SIMULATION 101:

Incorporating Simulation in Nutrition and Dietetics Education

Nutrition and Dietetic Educators and Preceptors

Academy of Nutrition and Dietetics

MEET THE PANEL

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Disclosures

Presenters have no actual or potential conflict of interest in relation to this program/presentation.

LEARNING OBJECTIVES

1. Define simulation and how it is being used to further advance nutrition practice
2. Discuss the value of incorporating standardized patients into nutrition related simulation activities
3. Discuss opportunities for incorporating the use high fidelity mannequins into dietetics curriculum
4. Evaluate ways to incorporate virtual reality simulation into the curriculum

Simulation Overview

By: Tabitha Jones-Thomas, PhD, RN

Simulation

- A technique that creates a situation or environment to allow persons to experience a representation of a real event of the purpose of practice, learning, evaluation, testing, or to gain understanding of systems or human actions. (Society for Simulation in Healthcare, 2013)

Nuts and Bolts of Simulation

Scenario Building Learning Outcomes

Learning Outcomes- Simulation learning objectives must be linked to the individual unit, course & program outcomes.

Scenario Building Components of Scenario Building

- Description of client
- Environment
- Standardized patient/Simulator
- Staging- Equipment
- Roles- RD, RN, family member, etc.
- Scenario progression outline/expected interventions

Simulation Design Template

Date:
Discipline:
Expected Simulation Run Time:
Location:

File Name:
Student Level:
Guided Reflection Time:
Location for Reflection:

Admission Date: **Today's Date:** **Brief Description of Client** **Name:** **Gender:** **Age:** **Race:** **Weight:** kg **Height:** cm **Religion:** **Major Support:** **Phone:** **Allergies:** **Immunizations:** **Attending Physician/Team:** **Past Medical History:** **History of Present illness:** **Social History:** **Primary Medical Diagnosis:** **Surgeries/Procedures & Dates:** **Nursing Diagnoses:**	**Psychomotor Skills Required Prior to Simulation** **Cognitive Activities Required prior to Simulation** [i.e. independent reading (R), video review (V), computer simulations (CS), lecture (L)]

Fidelity

Low Fidelity

High Fidelity

BRIEFING

Pre-briefing

- Prepare student for experience.
- Can be slightly different depending on the discipline (ensure to mirror the clinical work- flow)

Debriefing

- Debriefing Models
- Debriefing is generally where the learning occurs.
- It's important to facilitate this learner lead discussion.

DEBRIEFING

DEBRIEFING REMINDERS

- Impossible to debrief everything
- Debriefing should be learner-centric and conducted within a safe environment
- Participants need and value the feedback
- Debriefing points are derived through setting appropriate session/course objectives
- Ask learner to summarize overall case
- Ask each learner about scenario take away's (summary of individual learning)
- Tools should be used video, debriefing checklist, evaluation form
- Instructor skills - active listening, probing, stimulating reflection, using silence. Ask short open-ended questions- " I'm curious how you see it", "I observed you remove the tube feeding, elaborate on the rationale for that action"

PHASES OF SIMULATION

- PRE-BRIEF
- SCENARIO REPORT/BACKSTORY
- SCENARIO ENGAGEMENT/OBSERVATION
- DEBRIEFING

Franciscan Missionaries of Our Lady University
Clinical Simulation Observation Sheet

Student Name: _____ Simulation: _____ Date: _____

Please document your observations in the designated sections. Be prepared to provide feedback for strengths and areas for improvement.

Theme	Strengths/Appropriate Nursing Interventions	Areas for Improvement
Assessment What tools were used? Appropriate techniques? Systematic approach? Recognized significance of findings/changes? Document findings? Refer to appropriate personnel? Evaluate after intervention?		
Communication With patient? With family/significant others? With caregiver? With other interdisciplinary team members? With physician? What approaches used? Verbal/non-verbal? Therapeutic touch? Patient education?		
Management Best practice? Prioritized interventions? Appropriate protocols/procedures/treatments /interventions Critical thinking/problem solving? Delegated appropriately? Fluid/blood/drug administration? Short-term plan? Coordination with interdisciplinary team? Long-term plan? Coordination with interdisciplinary team?		

