

# The Integration of Clinical Laboratory Science Students into a Simulation-Based IPE Event

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# Hello! I am Dana Bostic



- ◆ Proud Medical Laboratory Scientist
- ◆ Simulation Enthusiast
- ◆ Interprofessional Education (IPE) Advocate
- ◆ Lifelong Learner

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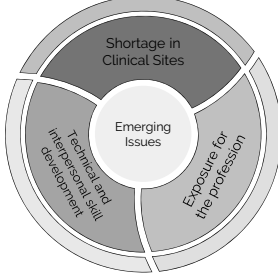
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*"Coming together is a beginning.  
Keeping together is progress.  
Working together is success."  
-- Henry Ford*

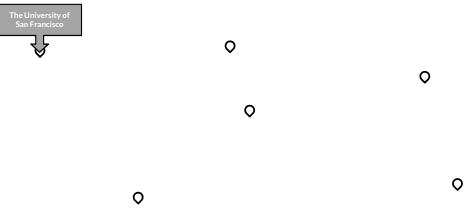
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# The Quest for Simulation Knowledge



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# Master of Science in Healthcare Simulation



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# The Capstone Project

The Integration of Clinical Laboratory Science Students into a Simulation-Based IPE Event

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### The Spark


- ▷ ASCLS Position Paper - 2015
  - ▷ Recognized that the Clinical Laboratory Science (CLS) profession needs to fully integrate patient safety concepts into pre-certification curricula and entry-level competencies for CLS program graduates.
- ▷ Mayo Clinic - 2015
  - ▷ 60-70% of all healthcare decisions regarding a patient's diagnosis and treatment are based on laboratory test results



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### Institute of Medicine (IOM)

- ▷ Six Aims for Improving the Healthcare System
  - Safe
  - Effective
  - Patient-centered
  - Timely
  - Efficient
  - Equitable



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### WHO, 2010

- ▷ Framework for Action on Interprofessional Education & Collaborative Practice
  - The use of interprofessional collaboration = innovative strategy!
  - Mitigates the global health workforce crisis
  - Optimizes health outcomes
  - Emphasizes the importance of patient safety
  - Necessary for preparing "collaborative practice-ready" healthcare practitioners

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### Background (cont'd)

- ▷ Other healthcare professions, such as medicine and nursing, have integrated competencies and professional activities into their respective curricula focused on the improvement of patient safety and the delivery of quality patient care.



### Our Mission


- ▷ To successfully integrate CLS program students into a longitudinal simulation curriculum structured to practice interprofessional collaboration in the management of patient cases requiring urgent and/or emergent patient care.


SOM	SON	SHP
<ul style="list-style-type: none"> <li>• Four SOM instructors</li> <li>• Two SOM student participants</li> </ul>	<ul style="list-style-type: none"> <li>• Two SON instructors</li> <li>• Two SON student participants</li> </ul>	<ul style="list-style-type: none"> <li>• Two CLS program first-year (CLS3) students participated without previous Sim-IPE experience</li> <li>• One CLS instructor</li> </ul>

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### Pilot - October 2017

- ▷ Zamierowski Institute for Experiential Learning (ZIEL)
  - A partnership of the University of Kansas Health System and the University of Kansas Medical Center
- ▷ ZIEL Resources
  - Education Specialists
  - Program Delivery and Operations Team
  - ZIEL Simulation Hospital
  - Team Canary





## The Overarching Goal

*By the end of the simulation, interprofessional students will demonstrate the knowledge and skills required to recognize and/or initiate urgent (or emergent) treatment for a patient with severe sepsis.*

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## Learning Objectives

1. As a team, demonstrate a primary and secondary assessment on a patient with sepsis.
2. Perform a prioritized history, physical, and diagnostic review to identify severe sepsis.
  - **Observable action:** Review of clinical laboratory results
3. Provide evidence-based care for a patient with severe sepsis.
  - **Observable action:** Recommend antibiotic based on appropriate lab and culture results
4. Work in an environment that cultivates interprofessional communication, collaboration, and care of patients with severe sepsis.

