

# SIMULATION CENTER

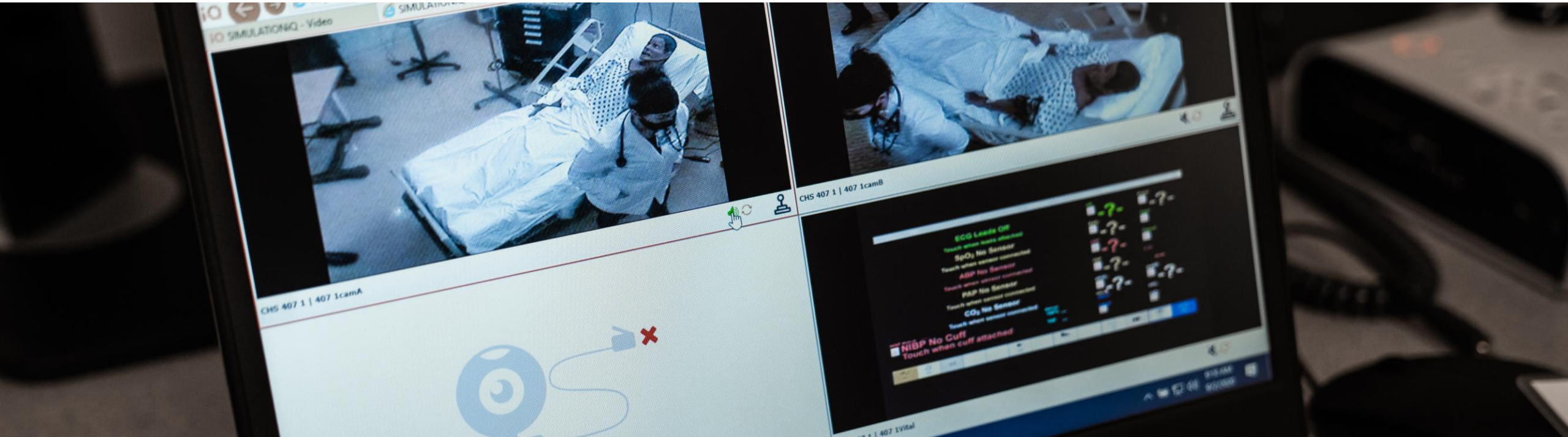
SIMULATION DELIVERY METHODS



# SELECTING THE BEST MODALITY

Selecting the most effective simulation modality should be based on:

- Learning objectives
- Complexity of the scenario
- Ensuring the safety of all participants



# SIMULATION MODALITIES



## Standardized Patients

An individual trained to portray a patient (Lioce, 2020).



## Patient Simulators

Full or partial body simulators with varying levels of function and fidelity (Lioce, 2020).



## Hybrid

Combination of two or more simulation modalities in the same simulation activity (Lioce, 2020).



## Task Trainer

A model with a part or region of the human body used to support procedural skills training (Lioce, 2020).



## SDRS

Student directed remote simulation using pre-recorded videos, images, and audio.



## Immersive Interactive

Simulate any environment and/or situation with fully interactive images, videos, and content.



## In-Person

Allows for hands-on simulation.



## Remote

Students, facilitators, and SPs connect using CAE LearningSpace off-campus synchronously.



# STANDARDIZED PATIENTS

- Standardized Patients (SPs) portray patients with many different conditions and emotional states in both inpatient and outpatient simulated settings.
- SP events offer students the opportunity to practice communication and physical assessment skills in a safe environment.
- The SP program recruits and employs children from 15 days to 17 years old to provide students with pediatric learning experiences.



# PATIENT SIMULATORS

## HIGH FIDELITY SIMULATORS

- Fourteen high fidelity patient simulators that vary in age, ethnicity, and function.
- Full body patient simulators functions include:
  - Airway management
  - Trauma responses
  - Heart, lung, and bowel sounds
- CAE Lucina (below) is a maternal/fetal training birthing simulator.

