UVA Health

UVa Health Simulation News

UVAHealth Life Support Learning Center

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Welcome!

Welcome to our Simulation Newsletter!

We'll discuss scenario creation this month. It's interesting looking at the literature about this. Most articles do not discuss how the scenario(s) used in the article were built. Most often, they simply state "scenarios were created" and nothing else. Sometimes they don't even include the scenarios in the article at all.

We're going to go into more detail about how to build a scenario. All the parts of the scenario are interconnected and all of them have to make sense for the situation you want to present.

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

Goals

As with most everything we do with simulations, we need to start scenario creation with the goals of the simulation. The goals drive everything else, and that is particularly true about scenario building.

Most times, we start writing a scenario from the top down. What are the goals? From those, we can make a high-level outline of the scenario.

For instance, say we want to do a code simulation. What about the code do we want the participants to focus on? What part of the code response is the most important? If we're looking for the ability to recruit help and start a BLS code, perhaps we'll start the patient in cardiac arrest. If we want the team to practice recognition of a change to cardiac arrest, we may have the patient start alive and then code in the middle of the scenario. What fits best with the goals?

As another example, if we want to practice a team's response to hypovolemia, we need to structure that around the team. It doesn't make sense to run a trauma exsanguination on a general medicine floor. But for the general medicine floor, we need to decide on, say, a rectal bleed (needs blood) vs. nausea/vomiting/diarrhea (needs fluids). We use the goals to decide which cause of fluid loss to use.

Structure

Once we have the general idea for the scenario, we can fill out the outline a little more.

How long do we have for the simulation? That will affect the pacing of the scenario and how much we can put into it. A simulation with a five-minute run is going to be much simpler than if it was an hour long. What level of difficulty do we want? Scenarios for new RN Clin 1s will likely be easier than scenarios for MET.

How many people will be participating? We need to have roles and actions for everyone.

How many people will be running the simulation? That will affect what we can put into it. For instance, we run simulations in the ED for the adult side once a month. The night shift ones only have one simulationist, so night shift will see the same scenario but simplified so that one person can run it.

Inside this issue:

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 improve their clinical judgment and teamwork skills during medical emergencies.

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Adding the Details

This is frequently the most time-consuming part. Everything in the scenario needs to be looked at to make sure it agrees with what we want the participants to see. Some things will be neutral (our rectal bleed scenario from a previous article might or might not have diabetes — it won't make a difference) but many things will be relevant (we can increase the difficulty of the rectal bleed patient by giving her a history of atrial fibrillation and being on Xarelto, an anti-coagulant).

We're looking at everything here: vital signs, patient clinical presentation, level of consciousness, and props that will be on the manikin, such as bruising or a rash. We use lots of props — our favorite is an empty soda bottle, for a STICU patient who just had bariatric surgery and then had soda (that combination doesn't work well).

We look at the backstory: what did the patient/family/EMS tell you about the patient before the simulation starts?

How will the simulation progress? We need to make sure it makes sense for the situation and for the goals.

We get very specific about the details. For instance, a patient with hypotension from a rectal bleed may have a blood pressure of 92/70, where a patient with hypotension from sepsis may have a blood pressure of 92/48, because their shocks are different and the body responds differently.

Depending on the difficulty level, we can include dead ends, but we need to give them enough to come back to the actual path. So, we might include a history of diabetes, but if they check the blood glucose, it's normal (a dead end with a way back out).

All of this helps the participants find a pathway from the start to the end. We need to create a path (or paths) they can find to be fair to them.

Pictures!

Recognizing VTach and checking for a pulse in an Exercise Physiologist simulation.

Northridge Pediatrics clinic responds to a plastic patient in distress.

Polishing

One of the last parts we do is polishing. We have a scenario and it is internally coherent. Now, we need to make sure it feels like a patient from the participant's area. For instance, the rectal bleed patient is going to have a slightly different setup in General Medicine compared the surgical acute floor. Both may have the same structure, both may be on Xarelto, but other elements may be different.

We want the patient to be set up so that the participant could legitimately say, "I just had this patient last week."

Frequently, we will ask our contact person to help with this. They have details about their patients that we would never know.

Journal Article

Our article is one of the few which talked about their scenario creation in detail. Look for the sections on development, authenticity, and complexity. The article is King, G., et al. (2016). Developing authentic clinical simulations for effective listening and communication in pediatric rehabilitation service delivery. *Developmental Neurorehabilitation 19*(5), 284-294.

We are having a hard time getting links that we can put directly into our newsletter. This article is findable through the UVa Health Sciences Library using the CINAHL database.