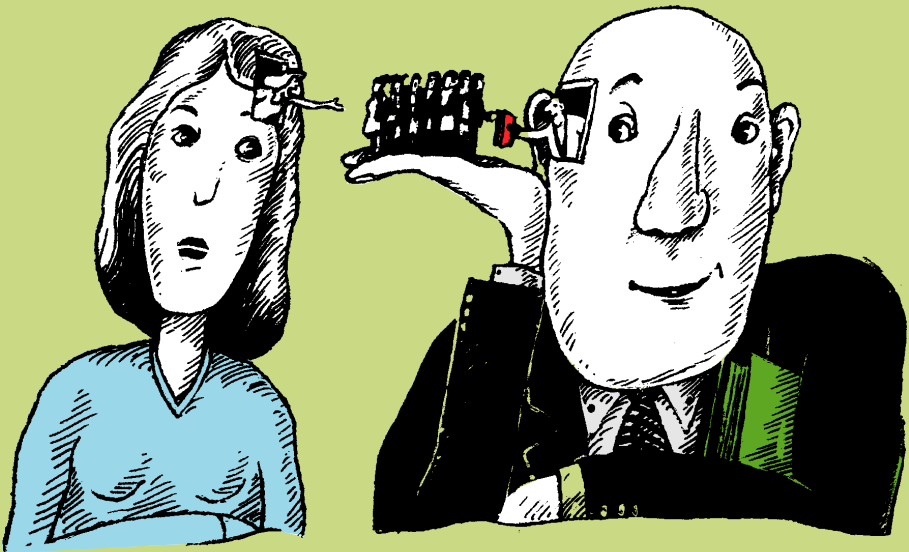


Implementing a Regional Dysphagia Management Strategy

Practical Considerations



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Implementing a Regional Dysphagia Management Strategy: Practical Considerations
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Understanding the Importance of Dysphagia

Dysphagia, which affects as many as 50% of stroke survivors, is associated with increased mortality and with morbidities such as malnutrition, dehydration and pulmonary compromise.¹⁻⁸ However, emerging evidence indicates that detecting dysphagia in acute stroke survivors improves outcomes such as pneumonia, mortality, and length of hospital stay and reduces overall healthcare expenditures.⁹

Determining the type of dysphagia and managing it effectively depends on performing a full assessment of swallowing function, a complex and specialized evaluation that must be performed by a speech-language pathologist (SLP). Ensuring that all stroke survivors suspected of having dysphagia receive an assessment rapidly is complicated by the limited number and availability of SLPs, especially in community hospitals.

A large systematic review recommends that screening acute stroke survivors for dysphagia can identify high-risk individuals, who can then undergo a full assessment.¹⁰ This strategy ensures optimal allocation of scarce SLP resources by efficiently targeting only high-risk individuals for full assessment. In Ontario, an expert panel has recommended that any healthcare professional, who has been trained in dysphagia screening, can screen stroke survivors and determine whether a full assessment, performed by an SLP, is warranted.¹¹

Earlier detection of dysphagia through screening allows treatment to be implemented sooner after a stroke, shortening recovery time and reducing rehabilitation costs. Emerging evidence now suggests that dysphagia screening in acute stroke survivors provides a statistically significant relative risk reduction (RRR) for pneumonia of more than 80%; a statistically significant RRR in mortality of 70%; a reduction in percutaneous endoscopic gastrostomy tube (PEG) insertion; and a reduction in healthcare costs.⁹



Improving Recognition and Management of Dysphagia

Vision

The following vision for improving the recognition and management of dysphagia is supported by the available evidence and was developed by the expert panel convened by the Heart and Stroke Foundation of Ontario:¹¹

All stroke survivors will have access to rapid and timely screening to minimize the development of complications. Stroke survivors who fail the screening* will have access to a rapid and timely full dysphagia assessment. Those stroke survivors found to have dysphagia will receive appropriate individualized dysphagia and nutritional management that meets the best practice guidelines for managing dysphagia. *positive screening

Best Practice Guidelines for Managing Dysphagia

The vision, in turn, provides a foundation for the best practice guidelines for managing dysphagia. These best practice guidelines, developed through a consensus process, provide a benchmark against which organizations involved in stroke care can measure their progress in improving the management of dysphagia after an acute stroke.

