WSO Stroke Dysphagia Checklist

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The Dysphagia and Aphasia Checklists have been developed to help healthcare professionals identify swallowing and communication problems in patients after stroke and provided a basic framework in their management approaches. These checklists are intended to be used by healthcare team members (medical or allied health professionals) in the acute/inpatient care setting. The reference section contains specific, actionable recommendations around safe feeding practice and supported communication strategies that can be adapted for use in limited resource settings.

Dysphagia Screening

ALL patients with stroke, possible stroke or TIA should undergo swallowing screening

- [ ] Before any oral intake including medication, food and liquid.
- [ ] As soon as patients are awake and alert and ideally within 24 hours admission.
- [ ] By an appropriately trained professional using a validated screening tool (Appendix 1).
- [ ] Patients will remain NPO until screen is completed and passed.

For patients who PASS the initial swallowing screen,

- [ ] Employ safe feeding practices (Appendix 2).
- [ ] Observe/assist for the first 3 meals. Monitor for signs and symptoms of swallowing difficulties (Appendix 3).
- [ ] Provide oral care as needed (Appendix 4).

For patients who FAIL the initial swallowing screen,

- [ ] Patients will remain NPO. Consider placing NPO signs at the bedside.
    - Assess hydration status and consider intravenous fluid if warranted.
    - Review medications and consider alternative route of medications.
    - Maintain oral care (Appendix 4).
- [ ] Refer to Speech-language pathologist (SLP) or other trained dysphagia clinicians as appropriate for further swallowing assessment.
- [ ] Repeat swallowing screen if patient's condition significantly changes while awaiting SLP assessment.

Dysphagia Assessment

- [ ] Patients who failed the initial swallowing screen should remain NPO and will require a more detailed clinical swallowing assessment.

- [ ] Patients considered to be at high risk of oropharyngeal dysphagia or poor airway protection should be considered for further instrumental assessments including videofluoroscopic swallow study (VSS, VFSS) or fiberoptic endoscopic examination of swallowing (FEES) to further guide management.

Dysphagia Management and Education

- [ ] Develop an individualized management plan to address therapy for dysphagia, nutritional needs, and specialized nutritional plans. Consider the following:
  - Restorative therapy may include lingual resistance, breath holds and effortful swallows.
  - Compensatory techniques may address posture, sensory input with bolus, volitional control, and texture modification.
  - Dietitian involvement to support nutritional/hydration needs orally or through enteral feeding pathways.
- [ ] Whenever possible, patients should be permitted and encouraged to feed themselves to reduce the risk of aspiration pneumonia.
- [ ] Patients should be given excellent oral care and educated in the need for good oral hygiene to further reduce the risk of pneumonia (Appendix 4).
- [ ] Patients, families and caregivers should receive education on swallowing, prevention of aspiration, and feeding recommendations. (Consider strategies such as teach back).
- [ ] Patients receiving modified texture diets or enteral feeding should be reassessed regularly, especially in the first weeks following the stroke and at 2-3 month intervals thereafter during the first year. The severity of swallowing impairment and the rate of improvement may alter the reassessment schedule.

References

Sherman, V, Greco, E, Thorpe K, Martino, R. The benefit of dysphagia screening in adult patients with stroke: A meta-analysis. Journal of the American Heart Association. 2021; 10: e018753. DOI: 10.1161/JAHA.120.018753.

Teasell, R, Salbach, NM, Foley, N, Mountain, A, Cameron, JI, Jong, A, Acerra, NE, Bastasi, D, Carter, SL, Fung, J, Halabi, ML, Iruthayarajah, J, Harris, J, Kim, E, Noland, A, Pooyania, S, Rochette, A, Stack, BD, Symcox, E, Timpson, D, Varghese, S, Verrilli, S, Gubitz, G, Casaubon, LK, Dowlatshahi, D, Lindsay, MP. Canadian Stroke Best Practice Recommendations: Rehabilitation, Recovery, and Community Participation following Stroke. Part One: Rehabilitation and Recovery Following Stroke; 6th Edition Update 2019. International Journal of Stroke. 2020; 15: 763–788. DOI: 10.1177/1747493019897843.

