2018 11th National Doctors of Nursing Practice Conference: Sustaining the DNP: Strategies for the Future in Clinical and Administrative Practice

Advanced Technological Teaching Strategies to Enhance Interprofessional APRN/DNP Education and Foster Collaborative Practice

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Todays Objectives

1. Development of a DNP project to develop interactive case studies (ICS) to enhance NP education.

2. The application of interprofessional core competencies for debriefing the student healthcare team

3. Exposure to Telehealth to promote interprofessional collaboration

4. Discuss the use of virtual reality to foster interprofessional collaboration

The Problem

- Dilemma of an on-line course
- Insuring distance students get a similar experience
- No learning strategy already designed to use
- Collaboration with instructional design
- Development of an Interactive Case Study (ICS)
- Decision to validate the learning

The Plan

- To develop an Interactive Case Study (ICS)
- Facilitate the learning of the art of diagnostic reasoning for students at a distance
- Compare the differential diagnosis list generated by students on site as compared to distant students using ICS
- Evaluate the data both quantitative and qualitative

Kolb's Cycle of Learning

Stages in cycle	Purpose	Function in Learning	ICS
1. Concrete Experience (CE)	Provides the basis for learning and relies on an openness and adaptability	Enable learners to grasp the experience	Patient Interview Lab review
2. Reflective Observation (RO)	Makes sense of the concrete experience as a variety of perspectives are explored		• Comparison of novice to expert (questions) • Documentation opportunity • Journal reflection
3. Abstract Conceptualization (AC)	Uses logic and ideas to understand the situation and problems	Equip learners to transform the experience into something meaningful	Knowledge check opportunity to devise questions
4. Active Experimentation (AE)	Is where the learner tests their theories and ideas which leads to a new concrete experience thus perpetuating the cycle		

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LISKO & O'DELL, 2010; Kolb, 2005; Merriam, Caffarella, & Baumgartner, 2007

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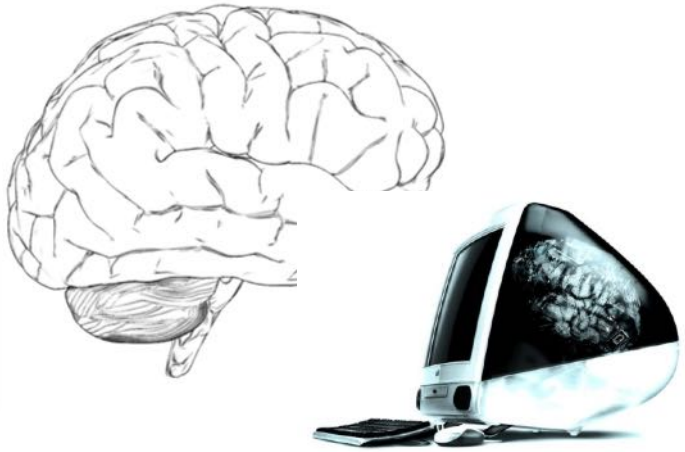
Kolb's Cycle of Learning

(Virtual)Concrete Experience: Interview, Physical findings, Lab review

Reflective Observation: Novice to Expert Comparison

Abstract Conceptualization: Knowledge check, opportunity to devise questions

Active Experimentation: develop diagnoses with rationale



LISKO & O' DELL, 2010; Kolb, 2005; Merriam, Caffarella, & Baumgartner, 2007

The Who

- Determining the right skill sets

- Putting the Team together
  - Subject Matter Expert (SME)
  - Instructional Designer (ID)
  - Information Technology (IT)
- Identifying the issues
  - Different perspectives
  - Role identification
  - Maintaining focus

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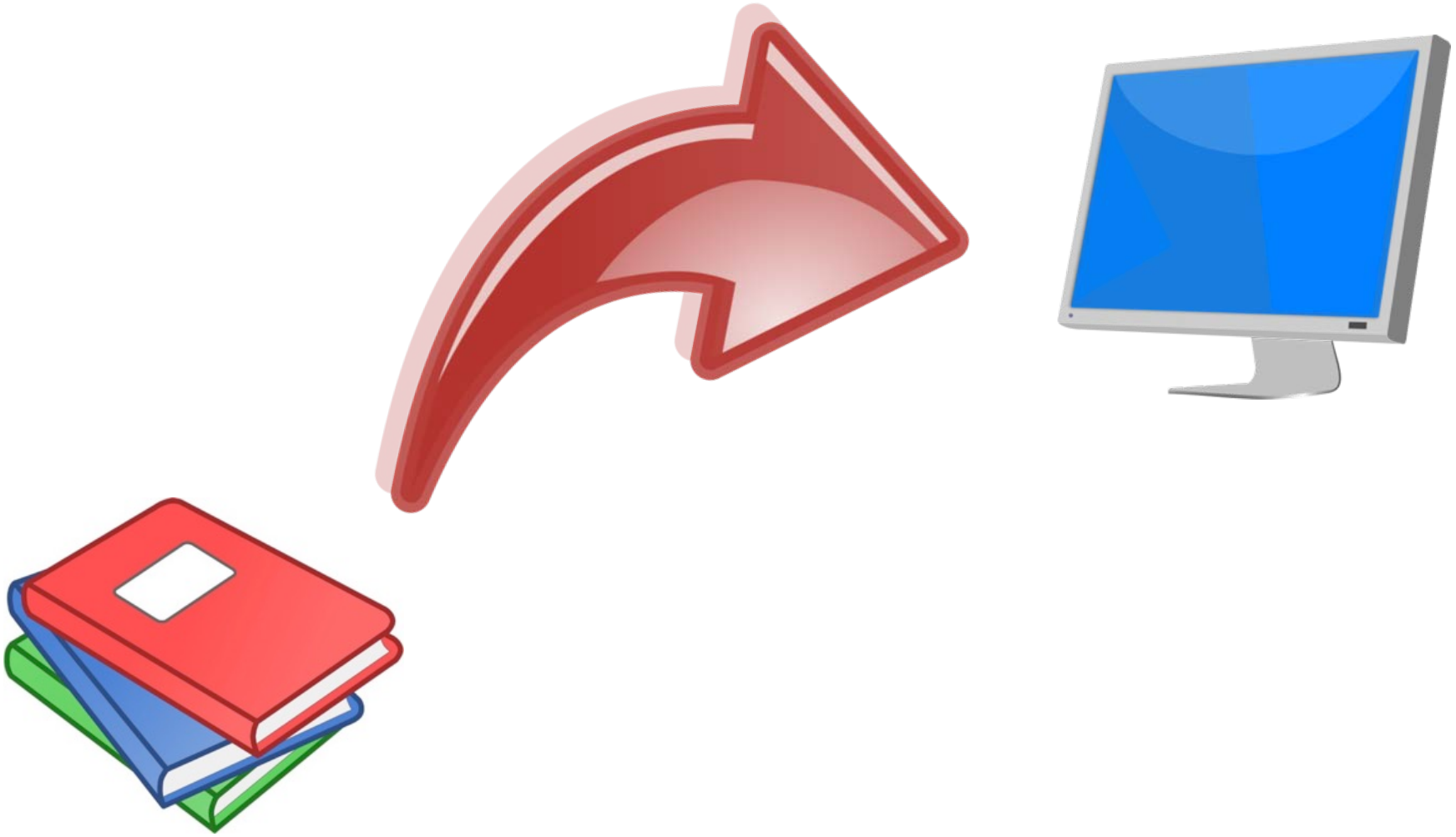
The How

