


Virtual Reality:

A Health Professions Education Platform to Enhance Empathy and Knowledge

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What is Virtual Reality?

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



History





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:

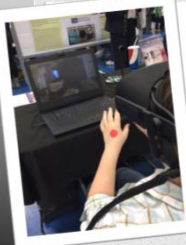
If healthcare providers in training could step into the perspectives of the patient and other members of the care team, **would this make them more effective providers?**

Carrie Shaw & Mom

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



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!




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- 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

- Live-action 7 minute 360° film
- Computer-generated interactive objects
- 3D binaural sound



Who is Alfred?

- A 74 year old African-American patient
- Advanced macular degeneration
- High frequency hearing loss

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Beatriz Lab

Dementia Progression

❖ Beatriz is a middle age Latina woman

- ❖ Early Stage
- ❖ Middle Stage
- ❖ Late Stage

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Clay Lab

End of Life



Created from a 48 Hour Hospice Home Immersion by Embodied Labs

❖ Clay is a 66 y/o male veteran with stage IV incurable lung cancer.


- ❖ Receiving a Terminal Diagnosis
- ❖ Transitioning to home hospice
- ❖ Last Days




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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 LGBT health to design this Lab




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INNOVATION FOR A HEALTHIER PLANET

DEMO



Erin, Barb
Marilyn
and Beth



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



Results on Clay Lab...



After completing Clay, learners report:

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



Preliminary Results Alfred Lab



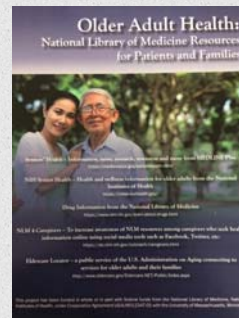
- o Learning was broad and significant...
- o 92% reported increased empathy
- o 88% reported increased learning about macular degeneration
- o 89% reported increased learning about hearing loss.


Students' Representative Comments ~ Alfred Lab



- o *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 elder individuals may be going through.*
- o *This experience was truly eye-opening and I thoroughly enjoyed it*
- o *We're all, for the most part, healthy and capable 20 somethings 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!*
- o *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

National Network of Libraries of Medicine New England
Region (NN/LM NER) Technology Grant