

Instructions

The TeleOSCE can be implemented in one of two ways:

1. **Online only.** In this implementation, the student, standardized patient and faculty member (if necessary) all “meet” online using simple web-based videoconferencing technology (The authors use Adobe Connect™, though many other similar products are available that can be substituted). If implementing the TeleOSCE completely online, the sugar values and image of the toe will be uploaded to the meeting room ahead of time and students will need to download the files during the encounter. This technological “stumbling block” is intended to distract the student so he/she is challenged to maintain focus on the patient while dealing with the technological medium. Additionally, the student prompt should be maximized to full screen for the student when he/she “enters” the room, and then minimized when he/she is ready to engage in the clinical simulation. Instructors should see if the technology they are using has the functionality to do this before implementing the online only version. Variations to the case necessary for an online only implementation are referred to as “Version 1” in the case.
2. **In-Person.** Some institutions may want to implement this case for students who are “in-person,” meaning the students do the case at the standardized patient center or some other assessment environment. In this case, students should enter the standardized patient’s room and interact with the patient via a laptop or some other capable computing device. The technological “stumbling block” can either be similar to the Online Only implementation (see above) OR the sugar values and toe image can be printed out and put in a folder next to the laptop. Version 2 in this case modifies the scenario somewhat to allow for this In-Person implementation.

Please contact Ryan Palmer, EdD, with any questions regarding the case: palmerry@ohsu.edu.

Instructions

Family Medicine Clerkship OSCE Telemedicine- Diabetic Foot Ulcer

Patient Scenario

You are Don Baker, a 74 year old man who is contacting your family physician via a remote telemedicine hookup from your home computer. The nature of your consult is an ulcer on your foot that has worsened over the last 3 days. As you have Type II Diabetes, this is a cause of concern for you and you emailed your physician the night before and he/she set up this telemedicine consult with you.

You live in Crane, a remote area of Oregon. Your family physician, Dr. Smith, is 28 miles away and the closest hospital is 200 miles away. It is due to this remote location that your physician set you up with a telemedicine option in your home, which is accessible by logging into a secure web portal on your computer. You have satellite Internet connectivity that is excellent, allowing you to participate in the telemedicine program. You've used the technology to communicate with your family physician before and feel comfortable using the interface. You also have a digital blood sugar monitor for your diabetes that can upload the data to the telemedicine interface. You can also upload digital pictures so the physician can view them as well.

Last month you had a small sore appear on your foot and, after consulting with your physician, he/she decided to send you to the hospital over 200 miles away for a possible toe amputation. Your daughter drove you at considerable expense and time. When you arrived at the hospital they determined the sore was just a mildly infected blister and sent you home, requiring you and your daughter to stay in a hotel that night. You were frustrated by the unnecessary trip and do not want it to happen again. You only reluctantly emailed the physician about the current sore due to the sore growing worse and now having a foul odor. Despite this, you still do not think it is anything and only contacted your physician at the urging of your daughter. You do not want to make another unnecessary trip to the hospital if you don't have to. This is the same sore you had from the trip to the hospital last month.

The student in this scenario will be asked to take a pertinent history from you about your sore and develop an action plan. The student is filling in for your regular physician, Dr. Smith, who has been working with you on your diabetes maintenance for the past 4 years since he/she took over for Dr. Jones, who was your physician for many years. You like your new doctor and appreciate the use of technology to prevent you from having to always drive in to clinic, but you are still slightly annoyed with him/her for sending you to the hospital for a false alarm last month. The student has been briefed on your past situation but has never met you before.

Your opening statement will be:

*Developed by Ryan Palmer, EdD, Lisa Dodson, MD and Fran Biagioli, MD
Oregon Health & Science University Department of Family Medicine*



- “I’ve still got a sore on my foot and it seems to be getting worse. I don't think it’s anything but my daughter wanted me to get in touch with you so I did.”