Moscrip, D. (2012) A Step-by-step Approach: Implementing Best Practice Guidelines for Dysphagia TOR-BSST© Dysphagia Screening. Barrie, ON: Central East Stroke Network.

Appendix

1- Dysphagia Screening Tools

NAME OF SCREENING TOOL	REFERENCES
"Any Two"	Daniels SK, McAdam C, Brailey K, et al. Clinical assessment of swallowing and prediction of dysphagia severity. Am J Speech Lang Pathol 1997;6:17-24
Hands free feature	Trapl M, Enderle P, Nowotny M, et al. Dysphagia bedside screening for acute-stroke patients: the Gugging Swallowing Screen. Stroke 2007;38:2948-52
The Toronto Bedside Swallowing Screening Test (TOR-BSST)	Martino R, Silver F, Teasell R, et al. The Toronto Bedside Swallowing Screening Test (TOR-BSST): development and validation of a dysphagia screening tool for patients with stroke. Stroke 2009;40:555-61.
Acute Stroke Dysphagia Screen	Edmiaston J, Connor LT, Loehr L, et al. Validation of a dysphagia screening tool in acute stroke patients. Am J Crit Care 2010;19:357-64.
Emergency Physician Dysphagia Screen	Turner-Lawrence DE, Peebles M, Price MF, et al. A feasibility study of the sensitivity of emergency physician Dysphagia screening in acute stroke patients. Ann Emerg Med 2009;54:344-8, 348.
Modified Mann Assessment of Swallowing Ability (MMASA)	Antonios N, Carnaby-Mann G, Crary M, et al. Analysis of a physician tool for evaluating dysphagia on an inpatient stroke unit: the modified Mann Assessment of Swallowing Ability. J Stroke Cerebrovasc Dis 2010;19:49-57
MetroHealth Dysphagia Screen	Schrock JW, Bernstein J, Glasenapp M, et al. A novel emergency department dysphagia screen for patients presenting with acute stroke. Acad Emerg Med 2011;18:584-89.

2- Safe Feeding Practices

Encourage self-feeding where possible. If unable, provide hand-over-hand support from an eye-level position. If full feeding assistance is needed, provide using low risk feeding strategies as follows:

- Ensure calm environment and minimize distractions.
- Check to ensure correct diet type has been provided.
- Ensure that patient is seated in an upright position with head tilted slightly forward. Use pillows to support as needed. When possible, seating in a wheelchair or chair during meals is preferred.
- Perform mouth care before each meal.
- Feed from an eye-level seated position.
- Use metal teaspoons. Do not use plastic for feeding individuals with bite reflex.
- Present a maximum of 1 teaspoon per bite.
- Use a slow rate of presentation.
- Allow adequate time between bites of food.
- Place food on the stronger side. Encourage 2 or more swallows per bite.
- Alternate liquids and solids, but never combine them in the same bite.
- Place liquids in a wide-mouth cup, glass or in a cut-down nosey cup which prevents the had from flexing backward and reduces the risk of aspiration. Some individuals may benefit from drinking from a straw.
- Reduce or eliminate talking by the stroke patient during oral intake, but allow talking between bites.
- Ask patients in which order food/liquid should be presented.
- Advise patients of what food/liquid is being presented.
- Provide visual or verbal cues for opening mouth, chewing and swallowing.
- Check for pocketing and residue after feeding.
- Observe for any signs or symptoms or swallowing problems during and for 30minutes after each meal. Discontinue feeding if any difficulties are noted.
- Perform mouth care after each meal.
- Position comfortably upright for at least 30 minutes after each meal.

3- Signs and Symptoms of Swallowing Difficulty

- Slow, effortful eating.
- Inability to take food from a spoon cleanly or drink from a cup without spillage.
- Facial weakness. Inability to close lips firmly.
- Reduced saliva production – dry appearance to mouth; difficulty when eating dry foods.
- Poor taste sensation – complaints of taste of food; refusal to eat.
- Reduced ability to chew solid foods.
- Pocketing of food in spaces between the gums and cheeks.
- Difficulty moving food in mouth – tongue pumping to initiate swallowing or food stays at the front of mouth.
- Food or drink running from nose.
- Excessive secretions, drooling – inability to swallow secretions causing appearance of excessive saliva.
- Reports of a sticking sensation in the throat.
- Throat clearing, coughing, choking when eating or drinking.
- Weak cough when eating or drinking.
- Changes in voice quality – wet, gurgly, hoarse sounds when eating or drinking.