- Identify student learning outcomes
- Backward Design
- Story Boarding
- Technology Magic

ICS Development Process



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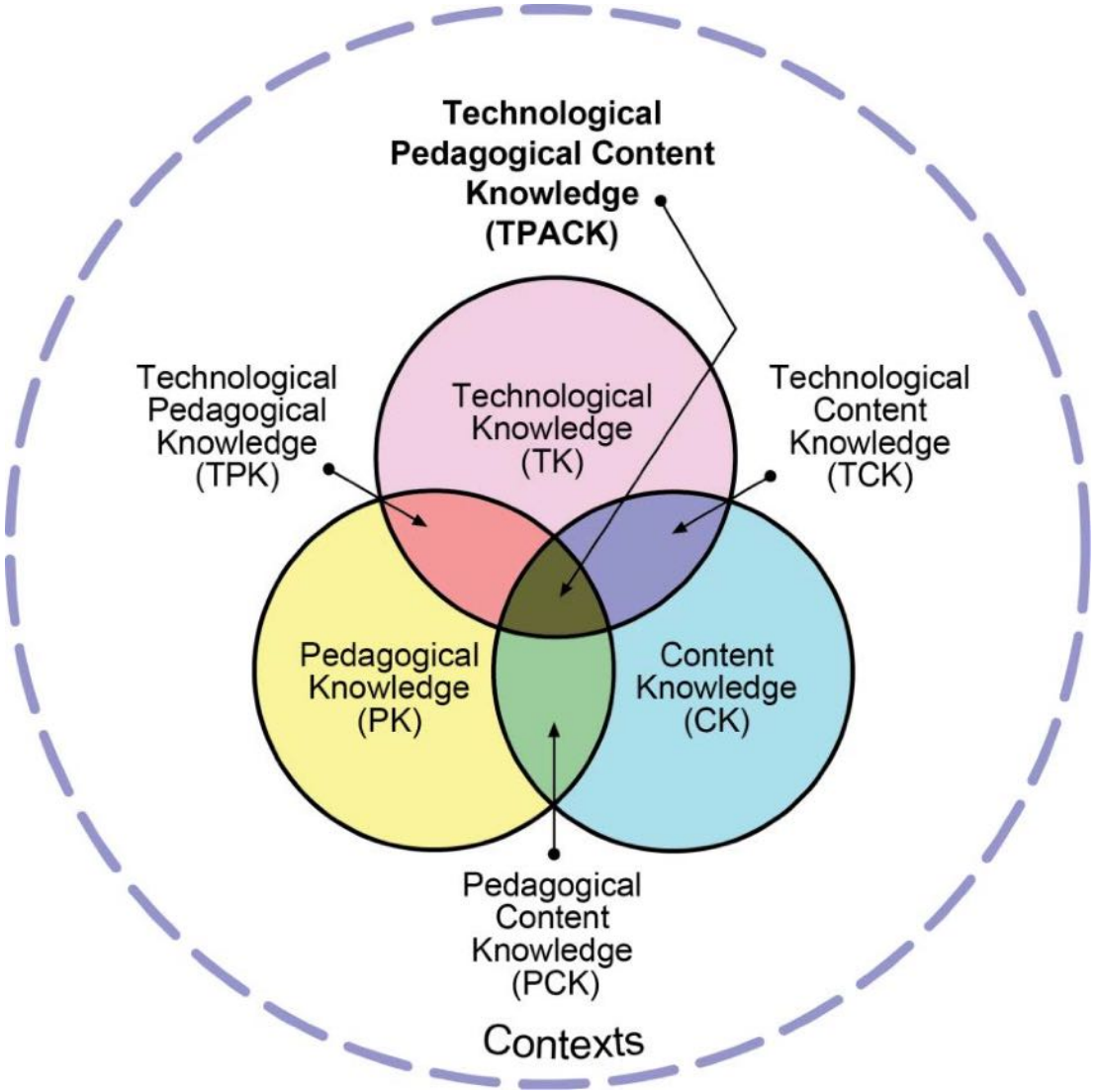
TPACK Model



