

Simulation Learning System with VR (SLS with VR): Facilitating a VR Simulation

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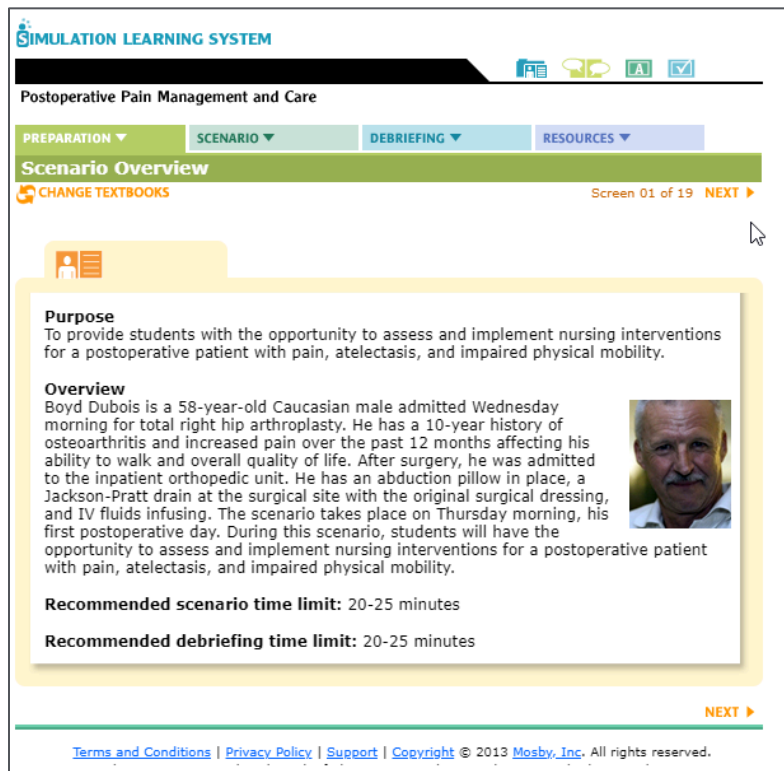
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Preparing to Facilitate or Moderate a VR Simulation

With a Simulation Learning System with Virtual Reality (SLS with VR) simulation, a key part of successfully facilitating (i.e., moderating the VR case in the SimX Moderator) is thorough preparation.

- Review the scenario beforehand, including the case description, the various patient states, dialogue options, and the critical actions.
- Use the **Dialogue Transcripts** provided in the SLS for RN with VR course on Evolve to review or print them as a reference to use while facilitating the simulation.

- Review the corresponding **Implementation Module** for a scenario/case in the Evolve course (located in the **Simulation Scenarios (Implementation)** folder):



NOTE: While each scenario's Implementation Module is currently structured for physical lab-based simulation, the Overview, Patient Report, Scenario Phase summaries, and more, largely align with its VR counterpart. This is also where you can locate specific debriefing guidance and questions.

During the Simulation

One of the most challenging tasks of the moderator is to ensure that the learners have as realistic an experience as possible by promptly responding to learners' questions and triggering animations at the appropriate times.

- Keep the Dialog tab open during most of the case, as learners can ask the patient a question at any time and a substantial gap in response is one of the most common ways to break the reality of the case.
- Check the Monitor or track Critical Actions as needed.
 - Some Critical Actions are tracked automatically, and other subjective ones need to be tracked manually. See **Introduction to the SimX Moderator** for more information.

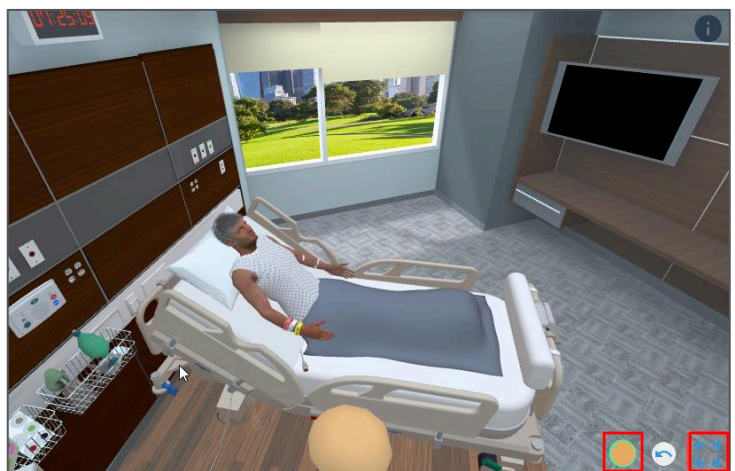
- In most cases, it may be best to keep your VR pane in the third-person view, allowing you to see the actions of all participants, switching to a first-person view only to troubleshoot.

