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Interprofessional Education Enhancement: Inclusion of Occupational Therapy

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Abstract

The increase in interprofessional education (IPE) opportunities provides an excellent opportunity for occupational therapy (OT) educators to partner with other health professions to deepen the understanding of how the OT profession adds value to future healthcare teams. The purpose of this study was to describe the development and impact of a curricular unit about the OT profession that was integrated into an established IPE program for medical, advanced practice nursing, pharmacy and social work students. A Needs Assessment was conducted by embedding an OT consultant within interprofessional student teams working in clinical environments over six weeks to observe baseline understanding of how student primary care teams work with OT professionals. From these observations, a curricular unit was designed that included lecture, interactive work stations, and case studies. Students completed pre and post surveys in order to assess their learning. Quantitative and qualitative analysis of pre and post surveys indicated a significant increase in knowledge, application of information, and confidence to refer to and utilize OT in clinical practice. Interprofessional students learned about OT scope of practice, possible interventions, and examples of appropriate referrals. The curricular unit provided an excellent example of how OT professionals can partner with health professions schools to provide content about OT when OT students are not accessible. Future improvements include assessment of longitudinal impact of the curriculum on health professions behavior, including impact on patient referrals to OT by primary care teams.

Keywords

Interdisciplinary education, Interprofessional collaboration, occupational therapy, advocacy, interprofessional learning

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Interprofessional Education Enhancement: Inclusion of Occupational Therapy

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ABSTRACT

The increase in interprofessional education (IPE) opportunities provides an excellent opportunity for occupational therapy (OT) educators to partner with other health professions to deepen the understanding of how the OT profession adds value to future healthcare teams. The purpose of this study was to describe the development and impact of a curricular unit about the OT profession that was integrated into an established IPE program for medical, advanced practice nursing, pharmacy and social work students. A Needs Assessment was conducted by embedding an OT consultant within interprofessional student teams working in clinical environments over six weeks to observe baseline understanding of how student primary care teams work with OT professionals. From these observations, a curricular unit was designed that included lecture, interactive work stations, and case studies. Students completed pre and post surveys in order to assess their learning. Quantitative and qualitative analysis of pre and post surveys indicated a significant increase in knowledge, application of information, and confidence to refer to and utilize OT in clinical practice. Interprofessional students learned about OT scope of practice, possible interventions, and examples of appropriate referrals. The curricular unit provided an excellent example of how OT professionals can partner with health professions schools to provide content about OT when OT students are not accessible. Future improvements include assessment of longitudinal impact of the curriculum on health professions behavior, including impact on patient referrals to OT by primary care teams.

INTRODUCTION

All health professionals should understand the value and importance of occupational therapy (OT) and should be able to facilitate incorporation of OT into practice appropriately to allow for increased client-centered care. Participating in interprofessional education (IPE) is a means to accomplish this goal. Interprofessional

education is defined as “occasions when two or more professions learn with, from, and about each other to improve collaboration and quality of care” (Centre for the Advancement of Interprofessional Education, CAIPE, 1997, p. 19). The American Occupational Therapy Association (AOTA) encourages OT educators to consider IPE collaboration as an important method for OT students to develop skills necessary to participate as effective members of the health care team (AOTA, 2014; AOTA, 2015). Indeed, this is a national conversation across all health profession schools for their own students. However, successful IPE also assumes that professional schools have readily available curricula to advocate for their own professions in different settings in order to teach other types of professional students about who they are and how they best practice care. In addition to developing meaningful learning experiences, health educators are expected to form partnerships and find opportunities to facilitate cross-discipline learning.

There is clear evidence that IPE efforts are effective in improving client-centered care and forming quality healthcare providers. Not only do accrediting bodies require IPE as part of their standards, but the body of evidence that demonstrates the positive impact of early IPE on practice behaviors has grown significantly (Guraya & Barr, 2018). Students who participate in IPE show an increased understanding of the scope of practice within their own and others’ disciplines and are more likely to become collaborative practitioners by showing respect and positive attitudes toward other disciplines’ practitioners (Bridges, Davidson, Odegard, Maki, & Tomkowiak, 2011). Given the evidence, large partnerships have refined IPE competencies (Interprofessional Education Collaborative, 2016), provided guidance for educators on theoretical frameworks (Arvin, George-Paschal, Pitonyak, & Dunbar, 2017), and curated repositories for curricula such as the National Center for Interprofessional Practice and Education (<https://nexusipe.org/informing/resource-center>). For the past decade, major funding agencies have encouraged educators to train future healthcare practitioners through IPE on comprehensive, collaborative teams in hopes of improving patient outcomes, mitigating challenging healthcare complexities, increasing job satisfaction, and producing better practitioners (Cronenwett & Dzau, 2010).

From a practical standpoint, however, developing an IPE opportunity depends on tremendous strategic planning to coordinate the variety of health professions curricula and allow for different types of students to “learn with, from, and about each other” (CAIPE, 1997). Challenges such as getting different professional students in the same room together, let alone in a clinical environment together, often inhibit the variety of professions that can collaborate in joint learning activities. A challenge unique to OT includes the perception that the profession is not part of the primary care team. For example, studies have shown that knowledge and appreciation for OT practice is frequently misunderstood (Loy, Mitcheff, Nyugen, & O’Brien, 2015), OT is not perceived as an integral member of the team (Smith & Mackenzie, 2011), and the role of OT is hindered by ambiguity, confusion, and lack of clarity around the profession’s scope of practice by other professionals, insurance agencies, and patients (Wilding & Whiteford, 2018). Therefore, to reach a goal of client-centered care where all health professionals

understand how to appropriately partner with OT, there is a need to create curricular units that are easily accessible to educators across the health professions.

