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.

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Objectives

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

Telemedicine gives rural doctors immediate access to help
by Tom Robertson, Minnesota Public Radio
August 22, 2012

EMR, telemedicine saves Texas $1B
AUSTIN, TX | August 24, 2011

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Why teach telemedicine in clinical education?

- ## Real world application
- ## **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.*
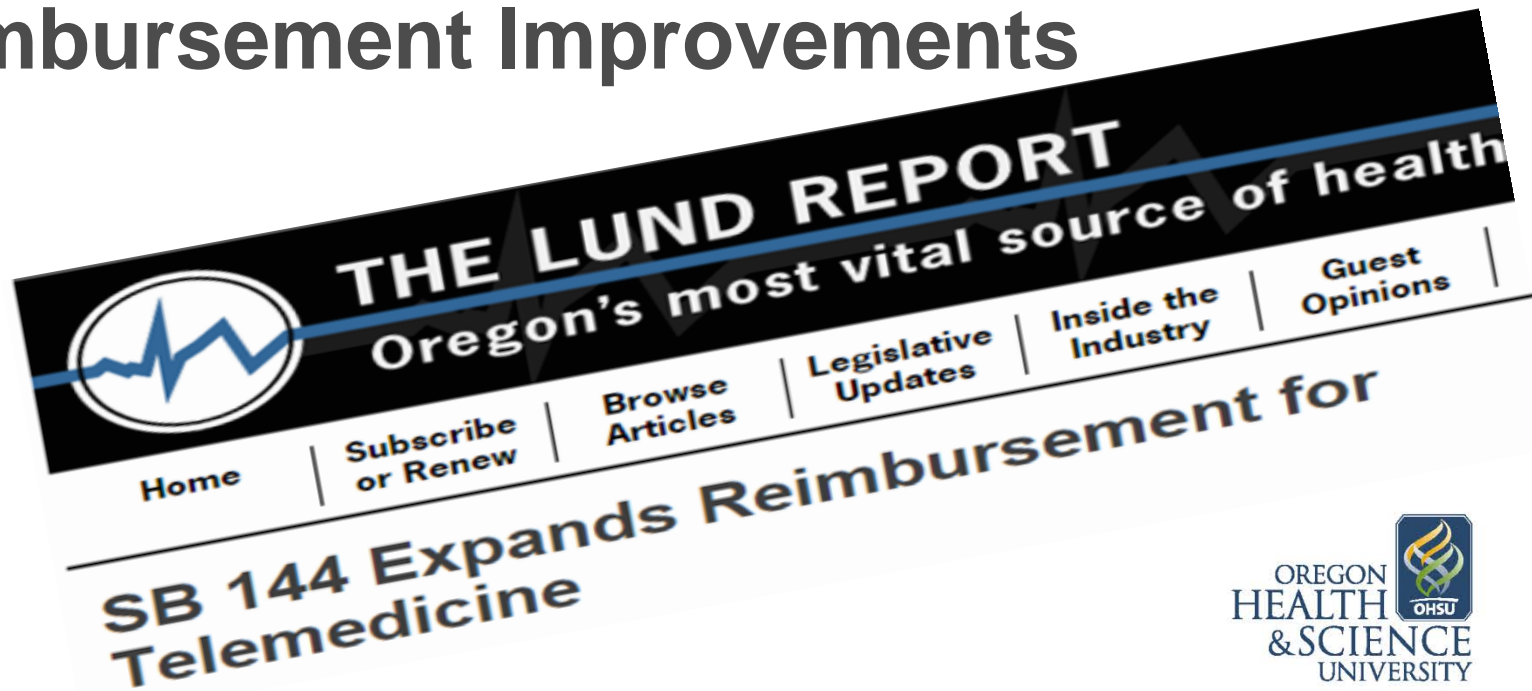
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Why teach telemedicine in clinical education?

- Real world application
- Patient Need
- **Future Practice Model**

Ambulatory Care | ED, Nursery, Acute Care | Inpatient | Transitions SNF LTAC Hospice | In Home Monitoring "Smartphone" Aps

Continuum of Care

Why teach telemedicine in clinical education?

- Real world application
- Patient Need
- Future Practice Model
- **Reimbursement Improvements**

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- Reimbursement Improvements
- **Method to Addresses many Medical Education Competencies with remote students**

Why teach telemedicine in clinical education?