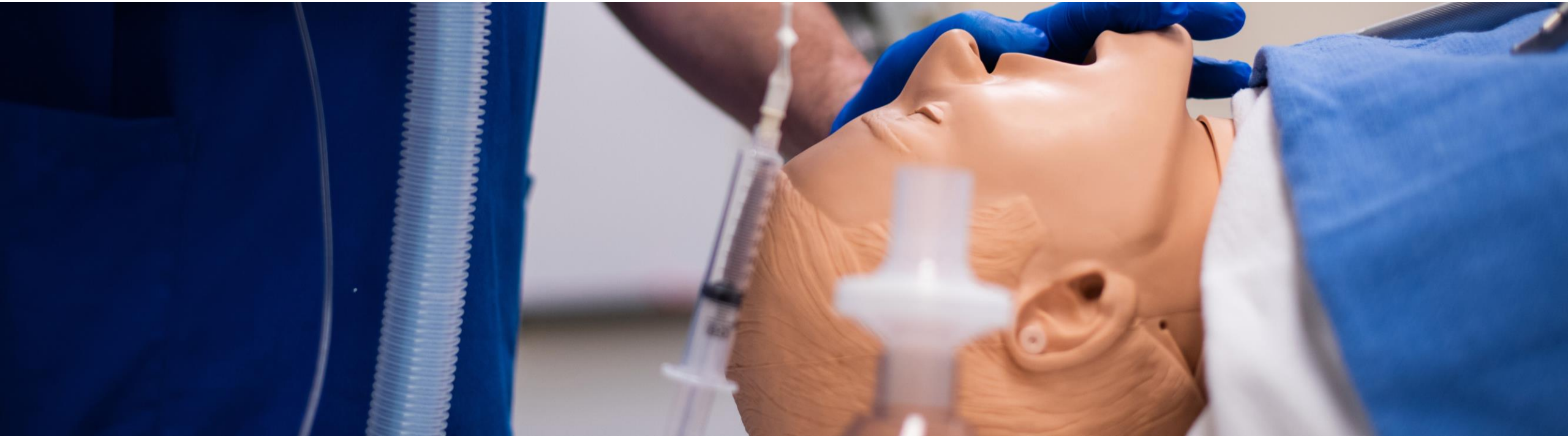




# PATIENT SIMULATORS

## MEDIUM AND LOW FIDELITY SIMULATORS

- Nineteen medium and several low fidelity patient simulators that vary in age, ethnicity, and function.
- Some full body medium fidelity patient simulators functions include:
  - Pulses
  - Heart, lung, and bowel sounds
- Ideal for head-to-toe assessments.



# HYBRID

Combination of different  
Simulation Center resources:

- Clinical Skills
- Labs
- Patient Simulators
- Standardized Patients

A variety of options based on learning  
objectives and faculty needs.

Coordination with the Sim Team to  
help plan will ensure a successful  
event.





# TASK TRAINERS

- Models of human anatomy to practice specific skills focusing on a specific task or procedure.
- Task trainers can be used in labs or used to enhance patient simulator or standardized patient scenarios creating a hybrid simulation.
- A few of the task trainers available:
  - Airway management
  - IV arms
  - Wound care
  - NG tube placement
  - Pelvic examination



# SDRS

## STUDENT DIRECTED REMOTE SIMULATION

- Students, observers, faculty, and voicers participate remotely using CAE Telemedicine, based on the Zoom platform.
- Simulations can be adapted to fit the SDRS format based on learning objectives, student level, and faculty need.
- Continuous coordination with the Sim Team and faculty will ensure a successful event.