The increase in evidence supporting the value of IPE and the development of required accreditation standards have resulted in more educators searching to partner across professions and to design creative strategies for students to learn together. This is an exciting opportunity for OT educators to partner with other health professions' schools and advocate for the inclusion of the OT profession in IPE curricula. In the spring of 2018, the authors of this descriptive study had the opportunity to form such a partnership. An OT consultant partnered with an established IPE program to create a teaching unit with the goal of expanding the understanding of the OT profession among future primary care professionals.

DESCRIPTION OF THE ESTABLISHED IPE PROGRAM

A university in the Southeast region of the United States was host to an established, longitudinal, and clinic-based IPE program (referred to as the Program) that placed teams of first year medical, advanced practice nursing, pharmacy and social work students in clinical environments to work and learn together over a two-year period. Students attended clinics with their team one-half day per week. In clinic, they interacted with patients under supervision from licensed professionals and developed interprofessional competencies into their own professional practice. In addition, students participated in a summer immersion, and came together in a seminar or simulation format one time per month over four semesters. Each semester focused on a theme: (1) patient as partners, (2) the professions, (3) teams, and (4) health systems (Waynick-Rogers et al., 2018).

In the second semester, focused on 'the professions', the Program taught students about roles and responsibilities of professionals outside of the four represented disciplines. This learning had previously taken the form of listening to several panels of experts describing their individual fields. The OT consultant, a graduate student at the time, was searching for an interprofessional setting to better understand barriers to OT referral. The Program director was in search of more interactive methods for learning about different professions. The goal for the partnership was to move student learning beyond the original experience of only listening to an OT professional on a panel explain their profession, to an immersive experience for the IPE students that included clinical experience with an OT professional. Immersion into interprofessional teams and learning has been shown to increase student understanding of other disciplines while facilitating a deeper, more comprehensive understanding of one's own role within the team (Bridges et al., 2011).

DESCRIPTION OF THE STUDY

The purpose of this descriptive study was to a) conduct a Needs Assessment by immersion of an OT consultant with IPE students in a clinical setting in order to identify gaps in understanding of OT scope of practice, b) use the findings from the observations to develop a curriculum that attempted to close knowledge and attitudinal gaps, c) implement the developed curriculum, and d) report the impact of the curriculum

on medical, advanced practice nursing, pharmacy and social work students participating in an established, clinic-based longitudinal IPE program.

Participants

Participants included students in their second semester of the Program (N=43) from the participating schools of medicine (n=13), nursing (n=13), social work (n=4), and pharmacy (n=13). All Program participants were included in the study. The educational intervention was included as part of the regular coursework.

Setting

All activities related to the observations and educational interventions took place at a private university and academic medical center in Nashville, Tennessee. The OT consultant conducted a Needs Assessment in four practice settings: inpatient acute cardiology, outpatient integrative health clinic, and separate adult and pediatric primary care clinics. The resulting Educational Intervention was conducted in the Program's regular school of medicine classroom.

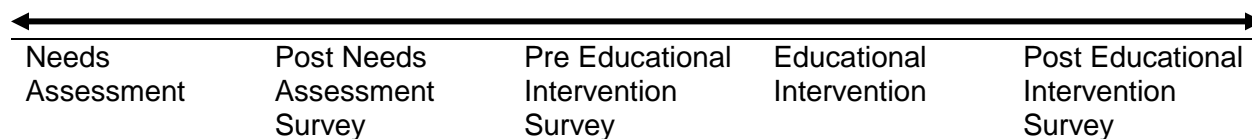


Figure 1. Intervention timeline.

METHODS

The following timeline (Figure 1) outlines the methods used to conduct the Needs Assessment, curriculum development, and educational impact study. Pre and post surveys were created as evaluation tools to better understand the impact of the curriculum on student learning. The post Needs Assessment survey and pre/post Educational Intervention surveys were part of the host University's general school of medicine curriculum reform efforts and therefore received a non-research determination by the institutional IRB (#130865).

1. Needs Assessment

An OT consultant was embedded in four of the Program's teams over the course of six weeks to observe the gaps in knowledge around OT services. The OT consultant interacted with four unique interprofessional teams (students, n=15). Each team was observed for a two-week period. The OT consultant shadowed patient care with the teams and facilitated discussion with licensed clinician preceptors and students about possible OT consultation in the practice setting. These interactions provided students with personal interaction with an OT, discussion of OT scope of practice, education on possible and appropriate OT interventions, and unique case-specific OT considerations for each patient they saw during their four-hour clinic session. Through the Needs Assessment, the OT consultant gathered information on gaps in knowledge of preceptors and discussed opportunities for OT in patient care plans. After each clinic session, the OT consultant documented field observation notes and submitted the notes to the Program's director for discussion and feedback.

2. Post Needs Assessment Survey

After the Needs Assessment with a team in the clinical setting, the OT consultant surveyed the students regarding their overall experience, learning that occurred, and likelihood of referral to OT practitioners in the future. The OT consultant developed a non-piloted, non-standardized survey to assess students. Post Needs Assessment survey questions include:

1. Overall, rate your experience with the OT consultant.
(Likert scale)
2. Rate how informative your experience with the OT consultant was. (Likert scale)
3. How likely are you to refer to OT in your professional career?
(Likert scale)
4. Did you learn anything about OT? What?
(open ended)
5. Do you have any feedback regarding your experience with the OT student consultant?
(open ended)
6. Would you like to receive more information on OT?
(yes, no)

3. Pre Educational Intervention Survey

Students completed an anonymous, non-piloted, non-standardized survey developed by the OT consultant before the didactic curriculum presentation.

