NATIONAL GUIDELINE FOR SWALLOW SCREENING IN STROKE

2017

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Acknowledgements

This guideline was written on behalf of the National Clinical Programme for Stroke by a multidisciplinary sub-group of the National Clinical Programme for Stroke Working Group. The group would like to acknowledge the Irish Association of Speech and Language Therapists (IASLT) who developed the IASLT Position Statement on Swallow Screening (2016). The working group referred extensively to this document and we are grateful for their support in developing this guideline. We would like to thank all of the stroke teams who have submitted data in relation to their current swallow screening service in particular the Clinical Nurse Specialists in Stroke. We would like to thank the Clinical Advisory Group for Stroke and the Irish Heart Foundation Council on Stroke for their support of the initiative. We would also like to thank everyone who contributed in the consultation process.

1.0 Policy Statement:

The National Clinical Programme for Stroke (NCP-S) aims to deliver rapid access to best-quality stroke services. The provision of early swallow screening by trained personnel has been identified as integral to the acute care of all stroke patients. Early swallow screening is recommended in both the Irish Heart Foundation Stroke Guidelines (2008) and the Royal College of Physicians Stroke Guidelines (2016). The NCP-S recommends that the swallow screen is performed on all stroke patients within four hours of admission and before any oral intake.

2.0 Purpose:

The purpose of this guideline is to support all acute stroke services in the development of a swallow screening service for stroke patients within their organisation.

3.0 Scope:

The scope of this guideline applies to medical, nursing, dietetic and speech and language therapy staff caring for patients with stroke.

4.0 Legislation/other related policies:

The document is guided by Irish Heart Foundation-Council for Stroke National Clinical Guidelines, IASLT Position Statement on Swallow Screening (2016) and Recommendations for the Care of People with Stroke Transient Ischaemic Attack (2009) and the Royal College of Physicians Stroke Guidelines (2016).

5.0 Glossary of Terms and Definitions:

Swallow Screening Test: A pass or fail process used to identify the possible presence of dysphagia and to indicate the need for further clinical swallow evaluation (ASHA 2004).

Clinical Bedside Assessment of Feeding, Eating, Drinking and Swallowing (FEDS): The process by which the speech and language therapist aims to identify the presence and nature of a FEDS disorder based on clinical signs" (IASLT 2012). This assessment involves a thorough case history, orofacial examination and food and fluid trials as appropriate and may indicate the need for further instrumental evaluation e.g. videofluroscopy/fibre optic endoscopic evaluation of swallowing.

Dysphagia: An eating, drinking and/or swallowing disorder usually resulting from a neurological or physical impairment of the oral, pharyngeal or oesophageal mechanisms (IASLT 2016).

6.0 Roles and Responsibilities:

6.1 Roles

- The Health Service Executive-Acute Hospital Division to ensure that swallow screening access is viewed as a priority in service planning submissions.
- Hospital Management to ensure that there are sufficient Medical, Nursing, Dietetic and Speech and Language Therapy staff to support swallow screening guidelines for stroke patients.
- Speech and Language Therapy Managers to ensure that there are SLT staff with appropriate training, to provide swallow screening training to Doctors, Nurses and other Speech and Language Therapists in each acute hospital setting where patients with acute stroke are admitted.
- Nursing Managers to ensure that all nursing staff caring for stroke patients are aware of this guideline and to facilitate training as required.
- Senior Stroke Clinicians to ensure that all medical staff caring for stroke patients are aware of this guideline and to facilitate training as required.
- Nursing, Medical, Dietetic and Speech and Language Therapy Managers to ensure that employees comply with this guideline through monitoring, audit and review.

6.2 Responsibilities

- Each health professional/HSE employee is accountable for their practice. This means being answerable for decisions he/she makes and being prepared to make explicit the rationale for those decisions and justify them in the context of legislation, case law, professional standards and guidelines, evidence based practice, professional and ethical conduct.
- It should be recognised that policies, procedures, protocols and guidelines represent a statement reflecting an expected standard of care and could be introduced in law as evidence of the standard of care expected. There may be occasions when it is acceptable to deviate from a PPPG but clinical judgement in such a decision must be clearly documented.

7.0 Implementing Swallow Screening in Stroke:

7.1 Background

The National Clinical Programme for Stroke (NCP-S) was established in 2010 with the mission to ensure:

- National rapid access to best-quality stroke services
- Prevent 1 stroke per day
- Avoid death or dependence in 1 patient every day

The background and policy context informing the NCP-S included the Irish National Audit of Stroke Care (2008) which found that stroke services in Ireland were poorly organised and largely ineffective leading to a high rate of preventable death and disability from stroke. The aims of the programme were targeted through the provision of reallocated funding to develop infrastructure and specialist posts within the stroke service nationally, specifically through the development of a national programme for thrombolysis therapy, the creation of designated stroke units on sites managing acute stroke patients and the recruitment of medical, nursing and health and social care professionals with specialist knowledge in stroke.