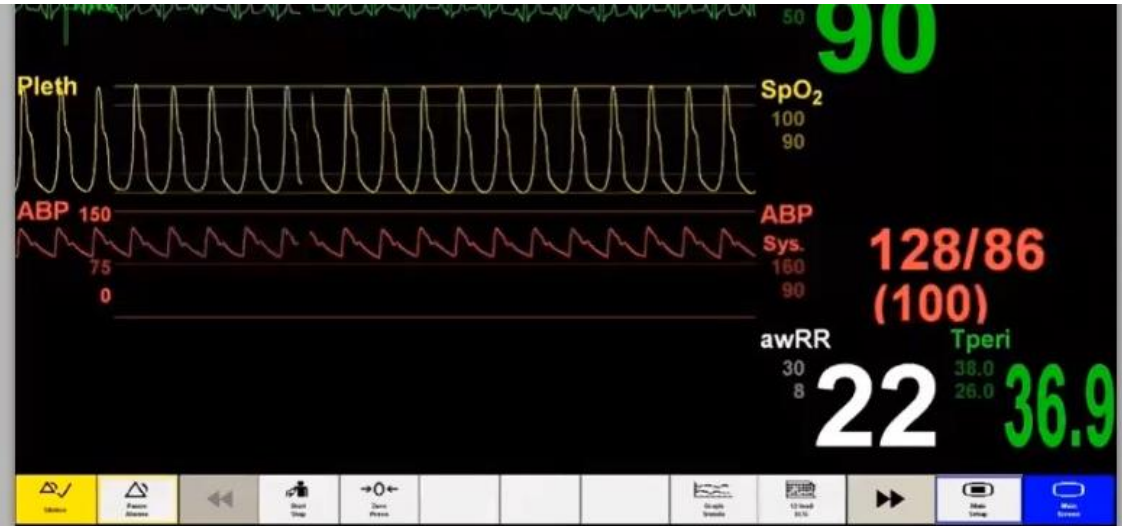


Baseline Vitals

# SDRS

## STUDENT DIRECTED REMOTE SIMULATION

- The exam room is setup according to the scenario requirements.
- Prerecorded videos with a Standardized Patient play in response to the student(s) direction.
- Roles can be adapted based on scenario and/or faculty need.



Baseline Vitals



# SDRS

## STUDENT DIRECTED REMOTE SIMULATION

- The view for all participants shows the exam room and the vitals monitor.
- The exam room view can also:
  - Show images
  - Display documents
  - Play audio – including auscultation
- The exam room and vitals monitor are both controlled by a remote Sim Team member.



# IMMERSIVE INTERACTIVE



- Students are immersed in any simulation environment.
- Fully interactive with images, videos, and content relevant to the scenario.



# IMMERSIVE INTERACTIVE



- Examples of current immersive environments:
  - Pre-Hospital Emergencies
  - Multiple Hospital Departments
  - Home Environment
  - Public Spaces
  - Outdoor Regions

Visit [immersive.co.uk](https://immersive.co.uk) for more information.

# IN-PERSON

- Students work through scenarios in the Simulation Center spaces.
- Working in-person allows students to learn new skills in a safe environment with immediate faculty feedback.
- Useful for a variety of simulation needs:
  - Hands-on labs
  - Skills drills
  - Simulations that require hands-on with manikins
  - Simulations that require in-person sessions with standardized patients





# REMOTE

## CAE Telemedicine

- Students can interact remotely with Standardized Patients using CAE Telemedicine.
- Participants can work completely remote, or students can use the Sim Center equipment to communicate with Standardized Patients working remotely.
- Observers and faculty can watch through CAE LearningSpace.
- The view for all participants shows the Standardized Patient and student interacting with the Standardized Patient.



Colin Bachinski, a student in the social work program, conducts a virtual simulation via Zoom with standardized patient Julianne Bouwens.

