DEI and Immersive Technologies in Nursing:

Enhancing Simulation Solutions for Learners and Faculty

Speakers:

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Laerdal Medical

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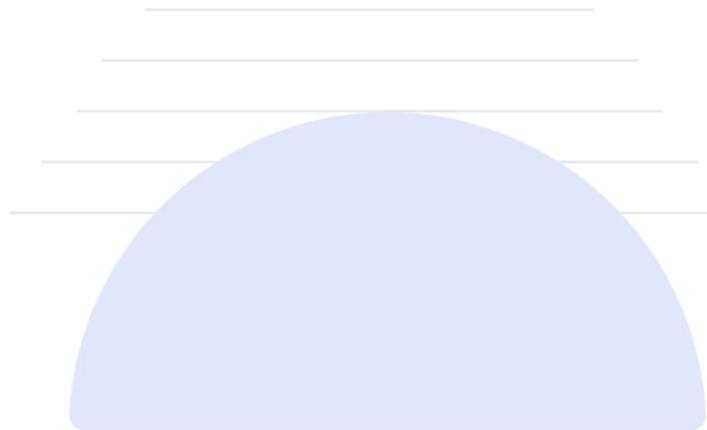
Our suite of simulation solutions:

- Allow for multiple and frequent opportunities for learners to demonstrate and assess their progression to competence with diverse, equitable, and inclusive (DEI) products and solutions.

- Can help programs engage in various experiential learning activities through Laerdal's immersive technology-focused solutions.

- Demonstrates the importance of utilizing data-driven insights for understanding learners' opportunities and strengths.

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Competencies in Nursing Education

35% > 23% > 9%

Kavanagh & Sharpnack, 2021

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![California Community Colleges]

Request for Applications (RFA)

California Community Colleges Chancellor's Office
Rebuilding Nursing Infrastructure Grant

WORKFORCE AND ECONOMIC DEVELOPMENT DIVISION
Equitable Student Learning, Experience, and Impact Office

Funding Years	**Fiscal Year 2024-25**
Release Date	November 15, 2024
Application Deadline	Applications must be received January 31, 2025, at 11:59 p.m. in NOVA
Funding Source	Rebuilding Nursing Infrastructure Grant Program (Strong Workforce Program)
	A competitive grant of up to $2,000,000 per California community college
Total Available funds	$57,000,000
Expected Grant Term	July 1, 2025 – June 30, 2027

1) Develop strategies for recruiting, retaining and training high quality faculty
2) Develop strategies for engaging and retaining nursing students
3) Purchasing new equipment
4) Developing or scaling efforts that lead to additional clinical placements

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(7) Purchasing equipment for nursing education programs.

(5) Developing strategies for engaging and retaining nursing students, including, but not limited to, the integration of high-impact and diversity-, equity-, and inclusion-focused curriculum, the development of apprenticeship opportunities, and the expansion of student support services including basic needs assistance, mental health support, case management, counseling services, and specialized tutoring.

Statement of Need: To meet the expectations of today's learners, nursing needs to provide students with more flexibility in when and where they practice and learn

Modular Skills Trainer

SimCapture for Skills

NextGen vSim

Modular Skills Trainer
Self-directed and Peer-to-Peer Skills Practice

Practice over 15 different skills in 1 task trainer:

NG Tube insertion	Ostomy Care
Wound Care	Urinary Cath & Enema
Tracheostomy Care	Injections
Central Line Dressing Change	IV Placement
Suppositories	Perineal Care
Oxygen Therapy	Nasal Swab
G-tube Care	

Building Fundamental Skills
with SimCapture for Skills

Peer-to-Peer Practice

Self-Record

Sessions Completed

Total Skills Practiced

Average Score

Observe a Peer

Your Course List (1)

Peer-to-peer   Self-record

NURS 110: Nursing Fundamentals - Core Competencies   3/3 | 91%

Airway Suctioning - Self Assessment
Attempts: 1 | Last Score: 92/100

Airway Suctioning - Peer Assessment
Attempts: 1 | Last Score: 86/100

Airway Skills Lab - Group Assessment
Attempts: 1 | Last Score: 96/100

Tracheostomy Care - Self Recording DUE MONDAY
Attempt 1

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Building Fundamental Skills
with SimCapture for Skills

< Back

1 Oxygen Administration P2P -...

👥 2 People   📊 0%

OVERVIEW

Utilizing the LDS and MST solution, participants will practice the skills of Oxygen Administration using Peer to Peer evaluations.

LEARNING OBJECTIVES

The participant will demonstrate Safety precautions.

Therapeutic Communications. Oxygen Administration. Assessment, and Documentation.

