Interprofessional Multi-patient Clinical Simulation by Health Sciences Students

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Background

- Participation in interprofessional (IP) situations has shown to improve teamwork among healthcare professionals and patient safety.
- Previous studies have shown that working with other disciplines helps increase the understanding of other roles leading towards a more positive team dynamic.
- Clinical simulations have shown to allow students to perfect their skills before entering the clinical environment, resulting in decreased errors.

Simulation Development

- Development
  - Built on success of IP experiences with 2 professions
  - Team developed in spring of 2012
  - Represented 6 health science professions
  - Months of team planning meetings

- Logistics
  - 2-hour simulations
  - Simulations sessions in 2 rooms
  - 10 time slots scheduled over a 3-4 days
  - Total of 20 sessions

- Patients/Cases
  - AIM Arbor
  - MA-unrestrained, ejected from vehicle, ETOR involvement
  - Ventilated/open heart, systemic lacer, respiratory failure
  - Intubated and on ventilator, chest tube, arterial lines, OG and post-pyloic feeding tube
  - Patient simulator
  - J Shuman
  - N/A: AKA, dressing off, incision infected
  - PEG tube, feeding on hold for ATB
  - Unemployed, uninsured, single
  - Cardiovascular and ETOH addict, Diabetic
  - Patient actor

Methods

- Subjects were all current students of the following professional fields: Respiratory Therapy, Nursing, Physical Therapy, Medical Diectics, Medicine, Nurse Practitioner, and Pharmacy.
- A survey measuring attitudes and confidence was administered to all participants pre- and post simulation.
- Simulations were recorded with audio/visual equipment to capture observational data.
- Debriefing sessions were held at the end of each simulation to determine if participants found the simulation useful in improving teamwork and increasing knowledge.
- Simulation videos were analyzed for communication, professional behaviors and overall teamwork both within and between disciplines.

Results

- Learning the Roles of Others
  - “Rounds helped see what other professions do. Rounds helped us know what questions we can ask other professions.
  - “I would hope that everyone from this takes away a greater respect for the other professions now that we do understand what they do.

- Increased Trust and Confidence
  - “It’s nice to know I can depend on other people to help me with what I do not know much about. It was humbling but also a confidence booster.”
  - “Something I have learned over the years is that nobody can do what they do without the other people. Yes sure I’m the doctor, but I can’t do my job without the rest of you guys.”

- Contrived Setting
  - “It was easy to get wrapped up in the simulation and forget about the patient. Treat the patient not the monitor.”
  - “You can get a chance to make mistakes and learn from them. And not in a real setting where it’s kind of the fast paced… less stressful.”

Discussion and Conclusions

- Interprofessional education has demonstrated a strategy to better prepare students for the clinical setting. Participants developed skills to work professionally with other disciplines.
- This study reinforces results from the literature that illustrate attitudes, teamwork and communication improved following clinical simulation.
- This study contributes evidence utilizing a broader scope of represented professions and unique multi-patient scenarios.
- Participation in the simulations reflected a positive change in attitude and increased confidence
- Data collected from video analysis showed an increased understanding of collaborative care and contributions of individuals in a health care team.
- Future research is needed to examine the long term effects of clinical simulations translating to the professional teamwork and patient care.

Instrumentation & Data Analysis

Data Collection
- Audio and video recordings
- Observation of participants (including field notes)
- Pre- and Post Surveys
- Transcribed group debriefs

Data Analysis
Students’ survey responses were pre-coded using the last 4 digits of their phone number for matching. Paired-sample t-test were used (SPSS 19.0, Armonk, NY). Statistical significance was determined a priori at p <0.05.