Pre Education Intervention survey questions included:

1. Rate your knowledge about OT.
(Likert scale)
2. Rate your confidence to correctly refer/utilize OT services.
(Likert scale)
3. Describe what you know about OT
(open ended)

4. Educational Intervention

The observations from the Needs Assessment led to the development of the OT curricular unit that addressed identified gaps in knowledge about the OT profession in early primary care professional training. As the OT consultant was embedded in the clinical teams, the observations led to the development of unique case studies of real patient interactions where specific OT considerations could help with overall care goals. The OT consultant met regularly with the Program's director to develop a curriculum that was feasible to teach in a 90-minute session, accessible to all types of novice health professions students, and utilized active learning instructional design. The curricular unit was intentionally designed to be interactive. Interactive learning opportunities in IPE have been considered vital to develop teamwork, knowledge, skills, and attitudes regarding a variety of healthcare disciplines (Richardson, Gersh, & Potter, 2012). The OT consultant, with the help of another OT, taught the final curricular unit in March 2018.

The Educational Intervention included a didactic presentation, seven interactive stations with an OT facilitator, and case study discussions (Table 1). The learning objectives stated that by the end of the session, learners will:

- Demonstrate understanding of OT scope of practice.
- Identify at least one intervention an OT can add to plan of care.
- Increase confidence in utilizing OT services and recognizing when referral of patients to an OT is appropriate.

The full cohort (N=43) was split into two sessions to accommodate the space. The OT lecturer presented a 90-minute seminar to students that included: lecture presentation, interactive stations with visuals, and case studies (Table 1). Following the seminar, there was time for reflection, discussion, and questions. The full slide deck including case studies developed by the OT consultant is available in Appendix A.

Table 1

Educational Intervention

Lecture Content	<ul style="list-style-type: none"> • Define “occupation” • Eight categories of occupation (Activities of daily living [ADL], Instrumental activities of daily living [IADL], rest & sleep, education, work, play, leisure, social participation) • Common practice settings, diagnoses, interventions • Difference between physical, occupational, and speech therapies • OT goals • Educational requirements for occupational therapists
Interactive Stations	<ul style="list-style-type: none"> • ADL • IADL • Assistive technology • Pediatrics • Rehabilitation of the upper extremity • Work re-entry & ergonomics • Aging in place
Case Studies	<ul style="list-style-type: none"> • Adult female who needs assistance with medication management • Teenage student who is diagnosed with an upper extremity impairment that negatively affects her daily function and quality of life (Kienbock’s Disease) • Pediatric child with autism, sensory processing disorder, visual impairments, and retained primitive reflexes

The initial 30-minute lecture presentation provided a broad overview of OT and the philosophy of care. Content included examples of typical OT interventions, diagnoses treated, and practice settings.

In the second section of the seminar, Program students participated in interactive stations. At each station, OT tools and prompting questions were available for students to pick up and examine. OT consultants were available to answer questions and provide real-life examples. Students were prompted to consider OT tools and the patients who could benefit from them. Facilitators directed students to imagine themselves diagnosed with a disorder, condition, or disease that requires these techniques or equipment that the OT can provide. For example, at the ADL station, each student picked up an object on the table that had an index card attached to it. Objects included: reacher, sock aid, long handled shoehorn, universal cuff, hairbrush, travel sized shampoo, and toothpaste. Each object had an attached index card that provided an explanation of the tool and prompting questions. An example of the index card associated with dressing is depicted in Figure 2.

<p>Reacher Long-Handled Shoe Horn Sock aid Dressing Stick Long Handled Sponge</p>
<p>*Instructor inserted images of equipment here</p>
<p>Dressing</p> <ul style="list-style-type: none"> ○ Adaptive equipment for dressing includes: reacher, sock aid, long handled shoehorn, dressing stick, button-hook, zipper pulls. ○ Imagine you're recovering from a hip replacement surgery and you have standard hip precautions: no hip external rotation, adduction, or flexion > 90 degrees. How will you get your socks and pants on independently? Try it out using the equipment. ○ Imagine that you experienced a stroke and have a flaccid right arm and leg. How will you get dressed? OTs teach dressing techniques. A frequent compensatory strategy taught is "dress the impaired limb or side first."

Figure 2. Example Activities of Daily Living Index Card.

The third and final portion of the seminar was the case study segment. Three cases that were developed from the Needs Assessment by the OT consultant were discussed. This allowed students to apply information to scenarios that were personal to their clinical experience in the Program.

5. Post Educational Intervention Survey

Students completed an anonymous, non-piloted, non-standardized survey developed by the OT consultant after the didactic curriculum presentation. The students were asked to complete identical survey questions, referenced in the “Pre Educational Intervention survey” above, immediately after the educational intervention was completed (post-survey). Pre and post surveys were identical in order to evaluate the impact of the curriculum on student learning.

ANALYSIS

Post Needs Assessment survey data was collected through the online survey portal, Survey Monkey. Pre and post Educational Intervention surveys were collected on paper in the classroom setting. All raw data was tracked in Excel. SPSS statistical software was used to calculate the means. A Mann Whitney U test was used for non-parametric data. A 2-tailed sample t-tests of the mean change for each survey question in the pre and post curriculum experience indicates statistical significance was found at the $p = 0.000$ level.

Qualitative responses from the open-ended questions were transcribed into Excel. Responses were examined to find frequency of reoccurring words and themes. Responses were sorted into groups based on accuracy and positivity in feedback in order to examine overall change in the pattern of language students used to describe OT. Accuracy in qualitative descriptions of OT was based upon the AOTA’s published definition and scope of practice of OT (AOTA, 2014).