Practice

Learner: Student One
Skill Performance

| 00:08 | 0/10 Item(s) Completed |

Completes hand hygiene and Identifies patient

❓ Required

○ Completed

○ Incomplete

○ Needed a Reminder

Submit Checklist

Learner: Student One
Session Feedback

Overall

Done   ✅ 7 ⌄

Missed   🟠 3 ⌄

View Score

< Your Score

70/100

| 04/01/2024 | 0m 19s |

Total Attempts: 3 | Previous High Score: 80/100

Score Breakdown

Skill Performance   70/100 ›

Score by Question Category

QSEN- Safety   20/30 ›

QSEN- Patient-Centered Care   20/20 ›

QSEN- Evidence-Based Practice (EBP)   20/20 ›

Nursing Education Modules

- Fundamentals
- MedSurg
- Maternity
- Pediatrics
- M&P Combo
- Pharmacology
- Advanced MedSurg Critical Care (New Module)
- Mental Health
- Health Assessment

NextGen vSim for Nursing

How vSim Supports CBE Principles:

- Self-directed learning
- Individualized learner feedback
- Multiple opportunities to practice
- Multiple contexts of care
- Deliberate practice

More Realistic Communication Between Patient and Nurse

Feedback Log

Panel 1 (Overview)

Overview
Tips for improvement
Simulation feedback
SBAR feedback

Simulation score
Simulation time 25:53 min

86%

Error Breakdown
1	Very critical	✗ ✗ ✗
1	Critical	✗ ✗ ✗
4	Important	✗ ✗ ✗

SBAR score
SBAR handover time 00:37 min

94%

Category Breakdown
75%	Situation
100%	Background
100%	Assessment
100%	Recomendation

Panel 2 (Tips for improvement)

Overview
Tips for improvement
Simulation feedback
SBAR feedback

Tips for improvement

✗ ✗ ✗ Remember to ask the patient about allergies before administering drugs.

✗ ✗ ✗ You should reassess the patient's breathing at this point.

✗ ✗ ✗ You administered 5 mg of hydralazine IV. The drug was administered earlier. The maximum total dose is 5.0 mg. You should have used the basic rights of medication administration to avoid improper use of drugs.

✗ ✗ ✗ You should have examined the patient's arms.

✗ ✗ ✗ You should have examined the patient's chest.

Panel 3 (Simulation feedback)

Overview
Tips for improvement
Simulation feedback
SBAR feedback

Simulation feedback

✓ You reviewed the provider's orders in the EHR.

✓ 01:53 You attached the pulse oximeter. This was indicated by order.

01:56 Patient status - Heart rate: 101. Pulse: Present. Blood pressure: 165/99 mm Hg. Respiration: 19. Conscious state: Appropriate. SpO2: 98%. Temp: 98.6 °F (37.0 °C). EFM: Occasional acceleration. Fetal heart rate: 160.

02:06 Patient status - Heart rate: 101. Pulse: Present. Blood pressure: 169/101 mm Hg. Respiration: 19. Conscious state: Appropriate. SpO2: 98%. Temp: 98.6 °F (37.0 °C). EFM: Baseline. Fetal heart rate: 155.

✓ 02:09 You administered 4 mg of ondansetron IV. It is important to use the basic rights of medication administration to ensure proper drug therapy. You should consider administering this drug slowly. This was indicated by order.

✗ ✗ ✗ Remember to ask the patient about allergies before administering drugs.

✓ 02:26 You assessed the respiration. She is breathing at 19 breaths per minute. The chest is moving equally.

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(8) Developing or scaling efforts that lead to additional clinical placements for nursing students

Statement of Need: Ensuring students have multiple experiences to care for patients with a variety of conditions.

