



ENHANCED CARE THROUGH INTERPROFESSIONAL EDUCATION AMONG DENTAL HYGIENE AND OCCUPATIONAL THERAPY STUDENTS

*Dr. Amy L. Sullivan¹ and Dr. Peter Giroux²

¹Professor in Dental Hygiene, School of Health Related Professions and Graduate Studies in Health Sciences
University of Mississippi Medical Center, 2500 North State Street, Jackson MS, 39216

²Professor in Occupational Therapy, School of Health Related Professions

Abstract Hypothesis: Knowledge, comfort level, and competency with wheelchair transfers, vital signs, and oral care with dental hygiene (DH) and occupational therapy (OT) students will be enhanced based on this interprofessional education (IPE) learning opportunity.

Method: A laboratory hands-on clinical experience was specifically designed for collaboration between DH and OT professors and 2nd year DH/OT students. Pre and post tests surveys as well as competency check-off by professors were utilized as outcome measures for this experimental, cross-sectional, quantitative design.

Outcome: Pre and post tests revealed improvement in all areas through descriptive analysis. After this IPE, 100% of DH students reported feeling average or above average in knowledge of wheelchairs, comfort level with a wheelchair patient, and performance of wheelchair transfers. OT students (100%) also reported feeling average or above average in knowledge of oral care, comfort level of denture clients, tooth brushing performance, and vital signs. Additionally, all DH/OT collaborative teams successfully completed the competency check offs by the DH and OT professors.

Conclusion: Students from each of the professions take with them a mutual respect for each other's profession and healthcare team. These shared values have been practiced at the University between DH and OT for over 10 years.

Key words: Interprofessional Education between Dental Hygiene and Occupational Therapy

Introduction: Traditionally, dental hygiene and occupational therapy programs run completely autonomous among allied health programs.

For Correspondence:

asullivan@umc.edu.

Received on: October 2016

Accepted after revision: December 2016

Downloaded from: www.johronline.com

Dental hygiene faculties teach dental hygiene students and occupational therapy faculties teach occupational therapy students. What would happen if we crossed over and taught the skills in which we are experts to the other disciplines? What would happen if we taught our students to exchange this knowledge to the other disciplines?

Since there is a paucity of research among interprofessional education among these two

departments, let's start with why the activity began over 10 years ago. Dental professionals were lacking necessary skills to make them feel comfortable when seeing special needs patients in the dental chair. In addition, we learned that many dental providers did not even treat patients in a wheelchair. A large percentage of dental professionals reported that they had little or no training on proper technique for wheelchair transfers^{1,2}(Sullivan, Morgan, & Bailey, 2009; Waldman & Perlman, 2006).

Due to independent state dental laws and regulations, in just a few states, dental hygienists are not allowed to provide services to include oral hygiene instructions and denture care without a dentist present. Since these regulations are so strict, many times occupational therapists will have to provide oral instruction or denture care to clients in rehabilitation centers or nursing homes since dentists are not typically staffed. Oral health is compromised in many clients that occupational therapists will treat, and there are modifiable risk factors important to teach, such as practicing preventive measures³ (Sullivan, Bailey, & Stokic, 2013). Occupational therapy students are taught very little about oral care in the traditional OT program.

To address these two inadequacies from each discipline, a collaboration day between the dental hygiene and occupational therapy departments was implemented annually. The implementation was designed to include student teaching. The purpose of the annual training was to give students an opportunity to enhance knowledge, comfort level, and competency with wheelchair transfers, vital signs, and oral care.

Materials and Methods:

The annual training takes place at the University Of Mississippi School Of Dentistry, in the dental hygiene clinic for approximately three hours. Two occupational therapy students are paired with one dental hygiene student. All students are given an introduction and orientation to the clinic, followed by a pre-test survey. In the pre-test survey, the dental hygiene students are asked questions about their knowledge, comfort level, transfer performance, and adaptive equipment associated with wheelchairs

immediately before the collaboration session. During the pre test for the occupational therapy students are asked questions about their knowledge of oral care, comfort with dentures, tooth brushing performance, and blood pressure performance.

