

Standardising processes for videofluoroscopic swallowing study (VFSS) clinics: Considerations at a profession and service-wide level

Ms Katrina Webster¹, Ms Natasha Moller¹¹West Moreton Hospital and Health Service, Ipswich, Queensland, AustraliaEmail: katrina.webster@health.qld.gov.au Phone: (07) 34137521

IDENTIFIED PROBLEMS

- High radiation doses – acquisition and fluoroscopy modes used
- Low pulse rate (7.5pps)
- Screening time unknown
- Inconsistent barium measurements
- Small team – 1 x speech pathologist and 1 x radiographer
- Inconsistent patient education
- Inconsistent speech pathology competency training
- Nil clear clinic guidelines
- Difficulty tracking VFSS referrals
- Inconsistent reporting practices by SPs
- Unaware of practices at other hospitals
- Nil set triaging or categorisation guidelines
- Time-intensive referral process with gaps in clinical handover



PLANNING

- Stakeholder engagement
- National benchmarking activities
- Evidence-based literature review
- Consumer engagement and patient experience surveys
- Pre-audit of radiation dosage and screening time
- Reviewing task delegation roles
- Submission to develop workplace instruction
- Education of staff

PRELIMINARY FINDINGS

- Limited quality evidence in the literature – predominantly paediatric studies
- Significant variation exists across facilities nationally in regards to VFSS clinic provision. Variances existed in VFSS clinic protocol, whether recipes were used for barium preparation, and generally poor knowledge of radiation dose delivered to patients

IMPLEMENTED ACTIONS

WORKPLACE INSTRUCTION & CLINIC PRIORITISATION CRITERIA

Outlines eligibility criteria, referral process, triaging, conducting, interpreting, reporting, and discharge processes

REFERRAL FORM

- Improved clinical handover and transparency of patient information
- Improved accuracy of prioritisation

REFERRAL DATABASE & VFSS CLINIC CODE

Improved tracking of patients referred to VFSS clinic and appointment scheduling

PROTOCOL CHANGE

All images in fluoroscopy mode - 30 pulses per second (pps) for thin fluids, 15pps for thickened fluids, 7.5-15pps for solids

STANDARDISED BARIUM RECIPES

- Recipes as per research by Catriona Steele
- Scales purchased and stored in fluoroscopy room to weigh prepared items consistently

VFSS COMPETENCY PROGRAM

Background knowledge and demonstrated ability components by a speech pathology trainer

CLINIC INFORMATION BROCHURE

- Consumer engagement
- Information about what to expect, referral process, and clinic location

ALLIED HEALTH ASSISTANT

- Training from SPs
- Engages in clinic set-up, feeding patients, & clinic clean-up



IMPLEMENTED ACTIONS CONT'D

VFSS REPORT TEMPLATE
Consistency of reporting amongst all SPs conducting VFSS at Ipswich Hospital

IN-SERVICES

- Speech pathology staff – clinic and protocol changes, and radiation safety
- Medical imaging staff – clinic and protocol changes



PATIENT EXPERIENCE SURVEYS & CONSUMER ENGAGEMENT

- High satisfaction with VFSS clinic and staff overall
- More prepared for clinic when receive appointment letter and brochure
- Low satisfaction with platform size and height of hooks in toilet!

OUTCOMES

- Overall 66% reduction in radiation dosage to patients (Pre: 3.37Gy.cm², Post: 1.14Gy.cm²)
- Nil significant change in VFSS screening time (Pre: 2.3mins, Post: 2.26mins)
- Consistently offer 2 VFSS outpatient appointments per week
- Improved confidence, communication, and consistency of practice for speech pathologists and radiographers involved in VFSS
- Improved clinical handover for SP running VFSS clinic
- Improved knowledge about VFSS evidence based practice within Speech Pathology and Medical Imaging teams
- Speech pathologists reporting improved clinical judgements about swallow physiology
- High patient satisfaction with the Ipswich Hospital VFSS clinic
- Improved patient education resulting in increased patient preparedness for procedure
- Additional staff present in VFSS clinic to facilitate accurate online interpretation

FUTURE DIRECTIONS

- Further investigate impact of changes in reducing patient's radiation dosage
- Speech pathology-led requests for VFSS referrals
- Develop formal Allied Health Assistant training program
- Explore use of sensory enhancement testing within VFSS procedures (e.g. carbonation, cold/hot fluids)



ACKNOWLEDGEMENTS

- Ipswich Hospital
- Speech Pathology
 - Medical Imaging
 - Quality Improvement
 - Medical Records
 - Consumer Engagement
 - Corporate Communications and Design
 - Allied Health Administration Officer
 - HBCIS Systems Coordinator
 - WMHHS Policy Procedures and Clinical Pathways Advisory Group

- Department of Health
- Medical Physics

REFERENCES

- Erskine, B.J., Brady, Z., & Marshall, E.M. (2014). Local diagnostic reference levels for angiographic and fluoroscopic procedures: Australian practice. *Australasian College of Physical Scientists and Engineers in Medicine*, 37, 75-82.
- Kim, H.M., Choi, K.H., & Kim, T.W. (2012). Patients' radiation dose during videofluoroscopic swallowing studies according to underlying characteristics. *Dysphagia*, 28(2), 153-158. doi: 10.1007/s00455-012-9424-y
- Logemann, J. (1998). Disorders of Deglutition. In J. Logemann, (Eds.), *Evaluation and treatment of swallowing disorders* (2nd ed., pp. 71-132). San Diego, CA: College-Hill Press.
- Speech Pathology Australia. (2013). *Videofluoroscopic Swallowing Study (VFSS) - Clinical Guideline*. Retrieved from www.speechpathologyaustralia.org.au
- Steele, C. (2016). *Barium Recipes*. Retrieved from <http://steeleswallowinglab.ca/srri/best-practice/barium-recipes/>

