Telehealth Simulation: Urosepsis in Older Adult
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)
The case is of a community-dwelling older adult who presents with an acute onset of fatigue, mental status changes, and general malaise. Upon additional questioning, the patient will report chills and slight burning on urination, new onset of incontinence, urinary frequency, and bloody urine (Note: This information is only provided if asked). This telehealth visit originates from the "patient's" residence. In the background may be some clutter suggestive of an older adult who does not feel well and can't attend to their home environment. The SP should appear disheveled and with difficulty concentrating. The SP should be in a light jacket or sweater because of having a "chill".

*****The students' goal is to use telehealth best practices to initiate the visit, take a focused medical history, adapt a focused physical exam to a virtual care environment, complete a cognitive assessment using telehealth practices, and to refer the patient for immediate emergency follow-up for potential urosepsis. The visit will originate from the patient's residence through a videoconferencing technology. A neighbor will have accessed the telehealth service at the request of a concerned daughter who lives out of state, but the older adult patient will be alone and sole source of information for the visit. The patient will communicate directly with a provider (APRN, PA, medical student/resident) at a distant site.

*****Alternately, the visit could originate from a telehealth hub such as a clinic in a senior living community, and an embedded participant (i.e., family member or caregiver) or a telehealth presenter could be guided through the exam.

***Case Objectives (Sample objectives below. Select those that apply or create new)**
- Demonstrate how to set the stage for a telehealth visit
- Demonstrate proper telehealth etiquette during a visit
- Conduct a synchronous telehealth visit by connecting to an originating site
- Demonstrate how to collect a pertinent patient history from an older adult experiencing acute cognitive impairment using telehealth equipment
- Demonstrate how to guide a patient and/or presenter through a focused telehealth physical examination with or without peripherals.
- Demonstrate how to integrate coordinated care with the learner serving as the telehealth provider
- Demonstrate how to implement emergency procedures for a patient during a telehealth visit

Learner's prerequisite knowledge and skills:
*****Use of telehealth videoconference platform
- Knowledge how to troubleshoot telehealth equipment at an originating and distant site
- Telehealth professionalism during the visit and when counseling patient/caregiver(s)

- Ability to recognize atypical presentation of acute illness in an older adult by efficient gathering of history and physical exam data
- Ability to apply telehealth communication competencies to gather a focused exam based upon an acute complaint in an older adult.
- Knowledge of how to adapt an assessment of cognitive status, functional status changes, and physical examination to a telehealth environment.
- Knowledge of criteria that indicate the scope of telehealth visit has been exceeded and how to initiate an appropriate plan of care.
- Recognition of cognitive change and atypical presentation of urinary tract infection in an older adult
- How to guide a patient or presenter through a focused physical examination (with or without peripherals)
- Recognition of blood glucose pattern changes.
- Basic diabetes management in an older adult.
- Basic hypertension management in an older adult

***Telehealth Technology Addressed:**
Synchronous delivery using varied platforms – (videoconferencing, m-Health, telehealth hub with technology/peripherals is potential modification)

***Telehealth Technology Included in Case: (Select all that apply)**
Computer, iPad, iPhone, etc...
Videoconferencing platform (i.e., Zoom, doxy.me, etc..) or alternately a mHealth app or telehealth hub with peripherals or robot technology

***Scenario Requirements:** (i.e., SP, mannequin, moulage, props, physical exam equipment):
- Older adult SP (preferred) or high-fidelity mannequin
- If peripherals will be used, consider inclusion of a telepresenter (i.e., embedded participant staff member at a senior living community) to assist.
- Blood glucose monitor and records (written) – reported blood glucose from today will be 248 mg/dL.
- Two different setting/areas needed: Distant site for provider staged like a clinic and distant site for standardized patient staged like home of an older adult. There can be clutter in the background suggestive of someone who does not feel well.
- Phone for SP and provider to communicate if video conferencing failure or to collaborate with another provider. SP requires phone in event this is utilized in physical exam. Student requires phone in event of emergency.
- Peripherals, if setting modified to senior living community clinic, including an electronic blood pressure cuff, electronic stethoscope, body cam, otoscope.
- Faculty could create a blood glucose record of some type – written log would be most appropriate and should show once a day testing (morning) with blood glucoses of 90-120 mg/dL and current day reading of 248 mg/dL. Patient will need to hold these up to the screen for provider to review.

