



THE UNIVERSITY of NORTH CAROLINA
GREENSBORO
School of Nursing

Faculty Guide

Type 2 Diabetes Mellitus



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Year: 2022

Source: <https://www.youtube.com/watch?v=afQzcanvQMs>

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, “**Type 2 Diabetes Mellitus**” 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 such as laboratory testing, current American Diabetes Association treatment guidelines, and the American Association of Clinical Endocrinologists and American College of Endocrinology type 2 diabetes management algorithm.



LEARNING OBJECTIVES

This video case simulation prepares learners to:

1. Distinguish between normal and abnormal changes related to having type 2 diabetes in an older adult.
2. Recognize the impact of the social determinants of health on the delivery of health care services for this patient.
3. Develop an evidence-based clinical management plan that takes into consideration cost, patient preferences, and need for referrals.
4. Discuss educational and disease prevention strategies for older adults with type 2 diabetes.
5. Adapt teaching on diabetes management based on the patient’s readiness to learn, health 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
1.1 - Demonstrate an understanding of the discipline of nursing's distinct perspective and where shared perspectives exist with other disciplines.	
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	
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	
2.2i Apply individualized information, such as genetic/genomic, pharmacogenetic, and environmental exposure	
2.2j Facilitate difficult conversations and disclosure of sensitive information.	
2.3 - Integrate assessment skills in practice.	
1.3f Analyze decision models from nursing and other knowledge domains to improve clinical judgment.	
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.	
2.6 - Demonstrate accountability for care delivery.	
2.6g Promote delivery of care that supports practice at the full scope of education.	

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>

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)

Concepts for Nursing Practice

Clinical Judgment

Communication

Compassionate Care

Diversity, Equity, Inclusion

Ethics

Evidence-Based Practice

Social Determinants of Health

CASE OVERVIEW

Case: Walter James is a 78-year old Caucasian male who presents to the office for a routine chronic care visit for type 2 diabetes management. This is a 3-month follow-up visit. The patient has had diabetes for 15 years. He reports always taking his medications. His home fasting blood sugars are in the 140's when he checks them. He does not check his blood sugars at any other time of the day unless he feels like his sugar is low. He reports hypoglycemic episodes towards the end of the month when he has food insecurity due to a lack of finances. He manages the hypoglycemic episodes with ice cream, candy, and cookies. The patient has Medicare and Medicaid health insurance.

Case Setting: Primary care office setting.

Case Background Information for Faculty: Walter James has had diabetes for 15 years. He is a relatively new patient to the practice, having just recently transferred care from out of state to live closer to his daughter, son-in-law, and 2 teenage grandchildren. He lives alone in a senior low-income apartment and has limited funds for healthy food choices.

This is the patient's second visit to this practice. Past medical history is significant for hypertension for 20 years, hyperlipidemia for 12 years, COPD for 7 years, and chronic kidney disease stage 3 for 5 years. He is a former smoker (25 pack year history).

Medications include: metformin 1000 mg BID for diabetes, glimepiride 4 mg daily for diabetes, hydrochlorothiazide-losartan 12.5 mg/100 mg for hypertension, amlodipine 5 mg for hypertension, atorvastatin 40 mg for hyperlipidemia, Incruse, Breo Ellipta, and albuterol for COPD, and a daily 81 mg aspirin.

His A1c today in clinic is 8.2%, but he is complaining of frequent episodes of hypoglycemia for which he corrects with cookies, candy, or ice cream. His fasting labs from 2 days ago reveal LDL of 68, fasting glucose of 138, and GFR of 51 mL/min. Last eye exam was 3 years ago. BP today is 128/78.

Case Simulation: Type 2 Diabetes Mellitus (14:27 minutes)

- Interactive video h5p link: <https://h5p.org/node/521655>
- YouTube link: <https://www.youtube.com/watch?v=afQzcanvQMs>

INTERACTIVE H5P CASE QUESTIONS*

1. What are common complications in the management of type 2 diabetes? Select all that apply.
 - a. **Cardiovascular disease**
 - b. **Retinopathy**
 - c. **Neuropathy**
 - d. **Nephropathy**
 - e. **Diabetes distress**
 - f. **Hypoglycemia**
 - g. **Hyperglycemia**
2. Which of the following are symptoms of hyperglycemia? Select all that apply.
 - a. **Polyphagia**
 - b. **Blurred vision**
 - c. **Polyuria**
 - d. Constipation
 - e. **Polydipsia**
 - f. Urticaria
3. Which of the following best describes symptoms of claudication?
 - a. Burning sensation in the feet
 - b. Swelling in lower extremities
 - c. Blurred vision with floaters
 - d. **Pain or cramping in lower extremities with exercise or walking and may be relieved by rest.**
4. According to the American Diabetes Association guidelines, how often should an adult patient with diabetes have a routine dilated eye exam?
 - a. Every 6 months
 - b. Every 18 months
 - c. **Every 12 months**
 - d. Every 24 months

5. In addition to feeling shaky and weak, what are other common signs and symptoms of hypoglycemia? Select all that apply.
- a. Polyuria
 - b. Diaphoresis**
 - c. Nausea**
 - d. Altered mental status/confusion**
 - e. Tachycardia**
 - f. Polydipsia
 - g. Blurred vision**
 - h.**
6. What initial actions should patients be instructed to take when they suspect they are having a hypoglycemic event? Select all that could apply.
- a. Eat 3 glucose tablets (5 grams each)**
 - b. Drink 4 oz. of orange juice or regular soft drink**
 - c. Eat 5-7 sugared hard candies such as lifesavers**
 - d. Check a glucose level and if less than 70 mg/dL begin treatment**
 - e. Eat a meal of complexed carbohydrates and protein
 - f. Glucagon injection if patient has severe altered mental status**
7. Which of the patient's medications may be contributing to hypoglycemia?
- a. Metformin
 - b. Hydrochlorothiazide-losartan
 - c. Glimepiride**
 - d. Atorvastatin
 - e. Amlodipine
8. What is the leading cause of death among patients with type 2 diabetes? Choose the best answer.
- a. Renal Insufficiency
 - b. Cardiovascular Disease**
 - c. Peripheral vascular disease
 - d. Diabetic ketoacidosis
9. What is the blood pressure goal for most patients with diabetes to decrease their risk for cardiovascular (CV) disease or a cardiovascular event?
- a. Less than 120/80
 - b. Less than 130/80
 - c. Less than 140/90**
 - d. Less than 160/90

***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. Is/are there any medication(s), over the counter drugs, vitamins or herbs that can potentially be contributing to this patient's hypoglycemia symptoms?
3. Describe an educational plan for the home-management of hypoglycemic episodes to teach this patient.
4. For the physical exam, what systems would the nurse practitioner include for a diabetes chronic visit? What physical findings would indicate end organ damage?
5. What are common complications of type 2 diabetes?
6. Develop a management and follow-up plan for this patient.
7. Describe preventative care measures or health promotion initiatives that would be appropriate for this patient.
8. Describe the impact of social determinants of health factors affecting this patient and identify strategies to mitigate these factors.

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