

**Telehealth Simulation: Sinusitis**  
***\*indicate telehealth focused content***

**A. Cover Sheet/Overview of Case**

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

This case will assist the student learner in utilizing telehealth for care delivery in an outpatient clinic/home. The student learner will use telehealth principles in history taking, physical exam techniques, clinical reasoning, and in the management plan for a patient with the diagnosis of Sinusitis.

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

- 1) Telehealth care delivery using the Zoom platform with no telehealth equipment (peripherals) or cart.
- 2) The Telehealth visit will consist of video conferencing.

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

- Perform an appropriate history
- Demonstrate appropriate patient rapport, engagement
- Develop appropriate differential diagnosis list
- Demonstrate an ability to explain diagnosis (es) and plan and respond to patient's questions accurately and thoughtfully through video conferencing.
- Demonstrate telehealth etiquette and professionalism with video conferencing
- Demonstrate how to conduct a clinical Assessment without peripherals (equipment)

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

- Use of telehealth videoconferencing platform
- Telehealth etiquette and professionalism skills
- Ability to assess, diagnose and manage the non-complex (stable) primary care patient
- Basic knowledge of advanced history and physical assessment

**\*Telehealth Technology Addressed:**

Synchronous delivery using videoconferencing

**\*Telehealth Technology Included in Case: (Select all that apply)**

- Computer
- Videoconferencing using ZOOM for health care (Alternate platforms may be used)

**\*Scenario requirements:**

- Standardized patient, adult middle age
- Computers and ZOOM for healthcare for connection between provider and patient

**Case Complexity Adaption:**

- Beginning student: This case can be used with beginning students learning the role of the APRN provider in telehealth care delivery. A beginning student could focus on how to initiate a visit and orient the patient who is using telehealth for the first time. A beginning student can focus on the steps to initiate a visit and the steps to complete a visit. The beginning student can also focus on the orientation and education of the patient. Faculty and Standardized Patients would evaluate the student by using checklists of telehealth etiquette, and communication.
- Intermediate/mastery student: This case can be adapted to a higher-level student and complexity using the telehealth cart and peripherals.
- The scenario is adaptable to the university's resources and level of student.

## B. Case Information for Learners

### Case Scenario Brief

You are the nurse practitioner student who has an appointment with a standardized patient who lives in a small apartment that is 2 hours away from your office. The patient states that his wi-fi is not reliable at times but he will do his best during the exam. Since the visit is taking place in the home there are no telehealth peripherals. Wi-fi broadband, and ZOOM are required for this telehealth visit.

#### \*Learner's task(s) to be completed

- Initiate a telehealth visit
- Establish the reason for visit
- Outline the structure for the visit and the timeline
- Consent or verify consent of the patient
- Secure the environment (i.e., HIPAA/Confidentiality/Security)
- Identify participants (individuals present in both provider and patient environment)
- Establish an emergency plan
- Obtain HPI
- Manage emergency situations if required
- Perform an appropriate exam by adapting assessment techniques for a telehealth visit
- Communicate systems needed for a focused exam on patient
- Develop appropriate, negotiated next step treatment plan with simulated patient (e.g.: medication adjustment, lifestyle, referral)
- Consider patient provided data from varied sources in treatment planning
- Establish plan and schedule follow-up appointment
- Prescribe medications if required and send (electronically via EMR or called in) to pharmacy of choice
- Outline procedure for sending summary of visit to patient

**Patient Name:** Paul Lohan

**Age:** 35 years old – (May vary depending on course and age of SP)

**Gender:** Male

**Setting:** Patient's home using personal computer and Zoom

**History:** "I have a cold and need an antibiotic for a sinus infection"

**Chief complaint:** "My child has been complaining of stomach pain for the past 2 days. Just worried I guess."

**HPI/PMH/:** Onset of my symptoms started 2 days ago. I had just come back from a Florida vacation with my roommate. I have pain over my cheeks and forehead which has lasted all day for the past week. I have also had the following: headache, nasal congestion, sore throat, cough, and slight fever. My headache is a 6/10 (scale 1-10) Tylenol, lozenges and Sudafed have helped some. If I bend over, this makes my headache worst. Also, if I get less sleep, I will feel worst. I have had sinus infections before, and they seem to come after a cold. I am also feeling some fatigue since not sleeping well at night. 5 episodes of sinus infections this year. Z-pack each time.

