Date: July 20, 2021

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Name of Case: Rural Case

Name of educational and or assessment activity: Telemedicine Rural Case

Patient Name: Ray/Rae Lanham

Chief Complaint: Sore on foot

Most likely Diagnosis and Differential with rationale from history and/or physical exam:

Most Likely Diagnosis: Diabetic foot ulcer with osteomyelitis

Differential:

Diabetic foot ulcer

Osteomyelitis

Diabetic foot ulcer without osteomyelitis

Foot Abscess

Challenge question: "Look, can I just get an antibiotic to get my kid off my back?” The patient would like to get better, but also would like to not be harassed by his daughter. “The whole nasty sock argument I can do without.” Doctor’s office and closest hospital is 1-hour drive away. Will not admit this, but “Doesn’t want the inconvenience of being hospitalized”. The patient will be resistant to an ER visit, as the nearest ER is a significant drive away. Similarly, in person visits will be logistically challenging, and the patient will report that there are no podiatrists able to see patients in person within a 25-mile radius.

Domains: Check all that apply

[x]  Professionalism

[x]  Communication and Interpersonal skills

[x]  Medical History

[x]  Physical exam

[x]  Shared Decision Making

[x]  Patient Education

[x]  Clinical Reasoning

[ ]  Documentation

[ ]  Handoff

[ ]  Presentation

[x]  Other: Systems-Based Practice, Problem-Solving

Type and level of learner: Third-year medical student

Case Objectives: please list specific objectives for each of the domains you have checked above:

1. Appreciate the role of telemedicine in the care of patients in remote areas
2. Recognize when to escalate care of a patient with a potentially serious health issue
3. Understand the limitations of the telemedicine examination
4. Describe management options for patients who may need more urgent care

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| SETTING: | Outpatient |
| PATIENT PROFILE:  |
| Age range | 50+ yo |
| Religious/spiritual background | Non-religious |
| Sex (e.g., male, female, intersex, transwoman, transman) | Male (SP can alternatively be female) |
| Sexual Orientation (e.g., heterosexual, lesbian, gay, bisexual, pansexual, queer, asexual) | Straight |
| Gender expression (e.g., man, woman, gender queer) | Man |
| Race/ethnicity: | Any |
| Physical description (e.g., BMI, height range) | Any |
| Physical limitations | None |
| Patient appearance (e.g., disheveled, hospital gown, business casual, casual) | Casual |
| Moulage + location (e.g., none, bruises, scars, body piercing, tattoos) | None |
| Affect (e.g., pleasant, cooperative) | Annoyed, reserved, taciturn |
| Family group (e.g., who is family, who they live with) | Lives aloneSupport network includes daughter |
| Education | Did not complete high school |
| Level of health literacy | Limited |
| Employment, if any - present and past, noting any current stresses | Farmer |
| Home/homeless - type of dwelling, number of stories, owned or rented | Lives in a 2-story home, with bathroom and bedroom upstairs |
| Financial situation- any current stresses | None |
| Insurance Status (e.g., un/under/insured, public/private, HMO/PPO) | Public |
| Habits (i.e., diet, exercise, caffeine, smoking, alcohol, drugs) | Smokes cigarettes 1 PPD since age 16 (pre-contemplative stage, “Another thing my daughter is onto me about.”)Alcohol: Maybe a shot of Old Crow when I can’t sleepNo other drug useDiet: TV dinners, canned soups, frozen foods mostly Exercise: None |
| Activities (i.e., hobbies, sports, clubs, friends) | Farming, Reading the newspaper, watching the news, “puttering around the house” |
| Typical day - what is the usual daily routine | Spends most the day farming. In evenings, engages in activities above. Talks to or sees daughter about once or twice a week |