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## Guidance for Best Practices

- ▷ Health Care Simulation
  - INACSL Standards of Best Practice: Simulation<sup>SM</sup> Simulation-Enhanced Interprofessional Education
    - Provides a collaborative approach for development of interprofessional practice competencies & communication.
- ▷ Clinical Laboratory Science
  - CLSI Standard for Antimicrobial Susceptibility Testing (AST)
    - The collection of blood and/or urine cultures prior to the administration of antibiotic therapy.

# Creating a safe environment...

The Basic Assumption

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*We believe that everyone participating today is intelligent, capable, cares about doing their best, is a valuable part of the healthcare team and wants to learn how to provide the best quality and safest patient care possible.*

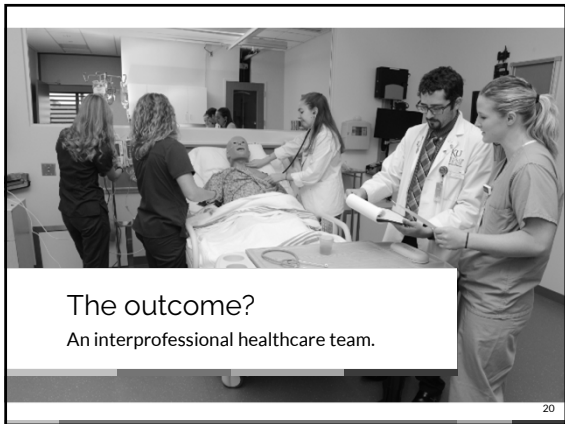
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### Simulation Timeline: 2 hours

Time	Task	Notes
5 minutes	Welcome: Introductions	
10 minutes	Urgent to Emergent Patient Care Overview	
30 minutes	Workshop: Urgent to Emergent Sepsis Conditions	CLS students received iSBARR practice in lab.
5 minutes	Prebrief: Sepsis Overview	
10 minutes	Patient Case #1: Cellulitis	CLS Stem: When called, hand deliver both the lab and sensitivity reports to the patient room. Report in iSBARR prioritized and critical content in the reports. Remain in room as a consultant.
20 minutes	Patient Case #1: Debrief	
10 minutes	Patient Case #2: UTI	
20 minutes	Patient Case #2 Debrief	
5 minutes	Take Aways	
5 minutes	Post-Event Simulation Survey	

### ISBARR Workshop for CLS Students

- ▷ Deliver laboratory results using an effective communication tool
  - **Identify** = Identify yourself, your title, and your team.
  - **Situation** = I am calling about Patrick Smith in room 4210. I am calling about a gram-positive organism from his microbiology workup. I believe this is an emergent situation.
  - **Background** = Are you familiar with the patient?
  - **Assessment** = The patient had MRSA isolated from his wound culture. I am concerned about this patient.
  - **Recommendation** = The antimicrobial susceptibility test (AST) shows that the organism is sensitive to vancomycin.
  - **Read-back or Recap** = Please repeat back the lab result to me for clarity.









The outcome?  
An interprofessional healthcare team.

➔ **100% strongly agreed!**

- ▷ CLS program students can benefit from participation in a simulation event.
- ▷ Participation in the simulation pilot was a valuable experience.
- ▷ Interaction with other healthcare disciplines was a valuable experience.

- ➔ **24 sessions**  
November thru December
- ➔ **349 participants**  
SHP, SOM, and SON programs
- ➔ **100%**  
Total success!

### Closing Remarks

 <b>Pilot Launch</b> ZIEL Simulation Hospital in October 2017	 <b>Interprofessional Team</b> Nursing Medicine Clinical Laboratory Science	 <b>Goal</b> Engage CLS learners in interprofessional practice on the healthcare team.
 <b>Positive Feedback</b> CLS student participants can benefit from practice of working on an interprofessional team & found it to be a valuable experience.	 <b>Going Forward</b> Opportunities for longitudinal studies and research for students participating on an interprofessional team.	 <b>The Final Take Away</b> Simulation provides an avenue to better prepare our learners for potential interactions in the real healthcare environment.

### Credits

Special thanks to all the people who made this simulation event possible:

- ▷ Zamierowski Institute for Experiential Learning
- ▷ School of Health Professions
- ▷ School of Nursing
- ▷ School of Medicine
- ▷ Our students
- ▷ Most importantly...our patients!

Thanks!  
Any questions?

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