

Education Strategies to Promote Interprofessional Team Collaboration Skills for Health Professions Students: Efficacy and Impact

Kathleen A. Poindexter, PhD

College of Nursing, Michigan State University, East Lansing, MI, USA

The evolving health care environment is placing greater emphasis on providing efficient, high quality care and holding health professions education accountable for training graduates who can work as members of an interprofessional team (Interprofessional Education Collaborative Expert Panel, 2011). Teamwork and collaborative skills are not intuitive or acquired through clinical indoctrination or simple exposure to other disciplines (Doll, Packard, Furze, Hugget, Jensen, et al., 2012). In order to achieve a shared learning environment, health professions students need learning experiences and opportunities to interact in meaningful ways (World Health Organization, 2010). The goal of shared learning is that each member of the team be able to understand the role and contributions of the other members in order to maximize team performance (Thistlethwaite, Moran, 2010). Developing effective teams through the acquisition of team core competencies improves institutional quality and safety (Interprofessional Education Collaborative Expert Panel, 2011).

The purpose of this study was to assess the efficacy and impact of teaching strategies to promote development of interprofessional team collaboration skills in pharmacy, osteopathic medical students, pre-licensure and graduate nursing students. This study compares the impact of attending TeamSTEPPS training via a web based presentation, a three hour interprofessional workshop, and participation in an authentic simulated training event. Students' perception of teamwork and safety were collected pre and post participation in each activity. The impact of performing team behaviors on progression of patient care and overall scenario outcomes were assessed.

Earlier studies support the efficacy of using team based training and high fidelity simulations to facilitate inter-professional education. The challenges and cost associated with implementing interprofessional education activities has limited widespread integration across health professions programs. Studies providing evidence on effective yet efficient educational strategies to facilitate the development of interprofessional team skills may promote widespread integration across health professions programs. To date, there has been a paucity of research investigating the impact of education strategies on the overall performance of team skills and impact on patient outcomes.

Method: The project was developed using an active research approach in which information learned was used to guide ongoing development of the study across semesters. A quasi-experimental design was used to evaluate performance of shared and collaborative interprofessional team based competencies. A convenience sample of pre-licensure and graduate students from the College of Nursing, College of Osteopathic Medicine and College of Pharmacy participated in a three hour interprofessional workshop. Nursing students and medical students also participated in a follow up simulation event.

The three hour workshop presented selected TeamSTEPPS (Agency for Healthcare Research and Quality, N.D.) communication tools using an interactive lecture and role play case scenarios. Teams were comprised of a representative from each of the specialty disciplines. Post participation, students were invited to complete an evaluation of the workshop and the Interprofessional Collaborative Competencies Attainment Survey (ICCAS) (King, Shaw, Orchard, & Miller, 2010). The ICCAS has 20 questions that ask participants to rate their competency development as a result of participating in the workshop. Results are examined to provide evidence of self-reported competency development.

To reinforce learning, simulated case studies were designed to reflect authenticity of the clinical environment and provide students the opportunity to utilize TeamSTEPPS tools within the context of real word practice (Thistlethwaite, Moran, 2010). Students participated in two simulated case scenarios. Community based Respiratory Therapists and Nurse Technicians were hired to perform as

members of the health care teams. The research group reviewed a customized presentation based on AHRQ's TeamSTEPPS®.

Scenarios were videotaped and examined for evidence of specified team based behaviors and impact on patient care progression and clinical outcomes. The assessment tool has four subscales; leadership, situation monitoring, mutual support, and inter-professional communication. Trained reviewers evaluate the performance of team skills and the quality of performance. The tool was developed by the researchers and demonstrates high inter-rater reliability scores and content validity. The study was reviewed by the University's IRB. The WHO's Framework for Action on Interprofessional Education & Collaborative Practice model (World Health Organization, 2010). provided the framework for the project. Participants were once again asked to complete the Interprofessional Collaborative Competencies Attainment Survey (ICCAS) (Archibald, Trumpower, MacDonald, 2014). A comparison of the reported competency results were examined to determine changes in reported competency development as a result of participation in both learning activities.

All students who participated in the interprofessional education events, were invited to complete the Interprofessional Socialization and Valuing Scale (ISVS) (King, Shaw, Orchard, & Miller, 2010). prior to the workshop and two weeks post participation in the simulation event.