vrClinicals for Nursing

Patient Simulators

Nursing Anne
Simulator
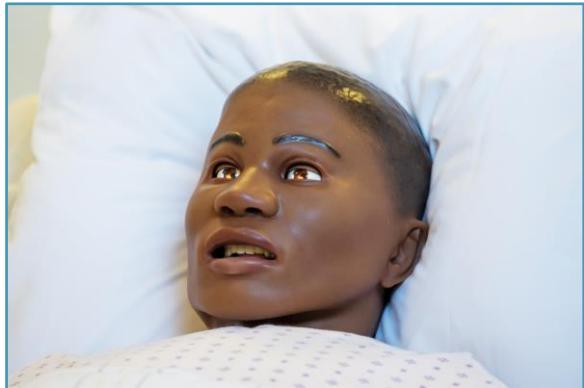
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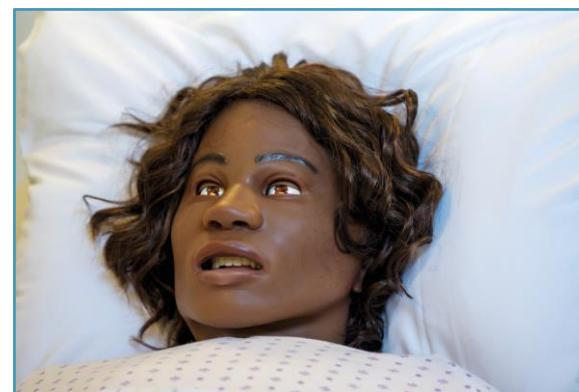
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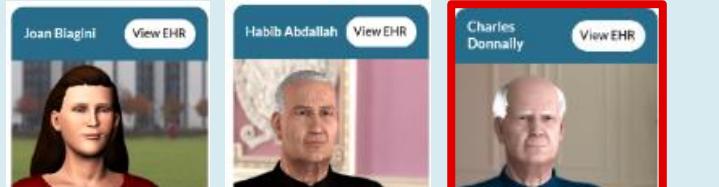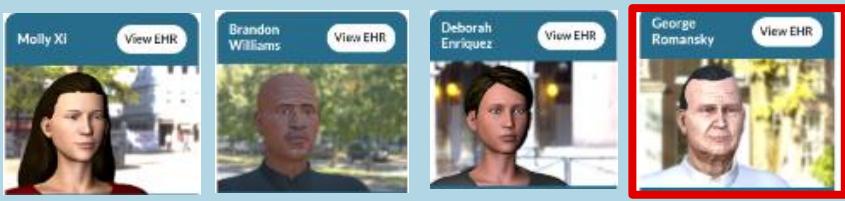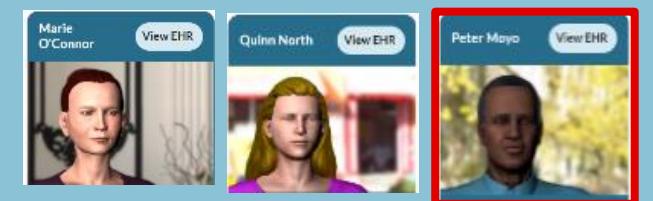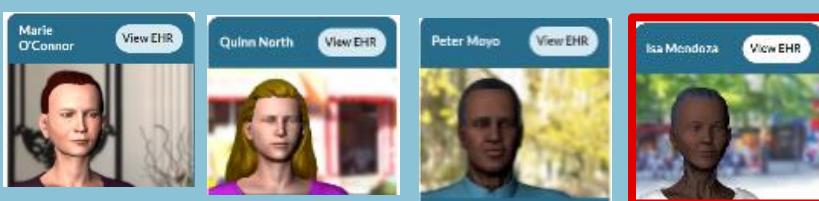
vrClinicals for Nursing

The immersive clinical placement experience

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Wolters Kluwer

National League for Nursing

vrClinicals for Nursing Patients

vrClinicals for Nursing Flow

Users can experience several rounds of Virtual Reality with screen-based activities
to reflect, react, and provide rationale

LEARNER EXPERIENCE

Prioritization	Simulation	Reflection				Debriefing
Review SBARs and EHRs Create plan of care Prioritize Patients (Pre-Sim)	Assess Patients Intervene Prioritize Patients (In-Sim)	Break	Guided Reflection Questions	Pre-Sim Prioritization Score and Feedback	In-Sim Prioritization Score and Feedback	Synchronous debrief with Educator

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vrClinicals for Nursing

- Prioritization Scores – Pre, During, and Post Simulation

- Overview of Critical Actions Performed and Missed

- Reflection Question Review for Debriefing of VR experiences

- Recommended Prioritization

- Gradebook scoring for faculty and students

Reflection Questions and Answers

Before starting the VR simulation, this was your initial horizontal prioritization and rationale:

How are you feeling after finishing your simulation in VR?

I feel OK about the care that I provided.

What (if any) aspects of the overall simulation experience challenged you the most? Why?

Receiving interruptions and having to re-prioritize my care and tasks was difficult.

While in the session, you experienced requests from one or more of the patients. Which situations do you recall? Which ones challenged you the most? – How did this impact your prioritization and why?

vrClinicals for Nursing

Recommended Sim Prioritization at Interruptions

This is how we would recommend prioritizing the patients during interruptions in your care. Multiple approaches exist, so review our recommendation and compare it to your own rationale, and discuss it with your instructor.

Managing multiple patients involves deciding the order of care and which treatments to prioritize per patient. Identifying urgent actions can guide you when to transition between patients, allowing simultaneous handling of multiple cases.

