

TELEHEALTH 102 - Maximizing Clinical Effectiveness

Image and Sound Quality & Etiquette in Live Video

Jonathan Neufeld, PhD

Great Plains Telehealth Resource & Assistance Center

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Resource & Assistance Center

gpTRAC.org

Outline

- **Presentation Quality**

- Technical issues and preparation for video sessions
- Sometimes subtle, but convey professionalism

- **Etiquette, Training, & Evaluation**

- Behaviors during a video encounter
- Essential for effective, professional encounters

This TRC activity is supported by grants from the Office for the Advancement of Telehealth, Federal Office of Rural Health Policy, Health Resources and Services Administration, DHHS

Introduction

- Presentation quality is a HUGE (but overlooked) professional issue
- There is always lots to learn & ways to improve
- Interesting and fun to discuss

I. PRESENTATION QUALITY



I. PRESENTATION QUALITY



Caveats

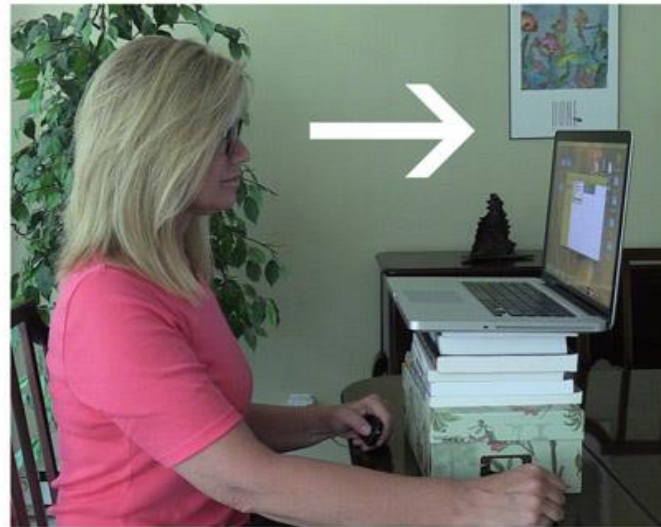
- Variation is possible - we are presenting “ideals”
- Hardware and software matter, but here we are focusing on “the rest of it” (what you do, not what your computer does)

Screen type and size

- Live video can be displayed on a wide variety of devices
 - Not limited to within an EMR or other platform
 - Various form factors have strengths & weaknesses



Camera Location and Stability



Screen type and size

- Exercise: Introduce yourself “through the window”
 - One type of “ideal” setup
 - “window” metaphor
- Try “Tablet” as well



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Camera Location and Stability

- Producing the illusion of “eye contact”
 - a. Camera directly over face
 - b. Video image directly under the camera
 - c. Minimize the separation