RESULTS

Needs Assessment Results

The post Needs Assessment survey indicated that students felt their interaction with OT was very positive: 90% of students rated their overall experience with the OT consultant as “excellent”; 100% of students classified the experience as either “informative” or “very informative”; and 100% of students indicated they were “very likely” to consult to or refer to OTs in their professional career. Student qualitative responses were very positive and indicated that there was a desire to know more about OT in early learning, for example:

- *I learned what OT was and how diverse the services are!*
- *When I first met the OT [consultant], I was not confident in what Occupational Therapy was, or what they did for patients. Over the past two weeks she has been very informative and helpful in the clinic. I now have a better understanding and appreciation for Occupational Therapy.*
- *“I think more professionals need to be informed about Occupational Therapy and what it has to offer for patients”*

- *“I definitely understand that maybe not all clinics will benefit from OT, but I definitely believe that our (cardiac surgery) team would benefit from having an OT, especially with regards to discharge and where a patient should be post-op.”*

By shadowing with the students, the OT consultant observed that many of the licensed clinician preceptors (both physicians and nurse practitioners) had gaps in their knowledge of OT and did not take advantage of possible OT referral during their care planning. Therefore, the focus on how to refer, for what reasons, and a level of confidence on when to refer became a focus of the curriculum design and allowed tailoring of the Educational Intervention to Program participants. The OT consultant utilized several of the real interactions with students and “missed opportunity” patient cases to develop discussion cases and became the foundation for the development of the resulting Educational Intervention.

Educational Intervention Results

Surveys were distributed during the seminar, therefore, all Program students (N=43) responded to the pre and post questions as part of the regular educational activities. The breakdown of learners representing professions is as follows:

- 30.2% Medical students (n=13)
- 30.2% Nursing students (n=13)
- 30.2% Pharmacy students (n=13)
- 9.4% Social work students (n=4)

After participating in the Educational Intervention, student ratings of both their level of OT knowledge and confidence to correctly refer/utilize OT services significantly increased (Table 2). On a 5-point Likert scale, student mean ratings of their knowledge about OT increased from 2.63 to 3.93. Student rating of their confidence to correctly refer/utilize to OT services increased from 2.30 to 3.93.

Table 2

Analysis of OT Curriculum Experience Survey Data

Survey Question	Mean Pre-survey +/-SD	Mean Post-survey +/-SD	Mean Change	p-value
Rate your knowledge about OT	2.63 +/- 0.725	3.93 +/- 0.507	1.30	.000
Rate your confidence to correctly refer/utilize OT services	2.30 +/- 0.860	3.93 +/- 0.507	1.63	.000

Variability in responses on the pre-surveys indicated a “low” level of knowledge of OT and indicated a perceived “ability to guess” how to appropriately refer to and utilize OT services. Variability in responses on the post-surveys indicated a “high” level of knowledge of OT and perceived “confidence” to appropriately refer to and utilize OT services (Figures 3 & 4).

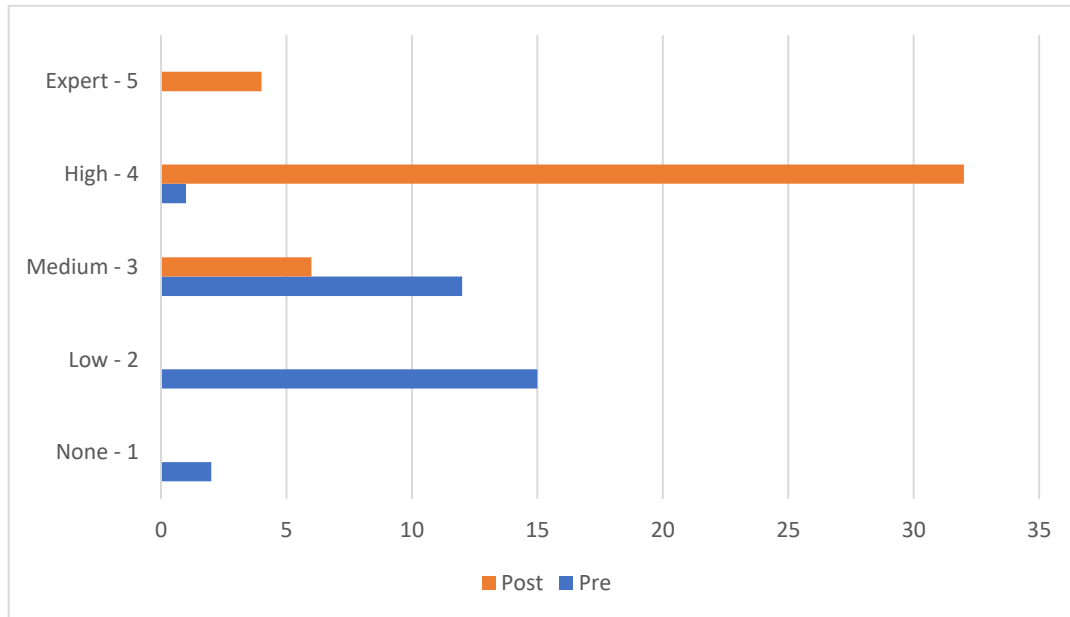


Figure 3. Pre & Post-Survey Results – Rate your knowledge about OT.