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| CASE INFORMATION |
| Chief Concern: What the patient will say when greeted by the student. The patient’s primary reason for seeking medical care often stated in his/own words. | “My daughter is worried about this sore on my foot” |
| Additional Concerns: Other, if any, concerns the patient has today (i.e., symptoms, requests, expectations, etc.) that will become part of set agenda. | Concerns/fears: Will not admit this at first, but “Doesn’t want the inconvenience of being hospitalized”. The patient would like to get better, but also would like to not be harassed by his daughter. “The whole nasty sock argument I can do without.” Expectations for the visit: Prescription for antibiotic; discharge obligation to daughter see: Challenge: "Look, can I just get an antibiotic to get my kid off my back?” |
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| THE PATIENT STORY: The SP will be asked to tell their symptom story and the personal and emotion impact for each of their concerns. You will want to write this is the patient voice. The symptom story should be able to answer this question: “Tell me more about [chief concern/additional concern], starting at the beginning and bringing me up to now.” The personal context should be able to answer questions concerning the broader personal/psychosocial context of symptoms, especially the patient beliefs/attributions. The emotional context should be able to ask how are you doing with this, how does this make you feel, how has this affected you emotionally? IMPACT: How has this affected your life? How has this been for your family? | Skin lesion on left great toe“My daughter is worried about this sore on my foot”“I have had this sore on my big toe for a couple of months” “I guess it’s getting bigger. It doesn’t really hurt, but sometimes this green stuff comes out of it. I guess it might be infected. You’re the doctor—you tell me.”Impact on patient’s life: Minimal (patient is not worried, but daughter is and was the one who told him to make this appointment)Green-yellow drainage - ongoing for a week. This will be hard to quantify, but it would be an ooze, not a faucet. His daughter was doing his laundry and was grossed out. She insisted he make this appointment when she looked at it. The patient is annoyed that it’s staining the socks. The overall vibe here is a patient not aware or concerned by how serious this might be. |
| HISTORY OF PRESENT ILLNESS: Although some of the HPI will be given in the patient’s symptom story, the learners will expand the story during the direct question section. Below describe the detailed history, usually about the chief concern, which the student must develop in order to make a useful assessment of the problem: |
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| Onset (when; gradual or sudden) | Sore on foot – 3 months ago, gradualGreen-yellow drainage – 1 week |
| Setting (what was going on or where was patient when symptoms first noticed?) | Sore on foot – noticed it while barefoot at homeGreen/yellow drainage - His daughter was doing his laundry and was grossed out. The noticed that it’s staining the socks.  |
| Duration (how long) | Sore on foot – 3 months agoGreen-yellow drainage – 1 week |
| Time relationships (frequency, constant or intermittent) | Sore on foot – constant in past 3 months, growingGreen-yellow drainage – intermittent in past week, but worsening |
| Location | Left big toe |
| Radiation | None |
| Quality | Not painfulDrainage is green/yellow and smells |
| Amount | Sore on foot – about size of quarter, growingGreen-yellow drainage – oozing (not like a faucet) |
| Aggravated by what | Nothing |
| Relieved by what | Nothing. “Whattya gonna do? It’s a blister for heaven’s sake.” |
| Associated with what | Sometimes sweats at night; gets chilly sometimes; “sometimes I sweat at night” (which has zero clinical value), but no drenching sweats, no rigors, just gets cold sometimes. The patient would shrug off any attempts to get more specific about these issues. |
| Attitude (what does the patient think is the problem, and how does he/she feel about it) | What do you think this is? “Just a sore or blister. Probably something to do with my diabetes”Patient is not worried, but daughter is. wants a prescription for antibiotics so that his daughter will stop nagging him about this and he doesn’t want to have to go to the hospital. |
| Overall course | Worsening |
| REVIEW OF SYSTEMS: Significant positives and negatives |
| Positive for skin lesion on left big with green-yellow drainage, nocturia (The patient has been getting up once a night to urinate as well as “a couple more times a day” for the past 2 months), increased thirst (He also has been a lot more thirsty- but has attributed that to the excessive heat.) | All other ROS negative |
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| Past medical history |  |
| Medication allergies (Name and reaction) | None |
| Environmental allergies (Name and reaction) | None |
| Illnesses | Diabetes - diagnosed in 40s, uncontrolled* The patient does not check his blood sugars with any regularity – maybe about once a week, and will say they’re “in the 200s”. He doesn’t know his last Hgb A1c, but his doctor told him it was high. The patient is not consistently adherent with his medications, and doesn’t like doctor visits, largely because the closest doctor’s office is an hour’s drive.
* Last saw podiatrist “years ago—he just cut my toenails.” No recent Ophthalmology visits.

Gout - flare in the big toe once a yearHypertension (High blood pressure)High cholesterol |
| Vaccinations | Up-to-date |
| Surgeries | None |
| Accidents/ injuries/ trauma | None |
| Hospitalization | None |
|   |
| Inclusive sexual and reproductive history |
| Sexual practicesSexual partnersProtection: Use of safer sex practicesUse of birth control if appropriateRisk of intimate partner violence | Widowed, deceased wife was his only lifetime sexual partner. Not currently sexually active, no current sexual partners. |
| Ob/GYN HISTORY | N/A (if female, post-menopausal) |
| Medications | Metformin 1000 mg BID (“I forget that night time dose sometimes…”), Glipizide 5 mg daily (“my doctor wanted to put me on insulin, but I don’t want to take a needle”)Atorvastatin 40 mg dailyLisinopril 20mg daily |
| Immunizations | [x]  Tetanus[x]  Flu[x]  Hepatitis[x]  Pneumovax[x]  HPV |
| Tobacco products:[x]  Cigarettes[ ]  Cigar[ ]  Pipe[ ]  Chew[ ]  E-cigarettes | [ ]  Never[ ]  Past- year started/year quit[x]  Currento   Quantity: 1 PPDo   # of years: since age 16o   pre-contemplative “Another thing my daughter is onto me about.” |
| Alcohol[ ]  Beer[ ]  Wine[x]  Liquor[ ]  Other  | [ ]  Never[ ]  Past- year started/year quit[x]  Currento   Quantity: Maybe a shot of Old Crow when I can’t sleepo   # of years: since age 40s |
| Drugs[x]  Weed[ ]  Cocaine[ ]  Heroin[ ]  Meth[ ]  Other[ ]  IV[ ]  Inhalants[ ]  Other | [ ]  Never[x]  Past- year started/year quit:* Marijuana in their 20s

