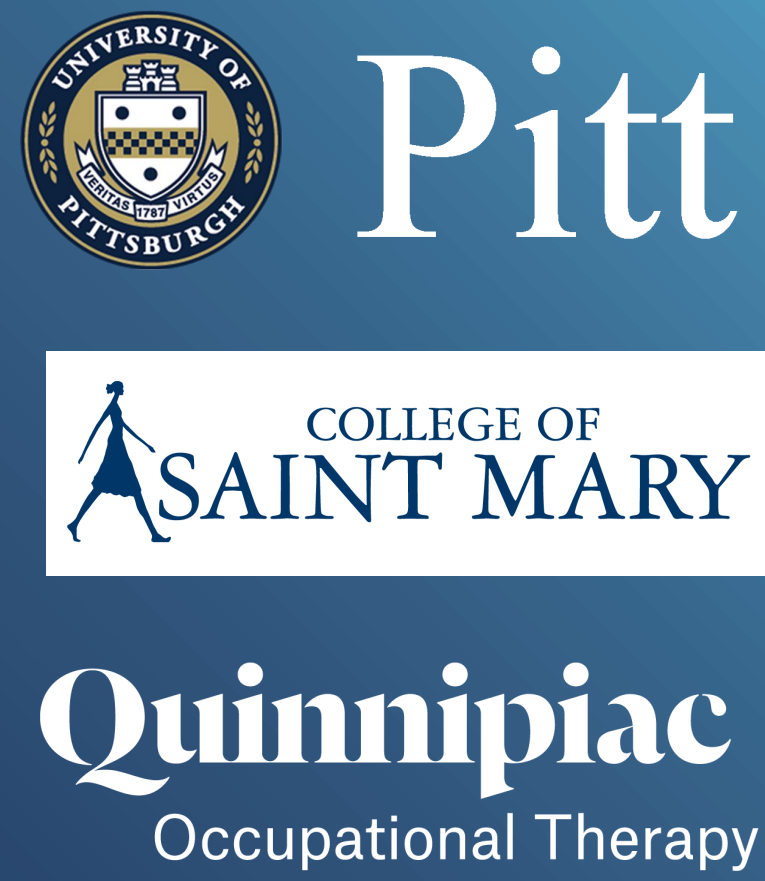




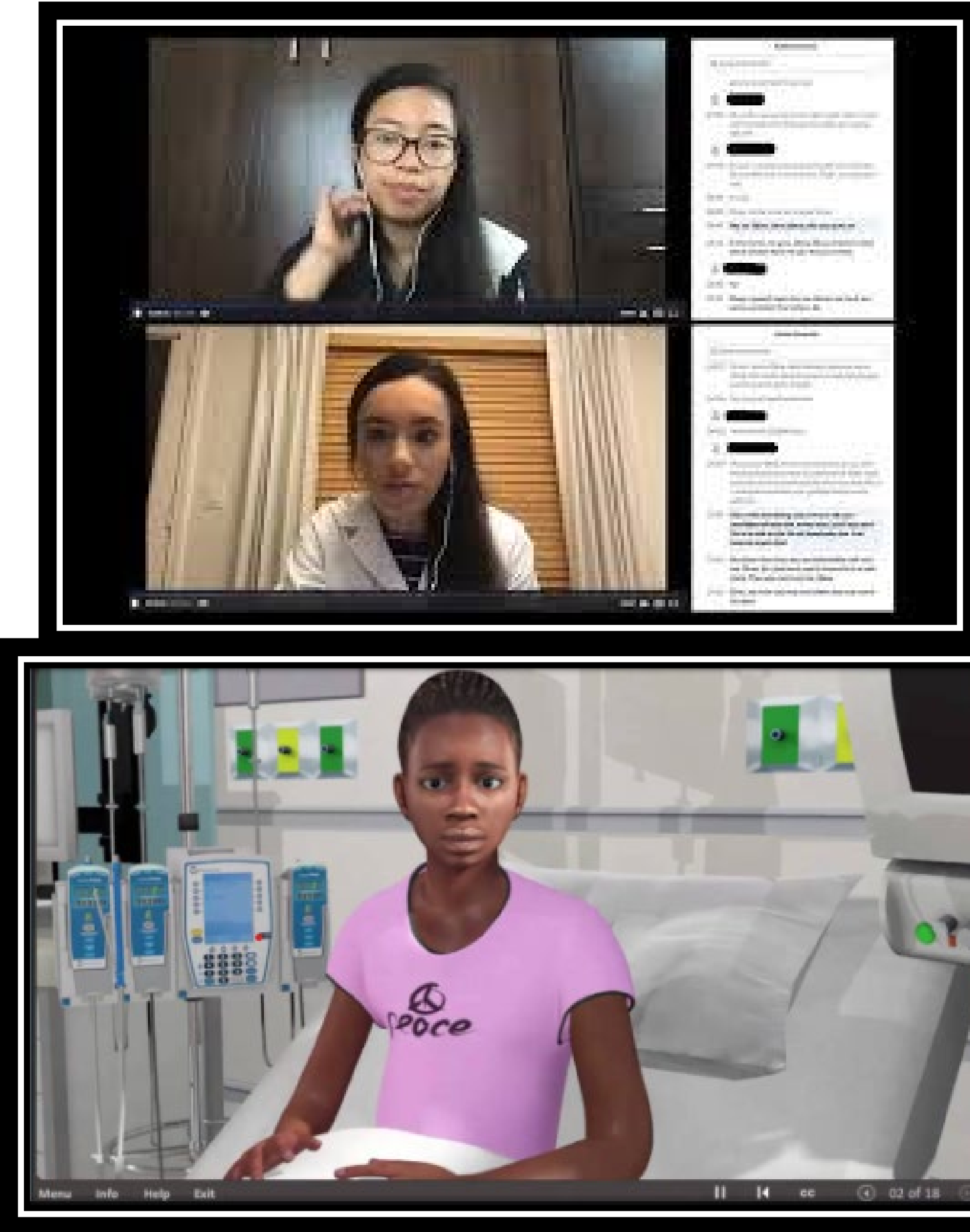
# Virtual Teaching: Simulation Best Practices