***Case Complexity Adaption: (how case can be adapted for complexity)**
If available, the case could be originated from a telehealth hub such as a clinic in a skilled nursing facility or even drugstore, and the student could direct the patient and/or a telehealth presenter in use of peripherals including an electronic blood pressure cuff, electronic stethoscope, body cam, and otoscope.

A high complexity case could include the requirement to initiate an emergency plan including EMS transfer for a witnessed event such as patient falling.

B. Case Information for Learners

Case Scenario Brief

***You are the NP provider at a walk-in medical clinic with telehealth capabilities. Your patient is an older adult patient who is experiencing an acute change in health status. Your goal today is to 1) initiate a telehealth visit using best practices and proper telehealth etiquette, 2) complete a pertinent history and physical (may include using equipment if peripherals or technology such as robot is available), 3) identify a primary diagnosis and 2 potential alternative diagnoses including supporting and refuting data, and 4) develop and implement a plan of care.*

***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 in an older adult with acute illness
- Develop appropriate, negotiated next step treatment plan with an older adult 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: Pat Adams
Age: 78 years
Gender: As self-identified by standardized patient
***Setting:** The patient lives alone; a telehealth visit has been set up by a neighbor at the request of the patient's concerned daughter who lives out of state; the call is originating from patient's residence. The patient is alone.
History: Patient is experiencing an acute onset of fatigue, mental status changes, and general malaise since the preceding afternoon.
CC: "I suddenly felt tired in the middle of the afternoon yesterday and took a nap which is unusual for me. I felt disoriented several times last evening. My daughter called this morning and was concerned because she thought I was confused."
PMH: Diabetes diagnosed 2 years ago (well-controlled with diet – Last A1C was 7.2%); hypertension well-controlled on medications; osteoarthritis
HPI: Will be provided to you by standardized patient based upon your history taking
Social HX: An older adult who has been retired for 20 years from Walmart. Patient lost partner 2 years ago. Patient lives alone and has one daughter who lives out of state. The patient has a supportive network of friends and neighbors.
FMH: Will be provided to you by standardized patient based upon your history taking
Physical Exam: You will direct the patient
Vital signs: You will guide the patient
Lab results: Unavailable at this time

C. Content for Standardized Patients

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

You will portray a community-dwelling older adult who presents with a sudden onset of fatigue, mental status changes, and feeling poorly. You lost your partner 2 years ago and now live alone. You first noticed these symptoms about 18 hours ago – your daughter, who lives out of state, felt you were confused this morning and was very concerned. She asked your neighbor to check on you and the neighbor helped you to access this telehealth visit by your computer.

You will initially describe symptoms of tiredness, mentally "dull" and feeling poorly. Upon additional questioning, you will report chills and slight burning on urination, new onset of incontinence, urinary frequency, and bloody urine (Note: You will provide this information only if directly asked by the student). This telehealth visit originates from your home by videoconferencing. In the background there may be some clutter suggestive of an older adult who does not feel well and cannot attend to their home environment. You appear disheveled and portray difficulty concentrating. You should wear a light jacket or sweater because of having a "chill".

- Opening Statement: "I don't feel well. My daughter is worried and wanted me to see the doctor. My neighbor helped me to get this appointment. I just want to go back to bed. I do not feel well. I can't believe I got this sick so quickly."
- General Appearance (e.g., make up, how hair is worn): You are an acutely appearing older adult – could create flushed appearance. The environment behind you is unkempt with clutter on cabinets.
- Dress (e.g., patient nightgown, socks okay): Your clothing is appropriate for usual day activities – you could use sweater as you may have a "chill". You are a bit unkept – hair not brushed.
- Presentation and resulting behaviors (e.g. body language, non-verbal communication, verbal characteristics): You are somewhat confused to time and date, and should repeatedly say, "I feel so sick." You should position yourself as if you do not feel well and cannot concentrate. You could be bent over holding your head while sitting in chair.
- Mood/Emotions: You are acutely ill and not particularly interactive.
    - Dialogue (conversational comments SPs say in addition to medical/health information; questions or statements patient MUST ask or say)

        Examples:

        - "I can't believe I got sick so quickly". "I just don't feel like doing anything." "I feel awful." "What is wrong with me?" ("Patient")

Dealing with open-ended questions and guidelines for disclosure (note: this guide provided by SP Program staff):

- SPs will answer naturally to open ended questions.
- If information appears in a checklist, SPs are trained to answer only if asked. In addition, if there is information that should not be offered unless asked, indicate "only if asked" in the case.