2/28/18

Simulation Benefits & Disadvantages

Pros

- Safe learning environment
- Nonpunitive
- Active learning
- Standardize Learning Objectives
- Multidimensional
- Low Fidelity (evaluate students {skills check-offs})

Cons

- Safe learning environment –Lack of caring when its not associated with numeral grade

Evaluation- SET-M

Simulation Effectiveness Tool - Modified (SET-M)

After completing a simulated clinical experience, please respond to the following statements by circling your response.

PREBRIEFING:	**Strongly Agree**	**Somewhat Agree**	**Do Not Agree**
Prebriefing increased my confidence	3	2	1
Prebriefing was beneficial to my learning.	3	2	1
SCENARIO:			
I am better prepared to respond to changes in my patient's condition.	3	2	1
I developed a better understanding of the pathophysiology.	3	2	1
I am more confident of my nursing assessment skills.	3	2	1
I felt empowered to make clinical decisions.	3	2	1
I developed a better understanding of medications. (Leave blank if no medications in scenario)	3	2	1
I had the opportunity to practice my clinical decision making skills.	3	2	1
I am more confident in my ability to prioritize care and interventions	3	2	1
I am more confident in communicating with my patient.	3	2	1
I am more confident in my ability to teach patients about their illness and interventions.	3	2	1
I am more confident in my ability to report information to health care team.	3	2	1
I am more confident in providing interventions that foster patient safety.	3	2	1
I am more confident in using evidence-based practice to provide nursing care.	3	2	1
DEBRIEFING:			
Debriefing contributed to my learning.	3	2	1
Debriefing allowed me to verbalize my feelings before focusing on the scenario	3	2	1
Debriefing was valuable in helping me improve my clinical judgment.	3	2	1
Debriefing provided opportunities to self-reflect on my performance during simulation.	3	2	1
Debriefing was a constructive evaluation of the simulation.	3	2	1
What else would you like to say about today's simulated clinical experience?			

Leighton, K., Ravert, P., Mudra, V., & Macintosh, C. (2015). Update the Simulation Effectiveness Tool: Item modifications and reevaluation of psychometric properties. *Nursing Education Perspectives, 36*(5), 317-323. Doi: 10.5480/1 5-1671.

Confucius

“ I hear and I forget, I see and I remember, I do and I understand.”

Questions

Contact

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STANDARDIZED PATIENTS

KATHRYN FAKIER, PHD, RDN, LDN

Standardized Patient (SP)

This term is also synonymous with *Simulated Patient*

Definition (Healthcare Simulation Dictionary 2.1)

- An individual who is trained to portray a real patient in order to simulate a set of symptoms or problems used for health care education, evaluation, and research

- SPs can be used for teaching and assessment of learners, including but not limited to history/consultation, physical examination, and other clinical skills in simulated clinical environments

- SPs can also be used to give feedback and evaluate learner performance

STANDARDIZED PATIENT (SP)

Trained *by professionals*	Coached *by faculty & clinical support team*	Interacts *with students*
• Background and history of a patient • Mimic body language, emotions, personality, and physical findings	• Simulate an actual patient so accurately that the simulation cannot be detected by a skilled clinician	• Portray a person in the hospital, doctor's office/clinical or community setting • Provides patient history • Simulates physical symptoms such as pain or difficulty walking