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## Background

- The systematic use of simulation can provide opportunities to practice critical and clinical reasoning, as well as technical and professional skills in a safe, low-risk environment, allowing students to adjust their response to complex scenarios consistent with clinical practice.<sup>1</sup>
- Evidence has shown that the use of virtual patients can improve clinical reasoning, procedural skills, and team skills when compared to traditional educational methodologies.<sup>2</sup>
- Virtual teaching through simulation can pose unique challenges related to the availability of resources, student volume, technology needs and funding, resulting in the need for creative implementation of best practice guidelines.<sup>3</sup>



## Virtual Simulation Teaching

Virtual simulation refers to partially immersive, screen-based experiences and is a relatively new pedagogy known to improve learning outcomes in these domains<sup>4</sup>



## Best Practice Strategies for Virtual Simulation Teaching

<b>Netiquette</b>	<i>Discuss the background captured with a webcam, distractors in the physical environment (people, animals), ability to listen and communicate effectively (headset), permission for recording, and privacy considerations.</i>
<b>Institutional/ Programmatic Policies</b>	<i>Establish policies and procedures, considering student and standardized patient safety (physical and emotional), liability insurance and coverage, privacy policies (HIPAA, FERPA), and permissions for recording.</i>
<b>Virtual Platform</b>	Consider cost, availability, <i>ease of use and access</i> for all involved in selecting of a virtual platform. <i>Consider recording, security and privacy features</i>
<b>Course/Program Integration</b>	Review the purpose and desired outcomes for virtual teaching experience; Consider curriculum, accreditation, and standards to determine the best place/fit.
<b>Preparation</b>	<i>Provide detailed learning platform instructions (chat feature, muting, recording, share screen, share video);</i> Share with students [and teaching team] <b>the learning objectives</b> , expectations, protocols and parameters Ensure <b>debriefing</b> and <b>feedback</b> occurs based on the selected model and timeframe allocated (immediate, delayed; faculty led, peer led, standardized patient led).
<b>Instructional Method/Modality</b>	Determine which modalities best meets the learning objectives: “live” standardized patient, video with authentic or standardized patient, virtual reality, avatars, video of medical equipment (ICU setting), etc.
<b>Standardized &amp; Authentic Patient/Avatar Preparation</b>	Provide a script with key statements and behavioral responses essential for student learning; Create a schedule of events as they are expected to occur and brainstorm how to respond when student goes off script; Train to use the equipment and supplies in the scenario;
<b>Resources</b>	Consider the need to monitor and troubleshoot the virtual simulation; Prepare materials, equipment, and space (virtual and real) Conduct student evaluations (feedback); facilitate and observe the sessions; Manage the students and attend to other needs associated with the virtual simulation.
<b>Assessment/Evaluation</b>	Ensure the <b>assessments are related to the learning objectives in a virtual environment</b> (Student); Use of realistic and appropriate tools based on observation skills, resources, availability and feasibility for use in a virtual environment. Provide an opportunity for students to assess overall simulation experience (i.e. SET-M) Evaluate simulation program in concert with program’s curriculum (i.e. CLECS)
<b>Documentation</b>	Consider inclusion of a supporting platform for documenting (academic learning management systems; electronic health record systems) Use a timer to practice time management

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