4- Oral Care Procedures

- Remove, clean and store dentures in clean water.
- Each morning and at bedtime, clean mouth with toothbrush and toothpaste.
- If possible, use a suction toothbrush and low foam toothpaste for individuals who cannot spit or manage fluid without aspiration.
- Swab the oral cavity with an alcohol-free antiseptic.
- Perform mouth care before each meal to remove bacteria. If antibacterial mouthwash is used, wait 20 minutes after mouth care before feeding. Alternatively, use water or saline.
- Perform mouth care after each meal to remove any food residue. Use an oral rinse for individuals without teeth.
- Use an oral moisturizer after mouth care if the patient is NPO or has a dry mouth.
- If severe dysphagia, use only plain water for moisturizer.

References

Heart and Stroke Foundation of Ontario. Improving recognition and management of dysphagia in acute stroke. Toronto, ON: Heart and Stroke Foundation of Ontario. 2002.

Martino, R, Knutson, P, Mascitelli, A, & Powell-Vinden, B. Management of dysphagia in acute stroke: An educational manual for the dysphagia screening professional. Toronto, ON: Heart and Stroke Foundation of Ontario. 2006.

WSO Stroke Aphasia Checklist

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Communication Assessment

ALL patients with stroke should be screened for communication disorders/aphasia

- ☐ As soon as possible and ideally within 48 hours of admission.
- ☐ By an appropriately trained professional using a validated screening tool (Appendix 1).

Patients with suspected communications deficits should be referred to a Speech Language Pathologist for assessment in the following areas using valid and reliable methods:

- ☐ Comprehension.
- ☐ Verbal production.
- ☐ Reading & Writing.
- ☐ Speech/Voice.
- ☐ Cognitive communications.

Discharge planning should begin as a component of the initial assessment in collaboration with the patient, family, caregivers and interprofessional team.

Management and Education of Aphasia

☐ Patients with aphasia should have early access to a combination of intensive speech and language therapy and communication therapy according to their needs, goals and impairment severity.

☐ Treatments to improve functional communication can include language therapy focusing on:

- Production and/or comprehension of words, sentences and discourse (including reading and writing);
- Conversational treatment;
- Constraint induced language therapy;
- Use of non-verbal strategies, assistive devices and technology (e.g., iPads, Tablets, other computer-guided therapies) to improve communication;
- Use of computerized language therapy to enhance benefits of other therapies.

- Appropriate patients should be assessed for their potential to benefit from using augmentative alternative communication (e.g. iPad, tablet, electronic devices, alphabet board) or other communication support tools.
- Treatment for aphasia may include group therapy and conversation groups.
- Families and caregivers should be engaged in the entire process from screening through intervention.
- Family and caregivers should receive aphasia education and training in the use of supported communication strategies (Appendix 2).
- All information intended for patient use should be available in aphasia-friendly formats.

References

Teasell, R, Salbach, NM, Foley, N, Mountain, A, Cameron, JI, Jong, A, Acerra, NE, Bastasi, D, Carter, SL, Fung, J, Halabi, ML, Iruthayarajah, J, Harris, J, Kim, E, Noland, A, Pooyania, S, Rochette, A, Stack, BD, Symcox, E, Timpson, D, Varghese, S, Verrilli, S, Gubitz, G, Casaubon, LK, Dowlatshahi, D, Lindsay, MP. Canadian Stroke Best Practice Recommendations: Rehabilitation, Recovery, and Community Participation following Stroke. Part One: Rehabilitation and Recovery Following Stroke; 6th Edition Update 2019. International Journal of Stroke. 2020; 15: 763–788. DOI: 10.1177/1747493019897843.