**Hospitalizations /surgeries:** None

**Screening/Prevention:** No vaccines in 10 years. I do not believe in the flu shots

**Medications:** Does not take medications regularly. Does take Tylenol and Sudafed when he gets a cold or sinus infection

**Allergies:** Has seasonal allergies when the mold levels are high

**Psychiatric:** None

**Social History:**

Works as an actor. Exercises 5 days a week for about 20 minutes. Diet consists of being a vegetarian. Lives with 2 roommates in an apartment. Drinks about 4-6 drinks during the week. Uses marijuana and cocaine on the weekends and once each day. Started using about 5 years ago. Stopped using tobacco 5 years. However, his roommates still smoke.

**Family History:**

Parents are alive and well. 3 Sibs (Brothers are alive and well).

**Physical Exam:** Will do a focused physical exam without peripherals. Student NP will describe the physical exam without peripherals. If possible, take vital signs. (Remember patient is at home; resp. Rate & Pulse)

**Labs and Diagnostic Tests:** Student to look in the record or ask for the most recent labs and tests

**Note: you need to choose how much information you will give the student NP in the patient chart**

### C. Content for Standardized Patients

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

*You are a 35-year-old man who is at home because you have had a cold for 3 days and it's not getting any better. You think it is another sinus infection which you get frequently. You want an antibiotic because that seems to get you better quickly. Just got back from traveling to Florida for some sun.*

- \*Visit format choices
  - ZOOM or other videoconferencing platform
- Opening Statement: "I have a cold and need an antibiotic for my sinus infection."
- General Appearance (e.g., make up, how hair is worn):
  - Patient: tired, hair messy
- Dress (e.g., patient nightgown, socks okay):
  - Typical for SP's age
- Presentation and resulting behaviors (e.g., body language, non-verbal/verbal characteristics):
  - Speaks rapidly at times
  - Pace the floor a couple of times
  - Run your fingers through your hair
  - Health literacy: high
  - Slightly demanding
  - Periodically moves out of the camera view on computer
- Mood/Emotions:
- Frustrated and anxious because he does not feel well. Worried he may not be able to work tonight
- Dealing with open-ended questions and guidelines for disclosure: SPs will answer naturally to open ended questions.

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

- Onset: It started about 2 days ago. I just came back from a **Florida vacation** with my roommate and then this started!
- Location: I have pain over my cheeks and forehead.
- Duration: it's all day for the past 2 days
- Characteristics/quality:
  - I have nasal congestion and a sore throat that is mostly in the morning
    - I can't seem to breathe through my nose
  - Sometimes I feel feverish. I have not taken my temperature though. I do not have a thermometer
  - I have a headache and pain on my face (cheeks and forehead)
    - If asked to describe pain: The pain is achy
  - I have a cough when I go to sleep
    - If asked to describe the cough:
      - It's a little wet/moist and there is a small amount of clear or yellow mucus
  - I'm a little achy too
- Intensity/severity: If asked about pain on a 1-10 scale: My headache is a 6/10

- Alleviating factors:
  - I took Tylenol on or two times. Maybe 2 tablets each time.
  - I took Sudafed one time which also seemed to help.
  - I sucked on throat lozenges which helped somewhat.
- Aggravating Factors:
  - If I get less sleep, I feel worst.
  - If I bend over, it makes my headache worst.
  - When I'm at work, I feel worse.
- Precipitating factors: I've had sinus infections before, and it seems like it comes after a cold.
- Significance:
  - I am worried I won't be able to perform in the play I'm in tonight.
  - I have not been exercising which is something I do religiously.
- Associated symptoms/other:
  - I am feeling some fatigue because I am not sleeping well at night.
  - If asked about eating/drinking: I am drinking a lot of fluids and I'm eating okay.
  - If asked if around anyone else who is sick: one of my roommates has a cold.
- Pertinent negatives:
  - No ear pain
  - No eye discharge
  - No shortness of breath; no wheezing
  - No toothache
  - No nausea, vomiting or abdominal pain

### **Past Medical History**

- Illnesses/injuries:
  - I am generally healthy, but I have had a few sinus infections. This past year I've had 5 episodes and got a Z-pack each time. The Z-pack is the cure.
  - The last time I got an antibiotic treatment was one year ago. I usually get an antibiotic when I have these symptoms. I know how I feel when I get this infection and I am so glad when I get the antibiotic. Believe me, it will not go away without it.
- Hospitalizations/surgeries: no
- Screening/prevention:
  - I have not had any vaccines for 10 years.
  - I do not believe in flu shots, so I haven't had any of those.
- Medications:
  - I do not take any medications regularly. I take Tylenol and Sudafed when I get a cold or sinus infection.
- Allergies: I have seasonal allergies when the pollen levels are high.

