

Dysphagia Severity Ratings/Assessment Guidance

Purposes

- Measuring change in swallow function over time
- Objectively measuring outcomes before and after intervention
- Overall picture of health status – assists with predicting need and planning for demand
- Improving consistency of documentation between parties (i.e. between therapists, researchers, for funding, caseload planning and prediction)
- Can be used for research purposes – contributes to the evidence base

Considerations

- Reliability - Outcomes are the same over repeated use and between administrators
- Validity – That the outcome (score) reflects what it aims to (i.e. degree of dysphagia)
- Practicality – Ease of use, degree of difficulty; suitability for client population
- Time for administration
- Responsiveness to change

Scales Considered...

AUSTRALIAN THERAPY OUTCOME MEASURES (AUSTOMS)

- Authors: A. Perry & J. Skeat
- Swallowing scale consists of 4 domains relating to the WHOICF model. With a 5-level scale within each domain
- Predominantly used to measure an outcome, i.e. an initial vs. a final rating

Pros

- Tested for reliability
- Offers a functional view of the effect dysphagia has on the individual

Cons

- Instruction manual states that data should not be collected on clients who are only seen once
- Can be quite subjective
- Designed for use by physiotherapists, occupational therapists and speech pathologists to use to measure the outcomes of their services

See <http://www.latrobe.edu.au/health/professional/clinicians/australian-therapy-outcome-measures-austoms>

MANN ASSESSMENT OF SWALLOWING ABILITY (MASA)

- Author: G. Carnaby-Mann
- Consists of 24 clinical items for evaluation of oropharyngeal dysphagia following stroke
- Each score is weighted on a 10-point scale
- Overall numerical score as well as a risk rating

Pros

- Tested for reliability
- Doesn't require video fluoroscopy to complete
- Unlimited use after purchase
- Takes approx 15-20mins for moderately impaired client – but can be completed as you go

Cons

- Need to be familiar with the scoring scales before administering
- Manual needs to be purchased
- Validated using stroke population

See the MASA scoring sheet at <http://srl.phhp.ufl.edu/dysphagia-toolbox/MASA.pdf>

Manual available at amazon.com and other books stores as well as at

http://www.cengage.com/search/productOverview.do?Ntt=103078004862148703819117023772109442721&N=14+4294922384+429495386&Ntk=P_EPI



DYSPHAGIA MANAGEMENT STAGING SCALE (DMSS)

- Author: Justine Joan Sheppard
- A five-level scale for rating severity of feeding and swallowing disorders based on management needs and health related outcomes

Pros

- Considers implications of dysphagia

Cons

- Certification required for use
- Cost associated with use

More information at http://www.nutritionalmanagement.org/dds_dmss.htm

FUNCTIONAL ORAL INTAKE SCALE (FOIS)

- Authors: M. Crary, G. Carnaby Mann, & M. Groher
- 7-point ordinal scale describing the amount and type of diet intake

Pros

- Less than 5mins to complete
- No training required
- High inter-rater reliability and consensual validity
- No VFS required for scoring
- Ratings are found to be associated with dysphagia severity (but not aspiration severity)

Cons

- Reliability and validity tested in stroke population
- May be overly simplified. Provides information about what the person actually eats/drinks not what they are assessed as safe with

See accompanying article: Crary M, Carnaby Mann G, & Groher M. (2005). Initial psychometric assessment of a Functional Oral Intake Scale for dysphagia in stroke patients. Archives of Physical Medicine and Rehabilitation, 86, 1516-1520.



DYSPHAGIA OUTCOME AND SEVERITY SCALE (DOSS)

- Authors: K. O'Neil, M. Purdy, J. Falk, & L. Gallo
- 7-level scale for rating functional swallowing severity
- Considers level of independence, nutrition type and diet level

Pros

- Has been tested for reliability – high inter-rater and intra-rater reliability
- Short time to administer – no more than 5mins

Cons

- Reliability may be affected by individual therapists' level of training and familiarity with the tool
- No comments on validity
- Subject to interpretation bias

Rating Levels

- Level 1: Severe dysphagia: NPO: Unable to tolerate and PO safely
- Level 2: Moderately severe dysphagia: Maximum assistance or use of strategies with partial PO only (tolerates at least one consistency safely with total use of strategies)
- Level 3: Moderate dysphagia: Total assist, supervision, or strategies, two or more diet consistencies restricted

- Level 4: Mild-moderate dysphagia: Intermittent supervision/cueing, one or two consistencies restricted
- Level 5: Mild dysphagia: Distant supervision, may need one diet consistency restricted
- Level 6: Within functional limits/modified independence
- Level 7: Normal in all situations