In 2015, the NCP-S commissioned the Irish Heart Foundation/HSE National Stroke Audit 2015 (NSA 2015):

http://www.irishheart.ie/media/pub/advocacy/research/ihf_national_stroke_audit_2015_web.pdf

NSA (2015) revealed much improvement in many areas of stroke care including a reduction of in-patient mortality by more than a quarter, reduction of discharge to a nursing home by one third and a thrombolysis rate equal to international standards. However, it also highlighted a 50% shortage of stroke unit beds and persistent deficits within multidisciplinary team staffing. One of the notable deficits was the lack of access to formal swallow screen testing. The audit results indicate a 6% rate of swallow screening within four hours compared to 56% in the UK.

Swallowing difficulties are common in stroke and this can lead to food and/or fluid and/or saliva entering the airway (aspiration), which increases the risk of pneumonia (RCP 2012). Swallow screening by trained personnel may help identify dysphagia early thereby ensuring timely referrals to speech and language therapy and to dietetics, thereby minimising the impact on the patient (Hinchey et al 2005).

Early swallow screening is recommended in both the Irish Heart Foundation Stroke Guidelines (2008) and the Royal College of Physicians Stroke Guidelines (2016), however, there is no current evidence of how quickly swallow screening should occur after stroke. Bray et al (2017) found that delays in screening for dysphagia after stroke are associated with an increased risk

of stroke related pneumonia. The NCP-S recommends that the swallow screen is performed on all stroke patients within four hours of admission but before any oral intake.

In 2016, the NCP-S identified the development of a swallow screening guideline as a key priority area within the programme plan. The NCP-S Working Group established a multidisciplinary swallow screening sub-group (appendix i) with the goal of developing National Guidelines for Swallow Screening in Stroke.

In tandem with this work the Irish Association of Speech and Language Therapists (2016) published a position statement on swallow screening, which has assisted the group greatly in the development of this guideline and is referred to throughout.

This guideline firstly defines swallow screening and identifies the key components of a swallow screening test in stroke. Recommendations for training are then suggested. Finally, a pathway for swallow screening in this population is proposed. This pathway may be used as resource for policy development by individual organisations.

It is beyond the scope of this group to give guidance on staffing resources surrounding training and supervision. The increased demand on Speech and Language Therapy services to provide training to Nursing and Medical staff needs to be considered. The delivery of early swallow screening has resource implications for Nursing and Medical staff in Emergency Departments and Stroke Units. It will be the responsibility of each organisation to ensure they have adequate staffing to train staff, and include swallow screening in local stroke guidelines in order to ensure that each stroke patient is managed according to best practice.

7.2 Core Components for a Swallow Screening Test in Stroke

Although many swallow screening tests, validated in the stroke population, have been described across the literature (De Pippo et al 1992, Edmiastom et al 2014, Martino et al 2009), no single test has been accepted as the gold standard. A recent systematic review on screening tests in patients with neurological disorders (Kertscher et al., 2014) did identify two screens that achieved minimum diagnostic accuracy levels to identify dysphagia; the Volume-Viscosity Swallowing Test (Clave et al., 2008) and The Toronto Bedside Swallow Screening Test (Martino et al., 2009). It should be noted that most swallow screening tests have been validated on their ability to detect aspiration, rather than dysphagia.

Items frequently included in swallow screening tests are;

- Assessment of medical stability
- Assessment of alertness level (Daniels et al., 2016)
- Observations on posture
- Observations on oral hygiene and management of oral secretions
- Observations on the presence of dysphonia (O'Horo et al., 2015)
- Observations on the presence of dysarthria (Daniels et al., 2016)
- Observations on the adequacy of the volitional cough reflex (Daniels et al., 2016)
- A water swallow test (WST) with judgments on the presence of cough, throat clear or change in vocal quality post swallow (Chen et al., 2016, O'Horo et al., 2015). There is evidence to suggest that a 3oz (90ml) volume has greatest sensitivity to detect aspiration in a stroke population (Chen et al., 2016).

In choosing a swallow screening tool, it is recommended that the tool should be evidence based. It should have adequate diagnostic accuracy scores (sensitivity, specificity, predictive values and likelihood ratios) rated against a reference standard e.g. videofluroscopy, to detect a risk of aspiration in a stroke population. When choosing a swallow screening tool, consideration should also be given to factors including ease of administration, documentation and training requirements.

7.3 Training

Swallow screening should only be carried out by healthcare professionals who have been adequately trained in the procedure. In the acute care hospital setting, these professionals are often registered nurses (SIGN, 2010). However, other members of the multidisciplinary team can also be trained to complete swallow screening, and as it is a service that should be available 24 hours a day, 7 days a week, it may also be possible for medical professionals to take on this role (ASHA, 2009).