History of current illness

- You were diagnosed with type II diabetes when you were about 50. You take medication for this (glucophage) and are pretty good about watching your blood sugar, and try to watch your diet but there are no grocery stores near you, often making it difficult for you to have access to fresh fruits and vegetables. You were diagnosed by your long time family physician, Dr. Jones. The student is your current family physician that took over the practice after Dr. Jones retired 4 years ago. He/she issued you a telemedicine remote station for your home so you could remotely monitor your diabetes and only come in when it is absolutely necessary. You use a digital monitor to sample your blood sugar daily. You take insulin shots 2 times per/day. Your insulin dosage is as follows: In the morning you take: 10 units of regular, 20 units of NPH

In the evening you take: 6 units of regular, 12 units of NPH

You have never had a diabetic health related complication since you were diagnosed. The sore on your foot last month was the first incident you thought might be diabetes related.

Your current sore is on the bottom of your right big toe. It is the same sore you had last month but you noticed it seemed worse when you were taking a shower in the morning three days ago. It has since grown in size and the affected area has gone from pink to dark brown. It has also begun emitting a foul odor. You’ve been trying to stay off of your feet for the past 18 hours as well as soaking your foot in warm water with epsom salt. The epsom salts do not seem to be improving the condition. You think this is just a blister that got infected (which is what happened last month when you were sent to the hospital) and that things will get better if you continue with the Advil and epsom salt baths. Your daughter came over for dinner last night and was alarmed when she looked at the sore and made you promise to contact your physician. She also took a picture of the sore (below) and helped you email it to the doctor. Your lab values from your blood sugar monitor are also emailed so the doctor can see them.

Image

Image of toe should be included here. The image should be of a sore that is neither too extreme nor too benign. The image sometimes used by the authors for internal educational purposes only is here:

<http://ducttapeandparacord.files.wordpress.com/2013/12/diabetic-foot-ulcers.jpg?w=150&h=112>

*Developed by Ryan Palmer, EdD, Lisa Dodson, MD and Fran Biagioli, MD
Oregon Health & Science University Department of Family Medicine*



Social history

- You are single (divorced). You retired from the postal service 8 years ago and moved to Crane to be closer to your daughter, Jill, her husband, Bob, and your 5 year old grandson, Jack. Your daughter and her husband are both teachers at the public high school in Burns. Jack started kindergarten in the Fall. You live modestly off of your postal service pension and social security and have comprehensive health insurance through Medicare, with only minor out of pocket costs for your medication and health care needs. Your insulin injections and medication are delivered by mail to you weekly.
- You drink approximately one to two beers a week. You have never smoked cigarettes or used any recreational drugs. Except for the medications for your diabetes, you do not take any medicines regularly.

Family history

- Your mother and father both died of natural causes in their early 90s. Your father had Type II diabetes and your mother had no health conditions. You have a younger sister, Beth (58), who lives in Boise and is healthy with no conditions. There is no other history of illness in your family.

Your affect and behavior:

- You are feeling some discomfort from your foot, but you should downplay that (diabetics do not have normal sensation in their feet). If asked about the pain you'll say something like "It doesn't hurt much but then again I can't feel much in my feet anyways because of the diabetes."
- You will answer the student's questions and not hold back information.
- If the student asks you what your blood sugar readings are, say you're not sure but you did upload them to the telemedicine room.
- If the student asks you to show him/her your foot, tell him/her you uploaded a picture your daughter took last night into the system. Do not offer to show the student the picture if he/she is asking you to describe the sore. The student needs to specifically ask you to show him/her the actual sore before you offer this information.
- If the student tells you that you need to go to the hospital, you will say, "No, doc, I'm not doing that." Do not offer that you will drive in to Burns but you will agree to it if the student offers it as a solution. You think this is another false alarm and don't want to spend the time and money on an unnecessary trip as well as further burden your daughter and her family. You will also resist a recommendation for a clinic visit but agree to it if the doctor insists. Try to push for an alternative plan that doesn't require travel.

- You will listen to the doctor's recommendations, but ultimately you will not consent to making the trip to Bend.
- Though you will not offer it unless the doctor mentions it, you are willing to follow up with the doctor if he/she determines things are getting worse. You will consent to whatever the doctor says you need to do to do so, such as send daily updates of blood sugars, pictures, etc..

The Lab Values sheet that follows needs to be updated for every OSCE. The date for the HgbA1c needs to be six weeks prior to the OSCE date. The other dates can be changed to dates the week before the current OSCE date.

Version 1: Online Only (Student participated online)

Values and toe picture are uploaded to the online meeting room.

