

The Recovery-Based Interprofessional Distance Education (RIDE) Rotation: Final Report From Four Graduate Cohorts

Lora Humphrey Beebe, PhD, PMHNP-BC, FAAN

nursing, University of Tennessee, Knoxville, TN, USA

Marian W. Roman, PhD, APRN, CS

College of Nursing, University of Tennessee, Knoxville, TN, USA

Hollie Raynor, PhD

nutrition, UT Knoxville, Knoxville, TN, USA

Dixie Thompson, PhD

graduate school, UT Knoxville, Knoxville, TN, USA

Andrea Franks, PharmD

pharmacy, UT, Knoxville, TN, USA

Purpose:

Interprofessional Education (IPE) occurs when two or more professions learn about, from and with each other in an iterative process of exposure, immersion and mastery (Bainbridge & Wood, 2013). There is a dearth of published information on IPE in graduate programs (Herath, et al, 2017). To our knowledge, ours is the only published work describing how we designed a short-term IPE offering incorporated as part of a graduate mental health nursing curriculum (Author, et al, 2015). This abstract presents final results from four graduate student cohorts (N = 76) who participated in the **Recovery-based Interprofessional Distance Education (RIDE)** rotation between Oct 2014-Feb 2017.

Methods:

A faculty team of two mental health nurse practitioners, an exercise physiologist, a registered dietitian and a pharmacist developed the 4-week RIDE rotation for graduate students in the four disciplines. Organizing the RIDE rotation around the recovery model (SAMHSA, 2012) ensured an emphasis upon optimal health and quality of life. IPE has significant overlap with recovery principles: both are client-centered, process oriented, pertinent in a variety of treatment settings, and applicable for a variety of disciplines. In brief, weekly RIDE modules incorporated content about team concepts, the recovery model, in person and online client simulations and culminated in a 3 day clinical immersion experience providing team based care to persons with multiple chronic conditions (mental health and medical) in a community mental health center located in the southeastern United States. Following IRB approval and the granting of informed consent, we conducted a quasi-experimental pre-post design to examine student learning outcomes.

Cohorts 1-4 completed the Team Strategies and Tools to Enhance Performance and Patient Safety-TeamSTEPPS Teamwork Attitudes Questionnaire (T-TAQ) anonymously online (Baker, Krokos, & Amodeo, 2008) pre and post RIDE. The T-TAQ is a 30-item Likert-type scale that includes six items for each construct: team structure, leadership, situation monitoring, mutual support, and communication. A total score is calculated for each construct (range 6-30) and an average score derived (Baker, Krokos & Amodeo, 2008).

After cohort one, our evaluation team identified the Team Development Measure (TDM-Stock, Mahoney & Carney, 2013) as an additional measure of team development. *In addition to the T-TAQ*, cohorts 2-4 completed the TDM (Stock, Mahoney & Carney, 2013) anonymously online pre and post RIDE. The TDM was designed for use in healthcare settings –scores range from 0-100. Because teams begin as a group of individuals and subsequently transform into a highly functioning team, scores increase accordingly over time, from 0-100, with a score of 100 representing the measure of a highly functioning team.

Results:

Forty-two mental health nursing, 17 pharmacy, 10 nutrition and seven exercise physiology students participated. Most students were females ($n = 56$, 74%) with prior experience working on healthcare teams ($n = 51$, 67%). Caucasian students numbered 65 (86%), African Americans 8 (11%) and Hispanics/Latinos 3 (3%). Analysis began with data plots and basic descriptive statistics, such as frequency distributions, means and standard deviations, appropriate for the level of measurement of the variables. Data distributions were checked for normality - any skewness or kurtosis statistic above an absolute value of 2.0 was considered non-normally distributed; this only occurred for the communication subscale of the T-TAQ so the communication subscale was analyzed using the Wilcoxon Signed Ranks test. All other outcomes were analyzed using paired t tests. Despite exceedingly high T-TAQ pre- test scores (mean scores above four of a possible five on most items), the post- assessment reflected growth on all subscales. Furthermore, we observed a statistically significant increase in scores on the team structure subscale ($t(23) = -4.93$, $p < 0.001$), which includes items assessing perceived value of patient and family feedback and perception of patients as critical members of the health care team.

While differences on the TDM were not statistically significant ($t = 0.88(60)$, $p = 0.38$), 74% of students rated their team's functioning higher at the post RIDE assessment. The largest improvements were observed on the following items: "This team is a personally meaningful experience for me", "I am allowed to use my unique personal skills and abilities for the benefit of the team", and "On this team, the person who takes the lead differs depending on who is best suited for the task".

RIDE students participated in focus groups at the conclusion of the experience and results were analyzed using traditional atheoretical content analysis. Transcripts were coded for content, and descriptive labels were applied to key phrases by two independent team members. As coding progressed, themes emerged from the links between the codes. Major themes included faculty collegiality, professional growth and team cohesion. Students stated: "The most important experience I took away from the RIDE project is the opportunity to work with other students as well as faculty in other departments", "I believe as a group, in a short time frame, we built great chemistry", and "I found that collaborating with other professions really does lead to improved patient care & can generate many more ideas and goals that may help the client".

This work has implications for nursing education, nursing practice and patient outcomes. These results suggest that an IPE rotation can enhance some team concepts and skills in graduate nursing, pharmacy, nutrition and exercise physiology curricula, and can be feasibly delivered in an online-blended format. However, the use of online-blended technology was a barrier for some students and faculty. We suggest formal training in online technology be offered to both students and faculty before using this method for IPE offerings. The advent of integrated care highlights the importance of interprofessional experiences at all levels of nursing education. Our outcomes suggest that even graduate students with prior health care team experience can garner significant benefits from such offerings. Finally, a large body of research demonstrates the improvement in client safety and quality of care resulting from IPE. We call for our colleagues to join us in providing meaningful IPE experiences for our students. Continuous improvements based upon student outcomes will be essential to provide high quality IPE experiences, with the ultimate goal of optimizing healthcare for all persons.

