

A panoramic view of the Seattle skyline at dusk. The Space Needle is prominent on the left, illuminated with blue and white lights. The city's skyscrapers are lit up, and the background shows a hazy, purple-tinged sky over the mountains.

Expanding Our Horizons

2010 AACP Annual Meeting and Seminars

American Association of
Colleges of Pharmacy
Discover • Learn • Care • Improve Health

AACP

July 10-14 | Seattle

The Role of Simulation in Interprofessional Learning and Assessment

Peggy S. Odegard, BS, PharmD,
BCPS, CDE, FASCP

University of Washington





Types of Simulation

- Mock procedures
- Role play
- Actors
 - Standardized patients
 - Standardized family members
 - Standardized health care providers
- Partial task trainers
 - “ResusciAnne”™
- Complex task trainers
 - IV arms
- Human patient simulators
 - Adult, pediatric, and neonatal simulation
 - High fidelity, full human body
 - Body parts
 - Mouth and jaw for dental simulation
 - Arm for blood pressure check, intravenous access, immunizations



Use of Simulation in Health Sciences Education

- Procedures
 - Intubation
 - Catheterization
 - Vascular access
 - Dental surgery
 - Physical examination
- High risk/low frequency events
 - Obstetrical delivery
 - Resuscitation
 - Anesthesia
 - Disaster response



Use of Simulations in Pharmacy Education

- Injections
- Blood pressure
- Code team or emergency response
- Medication dosing and initiation (e.g. PCA)
- Patient interviewing
- Teamwork



WSU Community pharmacy emergency simulation, 2010, with permission

Learning together using simulations

Opportunities

- Improves communication
 - speaking up against a perceived power gradient
 - making recommendations
 - receiving input
- Controlled application of classroom learning
- Skill development
- Demystifies “real world” stress
- Facilitates professional role appreciation and development

Challenges

- Finding common learning times in curricular schedules
- Curricular mapping is required to sync time availability between schools
- Simulator expense, prep, and maintenance
- Dedication of faculty or staff



Sharing Education

- Common Competencies (39 for UW health science schools!)*
 - Team collaboration
 - TeamSTEPPS program for UW
 - Clinical competency
 - reasoning and critical thinking
 - Health systems, professionalism, ethics, legal
 - Professional identify and role development
- Educational overlap between programs
 - Experiential training
 - Coursework
 - Health and society
 - OSCEs, standardized patients, simulations
- Faculty time and expertise

*Participants are referred to the UW poster and presentation at AACP 2010



Finding Common Ground for Learning Together

- Classroom
 - Common topics
- Clerkship
 - The patient
- Practice
 - The patient
 - Team-oriented care
 - Diabetes
 - Geriatrics
 - Intensive care
 - Emergency medicine
 - Disaster response



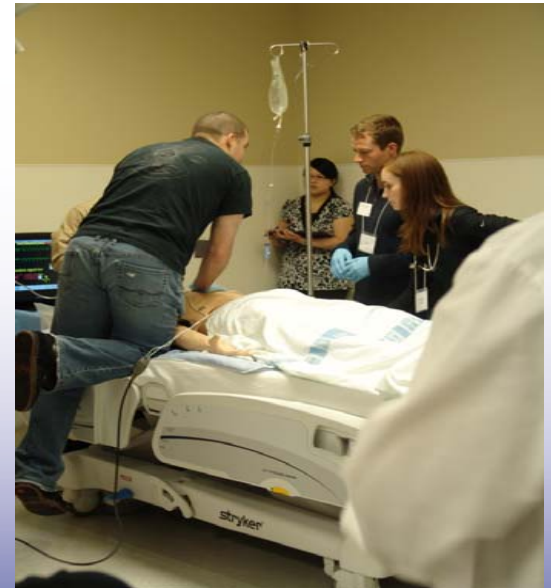
Simulation Assessment: Target your observation

- Behaviors, Attitudes, and Skills
 - Individual performance
 - Group performance
 - Teamwork
- Knowledge
 - Individual
 - Team
- Roles



Simulation Assessment: Preparation & Follow-up

- Set expectations for performance
- Control for factors you are not evaluating
 - Facilitate practice and comfort with simulator
 - Level the knowledge playfield
 - Clarify roles
- Debrief



