VR Simulations Improve Maternal Outcomes

RELIAS

PRESENTERS

John Harrington, CMI | VP Clinical Solutions

Lora Sparkman, MHA, RN, BSN | Partner, Clinical Solutions

Laura Bond | Strategic Alliances Manager

Introductions

Strategic Alliances

Blended Learning

Simulation Evolved and Overview

VR as one of the newest modalities

Q&A

Relias and Health Scholars Partnership Extends Blended Learning

RELIAS

Best-in-class Obstetrics performance solution

Healthcare industry expertise and consulting

HEALTH SCHOLARS

Best-in-class VR sim development for healthcare education

Industry expertise in VR tech applications and healthcare

CUSTOMER BENEFITS

Provides a multi-modal blended learning approach for increased engagement and applied knowledge in perinatal patient safety

- Test critical thinking, fluid reasoning and response under pressure in addition to knowledge

- Receive immediate feedback – simulation is voice command and response

- Learn from mistakes in a safe environment including individualized session coaching and reports

Simulations Have Evolved

Simulation has a long history in medical education for physicians and nurses.

- Ancient clay and stone models have been found across the world and were used to demonstrate clinical features of various diseases

- A more modern simulator was developed in Paris that was modeled from a deceased mother and neonate to teach midwives delivery techniques in the 1700s.

- The use of dead animals were used in surgery technique and improvements

- In the 1960s the idea of creating a mannequin to conduct chest compressions and breathing evolved to a toy maker creating the first Resusci-Anne® ""

- In 1968, Harvey® was created by a cardiologist to replicate any heart condition to teach cardiac assessment skills.

- "Task" and "diagnostic" were mainstream for medical education and evolved to be more lifelike over time.

- In the 80's and 90's, as the capabilities of computers evolved, new technologies such as virtual reality, augmented reality, and mixed reality have been incorporated into simulation.

Postgrad Med J. 2008; 84: 563–570.

Simulation Overview

- Simulation offers the clinical staff with unique learning opportunities to improve communication and teamwork

- Learning experiences within medical simulation can be customized to accommodate a wide range of learners from novice to expert.

- Medical simulation provides freedom to make and learn from mistakes.

- Medical simulation provides improved opportunities for feedback and evaluation.

Low fidelity Simulation Train the Trainer Model

Virtual Reality

In a recent study, VR simulations were found to be an effective tool for upskilling and developing highly sought-after soft skills.

Specifically, the study found that:

- VR learners completed training four times faster than classroom learners, and one-and-a-half times faster than e-learners.

- Those who use VR simulations were 275 percent more confident to act on what they learned after training.

- VR learners were 3.75 times more emotionally connected and engaged to their content than classroom learners.

Benefits to VR Simulation

• Immersive and Engaging Learning Experiences

• Safe, Risk-Free Environment

• Data Collection and Reporting

• Asynchronous training is more convenient

• VR Simulation training is more cost effective

Assessment-Driven Education and Analytics Platform
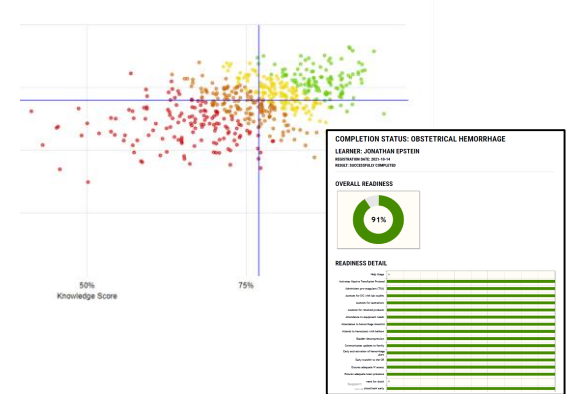## *Reinforced with Health Scholars VR*
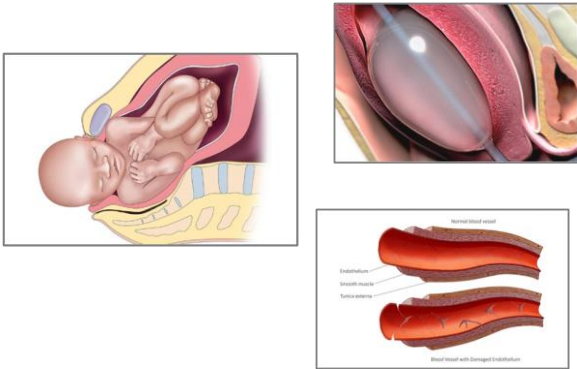
RELIAS OB SOLUTION

Assessment-based personalized learning path

HEALTH SCHOLARS

- Reinforce knowledge in specific emergency scenarios
- Promote better retention of information
- Meet simulation requirements*

BETTER OUTCOMES

Identify improvement areas for individual clinicians and groups

RELIAS

VR simulations for clinicians to practice protocol-based care scenarios and hone critical skills including Teamwork, Communication, Critical-thinking, and Decision-making.