**“Lower the camera;
raise the image”**

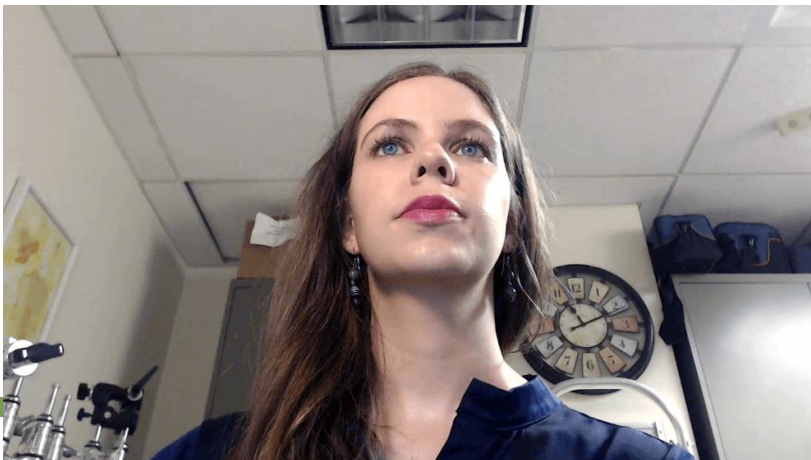


Camera Location and Stability



Light, Height, and Gap are Important





Typical Webcam Set-up Not Optimal



Optimal Webcam Set-up

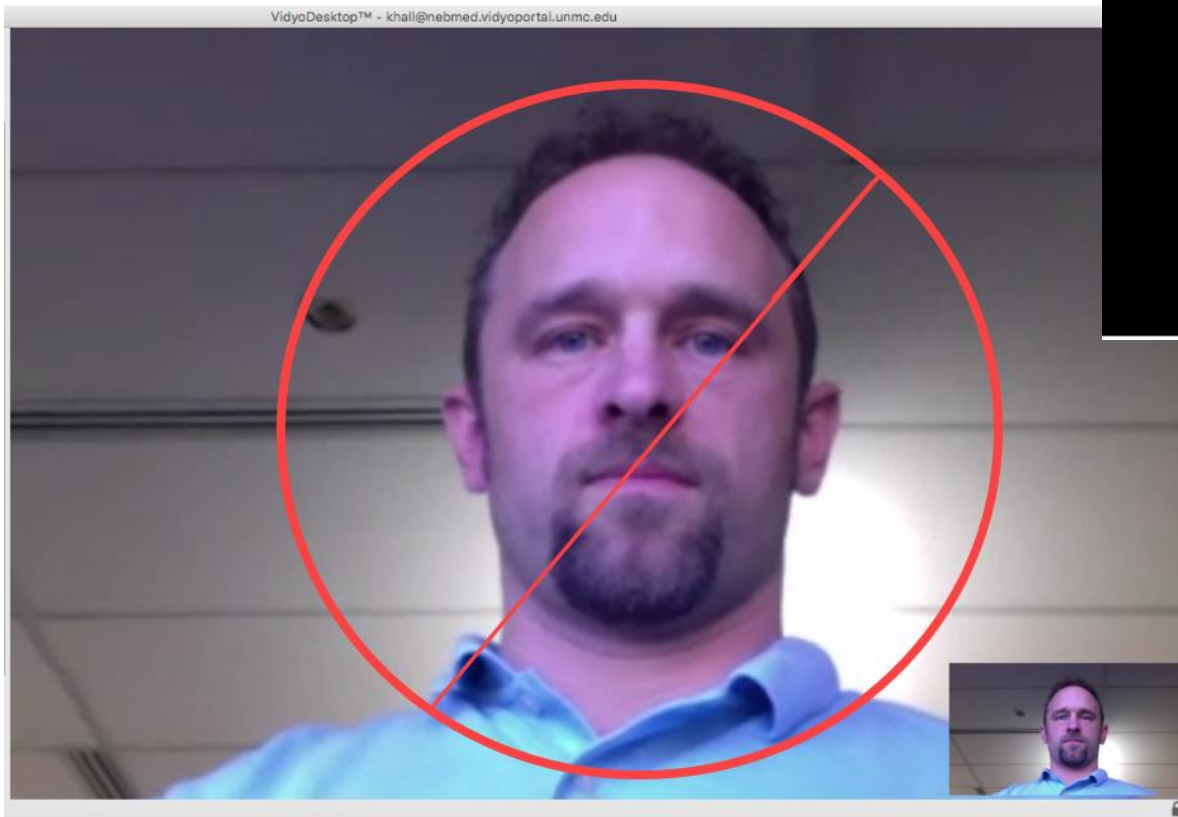


Lighting

- Standard workplace lighting is often “good enough”
- General principle: Bright, Blurry, & Before
- Things to avoid
 - “Point” sources - lamps
 - Harsh light - reflections
 - Unbalanced light - shadows
 - Backlighting
 - Subject near a bright/reflective back wall



Avoid the “webcam zombie” look



Downward glance and poor lighting can make you a character in a horror movie.

Lighting (more examples)



