



THE UNIVERSITY *of* NORTH CAROLINA  
**GREENSBORO**  
School *of* Nursing

# Faculty Guide

## Progressive Fatigue

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Authors: Laurie Kennedy-Malone, Karen A. Amirehsani, Md Towfiqul Alam

Year: 2022

Source: <https://youtu.be/8wMH76kZNTE>

## **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

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This simulation video case, “**Progressive Fatigue**” 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 long term management of patients with hypothyroidism.

# LEARNING OBJECTIVES

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**This video case simulation prepares learners to:**

1. Distinguish between normal and abnormal changes of aging in an older patient presenting with fatigue, constipation, and forgetfulness.
2. Recognize the impact of the social determinants of health on the patient’s health care service financial needs.
3. Distinguish between signs and symptoms of age-related memory loss and dementia.
4. Adapt teaching on management of symptoms of fatigue and constipation 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).

### Concepts for Nursing Practice

Clinical Judgment
Communication
Compassionate Care
Diversity, Equity, Inclusion
Ethics
Evidence-Based Practice
Social Determinants of Health

### 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)

**Domain, Competencies, and Sub-competencies for Advanced-level Professional Nursing Education**



**Knowledge for Nursing Practice**

**1.1 - Demonstrate an understanding of the discipline of nursing's distinct perspective and where shared perspectives exist with other disciplines**

1.1e Translate evidence from nursing science as well as other sciences into practice.

1.1f Demonstrate the application of nursing science to practice.

**1.2 - Apply theory and research-based knowledge from nursing, the arts, humanities, and other sciences.**

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.

1.3f Analyze decision models from nursing and other knowledge domains to improve clinical judgment.



**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 functional area of advanced nursing practice.

**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.

**2.5 - Develop a plan of care.**

2.5h Lead and collaborate with an interprofessional team to develop a comprehensive plan of care.

2.5i Prioritize risk mitigation strategies to prevent or reduce adverse outcomes.

2.5j Develop evidence-based interventions to improve outcomes and safety.

2.5k Incorporate innovations into practice when evidence is not available.

**2.6 - Demonstrate accountability for care delivery.**

2.6g Promote delivery of care that supports practice at the full scope of education.



## 2.8 - Promote self-care management.

2.8f Develop strategies that promote self-care management.

2.8h Employ counseling techniques, including motivational interviewing, to advance wellness and self-care management.



Professionalism

## 9.2 - Employ participatory approach to nursing care.

9.2i 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>

# CASE OVERVIEW

**Case:** A 72-year-old Caucasian female, Sylvia DeAngelo, presents with fatigue and exhaustion for the past 6 months. She currently works part-time as a baker, working three days a week part-time. The patient's husband encouraged her to be seen by a health care provider. Her internal medicine physician retired a year ago and she presents today as a new patient to the nurse practitioner. This is a hypothyroidism case.

**Case Setting:** Mrs. DeAngelo presents to the primary care clinic.

**Case Background Information for Faculty:** Sylvia DeAngelo was born in Genoa Italy and has been in the United States since she was 15. She is married 52 years to Gino who has been self-employed for many years. She has two daughters Emily (38) and Whitney (42). She is very concerned that she will lose her job due to her fatigue and feels they need her income for financial stability. She relates that she does drink socially 1-2 glasses of wine a week with meals, never has smoked and drinks 2 cups of regular coffee but recently has added a diet caffeinated soda in the late afternoon just to stay awake. She relates that she gained about 20 pounds in the past year, noticed her skin is dry with yellowing of her palms, relates to always feeling cold and is experiencing constipation.

