ABSTRACT:
Texas Tech University Health Sciences Center’s Quality Enhancement Plan (QEP) established a five year plan committed to interprofessional teamwork. As one of the strategies in fulfilling that commitment, in January of 2011, a group of interprofessional faculty piloted an online interprofessional course. The course was one of the first “shared” courses at TTUHSC and focused on the students’ professional development in assessing the healthcare as a system and practicing high performing interprofessional team skills. The major objective was for interprofessional student teams to resolve a fabricated sentinel event. Concepts of leadership, patient safety, interprofessional teamwork and communication, evidenced-based practice, shared accountability and decision-making, conflict resolution, quality and process improvement, and root cause analysis were inherent to the course. Due to tight scheduling, the course was divided into three distinct sections: 1) individual skills attainment, with course time designed for the students to work independently to learn about the concepts, 2) group work, with course time devoted for students to work within teams, and 3) presentations, with course time designated for faculty, practitioner experts, and student groups to present concepts and/or information about the case. Most all, the presentations included case based learning scenarios to assist in the application and discussion of the major concepts.

Deliverables: certification submission of individual learning activities, an interprofessional teamwork research poster, and resolution of a case study which was linked to the University of Missouri CLARION National Case Study Competition.

Outcomes: Five nursing students enrolled and completed the course for three credit hours and six medical students enrolled with three students completing the non-credit course for honors. Levels of students included: two graduate and three senior undergraduate in nursing and one third year and two first year medical students. Two teams competed locally with the winning team representing TTUHSC at CLARION Nationals, capturing 3rd Place.

Revision Recommendations: Students and faculty both expressed that the course needed to be spread over two semesters, and that to enhance early adoption and to increase synthesis of team skills, actual in-person demonstration of case based learning scenarios requiring team performance evaluation and feedback is necessary. To increase spontaneity of evidenced based interprofessional healthcare team communication that focuses on medical error prevention, a foundation of team anticipatory skills (such as foresight training and TeamSTEPPS™) and clinician team-patient communication must be included. Most importantly, inclusion of patient and family as members of the interprofessional team is essential and must be incorporated into case based learning scenarios, when combined-team learning environments are applied.

Revision Plan: The course(s) is set to begin in late fall of 2011 and will be completed in spring 2012. A clinical teamwork observation scale that incorporates patient/family as a member of the team is under revision and is the method targeted to evaluate and provide team performance feedback.
EDUCATIONAL METHODS OR APPROACHES USED:
Currently, TTUHSC’s QEP utilizes various methods/approaches based on the four implementation stages. For this particular project, the course was a web-based course which required learners to work within a group of students who were intentionally from different professions. Case-based learning was used that required attendance of webinars so that interactive participation among the teams as well as the class as a whole could be realized. Student teams independently agreed upon how the group was to meet and work on projects. Many teams were forced to work on-line due to the different locations of the students.

PROJECT DESCRIPTION:
The impetus for this project is a direct outcome of Texas Tech University Health Sciences Center’s (TTUHSC) Quality Enhancement Plan (QEP). TTUHSC’s QEP is centered on interprofessional teamwork “it” which is connected to the accreditation of the Commission on Colleges, Southern Association of Colleges and Schools (SACS). This project is one of the strategies utilized in the endeavor. Integration of “it” learning is primarily accomplished by TTUHSC’s QEP office serving as a clearing house for “it” activities. QEP utilizes various methods to implement “it” ideas at TTUHSC.