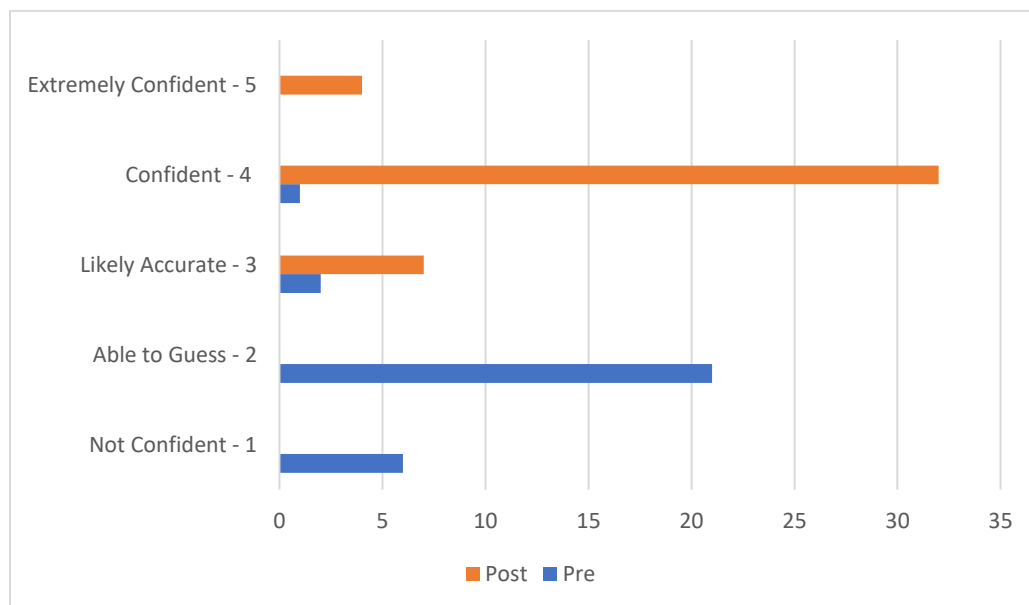


Figure 4. Pre & Post-Survey Results – Rate your confidence to correctly refer/utilize OT services.

An open-ended question asked: “Describe what you know about OT” as part of the pre and post Educational Intervention survey. Key themes based on word frequency in pre-survey responses included: self-report of limited knowledge and confusion about OT, the role of the OT in teaching activities of daily living tasks, the role of OT in fine motor skills and the upper extremity, and self-report of confusion about the difference between physical therapy (PT) and OT. The most common reoccurring word in the pre Educational Intervention survey was “help”.

Examples of responses included:

- *“Therapy for those with disabilities”*
- *“It is similar to Physical Therapy”*
- *“Supports patients in their ability to do everyday activities necessary for living independently”*
- *“I know that OT specifically relates to actions related to employment, and that’s what differentiates them from PT (I think)”*

An identical open-ended question: “Describe what you know about OT” was asked during the post Educational Intervention survey. Key themes based on word frequency in responses included: OTs focus on functionality, participation, quality of life, meaningful activities, interventions for ADLs and IADLs, the definition of “occupation”, and the versatility of interventions. The most common reoccurring word in the post Educational Intervention survey was “function”.

Examples of responses included:

- *“OT is a broad field that helps patients with all sorts of different conditions, with ADLs, IADLs, sensory processing, cognitive processing etc.”*
- *“They help improve patients’ daily function”*
- *“All about function. Focus on activities of daily living, IADLs and modifying environment”*
- *“It helps patients gain functional ability to manage their health and perform their daily activities”*
- *“Help patients improve their abilities to complete everyday occupations through innovative methods”*
- *“OTs use a variety of tools and creative thinking to help people solve problems associated with activities of life”*
- *“OT is concerned with promoting function in clients, helping restore or gain the ability to participate in occupations – those activities that are meaningful or purposeful for them”*
- *“Able to assist with any life dysfunction allowing a patient to adequately function in the community including ADLs, IADLs, work, school, leisure, and play”*

The use of the word’s “function,” “participate,” and “ADL” increased by 300% after curricular intervention. The usage of the word “meaningful” increased 200% between pre and post Educational Intervention surveys. The increase in the use of the words function, ADL, participation, and meaningful indicate increased understanding of OT philosophy of enabling function and participation in everyday activities and occupations. The inclusion of specific interventions also provided evidence that students can start identifying how OT professionals can add value to plans of care. The word clouds below

DISCUSSION

Collaboration among, and inclusion of, multiple practitioners with diverse skills and expertise is necessary in today's complicated healthcare environment to foster improved patient outcomes. Collaborative practice is a strategy heavily backed by evidence and research that improves patient care and service integration (Behm & Gray, 2012; Strasser, Uomoto, & Smits, 2008). There is a need for research assessing IPE's effectiveness, specifically research that includes OT as a member of the interdisciplinary team. Role advocacy is necessary for OTs to improve interprofessional collaboration (IPC) within the interprofessional team and correct misconceptions of the profession (Loy et al., 2015). The lack of knowledge about the OT profession and the clinical benefits of OT scope of practice limits the inclusion of OT in IPE. Therefore, advocacy through education is essential.

It is crucial for healthcare practitioners to accurately understand one another's professional role (Loy et al., 2015). Education on OT is vital so that patients and practitioners alike will be "aware and truly understand the profession that is OT" (Wilding & Whiteford, 2008, p. 185). However, to infuse this knowledge into already packed health professions curricula, OT educators need to advocate for the inclusion of professional knowledge in creative ways and partner with other health professional schools. Loy et al. (2015) recommended the creation of opportunities for students from multiple discipline to work together in IPE. Experiential labs and didactic curriculum will facilitate an increased understanding of the respective roles and scopes of each healthcare profession. Loy et al. (2015) also suggested IPE at universities would decrease workplace problems stemming from a lack of understanding.