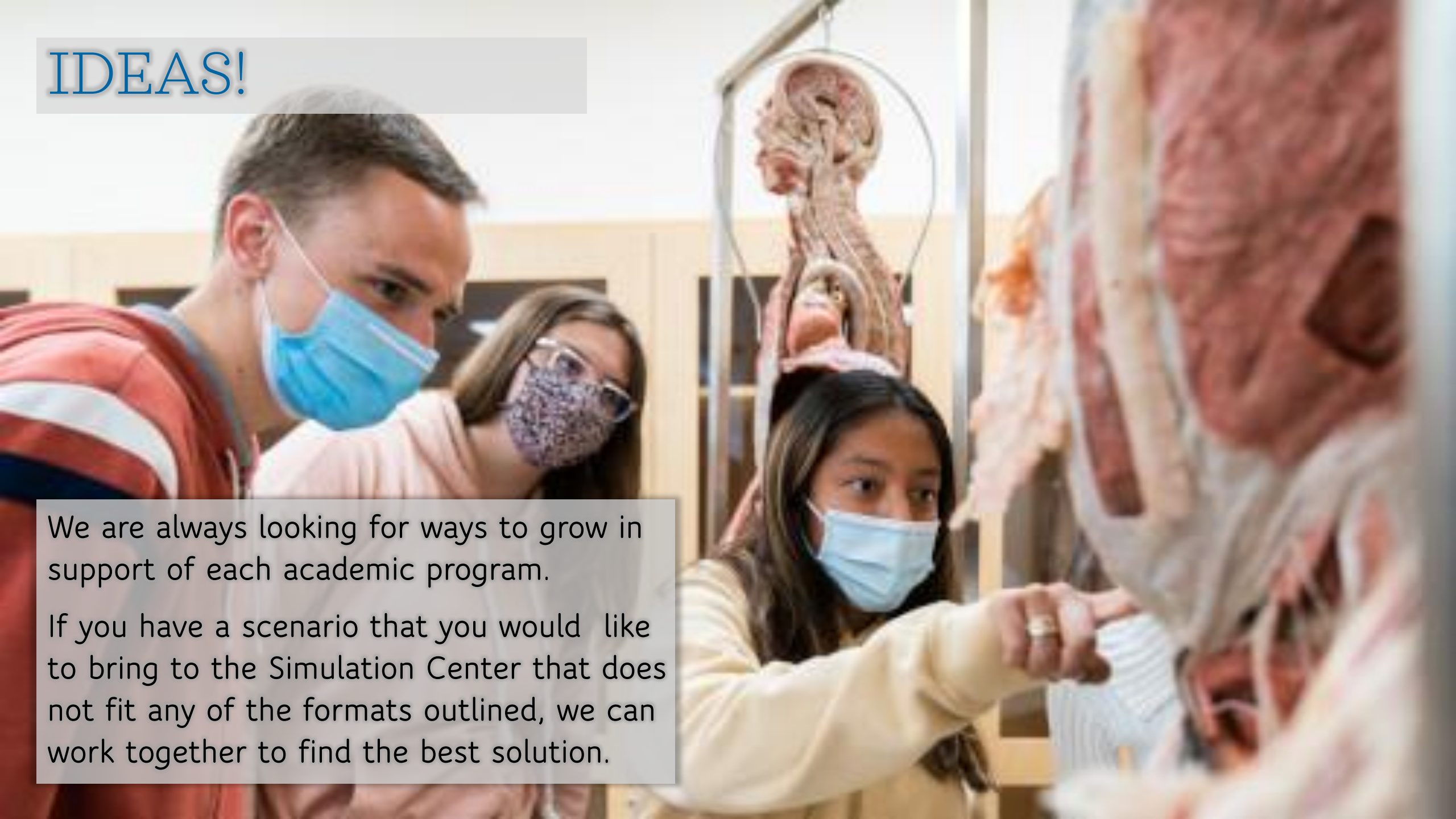
Image Credit: Valerie Wojciechowski

[GV Next Article](#)

# IDEAS!

We are always looking for ways to grow in support of each academic program.

If you have a scenario that you would like to bring to the Simulation Center that does not fit any of the formats outlined, we can work together to find the best solution.



	Standardized Patients	Patient Simulators	Hybrid	Task Trainers	SDRS	Immersive Interactive	In-Person	Remote
Adaptable Scenario Building	◆	◆	◆		◆	◆	◆	◆
Clinical Reasoning	◆	◆	◆	◆	◆	◆	◆	◆
Clinical Skills	◆	◆	★	◆	◆	◆	◆	◆
Decision Making	◆	◆	◆	◆	◆	◆	◆	◆
Examination Skills	◆	◆	★	◆	◆	◆	◆	◆
Hands-on	◆	◆	★	◆		◆	◆	
Interprofessional Teamwork	◆	◆	◆		◆	◆	◆	◆
Organization	◆	◆	◆		◆	◆	◆	◆
Patient History	◆	◆	◆		◆	◆	◆	◆
Patient Safety	◆	◆	◆	◆	◆	◆	◆	◆
Physical Examinations	◆	◆	★			★	◆	
Problem Solving	◆	◆	◆	◆	◆	◆	◆	◆
Scenario-based	◆	◆	◆		◆	◆	◆	◆
Scenario-based and Skills-based	◆	◆	◆		◆	◆	◆	◆
Skills-based	◆	◆	★	★	◆	◆	◆	◆
Telemedicine			★		◆			◆
◆ Available with this modality								
★ Can potentially adapt to use with this modality								



Contact the Simulation Center with any questions about how we can work together to help create dynamic and effective simulations for our Grand Valley students.

[simcenter@gvsu.edu](mailto:simcenter@gvsu.edu)

## GRAND VALLEY STATE UNIVERSITY SIMULATION CENTER MISSION

The mission of the Grand Valley State University Simulation Center is to promote interprofessional healthcare delivery by teaching professional competencies in a safe and interactive learning environment. This is accomplished by the application of existing and evolving best practices, pedagogies, and technologies.

