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What should a case-finding tool for dysphagia in long-term care residents with dementia look like?

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To the Editor;

As the rate of dementia increases in long-term care (LTC) so does the rate of dysphagia, with estimates ranging between 40–55%[1]. Speech-language pathologists have led in the development of numerous screening tools, dysphagia assessment processes and training[2]. However, current guidelines do not clearly define the elements and processes needed for a valid and reliable case-finding during mealtime, by Personnel Support Workers (PSWs), who primarily provide feeding assistance to residents with dementia[3]. Unless dysphagia results from an acute event such as a stroke, insidious development is most likely initially identified at mealtime by staff, the resident themselves, or family members. Although most PSWs have received basic training on feeding techniques, many are ill-prepared to recognize the signs of dysphagia[4]. A mealtime case-finding tool for PSWs needs to be simple, quick, easy to use and sensitive enough to detect changes in risk, which would trigger a full dysphagia assessment by registered staff [3].

In LTC, defining swallowing in terms of a diagnosis of dysphagia is problematic because often only symptoms and the functional status through observation of swallowing by the resident are known, not the underlying pathophysiology[5]. As more health care practitioners

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in long-term care homes attempt to scientifically evaluate care requirements and the impact of care on residents, they are faced with methodological and practical questions regarding dysphagia as follows.

1. How can dysphagia be simply operationalized (defined) for a case-finding tool? What is observable or measurable at mealtimes[6] ?

Case-finding tools to date that are used at the bedside often involve observation; placing solids/liquids into an individual's mouth and measuring how long the individual takes to move or chew the food/liquid before swallowing [1]. This bedside case-finding operationalizes dysphagia in an observable and measurable way, but is an artificial situation. Furthermore, key points for observation vary and may not consider aspects of the meal that are relevant when a resident has dementia. To demonstrate this challenge, we take the example of the Nutrition and Swallowing Checklist [7]. This case-finding tool refers to both nutrition and swallowing risk, which are both difficult to measure. The operational definition of these concepts was achieved by defining risk with 24 questions completed by a care giver observing an individual's nutrition and swallowing attributes [1]. Of note, these questions are not necessarily consistent with other case-finding processes, such as a bed-side swallow test [3], and neglect risk factors associated with the mealtime experience in its entirety (i.e. seating, distractions and ambiance) that are especially pertinent for persons with dementia.

2. What is the purpose of the case-finding tool? Is it relevant to determine risk or for another purpose (i.e. to evaluate a new procedure or product) [6] ?

A clear purpose for the case-finding tool and the measurement procedure helps to ensure the relevance of the tool and the data it generates. A tool for the risk of dysphagia that is being used to evaluate a new food product for residents that are able to swallow easily may be quite different than a tool that looks at risk of dysphagia among residents with dementia. In order to ensure that data collected are accurate and relevant to the purpose, the clinician needs to consider the intention of the tool during the tool's development along with the setting, who will be administering the tool and the target group. A case-finding tool should identify LTC residents with dementia at risk of dysphagia and activate a care plan that would elicit a detailed assessment. The use of the term "flagging tool" might be a term that better represents the intention of the tool to be used by PSWs.

3. Are the items in the case-finding tool credible in terms of being comprehensive and acceptable to care providers? Does the tool consider aspects of the environment that may trigger a swallowing incident (e.g. distractions) [6] ?

A case-finding tool is comprehensive if it measures relevant attributes important to the clinical purpose [6]. For example, if it is important to know the impact of dysphagia on the person's ability to eat independently, a swallowing measure that dealt only with painful

swallowing may not be as good as a measure that includes questions pertaining to eating assistance requirements. Comprehensive content may be a goal and require the tool to deal with environmental factors such as "how to" hints on providing eating assistance and minimizing environmental distractions. It also may be desirable to include subsequent actions that the primary care provider could change related to the residents' dining environment to reduce the risk of a choking incident.

4. What is the accuracy (including reliability and responsiveness to change) of the case-finding tool? Is the tool sensitive enough to identify ("flag") people who are at risk of swallowing problems and specific enough to eliminate the ones that are not at risk of developing swallowing problems? And, how reliable is the instrument across different main care raters [6] ?

A swallowing risk assessment tool is accurate if it reflects the "true" state of an individual's swallowing ability at the time [6]. How the "true" state is ascertained is usually through a global health professional assessment [6]. Both random and systematic error can affect the accuracy of the tool. Random error being anything variable that affects the test score, such as the resident not finishing their meal or deciding to only eat their ice cream on the day of testing [6]. Systematic error is something that always affects the true score of the test, such as a problem with the assessment tool [6]. Training, standardizing the testing and verifying results can reduce errors. Biologic evidence should also be established. For example, a measure of swallowing should generally reflect poor swallowing according to the stage of dementia (gradient effect) and be able to discriminate between groups assessed as having primarily swallowing disorders versus groups having primarily poor appetites. The measure also should be responsive to change in swallowing status over time given that dysphagia in dementia can change rapidly. Ideally, the aim is to differentiate groups before choking occurs. Any method used to measure swallowing status should be sensitive enough to identify small changes in the group.

5. What is the availability and cost of using the case-finding tool [6] ?

Sources of information about swallowing status and care interventions can be classified into two types: "existing data" defined as routinely reported data (admission assessments, e-health records, or the Minimum Data Set (MDS) interRAI reporting), and "new data" which is information that is not available from existing sources but that could be collected prospectively with a case-finding tool. Admission assessments contain some information on swallowing problems, albeit in many facilities this information is can be unreliable and needs confirmation by observation during mealtime. MDS interRAI is another source of data that offers information on changing cognitive status and nutrition [8]. A case-finding tool used routinely could supplement the clinical information and increase understanding about the meaning of "existing" data reports.

Our objective in this letter is to provide guidelines for assessment of methodological quality of measures of swallowing and dysphagia among persons with dementia in LTC. Our team has begun the process of building upon previous tools, generating empirical evidence and achieving expert consensus amongst our peers and those who provide care. Persons with dementia in long-term care deserve nothing less.

Reference List

1. Easterling CS, Robbins E. Dementia and dysphagia. Geriatric Nursing. 2008; 29(4):275–285. [PubMed: 18694703]
2. The Canadian Association of Speech-Language Pathologists and Audiologists position paper on dysphagia in adults. Canadian Journal of Speech-Language Pathology & Audiology. 2007; 31(3): 148–151.
3. Steele C, Molfenter S, Bailey G, et al. Exploration of the utility of a brief swallow screening protocol with comparison to concurrent videofluoroscopy. Canadian Journal of Speech-Language Pathology & Audiology. 2011; 35(3):228–242.
4. Chia-Chi C, Roberts B. Strategies for feeding patients with dementia. American Journal of Nursing. 2011; 111(4):36–46.
5. Brush J. Recognizing dysphagia at meals. Nursing Homes: Long Term Care Management. 2007; 56(10):48–48. 50, 52.
6. Chambers LW. Phyisical and Emotional Functioning of Primary Care Patients: Scientific Requirements for the Measurement of Functional Health Status. Journal of the American Medical Association. 1983; 249(24):3353–3355. [PubMed: 6854871]
7. Stewart L. Development of the Nutrition and Swallowing Checklist, a screening tool for nutrition risk and swallowing risk in people with intellectual disability. Journal of Intellectual & Developmental Disability. 2003; 28(2):171–187.
8. interRai - Long-Term Care Facilities (LTCF). 2013. http://www.interrai.org/long-term-care-facilities.html