BENEFITS OF USING SPS FOR EDUCATION

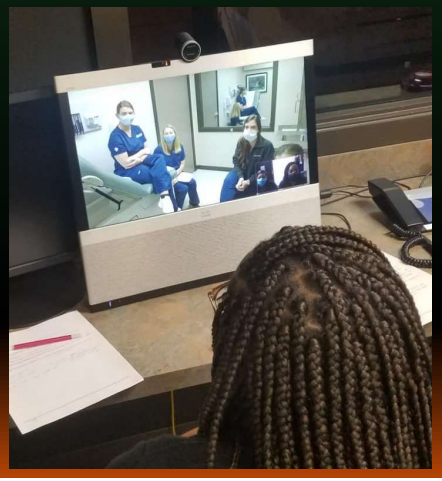
- STUDENTS' PERFORMANCE CAN BE ASSESSED FAIRLY
- MORE CONTROL OVER HOW THE CASE IS PRESENTED TO STUDENTS
- INTERACTIONS WITH SPS REDUCE THE PRESSURE ON STUDENTS
- CAN ACCURATELY AND CONSISTENTLY PORTRAY CHARACTERISTICS OF A REAL-LIFE PATIENT
- PROVIDES STUDENTS WITH THE OPPORTUNITY TO BECOME MORE COMPASSIONATE COMMUNICATORS AND INFLUENTIAL MEMBERS OF THE HEALTHCARE COMMUNITY

WAYS TO INCORPORATE SPS INTO NUTRITION SIMULATION EDUCATION

<u>Education, Counseling, & Communication</u>
- i.e. New-onset diabetes
- Telehealth

<u>Clinical Skills</u>
- Swallow screens
- Nutrition-focused physical exams
- Health screening assessments

<u>Negotiation Skills</u>
- Ethics/end-of-life



HIGH-FIDELITY SIMULATION MANIKINS

MARIA PLANT, DCN, MS, RDN, CNSC, FAND

SIMULATION MANIKINS

- MANIKINS
  - FULL BODY PATIENT SIMULATOR
  - MIMIC HUMAN ANATOMY AND PHYSIOLOGY
  - LOW-MID-HIGH FIDELITY
  - USED IN A SIMULATED HEALTH CARE ENVIRONMENT
    - DEVELOP AND DEMONSTRATE SKILLS
    - APPLY CRITICAL THINKING
    - CONCEPTUALIZE PATIENT INTERACTIONS
    - ENHANCE COMMUNICATIONS SKILL

SIMULATION MANIKINS

COMMON CAPABILITIES

- BLINKING, SPONTANEOUS BREATHING, BP, PULSE
- FEEDING TUBE INSERTION AND REMOVAL
- GASTROSTOMY FEEDING
- OSTOMY
- ANATOMICAL LANDMARKS- CLAVICLE, SCAPULA, AND ILIAC CREST
- AUSCULTATION OF HEART, LUNG AND BOWEL SOUNDS
- ARTICULATING ELBOWS, POSITIONAL HEAD, AND BENDABLE WAIST
- VOCAL SOUNDS
- CAN APPLY MOULAGE, WIGS, SKINS, WOUND KITS AND OTHER PROPS TO INCR

SIMULATION MANIKINS

BENEFITS

- PRACTICE SKILLS IN A SAFE ENVIRONMENT
- ALLOWS HANDS ON PRACTICE AND DEMONSTRATION OF SKILL
- ALLOWS IMMEDIATE FEEDBACK
- DEVELOP INTERPERSONAL AND COMMUNICATION SKILLS
- HELPS TO BRIDGE GAP BETWEEN CLASSROOM AND CLINICAL SETTING
- SESSIONS CAN BE VIDEOTAPED
- STUDENTS CAN LEARN FROM EACH OTHER
- STUDENT CENTERED
- INTERPROFESSIONAL OPPORTUNITIES

APPLICATION

BENEFITS

- PRACTICE NUTRITION INTERVIEW SKILLS
- DEMONSTRATE NUTRITION FOCUSED PHYSICAL EXAM SKILLS
- IDENTIFY POTENTIAL SIGNS OF MICRONUTRIENT DEFICIENCIES
- IDENTIFY AND DOCUMENT MALNUTRITION
- APPLY BASIC COUNSELING SKILLS
- COMPLETE NUTRITION ASSESSMENT AND ADIME DOCUMENTATION

