GOT! Care: Preparing the Geriatric Workforce for Interprofessional Collaborative Practice
The United States expects a more than a 100% increase in persons age 65+ from 40 million in 2010, to the projected 88 million in 2050 (Federal Agency Forum on Aging, 2012). As the population of older persons continues to dramatically rise across the nation, there remains a shortage of healthcare professionals with expertise in geriatrics to provide care to older adults (IOM, 2008). Furthermore, the care of older adults is complex requiring an interprofessional approach with coordinated care which can addresses multiple issues at one time. The call for the development of interprofessional educational programs that train healthcare professionals is cited by the National Center for Interprofessional Education (NCIPE, 2016) and the World Health Organization (Gilbert, Yan, & Hoffman, 2010) as essential for improving quality of care and patient outcomes, and reducing healthcare costs. Despite these calls for interprofessional geriatric education to adequately prepare the workforce, barriers to training program implementation are reported including: a) previous attitudes and experience toward interprofessional geriatric training and care, b) academic constraints, c) insufficiently trained educators, and d) underwhelming interest of the students in working with older adults (Bardach & Rowles, 2012; Partnership for Health in Aging, 2014). Overcoming these barriers requires careful planning and the development of theoretically-based, innovative clinical practice models. Resnick recommends developing innovative models with “real world” clinical experiences for students from different disciplines so students can actually experience working with and learning from other disciplines. Geriatric Outreach and Training with Care (Got Care!) is one example of a theoretically-based, comprehensive geriatric education and practice model designed to develop a cadre of healthcare providers skilled in interprofessional, geriatric care. A team of clinical faculty with geriatric expertise from nursing, medicine, dentistry, pharmacy, physical therapy, social work, and public health developed an interprofessional training program for
students and residents in geriatric assessment and management. Students participated in the didactic training program and then participated in interprofessional clinical home visit experiences and case conferences. The purpose of this paper is to describe the development, pilot implementation, and evaluation of the GOT Care! Program on levels of students collaborative practice assessment in caring for older adults.

**Background**

The Institute of Medicine (IOM) Report, Retooling for an Aging America: Building the Healthcare Workforce (2008), documents the reality of current and projected shortages for well-trained healthcare professionals in the specialty of geriatrics. In 2008, the IOM reported less than 1% of pharmacists and registered nurses were certified in geriatrics, and only 4% of social workers specialized in the care of older persons. There were 7,128 physicians certified in geriatric medicine, however, this number falls short of the projected need for 36,000 geriatricians by the year 2030. In addition, only 1% of all RNs and 4% of all advanced practice nurses in the nation were certified in gerontological nursing for their practice level. Furthermore, the IOM voiced the critical need to enhance education and training for the entire healthcare workforce in the important principles, skills, and best practices for geriatric care (IOM, 2008). Despite this statement by the IOM, it has been shown that there are few interprofessional education programs focused specifically on geriatric care (Partnership for Health in Aging, 2014).

**Geriatric Outreach and Training with Care**

The Geriatric Outreach and Training with Care (GOT Care!) Project was developed because of the need to prepare the emerging health care workforce with the important principles, skills, and best practices for geriatric care. This innovative, nurse led, project is propelled with federal funding from the Health Resource and Service Administration (HRSA) Nursing
Education, Practice, Quality and Retention (NEPQR) - Interprofessional Collaborative Practice Program. This project strongly embraces the IPCP core competencies (Interprofessional Education Collaborative, 2014) as a pedagogical underpinning, and intends to strengthen the preparation of students and residents in nursing, medicine, dental medicine, pharmacy, physical therapy, social work, and public health for team care toward improving healthcare outcomes of older persons. Through this project, a unique opportunity is provided for these interprofessional students to learn together in the didactic arena, and then reach out with geriatric expert faculty for interprofessional clinical learning and practice to a population of older persons with multiple chronic conditions (MCC) and high emergency department (ED) use.