1. Maintain all acute stroke survivors NPO until swallowing ability has been determined. NPO prohibits the administration of oral medications, water, and ice chips. Intravenous fluids may be required. Regularly perform mouth-clearing or oral care procedures, using a minimal amount of water, to prevent colonization of the mouth and upper aerodigestive tract with pathogenic bacteria.
2. Screen all stroke survivors for swallowing difficulties as soon as they are awake and alert. A registered nurse, registered practical nurse or other dysphagia team member, trained to administer dysphagia screening tests and interpret results, should perform the screening.
3. Screen all stroke survivors for risk factors for poor nutritional status within 48 hours of admission. A registered nurse, registered practical nurse or other dysphagia team member, trained to administer nutritional screening tests and interpret results, should perform the screening.
4. Assess the swallowing ability of all stroke survivors who fail the dysphagia screening (positive screening). The assessment includes a clinical bedside examination and, if warranted by the clinical signs, an instrumental examination. A speech-language pathologist should:
 - Assess the stroke survivor's ability to swallow food, liquid, and medications.
 - Determine the level of risk of dysphagic complications, including airway obstruction, aspiration of food and liquid and inadequate nutrition and hydration.
 - Identify associated factors that might interfere with adequate oral nutrition and hydration or lead to aspiration-related complications, such as impaired motor skills, cognition or perception.

- Recommend appropriate individualized management, which may include changes in food or fluid consistency, feeding strategies, swallowing therapy, oral care regimens and possibly referral to other health care professionals.

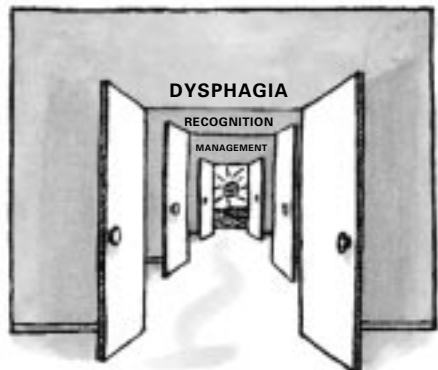
In addition, the stroke survivor's physician may monitor hydration status, initiate appropriate laboratory investigations and order supplementary intravenous fluid administration.

5. Provide feeding assistance or mealtime supervision to all stroke survivors who pass the screening (negative screening). An individual trained in low-risk feeding strategies should provide this assistance or supervision.
6. Assess the nutrition and hydration status of all stroke survivors who fail the screening (positive screening). A dietitian should:
 - Assess energy, protein and fluid needs.
 - Recommend alterations in diet to meet energy, protein and fluid needs.
 - Support alterations in food texture and fluid consistency, based on the assessment by a speech-language pathologist or dysphagia team.

7. Reassess all stroke survivors receiving modified texture diets or enteral feeding for alterations in swallowing status regularly. After the acute stroke management phase, usually the first week after the stroke, reassess patients at minimum intervals of once every 2 to 3 months during the first year after the stroke and then every 6 months thereafter. The severity of swallowing impairment and the rate of improvement may alter the reassessment schedule.

8. Explain the nature of the dysphagia and recommendations for management, follow-up and reassessment upon discharge to all stroke survivors, family members and care providers.

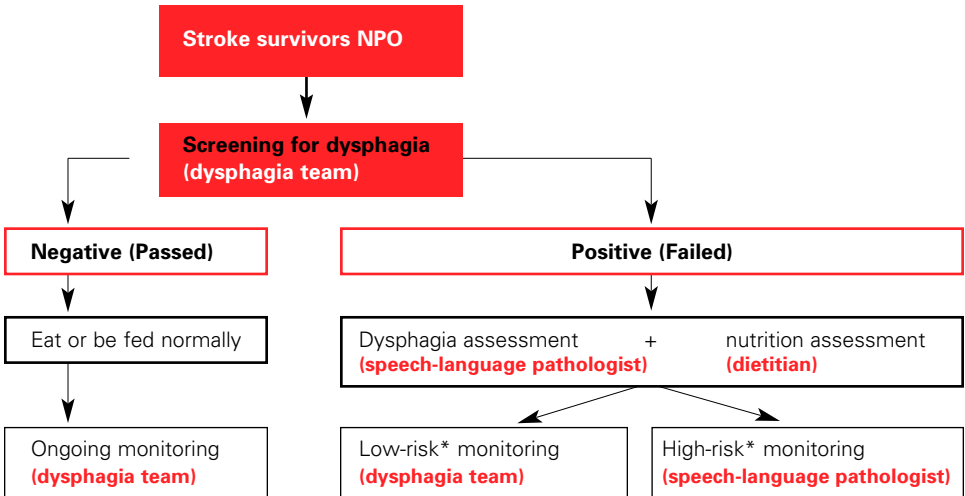
9. Provide the stroke survivor or substitute decision maker with sufficient information to allow informed decision making about nutritional options. Consider the wishes and values of the stroke survivor and family concerning oral and non-oral nutrition when developing a dysphagia management plan.



