Background

- Stroke complicated by dysphagia has a substantial impact on patients and may result in death.
- These critical complications are well documented in the literature, and include silent aspiration, pneumonia, long-term dependence on feeding tubes, depression, malnutrition and increased length of stay.
- To prevent these complications, improve quality of life and to meet best practices, dysphagia screening was introduced to the interprofessional stroke team in 2015.
- As clinical practice guidelines continue to be underutilized, effective implementation of best practices in stroke care is relevant to many organizations throughout the Toronto Stroke Network (TSN) and internationally.
- Strategies based on experience and retrospective review of statistical data from 2013 to 2016 are shared.

Methods

- An andragogical approach to knowledge transfer was utilized.
- Education provided core interprofessional teams of eight screeners, (Registered Nurses and Registered Practical Nurses and Registered Dietitians) and to users of the TOR-BSST, including Physicians, Nurses and Physiotherapists.
- Patients who failed screening referred to SLP for assessment.
- Education used Coordinated Stroke Strategy Dysphagia tools.
- Multi-modal educational approach included didactic classroom time, simulation and supervised practice with a mentor.
- Dysphagia policy and algorithm developed to sustain integrity of the process. Screeners go to location of patient to screen for dysphagia. Colleagues provide coverage for assignment until return. On-going evaluation ensured competency of skill.
- Compliance and effectiveness evaluated using stakeholder feedback, statistical data and manual tracking process by newly trained screeners.
- 3 years of data were retrospectively analysed by Decision Support.
- Data sources for analysis included:
  1. patients with a qualifying stroke discharge diagnosis,
  2. completion of Acute Swallowing Screen order and
  3. Time from registration to electronic order completion.

Results

- Compliance for using Stroke Pathway Order sets steadily increased.
- In 2013/14, compliance to the stroke pathway was approximately 65%. By 2015/16 compliance increased to 70%.
- Completion rates for TOR-BSST screens is at 65-70%.
- In 2013/14 83% of all screens were done within 24hrs. By 2015/16, 91% of all screens were done within 24 hours.
- Volumes of patients passing the screen also increased from 61% to 67% over the 3 years.

Discussion & Implications

- 100% of screeners volunteered to be TOR-BSST® trained; this is directly related to success of educational program.
- Screening in place for 6 years now; entire team may feel more comfortable with the process, therefore less barriers to coverage on neuro-stroke unit when screeners leave to screen patients in Emergency Department (ED).
- Competency maintained by having small core group of screeners.
- Stroke team videos, return demonstrations and 3 observations with SLP successful in developing well-trained screeners.
- Percentage of patients with ambiguous clinical presentation to ED completes 100% path compliance (Fig. 3).
- Screening orders embedded in electronic order sets; completion of TOR-BSST® directly related to use of stroke order sets (Fig. 2).
- Retrospective review revealed patients without TOR-BSST® (n=2) never required SLP consult; suggests stroke severity was mild and clinical judgment made for no assessment with no subsequent consequences; or patients were catastrophically ill or intubated (and therefore not able to be assessed or screened) or were made palliative or comfort measures only and did not require SLP care.
- Implementation and maintenance of efficiency in completing screens within 24 hours (Fig. 3). May be due to improved efficiencies to designated stroke unit admission times or improved awareness from rest of hospital to call TOR-BSST screeners.
- Increase in percentage of successful screens (Fig. 4) may be reflective of milder strokes (Fig. 6). This may be due to effective public awareness campaigns instructing early presentation to hospital. These findings consistent with studies examining incidence of dysphagia related to severity of stroke; however we used AlphalFM® ratings rather than NIHSS (Fig. 6).

Conclusions

Team collaboration and varied educational methodology promotes success. Initial investments in time and resources are worth long term benefits of program. Dedicated frontline support is critical to success.

References


Special thanks to our Executive Sponsor, Nancy Papadopoulos and John Hilt; Project Champions, Susan Woolard and Dr. Phil Rhee, Director, Thoracic and Vascular; the MPP Intermountain Nursing Staff and staff on wards Main-Middle-Stroke Unit; our Patient and Family Advisors, our community partners and the Toronto Stroke Network.