Safer Patient Mealtimes: An Interdisciplinary Educational Initiative for Health & Social Care Professions Students in a Neurorehabilitation Setting

Cox, M., Haughey, F. & Leonard, N.

Introduction

The National Rehabilitation Hospital (NRH) provides clinical placements for students from many different disciplines. Since the development of clinical practice tutor posts in 2008 the NRH has invested in the development of a rich interdisciplinary team learning environment. The aim of this poster is to outline the development, implementation and future direction of an interdisciplinary educational initiative regarding safer patient mealtimes for third level Health & Social Care Professions (Speech & Language Therapy, Physiotherapy and Occupational Therapy) students. Learning aims, approaches and outcomes will be outlined as well as participant feedback.

Review of the Literature

Eating and drinking are complex processes based on physical and cognitive skills (Johansson and Johansson, 2009). They are vital for maintaining adequate nutrition and hydration and are central features of social gatherings and family life. In a neurorehabilitation setting, patients often present with motor, sensory and cognitive impairments which impact negatively on the eating and drinking experience. Following a stroke or traumatic brain injury, it is common to suffer from dysphagia. The incidence of dysphagia post-acquired brain injury (ABI) is cited as ranging between 26% and 70% (Halper et al. 1999) with rates of 26%-42% cited for individuals entering a rehabilitation hospital (Cherney & Halper, 1996). Rates of aspiration post-ABI, range from 25% to 71% depending on the sample surveyed (Mackay et al. 1999b). There is substantial morbidity and mortality in patients who develop pneumonia after stroke (Armstrong & Mosher, 2011). Dysphagia can also occur as a consequence of anterior cervical discectomy and fusion (ACDF) surgery following a spinal cord injury. The published incidence of dysphagia after ACDF surgery ranges from less than 2% to greater than 50% (Lee et al, 2016).

Eating and drinking are multifaceted processes and breakdown can occur at varying levels following a neurological event. Therefore, a collaborative team approach is required to maximise patient nutrition, hydration, safety and independence. Ensuring patients with dysphagia have adequate nutrition is an important part of their medical management, as it has a critical impact on the person's recovery process and final outcome. Denes (2004) noted that rehabilitation problems associated with severely malnourished ABI patients include an increased occurrence of complications resulting in a longer length of stay in a rehabilitation unit.

The Health Information and Quality Authority (HIQA) National Standards for Safer, Better Healthcare (2012) call for a health service that provides care that is safe, effective, person-centred and that promotes better health and well being of the people using it. A collaborative approach from the different healthcare professionals working with patients is required to ensure this. Interprofessional learning (IPL) can promote this collaborative ethos at student level.

IPL occurs when two or more professions learn with, from and about each other in order to improve collaboration and the quality of practice (Hallin et al., 2009). It enables students to acquire knowledge, skills and attitudes that they could not acquire in uni-professional education. IPL for health science students has been seen as a vehicle that could prepare health professionals for improved collaboration (Reeves, 2000). Research suggests that best practice in clinical education should include innovative, interdisciplinary educational experiences for students to enable development and acquisition of skills that will facilitate collaborative patient-centred practice (Chan & Wood, 2010).

Learning Outcomes

Students will

- Identify the members of the interdisciplinary team (IDT) involved in facilitating safer mealtimes
- Know the roles of the IDT members in facilitating safer mealtimes
- Understand the clinical presentation of aspiration
- Be aware of the clinical investigations used to assess swallow impairment and identify aspiration
- Be aware of modified diet consistencies and thickened fluids and their role in safer mealtimes
- Understand the impact of physical and sensory impairments on safe eating and drinking
- Identify modified equipment and compensatory strategies to support safe participation in eating, drinking and swallowing

Method

- Interactive and experiential learning with role play exercises – Three Learning Stations
- 4 Speech and Language Therapy (SLT) students, 6 Physiotherapy students and 3 Occupational Therapy (OT) students