The addition of OT into IPE opportunities, such as the current Program described in this study, allows for multiple disciplines to engage with OT that ultimately increases their ability to practice in interprofessional teams and appropriately utilize OT services in future practice. However, to integrate into programs (especially those that don't have an established OT presence), OT educators need to be flexible and creative in their approach to providing easily integrated curricular units. The curricular unit described in this paper hopes to serve that role for future OT collaborations.

IMPLICATIONS FOR OT EDUCATION

This curriculum can be implemented in a wide variety of settings with learners across the professional continuum. It is appropriate content for both early learners as well as established professionals due to the combination of lecture, interactive stations and case-based instructional methods. This curriculum was designed to be used as a stand-alone session. At approximately 90 minutes in length, it is long enough to provide for deeper learning and possible transfer of information into specific context and short enough to be feasible for workforce in-service training sessions.

Overcoming implementation challenges and lessons learned help guide future iterations of this curriculum. For example, participating IPE students need more guidance at the resource stations from experienced OTs. Occupational therapy consultants were able to encourage questions, provide overview and natural discussion. Without the OT

consultant facilitation, students seemed to read and interact with different stations but did not start talking with each other or ask questions. Going forward, at least two to three OT professionals to assist with the stations would be encouraged.

Additionally, observations throughout the conduction of this study provided ideas for future directions of this unique OT curriculum. They included:

- Using a validated pre and post-session survey to increase the accuracy and reliability of the learning assessment data.
- Set up more interactions that include more opportunity for students to experience OT intervention within practice settings and then discuss them in the classroom setting.
- Assess the longitudinal impact of didactic curriculum and experiential component by administering a second post-Experience survey to same group of students later in their clinical and residential rotations or practice.
- Measure the impact of increased knowledge of and exposure to OT on patient care within practice.
- Receive increased input and involvement from practicing professionals who did not receive formal education regarding OT to make the cases more relevant to a wide variety of professionals.

The addition of OT into the program's course structure allows for multiple disciplines to engage with OT that ultimately increases their ability to practice in interprofessional teams and appropriately utilize OT services in future practice. A curriculum that can be easily integrated into existing IPE programs encourages collaboration of OT between medicine, nursing, social work, and pharmacy professions. This collaboration will hopefully build relationships that will remain in future practice and ultimately increase patient function and quality of life. Professionals working together will improve patient care and the long-term management of health conditions.

