

Webinar:

Creative Ways to Engage Your Students with Realityworks Health Science Resources

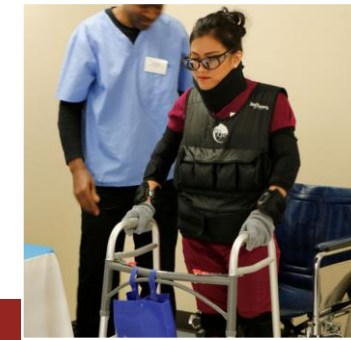
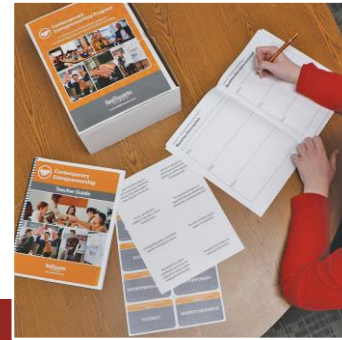
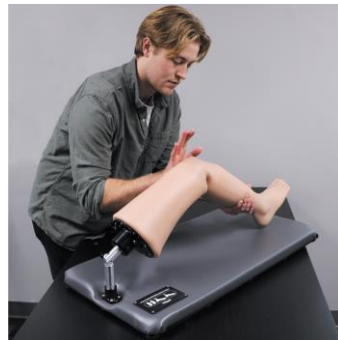
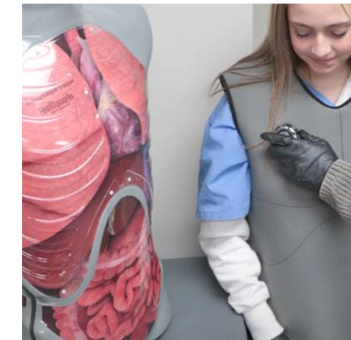


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Who is Realityworks?



We partner with educators, administrators and industry leaders to ensure our offerings meet their needs and make lessons truly meaningful.

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Presented by

Jamey McIntosh

Education Programs Manager

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Embracing Geriatric Care



Senior Care and Empathy

83%

of participants were able to empathize with life in old age very well after participating in age simulation suit experience.⁹

95%

of participants had better understanding of the physical conditions of aging after participating in an age simulation suit experience.⁹



Geriatric Simulator



Geriatric Nursing
Manikin



Geriatric Sensory
Impairment Kit

Power of Wearable & Manikin Simulators

- Offers realism while protecting privacy
- Can be used to teach technical skills AND interpersonal skills
- Realism leads to better prepared learners
- Builds empathy, understanding and sensitivity which can result in more positive patient interactions
- Cost effective

Geriatric Simulator

The Geriatric Simulator enables users to

- Visual impairment

Glaucoma Macular degeneration

Cataracts Diabetic retinopathy

Retinal detachment

Retinitis pigmentosa

- Restricted range of motion

- Decreased mobility

- Stooped posture

- Loss of sensation in hands

- Joint stiffness

- Loss of strength

- Fatigue

- Change in body image

- Decreased sense of balance

- Confusion



Power of Geriatric Wearable Simulation Experiences

“When used properly, empathy suits can give important insight into patients’ experiences for the wearer and allow the participants to share their experiences and frustrations with learners in the caregiver role.”

“The aging-simulation experience is an effective educational tool to raise awareness among health professionals of age-related difficulties. This sensory activity allows health professionals to put themselves in the shoes of older patients and to feel age-related difficulties.”

Curriculum Highlights

10-15 hours

1. Exploring Geriatrics and Gerontology
2. Visual Impairment
3. Declining Mobility Due to Aging
4. Impact of Aging on Bones and Joints
5. Hearing Loss
6. Cognitive Changes with Aging
7. The Geriatric Experience
8. Amazing Aging



Geriatric Sensory Impairment Kit

Hearing Impairment Simulator:

- Headphones that enable the user to experience tinnitus, high-frequency hearing loss, general hearing loss and dementia-related confusion

Geriatric Arthritis Simulator:

- A wearable for each hand that simulates moderate to severe arthritis

Geriatric Tremor Simulator:

- A portable device that uses EMS technology to induce hand tremors



Curriculum Highlights

7-13 hours

1. Hearing Loss and Impairment
2. The Impact of Aging on Bones and Joints
3. Understanding Tremor in the Elderly
4. The Geriatric Experience



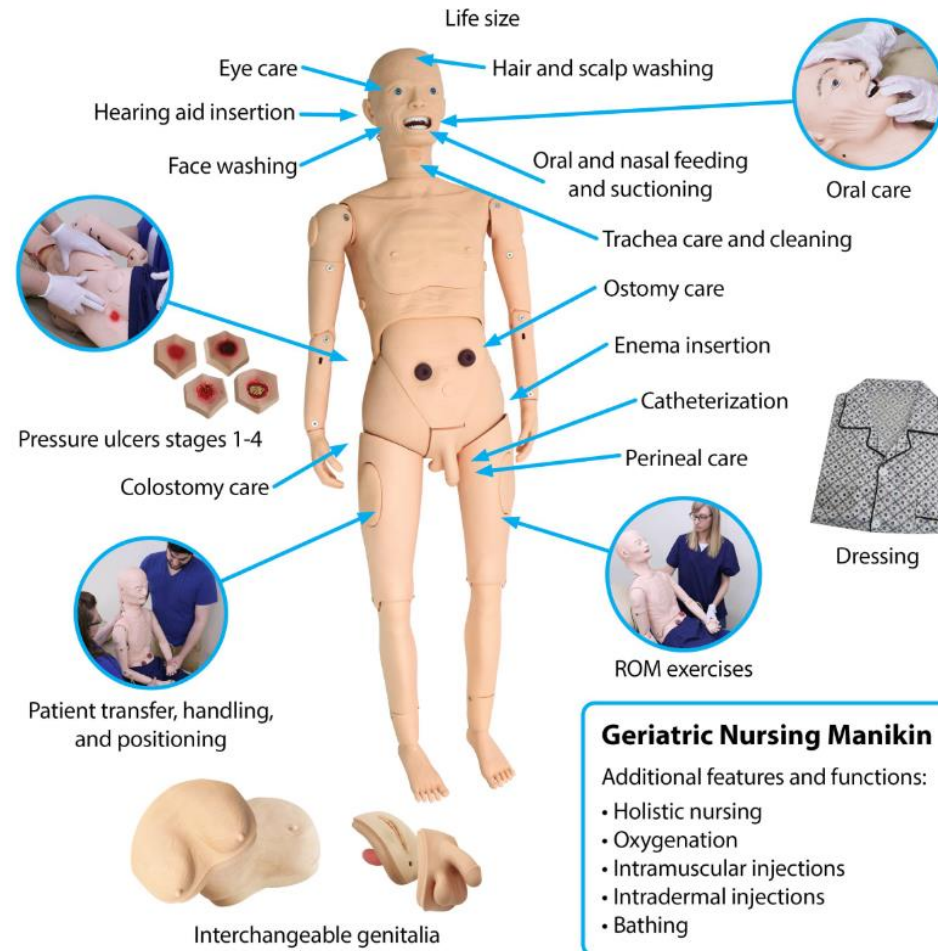
Geriatric Nursing Manikin

The Geriatric Nursing Manikin allows practice on 15 basic nursing functions:

- Oral and Nasal Feeding and Suctioning
- Trachea care and cleaning
- Mouth cavity and artificial teeth care
- Intramuscular and intradermal injections
- Urethral catheter insertion
- Colostomy care
- Pressure ulcer evaluation and care
- Patient transfer, handling, and positioning (range of motion exercises)
- Perineal care

Includes:

- Interchangeable male and female chests
- Interchangeable male and female genitals



Curriculum Highlights

5-7 hours

1. Basic Patient Care
2. Catheterization Procedures
3. Bathing and Range of Motion
4. Intramuscular Injections
5. Pressure Injuries



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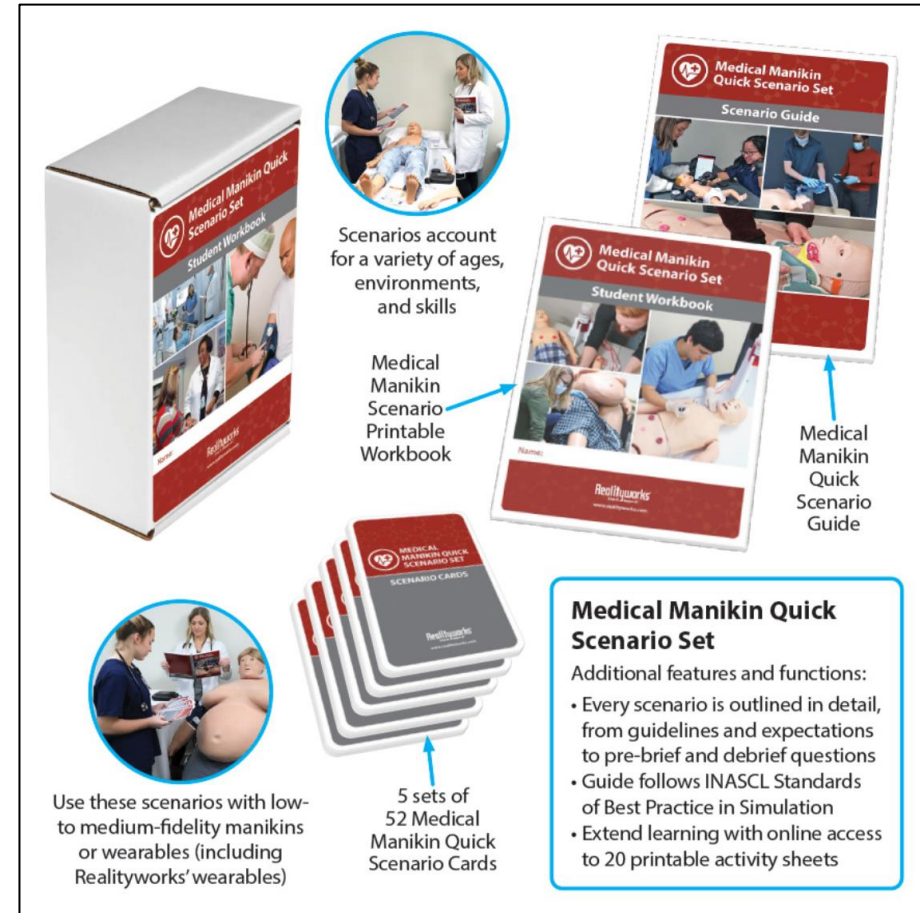


Creating Engagement through Simulation Experience



Gamification or Competition

- Role-Playing with Rewards
 - Assign specific roles (ie: lead nurse, family member, patient)
 - Give everyone responsibilities through a scenario
 - Give points or little rewards as the scenario plays out for actions and responsiveness to the situation
 - These could be for professionalism, teamwork, interaction with each other.



[Medical Manikin Quick Scenario Set](#)

Engaging Activity

- Bathing Check – Off Practice
- Create a scenario that fits the bathing scene
- Prep for the Scenario with a pre-brief
- Go through the Scenario
- Reflect with a debrief of the Scenario

Basic Patient Care: Bathing Check-Off Instructor Resource

PREPARATION:

Supplies:

- Bath wipes or washcloths/soap/2 basins
- Towels
- Bath blanket
- Laundry bag
- Patient gown
- Hand sanitizer or access to soap/water
- Clean gloves

After demonstration, have students practice bathing on the models using the following steps:

Optional: Evaluate the student's ability to complete bathing using the following steps. May score via points or satisfactory/unsatisfactory.

1.	Gather supplies needed (bath wipes or washcloths/towels/soap/basins, bath blanket, patient gown, gloves, laundry bag)	
2.	Knock, enter room and provide for privacy	
3.	Identify yourself with name and title (student nurse, etc.)	
4.	Wash your hands with sanitizer or soap/water	
5.	Identify patient by asking name and date of birth; verify this information	
6.	Explain the procedure to the patient and ask if they have any questions	
7.	Ask patient if he/she needs to use a bedpan, urinal, or bathroom	
8.	Arrange supplies on table (including filling one basin 2/3 full of warm water and soap and the other 2/3 full of warm water if not using wipes); place a few washcloths in each basin; place towels next to basins.	
9.	Wash hands and put on clean gloves	
10.	Raise bed to proper working height, place patient in semi-fowlers position and lower side rail	
11.	Place bath blanket over patient on top of linens; hold blanket as you remove the top linens; remove the linens and place in linen bag if changing linens or keep at foot of bed	
12.	Remove patient's gown while keeping patient covered with bath blanket	
13.	Remove pillow and place patient in semi-Fowlers position	
14.	Form a mitt with the washcloth in water basin and squeeze out excess water	
15.	Clean around patient's eyes using a different portion of cloth for each eye; wipe from inner canthus to outer canthus; dry eyes with towel; place used linens in linen bag	

Development of Rich Patient Backstories

Have students create their own patient health histories

- Create detailed histories of patients, including emotional dynamics, health issues, emotional responses, social interactions
- Create details from personal background, could be family connections, tv situations, trends that are on the rise



Engaging Activity

- Transparent tape or duct tape
- Scissors
- Pen
- Pill bottle or bottle with twist cap
- Glass
- Coins
- Gloves
- Envelope
- Socks
- Popcorn kernels (unpopped) or dried peas/frozen peas



Arthritis Experience Chart

Use this organizer to take notes on your arthritis simulation experience.

Task	Impact on Movement	How I Felt	How would this impact my daily life as an older adult?
Cut paper with scissors			
Write with a pen			
Open a pill bottle (or similar)			
Drink from a cup or glass			
Pick up and count change			
Other			

Incorporate Patient Perspectives

Have students do research or interview patients, peers, or family on how they would respond in different medical situations:

- How would you address concerns of:
 - Fears
 - Cultural beliefs
 - Stigmas
 - Communication styles
 - Professionalism

We do not learn from experience... we learn from reflecting on experience.

- John Dewey

Engaging Activity

- Pill Bottle
- Pen and Paper
- Walk a flight of stairs
- Button a shirt
- Water, Glass, Pitcher
- Pick up 5 coins

Geriatric Experience Checklist

Instructions: Do each task while wearing the Geriatric Simulator. Record your observations.

Task	Rating of difficulty to complete the task 1(easy) – 5 (hard)					What did you observe about your body as you completed the task?
	1	2	3	4	5	
Open a pill bottle						
Sign your name with a pen						
Walk up & down stairs (with walker or cane if available)						
Button a shirt						
Pour a glass of water from a pitcher						
Stand up and sit down on a chair						
Pick up and count 5 coins						

Key Considerations for Implementation

- Align with Learning Objectives
- Provide Clear Instruction and Expectations
- Facilitate Effective Debriefing of the Simulation
- Gather Feedback and Adapt





Basic Skills Training - Foundational Skills



Hands on Nursing Skill Trainers

Overview of Nursing Skills and Procedures

Nursing skills and procedures are foundational for delivering safe, effective, and high-quality patient care. These skills encompass a wide range of technical, interpersonal, and critical thinking abilities that allow nurses to address patients' physical, emotional, and psychological needs.

Key Nursing Skills and Procedures:

- Basic Nursing Skills
- Medication Administration
- Wound Care
- Infection Control
- Respiratory and IV Therapy
- Patient Education

Ex Examples.com



ECG Simulator



Multipurpose Training Arm



Blood Pressure Simulator



Auscultation Simulator

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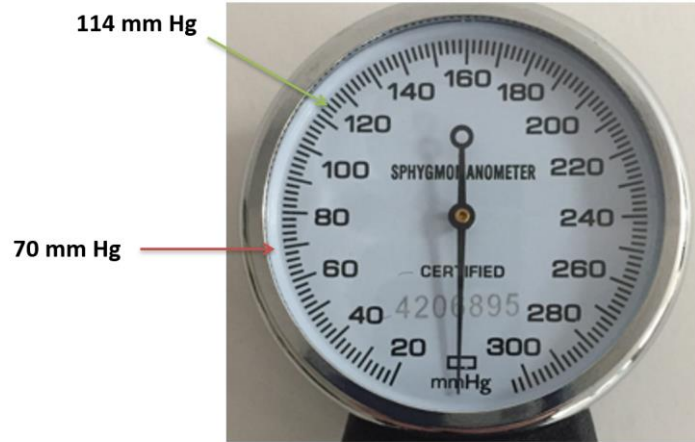


Blood Pressure

- Teaches proper cuff and stethoscope placement
- Practice and assessment mode options available
- Various practice cases mimic real life
- Checks pressure release rate
- Wrist pulse band included to listen for pulse
- Use with a standardized patient, student, or place on a manikin
- Great for a multitude of blood pressure scenarios
- Wide variety of readings
- Pulse band will stop pulsing when user has pumped up the cuff enough
- Instructor can play Korotkoff sounds through a headset for themselves or through a speaker for the whole the class to hear
- Instructor can customize the readings in assessment mode

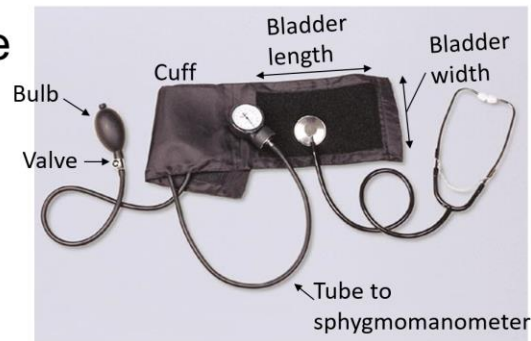


Reading the Dial



Equipment

- Sphygmomanometer
- Stethoscope



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American Heart Association Categories

Blood Pressure Category	Systolic		Diastolic
Normal	less than 120	and	less than 80
Elevated	120 – 129	and	less than 80
High Blood Pressure (Hypertension) Stage 1	130-139	or	80-89
High Blood Pressure (Hypertension) Stage 2	140 or higher	or	90 or higher
Hypertensive Crisis (Consult your doctor immediately)	Higher than 180	and/or	Higher than 120

http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/KnowYourNumbers/Understanding-Blood-Pressure-Readings_UCM_301764_Article.jsp#.Wn83RiUbNhE

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Introduction to Blood Pressure

8

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Blood Pressure Simulator



Programs?

Nursing, Medical Assisting, Nursing Assistant, Sports Medicine, Dental, EMT



Skills?

Manual blood pressure technique

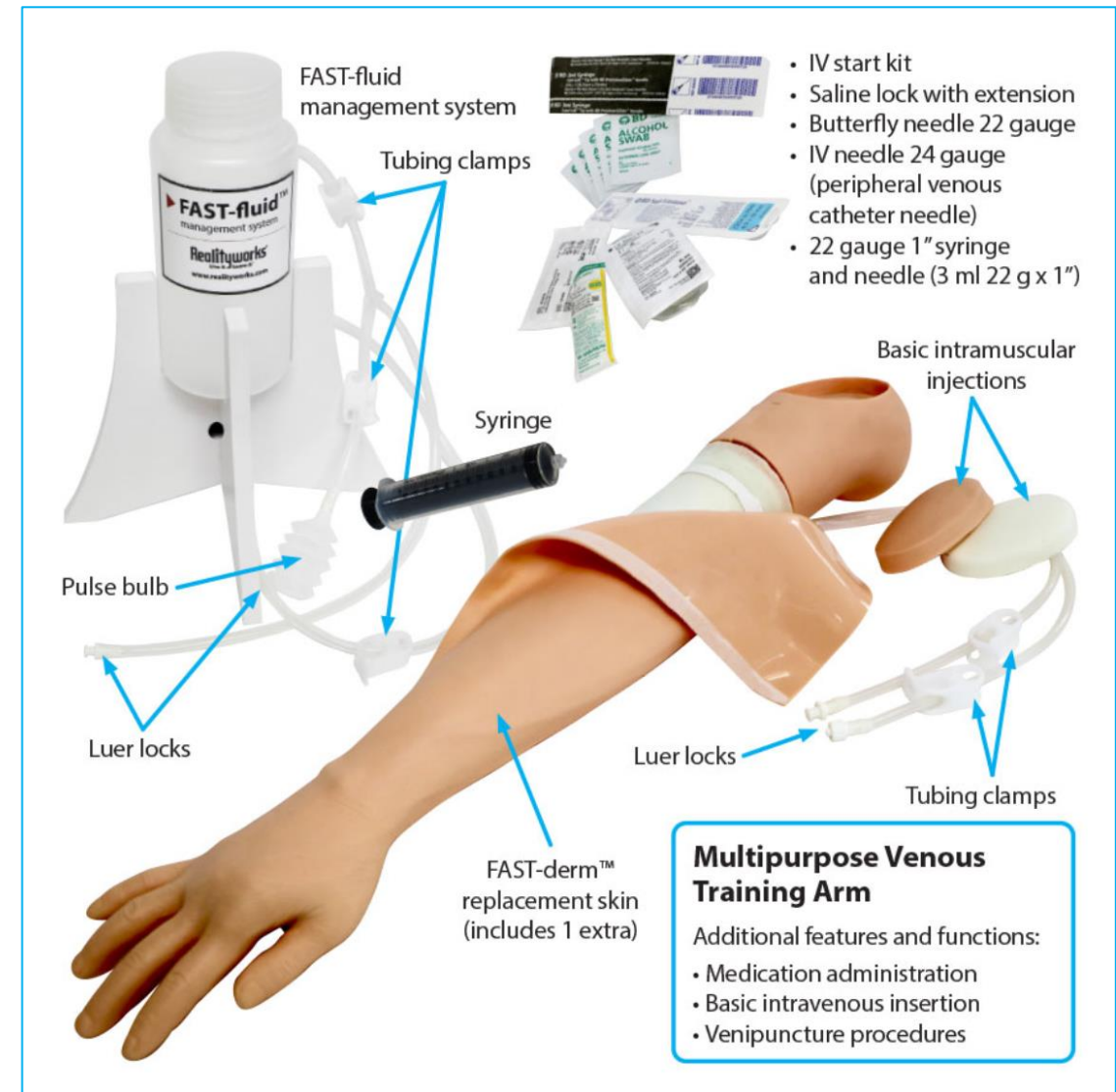


Careers?

Virtually any Health Science career!

Multipurpose Training Arm

- Allows for multiple sites for injection or blood withdrawal
 - IV insertion, intravenous (IV) bolus, phlebotomy and intramuscular injections
- Realistic self-healing skin including the FAST-derm replacement skin to make replacing training arm skin quick and easy
- includes the FAST-fluid management system, which manages fluids to make preparation, procedures and clean-up realistic and quick
- Use distilled water or saline to prime the veins and practice locating the arm's veins to prepare for a blood draw
- Provides realistic flashback during procedures



Multipurpose Training Arm



Programs?

Nursing, Medical Assisting, Patient Care Technician



Skills?

Allows practice on injection, blood withdrawal, and phlebotomy prep for skill development and mastery.

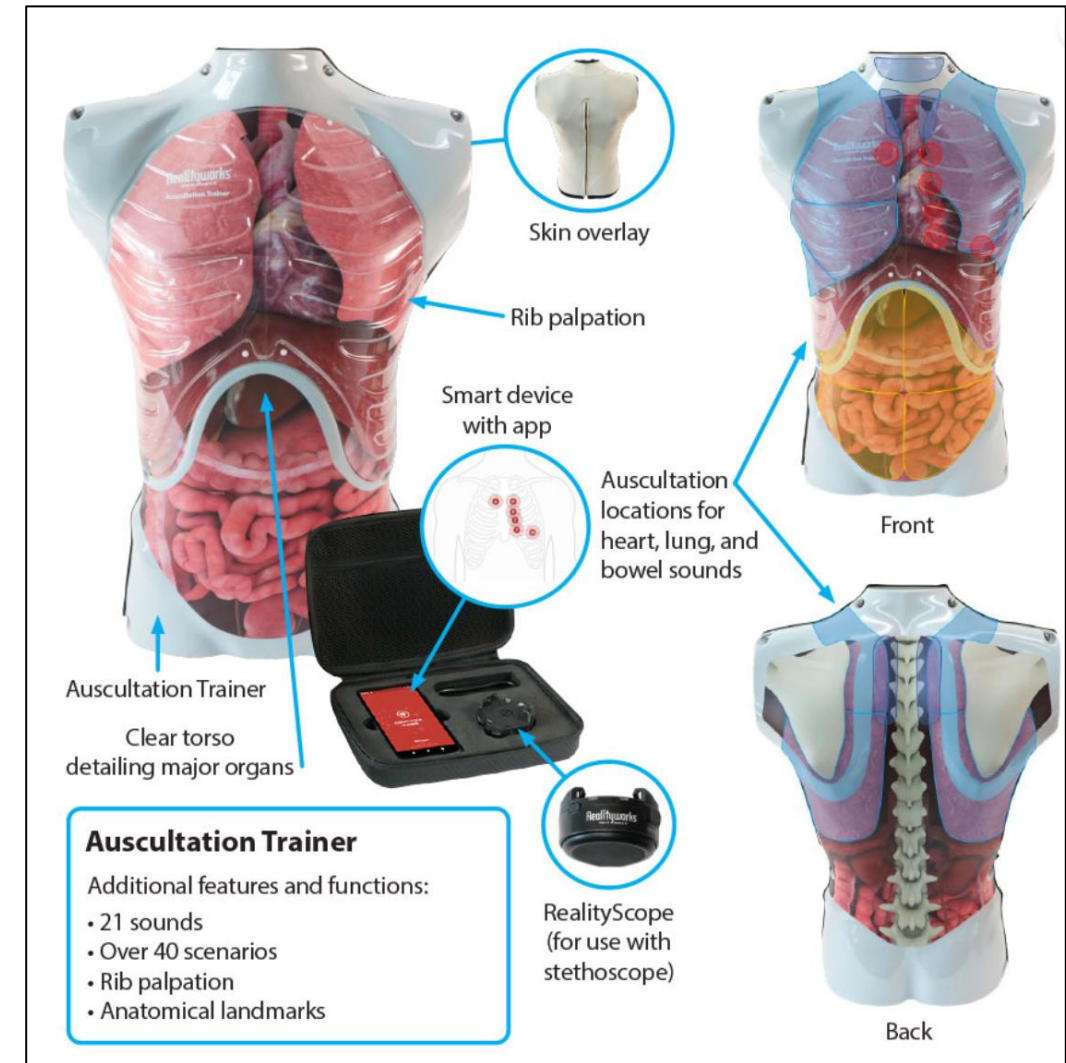


Careers?

Nursing, Medical Assistants, EMT and Paramedics

Auscultation Trainer

- RealityScope™ attachment affixes to any stethoscope
- Clear torso details major organs
- Anatomical landmarks built into the trainer
- Skin overlay removes easily
- Sounds play only when the RealityScope attachment is placed over corresponding auscultation sites
- Remove the skin overlay to help beginner students learn the basics, or leave the skin overlay on to assess advanced students' knowledge
- Includes a smart device and app programmed with 21 sounds and over 40 scenarios, such as bradypnea, hyperactive bowels and systolic murmurs
 - “High-pitched rushing sounds” (hyperactive bowel sounds)
 - “Low-pitched, loud bubbling and gurgling sounds” (Coarse crackles)
 - “High-pitched scratchy sound” (Cardiac friction rub)
 - “High- or low-pitched squeaky sounds” (Wheeze)
 - “Low-pitched coarse grating sound” (Pleural friction rub)



Auscultation Trainer



Programs?

Nursing, Medical Assisting, Patient Care Technician



Skills?

Allows correct placement for listening to heart, lung, and bowel sounds, allows for ability to identify different heart and lung sound issues



Careers?

Nurses (RN's & LPN's), Medical Assistants, EMT and Paramedics

ECG/EKG Trainer

- Smart device provides immediate feedback on electrode placement for 3-, 4-, 5-, and 12-lead configurations
- Electrodes and wires are those used in professional practice
- Smart device can project rhythms for classroom discussion
- Flashcards provide visuals of rhythms and written descriptions
- Use for formative learning in practice mode and summative assessment in testing mode
- Workbooks, flashcards and simulator with tablet provide opportunities for creative classroom management
- Flexible curriculum lets instructors go as deep as needed



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ECG Simulator



Programs?

Nursing, Medical Assisting, Patient Care Technician



Skills?

Tests and records the electrical activity of the heart, the heart's pumping action, rhythm and strength.



Careers?

Nurses (RN's & LPN's), Medical Assistants, EMT and Paramedics



Creating Engagement through Simulation Experience



Creative Use of the Simulation Environment

- Transform the Simulation Lab:
 - Have students become teachers
 - Create a “TV show” location where students put on a show of skill training
 - Recreate different healthcare settings:
 - Emergency Room
 - Operating Room
 - Home care environment
- Incorporate Props or Moulage:
 - Use props to increase realism
 - Add moulage to help identify issues with patients
 - Give backstories to the issues you see presented

Gamification and Competition

- Scenario-Based Challenges
 - Create challenges for individual students, teams, or whole classes
 - Create competition by having points/badges for:
 - correct diagnosis
 - timely interventions
 - effective communication
 - correct medical terminology



Blood Pressure Simulator

Engagement Activity

Follow all the procedures

Time the procedures

Check for accuracy of the readings

Points for correct placement, patient interaction, correct readings, patient care

Introduction to Blood Pressure Check-Off (Instructor Resource)

PART ONE: Demonstrate how to use the training tool to take a blood pressure using the following steps:

1.	Gather appropriate equipment	
2.	Knock, enter room and provide for privacy	
3.	Identify yourself with name and title (student nurse, medical assistant, nurse aide, etc.)	
4.	Wash your hands with sanitizer or soap/water	
5.	Identify patient by asking name and date of birth; state that you would verify this information with a medical record	
6.	Explain the procedure to the patient and ask if they have any questions	
7.	Verbalize that the patient would be positioned appropriately (seated, arm at heart level, legs uncrossed)	
8.	Place the cuff around the upper arm noting proper cuff size and placing it so the ARTERY label is over the brachial artery	
9.	Place the dial in view	
10.	Place the diaphragm of the stethoscope over the brachial artery at the antecubital space	
11.	Pump the BP cuff 30 mm HG above the patient's usual systolic pressure	
12.	Obtain a reading accurate within 2 points +/- of the blood pressure model	
13.	Ask your patient if they are comfortable and if they have any questions	
14.	Wash your hand with sanitizer or soap/water	
15.	Document the blood pressure below Date: Time: Blood Pressure:	
		Score:

Gamification and Competition

- “Escape Room” Style Simulation
 - Design a series of interconnected simulation tasks or patient cases
 - Students must solve within a time limit to “escape” the scenario
 - Have students work in teams to help get the correct scenario answers
 - Encourages critical thinking in a fun manner



Multipurpose Training Arm

Engagement Activity

Timed Activity

Go in sequential order

Have student do 5-8 steps to complete task

If not complete – must start over or give student, the last correct task

Introduction to Phlebotomy

Introduction to Phlebotomy Check-Off

Practice venipuncture on the models using the following steps. Depending on the method used (syringe, vacutainer, etc) to draw the blood specimen, you may have to verbalize some steps.

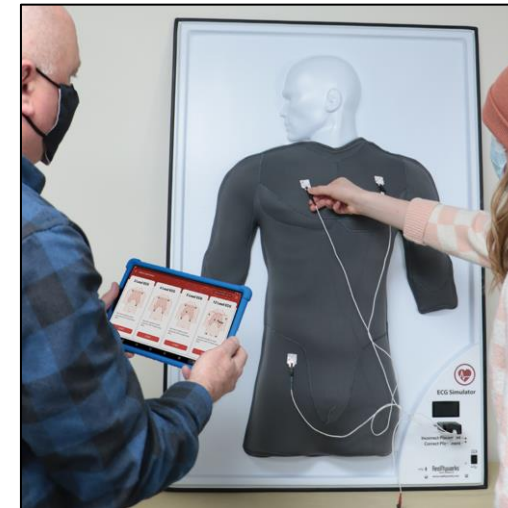
Verify written order from provider to determine type of test.
Gather supplies needed.
Knock, enter room and provide for privacy.
Identify yourself with name and title (student nurse, medical assistant, etc.).
Wash your hands with sanitizer or soap/water.
Identify patient by asking name and date of birth. Verify this information.
Explain the procedure to the patient and ask if they have any questions.
State placing patient in an appropriate position and extending the patient's arm.
Inspect the antecubital area and locate a vein that is visible, straight and clear.
Apply tourniquet 4-5 finger widths above potential site.
Palpate radial pulse to confirm arterial blood flow.
State asking of patient to open and close fist several times leaving fist clenched.
Inspect the antecubital area to confirm site.
Apply clean gloves and palpate selected vein.
Cleanse site with alcohol swab.
Anchor the vein by holding the patient's arm and placing a thumb below the venipuncture site.
Enter the vein at a 30-degree angle or less.
Draw blood collection tubes in the correct order (if applicable).
Once sufficient blood has been collected, release the tourniquet before withdrawing the needle.
Withdraw the needle gently and apply gentle pressure to the site with a clean gauze.
Discard the used needle and syringe or blood sampling device into sharps container.
Verify the label on samples and forms for accuracy.
Remove gloves and perform hand hygiene.
Check the insertion site for bleeding. Provide for patient comfort and safety.
Prepare samples for transportation.

Scenario Narratives

- “Choose your own Adventure” Simulation
 - Similar to “Escape Room” Simulation
 - Allow students to have different decision points that alter the course of the simulation
 - Lead to different outcomes based on the different needs of their patients
 - Helps to understand the impact of choices made



Auscultation Trainer



ECG Simulator

Engagement Activity

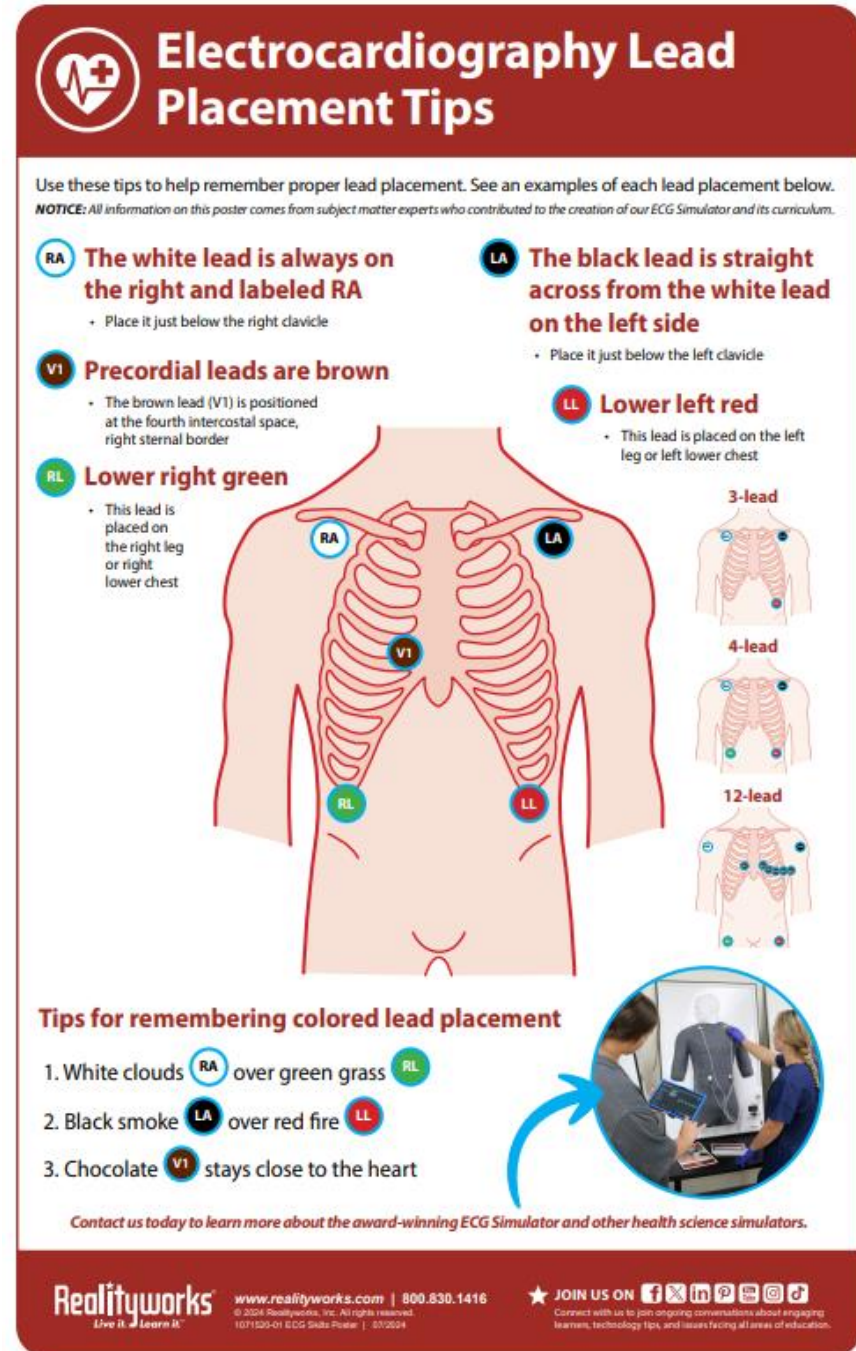
Have them have to place the leads

Go over the different types – 3, 4, 5, 12

Give different readings

See if they can understand what the readings tell them

Allow for them to pick different options for different learning outcomes



Electrocardiography Lead Placement Tips

Use these tips to help remember proper lead placement. See an examples of each lead placement below.

NOTICE: All information on this poster comes from subject matter experts who contributed to the creation of our ECG Simulator and its curriculum.

RA The white lead is always on the right and labeled RA

- Place it just below the right clavicle

LA The black lead is straight across from the white lead on the left side

- Place it just below the left clavicle

V1 Precordial leads are brown

- The brown lead (V1) is positioned at the fourth intercostal space, right sternal border

RL Lower right green

- This lead is placed on the right leg or right lower chest

LL Lower left red

- This lead is placed on the left leg or left lower chest

3-lead

4-lead

12-lead

Tips for remembering colored lead placement

- White clouds **RA** over green grass **RL**
- Black smoke **LA** over red fire **LL**
- Chocolate **V1** stays close to the heart

Contact us today to learn more about the award-winning ECG Simulator and other health science simulators.

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1071525-01 ECG Skills Poster | 07/2024

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Connect with us to join ongoing conversations about engaging learners, technology tips, and issues facing all areas of education.

Scenario Immersion

- **Telehealth Simulations**
 - Simulate virtual patient consultations
 - Practice effective communication
 - Assessment skill definition on what ailments are presented
 - Work on understanding interpersonal skills in relation to medical care
 - Use Microsoft Teams, Google Meet, or Zoom for realism



Healthcare Interpersonal Skills Program

Debrief and Reflection

- “What if?” Scenarios:
 - Ask students to consider alternative actions and potential outcomes
- Self-Reflection Journals:
 - Have students reflect on their performance, identify areas for improvement, and connect the scenario to user knowledge
- “Reverse Simulation”:
 - Have students take on the role of instructor and design a simulation scenario, requiring them to include objectives and core concepts
- Concept Mapping:
 - Visually connect the actions taken during the simulation to the principles of care

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Blood Pressure Simulator



Auscultation Simulator

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Questions?

