Augmented Reality for Medical Education

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Disclosures

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Society for Simulation in Healthcare
International Nursing Assoc. for Clinical Simulation & Learning
Sigma Theta Tau
Association Medical Educators Europe
International Association of Medical Science Educators
Objectives

• Participants will be able to define Augmented Reality or AR

• Participants will be able to identify variables that exist within the paradigm of AR that alter user perception of the real world

• Participants will be introduced pedagogy that supports real-time learning that is complimentary to traditional bricks & mortar and mannikin-based simulation

Augmented Reality

Augmented Reality (AR) supplements the real-world such that actual objects existing in the real-world appear to coexist with virtual objects, computer generated images or artifacts that are representations of actual objects.

In Short: Augment the real world with virtual objects

Is AR a Good Fit for your Curriculum

Effective

Efficient

Appealing

Proper Fit

Effective

Efficient

Appealing

Adoption of AR for Medical and Clinical Education:
Where are we now...

A

B

C

ABOUT US

Refers to a good or service being offered by a company ideally a product

Introducing

Refers to a good or service being offered by a company ideally a product

Mature

Refers to a good or service being offered by a company ideally a product

https://en.wikipedia.org/wiki/Hype_cycle
Adoption of AR for Medical and Clinical Education:
Where are we now...

From remote surgery to X-ray vision, doctors are showing other industries how to use AR/VR

November 30, 2018

Combination of AR/VR is know as Extended Reality (XR)
Collapses distance between information, people and experiences
particularly useful for education
- Immersive Streaming Education
- Potential for increased retention

Clinical uses:
- Heads-Up-Display during surgical and invasive procedures leveraging DICOM data

FDA approval of first Microsoft HoloLens augmented reality system for surgical use

October 18, 2018

FDA approval of OpenSight Augmented Reality System

Adoption of AR for Medical and Clinical Education: Autonomous Intelligent Mentoring (AIM) – Endotracheal Intubation

Geoffrey Miller, MS & Andrew Cross
Research Scientist at Medical Modeling and Simulation Innovation Center (MMSIC), TATRC, US Army MRMC
Eastern Virginia School of Medicine

Institute of Medicine/Society for Simulation in Healthcare Leading Innovator Award
Forum on Innovation in Health Professional Education Workshop

Adoption of AR for Medical and Clinical Education: Anesthesia Specific Lit Review


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