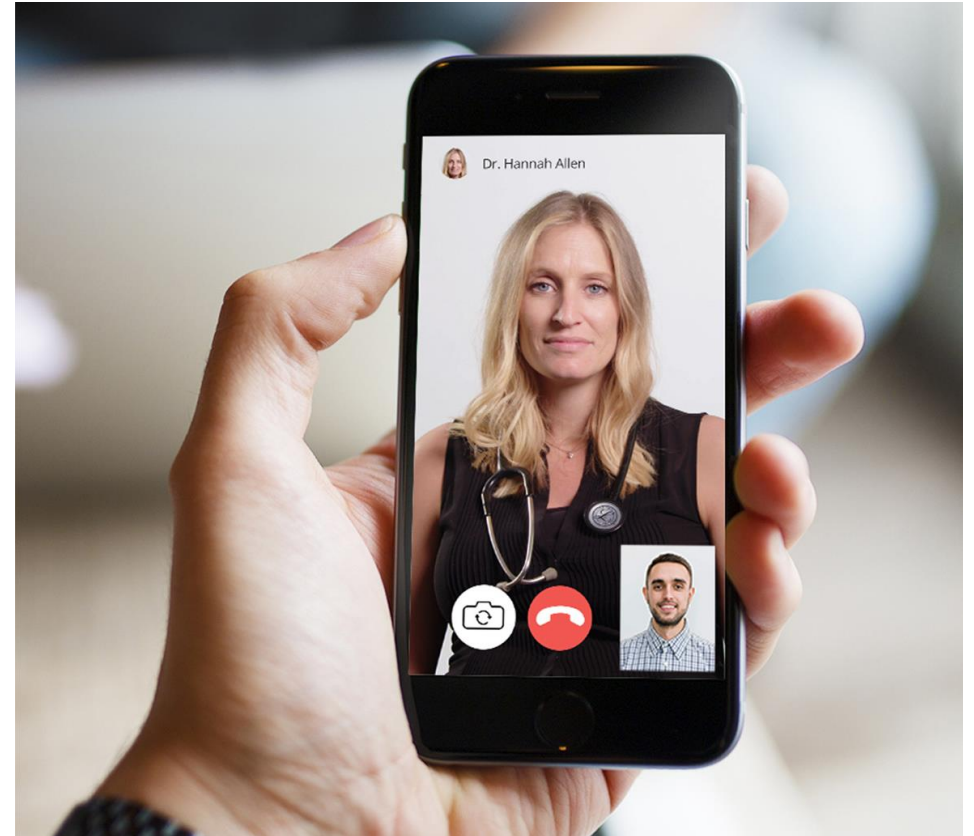
Back lighting



Side lighting

Camera Stability

- Stability adds to professionalism
 - a. Exercise: View through the “tablet”

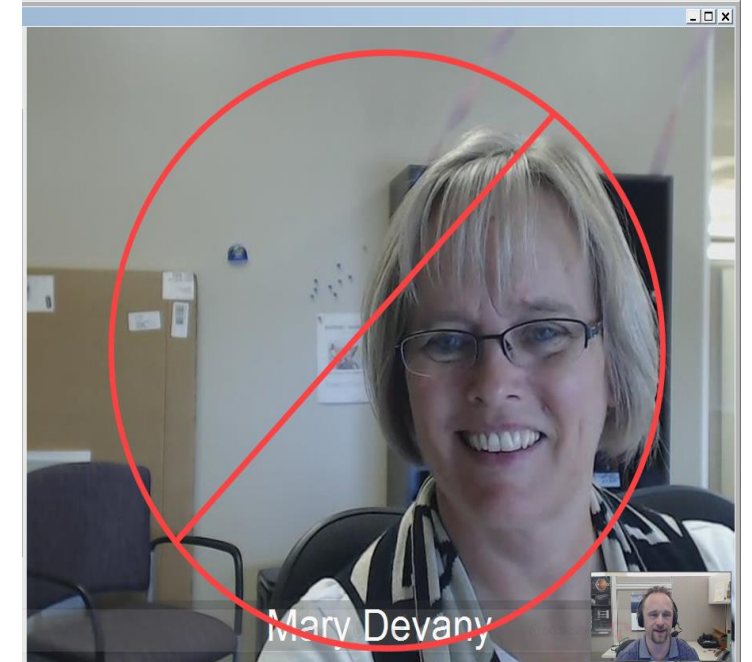
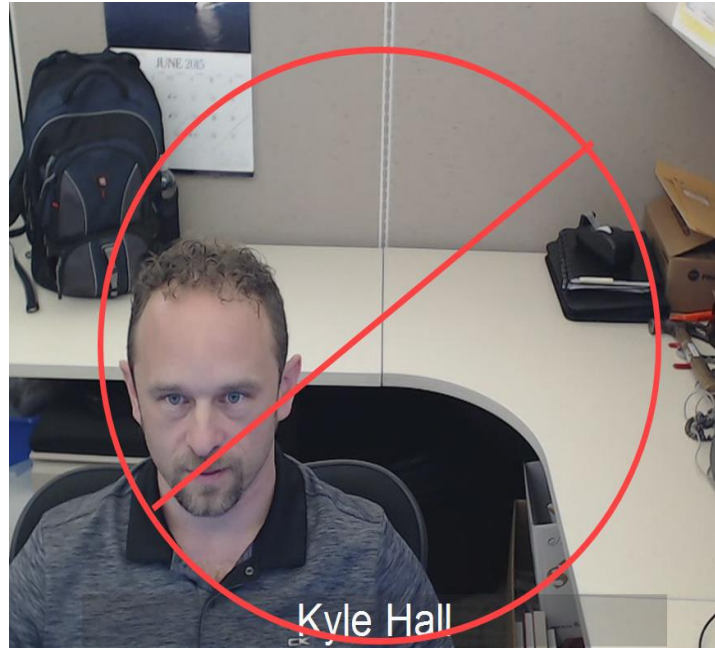
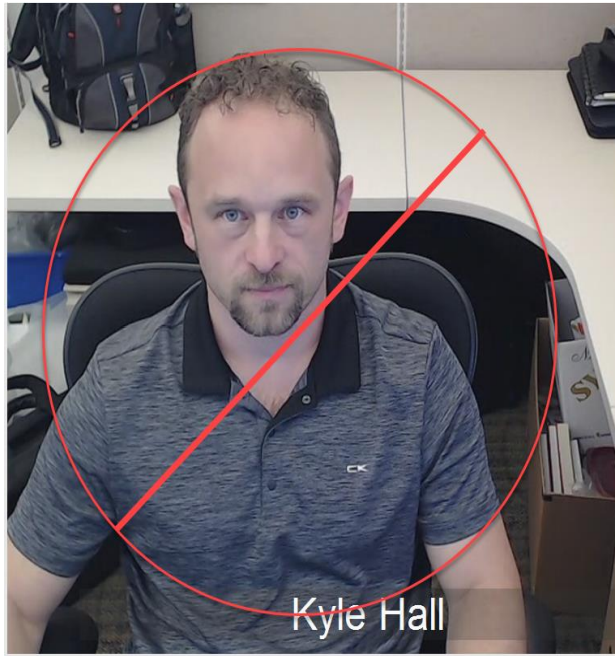