### Past Medical History and Review of Systems

- A. **General State of Health:** Until now good
- B. **Prior Illnesses or Injury:** none
- C. **Past Hospitalizations:** Appendectomy at age 16; 2 normal vaginal deliveries [38 & 42 years ago]
- D. **Allergies and Immunizations:** no allergies; usual immunizations - tetanus 5 years ago
- E. **Current Medications:** OTC laxative [Exlax] during the past 5 weeks - once every 10 days
- F. **Other drugs:** Occasional acetaminophen for pain, Centrum silver once a day. No calcium. Just started taking the Ex-lax for constipation.
- G. **HEENT/Neurologic:** Has noticed a decrease in the sense of taste. Feels that she is adding more sweetener and salt to foods. Hopes this does not interfere with baking!

Occasionally notes ringing in her ears; especially when it is quiet at night. States that while she has not noticed, her husband thinks her hearing is decreased.

**H. Breasts:** No problems noted

**I. Respiratory:** No shortness of breath upon exertion, no coughing

**J. Cardiovascular (including peripheral):** no palpitations, no chest pain.

**K. Gastrointestinal:** No heartburn, no nausea, no vomiting. Constipated for the past six months.

**L. Genitourinary:** No frequency, urgency, burning, no incontinence.

**M. Gyn:** had hot flashes and stopped menstruating 23 years ago, no estrogen replacement; no gynecological exam for 15 years; had 2 mammograms in past 3 years [at the Health Department]

**N. Musculoskeletal:** Muscle aches in arms, shoulders.

**O. Psychiatric:** Has been feeling occasionally sad, despite spending enjoyable times with her grandchildren. States that maybe she is feeling this way because she is tired. Also feeling forgetful, maybe because of being fatigued.

**P. Hematologic:** No bleeding noted.

### Physical Exam Results

**General Appearance:** Appears slightly depressed and tired. Note loss of the lateral aspect of both eyebrows.

**Vital Signs:** BP: 123/85 P: 60 OT: 98.2°F

**General/Endocrine:** Thyroid slightly enlarged with no masses

**Gastrointestinal:** rectal exam: no masses, brown stool, hemoccult negative

**Skin:** slight yellowish cast on face and slight yellow tinge on hand

**HEENT:** normal except mild periorbital edema. Rinne Hearing test: Reports hearing the sound longer through the air conduction but not twice as long as the bone conduction,

**Genitourinary:** Deferred.

**Breasts:** no masses or discharge

**Musculoskeletal:** normal muscle strength all extremities, no joint problems

**Respiratory:** clear to auscultation and percussion

**Peripheral Vascular:** pulses full and equal; no carotid or femoral bruits

**Cardiovascular:** normal heart sounds, no murmurs

**Neurologic:** deep tendon reflexes are full & symmetrical, but the relaxation phase is markedly prolonged; toes are down going.

Family History	Age	Health	Cause of Death
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Parents: father (Ed)		died at age 75 from a stroke	
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mother (Nancy)	93	alive and well with arthritis, may have some senility	
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Siblings: sister (Dorothy)		takes (high) blood pressure and thyroid medicines, visits each Christmas from California, "don't know what her problem is."	
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\* \* \* *no family history of diabetes, cancer, or heart disease*

Other: 2 daughters	38 & 42	who have no known medical problems	
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#### Case Simulation: Progressive Fatigue: (23:13 minutes)

- Interactive video h5p link: <https://h5p.org/node/358854>
- YouTube link: <https://youtu.be/8wMH76kZNTE>