Appendix

1- Aphasia Screening and Assessment Tools

NAME OF SCREENING TOOL	REFERENCES
Acute Aphasia Screening Protocol (AASP)	Crary MA, Haak NJ, Malinsky AE. Preliminary psychometric evaluation of an acute aphasia screening protocol. Aphasiology 1989;3:611–618
Communicative Effective Index (CETI)	Lomas J, Pickard L, Bester S, Elbard H, Finlayson A, Zoghaib C. The communicative effectiveness index: Development and psychometric evaluation of a functional communication measure for adult aphasia. Journal of speech and hearing disorders. 1989 Feb;54(1):113-24.
Scenario Test	Van der Meulen, I., van de Sandt-Koenderman, W., Duivenvoorden, H. and Ribbers, G. Measuring verbal and non-verbal communication in aphasia: reliability, validity, and sensitivity to change of the Scenario Test. International Journal of Language & Communication Disorders. 2010; 45(4), 424-435. doi: 10.3109/13682820903111952
Frenchay Aphasia Screening Test (FAST)	Enderby PM, Wood VA, Wade DT, Langton Hewer R. The Frenchay Aphasia Screening Test: A short, simple test for aphasia appropriate for nonspecialists. International Journal of Rehabilitation Medicine 1987;8:166–170.
Mississippi Aphasia Screening Test (MAST)	Nakase-Thompson R, Manning E, Sherer M, Yablon SA, Gontkovsky SLT, Vickery C. Brief assessment of severe language impairments: Initial validation of the Mississippi aphasia screening test. Brain Injury 2005;19:685–691.
Porch Index of Communicative Ability (PICA)	Porch BE. Porch Index of Communicative Ability: Theory and Development. USA: Consulting Psychologists Press; 1971.
Reitan-Indiana Aphasia Screening Examination (ASE)	Reitan RM, Wolfson D. The Halstead-Reitan neuropsychological test battery: Theory and clinical interpretation. Tucson, AZ: Neuropsychology Press; 1985.
ScreeLing	Doesborgh SJ, van de Sandt-Koenderman WM, Dippel DW, van Harskamp F, Koudstaal PJ, Visch-Brink EG. Linguistic deficits in the acute phase of stroke. Journal of Neurology 2003;250:977–982.
Ullevall Aphasia Screening Test (UAS)	Thommessen B, Thoresen GE, Bautz-Holter E, Laake K. Screening by nurses for aphasia in stroke—the Ullevaal Aphasia Screening (UAS) test. Disability and Rehabilitation 1999;21:110–11.
Western Aphasia Battery-Revised Aphasia Quotient (WAB- R AQ)	Kertesz, A. The Western Aphasia Battery- R AQ. New York: Grune & Stratton, Inc. 2006
Stroke and Aphasia Quality of Life (SAQOL-39)	Hilari, K., Byng, S., Lamping, D. L. and Smith, S. C. Stroke and Aphasia Quality of Life Scale-39 (SAQOL-39): evaluation of acceptability, reliability, and validity. Stroke 2003; 34(8), 1944–1950.

MOTOR SPEECH DISORDER SCREENING TOOL	
Frenchay Dysarthria Assessment (FDA)	Enderby PM. Frenchay Dysarthria Assessment. British Journal of Disorders of Communications. 1980; 15(3): 165-173.

2- Supported Communication Strategies

- Reduce distractions and noise (e.g. turn off TV, close the door or move to a quieter place).
- Stick to one conversation topic. Avoid quick shifts in conversation topics.
- Correct any perceptual deficits. Provide glasses and/or hearing aids if needed.
- Don’t rush. Be patient.
- Acknowledge that the person with aphasia understands better than is able to show.
- Acknowledge any frustrations the person with aphasia may be experiencing.

Getting information IN	Getting information OUT	Verifying the message
Speak slowly	Provide pen and paper	Summarize slowly and clearly
Use short, simple sentences	Show pictures for them to point to	Repeat the person’s message
Use an expressive intonation	Ask YES/NO or choice questions	Expand on what you think they might be trying to say
Gesture and/or point to the item	Ask one question at a time	
Show pictures	Give them time to respond	
Write down key words	Ask them to gesture, point or write down key words	
Observe the person’s facial expression, gesture to determine their level of understanding.		

Adapted from Supported Conversation for Adults with Aphasia. Aphasia Institute.