**Needs Assessment**

The local health system, and clinical partner for the GOT Care! Project, is located in a mixed suburban and rural county in the Northeast. The county service area is designated as a medically underserved area/population (HRSA, 2012). Vulnerable populations are at high risk for poor health outcomes as they experience poor integration into our health care system due to multiple factors including racial or ethnic minority status, geographic or economic barriers, cultural differences, or significant medical needs including disabilities and multiple co-morbid conditions (Urban Institute, 2012). During the local health system’s last community health needs assessment, both the 65+ and 85+ population groups from the county were relying heavily on services from emergency departments for ambulatory care sensitive (ACS) conditions and drug-related mental disorders indicating potential poly-pharmacy (University of New England Center for Health Policy, 2008). Results from the community health needs assessment emphasized an opportunity for improvement in access and coordination of geriatric services, which may ultimately translate into reduced inappropriate ED utilization and improved quality of
care for vulnerable older persons with MCC. Coupled with the university’s goal to increase interprofessional education opportunities for its students, the ideal service-learning opportunity was created. Led by a geriatric nurse practitioner with a doctorate in nursing practice and a community hospital stakeholder with an MPH, GOT! Care was developed. The overall mission for the GOT Care! Project is to increase the skills of the interprofessional geriatric workforce with team based education and clinical practice, and outreach to a vulnerable population of older persons with faculty experts, to help improve health care outcomes in this population.

**Purpose**

The purposes of this pilot study were twofold: a) to evaluate the feasibility of Geriatric Training with Care (GOT Care!) Project, and b) to determine changes in collaborative practice skills among a cohort of students participating in the program. This evaluation was conducted during the first two semesters of implementation. The questions that guided the evaluation of the pilot program were: 1) what were the challenges and benefits of the implementing GOT Care! Training and outreach program, and 2) what is the effect of participation in GOT! Care training and outreach program on student levels of interprofessional collaborative practice skills?

**Conceptual Framework**

The conceptual framework for the GOT Care! Training and Outreach Program follows the Interprofessional Education for Collaborative Patient-centered Practice (IECPCP) Model (D’Amour & Oandasan, 2005). In this model professionals use a systematic approach with consistent sharing of information and collaboration, reconciliation of differences between members of the team, and required engagement of the patient/family or population to optimize health care outcomes. The IECPCP Model integrates the concept of *interprofessionality*, as described by D’Amour & Oandasan (2005). With *interprofessionality* professionals from
different disciplines come together to reflect on and address the complex health care needs of a patient/family or population in a collective manner. This concept provides a mechanism to illustrate the factors and practices which can influence, enhance, and link IP education and practice, and ultimately provide a more unified effort to improve outcomes. According to D’Amour & Oandasan (2005), this concept differs from the concept of “interdisciplinary” which involves combined, but still fragmented knowledge obtained from multiple disciplines. Instead, interprofessionality, provides an all-encompassing structure to link the important processes of interprofessional (IP) collaboration at the micro level of teaching, learning, and professional practice, to the meso, or organizational level. The meso level connection provides a seamless link for IP educational processes within the health care organization for IP practice. The concept of interprofessionality further links the meso level connections to macro level activity such as the influencing of political, socio-economic and cultural systems.

As IP education, followed by the IP practice experience at the health care organization level, are the essences of the experiences of GOT Care!, it is clear this program embraces the concept of interprofessionality and the IECPCP Model in a comprehensive way. The GOT Care! Program has proposed several outcome measures which are poised to provide influence on the micro, meso, and macro system level, as suggested with the IECPCP Model. These outcome measures include a) team structure and function, b) population health, c) experience of care, and d) per capita costs. Their core domains are outlined in Table 1.

**Organization and Implementation of the GOT Care! Project**

Extensive coordination was required to develop this new IPCP education and practice model, including consultation with authorities from each of the represented health care education programs from the university, and our clinical partner to satisfy all affiliation, regulatory,
liability, and HIPPA requirements for both the faculty and student teams. A separate affiliation agreement, that covered faculty practice and clinical experiences for the full range of interprofessional students, was developed by the Program Director, in conjunction with the Attorney General’s Office for the university and authorities from the clinical agency. Coordination and validation for credentialing and orientation as required by the clinical agency was carried out with each of the university health care programs involved. This project was determined to be exempt by both the University and Hospital IRB boards, as it was found to be a quality improvement project, and not human subject research.