History of Present Illness:

Onset: You complain of feeling suddenly tired in the middle of the afternoon yesterday and took a nap for several hours (this is not your usual). This is primary complaint. You were disoriented several times last evening. Your daughter was concerned that you appeared to be a bit confused this morning. She contacted your neighbor and asked her to check on you. Your neighbor felt you required a medical evaluation and offered to set up the telehealth visit for you.

If asked, you may answer the following but do not do this unless you are directly asked by the student: You experienced bladder incontinence multiple times during the night and this morning; exhausted; up most of the night going to the bathroom.

Location: You are having some burning with urination (only offer this information if directly asked). You do have a light headache.

Duration: Your symptoms started about 18 hours with feelings of tiredness.

Characteristics/quality: You are not hungry. You picked at dinner. You complained od of being tired and went back to bed this morning. You refused breakfast, fluids, and medications this am and returned to bed.

Alleviating factors (what makes it better): You are so tired - sleep is not improving tiredness. You also were up all night in bathroom (provide this information only if asked directly).

Aggravating factors (what makes it feel worse): This is new onset of vague symptoms of fatigue and mental status changes. Degree of tiredness appears to be increasing

Precipitating factors (what seems to bring it on): You are unsure. You just started to suddenly feel ill.

Treatments: You tried resting/sleeping and rest with no improvement. You did have trouble sleeping last night because you were up to urinate so many times.

Significance (impact on patient's life): You are usually an active older adult. You had normal morning yesterday – pushed cart around grocery store and then went swimming. You are VERY UPSET about new-onset incontinence (but do not volunteer unless student asks).

Associated/other symptoms: You experienced chills last evening and this morning. You awoke in a sweat. You are unsure if you have a fever as home electronic thermometer is broken.

You were up multiple times during the night to urinate (do not volunteer this unless asked)– usually pattern is to awaken once. You experienced several episodes of incontinence (do not volunteer this unless asked). You have immediate urges to urinate and are urinating often. You feel as though your bladder will not empty (new problem for you).

You were concerned that you found blood in urine this morning (do not volunteer this unless asked).

You complain of pain while urinating (do not volunteer this) – urinary pain would be 3/10 if asked to rate.

Review of systems (e.g., pertinent positives and negative not listed elsewhere)- *Provide information if asked.*

Overall health: Your overall health is good. You manage several chronic illnesses (diabetes, hypertension, arthritis) very well.

Chills and Fever: You experienced chills last night and took a Tylenol. You awoke in middle of night with sweats. The neighbor who checked on you this morning felt you were warm. You have no thermometer working in house and are unsure if you have a fever.

Mental Status: You are usually very bright and conversant. Today, you were unsure of the day and appeared slightly disoriented when awoke but that clears. This worries your daughter who contacted a neighbor. You have no history of cognitive impairment, dementia, depression, other behavioral health problems, or stroke.

Fatigue/Change in Activity: Yesterday at 4pm you complained of need to nap (unusual for patient). You took a several hour nap and then wanted to go back to sleep. You are tired and plan to go back to bed after this visit.

Pain: You have experienced pain and burning with urination – rated 3/10. You do not have abdominal pain or back pain. You do experience some arthritic pain at times and stiffness at times.

Skin: You have no skin breaks. There is no bruising or lesions or areas of inflammation. No history of pressure ulcers.

Cardiovascular: Your neighbor has a home blood pressure monitor and found that you with a blood pressure of 180/96 (usual 140/84) this morning. The home blood pressure monitor provided a pulse reading of 124. Your neighbor did not manually check pulse. You have no edema/swelling. You have no history of other cardiovascular problems such as heart attack, coronary artery disease, heart failure or atrial fibrillation.

Respiratory: You neighbor felt you were "breathing heavy". You deny cough or congestion. You have no history of chronic lung diseases, allergy, sinus problems, etc...