Macy Simulation Assessment: Short Form

Overall Ratings	No	Yes, but	Yes	Comments?
Team Structure identifies goals, assigns roles / responsibilities, holds members accountable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Leadership utilizes resources, delegates tasks and balances workload, conducts briefs, huddles, and debriefs, empowers members to speak freely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Situation Monitoring includes patient/family in communication, cross monitors members and applies the STEP process, fosters communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mutual Support advocates for the patient, resolves conflict using Two-Challenge rule, CUS and DESC Script, works collaboratively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Communication provides brief, clear, specific and timely information, seeks and communicates information from all available sources uses SBAR, call-outs, check-backs and handoff techniques	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>No: Multiple critical behaviors absent or poorly performed.</p> <p>Yes, but: Most critical behaviors present but some performed unacceptably.</p> <p>Yes: All critical behaviors present and performed acceptably.</p>				



Sample Simulation Assessment:

Interprofessional Communication and Teamwork Assessment Rubric

* adapted from ISIS Difficult Airway Tool or AHRQ Simulation Grant tool

**adapted from TeamSTEPPS Team Performance Observation Tool

Assessment	1 = No	2 = Yes but	3 = Yes	Notes
Group				
1. All team members involved.*				
2. Duties negotiated appropriately.				
3. Resolved conflicts/disagreements.*				
4. Roles shifted appropriately and as needed.*				
5. Actively shared information.**				
6. Overall, team functioned effectively.				
Individual				
1. Listened to team input.				
2. Interacted appropriately with team members.				
3. Advocated for appropriate care based on identified role, speaking up against a perceived power gradient, if necessary.				
4. Functioned as effective team member.				

UW and WSU
collaborative
Draft
Assessment,
2009



Macy Project Aims

- To ***develop a simulation-based, team training program*** to improve teamwork skills that include interprofessional communication, collaborative learning and leadership among health professional students and faculty.
- To ***conduct a randomized, controlled validation study of the impact of a simulation-based, team training program*** on students' interprofessional teamwork skills as measured by an innovative Web-based assessment tool.
- To ***disseminate this training program*** to other health sciences schools by creating an exportable "***Interprofessional Training Toolkit***".
- To ***determine health professional students' perceptions*** of the value of simulation-based team training in their future practice "teamwork skills"

Josiah Macy Foundation, Co-PI
Zierler BL and Ross BK



Lessons Learned...so far

- Pay attention to attitudes and preconceived notions of faculty
 - Faculty or clinicians are at different levels of interprofessional experience and attitude
 - Workshops or group facilitation are helpful for unpacking beliefs, correcting assumptions and providing “ground rules” for working together
 - Role modeling is a key influence
- Curriculum can lead or get in the way
 - Curricular mapping is a critical first step to interprofessional education
 - Curricular change requires top-down support
 - Champions in each school are vital
 - More than just the “early adopters” are needed to facilitate true curricular change
 - Non-practice faculty are an important part of the interprofessional education discussion
- Simulation
 - A great tool for facilitating practice
 - Practice is needed to be successful in the simulation
 - Well received by students and faculty



References

- Bradley P. The history of simulation in medical education and possible future directions. *Medical education*. 2006;40:254-262
- Salvatori P, Mahoney P, Delottinville C . An Interprofessional Communication Skills Lab: A Pilot Project. *Education for Health*. 2006; 19:3, 380-384.
- Cooke S, Chew-Graham C, Boggis C, Wakefield A. “I never realized that doctors were into feelings too”: changing student perceptions through interprofessional education. *Learning in Health and Social Care*.2003; 2(3):137-146.
- Fernandez R, Parker D, Kalus J, et al. Using a Human Patient Simulation Mannequin to Teach Interdisciplinary Team Skills to Pharmacy Students. *American Journal of Pharmaceutical Education*. 2007; 71:3 (article 51).
- Frankel A, Gardner R, Maynard L, Kelly A. Using the Communication and Teamwork Skills (CATS) Assessment to Measure Healthcare Team Performance. *The Joint Commission Journal on Quality and Patient Safety*. 2007;33:9: 549-558.