**Interprofessional Faculty and Student Recruitment**

The Project Director in collaboration with the Deans and Directors from each of the represented health care programs, the Family Medicine Residency and Home Care agency of the hospital involved, identified and assembled faculty members from each discipline for work on the GOT Care! Project. Faculty from each of the disciplines of medicine, dental medicine, pharmacy, physical therapy; social work, and public health, were invited to participate, and no limit was placed on the number of interdisciplinary students recruited for the training, but teams for the outreach program were limited to two per discipline to not overwhelm the patients. During the first two semesters 129 students and 25 faculty participated in the GOT! Care program. Student demographic data is presented in Table 2.

**Curriculum Development**

The curriculum was designed to provide opportunities for IPCP team-based education and clinical collaboration experiences for a diverse pool of undergraduate/pre-licensure and advanced practice graduate students representing diverse health sciences, and their corresponding interprofessional faculty. One of the major objectives for the GOT Care! Project
was to prepare our emerging IPCP health care workforce for collaborative team-based approaches for improved healthcare outcomes for populations and communities. Work toward accomplishing this objective included faculty preparation, planning and development of the curriculum, training and outreach program, evaluation methods and overall preparation for merging multiple health care students and faculty together for a common clinical outreach program.

**Faculty Preparation**

All faculty participated in faculty development and orientation for a better understanding of the aims and objectives for the project, project phases, IPCP competencies, and overall responsibilities for the project. Both the faculty and student training was developed and executed by a team of five health educators with a specialty focus in IPCP education and training. This training was built on the Framework for the Development of Interprofessional Education Values and Core Competencies (Interprofessional Education Collaborative, 2014). Training for faculty and students included IPCP competency development and team building activities for participation in the IPCP program.

**Curriculum Planning, Training and Outreach Design**

Once the faculty was fully prepared for the IPCP focus of the team, work began to develop a curriculum and program for training students in IPCP, culturally competent, evidence-based geriatric care, including targeted assessment of older persons who have served in the military. The Program Director and Curriculum Development Team identified the basic outline for this curriculum and training program. Several meetings were held with faculty individually and as a group to provide orientation for the project, and share the basic outline for the curriculum and training program. Faculty were asked to select topics to present in conjunction
with other faculty team members, and use an interactive presentation method to engage the students. The faculty had several meetings in small groups and with the entire team to fully develop, finalize, and approve the curriculum and training program. At the end of the process, the IPCP faculty team met for a full day workshop to finalize and approve the curriculum and training program. During the workshop the team videotaped the GOT Care! Interprofessional Home Visit as model for the training program and rehearsed the interprofessional case conference discussion to be held for our student participants. These activities were selected by the faculty to perform as a group, to best role model IPCP and excellence in geriatric care for our students during the training. The Program Director and the Curriculum Development Team used the IPCP competencies via a crosswalk, to make sure these competencies were fully integrated into all elements of our curriculum and training program.

As the curriculum was being developed, the IPCP faculty team also worked simultaneously to plan the clinical collaboration experience including the analysis and determination of methods and procedures for the in-home Comprehensive Geriatric Assessment (CGA) and follow up. Each of the faculty members was asked to provide input on the interprofessional CGA, as well as the documentation tool to be used electronically. After a number of individual and group team meetings, the final processes and procedures for the outreach program was finalized and approved by all of the members of the faculty team. Our outreach clinical collaboration program was reviewed using the IPCP competencies via a crosswalk, to make sure these competencies were fully integrated for this experience for our patients, students, and faculty.
Training Workshop Description

The training program is a two day, workshop style program held at the beginning of each academic semester to introduce health care students to the competencies for interprofessional practice and culturally competent, evidence-based geriatric care. Special focus is placed on the targeted assessment for those older persons who have served in the military. There is a wrap up day at the end of the semester for debriefing on the program and for program evaluation.

Instructional Format and Activities

The program description, learning modules, learning objectives, and educational activities were formulated with Bloom’s Taxonomy (Clark, 1999). A total of eight modules with 16 learning objectives were presented in the two-day training program. Activities included multimedia lecture and video presentations (Bloom’s Cognitive Domain); small group discussions (Bloom’s Affective Domain); live mock case conference with audience participation (Cognitive Domain and Affective Domain); demonstration of specific assessment tools (Psychomotor Domain); hands on activity with “Have You Ever Served? card (Affective Domain and Psychomotor Domain); live Benefits Check Up case study (Psychomotor Domain); case study breakouts with small group with report out to large group (Cognitive Domain and Affective Domain). Learning Modules and objectives are listed in Table 3.

