

***Implementation of an
Interprofessional Transition to
Practice Simulation Curriculum for
Medical and Nursing Students
using TeamSTEPPS***

2nd Annual REACH
Medical Education Day
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Team Members

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- Laura Gantt, RN, PhD
- Skip Robey, MD
- Gina Woody, RN, MSN, DNP
- Linda Bolin, RN, MSN, ANP
- 30+ Residents, Nursing, and MD Faculty!

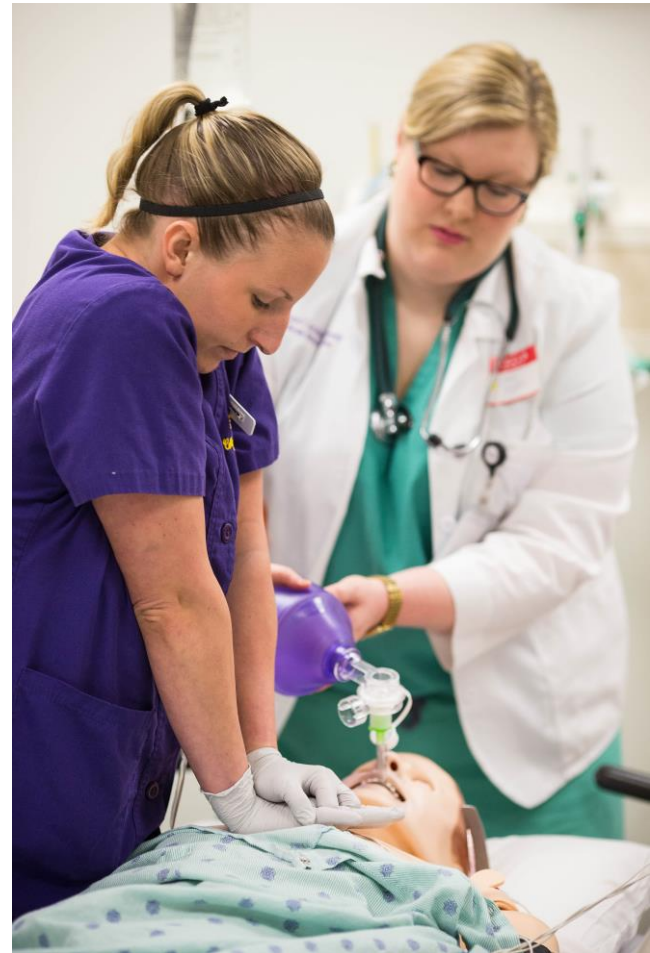
Team Training

- Associated with significant decrease in adverse events
- Health professional students rarely have instruction in team-training
- Collaboration between health professional schools is essential to provide safe learning of these competencies.



TeamSTEPPS

- Developed by Department of Defense and AHRQ
- Evidence based team training program aimed at communication and teamwork skills
- Communication failures are leading root cause of medical errors



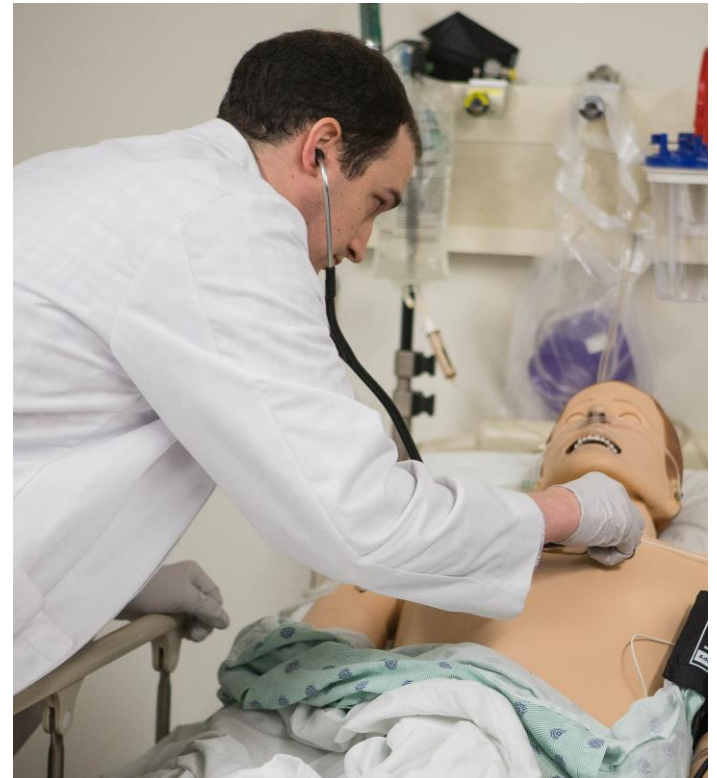
Curricular Design

Transition to Practice half-day workshop included:

- 40 teams of 1-2 medical students and 2-3 nursing students each

All participated in:

- Lectures and interactive small group activities on TeamSTEPPS principles
- Simulations with debriefing by medical and nursing faculty
- Knowledge and attitude assessment pre/post curricular intervention

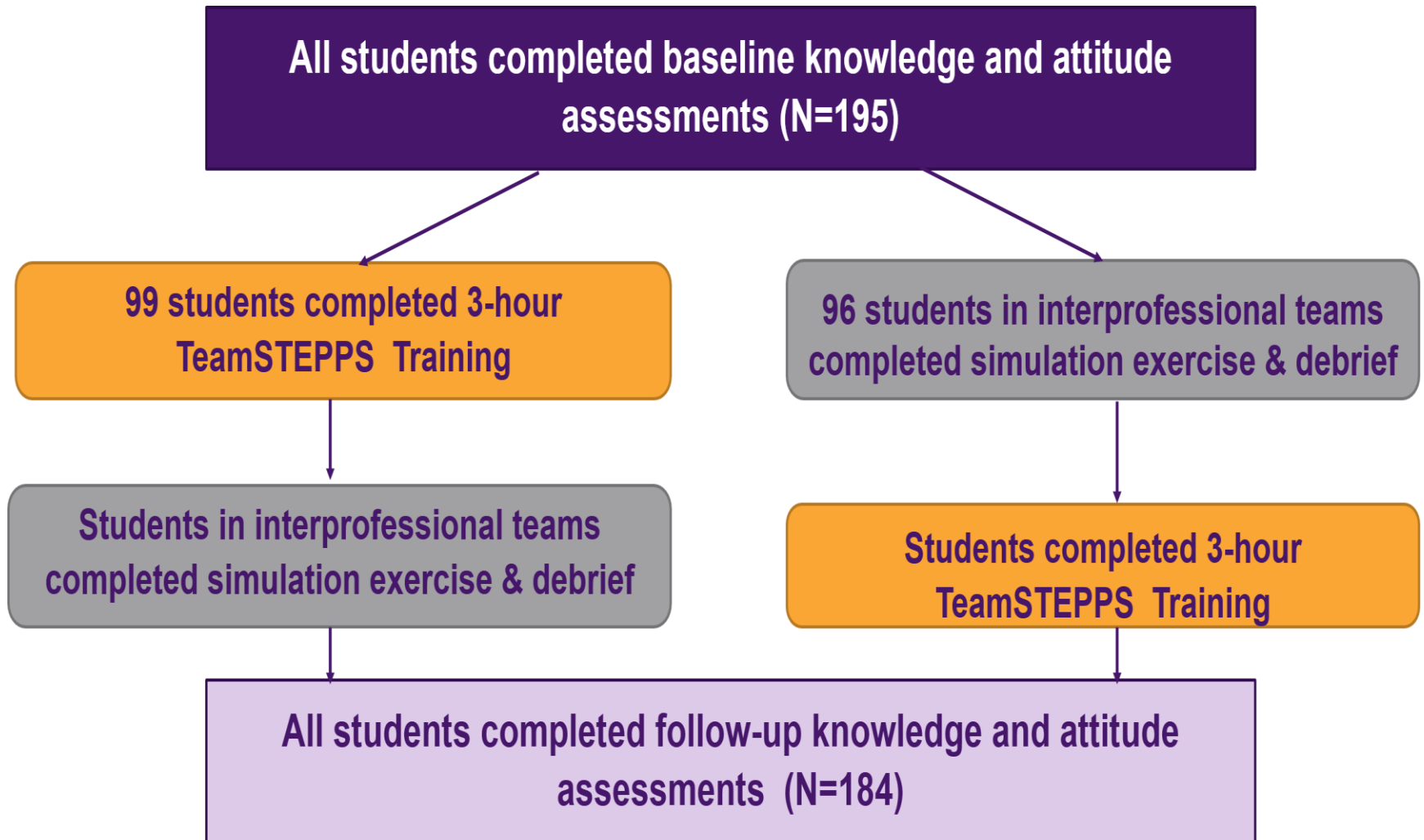


Methods

Learning Workshop -- Three Full Days

- Half of the students completed the simulation on Day 1 and half on Day 3
- All students completed the TeamSTEPPS training with their team on Day 2
- Both groups received all components of the curricular intervention
- The group that completed simulation first followed by training served as the control group for the Team STEPPS training.