Immersive   Scalable   Measurable

High Risk OB Sims

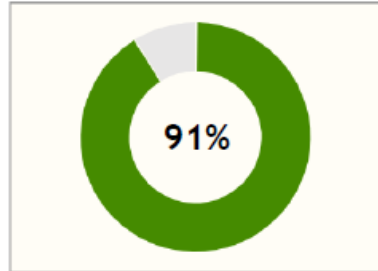| Labor & Delivery Scenario Name	Duration	Overview/Objective
1. Obstetric Hemorrhage	15-25 mins	• Identify/manage the first 3 stages of Obstetric Hemorrhage in accordance with ACOG/CMQCC.

2. Obstetric Emergencies:
  a. Maternal Code
  b. Hypertensive Crisis
  c. Maternal Sepsis
	8-10 mins (each)	• Maternal Code: Identify/manage an obstetric patient that has decompensated and is in cardiac arrest.
		• Hypertensive Crisis: Identify and manage a hypertensive patient that leads to an eclamptic seizure.
		• Maternal sepsis: Recognize and manage an obstetric patient in sepsis including the administration of broad-spectrum antibiotics.

3. Shoulder Dystocia	8-10 mins	• Manage births and complications associated with the presentation of shoulder dystocia.

COMPLETION STATUS: OBSTETRICAL HEMORRHAGE

LEARNER: JONATHAN EPSTEIN

REGISTRATION DATE: 2021-10-14
RESULT: SUCCESSFULLY COMPLETED

OVERALL READINESS

91%

READINESS DETAIL

	0
Help Usage	
Activates Massive Transfusion Protocol	
Administers pro-coagulant (TXA)	
Assesses for DIC with lab studies	
Assesses for lacerations	
Assesses for retained products	
Attendance to equipment needs	
Attendance to hemorrhage checklist	
Attends to hemostasis with balloon	
Bladder decompression	
Communicates updates to family	
Early activativation of hemorrhage alert	
Early transfer to the OR	
Ensures adequate IV access	
Ensures adequate team presence	
ment for shock	0
Support plood bank early	

Reporting

A learner is provided a Readiness Report and score for each VR scenario along with an in-app debrief to review opportunities to improve and areas of focus.

Obstetric Hemorrhage Video Excerpt

Obstetric Hemorrhage

- Voice Controlled
- Configurable based on CMQCC and ACOG Guidelines
- 15-25 minutes to complete

Objectives

- Demonstrate effective teamwork and communication.
- Demonstrate timely and accurate intervention.
- Demonstrate the effective use of a checklist or protocol.
- In accordance with ACOG and CMQCC guidelines.

Obstetric Emergencies

1. Maternal Code (8-10 min)

2. Hypertension (8-10 min)

3. Sepsis (8-10 min)

Objectives

- Instruct team members on how to perform effective chest compressions during cardiopulmonary resuscitation and recognize when they are not being performed properly.

- Recognize the need to properly position the patient and bed to perform high-quality CPR.

- Ensure supportive airway management of the patient in cardiac arrest.

- Instruct team members to perform manual left uterine displacement during cardiopulmonary resuscitation and when to perform it.

- Initiate timely perimortem cesarean section within 4 minutes of recognized cardiac arrest and delivery of baby by 5 minutes.

- Communicate effectively with a multidisciplinary team of anesthesiologists, obstetricians and nurses during patient management.

Shoulder Dystocia

- Voice Controlled

- 8-10 minutes to complete

Objectives

- Demonstrate early recognition and communication of diagnosis of shoulder dystocia.

- Demonstrate appropriate order and correct use of maneuvers to resolve shoulder dystocia (ALARMER or HELPERR).

- Recognize and demonstrate the correct procedure for McRoberts's maneuver.

- Recognize and demonstrate the correct procedure for suprapubic pressure.

- Recognize and demonstrate the correct procedure for Wood's corkscrew maneuver.

- Recognize and demonstrate the correct procedure for delivery of posterior arm maneuver.

- Recognize and demonstrate the correct procedure for delivering the baby on hands and knee.

Questions?

Please use the Q&A widget to submit questions.

THANK YOU