetings around this topic to build the evidence base; organize training for staff, etc.)</p>
12			<p>What is required to implement these next steps?</p>

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