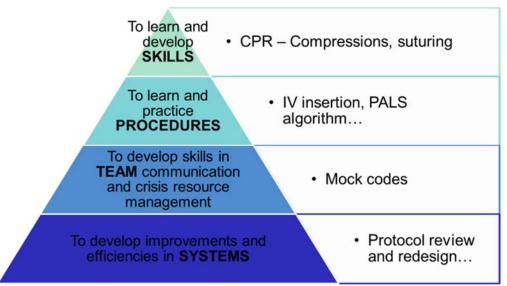


## Introduction

What comes to mind when someone says the word "Simulation"? Flight simulators, human manikins, virtual reality, and NASA might all come to mind. But "simulation" is more than just technology. "Simulation is a technique – not a technology – to replace or amplify real experiences with guided experiences..." These guided experiences allow participants to experience, pause, reflect, and truly learn in order to change behaviour.

In many institutions, simulation is also used as an evaluation tool. Please note that throughout these videos we will not be addressing simulation in this sense. The focus of these modules is simulation as an educational methodology, also known as "simulation-based learning" or "simulation-based education." There are lots of reasons for simulation to be used in education. Practicing without the potential to harm people who are patients is usually the first and foremost benefit to simulation, but there are many others.



This pyramid represents the level of impact different uses of simulation can have. At the tip of the triangle (SKILLS) is skills-based training. Examples of this include CPR compressions, suturing, trach care, intubation – the list goes on. These are things which typically have a clear "right" and "wrong" way of being done, and require some sort of psychomotor aspect, or muscle memory, to achieve competency.

The second section of the triangle (PROCEDURES) refers to practicing procedural events, such as PALS. These are scenarios which unfold and require a regular and predictable application of theory, like ACLS algorithms.

The third level of the triangle (TEAM) represents teamwork skills, like Crisis Resource Management, communication, team roles, responsibilities, and resource allocation. With multiple people involved, all learning skills which can transfer between many settings, the impact of practicing these types of skills is more widespread than those at the top two levels of the pyramid.

At the bottom of the pyramid (SYSTEMS) is using simulation to develop improvements and efficiencies in systems, like protocol reviews and redesigns. These simulations help inform the protocols and guidelines which practitioners refer to on a daily basis for their work, and lay the foundation for all other levels of the pyramid. They can also give us insight into why guideline compliance might be low, and help identify gaps in processes and systems. Sims at this level also provide opportunity to test new solutions to existing problems.

Before moving on, let's be clear – simulation-based education is a very valuable tool. But it's not a silver bullet, and not always the right fit for the job. To learn more about what the sim community calls "Functional Task Alignment," please review the "Learning Theory" video.

To find out more about simulation's history and current uses, please review the "Additional" resources section on this page (https://simulation.vchlearn.ca/video/intro). And if you'd like to see whether you've understood this content, take the "Knowledge Check quiz,", also on this page.