# INTERACTIVE H5P CASE QUESTIONS\*

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1. In asking the patient questions about her past medical history the nurse practitioner needs to gather data pertaining to the patient's past medical history. Which of the following questions should the nurse practitioner ask if seeking clues to the presentation of fatigue for the patient in this case? Check all that apply.
  - a. **Have you ever experienced this feeling of prolonged fatigue before?**
  - b. Have you noticed any tremors? (Tremors often appear in patients with hyperthyroidism)
  - c. **Do you have an history of extensive neck surgery or radiation to the neck or head?**
  - d. **Have you had any extensive exposure to fire retardation materials or fungicides?**
  - e. **Have you ever taken lithium before?**
  - f. **Have you ever taken amiodarone before?**
  - g. **Any personal history or family history of any endocrine disorders?**
  - h. **Any evidence of bleeding?**
  - g. Any associated weakness of your upper extremities? (Proximal weakness often occurs in hyperthyroidism)
2. Focused questions in the review of systems aid the nurse practitioner in narrowing down the list of differential diagnosis. Select from the list of questions below that should be asked to aid in the differential diagnoses of fatigue for the patient in this case. Check all that apply.
  - a. **How you found that you are having difficulty concentrating?**
  - b. **Are you constipated and if so, is this a new problem or has become worse since the onset of your symptoms?**
  - c. Have you noticed your heart rate has increased with exertion?
  - d. **Have you noticed a change in your sense of taste?**
  - e. **Are you experiencing any changes in your sleep?**
  - f. **Has there been a change in your weight in the past 3 months?**
  - g. **Have you noticed any changes in your hearing?**
  - h. **Have you noticed any changes to temperature intolerance?**
  - i. Have you noticed any changes to muscle mass in your extremities?
  - j. Have you felt withdrawn or apathetic?
3. Given the reported symptoms of fatigue, constipation, xerosis, and weight gain, the nurse practitioner will focus her physical examination for positive clinical signs that may be indicative of an underlying condition that presents with these symptoms. Select all the following clinical signs that a nurse practitioner might observe initially in a patient with these clinical symptoms listed above.
  - a. **Queen Anne's sign—outer third of eyebrow missing**
  - b. **Periorbital edema**
  - c. **Yellowing of palms of hand**

- d. **Enlarged thyroid (picture of neck)**
  - e. Pale conjunctiva
  - f. Eye lid lag and lid retraction
4. Which of the following differential diagnosis will you consider in this patient?  
Indicate all that apply:
- a. **Hypothyroidism**
  - b. **Dementia**
  - c. **Anemia**
  - d. **Depression**
  - e. Anxiety—New or exacerbated cases of anxiety may occur with a new diagnosis of hyperthyroidism.
  - f. Atrial fibrillation new cases of Atrial fibrillation often occur with a new diagnosis of hyperthyroidism
  - g. **Chronic fatigue syndrome**
5. When conducting a cognitive screening test, the nurse practitioner recognizes that:  
Check all that apply:
- a. **Following the written directions of the test are important to obtain accurate results**
  - b. Improvising for patient specific needs is permissible to obtain good baseline data
  - c. **Selection of cognitive tests for screening purposes should consider patient attributes and abilities such as educational level, spoken language, dexterity, and visual and hearing capabilities.**
  - d. Tests of cognition can be administered over time to obtain a score without fatiguing the patient.
6. In conducting a physical examination in a patient with suspected hypothyroidism, the nurse practitioner conducts a focused physical examination. Check all the physical findings that may present in an older adult with hypothyroidism:
- a. **Outer third of eyebrow missing**
  - b. **Puffy eyelids**
  - c. **Yellowing of palms of hand**
  - d. **Enlarged thyroid (picture of neck)**
  - e. **Pale conjunctiva**
  - f. Cachectic appearance
  - g. Eye lid lag and lid retraction
  - h. **Course dry hair**
  - i. **Macroglossia**
  - j. **Bradycardia**
  - k. **Delayed response to reflex relaxation phase**
  - l. **Non -pitting edema of lower extremities**

- m. **Positive Phalen maneuver or Tinel's sign.**
  - n. **Ataxic gait**
  - o. Arrhythmia
7. In a patient that you suspect hypothyroidism, which diagnostic test would you consider ordering first?
- a. Ultrasound of thyroid (Ultrasound would be ordered to determine presence of nodules or cysts)
  - b. **Thyroid stimulating hormone (TSH) The serum TSH level is the preferred first laboratory test**
  - c. Thyroid antibody tests (Thyroid antibody tests would be ordered following a diagnosis of thyroid disease to determine if there is an immune system dysfunction).
  - d. Triiodothyronine (Abnormal triiodothyronine can be indicative of early thyroid disease, but also starvation)
8. In educating patients with hypothyroidism prescribed levothyroxine, we know certain food products can interfere with the absorption. Select the food products that can interfere with the absorption of levothyroxine and should be avoided several hours after the dosing of this medication:
- a. **Walnuts**
  - b. **Calcium fortified juices**
  - c. **Dietary fiber**
  - d. **Soybean flour**
  - e. **Cotton seed meal**
  - f. **Dairy products**
  - g. **Broccoli**

