



Welcome!

Welcome to our Simulation Newsletter!

We've finished walking through the simulation process. So, this month, we're going to talk about something completely different: multiple-simulationist simulations.

These come in three flavors: simulations with lots of participants, so we need lots of the same patients; simulations with multiple patients, for which each patient has a simulationist; and complicated simulations, in which we need

multiple simulationists to keep up with the participants. We'll describe examples of each this month.

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

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Many-Participant Simulations

We have simulations that have large numbers of participants. While it is possible to run a simulation with eight participants and seventy observers (main OR, 2018), it's not easy. The most common way to handle this is to divide the group by bring multiple simulationists who are all running the same simulations with smaller groups of participants.

One of our largest, and longest-running, examples

of this is Interventional Radiology, in which everyone (physicians, NPs, nurses, and techs) are involved. For their thirty-plus participants, four simulationists with four manikins would be optimal.

We've done a similar thing with Endoscopy for even longer. Again, for their thirty-some participants, four simulationists would be best.

For both of them, the sim-

ulationists would each be running the same scenarios in small groups.

It's an effective and efficient way to have a large number of people participate in simulations at the same time.

Another option for this situation would be to schedule several time slots for the same simulation so that people could come when they are available.

Many-Patient Simulations

A few simulations have multiple patients for one group of participants. These are a little harder to arrange because we need so many simulationists for a small group of participants. However, they are useful.

We have helped Nursing Professional Development Services with their PCA to PCT course since 2016 by using three simulated moni-

tors to run a 12-hour shift in 6 minutes (we call them "flash simulations").

We did simulations with 8West in which the participants had to do their normal daily tasks for three manikins and also find the medical emergency.

We used our Cut Suit equipment to do a training exercise for the Emergency Department, the Char-

lottesville Police and Fire Departments, and the Charlottesville-Albemarle Rescue Squad to find, treat, and bring to the hospital two simultaneous trauma alerts. That required a lot of planning!

These simulations need a lot of preparation work, but they can be highly valuable.

Steps of a Simulation:

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

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We create simulation-based experiences for current staff and students to maintain and improve their clinical judgment and teamwork skills during medical emergencies.

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A First Five Minutes program for 5South.



PICU preparing to cardiovert an infant with unstable SVT. You can see the rhythm on the Zoll.

Many-Intervention Simulations

Other simulations have only one group of participants and only one patient, but they are so complicated that we need multiple simulationists to keep up with the participants.

The ED 500s simulations, which are trauma alerts or other sick patients, have six or more participants working on the patient at once. To keep up with the IV starts, monitoring devices, medication administrations, and other procedures, we have one person running the manikin and one running around working with the participants (and really need two).

The malignant hyperthermia simulations for the ORs (especially OPSC) have several nurses drawing up dantrolene, a sick patient who needs other medications, and a person calling the Malignant Hyperthermia Association of the United States (we even simulate that). Again, we need one simulationist to run the manikin (and be MHAUS) and one to work with the participants.

Other Special Simulations

Manikins these days are cordless, which means they can move. We've done simulations in which the patient is brought from one area to another. One example of this was the ED Peds-to-PICU simulations, in which a child came into the ED, was treated, admitted to PICU, and physically went upstairs to PICU.

That required a lot of coordination work, but it was useful for practicing clinical care and it helped both the ED and the PICU understand how each other works. We had PICU nurses in the ED watching the ED's workup and ED nurses staying after patient handoff watching how the PICU brought a new patient in.

Journal Article Spotlight

This month's journal article is on multi-patient simulations. It's not groundbreaking — just an article about a multi-patient simulation for nursing students. But it does show what is possible: multiple patients, interactions with other health care providers, and dealing with unexpected changes. The article is Kirkman, T., et al. (2018). Strategies for implementing a multiple patient simulation scenario. *Nurse Education Today* (64), 11-15. The following link should work from any UVa computer: <https://www.sciencedirect.com/science/article/pii/S0260691718300601#s0005>.

More Simulations

And one more example. Before COVID-19, we helped the Trauma Service with an outreach program where new drivers in high school would watch a simulated trauma alert. The simulation had an actual trauma team working on a Standardized Patient in a Cut Suit (an armored skin worn by a simulationist that allows surgical procedures). We needed one simulationist dedicated solely to patient safety as well as others running the patient monitor and ensuring the simulation went forward.

Simulations can be used for more than just clinical skills. This was both community education and to help keep our Trauma Center designation.