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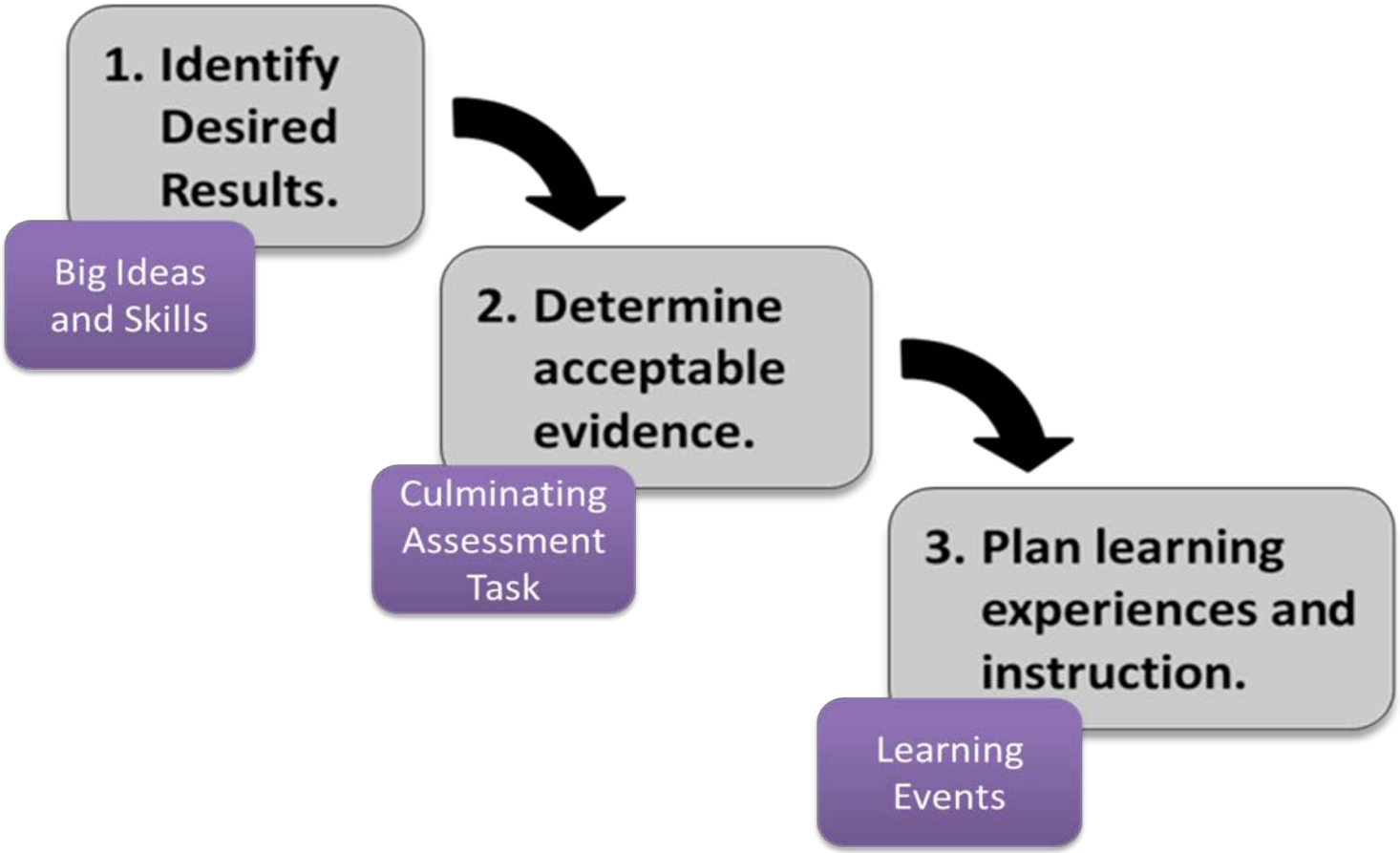
Backward Design



Wiggins, G. P., & McTighe, J. (2005). *Understanding by design*. Association for Supervision & Curriculum Development.

Research Design

- Convergent mixed method design with simultaneous data collection and analyses
- Mixed methods provides informed data
- Data collection for the research project is embedded in the course design.

Pediatric SP Example

Adult SP Example

Geriatric SP Example


experience
patient
think
need
questions
time
assessment
practice
felt
know
patients
feel
ask
first
take
history
get
differential
diagnosis
skills
comfortable
improve
like
really
good
biggest
made
just
things
also
better
pain
confident
second
learned
information
review
much
thought
important
make
going
real
able
process
one
work
differentials
diagnoses
learning
away
lot
room
great
asking
see
become
nurse
asked
help
taking
focused
Overall
overall
next
helped
forgot
definitely
nervous
clinical
exam
way
chest
charting
future
opportunity
something
physical
may
sure
realize
go
confidence
different
thinking
focus
look

Core Competencies for Interprofessional Collaborative Practice

Interprofessional Core Competencies in Healthcare

•IPEC Core Competencies for Interprofessional Collaborative Practice 2016 update

- Values/Ethics (VE 1-10)
- Roles/responsibilities (RR 1-10)
- Interprofessional Communication (CC1-8)
- Teams & Teamwork (TT 1-11)

•https://www.asha.org/uploadedFiles/Interprofessional-Collaboration-Core-Competency.pdf

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Interprofessional Collaboration

- Use of Debriefing as a tool to develop collaboration
- Foster the development of clinical reasoning and judgment skills through reflective learning processes

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The Purpose

- The need for more opportunities for safe non-threatening interactions among interprofessional learners is vital to improving the function of the health care team

- Simulation provides an excellent opportunity to address interprofessional education needs and ultimately improve interprofessional practice

The Opportunity

- The ICS grant impacted the NP student and the Medical student. Both were doing the ICS for their education but in isolation…

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The Solution

- Develop core competency scenarios that reflect each core competency and debrief with an interprofessional faculty team leading an interprofessional student group

- An added twist - one group is at a distance

The Process

- Faculty team made up of NPs and Physicians developed case scenarios
- Utilized technology to cross the distance
- Request for volunteers
- The core competencies were reviewed and 5 scenarios for each core value was developed by the faculty team
- To enable the faculty team to facilitate discussion, specific topics were delineated for each question to enhance the interprofessional student team‘s understanding of the issues

Examples of Scenarios

- You are part of a health care system that has recently instituted interdisciplinary rounding. During lunch, one of your co-workers (in your discipline) expresses strong negative opinions regarding the value of having team members of other disciplines contribute to the plan of care for your patients. How could you respond to your co-worker? *(RR 7 and RR 9)*

- Discussion topics: Approaches to demonstrate respect for contributions of all members of the healthcare team; development of relationships with other disciplines to facilitate professional growth and enhance patient care

Examples of Scenarios

- You are having a discussion with another team member regarding a difficult situation, what kinds of issues are important to keep in mind as you communicate? (CC6, CC7, CC8)

- Discussion topics: be aware of environment, recognize level of experience and expertise of all involved, conflict resolution techniques, reinforce culture of patient-centered teamwork

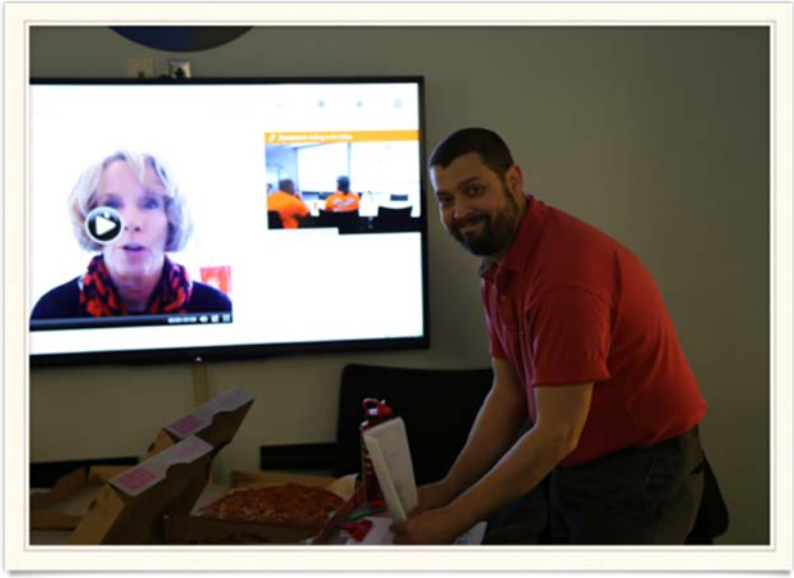
Examples of Scenarios

- Your current practice has merged with a practice that serves a more ethnically and socioeconomically diverse patient population. What steps could be taken by the providers (in both groups) that would be mutually beneficial in order to facilitate culturally competent care for your patient population? *(RR 3, RR8, RR 9, VE 3)*