APPLICATION

Failure to Thrive Case Simulation

Objectives:

- Demonstrate interview skills relevant to opening phase of interview
- Demonstrate head to toe Nutrition Focused Physical Exam
- Develop a nutrition care plan including nutrition assessment, diagnosis, intervention, monitoring and evaluation

APPLICATION

FAILURE TO THRIVE CASE SIMULATION

- LEARNING OBJECTIVES
- CASE INFORMATION AND RUBRICS
- STUDENT AND INSTRUCTOR PREPARATION MATERIALS
- SIMULATION LAB SET UP AND PREPARATION OF MANIKIN
- RESOURCES
- DEBRIEFING

*ONLINE OPTIONS- PRE-RECORDING VIDEO, LIVE ZOOM

Case Title:	Ms Pacheco Malnutrition, failure to thrive	
Facilitator:		
Basic Information	**Target Audience:**	Students in 325 MNT lab
	Specialty:	Nutrition/Dietetics Students
	Other:	

Learning Objectives: (2-3 specific technical, cognitive, and/or behavioral skills desired)

1.	Develop interview skill relevant to opening phase of interview (greeting, introduction, purpose of visit, rapport building, what and why of NFPE, and consent)
2.	Practice head to toe Nutrition Focused Physical Exam Skills
3.	Develop a NCP including nutrition assessment, dianosis, intervention, monitoring and evaluation along with appropriate documentation

Provide a brief overview of the case for the LEARNERS: (Chief Complaint, age, gender, nature of the scenario, etc.) Include any history you want given at the beginning of the scenario.

Admit date: 11/12/22

Carol Pacheco is a 79 -year-old female admitted for dehydration and failure to thrive. She is admitted to the medical unit at her local hospital for treatment and is currently day 2 admission. Her family reports poor appetite and progressive weight loss over the past 6 months.

Medical history include: afib, HTN, GERD, Hyperlipidemia, Depression, COPD

Medications at home: Sertralin, lasix, lipitor, metoprolol, prilosec, symbicort
Tobacco use: none
Alcohol use: 1-2 glasses of wine per week
Family history: mother – Alzheimer's disease; father CVD
Demographics: recently widowed- 1 year, lives alone, English speaking

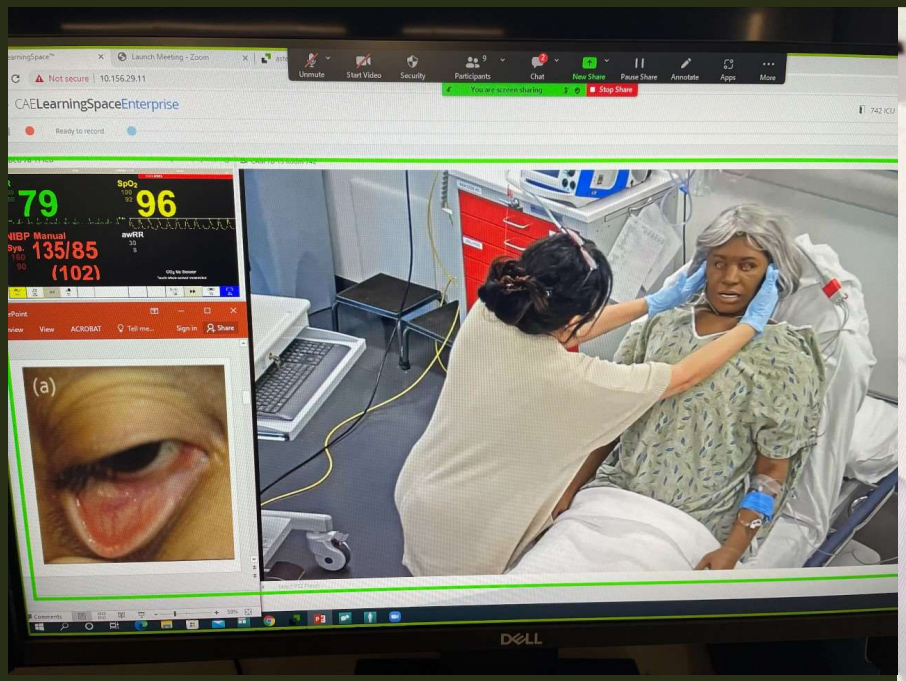
Oral mucsosa: dry mucous membranes, no lesions or sores

APPLICATION

Failure to Thrive Case Simulation

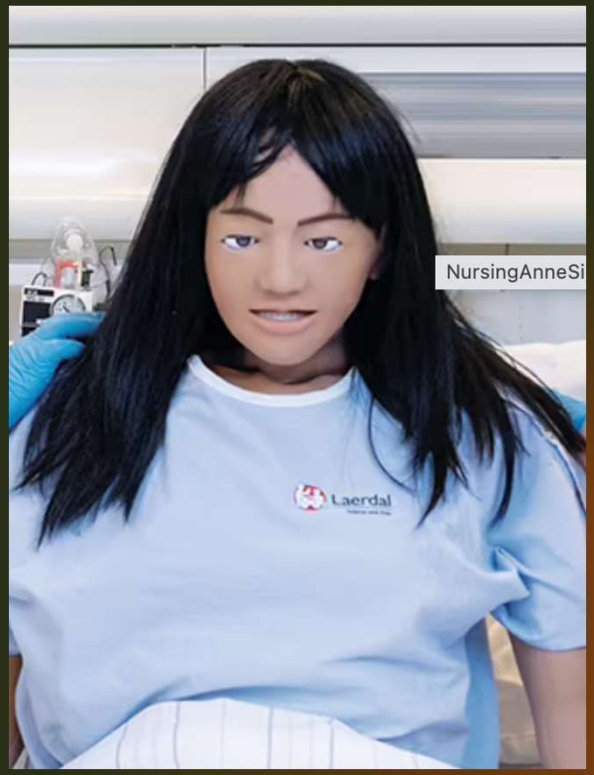
Debriefing

- Conducted immediately after simulation scenario
- Purpose is for student Reflection
  - Students discuss case, what was learned, what went well, what they would change to improve outcomes, facilitator guides discussion, provides constructive feedback
- Video recordings can be provided to student to examine their own performance



- ARIZONA SIMULATION TECHNOLOGY & EDUCATION CENTER (ASTEC)- UNIVERSITY OF ARIZONA HEALTH SCIENCES

Thank You!



THE USE OF VIRTUAL SIMULATION IN ACADEMIA

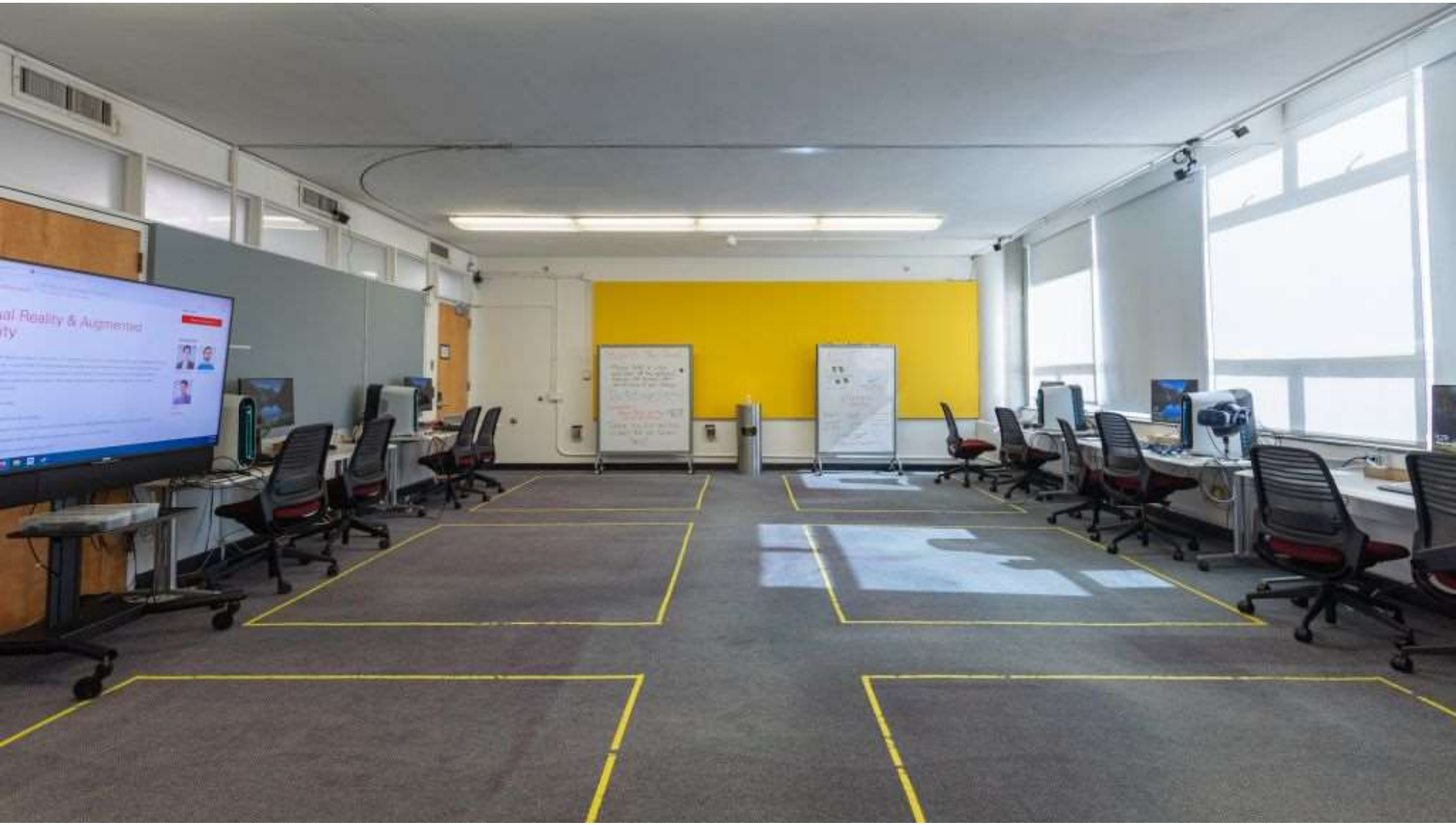
SANDRA MAYOL-KREISER, PHD, RDN, CNSC

What is virtual reality?

Virtual reality (VR) is an artificial, computer-generated simulation or recreation of a real life environment or situation. It immerses the user primarily by stimulating their vision and hearing.