COVID-19 specific questions (RESPOND NO TO ALL):

Have you experienced any of the following symptoms in the past 48 hours:

- fever of 100.4 or chills
- cough
- shortness of breath or difficulty breathing
- fatigue
- muscle or body aches
- headache
- new loss of taste or smell
- sore throat
- congestion or runny nose
- nausea or vomiting
- diarrhea
- Intensity

- Have you traveled to an area where COVID is prevalent within the past 14 days?
- Have you been exposed to anyone with diagnosed COVID within the past 14 days?
- Do you wear a face mask when you are out? YES

Appetite/GI: -You normally have a very good appetite. You barely touched food last night and refused breakfast and fluids such as water and tea and soup this morning. You have no nausea or vomiting. You did not take your usual medications this morning because you did not want to eat breakfast. Your bowel movements are regular each day. You do not use laxatives. You have no pain having a bowel movement. You have not noticed blood in your stools. You have not experienced constipation or diarrhea. Your last colonoscopy was 5 years ago and was normal. Stool specimen check during wellness visit was normal.

Genitourinary: You experienced urinary frequency and urgency (had to go quick and could not make it to the bathroom). You had several bouts of incontinence during the night. Your noted blood in urine when cleaning up. You had a urinalysis as part of last physical and were told it was normal. You have never had blood in urine before.

If Female patient – You have had no vaginal drainage. You went through menopause "years ago". You delivered 2 children with no difficulty. You do have age-related bladder problems. You have no problems with stress incontinence or difficulties urinating. You have not been sexually active since the loss of your partner. You have no history of a sexually transmitted infection. If asked about sexual orientation, you may identify consistent with your orientation.

If Male patient - You have not had a PSA test done You have no abdominal or testicular pain. You have no penile drainage. You have no prior history of voiding difficulties. You are not circumcised. You are not

currently sexually active due to health issues with partner. You have no history of a sexually transmitted infection. If asked about sexual orientation, you may identify consistent with your orientation.

Endocrine: You have well-controlled Type 2 diabetes. You manage your diabetes with diet and physical activity. Your usual fasting blood sugar is 110 mg/dL. Today, caregiver checked blood sugar and obtained a reading of 248 mg/dL (has never been that high!). You do have a blood glucose log and record your blood sugar each morning. You have no other endocrine issues such as thyroid or adrenal disease.

Past Medical History:

Diabetes - diagnosed 2 years ago (well controlled with diet – Last A1C was 7.2%). Today's blood glucose reading was 248 mg/dl.

Hypertension well-controlled on medicines.

Arthritis which bothers you at times ("my knees hurt sometimes if I do too much"). You treat this effectively with Tylenol.

Hospitalizations: 15 years ago for "gallbladder attack".

Surgical history: removal of gallbladder 15 years ago.

Screening/prevention:

Last physical exam: Your last Medicare wellness exam in July of last year. There were no new health issues identified – You were told you are "fit as a fiddle." "Doing great for age." All blood work was normal including urine test and stool test for blood.

Immunizations: Up-to-date on immunizations; has had a flu shot last season (in October). Had Tdap (pertussis) booster 1 year ago. Had pneumococcal vaccine. Had Shingles vaccine.

Gynecologic (if SP female): last PAP smear at age 65 – was normal; Last mammogram 1 year ago – normal; 2 pregnancies – 2 vaginal deliveries. You are not sexually active due to current health concerns of partner. You are in a monogamous relationship. No history sexually transmitted infection. No issues with stress incontinence.

Medications: (prescription, over the counter, supplements)
Lisinopril 10 mg daily for blood pressure (takes at bedtime – not taken last evening)
Hydrochlorothiazide 12.5 mg daily for breakfast (not taken today)
Amlodipine (Norvasc) 10 mg daily for blood pressure (Refused dose this morning.)
Multivitamin daily
Acetaminophen (Tylenol) as needed for arthritis pain (Took two tablets at midnight because you felt warm and had experienced "a chill.")

Allergies (e.g. environmental, food, medication, and reaction): None

Psychiatric: No issues (see ROS)

Family History: (e.g. health status, age, cause of death):

- Father died of heart attack at age 72
- Mother died of colon cancer at age 86.

- You are only surviving sibling of 5 children.
  - Sister died of lung cancer at age 68
  - Brother died of COPD at age 72
  - Brother died of bladder cancer at age 76
  - Lost touch with another estranged brother and has no knowledge of his health.
- Children – one daughter age 50 with no health issues
- Grandparents – they are both deceased; not sure of medical history but told they died of "natural causes."
- No family history stroke, heart disease, or diabetes. Most people in the family die of "old age."