QEP utilizes faculty champions who are faculty members representing the different disciplines/schools at the university. The faculty champions are charged with implementing and overseeing the overall vision of establishing an institutional culture that is committed to the values of interprofessional education and care, including collaboration, communication, and coordination. Seed grants are made available yearly for faculty from the different disciplines/schools to collaborate on special projects that meet the student learning outcomes. Seed grants have included integrated clinical experiences, university-wide symposiums, student and faculty workshops, published modules to be used for student learning activities, student organizational projects, and extracurricular activities. And more recently, projects such as this one, which is a shared course that offers credit and/or honors recognition within each participating school’s curriculum. One of the major reasons this project/course is successful is that it is linked to QEP. The idea was supported by QEP and served as the conduit for the students to compete at University of Minnesota’s CLARION National Case Study Competition. TTUHSC’s Team won 3rd place at the event, catching the attention of leaders at TTUHSC. Additionally, QEP is linked to SACS accreditation, so there is ample administrative support (backed by the Deans of each school as well as the President) and attention to ensure that the QEP has the resources required to fulfill the program’s objectives. Interest has grown among the various schools and now there is a presidential push for an interprofessional curriculum requirement to be formulated for all students at the university. This course serves as an example of that requirement. Most importantly, word of mouth among the students who have been involved in the various projects has created a need to fast track the program. Students are requesting and expecting more interprofessional experiences. TTUHSC’s curricular structure is organized such that each school determines courses independently of one another and to date are primarily uniprofessional in nature. Occasionally when shared clinical placements or special events are offered, the learning is parallel rather than integrated. Even with strong support of QEP, course collaboration and integrated learning opportunities among the schools is very rare.

TTUHSC is targeting all disciplines, both faculty and students, within the university which include: medicine, nursing, pharmacy, allied health sciences (physical therapy, occupational therapy, respiratory therapy, speech and language therapy, clinical laboratory sciences, and physician assistants) and biomedical sciences. Therefore, there is representation from all schools within the university housed within the QEP department. Together faculty implement student learning outcomes as identified in the strategic plan of QEP. There are four major stages which require faculty and students from different schools to participate in the various projects. For this project/course, QEP’s 3rd goal aligned which is:
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Establish a culture of interprofessional education by developing interprofessional teamwork learning opportunities and facilitating the integration of these opportunities into existing curricula.

Although there is no formal relationship with public agencies, QEP makes full use of public and private curricular resources as they apply to a particular activity. Such agencies/associations/foundations include but are not limited to: Institute for Healthcare Improvement (IHI), Agency for Healthcare Research and Quality (AHRQ), Association for Prevention Teaching and Research (APTR), Association for Prevention Teaching and Research (APTR), National Patient Safety Foundation (NPSF), and Robert Wood Johnson Foundation (RWF) etc.

HEALTHY PEOPLE OBJECTIVE ADDRESSED:
This project directly addresses ECBP-12-16 to “Increase the inclusion of core clinical prevention and population health content in health professions education.” Currently, this course is the only structured environment that provides opportunity for RN and MD students to actively learn and practice healthcare preventive strategies within interprofessional healthcare teams.

PROGRAM OR COURSE GOALS:

Number of students enrolled/participating in 2010-2011 school year: 11
Course Title: Root Cause Analysis for Interprofessional Team Members.

Course Description: The course focuses on the students’ professional development in assessing healthcare as a system and practicing high performing interprofessional team skills that are necessary to achieve the six aims outlined by the Institute of Medicine (IOM). While working in interprofessional teams, learners apply their professional knowledge and team skills to resolve and reduce errors of a fabricated sentinel event, case study.

Course Credits: SON offers the course as a three hour credit elective at the graduate level and open to undergraduates, while SOM offers the course as a honors elective, with no credit hours.

Number of Students: Five nursing students enrolled and completed the course and six medical students enrolled with three completing the course.

Type of students included: Of the five nursing students, two were graduates and three were senior undergraduates. Among the medical students, one was a third year student and two first year students participated.

Did you conduct a needs assessment as part of your planning process? ☐ Yes ☒ No
A needs assessment was not performed for this project, the gap was apparent. TTUHSC’s QEP office developed a comprehensive assessment plan to guide the planning, implementation, and continuous quality improvement of the Interprofessional Teamwork initiative. In evaluating the overall progress of the Interprofessional Teamwork Initiative, primary emphasis is given to the impact of interprofessional teamwork educational programming on the quality of student learning. The assessment process is a dynamic component of the QEP initiative, developed to provide outcomes for continuous growth and improvement planning. The ongoing interprofessional teamwork assessment process includes formative and summative assessment, assessment of student learning outcomes, and use of assessment outcomes to develop improvement action plans and inform decision-making.
PROFESSIONS INVOLVED:
Even though multiple requests for participation from all schools were published, the SON and SOM remain the only schools currently involved in this project/course.