[ ]  Current[ ]  # of years: since age 20s |
| Diet (describe) | TV dinners, canned soups, frozen foods mostly |
| Exercise (describe) | Reading the newspaper, watching the news, “puttering around the house” |
| List any other important social history or information important to this case | Daughter is social support - “She makes sure I’m eating okay and I haven’t burned the house down.” |
| Family history |  |
| Mother, Father, Siblings, Grandparents, and other significant findings. | Both parents died of “old age.”  Doesn’t talk to his older brother; daughter is in good health |
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| Physical Exam- List exam maneuvers expected for this case and any abnormal findings that SP will simulate. (tenderness, hyper-hypo reflex, rebound, weakness etc. )General: no acute distressFoot: Diabetic foot ulcer (either make-up on foot or picture to show student, quarter-sized deep ulcer on left large toe with green-yellow drainage), non-tender to palpationOther exam not expected to be performed. If performed, exam is otherwise normal except decreased sensation in distal plantar foot |
| PHYSICAL EXAM FINDINGS |  |
| 1)          Written in layman’s terms | See above and below |
| 2)          General appearance- affect, appearance, position of patient at opening (i.e. sitting, laying down, holding abdomen etc.) | Arms crossedReserved, annoyed |
| 3)          Vital signs | Not expected to be performed |
| 4)          Specific findings and affect | Quarter-sized deep ulcer on left large toe with green-yellow drainage. Not painful to touch. |
| 5)          Response to certain physical movements | Picture or foot with make-up to be shown when asked to show foot. If asked to palpate toe, it is non-tender/painful, but there is green-yellow drainage.  |
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| DIAGNOSIS AND DIFFERENTIAL |  |
| Diagnosis with support from positive and negative history and PE findings | Diabetic foot ulcer with osteomyelitis – patient with long-standing uncontrolled diabetes and likely neuropathy with deep foot ulcer with purulent drainage, unable to rule out bony involvement |
|  | Diabetic foot ulcer without osteomyelitis - patient with long-standing uncontrolled diabetes and likely neuropathy with foot ulcer with purulent drainage |
|  | Chronic diabetic foot wound without infection - patient with long-standing uncontrolled diabetes and likely neuropathy with foot ulcer |
|  | Foot abscess – foot lesion with purulent drainage |
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| MANAGEMENT OR DIAGNOSTIC PLAN | Recommend patient go to hospital/ER for evaluation and treatment for deeper infection (osteomyelitis, requires imaging for diagnosis, will require IV antibiotics and possible surgical debridement)Alternatively, if SP unwilling go to ER/hospital, student can give empiric oral antibiotics, with close follow-up (within 1 week) in clinic (primary care or podiatry) and strict return/ER precautions (call or go to ER if does not improve with antibiotics) |
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| PROFESSIONALISM ISSUES OR CHALLENGES: | Concern for deeper infection (osteomyelitis), however, nearest hospital is far away and patient is hesitant about goingTelemedicine skills:* Confirm patient identifiers and obtain location information
* Appropriately set up telemedicine encounter and confirm that patient’s technology is working
* Confirmed SP’s videocall functionality
* Physical exam of foot by video or picture

Medical History, Physical Exam:* Obtain targeted history and limited physical exam (mostly visual inspection)

Clinical Reasoning:* Recognize that history and physical exam are concerning for diabetic foot ulcer and possible osteomyelitis
* Recognize need for evaluation and possible treatment in hospital

Shared Decision Making, Professionalism:* Formulate and propose a management plan that patient agrees with

Communication and Interpersonal Skills, Professionalism:* Clearly communicate to patient regarding concerns about serious diabetic foot infection
* Ensure patient understands and agrees with recommended management plans and next steps
* Clearly counsel patient on return/ER precautions, if patient does not go to hospital

Problem-Solving, Systems-Based Practice:* Student needs to help patient figure out logistics of carrying out management plan (if patient agrees with going to hospital, who will drive him? If patient does not go to hospital, what are the logistics of follow-up)
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