



### Welcome!

Welcome to our Simulation Newsletter!  
In this month's issue, we'll discuss how classes and simulations can compliment

each other. They each have their strengths and weaknesses. Putting them together makes them both much more effective.

Please send us your feedback! *Our contact information is in the top left corner of the second page.*

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### Classes

We've all been in classes of some sort, starting back when we were schoolkids. There are many more ways to hold classes these days: in person, by webinar or teleconference, or by CBLs. In-person classes can be lectures, discussions, or a hybrid of both.

Regardless of the format, they all have the same goal:

information transmission. The leader of the class has information that the students in the class need to have.

Classes can be effective and efficient. They're also necessary. Students in the class need to have a base of knowledge before they can do anything else. Before you can treat someone for

shock, you have to know what shock is and how to recognize it. You also have to know what the possible treatments are. All that can be taught in classes.

### Simulations

Simulations are a different setup. They do not do well as initial instruction. They assume that you have some degree of knowledge before you come into the simulations.

What they are good at is helping to consolidate and synthesize all the information the participant knows. It is the "Putting It All Together" step.

When you're a student in a class, there's some time to think. You are not also doing three other things at the same time. This is a good and useful way to create new brain pathways for

a student. However, that's not how the real world works.

When you're in a simulation as a participant, you are having to apply your knowledge while also actively caring for a (plastic) patient. You are integrating all the information you've previously learned while also doing things. You are combining your book knowledge with muscle memory. The simulation allows you to take algorithms, guidelines, or practice models and actually apply them at speed during (plastic) patient care. When you're at decision points,

you have to actually make your decision. When you're assessing your patient, you have to decide what you're finding — is your patient stable or unstable, and why?

Having courses to learn new material is important. Using simulations to lock that learning in is also important.

#### Steps of a Simulation:

- Goals
- Creation
- Preparation
- Running the Simulation
  - Briefing
  - Run
  - Debriefing
- Reset
- Assessment

**UVAHealth**  
**Life Support Learning Center**

1222 Jefferson Park Ave  
Fifth Floor, Room 5603  
Box 800309  
Charlottesville, VA 22903

Phone: (434) 924-1765  
Email: [jph5z@uvahealth.org](mailto:jph5z@uvahealth.org)

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## Pictures!



One of the Malignant Hyperthermia simulations in the Main OR PACU. Notice it's actually in a PACU room, so people can practice in their actual area. It's how we found it would be hard to make a phone call to the national hotline from the room: not all rooms have a phone.



Performing nasotracheal suctioning on a PICU infant.

## General Medicine EtCO<sub>2</sub>

The General Medicine floors have done a great job of combining both modalities in their rollout of using end-tidal CO<sub>2</sub> detectors.

They had their nurses take certain CBLs to get the basic information about what capnography is and what it can do. They did a return demonstration session where the nurses showed they could correctly set up the EtCO<sub>2</sub> equipment and zero it properly. Those are both Class modalities.

They also did a series of snowball simulations, in which nurses were covered for 40 minutes from their floor assignment, watched one simulation, and were the primary nurse in a second simulation. We had a sequence of four simulations, so everyone didn't see everything, but it was enough to get the nurses to think how they could use capnography in their actual care. That's the Simulations modality.

This mix of modalities is exactly what we were discussing on page 1. General Medicine used the CBLs and return demonstrations to give the basic information and then used simulations to help lock in how and when to use it.

## Mock Codes

Mock codes are also a great example of mixing modalities.

Everyone who touches a patient needs to have a current BLS card and certain providers also need to have a current ACLS card. Those classes provide the basic information of what to do in a code, and the participants come out at least competent to participate in or run a code.

However, it's really hard for a class to recreate the speed and complexity of running an actual code in a lecture or discussion. Simulations, whether inside or outside of the classes, helps to actually put all the different aspects together: recognition of condition, choosing the right algorithm, soft skills such as crew resource management, and the interactions between all of the team members.

You can learn how to run a code in a class, but you don't really know how to run a code until you run a code (even if it's on a plastic patient).

## Journal Article

Our journal article this month is on a different theme. It's an interesting article on using simulation to create a CPR compression method for a patient with severe scoliosis. Simulation doesn't have to be just to improve clinical skills — it can be used to create or test out new processes and procedures, as well.

The article is Rex, J., et al. (2023). Using Simulation to Develop and Test a Modified Cardiopulmonary Resuscitation Technique for a Child With Severe Scoliosis. *Simulation in Healthcare*, 18(5), 341-347.

The following link should be able to get you to the article: [https://journals.lww.com/simulationinhealthcare/citation/2023/10000/using\\_simulation\\_to\\_develop\\_and\\_test\\_a\\_modified.9.aspx](https://journals.lww.com/simulationinhealthcare/citation/2023/10000/using_simulation_to_develop_and_test_a_modified.9.aspx).