LESSONS LEARNED/EVALUATION RESULTS:
Greatest Successes
QEP’s greatest success is the use of interprofessional simulated clinical experiences. These activities engage students and offer the students a sense of accomplishment and confidence in teamwork. The greatest success of this project/course was that the TTUHSC Team won 3rd place at the University of Minnesota’s CLARION National Case Study Competition. This brought a great deal of positive attention not only to the QEP office and students but to individual faculty within the course. The use of experts from the field, guest lecturers, helped fill gaps with underrepresented faculty/schools and provided expertise in content areas that were less familiar to the faculty who were involved in the course. Several students in the course voiced a very positive response when asked if they would recommend the course to others. All the students requested more interprofessional “shared” experiences and courses.

Greatest Challenges
QEP’s greatest challenges are scheduling and incorporating additional activities into an all ready crammed curriculum. Unprepared or unenthusiastic faculty and gaps between philosophical and academic policy run a close second. In addition, particular to this project/course, major challenges during development and implementation included: 1) minimal time to create faculty cohesiveness on common team teaching issues i.e. student absences, etc.; 2) the awkwardness of having students within the same class with different credit systems i.e. one was a honors course that was pass/fail and the other was a 3 hour course credit elective; 3) organizing groups when members are at different levels i.e. 1st year medical student with an experienced registered nurse of 15 years who was seeking a masters in nursing; 4) networking with various departments so enrollment and development of an online course would be seamless for the student i.e. enrollment via one’s own school but having access to the same web-based course; 5) faculty and students spent more time per week than what was allotted due to the need to collaborate and meet the unexpected learning needs; 6) the inability to have actual clinical time to focus on skills or situations was a barrier for the students to truly experience the healthcare team skills and dynamics (both the verbal and nonverbal skills) that are utilized in highly effective teams; and 7) even though the students attempted to illustrate patient-centered care, the dynamics of the patient role was sorely missing. Without the interaction of patients and families, the complexity of the situation became limited dimensionally. Thus at times, the student team responses were somewhat naïve, unprofessional in nature, and/or grossly inept.

CONCLUSION:
Recommendations
1. To avoid scheduling conflicts, start early in identifying dates and times and have a representative of each participating school seek a scheduling agreement from facilitators/directors of the courses that will most likely have a high impact on the course activities.
2. Set ground rules among course faculty and ask the same of the student teams so that group expectations will be voiced early and commitment as an individual and group is acknowledged.
3. Set clear expectations of the course requirements and establish a structure within the course (i.e., chain of command to reduce conflicts associated with varying course credits issues and students’ ability to circumvent course expectations).
4. When there are course faculty knowledge deficits or professions not represented, use practitioners as guest lecturers.
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5. When forming interprofessional student teams, the individual student’s clinical and employment experience, learning needs, as well as personality preferences, should be considered.

6. When planning activities, additional time should be considered so that ample time is given to the diverse learning needs of the group. Revisions for 2011-2012 include splitting the course into two separate courses in which the first course can be taken as a prerequisite or at the same time as the second course.

7. Regardless of student levels, to develop interprofessional healthcare team skills, a certain amount of face-to-face, physical demonstration, and/or practice is required in the learning process.

8. Provide a foundation on how interprofessional healthcare teams can include the patient and family into the plan of care and team communication.

9. Incorporate patient and family interactions that require the healthcare student teams to respond with spontaneity.

10. Include anticipatory skills such as foresight training so that student healthcare teams will have a shared mental model and situational awareness necessary to prevent errors at the onset rather than retrospectively or through observation.

COMPANION MATERIALS: (Course syllabi, resource lists, tests, website, etc.)
1. Syllabus for 2010-2011_RCA FOR Interprofessional Team Members_3 credit
2. Draft_2011-2012_Advancement of Patient Safety_2 credit
3. Draft_2011-2012_RCA Course_1 credit

PUBLICATIONS:
none

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