- Discussion topics: Obligation to engage in continuous professional development as a means to improve patient care; utilizing each team member's unique skills to enhance patient care; embracing cultural diversity and differences in patient populations

Plan

- Arrange a meeting/volunteers
- 3 faculty teams (one physician and one nurse practitioner)
- Randomized student groups made up of 1-2 third year medical students and 1-2 nurse practitioner students in their fourth semester who were enrolled in a differential diagnosis course
- Use of technology
- Discuss the presented case
- Ask for any clarification
- Identify unique perspectives from each profession represented (medical student, practitioner student)



Implementation

- Interprofessional faculty team modeled behavior for Interprofessional student team
- Faculty set the mood as nonthreatening and provided an opportunity for open dialogue
- Rich dialogue among the students
- Interesting reactions

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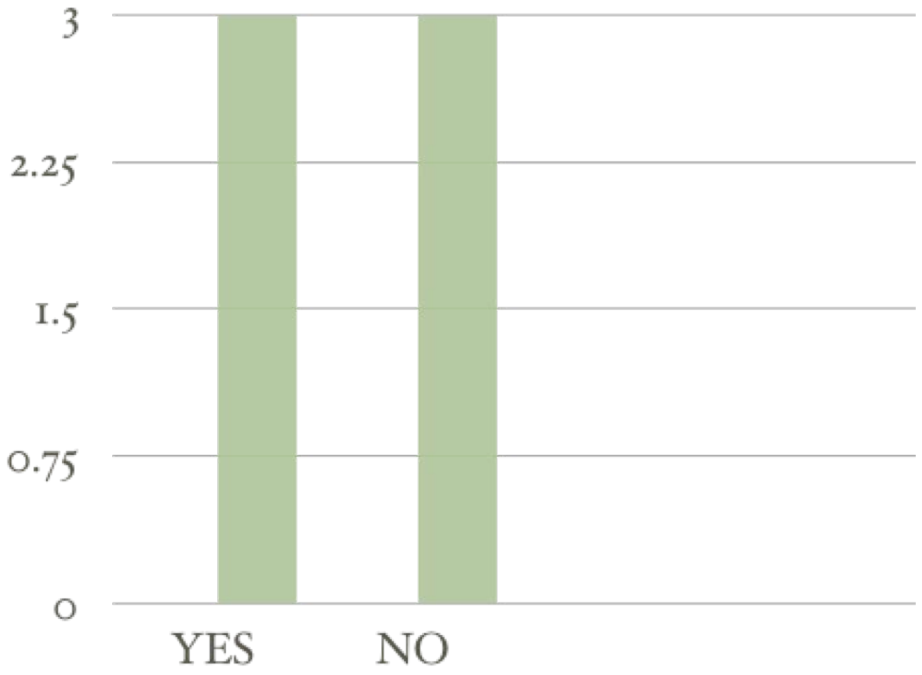
Student Response

- 15 students participated, 6 returned evaluations
  - 4 medical students
  - 2 nurse practitioner students

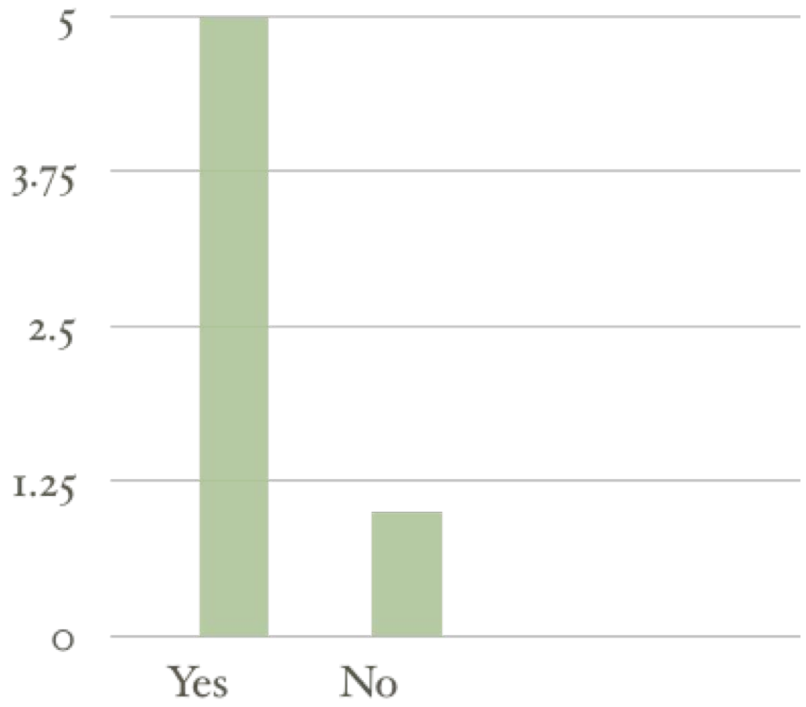
- 83.4% found it a valuable experience (n=5)
  16.67% did not feel it was a valuable experience (n=1)

Student Evaluation

- Were you aware that there are interprofessional competencies?



- Did you find the debriefing useful?



