2016 Full Submission

Title: Development of an Interprofessional Education Unit at Duke Regional Hospital

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Focused Question: Which educational and operational measures are needed to create a high yield IPE experience for learners in the inpatient setting? Historically, learners in the inpatient setting have been in educational silos despite close physical proximity. This project describes the implementation of an IPE unit and measures effectiveness.

Background: Inpatient care is performed by interprofessional collaborative teams aiming to deliver high quality, effective patient-centered care. IPE of health professions learners prepares learners to function successfully on interprofessional teams. The importance of IPC and IPE has been recognized by the IOM and WHO. (i,ii) The Interprofessional Education Collaborative (IPEC) defined four interprofessional competency domains: values/ethics for interprofessional practice, roles/responsibilities, interprofessional communication, and teams and teamwork .iii The Interprofessional Attitudes Scale (IPAS) is a validated survey tool studied in a variety of health profession learners and reflects the four competency domains in the IPEC report. (iv) By creating an IPE inpatient unit, we hope to concentrate opportunities to evaluate learner's competence in these domains in the inpatient setting and determine how specific educational interventions impact learner attitudes.

The general medicine service at Duke Regional Hospital (DRH) consists of learners from a variety of health professions at both the graduate and undergraduate level. The teams are led by attending physicians and senior internal medicine residents supervising interns from several different residency programs including psychiatry, anesthesia, family medicine, and both categorical and preliminary (neurology, dermatology, radiology, radiation oncology) medicine. Additionally, each team has second year medical student, second year physician assistant student and fourth year pharmacy student. Pharmacy residents rotate on the teams for several months a year as well. In addition, DRH hosts nursing students, dietician interns, and physical, speech and occupational therapy students various times throughout the year. Given the multitude of health professions learners, DRH is ripe for development of robust IPE projects.

Creation of an IPE unit will require a series of educational and operational initiatives. Buy-in from Duke Regional Hospital executive leadership for creation of an interdisciplinary unit with the dual focuses of patient care and education has been established. The second operational measure, which is ongoing, is

directing the patients cared for by teaching teams to primarily one unit to concentrate interprofessional educational opportunities and lay the groundwork for educational interventions. The first planned educational intervention for learners will be the implementation of Interdisciplinary Rounds (IDR). Other interventions will build on this. IDR consists of multiple team members from different health professions meeting together to discuss and coordinate patient care. IDR is one example of explicit and structured interprofessional interaction that can advance patient care. The Institute for Healthcare Improvement (IHI) has advocated this model as a means of improving patient care and enhancing patient safety because the fragmentation of care negatively impacts patient safety. (v) As a result, IDR have been proposed as an effective tool for coordinating care across disciplines, improving patient safety, establishing daily goals and planning for discharge. Previous research has demonstrated that IDR has significantly decreased length of stay, decreased average cost per patient, improved patient and staff satisfaction, reduced adverse events and even showed reductions in in-hospital mortality. (vi,vii,viii) In addition, validated tools can be used to assess the quality of IDR. (ix)
Faculty trained in IPE play a key role in facilitating IPE. Even faculty with limited experience in IPE appreciate the importance of IPC but may lack confidence in IPE teaching ability. (x) Multiple organizations encourage ongoing efforts at the department and institutional level to promote faculty development in IPE; both large and small scale faculty development interventions have been described. (xi,xii,xii,xiv) At DRH, using survey methodology adapting the faculty survey promoted by Curran et al, we found that hospital medicine faculty score well in attitudes towards IPC. (xv) DRH hospital medicine faculty have already also participated in local faculty development educational efforts about the importance of IPE, and teaching students from different health professions (specifically physician assistant and pharmacy students). At DRH hospital medicine faculty participate in quarterly educational group meetings that can serve as a platform for faculty development needed for this project. Convenience and lack of availability of opportunities to participate in IPE is more often a barrier than attitudes toward IPE. (xvi,xvii) Creating an IPE unit will allow learners to practice IPC skills. Creating local opportunities to participate in IPE in conjunction with strong local institutional support and ongoing faculty development programs and engaging teachers from a variety of health professions may help increase the success and sustainability of IPE interventions. (xviii)

Specific Aims:

(1) Creation of an IPE unit to serve as a platform for IPE initiatives
a. Measurements will include percentage of learner's patients localized to unit, development of interdisciplinary classroom, faculty participation in facilitating IPE, frequency of learners getting feedback from other health professional
(2) Implementation of IDR and assessment of impact on learners IPAS results
a. Measurements include frequency of IDR and number of attendees from each participating health profession, impact on participation on IPAS results.
(3) Measurement of patient and operational outcomes
a. Patient outcomes include mortality, code/RRT events, patient satisfaction
b. Operational outcomes include length of stay and timely patient movement

Methods:

Creation of an IPE unit:

Working with operational staff responsible for bed assignment and providers involved in a patientâ€™s admission, patients assigned to the teaching teams without specific nursing needs (eg central telemetry or nursing competencies) preferentially will be placed on the IPE unit.