Version 2: In-Person (Student participates in-person)

VALUES AND TOE PICTURE SHEETS PUT ON THE DESK FOR THE STUDENT. This information should be inside a manila folder, with a sticky that says, "Just emailed from Mr. Baker."

The student does NOT get the two following sheets outside the door!

The student DOES get the two-page student scenario outside the door.

7/4/13 HgbA1c 7.6

CBG's

8/16	0700	140 mg/dl
8/17	0700	146 mg/dl
	1800	179 mg/dl
8/18	0700	150 mg/dl
	1300	174 mg/dl
	1800	190 mg/dl
	2300	166 mg/dl
8/19	0800	160 mg/dl
	1200	182 mg/dl
	1700	242 mg/dl
	2230	300 mg/dl
8/20	0700	196 mg/dl
	1400	294 mg/dl
	2100	332 mg/dl
8/21	0800	221 mg/dl
	1600	288 mg/dL
	2130	370 mg/dL
8/22	7AM	320 mg/dl

*Developed by Ryan Palmer, EdD, Lisa Dodson, MD and Fran Biagioli, MD
Oregon Health & Science University Department of Family Medicine*



Image of Toe

Image of toe should be included here. The image should be of a sore that is neither too extreme nor too benign. The image sometimes used by the authors for internal educational purposes only is here:

<http://ducttapeandparacord.files.wordpress.com/2013/12/diabetic-foot-ulcers.jpg?w=150&h=112>

*Developed by Ryan Palmer, EdD, Lisa Dodson, MD and Fran Biagioli, MD
Oregon Health & Science University Department of Family Medicine*



ONLINE ONLY VERSION

Family Medicine Clerkship OSCE Telemedicine- Diabetes

You have a total of 15 minutes to read this scenario and to conduct the telemedicine visit with the patient

You are doing a telemedicine consult with Don Baker, a 74 year old male with chronic Type II diabetes. You are on locums in Burns, Oregon filling in for Mr. Baker's primary care physician, Dr. Smith, who is unreachable and out of the country for several weeks. Dr. Smith has done several telemedicine consults with Mr. Baker and he is familiar with the format. Mr. Baker lives in Crane, Oregon, which is approximately 30 miles away from the clinic you are currently working at in Burns and approx. 200 miles away from the nearest hospital in Bend. Last night Mr. Baker emailed you with a complaint of a sore on his right toe. His notes reveal that a similar situation happened last month. At the time Dr. Smith had no way to visually inspect the sore and feared it might be diabetes related, so he sent Mr. Baker to the hospital. It turned out to be a mildly infected blister.

Technology:

- You will interact with Mr. Baker via a telemedicine system.
- Mr. Baker has a digital blood sugar monitor that he can upload readings to the online meeting room with. Readings can be downloaded by selecting the file and clicking the download button.
- Mr. Baker has a digital camera monitor that he can upload pictures to the online meeting room with. Pictures can be downloaded by selecting the file and clicking the download button.

Your purpose at this station is to:

- 1) *Take a pertinent history of present illness.*
- 2) *Determine the severity of the sore and recommend treatment and follow up if necessary. The patient does have transportation available if needed.*

PRINTED OUT VALUES AND IMAGE VERSION

Family Medicine Clerkship OSCE Telemedicine- Diabetes

You have a total of 15 minutes to read this scenario and to conduct the telemedicine visit with the patient

Student Scenario

You are doing a telemedicine consult with Don Baker, a 74 year old male with chronic Type II diabetes. You are on locums filling in for Mr. Baker's primary care physician, Dr. Smith, who is unreachable and out of the country for several weeks. Dr. Smith has done several telemedicine consults with Mr. Baker and he is familiar with the format. Mr. Baker lives in Crane, OR, which is approx. 30 miles away from the clinic you are currently working at in Burns and approx. 200 miles away from the nearest hospital in Bend. Last night Mr. Baker emailed you with a complaint of a sore on his right toe. His notes reveal that a similar situation happened last month. At the time Dr. Smith had no way to visually inspect the sore and feared it might be diabetes related, so he sent Mr. Baker to the hospital. It turned out to be a mildly infected blister.