O'Neil KH, Purdy M, Falk J. et al. (1999). The Dysphagia Outcome and Severity Scale. *Dysphagia*, 14, 139-45.
<http://www.ncbi.nlm.nih.gov/pubmed/10341109>

These instrument summaries above are taken from

<http://www.tccp.com.au/docs/documents/Dysphagia%20Severity%20Rating%20Scales.pdf>

Other Validated Instruments

(with summaries drawn from literature by E. Pease)

TORONTO BEDSIDE SWALLOWING SCREENING TEST (TOR-BSST)

- Authors R. Martino, F. Silver, R. Teasell et al.
- Bedside evaluation incorporating water swallow, voice quality before and after water swallow, and tongue movement
- Tested with stroke patients

Pros

- High sensitivity and predictive value
- Validity tested among nurse screeners
- Reliable and valid method, in which few if any patients with dysphagia will be missed

Cons

- Requires four training hours and fee required with for acquiring the tool and educational components
- Validation with other neurological etiologies under study

See accompanying article and screening tool: Martino R, Silver F, Teasell R. et al. (2009). The Toronto Bedside Swallowing Screening Test (TOR-BSST): Development and validation of a dysphagia screening tool for patients with stroke. *Stroke*, 40, 555-561.

MASSEY BEDSIDE SWALLOW SCREEN

- Authors: R. Massey & D. Jedlika
- Assesses swallowing function and reflexes among stroke victims and helps to determine the need for speech pathology intervention
- Bedside screen developed for use by nurses

Pros

- Relatively high inter-rater reliability
- Statistically significant ability to differentiate between the presence and absence of dysphagia
- High sensitivity and specificity

Cons

- Small sample size
- Calls for additional population studies and replication of findings with stroke victims

See accompanying article and tool: Massey R & Jedlika D. (2002). The Massey Bedside Swallow Screening. *Journal of Neuroscience Nursing*, 34, 252-260.



MODIFIED MANN ASSESSMENT OF SWALLOWING ABILITY (MMASA)

- Authors: A. Nader, G. Carnaby-Mann G, M. Crary et al.
- Physician-administered tool for assessing dysphagia at the bedside
- Screening tool for use in acute stroke
- Ease of administration makes it suitable for use by a range of health professionals working with patients with stroke at risk for swallowing impairment.

Pros

- Demonstrates a good tradeoff between sensitivity and specificity, both of which are relatively high
- Good inter-rater reliability
- Highly reliable and accurate in identifying dysphagia in acute stroke

Cons

- Calls for further validation of study findings
- Recommends validation of findings by nurses

See accompanying article and tool, which appears at the end of the article: Nader A, Carnaby-Mann G, Crary M et al. (2010). Analysis of a physician tool for evaluating dysphagia on an inpatient stroke unit: The modified Mann Assessment of Swallowing Ability. *Journal of Stroke and Cerebrovascular Diseases*, 19, 49-57.

Non-Validated Tools

STATE OF MISSOURI DEPARTMENT OF MENTAL HEALTH CHOKING RISK ASSESSMENT

- Author: Department of Mental Health Regional Offices
- Provides a process to ensure that individuals are assessed annually and more often as needed for choking risk
- Focuses attention on risk factors and the implementation of strategies to counter them
- Provides a basis for policy and procedure development at the local level

Pros

- Straightforward and easy-to-administer tool
- Could provide local opportunities to research the tool's validity and reliability and add to the existing base of knowledge

Cons

- No information on reliability and validity
- How the tool was constructed is not informed by references to the literature

See accompanying tool, which is also available at
<http://dmh.mo.gov/docs/kcro/CHOKINGRISKASSESSMENT.doc>



BUFFALO PSYCHIATRIC CENTER CHOKING ASPIRATION SCREEN

- Authors: In collaboration with their colleagues at BPC, Occupational Therapist Pat Grisafi and Speech Pathologist Diane Hourihan. Both have extensive backgrounds in dysphagia management in people with psychiatric disorders and choking risk management in patients with mild symptoms of dysphagia associated with medications side effects).
- Provides the ability to screen for dysphagia and to look for problem eating behaviors associated with choking
- Focuses attention not only on dysphagia, but also problem eating behaviors that lead to choking incidents for people diagnosed with psychiatric disorders

Pros

- Straightforward and easy-to-administer tool for nurses and physicians
- Builds off best practices and expert knowledge

Cons

- No information on reliability and validity

See accompanying tool: BPC Choking Aspiration Screen