Clinical Process

The following clinical process is based on the best practice guidelines for dysphagia and illustrates the roles of the different healthcare professionals involved in screening and managing dysphagia.

Figure:
Clinical approach to screening, assessing and monitoring stroke survivors for dysphagia



*Low risk and high risk refer to an individual's risk of developing dysphagia complications. This risk is determined by the SLP as part of a full dysphagia assessment.

Evaluating a Regional Dysphagia Screening Model

Research Overview

A pilot research program in 2003-2004 developed and tested a model for dysphagia screening of stroke survivors. Grand River Hospital provided leadership in the Kitchener/Waterloo Region and the Niagara Health System provided leadership in the Niagara Peninsula.

The Toronto Bedside Swallowing Screening Test (TOR-B SST[®]) was used in all participating institutions to ensure a consistent screening process. The TOR-B SST[®] is the only screening tool developed from a systematic review of the literature and based on the best available evidence.^{9,12,13} The goal is to include an initial screening test that can accurately and reliably detect the presence of dysphagia in stroke survivors, regardless of time post stroke.

The pilot research consisted of three phases with the following objectives:

- 1. Development and implementation:** To develop and implement a dysphagia screening education program and a regional network of healthcare professionals who successfully completed the program.
- 2. Assessment within the acute setting:** To determine whether the new regional dysphagia screening program decreased variation in the management of dysphagia in stroke survivors.
- 3. Feasibility within the acute and rehabilitation environments:** To assess the acceptability and feasibility of the new dysphagia screening program within the acute and rehabilitation settings.

Research Results

Development and Implementation

The researchers developed an education program that included a review of the following topics:

- Normal and abnormal swallowing anatomy and physiology.
- Dysphagia screening.
- Nutrition screening.
- Oral hygiene.
- Supported management techniques.

Based on participant feedback, the researchers also developed a self-study manual containing additional theoretical information and practical exercises and a separate nutrition screening manual. A total of 127 healthcare professionals were trained, of whom 114 were certified and became eligible to screen acute stroke survivors for dysphagia.

Assessment within the Acute Setting

The researchers assessed six practice behaviours to compare the delivery of dysphagia screening before and after training and certification. Significant variation was identified between institutions before training. However, after the education program, stroke survivors received the same dysphagia screening service regardless of the institution to which they were admitted. In addition, the dysphagia screening education program successfully increased the knowledge, skills, and dysphagia-related work satisfaction of participating professionals.

Feasibility within the Acute and Rehabilitation Environments

Throughout the pilot project, the researchers assessed the feasibility of developing and training dysphagia teams through discussions with healthcare professionals in acute and rehabilitation environments. The research project determined that implementation of dysphagia teams was feasible in both environments.

Acute Setting

In the acute setting, the project identified a number of benefits of instituting dysphagia teams and of using a standardized screening process. In addition, several strategies proved critical in effecting practice change in different hospitals.

Benefits

- Increased communication among healthcare professionals both within and between institutions in a stroke region.
- Increased awareness among healthcare professionals and administrative personnel of prevalence and risks of dysphagia in stroke survivors.
- Standardized dysphagia service delivery across institutions in region ensuring equitable service to stroke survivors.
- Opportunity to participate in a dysphagia program developed and endorsed by the Heart and Stroke Foundation of Ontario.

- Standardized, evidence-based approach to screening stroke survivors for dysphagia.
- Introduction of a simple, easy and quick frontline dysphagia screening procedure.
- Training for healthcare professionals in dysphagia screening and supported management for acute stroke survivors.
- Opportunity to develop dysphagia resource materials, such as newsletters, locally.
- Opportunity for institutions to implement additional dysphagia-related projects:
 - *New dysphagia standards launched: oral hygiene standards.*
 - *Various research projects identified: TOR-BSST[®] administration time, handheld TOR-BSST[®] scoring, standardization of new nutritional screening tool.*
 - *Best practice dysphagia guidelines integrated into institution's clinical pathways for stroke.*

Critical Strategies

- Identification of and communication with all key stakeholders prior to implementation is vital to ensure that relevant information reaches all involved staff and to prevent problems associated with communication breakdown.
- Allocation of adequate time for project implementation facilitates smooth and effective implementation.