7.3.1 Training Procedures

The training of multidisciplinary team members in the administration and interpretation of swallow screening tests should be completed by a professional with in-depth knowledge in the assessment and management of swallowing disorders. This is often the speech and language therapist (SLT) (Irish Heart Foundation, 2009).

Local protocols and policies should describe the procedures for training of multidisciplinary team members in swallow screening. These swallow screen training protocols should consist of an education module and an associated assessment component.

At a minimum, the education module should include:

- An overview of the anatomy and physiology of swallowing
- Information on the clinical indicators/risks for dysphagia in the stroke population
- A discussion on the differences between screening and formal assessment
- Detailed instructions on how to perform, interpret and score each item of the screening test
- An opportunity to observe the test being completed. This should include direct observation of a swallow screen with a real patient, or watch a video of a real patient screening, or a demonstration on a patient actor.

The education module will often be offered by individual or group, face to face sessions with the SLT, but the use of web based modules or similar alternatives may also be considered (Anderson et al, 2016; Warner et al, 2013; Cichero et al, 2009).

An assessment protocol should be completed prior to trainees being certified to independently complete swallow screening with stroke patients (Anderson et al, 2016; Warner et al, 2013; Cichero et al, 2009).

This assessment component of swallow screen training protocols should include:

- An opportunity to demonstrate an acceptable level of core theoretical knowledge
- An opportunity to administer, score and interpret the swallow screen on a number of patient actors and/or stroke patients

7.3.2 Maintenance of Skills

Local policies and protocols should describe the procedures to follow regarding the need for refresher training where necessary. At present, there has been no published literature or research that has directly addressed this issue. However, the importance of maintaining knowledge and skills in relevant clinical areas is widely accepted across all healthcare professions.

Careful consideration needs to be given to the training demands that establishing and maintaining effective swallow screening may put on speech and language therapy services, particularly in Emergency Departments where there may be a high turnover of staff. Additional resources may be necessary to support initial and ongoing training needs, alongside rostering that ensures that adequately trained staff are available at all times (Irish Heart Foundation, 2010).

7.4 Stroke Swallow Screening Pathway

1. The patient is admitted to ED, diagnosed as having a stroke and admitted to the Stroke Unit.

All stroke patients*/** should have a swallow screen test within 4 hours.

Note-Patients who are not sufficiently alert will automatically fail the swallow screening test.

*With the exception of patients with a pre-existing dysphagia, in which case they should be referred to speech and language therapy immediately.

** Care of the patient post thrombolysis or thrombectomy should follow local policy and may delay the opportunity to perform the swallow screen within the 4 hour time frame.

2. Keep the patient NPO (no food, fluids or oral medications) until a swallow screen test is complete.

Nurse is to ensure:

a. NPO sign is placed in location as per local policy and is clearly documented in clinical record.
b. Local oral hygiene policy is followed.
c. Patient / family are informed and given information on swallow screening and other education as required.
d. Consultation with Pharmacy regarding non oral administration of medicines as required.

3. The swallow screen test will be completed on all patients by a trained screener within four hours of admission to hospital or on stroke diagnosis if the patient is already an in-patient.

a. The swallow screen should be completed before any oral intake.
b. Swallow screening test forms will be completed by the screener; signed, timed and dated and added to the clinical record.
c. The clinical team and patient/family should be verbally notified of the results of the swallow screen by the person who completed the screen.

d. A log of all trained screeners will be maintained by either the Speech or Language Therapy Department or by Nursing Management or both.
e. All patients should have undergone a swallow screening test prior to referral to speech and language therapy, with the exception of those with a baseline dysphagia.

4. If the swallow screen is passed:

a. Inform patient and family that the patient can eat his/her normal diet.

b. Nursing and Medical staff to monitor for signs of dysphagia and pneumonia such as difficulty swallowing food or fluid, dyspnoea, hypoxia, tachypnoea or unexplained pyrexia and refer to speech and language therapy if signs of dysphagia or developing pneumonia are observed.
c. Ensure the patient is referred to speech and language therapy if communication difficulties are present.
d. If there are no communication or swallowing difficulties, the patient should not be referred to speech and language therapy.

5. If the swallow screen failed:

a. Keep patient NPO (no food, fluids, or oral medications).
b. Ensure NPO sign is placed in location as per local policy and is clearly documented in clinical record.
c. Nursing staff to educate the need to maintain the patient NPO with the patient and their family.
d. Provide regular oral hygiene/mouth care as per local policy.
e. Refer patient to speech and language therapy immediately.
f. Refer patient to dietitian immediately.
g. Consider IV fluids and nasogastric tube for medications as indicated.
h. If placed NPO, patient should be considered for nasogastric feeding, within 24 hours of admission and should receive enteral nutrition within 24 to 48 hours of admission if not contraindicated (NICE 2008; IHF 2010, RCP 2016).
i. If a patient is placed NPO out of hours and a decision has been made to commence enteral nutrition, refer to the out of hours enteral feeding regimen as per local policy.
j. Swallow screening may be repeated at twelve hour intervals if status changes.

