

Evaluating benefits is an important component of the connecting South West Ontario (cSWO) Program that helps to support and demonstrate the realization of health system benefits through the adoption of electronic health records (EHRs). By pursuing the measurement of organizational value (improvements in the efficiency of care delivery such as time-savings and redirected resources) and clinical value (patients undergo fewer unnecessary tests, patients have improved access to care), patients ultimately benefit from higher quality, better informed clinical decision-making.

The cSWO Analysis and Research program uses a research-based approach to identify areas of clinical best practice that are affected by the use of EHRs, and works collaboratively with clinicians to understand the value of EHRs. This formative evaluation process informs change management and adoption, and enables clinicians to use EHRs more effectively. This research does not include the use of any personal health information.

This document is one in a series of case studies which describe the clinical value of EHRs in different clinical settings and contexts, particularly with respect to clinical best practices. The work of the cSWO Analysis and Research program is ongoing; depending on the circumstance, these cases occasionally raise questions for further investigation, and clinicians are invited to participate in analysis and research to continue to develop these answers.

## Value statement

Access to electronic health records (EHRs) through the cSWO Regional Clinical Viewer, ClinicalConnect™, supports Speech-Language Pathologists (S-LPs) in assessing patients with potential swallowing difficulties to ensure safe medication administration and feeding.

## Speech-Language Pathologists role in dysphagia assessments and treatment

Dysphagia (swallowing impairment) is a complex medical condition with potentially serious consequences including malnutrition, dehydration, airway obstructions, pneumonia, reduced rehabilitative potential, quality of life, and social isolation. Dysphagia in itself is not a disease, but is a common symptom in diseases affecting the brain or nervous systems (e.g. Parkinson's disease, amyotrophic lateral sclerosis, stroke, spinal cord injury), as well as in medical conditions resulting in structural/mechanical changes to the face, jaw, mouth, tongue or neck (e.g. cancer, surgery and degenerative muscle loss).<sup>1</sup> Studies have found that Dysphagia affects 15-40 per cent of people over age 60, with the prevalence in hospital settings being up to 20 per cent.<sup>2</sup>

Speech-Language Pathologists are currently the professional most frequently responsible for dysphagia assessments. A comprehensive assessment includes, but is not limited to, case history reviews, patient/client and caregiver interviews, oral motor and sensory assessments, swallowing trials, and instrumental assessments (e.g., videofluoroscopies, fiberoptic endoscopic evaluations).<sup>3</sup> Based on the assessment, the S-LP makes recommendations on the most appropriate diet texture (food and liquid components) as well as any modifications to oral medications that are required to promote safe swallowing.<sup>4</sup>

## EHR access improves ability to make safe swallowing recommendations

The S-LP responsible for acute medicine referrals at Brantford General Hospital (BGH) receives approximately 40 physician referrals per month from a variety of hospital units including emergency department, critical care, infectious disease, medical floors, surgery and telemetry. Patients are referred early in their stay, as the results of the S-LP's assessment of swallowing can inform medication administration.

ClinicalConnect is accessed for the majority of referrals, especially if the patient information isn't recent or has only limited detail in the hospital system (i.e., Meditech), or if it is likely that the treatment took place in one of the Hamilton hospitals (e.g. cancer treatment at Juravinski Cancer Centre). In particular, the assessment is informed through information found in the transcriptions and diagnostic imaging modules, as well as home and community care. Dietitian notes, if present, are considered a "hidden gem" by the S-LP. If S-LP reports are available in ClinicalConnect, the time associated with faxing the other hospitals to obtain the notes would be eliminated.

The following two examples illustrate the benefits of accessing the patient’s EHRs in addressing patient safety and time to treatment.

**Scenario 1**

- Patient from community was admitted with a PEG (Percutaneous Endoscopic Gastrostomy) feeding tube but was unsure of why he had the feeding tube.
- S-LP was able to access clinic and discharge notes from St. Joseph’s Healthcare Hamilton (SJHH) which indicated that a videofluoroscopic swallow study (VFSS) had been done and recommendations made based on the results; S-LP was then able to call to get the full results from SJHH.
- As the patient was a silent aspirator (i.e. no outward signs of swallowing difficulty), swallowing difficulties wouldn’t have been picked up in a bedside assessment.

Benefits Realized:

- Without access to the patient’s EHRs, the S-LP may have cleared the patient for thin fluids, which could have resulted in aspiration, pneumonia, etc. and subsequent need for a VFSS
- Associated benefits: patient safety; avoidance of increased length of hospital stay; avoidance of increased time and costs associated with duplicate testing

**Scenario 2**

- Patient from Norfolk General Hospital (NGH) came to BGH for orthopaedic surgery.
- S-LP noticed that the patient had trouble swallowing.
- S-LP viewed images and reports recently done at NGH (in ClinicalConnect) and found a history of esophageal issues.

Benefits Realized:

- Able to make more appropriate recommendations for treatment
- Avoided need to duplicate tests
- Associated benefits: patient safety; patient experience; time and cost savings; faster time to treatment

**Testimonial**

“ClinicalConnect is an important tool in my ability to provide high quality care to the people I serve. As a community hospital, we often have patients who are repatriated from larger centres, or who come to us for specialized care from smaller hospitals in the surrounding area. Access to imaging and dictations from other institutions has improved my ability to provide effective, efficient and safe care. I look forward to ClinicalConnect being expanded to allow for even better access to electronic health information from across the health care continuum.”

Heather Hosten, Speech Language Pathologist, Brantford Community Healthcare System

**Questions**

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**Sources**

<sup>1</sup> Speech-Language and Audiology Canada. (2007). SAC Position Paper on Dysphagia in Adults. Retrieved from: <https://www.sac-oac.ca/professional-resources/resource-library/sac-position-paper-dysphagia-adults>

<sup>2</sup> Iyer, A. and Heathcote, D. (2015). Safe Swallowing of Oral Liquid Medications in Patients with Dysphagia: A Patient Quality and Safety Initiative - Trillium Health Partners. Retrieved from: [https://www.cshp.ca/sites/default/files/Clinical%20Pharmacy/1\\_Safe-Swallowing-of-Oral-Liquid-Medications.pdf](https://www.cshp.ca/sites/default/files/Clinical%20Pharmacy/1_Safe-Swallowing-of-Oral-Liquid-Medications.pdf)

<sup>3</sup> The Ontario Association of Speech-Language Pathologists and Audiologists. (Revised 2016). The Speech-Language Pathologist’s Role in Dysphagia Services. Retrieved from: <https://www.osla.on.ca/uploads/The%20SLP%20Role%20in%20Dysphagia%20Services%20Working%20Group%202006%20rev%202016%202.pdf>

<sup>4</sup> Jackson, L.D. et al. (2008). Safe Medication Swallowing in Dysphagia: A Collaborative Improvement Project. *Healthcare Quarterly* 11, March 2008: 110-116.doi:10.12927/hcq.2008.19660.



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