- Early participation of onsite or regional SLPs ensures that the new screening program is integrated into the SLP dysphagia referral process and that the dysphagia team is aware of performance differences between screening and assessment.
- Communication to involved individuals and departments of the benefits of a dysphagia team, compared with existing service delivery models, helps to ensure smooth implementation.
- The distance between hospitals in the region must be considered when creating a regional process for dysphagia team development.
- Nurses trained in screening found the form simple, quick to administer and score, and easy to interpret.
- Use of the screening form ensured that swallowing ability was addressed consistently at admission to rehabilitation, as transfer documents from acute hospitals often provide no details about swallowing status.
- Nurses gained valuable knowledge that allowed them to prioritize patients for SLP referral and to provide the SLP with definitive evidence supporting the request for assessment.

Rehabilitation Setting

In the rehabilitation setting, the research elicited opinions from participating health-care professionals about the TOR-BSST® screening procedure and the applicability of the dysphagia guidelines published by the Heart and Stroke Foundation of Ontario.

TOR-BSST® Procedure

- Nurses considered the training program important to ensure proper administration and scoring.

Best Practice Guidelines for Managing Dysphagia

- Nurses welcomed the opportunity to participate in workshops on dysphagia screening and supported management techniques, especially the oral hygiene component.



Process for Implementing Dysphagia Screening

Successful implementation of dysphagia screening in a hospital relies on clear goals with realistic time frames, clear and effective communication, detailed planning and teamwork. The specifics of the process may vary from hospital to hospital, but the process itself can be divided into planning, preparation and launch phases.

The first, and perhaps most critical, phase in implementing dysphagia screening in a hospital is planning the project. This part of the process can sometimes appear daunting, but it is vital to successful implementation. Key steps in this initial phase are detailed in *Planning the Implementation*.

Once the planning has been completed, the next phase of the process includes creating and training the dysphagia team and developing the necessary protocols. A checklist of keys steps in this phase is contained in *Preparing for Implementation*.

The final phase of the project involves launching the dysphagia screening initiative and performing the necessary follow up. Key steps in the implementation phase are itemized in *Implementing Dysphagia Screening*.

Planning the Implementation

- Determine the *administrative* role of the Ontario Stroke System (OSS) representative (Regional Stroke Program Manager, Regional Education Coordinator, or District Stroke Coordinator) in implementing dysphagia screening in the hospital.
- Identify the onsite or regional SLP who will lead the *clinical* aspects of the project.
- Identify clinical and administrative departments that must be *informed of* the clinical practice change in dysphagia screening and those that must be *involved in* implementing dysphagia screening. Generally, departments that must be involved include hospital administration, medicine, nursing, speech-language pathology, and dietetics.
- Determine the general project scope: The project may focus on implementing and evaluating dysphagia screening within the hospital or within specific units, or data gathering and research initiatives may be added to the basic process.
- Determine realistic time lines for the planning, training and implementation phases.
- Determine the evaluation process to be used (See *Framework for Program Evaluation*).
- Identify a mechanism to provide post-implementation support. This support may include ways to address problems, provide advice to the dysphagia team, and ensure timely screening for all stroke survivors.
- Create a dysphagia task force composed of individuals from key departments, such as hospital administration, medicine, nursing, speech-language pathology, and dietetics. The task force will be responsible for all aspects of planning, implementing and evaluating the project.
- Identify the procedures to be followed in implementing dysphagia screening, based on institutional guidelines, following the appropriate lines of communication, and incorporating the relevant reviews.

- Ensure that TOR-BSST[®], the evidence-based screening process with high reliability, is uniformly implemented.
- Determine the protocols that must be developed. Examples of protocols include the following:
 - *Nursing protocols for identifying subjects for screening or referring individuals to the dysphagia team.*
 - *Protocols for referral and efficient access to SLP.*
 - *Protocols for around-the-clock coverage by the dysphagia team.*
 - *Protocols for screening within 24 hours.*
- Identify the healthcare professionals managing stroke survivors who must be aware of the dysphagia team, such as nursing, medicine, physiotherapy, occupational therapy, dietetics and other relevant groups.
- Identify the communication strategies to be used with healthcare professionals managing stroke survivors. Effective strategies may include posters, information sessions, newsletters, and other options.
- Refine the project scope, if necessary, based on decisions made during the planning stage.
- Determine detailed project steps and projected time lines.
- Clarify the roles and responsibilities of the OSS representative, SLP, dysphagia task force, and dysphagia team in the preparation and launch phases.