Results: Results of the ICCAS and the ISVS will be reported. Generally participants reported valuing team work and supported interprofessional education and training to enhance communication, respect, trust, and role performance. The impact of teaching strategies on the development of interprofessional team based behaviors will be discussed. Participation in an interactive - interprofessional workshop followed by participation in collaborative simulation events provided the highest level of evidence for integrating team behaviors and positive impact on clinical outcomes. Participation in an online web-based didactic presentation was the least effective teaching strategy although most cost effective. Teams demonstrating the greatest percentage of critical team behaviors resulted in higher performance levels, reduced treatment delays and performance errors. Consistent with prior study results, overall comments from all participants were favorable with support for further events and integration across the curriculum.

Conclusion: The outcome of this ongoing longitudinal study supports participation in team based educational training and authentic simulation has the potential to promote collaborative interdisciplinary teamwork, improve patient outcomes and reduce healthcare errors. Integration of interprofessional team training competencies may promote a collaborative practice-ready health care workforce.

Title:

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Keywords:

Educational Strategies, Interprofessional Education and Interprofessional Simulation

References:

Agency for Healthcare Research and Quality. (nd). TeamSTEPPS National Implementation. TeamSTEPPS curriculum tools and materials. Rockville, MD. Retrieved Oct., 2015 from <http://teamstepps.ahrq.gov/abouttoolsmaterials.htm> Archibald, D., Trumpower, D., MacDonald, C.J. (2014). Validation of the interprofessional collaborative competency attainment survey (ICCAS). *Journal of Interprofessional Care*, 28(6): 553-558. Doll, J., Packard, K., Furze, J. Hugget, K., Jensen, G., et al. (2012). Reflections from an interprofessional education experience: evidence for the core competencies for interprofessional collaborative practice. *Journal of Interprofessional Care* 27(2), 194-6. Interprofessional Education Collaborative Expert Panel. (2011). Core competencies for interprofessional collaborative practice: Report of an expert panel. Washington, D.C.:Interprofessional Education

Collaborative. King, G., Shaw, L., Orchard, C. A., & Miller, S. (2010). The interprofessional socialization and valuing scale: A tool for evaluating the shift toward collaborative care approaches in health care settings. *Work*, 35(1), 77-85. Thistlethwaite J., Moran, M., (2010). Learning outcomes for interprofessional education (IPE): Literature review and synthesis. *Journal of Interprofessional Care*. 24(5): 503-513. Who Framework for action on interprofessional education and collaborative practice http://www.who.int/hrh/resources/framework_action/en/

Abstract Summary:

The purpose of this study was to assess the efficacy and impact of teaching strategies to promote development of interprofessional team collaboration skills in pharmacy, osteopathic medical students, pre-licensure and graduate nursing students. This study compares the impact of attending TeamSTEPPS training via a web based presentation, a three hour interprofessional workshop, and participation in an authentic simulated training event. Students' perception of teamwork and safety were collected pre and post participation in each activity. The impact of performing team behaviors on progression of patient care and overall scenario outcomes were assessed.

Learning Activity:

LEARNING OBJECTIVES	EXPANDED CONTENT OUTLINE
Discuss development of educational strategies to incorporate disciplinary specific, shared, and collaborative TeamSTEPPS performance competencies.	Interprofessional and Disciplinary Competency Outcomes Development of clinical scenarios using simulation design theory Disciplinary consensus Stages of Development (PDSA Model) - 1) Disciplinary competency, Web-based TeamSTEPPS and simulation; 2) TeamSTEPPS didactic and simulation; and 3) IPE Workshop and simulation. Evaluation tools
Contrast participation in a web based didactic TeamSTEPPS training session and an interactive interprofessional TeamSTEPPS workshop on competency development and impact on team performance.	Overview - Web based TeamSTEPPS training 2 hour didactic TeamSTEPPS training session 3 hour interprofessional TeamSTEPPS training session Simulation case scenarios - evaluation outcomes
Examine the effectiveness of educational strategies on the perception and performance of team based behaviors during a simulated patient care scenario and impact on patient care.	Examine results of ICCAS and the ISVS pre and post participation Report results of TeamSTEPPS behaviors during simulation event Impact of TeamSTEPPS interprofessional team based behaviors on clinical outcomes and patient outcomes

Slot:

C 05: Friday, April 8, 2016: 3:15 PM-4:30 PM