

Telehealth Simulation: Patient with Diabetes and Foot Wound
Option to include Interprofessional Practice
**indicate telehealth focused content*

A. Cover Sheet/Overview of Case

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Date of Case Development:

04/01/2022

***Case purpose (e.g., brief description of the patient case and telehealth integration)**

This case will assist the APRN student to provide care in a rural, underserved, nurse-run community clinic using a telehealth backpack and/or photograph tools. As the clinic visit evolves, there is an opportunity to engage with an interprofessional wound care team using videoconferencing, econsult, and store-and-forward technology. The student learner will use history taking, physical exam techniques, photography tools, and interprofessional collaboration via telehealth in the management of a patient with Type II diabetes and a non-healing foot wound. This case highlights the care of an Indigenous person living on a reservation in the northern plains.

The case will illustrate telehealth care delivery tools that can be adapted for:

- 1) Telehealth delivery using synchronous videoconferencing and econsult with an interprofessional team of specialists.
- 2) Use of photographic picture tools to capture wound characteristics and images.
- 3) Use of store-and-forward technology to share images.

***Case objectives (Sample objectives below. Select those that apply or create new.)**

- Demonstrate telehealth etiquette.
- Approach patient care from a perspective of cultural sensitivity, humility, and safety.
- Complete a focused history and physical.
- Initiate a synchronous eConsult with the Wound Clinic team.
- Share relevant patient information using a videoconferencing format and store-and-forward technology.
- Collaborate with team members, including the patient, to determine a culturally relevant, patient-focused plan of care.

***Learner's prerequisite knowledge and skill:**

- Ability to collect relevant patient history, physical assessment, and cultural/spiritual/psychosocial data.
- Telehealth etiquette.
- Use of a telehealth backpack or available electronic photographic tools to document wound characteristics.
- Ability to initiate a synchronous econsult.
- Knowledge of interprofessional roles and responsibilities.
- Ability to assess, plan, negotiate and manage a stable primary care patient in a rural setting.

***Telehealth Technology Addressed:**

- Synchronous videoconferencing using an econsult
- Picture-taking tools
- Store-and-forward functionality

***Telehealth Technology Included in the Case:**

- Computer
- Telehealth backpack
- Wound measurement and picture-taking functions
- Videoconferencing

***Scenario Requirements:**

- Standardized patient, middle age
- American Indian ethnicity
- Computers
- Telehealth backpack
- Wound care products

Case Complexity Adaptation:

- Beginning student: This case can be used with beginning APRN students to focus on patient history and physical assessment using a telehealth backpack. Incorporating cultural, spiritual, and psychosocial assessments provides an opportunity to ensure a holistic, patient-centered approach to care delivery. The APRN can incorporate a culturally sensitive, individualized patient education plan.
- Intermediate/mastery student: Extending the patient assessment and planning process to include an interprofessional team of experts via telehealth provides an opportunity to collaborate with professional disciplines beyond nursing. The student will have an opportunity to practice using store-and-forward technology.

B. Case Information for Learners

Case Scenario Brief

You are the nurse practitioner student in a rural, underserved healthcare setting who has an appointment with a standardized patient in your nurse-run clinic. The patient is requesting an evaluation of a nonhealing wound. You notice he/she/they have missed several previously scheduled appointments.

*Learner task(s) to be completed:

- Perform a focused history and physical
- Perform a wound assessment
- Assess blood sugar
- Obtain and upload photos of wound
- Inform patient of option for wound care team consult using telehealth videoconferencing
- Obtain consent
- Initiate synchronous econsult
- Demonstrate telehealth etiquette
- Report relevant patient data
- Send patient data and wound characteristics including photos via store-and-forward technology
- Develop and negotiate plan of care
- Include patient education and follow-up

Patient Name: Riley Green

Age: 45 years

Gender: dependent on standardized patient

Setting: rural community clinic

Chief Complaint: "I stepped on a nail about 4 months ago, maybe longer. It does not seem to be healing."