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Appendix A

Slide Deck

<h2 style="text-align: center;">Occupational Therapy</h2> <p style="text-align: center; font-size: small;">Julie Wolford RN, JDOT</p>	<h3 style="text-align: center;">Objectives</h3> <ol style="list-style-type: none"> 1. Demonstrate understanding of Occupational Therapy's scope of practice. 2. Identify at least one intervention an Occupational Therapist can add to a plan of care. 3. Increase confidence in utilizing Occupational Therapy services and recognizing when to refer patients to an Occupational Therapist, if appropriate. 	<h2 style="text-align: center;">Participation in Everyday Life</h2> <p style="text-align: center; font-size: x-small;">*Occupations are everyday activities that people do as individuals, in families and with communities to occupy time and bring meaning and purpose to life. Occupations include things people need to, want to and are expected to do.^{1,2}</p>						
<h3 style="text-align: center;">What is an "Occupation"?</h3>	<h3 style="text-align: center;">What is an "Occupation"?</h3>	<h3 style="text-align: center;">Practice Settings</h3> <ul style="list-style-type: none"> - Institutions (hospitals and prisons) <ul style="list-style-type: none"> - Acute Care, Inpatient Rehabilitation, Skilled Nursing Facilities, Long Term Acute Care, ICU - Outpatient Settings <ul style="list-style-type: none"> - Pediatric, Neuro, Ortho, Hand - Home and Community Settings <ul style="list-style-type: none"> - Group Homes - Schools - Living Facilities - Research Facilities - Consultation Role <ul style="list-style-type: none"> - ergonomics 						
<h3 style="text-align: center;">Common Diagnoses</h3> <ul style="list-style-type: none"> • Neurodegenerative Diseases • Neurological Impairments • Neuromuscular Disorders • Upper Extremity Abnormalities • Mental Illness • Burns • Cardiopulmonary Conditions • Visual & Hearing Impairment • Musculoskeletal Disorders • Developmental Delays • Chromosomal Abnormalities • Intellectual Disabilities • Aging Process 	<h3 style="text-align: center;">Common OT Interventions</h3> <ul style="list-style-type: none"> - Occupation-based activities <ul style="list-style-type: none"> - H&H, JCL, I&A, I&G, grading, scaffolding, just right challenge - Therapeutic exercise - Environmental modifications - Functional and vocational training - Adaptive equipment and adaptive technology - Cognitive strategy training - Emotional regulation - Sensory modulation 	<h2 style="text-align: center;">What Sets Occupational Therapy Apart?</h2>						
<h2 style="text-align: center;">Medical Stability vs Functional Ability</h2>	<h3 style="text-align: center;">Goals Differentiate Therapeutic Services</h3> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="background-color: #d9ead3; width: 33%;"> Physical Therapy - Decrease dysfunctional movement patterns </td> <td style="background-color: #d9ead3; width: 33%;"> Occupational Therapy - Increase functional participation in everyday activities </td> <td style="background-color: #d9ead3; width: 33%;"> Speech Therapy - Increase communication, oral-motor function, and cognition </td> </tr> </table>	Physical Therapy - Decrease dysfunctional movement patterns	Occupational Therapy - Increase functional participation in everyday activities	Speech Therapy - Increase communication, oral-motor function, and cognition	<h3 style="text-align: center;">Goals Differentiate Therapeutic Services</h3> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="background-color: #d9ead3; width: 33%;"> Physical Therapy - Decrease dysfunctional movement patterns MOBILITY </td> <td style="background-color: #d9ead3; width: 33%;"> Occupational Therapy - Increase functional participation in everyday activities FUNCTION </td> <td style="background-color: #d9ead3; width: 33%;"> Speech Therapy - Increase communication, oral-motor function, and cognition COMMUNICATION </td> </tr> </table>	Physical Therapy - Decrease dysfunctional movement patterns MOBILITY	Occupational Therapy - Increase functional participation in everyday activities FUNCTION	Speech Therapy - Increase communication, oral-motor function, and cognition COMMUNICATION
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<h3 style="text-align: center;">Goals</h3> <p style="font-size: x-small;">Patients will demonstrate increased short-term memory as evidenced by 80% accuracy of recall games using adaptive strategies in order to increase safety in the home environment.</p> <p style="font-size: x-small;">Patients will perform lower body dressing with minimal assistance in order to increase independence with self-care.</p> <p style="font-size: x-small;">Patients will demonstrate ability to manage adaptive equipment in the home environment in order to prepare for safe discharge.</p> <p style="font-size: x-small;">Patients will demonstrate increased fine motor precision as evidenced by coloring inside lines with 75% accuracy in order to increase ability to manipulate paintbrush for leisure activities.</p>	<h3 style="text-align: center;">Goals</h3> <p style="font-size: x-small;">Patients will demonstrate increased short-term memory as evidenced by 80% accuracy of recall games using adaptive strategies in order to increase safety in the home environment.</p> <p style="font-size: x-small;">Patients will perform lower body dressing with minimal assistance in order to increase independence with self-care.</p> <p style="font-size: x-small;">Patients will demonstrate ability to manage adaptive equipment in the home environment in order to prepare for safe discharge.</p> <p style="font-size: x-small;">Patients will demonstrate increased fine motor precision as evidenced by coloring inside lines with 75% accuracy in order to increase ability to manipulate paintbrush for leisure activities.</p>	<h3 style="text-align: center;">Requirements for Occupational Therapists</h3> <ol style="list-style-type: none"> 1. Bachelor's Degree 2. Volunteer/Internship 3. Graduate Degree 4. Supervised Fieldwork 5. NBCOT Exam 6. Licensure 						
<h2 style="text-align: center;">OT Stations</h2>	<h3 style="text-align: center;">Rehabilitation of the Upper Extremity</h3> <p style="text-align: center; font-size: small;">i.e. shoulder, elbow, forearm, wrist, hand</p> <p style="font-size: x-small;">OTs have a comprehensive understanding of the impact of upper extremity dysfunction on key daily activities and roles. OTs aim to minimize disability, relieve pain, and restore function.⁶</p>	<h3 style="text-align: center;">Work Re-Entry & Ergonomics</h3> <table border="1" style="width: 100%; font-size: x-small;"> <tr> <td>Possible Work Interventions: <ul style="list-style-type: none"> - Work-oriented treatment preparation - Job analysis - Work tolerance screening - Workplace interventions </td> <td>Possible Ergonomic Interventions: <ul style="list-style-type: none"> - How does the workplace impact injury/illness? - Identify hazards - Recommend interventions </td> </tr> </table>	Possible Work Interventions: <ul style="list-style-type: none"> - Work-oriented treatment preparation - Job analysis - Work tolerance screening - Workplace interventions 	Possible Ergonomic Interventions: <ul style="list-style-type: none"> - How does the workplace impact injury/illness? - Identify hazards - Recommend interventions 				
