Implementing a Rural Telemedicine Simulation for Clinical Learners

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Disclosure

- Drs. Palmer’s work is supported by a grant from National Cancer Institute (1R25CA158571-01A1) Title: Integrating Patient Centered EHR and HIT Curriculum into BSS Medical Education.
- Drs. Palmer’s work is also supported by a the American Board of Internal Medicine Foundation. Putting Stewardship into Medical Education and Training grant. Title: Teaching Stewardship using Primary Care Simulation Education. PI: Biagioli
- Dr. Palmer is on the Board of the Telehealth Alliance of Oregon (TAO), a statewide membership organization focused on education and policy pertaining to the use and implementation of telehealth in Oregon.
- Consent for publication of student photos on file at OHSU Family Medicine.
Upon completion of this session, participants should be able to:

- Describe the importance of providing telemedicine simulation to clinical learners.
- List specific clinical skills that a telemedicine clinical simulation can best measure.
- Discuss ways to incorporate telemedicine simulation into other professions and workplace based assessments.
Why teach telemedicine in clinical education?

- Real world application
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- Patient Need

Comment on Joe Robertson’s 96k square miles blog:

William P. Russell February 17th, 2013 at 5:49 pm

96,000 square miles – that’s awesome. We live only 23 miles from Coos Bay but I have not been able to find where the connection to OHSU Telemedicine is located. I have experience hosting WebEx video conferencing; is there any chance that this technology could be used for telemedicine? My wife has been a Type I Diabetic for 56 years and we have driven the 256 miles to OHSU for a consult, but at our age it takes 2 nights in a motel so we can not afford to come often enough.
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- Future Practice Model
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- Reimbursement Improvements
Why teach telemedicine in clinical education?

• Real world application
• Patient Need
• Future Practice Model
• Reimbursement Improvements
• Method to Addresses many Medical Education Competencies with remote students
Why teach telemedicine in clinical education?

- Real world application
- Patient Need
- Future Practice Model
- Reimbursement Improvements
- Method to Addresses many Medical Education Competencies with remote students
- Better patient care
Live Simulation: The “How” of teaching telemedicine

• Prevalent in many professionals sectors
• Gives trainees the ability to practice and learn in a safe environment
• Allows supervisors to assess competence for complex skills prior to “going live”
• Common in clinical training
  – Hi-fidelity models, Objective Structured Clinical Exams (OSCEs)
Objective Structured Clinical Exams (OSCEs)

• OSCEs:
  – Clinical simulations with standardized patient (SP) actors
  – SP and/or direct faculty feedback, communication, checklist
  – Summative or formative assessment

Kramer as a standardized patient
The TeleOSCE

• Primary care, rural-focused clinical simulation
• Required formative assessment for core FM clerkship (OHSU)
• Takes place via an online simulated telemedicine interface (Adobe Connect)
• In-person and Online only setups
TeleOSCE Room Set Up

Speakerphone on mayo stand

Computer with web cam. Log on to video conferencing (example: Adobe connect)

Standardized Patient connects to video chat room.

Student seated
Scenario 1- Diabetes

- Don Baker, 74 y/o diabetic
- Sore on right toe, Rising sugar levels
- Previous false alarm, patient resistance
- Student must
  - Assess severity of condition
  - Utilize technology to view sore and sugars
  - Work with patient on treatment plan
Scenario 2- Depression

- Joan Lewis, 68 y/o, recently widowed
- Lives in Juntura, OR., PCP in Burns set up with telemedicine portal. Located 1 hour away.
- Recent widow
- Trouble sleeping
- Student must
  - Take a pertinent history of present illness.
  - Utilize technology to interpret PHQ-9 results
  - Work with patient on treatment plan
Learning Competencies

• Clinical knowledge
  – Diabetes & Depression management

• Socio-economic knowledge
  – Transportation issues
  – No pharmacy
  – Poor access to fresh food

• Patient-centered use of technology
  – Intentional “stumbling blocks”

• The “how” is more important than the “what”
Cases in Development

- American Board of Internal Medicine grant
- Sinusitis
  - Urban underserved
  - Mobile phone
- MRI
  - Unnecessary MRI request
Impact

• “It’s never crossed my mind before that patients would have the same technology as the physician in the office so that you could do a visit with the patient in their homes by themselves like that….That was new for me.” (Student A)

• “It (the TeleOSCE) fits pretty well with the theme that we do have a lot of patients who have a hard time getting in to see the doctor… even though this is a rural area, they live even farther out, so I can definitely see myself doing this, you know, later on in my career when I will have to do telemedicine with patients.” (Student B)
Impact

Mean Differences in Survey Scores Pre vs. Post TeleOSCE (Rotations thru Rot 5 (AY 15/16))

- No Exposure (n=22)
- Observers (n=10)
- Active Participants (n=95)
TeleOSCE Implementation:
University of South Dakota Sanford School of Medicine
Other TeleOSCE Implementations

• The University of Texas Health Science Center, San Antonio
• OHSU PA program
Beyond Academia

- Competencies be modified for different learner levels, professions
- Competencies can be modified to fit needs of different healthcare systems
- Other technology can be used: Skype, Google Hangouts, Zoom or actual telemedicine platform
- Workplace-based telemedicine assessment that can be administered remotely
This event has been approved for up to 1.00 continuing education (CE) hours for use in fulfilling the continuing education requirements of the Certified Professional in Healthcare Management Systems (CPHIMS) and Certified Associate in Healthcare Information and Management Systems (CAHIMS). Email Scott Zacks at scott@scottzacks.com to request the webinar event completion form.
References