\***Bolded answers** are the correct responses

## POSSIBLE DISCUSSION QUESTIONS

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1. Given the patient's concern for financial stability and her ability to pay for any new medications, what resources in your community could the nurse practitioner recommend to the patient?
2. With the probable diagnosis of hypothyroidism, what specific information on self-care management of hypothyroidism should the nurse practitioner provide the patient on subsequent visits?

# REFERENCES

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- 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>
- Calsolaro, V., Niccolai, F., Pasqualetti, G., Tognini, S., Magno, S., Riccioni, T., ... & Monzani, F. (2019). Hypothyroidism in the elderly: who should be treated and how? *Journal of the Endocrine Society*, 3(1), 146-158. <https://doi.org/10.1210/js.2018-00207>
- Duntas, L. H., & Yen, P. M. (2019). Diagnosis and treatment of hypothyroidism in the elderly. *Endocrine*, 66(1), 63-69. <https://doi.org/10.1007/s12020-019-02067-9>
- Gourmelon, R., Donadio-Andréi, S., Chikh, K., Rabilloud, M., Kuczewski, E., Gauchez, A. S., ... & Bonnefoy, M. (2019). Subclinical hypothyroidism: is it really subclinical with aging? *Aging and Disease*, 10(3), 520. <https://doi.org/10.14336/AD.2018.0817>
- Jasim, S., & Gharib, H. (2018). Thyroid and aging. *Endocrine Practice*, 24(4), 369-374. <https://doi.org/10.4158/EP171796.RA>
- Jonklaas, J., Bianco, A. C., Bauer, A. J., Burman, K. D., Cappola, A. R., Celi, F. S., ... & Sawka, A.M. (2014). Guidelines for the treatment of hypothyroidism: prepared by the America Thyroid Association task force on thyroid hormone replacement. *Thyroid*, 24(12), 1670-1751. <https://doi.org/10.1089/thy.2014.0028>
- Leng, O., & Razvi, S. (2019). Hypothyroidism in the older population. *Thyroid research*, 12(1), 1-10. <https://doi.org/10.1186/s13044-019-0063-3>
- Peeters, R. P. (2017). Subclinical hypothyroidism. *New England Journal of Medicine*, 376(26), 2556-2565. <https://doi.org/10.1056/NEJMcp1611144>
- Polit, D. F., & Beck, C. T. (2006). The content validity index: Are you sure you know what's being reported? Critique and recommendations. *Research in Nursing & Health*, 29(5), 489-497.
- Saifi, A., Ahmadi, A., & Mansourian, A. (2017). Hypothyroidism in Elderly Population: A Review. *Journal of Clinical and Basic Research*, 1(1), 47-53. <http://dx.doi.org/10.18869/acadpub.jcbr.1.1.47>
- Taylor, P. N., Albrecht, D., Scholz, A., Gutierrez-Buey, G., Lazarus, J. H., Dayan, C. M., & Okosieme, O. E. (2018). Global epidemiology of hyperthyroidism and hypothyroidism. *Nature Reviews Endocrinology*, 14(5), 301-316. <https://doi.org/10.1038/nrendo.2018.18>
- Watson, C.S. & Guilbeau, J. (2021). Assessment and Management: Primary Hypothyroidism in Women. *Women's Healthcare*, 9(1), 36-40.

<https://www.npwomenshealthcare.com/assessment-and-management-primary-hypothyroidism-in-women/>

## OTHER RESOURCES

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St. Louis University Mental Status Examination  
<http://aging.slu.edu/pdfsurveys/mentalstatus.pdf>