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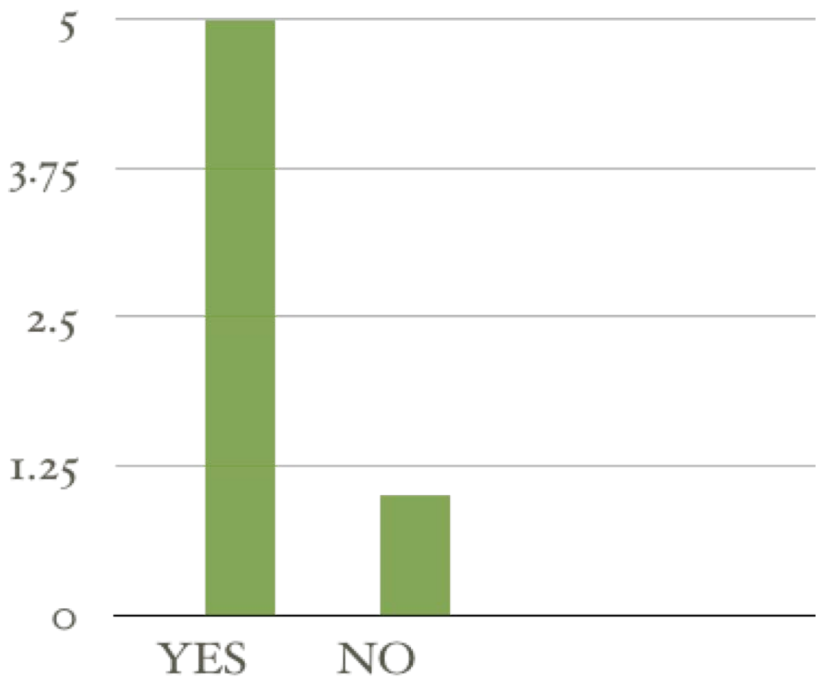
Qualitative Comments

- "Relevant, pertinent, useful, excellent suggestions for handling situations"
- " a good dry run, enjoyed other's perspectives"
- "Yes! great idea to expose students to the health care team…increases communication across disciplines"
- "thought this was very worthwhile, learned from other's experiences"
- "I think healthcare has been "siloed" and interprofessional collaboration is key to improved outcomes and reduce waste of resources"
- "I felt unprepared"

Student Response

- Would you recommend this type of an experience?



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Qualitative Comments

- “physicians don’t always value or respect their colleagues which is unfortunate …having these discussions off the floor will help physicians recognize the value and skill nurses have” (spoken by a med student)

- “helps to learn effective communication”

- “this is a necessary skill for heathcare professionals to have"

- “session was good to gain an idea of various perspectives and good to practice what we could say when stressful situations arise”

Faculty Evaluation

- “interesting to hear experiences”
- “able to guide and explain”
- “surprised that some didn’t know what the terms meant”
- “good dialogue”
- “no one seemed afraid to speak their mind”

Lessons Learned

- Have back-up technology
- Better prepare students as to expectations
- Increase number of groups
- Have multiple sessions doing one competency at a time
- Integrate throughout
- Biggest value was faculty team modeling behavior
- Unique teaching and learning opportunity for faculty and students
- Would like to do more… Looking at ways to integrate and find funding

Next Steps

Virtual reality
Different disciplines : Pharmacy, Medicine, Nursing, Advanced Practice
Development of scripts for each discipline
Grand rounds
Complete their role
Access another role
Post experience debriefing

Exposure to Telehealth to Promote Interprofessional Collaboration

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Introduction

- New strategies are needed to effectively address the national healthcare provider shortage, complexity of disease, aging of our population, and limited access to care.
- One potentially unifying solution to current challenges in healthcare that also actualizes the Institute of Medicine (IOM) nursing goals related to innovative solutions to care using technology is telehealth.
- Telehealth refers to use of technology to provide healthcare services at a distance including direct patient care, remote monitoring, and education.
- As leaders in healthcare, registered nurses (RNs) and nurse practitioners (NPs) should possess the knowledge and skills required to advocate for and utilize such technologies in practice.

Future of Health Care

- **Population growth:** The U.S. Census Bureau projects the population to increase by 13 % between now and 2025
- **Population aging:** The first baby boomers turned 65 in 2011, and by 2030, 70 million U.S. residents (20 %) will be 65 or older
    - A significant impact of that trend is that those 65 or older use twice as many physician resources as those less than 65
- **Chronic disease growth:** By 2030, half the population will have one or more chronic conditions
    - Studies have shown that patients with chronic disease average more than twice as many physician visits per year as patients without a chronic condition

The Global Institute for Emerging Healthcare Practices

Future of Health Care

The Inadequate Growth of Caregiver Supply

- Caregiver aging
- Flat medical school attendance
- Medical school costs
- Declining primary care interest
- Physician job dissatisfaction
- Nurse and nurse practitioner faculty shortages
- Regional Disparities

