Virtual Reality: A Health Professions Education Platform to Enhance Empathy and Knowledge

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What is Virtual Reality?
- A believable, interactive 3D computer-created world that you can fully explore...
- You feel you really are there; both emotionally and physically.

History

Carrie Shaw & Mom

Carrie Shaw, founder of Embodied Labs, became a caregiver when she was 19 when her mom was diagnosed with Early-Onset Alzheimer's disease. Today Carrie and her team are tackling a question inspired by her mom's illness: If healthcare providers in training could step into the perspectives of the patient and other members of the care team, would this make them more effective providers?

Why Virtual Reality?

Embodied Learning allows viewer to:
- Speed up the learning process
- Go inside and outside the body
- Visit unique perspectives
- Trick their brain into living "real experiences"
The Impetus for our Project

May 2016

NNLM NER Grant
nnlm.gov/ner

National Network of Libraries of Medicine, New England Region

Mission:
• To support health professionals with equal access to biomedical information & improve public's access to info to make informed decisions about health care
• Outreach to libraries, health professionals, consumers
• Fund outreach awards for groups to help them accomplish their mission
• Apply for funding - FMI see Funding tab on their website

What We Needed

Each VR station has:
• VR-ready Laptop (Alienware)
• Motion sensor (LeapMotion)
• VR headset (Oculus Rift)
• Pelican case for transport
• Embodied Labs site license
And...

Space to set this up...

Why Empathy?

Having empathy means better:
★ Patient outcomes
★ Treatment adherence
★ Physician health and satisfaction
★ Fewer malpractice complaints
AND....
It's TEACHABLE!
Mandatory for all UNE COM Medical Students (PA, DPT, Nursing, Sociology of Aging, etc)

Quick but impactful

Pre-test & Post-test measures

4 computer stations at J. S. Ketchum Library

3 stations at J. S. Abplanalp Library

UNE leads student VR use worldwide

The Alfred Lab: Macular Degeneration and Hearing Loss

FIRST EMBODIED VR EXPERIENCE

The Alfred Lab
- Macular Degeneration 3D VR film
- Orientation for seniors
- Home on your own
- VR headset

Who is Alfred?
- 75 year old goldόn
- Advanced mobility impairment
- High frequency hearing loss

Beatriz Lab

Dementia Progression

- Beatriz is a middle age Latina woman
- Early Stage
- Middle Stage
- Late Stage

Clay Lab

End of Life

- Clay is a 66 y/o male veteran with stage IV incurable lung cancer.
- Receiving a Terminal Diagnosis
- Transitioning to home hospice
- Last Days

Created from a 48 Hour Hospice Home Immersion by Embodied Labs
Dima Lab
Lewy Body Dementia & Parkinson's Disease

Part 1 - "A Changing Brain & Body"
Part 2 - "Managing Care Decisions"
Part 3 - "From Home to Community Care"

Upcoming Labs

- **Eden Lab** (Fall 2019)
  - LGBT health and home care
  - Working with SAGE Maine and leaders in LBGT health to design this Lab

Clay Lab
What people are saying...

"Before I did not know much about hospice care, but I now have a much more positive outlook on it."
UNE Medical Student

"I felt emotionally involved from the start. It gave me good perspective on the last few days to hours of life."
UNE Medical Student
After completing Clay, learners report:

- ✓ 34% less fear
- ✓ 34% more peacefulness
- ✓ 36% feel less helpless
- ✓ 18% more empowerment
- ✓ 9% less sadness

Results on Clay Lab…

Preliminary Results

Alfred Lab

- Learning was broad and significant...
- 92% reported increased empathy
- 88% reported increased learning about macular degeneration
- 89% reported increased learning about hearing loss.

Students’ Representative Comments ~ Alfred Lab

- This was definitely a unique experience - I had no idea that sensory deficits of this proportion were actually fairly common in the aging population, and it has really opened my eyes to what older individuals may be going through.
- This experience was truly eye-opening and I thoroughly enjoyed it.
- We’re all, for the most part, healthy and capable 20somethings with no sense of what it means to have macular degeneration or any other type of serious degenerative illness. I don’t think this experience necessarily gives us the perfect foundation but what could? It’s a great first step!
- I loved this experience because I think it’s an incredible step forward to incorporating technology into our curriculum and creating a fundamental understanding of some of the symptoms our patients may be experiencing.

Resources
Questions & Thank you!

Embodied Labs for their creativity in designing this project and their support throughout

UNE IT Staff
Library Staff and Student Workers

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