Outreach Program

Once the training was complete, students participated as part of the interprofessional team in the outreach home visit program for vulnerable older persons with multiple chronic conditions and high emergency department use. During these outreach days, interprofessional groups were assembled to meet the needs of the patients we planned to visit, and to meet the learning needs of the students involved for the day. The day began with a pre-conference,
scheduled home visits, then a post-conference. Students, mentored by their faculty, carry out the role of the health care professional from their discipline during the interprofessional conferences and home visit. During this time an interprofessional problem list was generated and recommendations were made to the patient’s primary care provider related to reduce their patients’ risks for hospitalization and institutional status, medication use, as well as functional, cognitive, and social status.

**GOT Care! Interprofessional Practice Model**

In order to work toward the project aim of improving access and coordination of care for the vulnerable geriatric population seen by the student and faculty teams during the outreach portion of the program, a GOT Care! Interprofessional Practice Model was developed. Figure 1 depicts the overall coherence synchronization, and shared efforts of the GOT Care! Interprofessional Practice Model (Malcolm & French, 2014). Through this model, a well-trained interprofessional healthcare team connects to an older person and their foundational support system with the caring “heart”. This model illustrates a harmonious collaboration, with the intent to prepare and enhance the interprofessional geriatric health care workforce, while simultaneously improving healthcare outcomes for the older person. Within the center of this model is the bright pink circle depicting the older person. This vibrant circle stands out among the other muted circles of the model, to highlight the older person as “the pulse of” and vital focus for the GOT Care! Project.

**Evaluation Methods**

Our evaluation plan tracks process and outcome measures throughout the GOT Care! project period. Process measures include assessments of training effectiveness as perceived by
students, faculty, and primary care providers and periodic documentation of student participation, training program delivery, and in-home patient visits (formative evaluation). Outcome measurements are collected at the beginning and end of each semester. For the purpose of this pilot study we utilized a demographic form and the Collaborative Practice Assessment Tool\textsuperscript{16} to assess the team’s strengths and areas for improvement.

**Demographic Form**

The demographic form consisted of self-report regarding age, gender, race, ethnic group that they identify with, highest level of education completed, discipline and specialty, and prior experience in the geriatric home care setting.

**Collaborative Practice Assessment Tool**

The Collaborative Practice Assessment Tool (CPAT) (Schroeder et al., 2011) is a reliable and valid 57-item tool with a 7-point scale that assesses collaborative practice. The tool has eight subscales: a) mission, meaningful purpose and goals, b) general relationships, c) team leadership, d) general role, responsibilities and autonomy, e) communication and information exchange, and f) community linkages and coordination of care, g) decision-making and conflict management and h) patient involvement. There are three open-ended questions at the end of the survey to identify the team’s collaborative practice strengths and weaknesses. Cronbach alpha scores for the subscales range from .67-.89 (Schroeder et al., 2011). In this study. Cronbach alpha scores ranged from .50-.95. The lowest alpha score was calculated for the Community Linkage Scale which has only four items.
Data Analysis

Demographic characteristics and descriptive data were analyzed using IBM SPSS 20. The CPAT scores did not meet the assumption for normality, therefore, the Wilcoxon Signed Rank Test was utilized to compare means of the Collaborative Practice Assessment Tool pre and post GOT! Care experience. Contextual data were analyzed using an immersion-crystallization approach as described by Borkan (1999). The approach involves a systematic iterative process, a going back and forth of text interpretation and categorization. The PE and graduate assistant reviewed all the available texts. Meaningful segments were extracted from the contextual data, coded and organized into themes.

Pilot Study Results

The first question, what were the challenges and benefits of implementing GOT Care! for the university and the healthcare institution?, was answered using pre and post experience open ended questions. The themes are presented in Table 4. These data gave the GOT! Care Team insight into program strengths such as the overall respect shown among the team members and the strong focus on patient centered care. Other contextual data reflected challenges such as time, needed resources and logistical issues. As a result, the GOT! Care Team was able to make adjustments in the training and outreach program to ensure student learning and improve patient outcomes. The action items listed in Table 4 identify how GOT Care! Team members will continue to facilitate program strengths and make modifications for program improvement.