Technology:

- You will interact with Mr. Baker via a telemedicine system. You will not need to know how to operate the technology to participate in this station.
- Mr. Baker has a digital blood sugar monitor that he can email readings to your office with.
- Mr. Baker has a digital camera and has used it to email images to you in the past.

Your purpose at this station is to:

- 1) *Take a pertinent history of present illness.*
- 2) *Determine the severity of the sore and recommend treatment and follow up if necessary The patient does have transportation available if needed.*

Clinic visit

Patient Name: Don Baker

Med. Rec. No.: 24998

S: This is a 74 year old male with complaint of a sore on his right big toe.

PMH: Diagnosed in his 50s with Type II diabetes.

Rx:

1. Insulin shots 2 times per/day.

AM: 10 units of regular, 20 units of NPH

PM: 6 units of regular, 12 units of NPH

2. glucophage 1000 mg bid

Habits: Drinks approximately one to two beers a week. Has never smoked cigarettes or used any recreational drugs. Except for the medications for your diabetes, patient does not take any medicines regularly.

Family history: Mother and father both died of natural causes in their early 90s. Father had Type II diabetes and Mother had no health conditions. Has a younger sister who lives in Boise and is healthy with no conditions. No other history of illness in the family.

Social History: Patient is single (divorced). Retired from the postal service 8 years ago and moved to Crane to be closer to his daughter and her family. Is a Medicare patient with comprehensive health insurance. Insulin injections and medication are delivered by mail weekly.

**Family Medicine Clerkship OSCE: Telemedicine - Diabetic Foot Ulcer
Observer Checklist**

Student name: _____

Date: _____

Place a check in front of each task that the student accomplished correctly. Do not place a check for any tasks that were forgotten, missed or done partially or incorrectly. If "and" is used for a task, the student must complete all tasks. If "or" is used for a task, the student must complete or address at least one of the tasks. Students will have 2 minutes to "wrap-up" the interaction, discuss follow-up, and/or provide closure without observer prompting.

Interpersonal Skills

The student:

- _____ 1. Established rapport with patient.
- _____ 2. Used words and terms understandable to the patient.
- _____ 3. Allowed the patient time to answer questions (did not interrupt to ask more questions or interject comments).
- _____ 4. Asked questions in a non-judgmental manner.
- _____ 5. Showed concern for patient's ability to see and hear with the technology.
- _____ 6. Demonstrated understanding to patient's perspectives and concerns.
- _____ 7. Clearly communicated to patient what is to be done after this appointment.
- _____ 8. Demonstrated understanding of patient's context (distance to hospital, concerns over false alarm, etc.).

Clinical knowledge

The student:

- _____ 9. Interpreted sugar levels correctly (noted an increase in blood sugars due to this infection).
- _____ 10. Interpreted picture of foot correctly (that this is likely an infected diabetic ulcer).
- _____ 11. Medication reconciliation was performed (asked about insulin dosage and timing).
- _____ 12. Asked about the timeline of the wound.
- _____ 13. Asked about toe symptoms (e.g. redness, odor, drainage).
- _____ 14. Asked about baseline sensation in feet.
- _____ 15. Asked about foot care (for this specific situation).
- _____ 16. Advised patient that foot should be examined.
- _____ 17. Advised about dangers of not treating foot.
- _____ 18. Developed a plan of action that has the patient seen within a 24 hour period.

Use of Technology:

The student

- _____ 19. Was able to remain focused on patient despite the technology interface.
- _____ 20. Accessed patient's blood sugar readings.
- _____ 21. Accessed patient's picture of his foot sore.
- _____ 22. Did not grow flustered or distracted by the technology interface.
- _____ 23. Acknowledged what they were doing when they were not focused on patient (due to being distracted).

Comments for the student:

*Developed by Ryan Palmer, EdD, Lisa Dodson, MD and Fran Biagioli, MD
Oregon Health & Science University Department of Family Medicine*



Follow-up: Would any further learning activities be helpful to this student? Yes/No

Specific skills to address:

OVERALL EVALUATION (circle below):

Students are not graded on these stations; however, to assist with individual feedback, please evaluate their overall performance.

1	2	3	4	5	6	7	8	9	10
extreme deficiencies	serious deficiencies	significant deficiencies	below min expectations	met min expectations	fair	good	strong	superior	outstanding

Faculty Observer: _____