Conclusion: We urge our colleagues to implement IPE for graduate nursing students, and to consider which disciplines are essential to maximize team-based care for underserved and vulnerable client groups. Details about the RIDE rotation, educational materials, assignments, rubrics, simulated client interaction and debriefing videos and much more, are available on the RIDE rotation YouTube page: (link includes author information, but will be inserted if abstract is accepted).

Title:

The Recovery-Based Interprofessional Distance Education (RIDE) Rotation: Final Report From Four Graduate Cohorts

Keywords:

interprofessional, online blended and recovery

References:

Bainbridge, L., & Wood, V.I. (2013). The power of prepositions: A taxonomy for IPE, *Journal of Interprofessional Care*, 27(2), 131-136.

Herath, C., Zhou, Y., Gan, Y., Nakandawire, N., Gong, Y and Lu, Z. (2017). A comparative study of interprofessional education in global healthcare, *Medicine*, 96(38), e7336.

Baker, D.P., Krokos, K.J., & Amodeo, A.M. (2008). Team STEPPS Teamwork Attitudes Questionnaire Manual. U.S. Department of Defense: Washington, DC

Author, et al. (2015). The Recovery-Based Interprofessional Distance Education (RIDE) Rotation: Content and Rationale. *Issues in Mental Health Nursing*, 36(10), 773-780

Substance Abuse and Mental Health Services Administration-SAMHSA. (2012). SAMHSA's Working Definition of Recovery: Ten guiding principles of recovery.PEP12-RECDEF. Retrieved 10-22-17 from: <http://www.samhsa.gov/recovery>

Stock, R., Mahoney, E., & Carney, P.A. (2013). Measuring team development in clinical Care settings. *Family Medicine*, 45, 691-700.

Abstract Summary:

Review of the 4-week RIDE rotation: a series of online modules on interprofessional/recovery concepts for graduate students (mental health nursing, pharmacy, nutrition, exercise physiology) with 3-day clinical immersion. Seventy-six students (4 cohorts) participated. Presentation of results from quantitative team attitude/team development assessments, and from qualitative focus groups.

Content Outline:

1. Introduction: 5 minutes-

Review IPE concepts, recovery concepts, and professions included in RIDE rotation with rationale

II.Body: 10 minutes-

5 minutes-Review RIDE educational content and weekly activities with examples, describe student sample characteristics (N = 76)

5 minutes-Review pooled data analysis results from all four cohorts: A) quantitative (pre-post team concepts and team development) and B) qualitative (focus group themes)

Conclusion: 5 minutes-

Questions, answers and lessons learned

First Primary Presenting Author

Primary Presenting Author

Lora Humphrey Beebe, PhD, PMHNP-BC, FAAN
University of Tennessee
nursing
professor
knoxville TN
USA

Professional Experience: I have over 33 years' clinical experience in mental health nursing and over 20 years as a nurse educator. I have supervised graduate, undergraduate & doctoral students in research & clinical work and mentored junior colleagues in research. I have researched mental health promotion in vulnerable persons for 17 years.

Author Summary: Dr Beebe is professor, University of Tennessee, Knoxville and a Fellow in the American Academy of Nursing. Her research improves the lives of persons with schizophrenia spectrum disorders through intervention development and educational innovations. Her work is funded by grants from HRSA, NIH and AHRQ totaling over \$2 million, and through its dissemination, informs mental health nursing practice and shapes nursing education nationally and internationally.

Second Author
Marian W. Roman, PhD, APRN, CS
University of Tennessee, Knoxville
College of Nursing
Assistant Professor
College of Nursing
Knoxville TN
USA

Professional Experience: Teaches mental health nursing, qualitative nursing research, and gerontology seminar for the College of Nursing at UTK. Research interests include older adults behavioral health: resilience in chronic and acute illnesses and childhood maltreatment (focusing on relational aspects or interactions)

Author Summary: Teaches mental health nursing, qualitative nursing research, and gerontology seminar for the College of Nursing at UTK. Research interests include older adults behavioral health: resilience in chronic and acute illnesses and childhood maltreatment (focusing on relational aspects or interactions)

Third Author
Hollie Raynor, PhD
UT Knoxville
nutrition
professor
knoxville TN
USA

Professional Experience: Dr Raynor is a Professor and researcher at University of Tennessee Knoxville dept of nutrition. federally funded researcher and member of the RIDE faculty team

Author Summary: Dr Raynor is a Professor and researcher at University of Tennessee Knoxville dept of nutrition federally funded researcher and member of the RIDE faculty team

Fourth Author
Dixie Thompson, PhD
UT Knoxville
graduate school
vice provost and dean graduate school
knoxville TN
USA

Professional Experience: Dr Thompson is vice provost and dean of the graduate school at UT Knoxville, her expertise is in exercise physiology and she was a member of the RIDE faculty team

Author Summary: Dr Thompson is vice provost and dean of the graduate school at UT Knoxville, her expertise is in exercise physiology and she was a member of the RIDE faculty team

Fifth Author
Andrea Franks, PharmD
UT
pharmacy
faculty
knoxville TN
USA

Professional Experience: Dr Franks is faculty in the college of pharmacy at the University of Tennessee health science center, and was a member of the RIDE faculty team

Author Summary: Dr Franks is faculty in the college of pharmacy at the University of Tennessee health science center, and was a member of the RIDE faculty team