HPI: I was in the Emergency Department several weeks ago with symptoms of vomiting. I had a stomach flu. The nurse in the ED noticed my foot and gave me cream and bandages to take care of it, but they have not worked. I made an appointment at your clinic, but I had to cancel because of my work schedule.

PMH: chronic back pain, obesity, Type 2 diabetes

Hospitalizations/surgeries: None

Screening/Prevention: No vaccines. No flu shots. COVID-19 vaccinations up to date.

Medications: Levemir 22 units at bedtime. Regular insulin per sliding scale. Administers own insulin twice per day. Checks blood sugar daily. Insulin and supplies are provided by the Indian

Health Service (IHS). Riley often waits until the day he/she/they run out of medications and supplies prior to notifying the IHS.

Norco q 4h for many years for chronic back pain, but now uses the medication only when needed.

Allergies: None

Psychiatric: None

Social History: Employed as an instructor at Oglala Lakota College. Teaches Lakota culture. Husband/Wife unemployed. Uses the IHS for medical care. Smokes half-pack of cigarettes per day. Alcohol on the weekends.

Family History: Married, 4 children ages 25, 23, 20, & 17; younger two live at home. Currently, a sister and her 3 kids are living in the home. The oldest child has 2 kids, so the grandkids sometimes stay with family.

Physical Exam: Medical Assistant (MA) completed V/S. History and Physical completed by APRN.

Labs and Diagnostics Tests: Blood glucose completed by MA - 190mg/dL

C. Content for Standardized Patient

Case summary/presenting information: (include age, gender, summary statement, background info related to health care issue)

You are a 45-year-old person who sustained an injury to the bottom of your right foot about four months, maybe longer. You were in the Emergency Department several weeks ago with symptoms of vomiting. The nurse gave you some cream and bandages to care for the wound, but they have not helped. She told you if the sore did not heal, you could get “really sick”. It has been hard to keep your clinic appointments because of your work schedule and complicated family life.

- ***Visit format choices:**
 - In-person visit
 - Transition to videoconferencing for synchronous econsult
- **Opening Statement:** “I have a sore on my foot that will not heal.”
- **General Appearance:**
 - Neat, clean, in no acute distress.
- **Dress:**
 - Flannel shirt and jeans, clothes older and worn
- **Presentation and resulting behaviors:**
 - Cooperative
 - Answers questions, but does not provide additional information
 - Follows diabetic plan but does not always check blood sugars twice per day, often forgets to pick up medications and supplies until urgently needed
 - Believes he/she/they are managing diabetes well
 - Diabetes is often viewed as inevitable due to the high number of persons on the reservation with a diabetes diagnosis

- Mood/emotions:
 - Appears rushed
- Dealing with open-ended questions and guidelines for disclosure:
 - Answer open-ended questions with short phrases
 - Disclose only what is asked
 - Developing trust is a challenge

History of Present Illness: (Please answer these questions, only if asked.)

- Onset: I stepped on a sharp metal object in the yard about four months ago, probably longer. I think it was a nail. We are doing work on the trailer.
- Location: It is on the bottom of my right foot; near the ball of my right foot.
- Duration: About 4 months, maybe longer.
- Characteristics/quality: I notice there is some yellow/green drainage on my sock at the end of the day. It is not getting better and seems to be getting worse; it seems deeper.
- Intensity/severity: I don't feel any pain. It feels like I am always stepping on something when I walk.
- Alleviating factors: The nurse gave me some cream and Band-Aids, but it has not helped. She thought you could help me or would know people who could help me.
- Aggravating factors: I think being on my feet when I teach makes it worse. I am always busy working.
- Precipitating factors: I should have been wearing my shoes outside.
- Significance: The nurse said I could get really sick. I have seen people on the reservation with their legs cut off because of diabetes. I am not sure there is much you can do about that.
- Associated symptoms: None.
- Pertinent negatives:
 - No fever
 - No pain
 - Wearing socks, shoes seem to fit well

Past Medical History:

- Illnesses/injuries: chronic back pain, obesity, diabetes mellitus type 2
 - Injured back many years ago while moving furniture. Was unable to get IHS paperwork completed for a CT scan or MRI. Took Norco q 4h for many years, but now uses medication only when needed.
 - Weight 91kg
 - Diagnosed with type 2 diabetes 3 years ago. The pills did not work and required insulin.
- Hospitalizations/surgeries: None. Visits the ED if feels unwell. Recently in the ED for hyperglycemia and vomiting related to a stomach flu.
- Medications: Levemir 22 units at bedtime. Regular insulin per sliding scale.
- Immunizations: COVID-19 vaccinations x2. Tdap: unsure.
- Allergies: NKA
- Attended a few diabetes classes sponsored by the IHS: *Special Diabetes Program for Indians* (SDPI). Travel and time were a challenge.

Social History:

- Substance use
 - Drugs: None
 - Tobacco: ½ to 1 pack cigarettes per day
 - Alcohol: Drinks 4-6 drinks/day on weekends
- Cultural: Oglala Lakota Nation
- Spiritual: Jesuit Catholic Church on the weekends

Family History:

- Home situation/environment: Married, 4 children ages 25, 23, 20, & 17; younger two live at home. Currently, a sister and her 3 kids are living in the home. The oldest child has 2 kids, so the grandkids sometimes stay with family.
- Social: Employed as an instructor at Oglala Lakota College. Teaches Lakota culture. Spouse unemployed.
- Diet: Food from the Commodity Exchange aka “Comods”; a federally funded distribution program. The family orders the package with fresh fruit and vegetables. It does not last the entire month. Riley loves fried bread.
- Exercise: No exercise program. Busy working and taking care of the family. It is hard to have time for yourself. It is hard to get to the doctor. There is always so much going on at home.

Review of Systems:

- **General:** Overall general appearance: obese, good hygiene, does not appear ill.
- **Skin:** WNL
 - Wound: No signs of infection
 - 2.3 cm by 2 cm oval stage 3, foot ulcer, ball of foot. 0.3 cm white wound edges
 - Wound bed red/pink with minimal pale-yellow drainage. 0.1 cm depth
 - No tunneling
- **HEENT:** WNL
- **Neck:** WNL
- **Chest:** WNL
- **CV:** WNL
- **PV:** 1+ edema BLE.
- **Abd:** Large, soft.
- **GU:** WNL
- **More Maneuvers:**

Diagnoses should include:

Actual Diagnosis: Non-healing wound left foot, Hyperglycemia, Diabetes management, Substance use

Plan: Wound care consult, diabetes management teaching and follow up

D. Post-Encounter Activities/Evaluation with focus on Telehealth*

1. Tools adapted for the evaluation of the student:

- ***Telehealth Simulation Checklist***

- Faculty Evaluation of Student
- Standardized Patient Evaluation of Student
- Student Self-Evaluation

- Faculty evaluation of oral report to Wound Clinic team

- Evaluation of SOAP note including documentation of billing and coding data using a written not rubric

- Student Self-Evaluation and reflection for improvement incorporating the following questions:

- Were you able to connect with your patient? Did you include cultural/spiritual/psychosocial topics and questions that provided insight into your patient as a person?
- Describe your comfort using the telehealth backpack and photo tools. Were they easy to use? Were you able to share documents?
- Discuss the process of connecting with the Wound Clinic. Was technology helpful? Were you able to clearly communicate patient status?
- As you reflect on the plan of care, was it patient-centered? Realistic? Culturally relevant?

2. Two-faculty debriefing in groups of students

- One faculty may be the technology expert
- One faculty may be knowledgeable of Indigenous populations

3. Discussion questions/topics for debrief

- Telehealth can bring specialty care to rural and underserved areas to improve health, decrease costs, and improve patient satisfaction. How did technology work for you today?
- Rural healthcare includes challenges and opportunities. What went well? Any opportunities for improvement? What resources may be helpful?
- Share your reflections about team dynamics, roles, communication, etc. Ask the standardized patient to share their perceptions of their healthcare team.
- As you reflect on your knowledge of Indigenous populations, what information or patient cues were helpful? Were you able to create a realistic plan of care? Would you do anything differently?

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