Social History:

- Substance use (past and present)
  - Drug use (recreational and medication prescribed to other people) - never
  - Tobacco use - never
  - Alcohol use – occasional glass of wine with dinner
- Home situation/environment: You live alone in your home of 40 years. Your partner died 18 months ago after a 45-year relationship.
- Support systems: daughter lives out of state, neighbors
- Occupation: You retired 20 years ago and worked at Walmart
- Relationship status
  - Current sexual partners: 0
  - Lifetime sexual partners: 3
  - Other relevant sexual history: non-contributory
  - Safety in relationship: not currently sexually active
- Leisure activities: You enjoy gardening and swimming; You participate in activities at place of worship and your community senior center though have been limited by COVID
- Diet: You "watch carbohydrates"
- Exercise: walking and swimming

***Physical exam findings** – include instructions on replicating findings:

Weight is your stated weight; height is your stated height

Vitals: Thermometer at home is broken – you are unsure of temperature – you did have chills last evening; Home blood pressure monitoring equipment earlier today B/P 180/89 (usual 140/90); Pulse on blood pressure equipment 124. You did not take blood pressure medications today because you are "too sick".

General exam: You appear ill. Possibly flushed and breathing heavy. You should be limitedly conversant and may require repetition of questions and may answer inappropriately. You are having trouble concentrating to answer questions.

Skin: The student may ask you to either use your cell phone or computer video to examine your skin. Your face may be flushed. You are to report that any finding by the student such as a mole, etc... have been there for some time and have not changed. You have no new changes to your skin. If the student asks to examine your head, please comply but you have no abrasions or lacerations.

Eyes: if the student asks you to shine a light in your eyes, you may use your cellphone flashlight and do not look directly into the light. If the student asks you to lower the lighting in your room, please do so and follow directions. Follow the directions of the student if you are asked to follow an object or move your eyes in varied directions. You have not tenderness in your eyes or drainage.

Nose: if the student asks you to shine a light under your nose, please do so. You will report no nasal drainage. If asked to tap your sinuses, please so and report no tenderness. If the students ask you to bend your head forward, please comply. Report on pain.

Throat: if the student asks you to shine a light into your throat (this could be by your cell phone light or a flashlight), please do so and follow directions. Your throat is not sore, and you have not problems with your mouth or throat. You may display difficulty in following these directions.

Neck: if the student asks you to move your neck in varied, positions, please do so and report no pain. If the student asks you to feel your neck for lumps, please follow directions and report you feel no enlargements of lymph nodes.

Heart: If the student asks you to count your pulse, please tell them it is so fast that you can't count it.

Chest: the student may guide you through counting your respirations, please follow directions and report a rate of 30 breaths a minute. Report no shortness of breath.

Abdomen: the student may ask you to lie down and feel your abdomen. Please follow directions and report no areas of tenderness. If asked to move into different positions or to do different activities, please tell them you just don't feel well enough to do those movements and report no pain.

Extremities: if the student asks you do use your cell phone to examine your legs and feet, please do so. You are to report no sores or problems with your feet and no swelling.

Blood glucose: you will provide a faculty-developed blood glucose log or printout of a downloaded record to the student. You may project this with the camera or read the numbers.

**Because the telehealth in this scenario lacks peripheral equipment to aide in physical examination (such as a stethoscope), the provider should only be able to complete a general survey of the patient and mental status exam. The scenario could be adapted to incorporate a peripherals and advanced health assessment.

***Guidelines for feedback** (e.g., logistics, focus for feedback, written or verbal)
This is a formative learning experience. At completion of the scenario, you and the provider should provide brief verbal feedback focused on the delivery of the visit – telehealth etiquette and communication or your perceptions of the visit.

*The ***Telehealth Simulation Checklist*** may be used to guide feedback or evaluate student performance

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:
    a) Reflect on and describe your comfort level with the learning activities in this telehealth activity and the overall telehealth simulation experience.

    b) Describe how your participation during the telehealth simulation experience could potentially affect your future practice as a nurse practitioner.

    c) Describe strategies you used to establish your provider relationship with the patient and family member during this telehealth experience.

    d) 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 practiced 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 gerontologic primary care may be useful in facilitating discussion related to the atypical presentation of acute illness in an older adult and considerations related to clinical management of an older adult with telehealth.

3. Discussion questions/topics for Debrief:

- Comfort with equipment
- 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.
- Atypical presentation of illness in an older adult - considerations of history taking and physical examination, inclusion of family caregiver, determining diagnosis/alternative diagnoses, considerations in clinical management, acuity of case, and referral.
- 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