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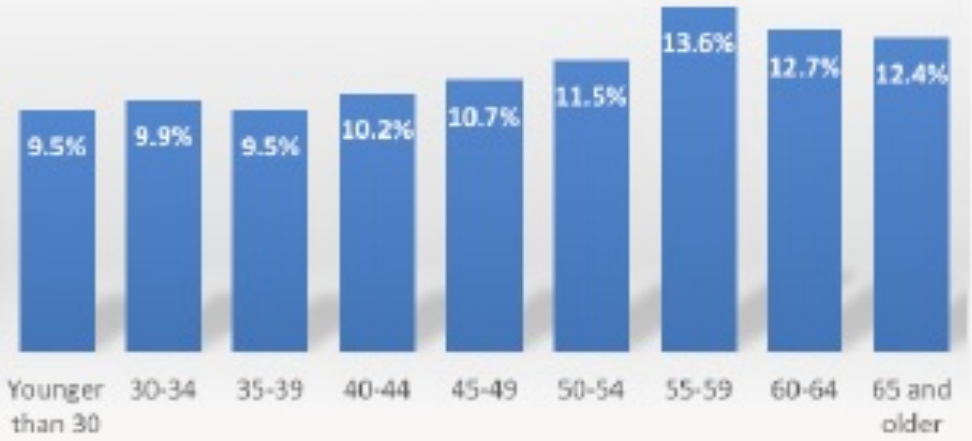
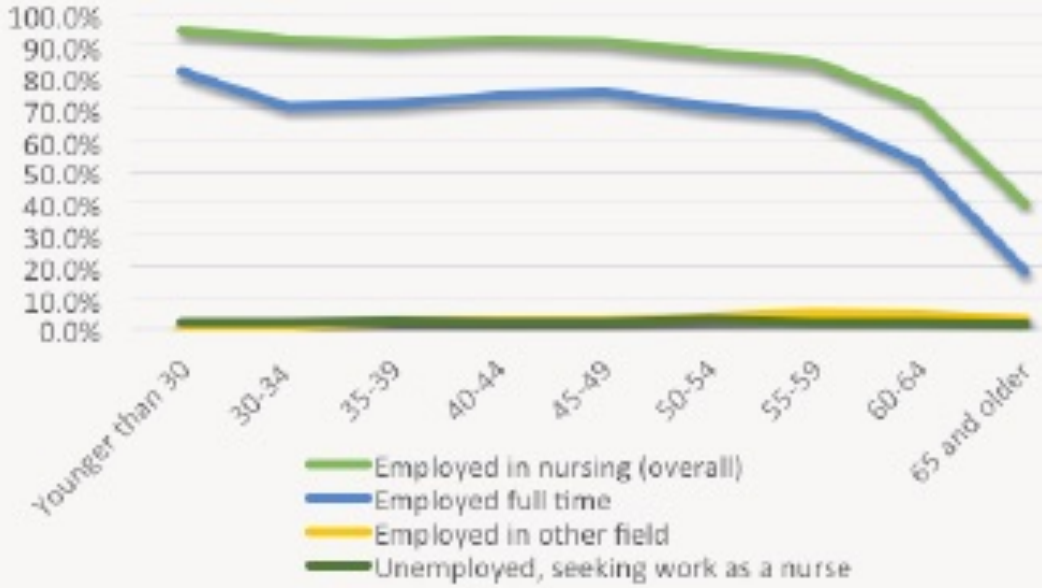
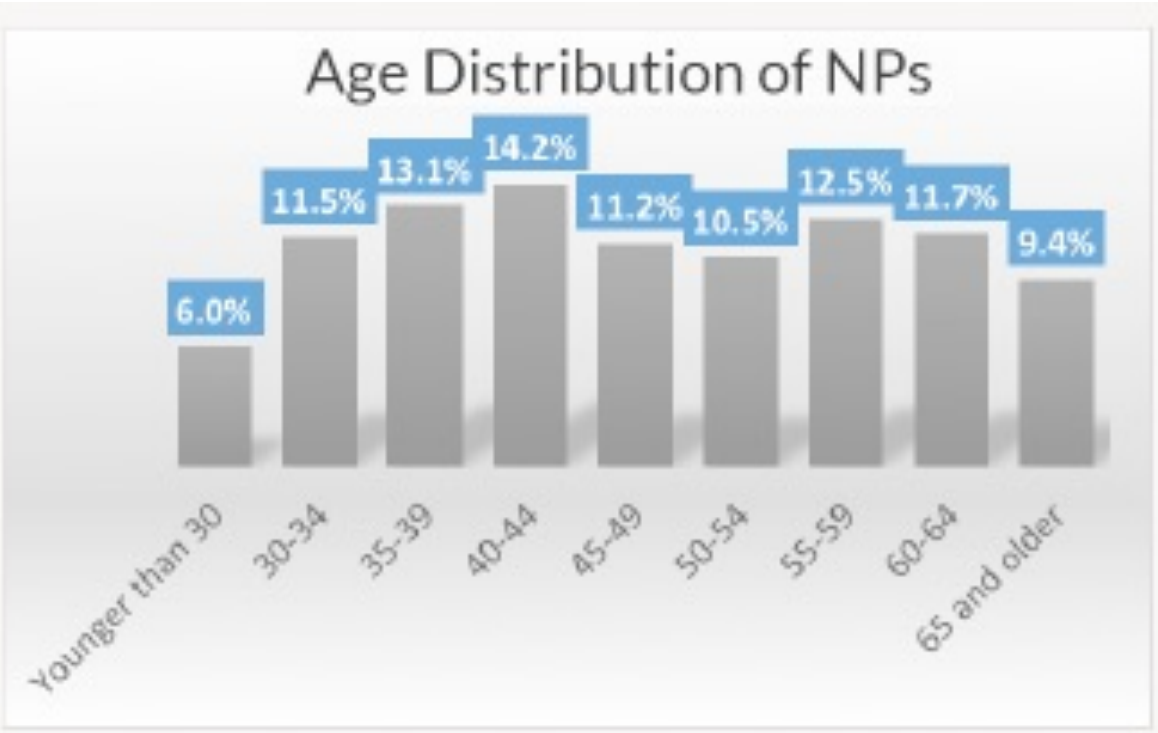
Age Distribution of RNs



Employment Status and Age of RNs



Age Distribution of NPs



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FUTURE OF HEALTH CARE

Table 1. Projected Nurse and Physician Shortages by 2025

Caregivers	Year	Shortages
Nurses	2025	500,000[1]
Physicians: primary care	2025	46,000[2]
Physicians: surgery	2025	41,000[2]
Physicians: medical specialty	2025	8,000[2]
Physicians: other specialty	2025	29,000[2]
Physicians: total before reform	2025	124,000[2]
Physicians: reform impact		31,000[3]
Physicians: total with reform	2025	155,000

Table 2. Projected Visit Demands

Year	Visits per Year[14]	Increase from 2004
2004	722,000,000	–
2010	779,000,000	7.9%
2020	1,006,000,000	39.9%
2030	1,316,000,000	82.3%

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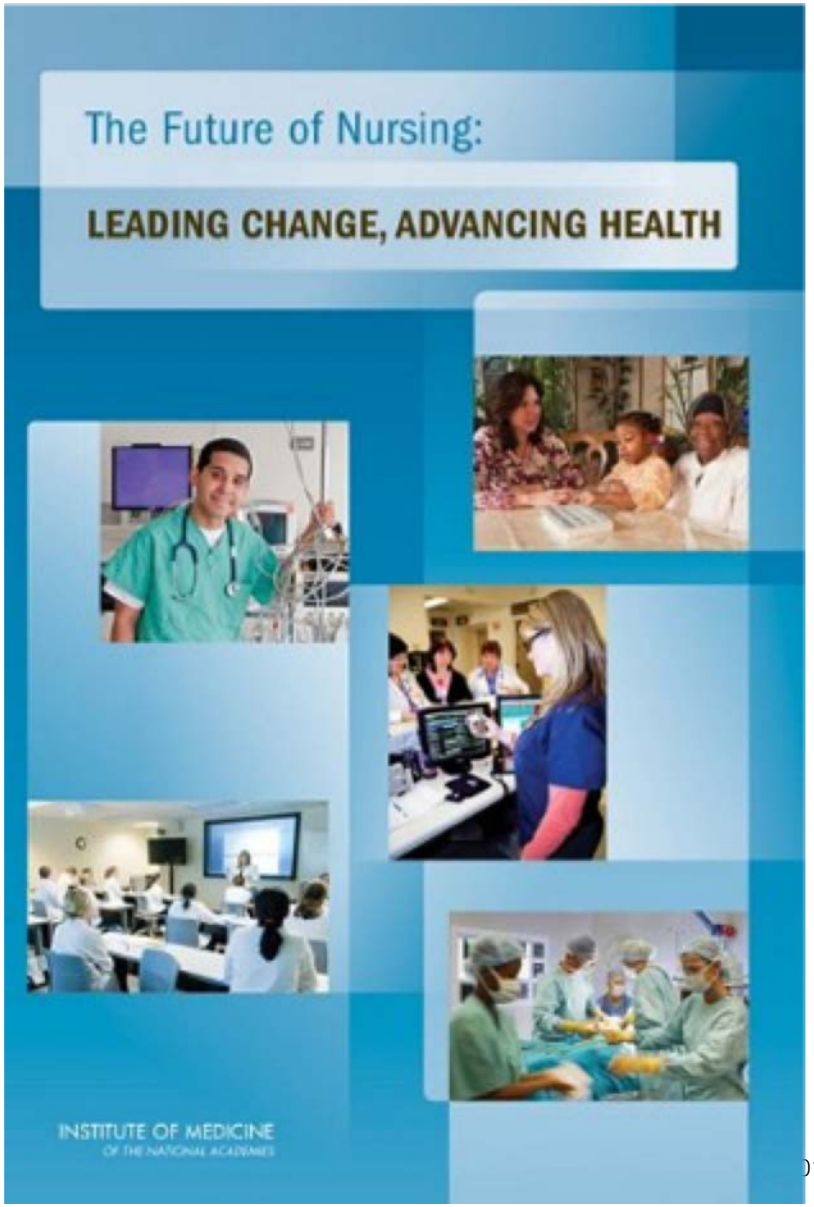
THE FUTURE OF NURSING