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<h3>Aging in Place</h3> <p>"The goal of aging in place is to enhance the quality of life for older adults in their home environment, allow them to participate in valued activities, and ensure that people who plan to stay in their homes as they age make necessary modifications to do so."¹⁰</p> <ul style="list-style-type: none"> • Visions <ul style="list-style-type: none"> o How does vision impairment impact participation? o Vision dependent steps, contraptions, routines, signs? • Diagnosis <ul style="list-style-type: none"> o Physical ability, reaction time, vision, age, judgment, problem solving? o Driving Rehabilitation Specialist? 	<h2>Case Study Application</h2>	<h3>Case Study: Elena</h3> <p>Elena, 32 years, received the mechanical trial valve replacement in February 2016. She has been non-compliant with her anticoagulant medication and weekly INR lab draws. Elena's case is complicated by her low socioeconomic status and lack of social support. She has been readmitted to the hospital 7 times in the past 2 years. Each time, her INR is consistently 2. It is clear to the interprofessional team that Elena is not taking her Coumadin and therefore, it is high risk for developing blood clots that may lead to stroke, myocardial infarction, or other complications.</p> <p>Should the practitioner make an OT referral? Why or why not? What would the OT do to help?</p>
<h3>OT Intervention: Medication Management</h3> <ol style="list-style-type: none"> 1. Evaluation <ol style="list-style-type: none"> a. Interview b. Home Assessment c. Family Interview 2. Intervention <ol style="list-style-type: none"> a. Skills Training b. Environmental cues c. Cognitive strategies d. Education e. Ensure safety 	<h3>Case Study: Marianne</h3> <p>Marianne, 55 years, arrived to alternative medicine outpatient clinic. She is diagnosed with Kienbock's Disease. Symptoms include chronic pain in the distal forearm/spectacle horn. It is bilateral and limits her function. It includes general edema in the order. Kienbock's Disease is a vascular necrosis of the lunate bone. It can result in collapse of the wrist leading to long-term dysfunction, improper movement and increased support to the wrist joint. Marianne experiences extreme debilitating pain in episodes approximately every 3 weeks. Exacerbations limit her everyday function. Marianne is on NSAIDs that she cannot tolerate but is on when traveling. Marianne identifies that stress increases her pain. Exacerbations and the stress that she feels are her future debilitating.</p> <p>Should the practitioner make an OT referral? Why or why not? What would the OT do to help?</p>	<h3>OT Intervention: Upper Extremity Impairment</h3> <ol style="list-style-type: none"> 1. Evaluation <ol style="list-style-type: none"> a. Interview (What is the meaning of this for you?) b. Functional Decline c. Age, occupation, stage of disease, activity level 2. Intervention <ol style="list-style-type: none"> a. Immobilization of the wrist (splinting or orthosis) b. Pain Control c. Increase joint stability d. Adapt environment to increase function
<h3>Case Study: Mark</h3> <p>Mark, age 7, arrived to the outpatient clinic for a well-child physical. At home, his mother indicates Mark will not tolerate having his hair washed or touched and that is limited variety of food. Preferred foods include pizza, french fries, and chicken fingers. Mark is the 97th weight percentile and will not tolerate fruits, vegetables, or lean meats. Mark's mother states she is getting bullied at school. He comes home with bruises. Mark's mother states that Mark doesn't have any difficulty with school tasks but very irritable. Mark says he is misaligned when he is being pushed back to align his eyes when focusing on the object. During the 30-minute check-up, Mark is frequently banging his head into things and his mother states he usually likes to pull on his chin strap.</p> <p>Should the practitioner make an OT referral? Why or why not? What would the OT do to help?</p>	<h3>OT Intervention: Pediatrics</h3> <p>Interventions</p> <ul style="list-style-type: none"> • Vision <ul style="list-style-type: none"> o Eye binocular depth perception, accommodation • Audition <ul style="list-style-type: none"> o Pitch, volume, intensity, frequency, location, processing, encoding, recall • Sensory Processing <ul style="list-style-type: none"> o Interoception o Proprioception o Heavy work/Deep Pressure • Attention 	<h3>Reference List</h3> <ol style="list-style-type: none"> 1. American Occupational Therapy Association. (n.d.). About Occupational Therapy. http://www.aota.org/About-Occupational-Therapy/Patient-Clients/What-is-OT.aspx?Updated=August%2017. Accessed February 2, 2018. 2. About Occupational Therapy. (n.d.). American Occupational Therapy Association. http://www.aota.org/About-Occupational-Therapy/Patient-Clients/What-is-OT.aspx?Updated=August%2017. Accessed February 2, 2018. 3. American Occupational Therapy Association. Occupational Therapy Practice Framework: Domain and Process. (3rd ed.). (American Occupational Therapy Association, 2014). 68-53-54-8. 4. OT Research Practice. American Occupational Therapy Association. http://www.aota.org/About-Occupational-Therapy/Research/OT-Research.aspx?Updated=August%2017. Accessed February 2, 2018. 5. American Occupational Therapy Association. The Role of Occupational Therapy for Rehabilitation of the Upper Extremity. http://www.aota.org/Practice/Current-Practice/Professional-Work/Upper-Extremity/2016/03/01/2016-03-01-01.aspx. Accessed February 2, 2018. 6. The U.S. Health Care System. Center for Program and Policy Studies. http://www.aota.org/About-Occupational-Therapy/Research/OT-Research.aspx?Updated=August%2017. Accessed February 2, 2018. 7. National Health Statistics. http://www.health.gov/ourprograms/health-statistics/. Accessed February 2, 2018.
<h3>Reference List Continued</h3> <ol style="list-style-type: none"> 8. American Occupational Therapists Association. Ergonomics. Website. http://www.aota.org/About-Occupational-Therapy/Patient-Clients/Ergonomics.aspx. Updated 2004. Accessed April 24, 2018. 9. Cvetkovic, Campbell, VA. Vision impairment and hearing loss among community-dwelling older Americans: Implications for health and functioning. <i>American Journal of Public Health</i>. 2004;94: 823-829. 10. Warren, H., Wallack, L. Occupational therapy services for persons with visual impairment. http://www.aota.org/About-Occupational-Therapy/Research/OT-Research.aspx?Updated=August%2017. Accessed April 24, 2018. 11. Aging in place and home health care. American Occupational Therapy Association Website. http://www.aota.org/Practice/Professional-Work/Upper-Extremity/2016/03/01/2016-03-01-01.aspx. Updated 2018. Accessed April 24, 2018. 12. Mordkoff, T., Kraybill, T., Linnell, E., Noland, J. Occupational therapy in medication management: A survey of practitioners. Website. http://www.aota.org/About-Occupational-Therapy/Research/OT-Research.aspx?Updated=August%2017. Updated March 21, 2018. Accessed April 24, 2018. 13. Occupational therapy's role in medication management. <i>American Journal of Occupational Therapy</i>. 2017;71:1-20. doi: 10.5014/ajot.2017.016022. 14. Latham, RP, Wallace, CJ, Blackwell, D, Kuperminz, A, Vaccaro, J, Mintz, J. Skill training versus psychosocial occupational therapy for persons with persistent suboptimal. <i>The American Journal of Psychiatry</i>. 1993;150(8): 1087-1091. 15. American Occupational Therapy Association. NBCOT exam prep. AGTA Press. 2013. http://www.aota.org/About-Occupational-Therapy/Research/OT-Research.aspx?Updated=August%2017. Accessed January 7, 2018. 16. Role of physical therapy and occupational therapy in working with children with special needs. CBO. College Website. http://www.aota.org/About-Occupational-Therapy/Research/OT-Research.aspx?Updated=August%2017. Updated February 9, 2016. Accessed April 24, 2018. 		