Preparing for Implementation

- Recruit the onsite or regional SLP to act as project leader.
- Recruit the dysphagia team with representation from relevant disciplines, including nursing, physiotherapy, occupational therapy, and dietetics or clinical nutrition.
- Develop the protocols necessary for implementing dysphagia screening.
- Educate and certify the dysphagia team.
- Develop and implement an information program for healthcare professionals managing stroke survivors.
- Develop the post-implementation support strategy and program.

Implementing Dysphagia Screening

- Launch the dysphagia team.
- Implement the supporting protocols.
- Ensure that post-implementation support is available for the dysphagia team and for staff managing stroke survivors.
- Begin screening stroke survivors for dysphagia following the approved processes.
- Monitor the patient identification, screening and referral process.
- Address necessary changes in education or information provided to healthcare professionals, in processes implemented and in any other aspect of the implementation.
- Evaluate the project.

Appendices

Heart and Stroke Foundation Resources

Best Practice Guidelines for Managing Dysphagia

An overview of the nine dysphagia guidelines.

Improving Recognition and Management of Dysphagia in Acute Stroke

A booklet that includes a vision for managing dysphagia in Ontario, guidelines based on best practice, and information on establishing procedures and policies.

Management of Dysphagia in Acute Stroke: An Educational Manual for the Dysphagia Screening Professional

A workshop and manual on managing dysphagia in the acute setting.

Management of Dysphagia in Acute Stroke: Nutrition Screening for Stroke Survivors

A workshop and manual that reviews principles of nutritional screening for stroke patients. Also includes a screening tool.

A Regional Approach to Dysphagia Management. Final Research Report

The research report of the dysphagia pilot project which was designed to develop and test a model for the screening of dysphagia across two stroke regions.

For more information about professional education resources or to obtain copies, call 416-489-7111, 389, e-mail csor@hsf.on.ca or visit www.heartandstroke.ca/profed

Framework for Program Evaluation

It is recommended that each institution assess the implementation of the Regional Dysphagia Management Strategy, as the success of this strategy is an important component of the OSS. The following areas may be assessed, based on feasibility and applicability to the specific hospital:

1. Timely administration of dysphagia screening to newly admitted stroke survivors.
2. Availability of at least one certified dysphagia screener 24 hours a day, seven days a week, every week of the year.
3. Successful referral to the SLP of every stroke survivor with a positive screening (i.e., failed screening).
4. Successful referral to a registered dietitian (RD) of every stroke survivor with a positive screening result (i.e., failed screening).
5. Timely full clinical dysphagia assessment by the SLP for every stroke survivor with a positive screening.
6. Timely full clinical nutrition assessment by the RD for every stroke survivor with a positive screening.
7. NPO status maintained until negative screening result available.
8. Procedures in place to ensure continued competency over time of dysphagia screeners.
9. Procedures in place to ensure communication of dysphagia screening policies to new staff.
10. Screening administered only by individuals who successfully completed training and certification.

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Dysphagia Team Certification

Individual hospitals may choose to impose additional certification conditions, but it is strongly recommended that the following general requirements form the minimum that must be met for a clinician to be certified as competent in screening stroke survivors for dysphagia:

- Attendance at the one-day Heart and Stroke Foundation of Ontario dysphagia screening educational workshop (or equivalent).
- Review of the Heart and Stroke Foundation of Ontario dysphagia educational manuals:
 - *Management of Dysphagia in Acute Stroke: An Educational Manual for the Dysphagia Screening Professional.*
 - *Management of Dysphagia in Acute Stroke: Nutrition Screening for Stroke Survivors.*
- Determination by the SLP implementing the training that the clinician has acquired theoretical knowledge from the manuals about dysphagia screening.
- Determination by the SLP implementing the training that the clinician has acquired practical knowledge about dysphagia screening from the manuals: It is strongly recommended that the individual hospital define competency in dysphagia screening as the successful independent administration of two sequential dysphagia screenings.

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