IOM Recommendations

1. *Remove scope-of-practice barriers*
2. *Expand opportunities for nurses to lead & diffuse collaborative improvement efforts*
3. *Implement nurse residency programs*
4. *Increase the proportion of nurses with a BS degree to 80% by 2020*
5. *Double the number of nurses with a doctorate by 2020*
6. **Ensure that nurses engage in lifelong learning**
7. **Prepare & enable nurses to lead change to advance health care**
8. **Build an infrastructure for the collection & analysis of interprofessional health care workforce data**

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American Association of Colleges of Nursing
ADVANCING HIGHER EDUCATION IN NURSING

The Essentials of Master's Education in Nursing

I. Background for Practice from Sciences and Humanities
II. Organizational and Systems Leadership
III. Quality Improvement and Safety
IV. Translating and Integrating Scholarship into Practice
V. Informatics and Healthcare Technologies
VI. Health Policy and Advocacy
VII. Interprofessional Collaboration for Improving Patient and Population Health Outcomes
VIII. Clinical Prevention and Population Health for Improving Health
IX. Master's-Level Nursing Practice

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ADVANCING HIGHER EDUCATION IN NURSING

The Essentials of Doctoral Education for Advanced Nursing Practice

I. Scientific Underpinnings for Practice
II. Organizational and Systems Leadership for Quality Improvement and Systems Thinking
III. Clinical Scholarship and Analytical Methods for Evidence-Based Practice
IV. Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care
V. Health Care Policy for Advocacy in Health Care
VI. Interprofessional Collaboration for Improving Patient and Population Health Outcomes
VII. Clinical Prevention and Population Health for Improving the Nation's Health
VIII. Advanced Nursing Practice

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PREPARING FOR THE FUTURE

As the use of technology expands, the master's-prepared nurse must have the knowledge and skills to use current technologies to deliver and coordinate care across multiple settings, analyze point of care outcomes, and communicate with individuals and groups (ANCC, 2012)

National Organization of Nurse Practitioner Faculty (NONPF)

- Competencies:
- Telehealth etiquette and professionalism while videoconferencing
- Skills in using peripherals, such as otoscope, stethoscope and ophthalmoscope.
- An understanding of when telehealth should and should not be used
- An understanding of privacy/protected health information (PHI) regulations
- Proficiency in the use of synchronous and asynchronous telehealth technology
- Knowledge of appropriate documentation and billing of telehealth technology
- An ability to collaborate interprofessionally using telehealth technologies
- Proficiency in taking a history, performing an appropriate physical exam, and generate differential diagnoses using telehealth.

Introducing Telehealth into Curriculum

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INTOUCH HEALTH
msi
EXIT

Challenges of Introducing Telehealth to Distance Learners

- Insuring distance students get a similar experience
- Collaborate between CON, COM, IT, ID and College of Engineering
- Developing ICS that give telehealth experiences

ICS: Geriatric Patient with Suspected CVA

67 yr-old-male arrives at a rural free-standing ED

CC: Left arm and leg weakness

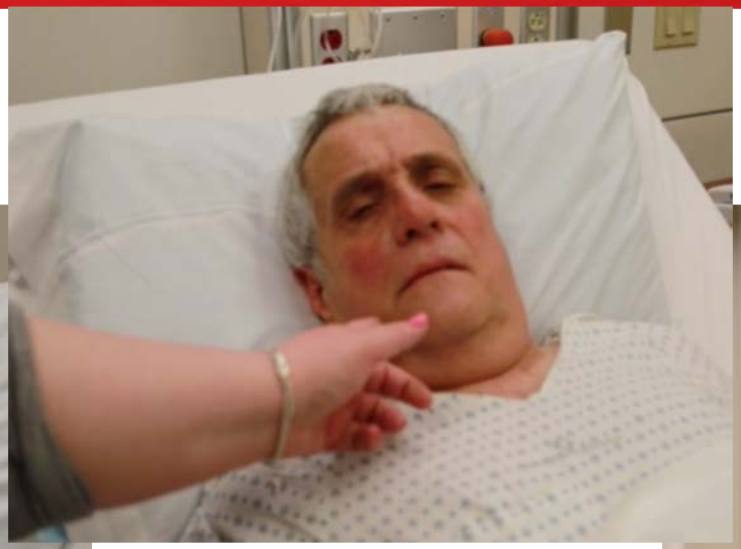
HPI: Weakness started 1 hr PTA. Unable to open pill bottle d/t weak grip L hand. Difficulty moving leg & has to rely on his cane more than usual. c/o HA in the morning. Had noted L hand weakness last week which got better on it's own

PMH: HTN controlled on CCB and ACEi, DM2 on oral hypoglycemics, moderate COPD without frequent exacerbations, OA (uses cane to ambulate), prior seizure 3 years ago related to alcohol withdrawal

SH: smokes ½ ppd for "many years," prior "heavy drinker" but has cut down to 2-3 beers a few times a week, denies recreational drug use, not sexually active since his divorce 7 years ago, recently retired

FH: father died in his 50s from a heart attack, mother still living and has high blood pressure, children are healthy

Filming



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Filming

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ICS: Geriatric Patient with Suspected CVA

What's Next!!