- Real world application
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- Future Practice Model
- Reimbursement Improvements
- Method to Addresses many Medical Education Competencies with remote students
- **Better patient care**

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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)

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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

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Faculty
(feedback)

SP

Student

Staff support

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

TeleOSCE Room Set Up

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Scenario 1- Diabetes

- Don Baker, 74 y/o diabetic
- Lives in Crane, OR., PCP in Burns set up with telemedicine portal. Closest hospital 200 miles.
- 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

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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
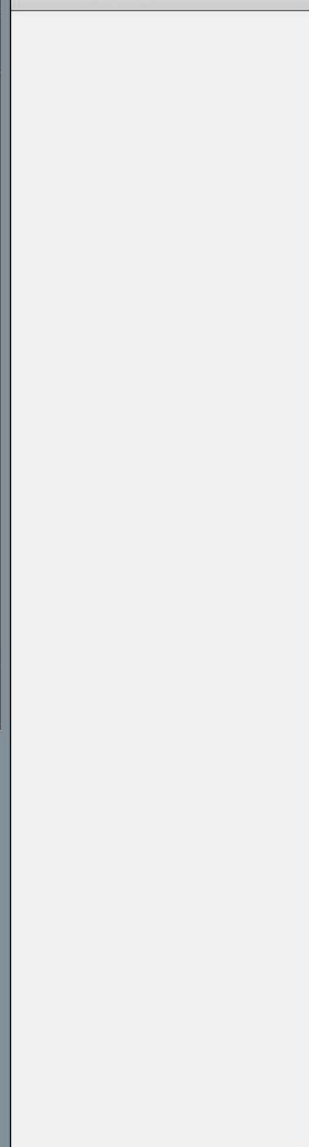- MRI
  - Unnecessary MRI request

Camera

Chat 16 (Everyone)

Don Baker

Attendee List (4)

Active Speakers

▼ Hosts (1)

Ryan Palmer

▼ Presenters (1)

▼ Participants (2)

Don Baker

Lisa D

Student Scenario 10-29-13.pdf   Full Screen

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.

Files 12

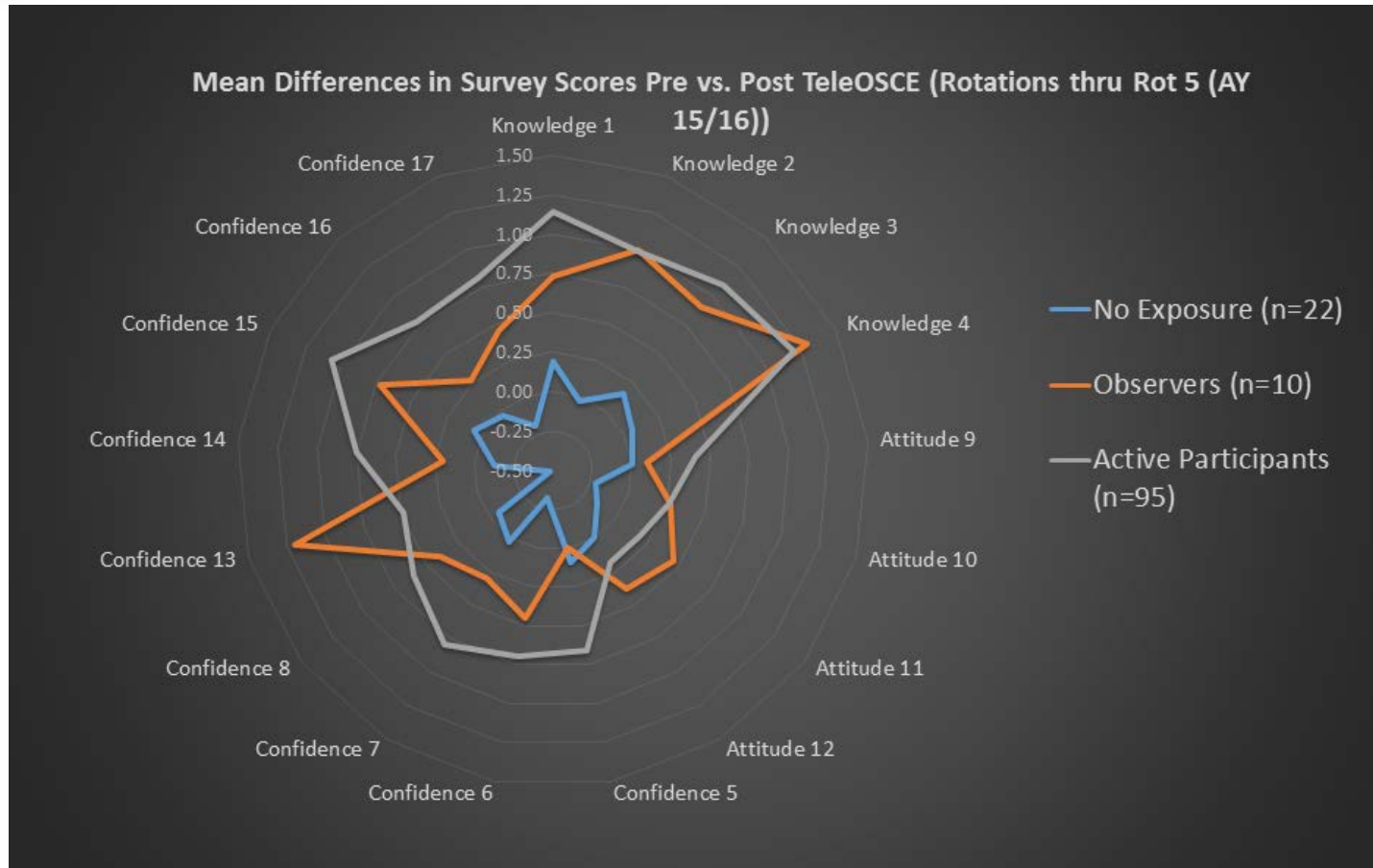| Name	Size
Don Baker Labs.pdf	34 KB
Foot pic.jpg	63 KB