🕐 **Joan has abdominal pain**

Despite having initial patient priorities, it is essential to reassess as new information becomes available. The bullet points below outline the thought process during such a moment of reassessment.

Interruption
The call light was activated by Joan Biagini in room 24, who reported experiencing abdominal pain.

Reassessment
Upon receiving new information about Joan Biagini's

Sim Prioritization Score

Your score: ⭐ ☆ ☆

This score shows how well your in-sim prioritization decisions match our recommended prioritization for the patients through the scenario.
The score considers the display and understanding of:

- Patient priority levels compared to one another as they unfold and interruptions occur
- Critical actions needed to manage priority levels across multiple patients
- Correct nursing practices in the care of individual patients

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Overview of Performed and Missed Critical Actions

This is a list of all expected Critical Actions for each patient, displaying which ones you performed and which ones you missed.

- ✓ Attach the blood pressure cuff.
- ✓ Attach the pulse oximeter.
- ✗ Check the pulse rate.
- ✓ Measure the temperature.
- ✓ Examine the patient's chest.
- ✗ Auscultate the heart.
- ✗ Examine the patient's arms or legs.
- ✓ Examine the patient's abdomen and pelvis.
- ✗ Auscultate the patient's abdomen.
- ✗ Ask if the patient has any nausea or vomiting.
- ✗ Ask if the patient had experienced any diarrhea today
- ✓ Assess the patient's pain.
- ✓ Assess the patient's IV site.

Habib Abdallah

Beginner - 2 Patient - Part 1			
SIMULATION:Beginner - 2 Patient - Par...	Setting Up:vrClinicals Video Tutorial	Starting the App:vrClinicals Video Tuto...	Moving Arour
Due: Aug 21, 2024	Due: Aug 20, 2024	Due: Aug 20, 2024	D
57% ⚠	✓	✓	
64% ⚠	✓	✓	
55% ⚠	✓	✓	
65% ⚠	✓	✓	
77%	✓	✓	
0 ⚠	✓	✓	
61% ⚠	✓	✓	
42% ⚠	✓	✓	
55.3%	-	-	

3) Develop strategies for recruiting, retaining, and training high-quality nursing faculty, including, but not limited to, offering incentives, including stipends and flexible working hours, to recruit and retain nursing faculty, and by **providing professional development opportunities**.

Statement of Need: Faculty need training not only in operating teaching technologies but also in best practice for integrating simulation across the curriculum to improve student outcomes

Laerdal Educational Services

Faculty Development

NEW! Simulating for Equitable Health Outcomes

This course has been designed to showcase how diversity training can be tied into all aspects of simulation-based learning. Our Simulating for Equitable Health Outcomes course is an immersive training session that can be delivered to all areas of your organization.

New! CORE Debriefing

The CORE Debriefing workshop is a blended learning course, which comprises a one-day teaching session that can be delivered live at your site or virtually and is coupled with a complementary eCourse.

Getting Started Courses

Learn the basics of your simulator, including startup and shut down procedures, how to run basic scenarios, patient monitor and instructor device operations, operating modes, and other useful system features.

Software Courses

Learn more about the SimPad or LLEAP Learning Applications and how to start using your SimPad or LLEAP simulator system in your education.

Teaching with Scenarios

Learn how to prepare for a simulation, practice facilitating a simulation, and an introduction to best practices for debriefing.

Scenario Programming

Learn to design your own scenarios using Laerdal's SimDesigner application. Basic and Advanced courses enable you to use the Laerdal SimDesigner worksheet to construct scenarios relevant to your learning objectives.

Our professional team helps simulation faculty and staff get the most out of their training program

Laerdal's Educational Services Solutions are:

•Designed for instructors, administrators, operators and technicians

•Geared toward all levels of practitioners, from beginner to advanced

•Available through onsite sessions, live online sessions or eLearning courses

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Grant Opportunity	Proposed Need	Laerdal Solutions
(7) Purchasing equipment for nursing education programs.	Updated technology to meet outcomes and practice partner needs	Laerdal Nursing Solutions must be tied to projects
(5) Developing strategies for engaging and retaining nursing students…	To meet the expectations of today's learners, nursing needs to provide students with more flexibility in when and where they practice and learn	MST SimCapture for Skills NextGen vSim
(8) Developing or scaling efforts that lead to additional clinical placements for nursing students	Ensuring students have multiple experiences to care for patients with a variety of conditions.	vrClinicals Patient Simulators
3) Develop strategies for recruiting, retaining, and training high-quality nursing faculty… **providing professional development opportunities**.	Faculty need training not only in operating teaching technologies but also in best practice for integrating simulation across the curriculum to improve student outcomes	Laerdal Educational Services

Q&A

Thank you and please reach out to your Territory Manager for more information!

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