Accommodating Observers

Since we recommend that **two students** actively participate in a VR simulation session at a time, i.e., wearing the VR headsets and providing care to the virtual patient, we recommend that other students be observers, similar to physical lab-based simulation. For example, perhaps two students act as primary and secondary nurses in VR, while two or more other students observe via a projector or TV screen.

To set this up, you will need **two laptops/computers** to run the SimX Moderator:

- One computer should be used by the moderator/facilitator of the simulation to moderate the case.
- The second computer should also run the SimX Moderator and join the same sim group (see **Start or Join a Sim Group**) but project the VR View pane in full-screen on the laptop/computer, perhaps choosing a participant view so that students can see exactly what their fellow student in VR is seeing/doing.
 - This computer can be connected to a projector/TV/monitor (via HDMI or whatever connections are appropriate for your devices) so that students can view on a larger screen rather than directly on the computer screen.
 - Display the VR View pane in full-screen by selecting the **square icon (bottom-right)**, and if desired, select the **participant view** you'd like observers to see by choosing a **participant icon**. (These are color-coded. An orange one is shown here at the bottom-right).



- If you choose to have observer students in a room separate from the VR participants, ensure the observers can hear the VR students through phone conference tools, as participant audio is not piped through the headsets at this time (only simulation audio, such as dialog, heart sounds, etc. comes through the moderator's feed of the VR view).

Simulation Session Recording


- If you would like to record the VR view of participants, SimX recommends the use of third-party screen capture and audio software to enable session recording for later review.
- If you do not have access to software, the Open Broadcast Software Project has its free **OBS Studio** at obsproject.com ↗ screen recording and broadcast software. Alternately, consider using your web conferencing tool for recording, such as Zoom or Microsoft Teams.
- In order to capture full audio, including learner speech, the sound from the physical simulation space must be piped in the Moderator computer microphone input from either a microphone mounted in the simulation space, and internet telephony application running on the Moderator computer and called into be a speakerphone in the simulation space, or another communication device picking up audio in the simulation space.

SimX Case Reports

Each time you start a scenario and select **End Case**, a report in .html format will populate on your local hard drive in your **Documents > SimX Case Reports** folder.

- Open this file in a browser (e.g., Chrome, Firefox, Edge), then use the browser's **Print/Save** options to print a copy or save it as a .pdf.
- The Case Report can be used for reference while debriefing.
- Currently the report provides
 - the time and date of when the report was generated, i.e., when **End Case** was selected,
 - scenario information,
 - the states that students entered in the simulation, associated critical actions, and how they performed,

- and a log of all the moderator actions (e.g., Dialog selections) and student actions (e.g., BP Cuff).



Scenario MED 28 - Cynthia Bennet - Urinary Tract Infection and Anaphylactic Reaction

Elsevier SLS Pilot | 10/06/2020 | 16:41 PST

Patient Data:
Cynthia Bennet
34-year-old Female

Estimated Case Time: 10-15 minutes

Primary Diagnosis: Urinary tract infection

Secondary Diagnosis: End-stage renal disease, diabetes mellitus

Simulation Challenge:
Patient being treated for a urinary tract infection experiences an anaphylactic reaction to an IV antibiotic.
Learner assesses and manages care for a patient experiencing an anaphylactic reaction to an IV antibiotic.

Scenario Skills:

- Conduct assessment
- Recognize signs and symptoms of anaphylactic reaction
- Stop IV antibiotic
- Administer supplemental oxygen
- Notify provider
- Administer SQ epinephrine
- Provide patient education and support
- Access care in EHR

Critical Actions

Initial Assessment	Worsening Anaphylaxis	Recovery
Recognize Abnormal Findings	Provides Full SBAR to Provider	Explains interventions
Recognize Anaphylaxis	Manages Husband's Emotions	Re-evaluates Patient
Stop IV Antibiotics	Administers SQ Epinephrine	Evaluates Patient Understanding
Conducts Initial Assessment	Applies NRB at 15 L/min	Provide Emotional Support
Conducts Focuses Assessment		

Timeline

○ State Transition 🔊 Dialog Item 👤 Action Completed 🟢 Critical Action

Time	Action	
00:00:00	Entered State: Introduction	○
00:01:26	Dialog: "[Nurse Gives Brief Verbal Handoff]"	🔊
00:01:59	Dismiss Handoff Nurse	👤
00:01:59	Dismiss Handoff Nurse	👤
00:01:59	Entered State: Initial Assessment	○
00:01:59	Entered State: Initial Assessment	○
00:02:09	BP Cuff	👤

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