The second question, what is the effect of the GOT! Care program on student levels of collaborative practice skills was answered by administering the CPAT pre and post training and outreach experience. As can be seen in Table 5 statistically significant improvements in
collaborative practice skills were found in seven of the eight subscales. Using Cohen’s guidelines (1988) effect sizes ranged from small \( r = .24 \) (Team Leadership) to medium \( r = .37 \) (Community Linkages and Coordination of Care).

**Discussion**

The geriatric outreach and training program is a federally funded collaboration between a university and a hospital system serving a large population of older adults with multiple chronic illnesses. The GOT Care! Project is poised to break down many of the barriers to geriatric education noted by Bardach and Rowles (2012), by providing specific opportunities for interprofessional students to learn together in a two day didactic training program focused on IPCP, culturally competent, evidence-based geriatric care. Following this, teams of interprofessional students and geriatric faculty from nursing, pharmacy, medicine, physical therapy, social work, and dental medicine work jointly with the hospital and their home care agency provide outreach to older persons with special needs in their home to provide a Comprehensive Geriatric Assessment (CGA) and later, a follow up visit. Students have the unique opportunity to develop skills and critical knowledge for risk reduction and health promotion for older persons. These collaborative experiences are consistent with the IPEC recommendation for interactive learning for students from multiple health disciplines, working together from pre-licensure to practice.

Evaluation of the GOT! Care curriculum and student levels of CP skills provide encouraging data and direction for the continuation of the program. A number of positive responses related to program implementation were noted by students. Among these were learning about roles and responsibilities of other professionals on the team, the patient-centered focus of the team, and learning to link patients to community resources. The barriers identified
by students included issues with scheduling visits to patient, more hands-on experiences and logistical issues such as space and time. These data were helpful to the faculty in helping them to make adjustments to improve students’ experiences and program implementation. For example, during the first semester of the program students reported their need for increased hands-on experiences with patients. As a result, the project director worked with faculty to rearrange the schedule to increase student involvement with geriatric assessment and reporting during interprofessional team meetings. Consequently, the second cohort of student voiced no dissatisfaction with the outreach portion of the program.

Pre and post experience measurement of student levels of collaborative practice skills revealed significant improvement in seven of the eight subscales of the Collaborative Practice Assessment Tool. The statistically significant improvement in the seven subscales reflect the team’s efforts related to careful curriculum planning and training based on the Framework for the Development of Interprofessional Education Values and Core Competencies (Interprofessional Education Collaborative, 2011). In addition, as noted by students, faculty served as leaders in interprofessional collaborative practice during the home visits and case conferences. The major strength of the GOT! Care program is providing the opportunity for students to apply the IPE values and core competencies in practice after the didactic training sessions. This strength is supported by The Robert Wood Johnson Foundation White Paper on Interprofessional Collaborative Practice (RWJF, 2015). The paper stressed the importance of training students in interprofessional teams while caring for patients. This intentional team clinical training provides students with the opportunity to hone important interprofessional behaviors and skills which they will carry into their professional careers. Specifically teaching students how to practice interprofessionally will enhance teamwork and communication to promote patient safety, break
down professional silos, increase professionalism and professional satisfaction among disciplines. These future clinicians will be more likely to practice interprofessional collaborative care with mutual respect for other team members leading to improved patient outcomes.

The decision making and conflict management subscale was the only area not showing significant improvement. As noted by students this may be attributed by the high level of respect shown between members of the team and strong desire to collaborate to improve patient care at the start of the program.

Thus far, GOT! Care is showing that training the future geriatric workforce requires careful planning, an inclusive approach, high level of collaboration and commitment between institutions involved, strong leadership by the project director and her team, and a trained faculty committed to the curriculum and objectives of the program. Moreover, including a clinical component to the training enables student to apply the IPE values and core competencies in practice increasing student levels of collaborative practice in geriatric care. Future program evaluation will focus on the Triple Aim outcomes such as population health, experience of care, and cost of care.

Acknowledgement

“This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number HRSA-14-070 Nurse Education, Practice, Quality and Retention-Interprofessional Collaborative Practice for $1,400,688 with no other nongovernmental funding. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.”
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