First and foremost, I am a paramedic and a paramedicine educator. But last year I woke on Sol 12 of an immersive Mars mission simulation to observe small confined crews in a Mars analogue as the crew medical officer. But it was raining. While the crew members watched the rain from the habitat window somewhat perplexed, it began to sink in. Physically Mars has no atmosphere, therefore it does not rain on Mars. Any attempts of the crew members who were engaged in the simulation to ignore it (the rain) or alter the simulation to allow its presence would negate the very objectives of the simulation.

In short, I was in a simulation that had literally just bombed, yet ironically, whilst standing there looking outside the habitat, I could recall similar incidents from my ambulance training years ago. Not the raining part, the simulation bombing.

**Simulation Reminiscence**

Years before, as a student paramedic I was standing outside a classroom with the windows covered. Inside were three clinical instructors who were setting up a simulation, and I, as the resident greenhorn, had no idea what to expect. All that was certain, was that I would have to achieve a pass mark to continue with my paramedic training.

As the classroom opened, I held my breath and the clinical instructor stepped forth. "You have been dispatched to a local park where an unconscious female patient with a serious bleed has been found." He then moved to one side and beckoned us in.

My partner and I entered the classroom and approached the scene. Park? What park? All I could see was a naked plastic manikin lying prone on the carpet floor of the classroom. Overhead, fluorescent lights lit the dark carpet, and there were several desks and chairs stacked up in the corner. This was not a great start to a "simulation". Once we had entered, the clinical instructor further informed us that the patient was lying left lateral. Wait what, was there another patient that I could not see? All I could see was the plastic naked manikin lying prone, so we performed a secondary scan of the room.

We found nothing further so after a short delay searching, we assumed that the prone patient was in fact the patient. As we approached, I could see that some cord had been wrapped around the patient's leg, but I failed to see bleeding.
In fact, I failed to see any blood at all. The clinical instructor then informed us verbally that the bleeding was of a catastrophic nature and because of our delay searching, the patient had bled out and was now in cardiac arrest. Really? I was literally standing in a classroom with white walls, a plastic patient, and no blood, and this is my final assessment? Simulation indeed.

**To sim or not to sim**

Simulation in paramedicine education provides a vital link between the classroom and the real world. It generates a tangible opportunity for paramedicine students to experience real time clinical experiences through imitation or representation to mimic real life circumstances.

When simulation training is facilitated well, it provides an opportunity for student paramedics to apply their learned theoretical knowledge whilst incorporating their clinical skills and decision making processes. Without simulation students would miss the opportunity to apply and practice these as procedures before hitting the streets in real world emergencies. They would then have to rely on opportunistic clinical experiences in the real world, where clinical exposure varies between students and is both difficult to manage from an educational point of view due to intermittent caseloads. Therefore, simulation is a vital conduit between paramedicine education and the real world.

Whilst an effective simulation can maximise participant learning and provide a more productive learning experiences than opportunistic clinical experiences alone, it often cannot accurately or effectively replicate the stress, pressure, or anxiety of the real world situation. Moreover, when simulation training fails to accurately portray or simulate the desired situation, it fails to develop some of the key skills required of the student paramedic. Although many paramedical services and education provider are budget constrained, it is often that simulation training fails because they require rigorous preparation that varies with the nature and the complexity of the set simulation. The clinical trainers have either not enough time, or not enough resources to ensure the simulation training is at a high level, and the training then relies on historical training methods. In paramedicine education, we need to, and can do much better in simulation.

In order to raise the clinical benchmarks required of the graduate paramedic, we need to ensure that our simulation training methods also continue to develop. If a paramedicine student is expected to manage a bleeding patient, the patient should be bleeding, and if the simulated patient is outside, the patient should be outside.

If we as a profession are going to develop our peers through simulation training, we need to sim seriously and take the time to prepare the resources that are required of the case. This will simulate and replicate the case as closely as feasibly possible to ensure that our graduates get the most out of the experience and can translate this experience to their clinical work on the street. Evidence supports the continued usage of simulation training as a valuable educational technique that encourages the development of new skills without involving real patients, but to be efficient it must be carefully planned.

**REFERENCE**


**ABOUT THE AUTHOR**

Steve Sunny Whitfield is a lecturer at Griffith University School of Medicine (paramedicine) with experience in providing health care in remote and extreme environments that includes humanitarian operations, high altitude expedition medicine, and both flight and retrieval medicine. Steve is also a keen geographer, climber, surfer, and writer.