The dental hygiene clinic (DHC) is an open bay clinic that holds 20 dental chairs. Dental hygiene students supply toothbrushes, floss, models, dentures and partials. Occupational therapy students bring wheelchairs, transfer belts, and sliding boards to the DHC. Half the students are instructed to begin the oral care portion, while the other half begins the wheelchair portion. This is done to help facilitate faculty check-offs and to help manage/share equipment. The collaboration begins. Students teach students of the other discipline, and when confident ask faculty to do their competency check-off. Check-offs consist of DH/OT faculty observing and asking follow-up questions to make sure each group was properly trained. After students perform the check-off, they switch roles and begin the other section.

In the oral section, dental hygiene students teach occupational therapy students proper brushing and flossing technique. Typically this includes the Bass brushing technique and "c" shaped flossing but is tailored to individual needs. Denture and partial care is taught and practiced. For many OT students, this is the first time to actually hold a denture in their hands. Although blood pressure is taught in the OT curriculum, it is one additional time to practice for them.

In the wheelchair section, first dental hygiene students must learn proper mechanics of wheelchair. OT students teach DH students how to wheels, remove foot pedals, and remove arms rests. They learn the best placement of the wheelchair and how to use adaptive equipment such as a transfer belt and transfer board. DH students are taught a couple different techniques and then practice.

After students have ample time to learn and practice, faculty observe competency check-offs. At the conclusion of both Oral care and wheelchair check-offs, students take the post-test survey. Pre and post test surveys as well as

competency check-off by professors were utilized as outcome measures for this

experimental, cross-sectional, quantitative (and minimal qualitative) design.

Tables and Figures:

	Before	%	After	%
Knowledge of wheelchairs	Excellent	1.4	Excellent	97.1
	Average	50.7	Average	2.9
	Below Average	47.8	Below Average	0
Comfort level with wheelchair patient	Excellent	0	Excellent	85.5
	Average	30.4	Average	14.5
	Below Average	69.6	Below Average	0
Performance of WC transfer	Excellent	0	Excellent	91.3
	Average	10.1	Average	8.7
	Below Average	89.9	Below Average	0
Comfort level with adaptive equipment (belt/board)	Excellent	0	Excellent	91.3
	Average	5.8	Average	8.7
	Below Average	94.2	Below Average	0
Knowledge of oral care	Excellent	6	Excellent	97
	Average	90.3	Average	3
	Below Average	3.7	Below Average	
Comfort level with denture clients	Excellent		Excellent	84.3
	Average	9	Average	15.7
	Below Average	91	Below Average	
Toothbrushing performance	Excellent	18.7	Excellent	100
	Average	79.1	Average	
	Below Average	2.2	Below Average	
Blood pressure performance	Excellent	41	Excellent	99
	Average	53	Average	
	Below Average	2	Below Average	
	<i>Not performed 2016</i>	---		---

Overall statistics for the last 4 years: (n= 204; 135 OT, 69 DH) 2013-2016

Results and Discussion: Pre and post tests revealed improvement in all areas through descriptive analysis. After this IPE, 100% of DH students reported feeling average or above average in knowledge of wheelchairs, comfort level with a wheelchair patient, and performance of wheelchair transfers. OT students (100%) also reported feeling average or above average in knowledge of oral care, comfort level of denture clients, tooth brushing performance, and vital signs. Additionally, all DH/OT collaborative teams successfully completed the

competency check offs by the DH and OT professors. This year to add a qualitative prospective, students were asked to share their experience. Common themes that arose with the IPE session were that students teaching made learning more relaxing, easier to understand (speak same language), and offered an opportunity to learn about each other's profession.

Students from each of the professions take with them a mutual respect for each other's profession and healthcare team. These shared

values have been practiced at the University between DH and OT for over 10 years. Overall, students, faculty, and the administration think fondly of the activity. We will continue to collect data and report our findings.

Acknowledgement: Tonia Taylor, PhD, Occupational Therapy Department for helping get this started with dental hygiene and participating in the activity many years along with other OT faculty at UMC.

References:

- Sullivan A, Morgan C, and Bailey J, Dental professionals' knowledge about treatment of patients with spinal cord injury. *Special Care Dentistry*, 2009, 29: 117-122.
- Waldman HB, Perlman SP, A special care dentistry specialty: sounds good but...*Journal of Dental Education*, 2006, 70: 1019-1022.
- Sullivan A, Bailey J and Stokic D, Predictors of oral health after spinal cord injury. *Spinal Cord*, 2013, 51:300-305.