A new lunchtime conference series will provide an interdisciplinary classroom. The conference series includes presentations by a variety of health professions and will serve as a platform for structured didactic teaching about IPC skills. DRH hospital medicine morbidity and mortality conference will include both learners and other health professionals to role model interdisciplinary communication and quality improvement.

Faculty development in regularly scheduled faculty meetings will focus on the goals of the IPE unit, IDR with learners and eliciting feedback from other health professionals about the performance of the learners. Educational sessions will be held for the IPE unit staff prior to implementation of IDR during monthly staff meetings. While staff may have participated in IDR on other units, they will be trained in participating with learners, the value of IPC and techniques to provide learner feedback. Further faculty and staff sessions may be scheduled as needed.

Implement scripted IDR and measure impact on learner attitudes:

IDR will occur weekdays with the charge nurse, care nurse, pharmacist, case manager and medical team including intern, resident, and PA, medical and pharmacy students. The IDR script includes updated patient status, nursing concerns, patient safety and medication issues, discharge plan and daily team-based goals. Attending physicians, nurses and case management will be expected to provide feedback to learners in the IPEC competency domains. Rounds will be evaluated with a validated IDR quality assessment tool.xix

IPAS will measure learner and staff attitudes before and after IDR implementation. Post intervention surveys include an opportunity to give anonymous qualitative feedback.

Measurement of patient and operational outcomes

Performance services currently monitors patient outcomes data as well as operational measures. Patient satisfaction is tracked institutionally through Press-Ganey. Additional QI projects at DRH currently track data from all codes and RRT events. A safety reporting system already tracks safety events.

Outcomes and measures

Creation of an IPE unit

The number of teaching service patients assigned to the IPE unit is tracked by administration for operational measures.

Feedback from learners on the interdisciplinary classroom will include additional questions added to the IPAS survey. The numbers, types of learners, and types of health professionals leading and participating

in noon conference and interdisciplinary morbidity and mortality will be tracked. Faculty participation in IPE initiatives will also be tracked. Focus groups may be used with faculty and learners to obtain qualitative feedback

Implement standardized IDR and measure impact on learner attitudes
The number of days per week that each teaching team participated in IDR, the types of health professionals and learners, and total duration of rounding time per team will be tracked. Additionally, IDR will be evaluated on a random basis using the validated Interdisciplinary Rounds Assessment Scale. Interrater reliability for this instrument will be measured.

Learners will receive the IPAS survey before and after their rotation. Unit staff will receive the survey prior to the implementation of IDR and at 6 months and 1 year after the implementation to allow for detection in changes over time. The same survey will be sent to staff on other medical units over the same time period to act as controls. Faculty attitudes toward IPE are already being measured as part of another educational project.

Measurement of patient and operational outcomes
Working with performance services, we will track operational measures such as time from discharge order to departure time and length of stay and patient outcomes measures such mortality and readmissions for both the IPE unit before and after IDR as well as other medical units for the same time periods. Similarly patient satisfaction data will be compared for the IPE unit before and after IDR implementation as well as other medical units during the same time periods. Code, RRT and SRS data will be tracked as usual and examined for trends in numbers, types and outcomes of events.

Data management and analysis
Data will be collected using RedCaps; all surveys will be voluntary and anonymous. Data will be analyzed only in aggregate and will not contain any personal identifiers. Data will only be stored on password-protected Duke computers accessible only to study personnel. IPAS surveys and IDRAS measurements will be analyzed with descriptive statistics and interactions where possible.

IRB Status: Plan to submit

Challenges: The unit chosen as the IPE unit is a recently re-opened unit without a specialty nursing focus with a significant number of newly hired staff, many of whom are new nursing graduates with little teaching experience. Staff development will play a crucial role in the success of the unit. The nurse manager is supports fostering a unit identity with IPE being the nursing specialty of the unit. Learner challenges include the fact that learners rotate onto the teaching service at different times throughout the month This will require making orientation to the structure and goals of IPE an ongoing process. Buy-in from the learners will require continuous efforts both at expectations as well as the benefits of IPE and IPC to their patients and their own workflow.

Budget Template:

PI Effort	1.3%	$2500
Consult costs:	DOCR assistance	$3200
Equipment:		
Supplies:	Survey completion incentives (for ex, food for nurses meetings, gift card raffle)	$300
Travel:	toward travel and registration for T3 Train the Trainer Interprofessional Faculty Development Program and to travel to conferences to present work	$4000
Total Requested:		$10,000

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