8.0 Revision and Audit:

This is the first version of the National Guideline for Swallow Screening in Stroke. The implementation of this guideline will be audited through the National Stroke Register and reported in the National Stroke Register Annual Report.

9.0 References:

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10.0 Appendices:

Appendix i: Membership of National Clinical Programme for Stroke - Swallow Screening Initiative Sub-group

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Karen Fitzgerald, Clinical Nurse Specialist Stroke, Mercy University Hospital.

Mary Flanagan, Clinical Nurse Specialist Stroke, Our Lady's Hospital, Navan.

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Jennifer Moloney, Senior Speech and Language Therapist, Beaumont Hospital.

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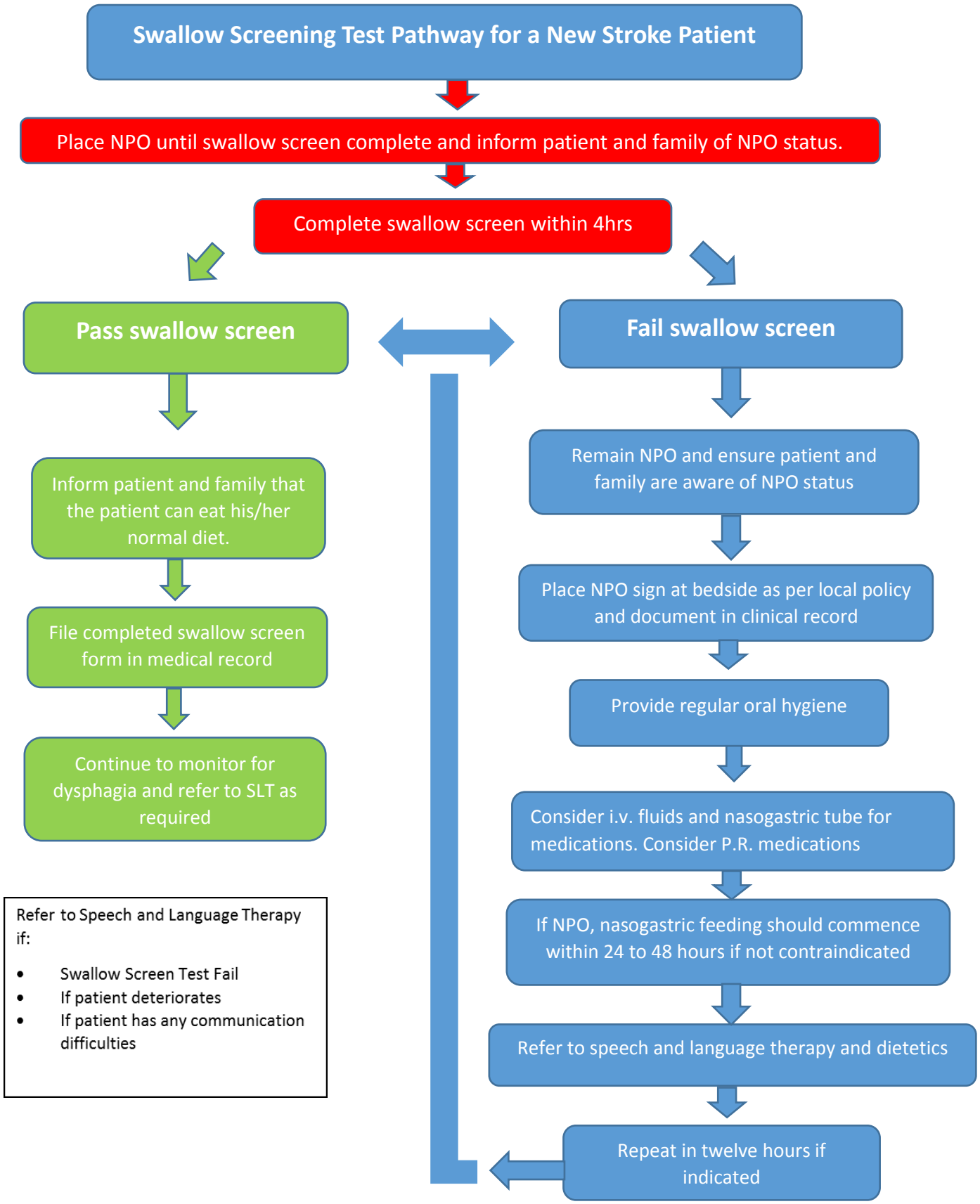
Appendix ii: Swallow Screening Test for Stroke Patients Flowchart



11.0 Revision History: