



THE UNIVERSITY of NORTH CAROLINA
GREENSBORO
School of Nursing

Faculty Guide

Progressive Shortness of Breath



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Year: 2022

Source: <https://youtu.be/pHC4Jh7xMoA>

How These Videos Were Developed

These patient videos were scripted by UNCG School of Nursing professional educators. The scenarios are fictitious but based upon real circumstances and acted out by professional actors. The videos are available on YouTube and H5p platforms. Interactive questions were inserted into the videos using the h5p.org online platform. Closed captioning is included for increased accessibility.

The Academic Practice Partnerships Today for Competent Practitioners

Tomorrow (APPTCPT) video case simulations have been designed to enhance nurse practitioners' skills in health history, advanced physical assessment, diagnostic reasoning, and developing management plans. These video case simulations integrate the *Adult-Gerontology Primary Care Nurse Practitioner Competencies* (AACN, 2016) in the learning objectives.

Course Use

You can link to or embed these videos for your class. H5p videos can be assigned to students to complete as homework or completed in small groups or as a whole class for discussion. H5p videos can be incorporated into a learning management system (LMS) to track student responses. The YouTube videos can be linked or embedded in your course.

Using these Videos with an LMS for Formative Learning

Blackboard: Here are instructions for how to incorporate [h5p videos into Blackboard](#).

Canvas: Using Canvas with H5P.com

To collect students' scores, you'll need an h5p.com account. To get started with H5P in Canvas just go to [H5P.com](https://www.h5p.com) and start a 30 days free trial. You should make sure your Canvas admin is ready to [set up the LTI integration](#). By using H5P.com, the content is inserted right away, grades are stored in the gradebook and you can see what your users

answered. Then you can download these ANEW patient videos from h5p.org and import them into your h5p.com account using these [import/export instructions](#).

Moodle: See these [instructions for using h5p.org with Moodle](#).

Disclaimer:

As new scientific information becomes available through basic and clinical research, recommended treatments and therapies undergo changes. At the time of development, the authors have done everything possible to make this simulation case accurate with accepted standards at the time of production.

INTRODUCTION




This simulation video case, “**Progressive Shortness of Breath**” presents primary care nurse practitioner learners an opportunity to develop their diagnostic reasoning and advanced health assessment skills/knowledge to function in an APRN role. Learners can discuss and collaborate to diagnosis the patient presentation and develop an appropriate plan of care for treatment and address any preventative care needs. The learning focus of this simulation video case can be for nurse practitioner learners early in their clinical management program or be adjusted to learners at the end of their education program by adding content on ECG, cardiac ultrasound, laboratory testing, and applying the current ACC/AHA/HFSA Focused Guidelines for the Management of Heart Failure.

LEARNING OBJECTIVES

This video case simulation prepares learners to:

1. Apply knowledge in advance health assessment to form differential diagnoses based upon scientific knowledge to differentiate between normal and abnormal findings in physiological, psychological.
2. Discuss educational strategies and compensatory mechanisms for patients experiencing dyspnea upon exertion to incorporate in their daily lives.
3. Adapt teaching on management of symptoms based on the patient’s readiness to learn, literacy and resources.

The charts below were developed through a consensus process by the five nurse practitioner faculty experts who independently reviewed the videos and the faculty guides to determine the relevance of the content of the video and assignments with each of the domains, advanced level nursing education competencies, essentials level 2 sub-competencies and the concepts. The competencies, sub competencies and concepts listed here have an 80% consensus on the item (Polit & Beck, 2006).

Domain, Competencies, and Sub-competencies for Advanced-level Professional Nursing	
	Knowledge for Nursing Practice
1.2 -Apply theory and research-based knowledge from nursing, the arts, humanities, and other	
1.2f Synthesize knowledge from nursing and other disciplines to inform education, practice, and research.	
1.2g Apply a systematic and defensible approach to nursing practice decisions.	
1.2h Employ ethical decision making to assess, intervene, and evaluate nursing care.	
1.3 Demonstrate clinical judgment founded on a broad knowledge base.	
1.3d Integrate foundational and advanced specialty knowledge into clinical reasoning.	
1.3e Synthesize current and emerging evidence to influence practice.	
	Person-Centered Care
2.1 Engage with the individual in establishing a caring relationship.	
2.1d Promote caring relationships to effect positive outcomes.	
2.1e Foster caring relationships.	
2.2 Communicate effectively with individuals.	
2.2g Demonstrate advanced communication skills and techniques using a variety of modalities with diverse audiences.	
2.2i Apply individualized information, such as genetic/genomic, pharmacogenetic, and environmental exposure information in the delivery of personalized health care.	
2.3 - Integrate assessment skills in practice.	
2.3h Demonstrate that one's practice is informed by a comprehensive assessment appropriate to the	
2.4 - Diagnose actual or potential health problems and needs.	
2.4f Employ context driven, advanced reasoning to the diagnostic and decision-making process.	
2.4g Integrate advanced scientific knowledge to guide decision making.	
	Professionalism
9.1 - Demonstrate an ethical comportment in one's practice reflective of nursing's mission to	
9.1j Suggest solutions when unethical behaviors are observed.	
9.2 - Employ participatory approach to nursing care.	
9.2i Identify innovative and evidence-based practices that promote person-centered care.	
9.2k Model professional expectations for therapeutic relationships.	
9.2l Facilitate communication that promotes a participatory approach.	

Adapted with permission from American Association of Colleges of Nursing. American Association of Colleges of Nursing. (2021). *The essentials: Core competencies for professional nursing education*. <https://www.aacnnursing.org/Portals/42/AcademicNursing/pdf/Essentials-2021.pdf>

Concepts for Nursing Practice
Clinical Judgment
Communication
Compassionate Care
Evidence-Based Practice

Learners of Advanced Practice Health Professions:

- Family Nurse Practitioner (FNP)
- Adult-Gerontology Primary Care Nurse Practitioner (AGPCNP)
- Adult-Gerontology Acute Care Nurse Practitioner (AGACNP)
- Physician Assistant (PA)

CASE OVERVIEW

Case: Jamie Mackey is a 65-year-old Caucasian male with chief complaint of progressive increased in shortness of breath, recently. Patient's actual diagnosis is heart failure.

Case Setting: A 65-year-old male presents to clinic to see the nurse practitioner for increased breathlessness. Patient states, "I'm having difficulty breathing." This is a focused visit in a primary care setting.

Case Background Information for Faculty: Jamie Mackey states he has been experiencing progressive shortness of breath on walking for the last 3 weeks. He reports having to stop to catch his breath halfway up one flight of stairs in his home. He has difficulty lying down in bed (supine) with noted increased shortness of breath. He now sleeps on three pillows and still wakes up breathless on several occasions in the middle of the night. Before, the last 3 weeks, he used to sleep with only one pillow. He reports increased swelling in his ankles by the end of each day for the last few weeks. He is easily fatigued or tired with limited activity. He has recently noticed some vague discomfort in the upper right side of his abdomen. He denies chest discomfort or pain, palpitations, or feelings of dizziness or faint. Denies wheezing with his shortness of breath.

Physical findings and vital signs: ***This information is not available in the H5P video with embedded interactive questions or YouTube video. Faculty can provide the students with these physical findings and vital signs or develop their own for in-class or small group discussion/activities.

- A. **Vital Signs:** BP: 150/100, OT: 98.4 orally HR: 90 & regular RR: 22 Ht: 5 ft, 11 inches, Wt: 220
- B. **General:** Well developed, overweight male, appears stated age; no acute distress
- C. **Respiratory:** Chest - dullness and decreased breath sounds at the right base; bibasilar rales.
- D. **Cardiovascular/peripheral vascular:** JVD to the angle of the jaw in the sitting position. LV impulse diffuse, laterally displaced. Parasternal lift present. S2 physiologically split, S3 at apex, grade II/VI pansystolic murmur at apex; 2+ pedal edema bilaterally.
- E. **Gastrointestinal:** Abdomen - liver enlarged. Patient has discomfort in upper right abdomen.
- F. **Skin:** warm, dry to touch; color pink

Case Simulation: Progressive Shortness of Breath (11:19 minutes)

- Interactive video h5p link: <https://h5p.org/node/405936>
- YouTube link: <https://youtu.be/pHC4Jh7xMoA>

INTERACTIVE H5P CASE QUESTIONS*

1. Based upon the patient's chief complaint, which of the following conditions should be

considered as leading differential diagnoses? Select all that apply.

- a. **COPD**
- b. **Asthma**
- c. **Coronary artery disease**
- d. **Pneumonia**
- e. **Heart failure**
- f. **Anemia**

2. The next step is to obtain the history of present illness (HPI). What would be your first question using the OLDCARTI mnemonic?
- a. Do you feel short of breath all the time?
 - b. What type of activities make you feel short of breath?
 - c. **When did you first notice having difficulty breathing?**
 - d. When you feel short of breath, does it go away when you rest?
3. Using the mnemonic you learned to take a history of present illness, drag and drop the following items in the correct order.

Onset
Location
Duration
Characteristics
Aggravating factors
Relieving factors
Treatment tried
Impact or interference with life

4. What is the correct medical term describing this patient's symptom of waking up suddenly in the middle of the night feeling breathless?
- a. Orthopnea
 - b. Dyspnea
 - c. Acute asthma exacerbation
 - d. **Paroxysmal nocturnal dyspnea**
 - e. Sleep apnea
5. From the HPI, which of the following are pertinent positives described by the patient? Select all that apply.
- a. **Dry cough**
 - b. Palpitations
 - c. **Dyspnea on exertion**
 - d. **Peripheral edema**
 - e. **Breathlessness at night**
 - f. Angina
6. Which of the patient's medications could be causing his symptoms?
- a. None of his medications.
 - b. Lisinopril

- c. Hydrochlorothiazide
 - d. Metformin
 - e. Pioglitazone**
 - f. Rosuvastatin
 - g. Aspirin
7. What body systems should the nurse practitioner include in the physical exam for this patient? Select all that apply.
- a. General**
 - b. Skin**
 - c. HEENT**
 - d. Cardiac exam**
 - e. Peripheral cardiovascular system**
 - f. Respiratory system**
 - g. Gastrointestinal system**
 - h. Genitourinary system
 - i. Musculoskeletal system
 - j. Neurological system
8. Check all the physical findings that may present in a patient with heart failure.
- a. Tactile fremitus
 - b. Jugular vein distention**
 - c. Crackles (rales)**
 - d. Wheezes**
 - e. Point of maximal impulse (PMI) displaced to right
 - f. Positive hepatojugular reflux**
 - g. Hepatomegaly**
 - h. Splenomegaly
 - i. S3 gallop**
 - j. S4**
 - k. Venous hum
 - l. Peripheral edema**

***bolded responses** are correct answers

POSSIBLE DISCUSSION QUESTIONS

1. What are the pertinent positives and negatives learned from the HPI and review of systems (ROS)?
2. Based on the subjective findings of the chief complaint and HPI, what are the top five differential diagnoses? Support your choices with rationales.
3. Is/are there any medication(s), over the counter drugs, vitamins or herbs that can potentially be causing this patient's symptoms?
4. In conducting a physical examination in a patient with suspected heart failure, what are the physical findings that may present in a patient with heart failure?

5. Identify pertinent positives and negative in the physical findings. Explain the meaning of these findings. How do they assist in the ruling in or out a differential diagnosis?
6. What diagnostic test are the most appropriate to order during this visitation? Explain your rationale or ordering each test(s).
7. Based on the differentials and plan of care what are some preventative care measures or health promotion initiatives that could be included?

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