- Building on the ICS format
- Using Virtual Reality as a platform
- Interprofessional opportunities
- What is needed?
- Issues related/outcomes

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Building on the ICS format

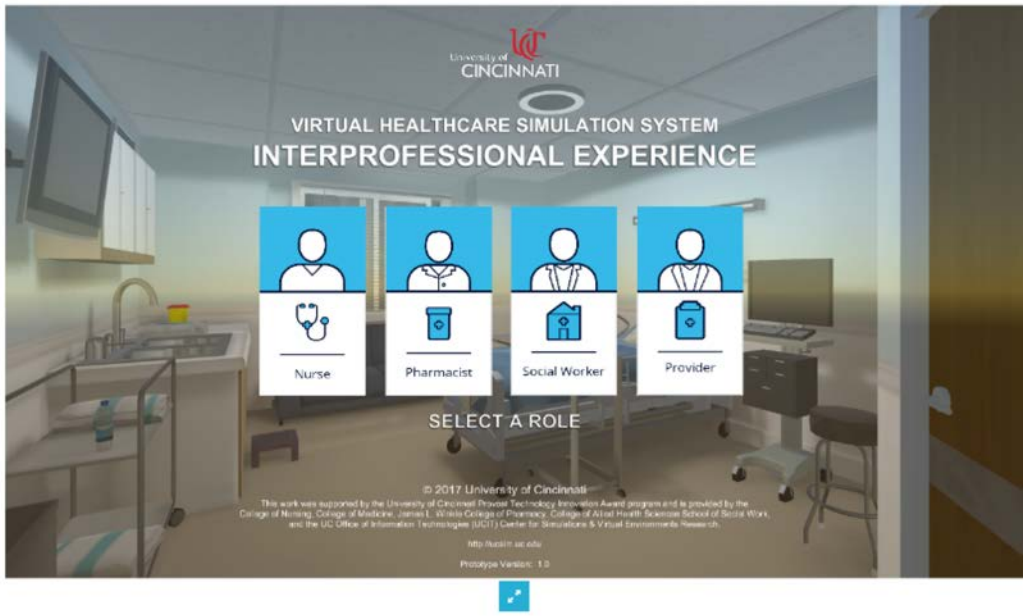
- Principles used in the ICS development
- Team development
- Student Learning outcomes as driver
- First person approach
- Interprofessional opportunities built into the experience

Using Virtual Reality as a Platform

- Partnering with digital design
- Understanding the development of movement
- Layers of interconnectedness with multi role players
- Cost of development

Interprofessional Opportunities

- Advanced Practice, Medicine, Nursing, Pharmacy, and Social Work
- Development of scripts
- Use of embedded questions/interactivity
- Grand Rounds as a concept
- Role playing
  - Professional Role
  - Role of other Profession



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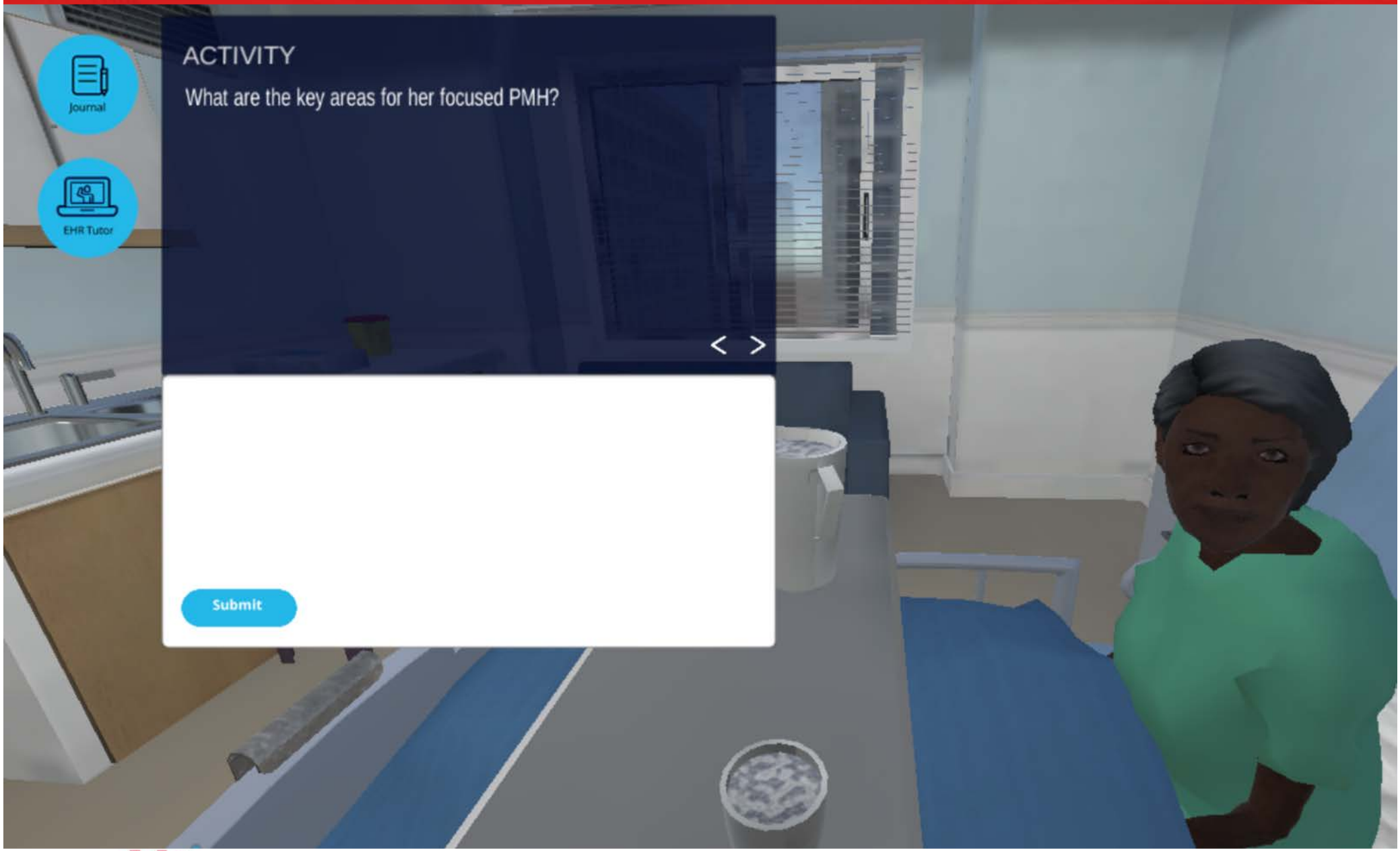

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What is needed?

- Team of Professionals
- Time
- Scripts
- Cost
- Implementation plan

Issues related/outcomes

- Debriefing own role
- Discussion of other roles
- Gamming more comfortable for digital natives
- Need for team approach unable to do on own

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