HEMOVAC


LEADERSHIP | SCHOLARSHIP | CAREER
ARCH VIRTUAL



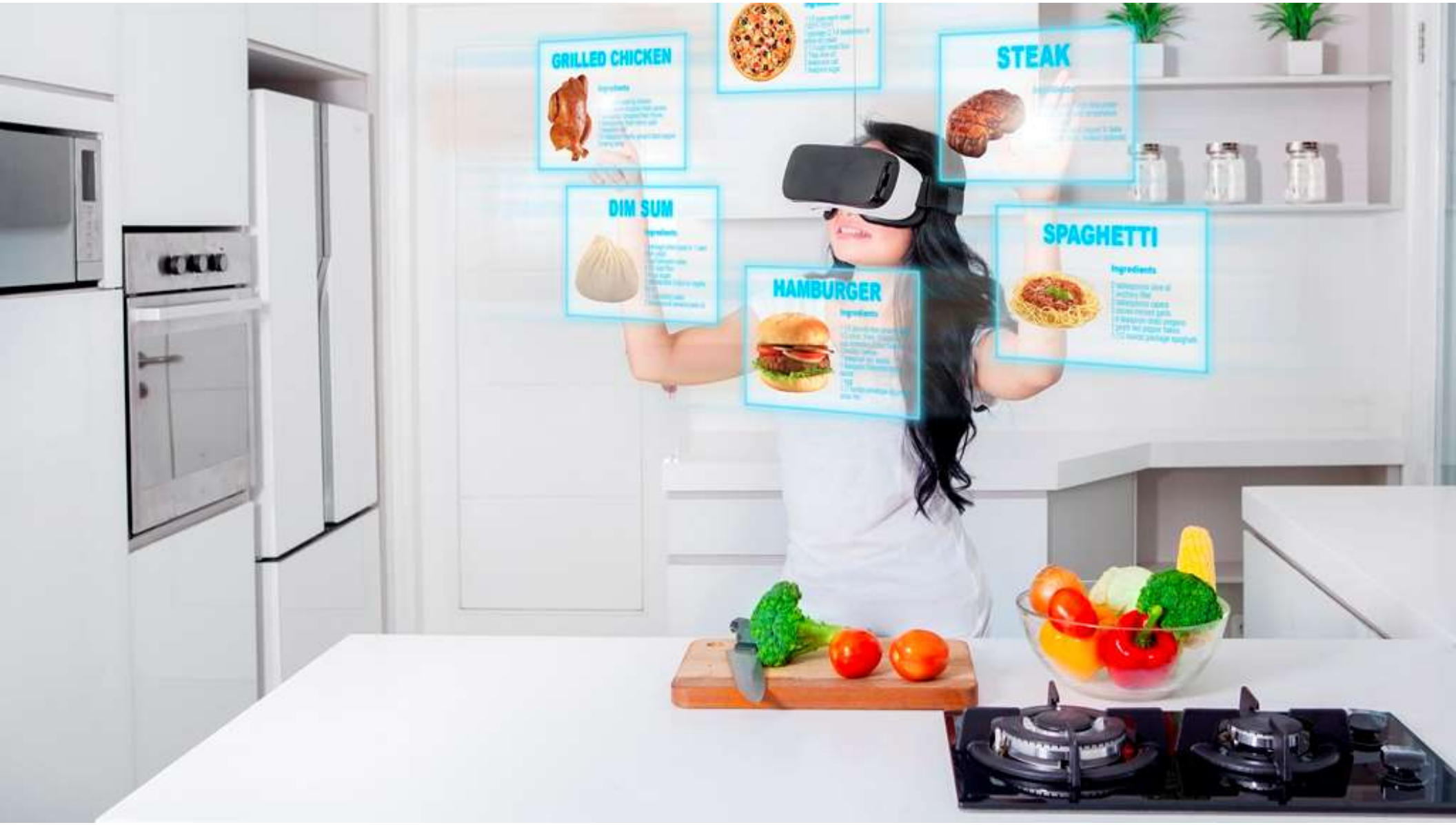
ADVANTAGES AND DISADVANTAGES OF USING VR FOR HEALTHCARE

Advantages	Disadvantages
Good variability and customization	Expensive hardware and software
Various areas of implementation	Risk of addiction
Provides safe and controlled environment	May cause motion sickness
Offers detailed 3D visualization	Mostly experimental nature
Extensive psychological effect	Cannot replace real-life practice

ACADECRAFT
Smart People , Smart Content

Benefits of VR in Education

- Enhanced Visualization
- improved education Quality
- Collaborative Learning
- Global Outreach
- Better Student Appraisal
- Improved Research


GRILLED CHICKEN
STEAK
DIM SUM
SPAGHETTI
HAMBURGER

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Thank You!

Questions?

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