Methods



Effect on TeamSTEPPS Attitudes

| | M4 Students (N=72) | | Nursing Students (N=112) | | P value | Medical Students (N=72) | | Nursing Students (N=112) | | P Value |
|-------------------------------|--------------------|-------|--------------------------|-------|---------|-------------------------|-------|--------------------------|-------|---------|
| | Pre | SD | Pre | SD | | Post | SD | Post | SD | |
| Team Structure | 4.28 | 0.456 | 4.67 | 0.322 | P<.001 | 4.47 | 0.409 | 4.76 | 0.293 | P<.001 |
| Leadership | 4.53 | 0.409 | 4.82 | 0.247 | P<.001 | 4.63 | 0.439 | 4.84 | 0.275 | P<.001 |
| Situational Monitoring | 4.35 | 0.425 | 4.65 | 0.366 | P<.001 | 4.44 | 0.460 | 4.70 | 0.415 | P<.001 |
| Mutual Support | 4.02 | 0.657 | 4.52 | 0.405 | P<.001 | 4.39 | 0.517 | 4.71 | 0.308 | P<.001 |
| Communication | 4.26 | 0.444 | 4.49 | 0.391 | P<.001 | 4.39 | 0.469 | 4.70 | 0.316 | P<.001 |

Changes in Teamwork Attitudes

M4 Students

| | Pre | Post | P-value |
|----------------------|------|------|---------|
| Team Structure | 4.28 | 4.47 | P<.001 |
| Leadership | 4.53 | 4.63 | P<.05 |
| Situation Monitoring | 4.35 | 4.44 | P=.08 |
| Mutual Support | 4.02 | 4.39 | P<.001 |
| Communication | 4.26 | 4.39 | P<.05 |

Nursing Students

| | Pre | Post | P-value |
|----------------------|------|------|---------|
| Team Structure | 4.67 | 4.76 | P<.001 |
| Leadership | 4.82 | 4.84 | P=.49 |
| Situation Monitoring | 4.65 | 4.70 | P=.33 |
| Mutual Support | 4.52 | 4.71 | P<.001 |
| Communication | 4.49 | 4.70 | P<.001 |

Effects on Teamwork Knowledge

| Means and Difference between Mean Pre- and Post-Scores for Medical Students and Nursing Students | | | | | | | |
|--------------------------------------------------------------------------------------------------|--------------|----------------------------|-------------|------------------|---------------|-----------------------------|-------------|
| Medical Students | | | | Nursing Students | | | |
| Pre N=77 | Post N=72 | Mean Difference N=71 | p- value | Pre N=112 | Post N=112 | Mean Difference N=112 | p- value |
| 93.14 | 95.45 | 2.635 | 0.001 | 90.51 | 92.65 | 2.142 | 0.005 |

- M4 Students scoring less than 93 on pretest, 76% (13/17) improved
- M4 Students scoring greater than 93 on pretest, less than 2% (1/52) scored lower
- Nursing Students scoring less than 93 on pretest, 65% (28/43) improved
- Nursing Students scoring greater than 93 on pretest, 12% (8/69) scored lower

The Real Evidence

I wanted to let you know that the TeamSTEPPS simulation with the medical students related to a code scenario was extremely beneficial during my very first capstone clinical day. At the end of my shift after a great first day in the emergency department at Lenoir Memorial, a patient came in via ambulance to the ED and was coding when they brought the patient in. When the patient arrived, because of the CON and BSOM simulation, I was able to confidently step up and alternate in to do CPR compressions throughout the entire code. Without having the simulation experience, I wouldn't have been as prepared or as confident to step up when the nurse doing compressions asked for relief. We were not able to save this patient and it was the first patient I have lost. I was able to better deal with the loss because I knew I had done the best I could. **I took the experience, practice and feedback I gained from the TeamSTEPPS simulation and was able to put it into clinical practice within a week of simulation.**

Limitations

- Occurred during Match week leading to loss of some participants
- Single institution, single experience
- Focused on attitudes and knowledge, but not skills



Conclusions & Next Steps

- Interprofessional team-training significantly improves attitudes toward teamwork.
- TeamSTEPPS can improve student knowledge on teamwork.
- Next steps include investigation of most effective training, inter-rater reliability between faculty and student assessment of teamwork competencies; compare clinical care performance to teamwork evaluations.

Questions?