Station 1:Postural and positioning considerations for eating, drinking and swallowing (Facilitated by Physiotherapy)

Station 2: Overview of instrumental assessment in dysphagia; Modified meal consistencies, thickened fluids and strategies for safe swallowing (Facilitated by Speech & Language Therapy)

Station 3: Adapted Equipment and Strategies to compensate for visual and upper limb impairment (Facilitated by Occupational Therapy)

Figure 1: *Physiotherapy Learning Station - Postural and Positioning Considerations for Eating and Drinking*

Figure 2: *Speech and Language Therapy Learning Station – Modified Meal Consistencies and Thickened Fluids*

Figure 3: *Occupational Therapy Learning Station- Adaptive Aids and Compensatory Strategies*

Feedback & Evaluation

Students reported improved understanding of their own roles and the roles of other team members in promoting safer patient mealtimes in a neurorehabilitation setting.

Good to learn other therapists' roles in swallow and mealtimes

Positive aspects of the tutorial detailed by students included:

- Opportunities for interactive, experiential and peer-based learning
- Practical focus
- Interdisciplinary learning
- Increased understanding of patient experience of dysphagia

Practical & IDT aspect of session extremely helpful

Conclusion

HIQA National Standards for Safer, Better Healthcare (2012) call for a health service that provides care that is safe, effective, person-centred and that promotes better health and well-being of the people served. A collaborative approach from the different healthcare professionals working with patients is required to ensure this. This collaborative ethos was promoted using IPL focusing on interactive and experiential methods. Collaborative working in the area of safer mealtimes is a novel approach that requires further development and promotion. Future IPL will be developed to include dieticians who are central to safer patient mealtimes.

References:

Armstrong, J. & Mosher B. (2011) Aspiration Pneumonia After Stroke- Intervention and Prevention. *The Neurohospitalist*, 4(2), 85-93.
Chan, A. & Wood, V. (2012) Preparing tomorrow's healthcare providers for interprofessional collaborative patient-centred practice today. UBCMJ, 1(2), pp.22-24.
Cherney, L. R., & Halper, A. S. (1996). Swallowing problems in adults with traumatic brain injury. *Semin Neurol, 16*(4), 349-353.
Denes, Z. (2004). The influence of severe malnutrition on rehabilitation in patients with severe head injury. *Disabil Rehabil, 26*(19), 1163-1165.
Hallin K, Kiessling A, Waldner A, Henriksson P. Active interprofessional education in a patient based setting increases perceived collaboration and professional competence. Med Teach. 31 pp.151-157.
Halper, A. S., Cherney, L. R., Cichowski, K., & Zhang, M. (1999). Dysphagia after head trauma: the effect of cognitive-communicative impairments on functional outcomes. *J Head Trauma Rehabil, 14*(5), 486-496.
HIQA National Standards for Safer, Better Healthcare (2012)
Lee, J. Y., Lim, M. R., Albert, T. J. Dysphagia after anterior cervical spine surgery: Pathophysiology, incidence, and prevention. Online publication only.
Johansson, A. & Johansson, U. (2009) Relatives' experiences of family members' eating difficulties. *Scandinavian Journal of Occupational Therapy* 16, pp. 25-32
Mackay, L. E., Morgan, A. S., & Bernstein, B. A. (1999b). Swallowing disorders in severe brain injury: risk factors affecting return to oral intake. *Arch Phys Med Rehabil, 80*(4), 365-371.
O'Neil-Pirozzi, T. M., Lisiecki, D. J., Jack Momose, K., Connors, J. J., & Milliner, M. P. (2003). Simultaneous modified barium swallow and blue dye tests: a determination of the accuracy of blue dye test aspiration findings. *Dysphagia, 18*(1), 32-38.
Reeves, S. (2000). Community-based interprofessional education for medical, nursing and dental students. Health & Social Care in the Community, 8(4), 269-276.