### **Social History:**

- Substance use
  - Drug use: I use marijuana and cocaine
  - If asked how often: I use them on the weekends and take them once each day.
  - If asked when started using drugs: I started using about 5 years ago.
  - Tobacco use:
    - I used to smoke, but I stopped 5 years ago.

- Alcohol use: I have about 4-6 drinks during the week
- Home situation/environment:
  - I live with 2 roommates – we rent an apartment
  - If asked about housing or where live: I live in an apartment in Chicago

**Physical Exam Findings:**

*The physical exam without peripherals will take place for this case. Adapted based on level of student*

- **General:** This begins when first connecting with the patient. How is the body position of the patient? How is the breathing? Is the patient leaning forward to breath? Coughing? wheezing? How do they look? etc.
- **Skin\*:** Look for any rash. Lesions, mass, swelling
- **HEENT\*:** Tell patient to take his fingers and pull down on his ears. Ask if any pain? Tell patient to pull down on lower eye lids. Ask any discomfort? Always redirect the patient if you need to see something closer. Have patient tap on the frontal and maxillary sinus: (Note there is positive facial tenderness) You must show patient first where you want them to tap. Nose: (Have patient come close to the camera – you see clear to white discharge in both nares. Throat: ask patient to shine the light from his smart phone as he comes close to the light and camera. the throat is clear from what you can see. No tonsillar hypertrophy Look in the mouth: no erythema or lesions seen
- **Neck\*:** Now ask patient to move their fingers down their neck starting behind the ears. Tell the patient to let you know if there is any swelling or tenderness noted behind the neck or in front. Note: No mass appreciated, no LAD
- **Chest\*:** Have patient take a deep breath hold his breath then breath out fast. (Listen for wheezing, abnormal sounds, congestion. Then take a few more breaths and breath out. Have them move closer to the camera if needed
- **CV:** unable to listen for heart sounds without peripherals. Have patient palpate chest for any tenderness and thrills. (explain what a thrill is) You as the student NP observe for any deformities, lifts, heaves, pulsations. Note: There are no CV issues
- **Abd:** Show patient how to palpate the abdomen. Important for you to ask pointed questions: pain, tenderness, swelling?? Note: (There are no issues)
- **More Maneuvers:** Tilt your head back and forward. Ask if any discomfort, or pressure? Patient answers a small amount of pressure felt over his eyes. Ask patient to lean forward and touch shoes. Note: a small amount of pressure felt across forehead

**Diagnoses should include:**

**Actual Diagnosis:** Viral rhinosinusitis, Binge drinking, Substance use

**Plan:** Refer to counseling for drinking and substance use/misuse.

## **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 Preceptor of Student
- Evaluation of clinical SOAP note including documentation of billing and coding data using a written note rubric
- Student Self-evaluation and Reflection for Improvement incorporating the following questions:
  - Reflect on and describe your comfort level with the learning activities in this telehealth activity and the overall telehealth simulation experience.
  - Describe how your participation during the telehealth simulation experience could potentially affect your future practice as a nurse practitioner.
  - Describe strategies you used to establish your provider relationship with the patient and family member during this telehealth experience.
  - Discuss how these strategies are similar or different to those you have used to establish your provider relationship with the patient during face-to-face clinical encounters.

### **2. Two-faculty debriefing in groups of students (6 students is ideal).**

- One faculty member could be a simulation expert and address content addressing the actual simulation experience using best practices described in International Nursing Association for Clinical Simulation and Learning (INACSL) Standards of Best Practice: SimulationSM Debriefing (INACSL Standards Committee, 2016).
- Second faculty member with experience in pediatrics may be useful in facilitating discussion related to substance use disorders

### **3. Discussion questions/topics for Debrief:**

- Comfort with conducting a visit without peripherals
- Comparisons, and contrasts between live and telehealth visits with regard to establishing rapport, gathering a history, performing a physical examination, diagnostic work-up, establishment a diagnosis, and probable treatment plan
- Relationship building in the virtual environment, positive and negative experiences.
- Role of simulation staff in creating separate virtual rooms to facilitate small group prebrief and debrief activities and rooms for the actual encounters.

***Revised from Association of Standardized Patient Educators Case Development Template, version 2018***