Download File(s)
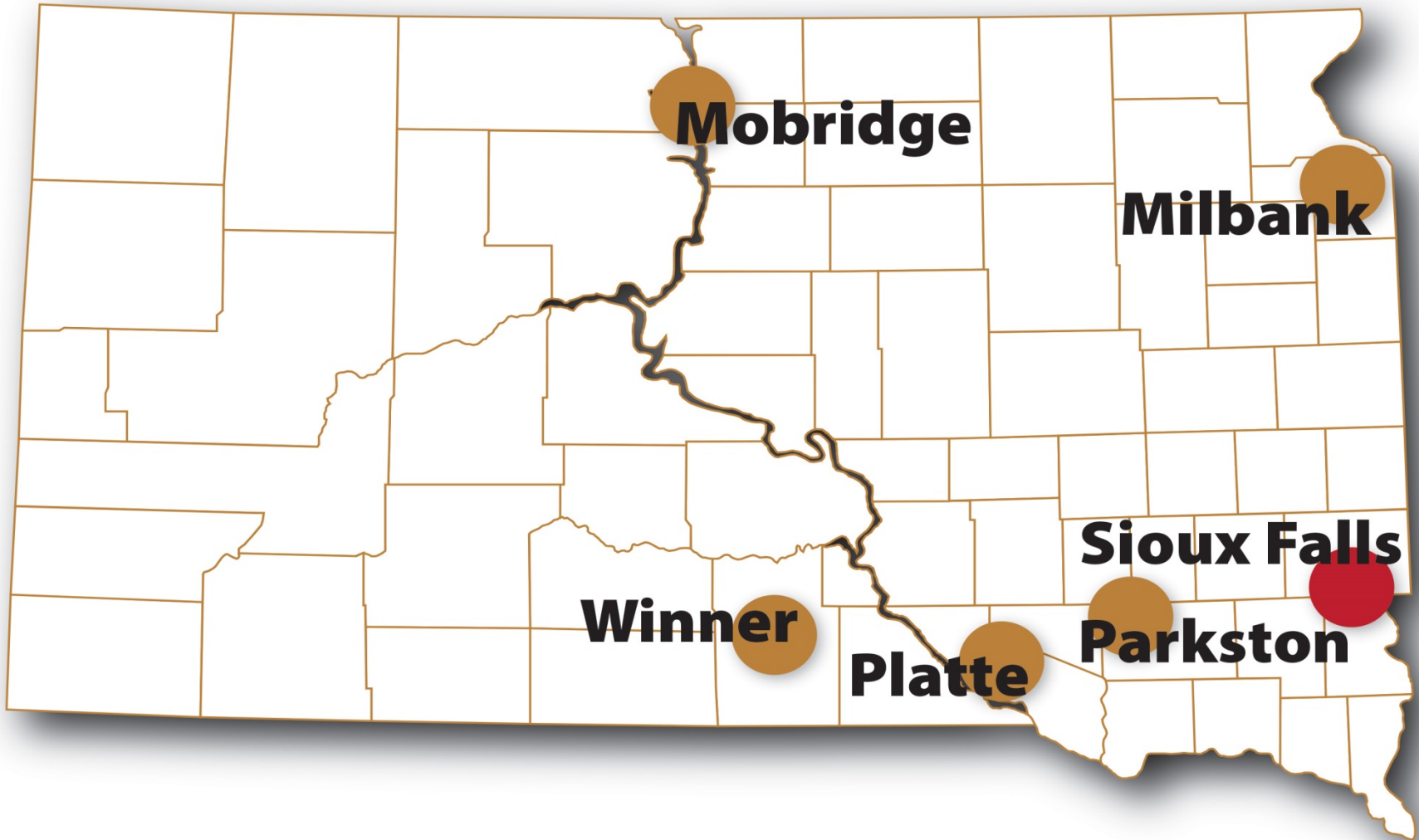
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Video Example

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)

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Impact

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

TeleOSCE Implementation:
University of South Dakota Sanford School of Medicine

Mobridge

Milbank

Sioux Falls

Winner

Platte

Parkston

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

Discussion

Questions: palmerry@ohsu.edu

Reedsport, Oregon
Photo by Lisa Merriman, MS3,
OHSU Rural Clerkship , January 2014

- 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.

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