Framing & Background

- Fill the frame to the top
- Include your hands
- Avoid intrusive backgrounds
- Avoid backlighting



Framing & Background



Privacy & Security



Work area has insufficient privacy allowing co-workers to unintentionally intrude



Secure office location, but the glass behind the user creates privacy a concern

Room Walls & Backgrounds

- Flat colors (unreflective)
- Neutral tones
- Avoid patterns & lines

[Story: Altru “telemedicine” color palette]



Room Colors (and Lighting)

- Room walls change the color of reflected light
- Choose neutral or muted colors
- Use “daylight” colored lights



Sound

Reverberation

Proximity

Sensitivity

Directionality



Sound

Reverberation - Room echo (“softer” walls and furniture reduce reverb)

Proximity - The closer the mic is to the sound, the better the quality

Sensitivity - Signal (volume) reduces with the distance ***squared***

Directionality - High frequencies (necessary for intelligibility) come straight out of the mouth; low frequencies are less directional

Sound



- Lots of mic styles available - don't settle for bad sound
- Headsets solve most problems
- Feedback - when two ends of the call can hear each other
- Echo - usually the one with the problem can't hear it



Sound

- Pro Tip:

“MTDM”



Handling Peripherals

- Stand behind/to the side of the patient
- Address the camera
- Practice



Other “Pro Tips”

- Secondary communication plan (backup “hotline”) - if presenter leaves the room or the call breaks down
- Know your equipment and placement of cameras and microphones.
 - Software and hardware upgrades tend to change things

--- BREAK ---



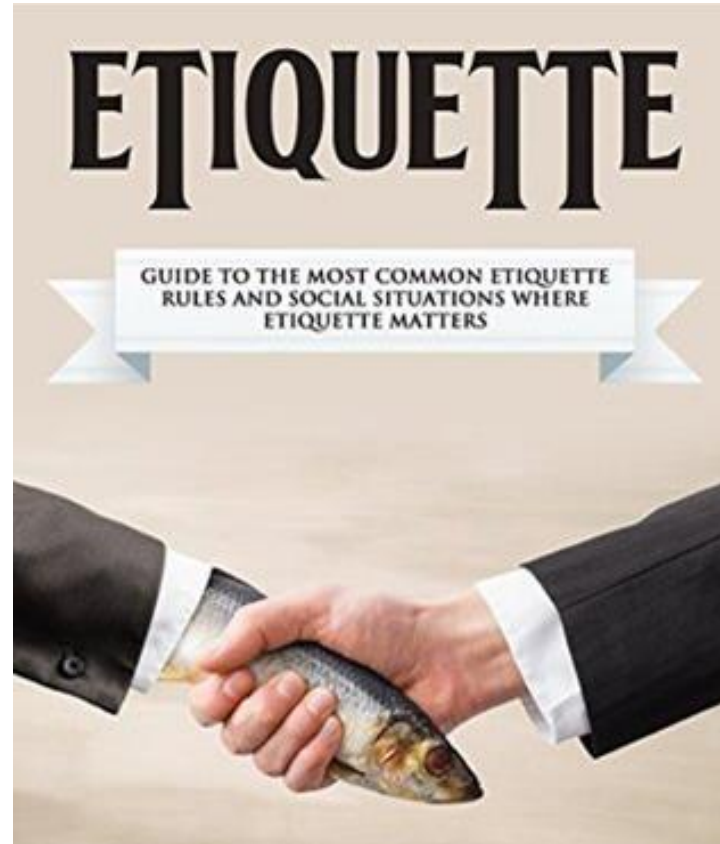
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II. ETIQUETTE, TRAINING, & EVALUATION



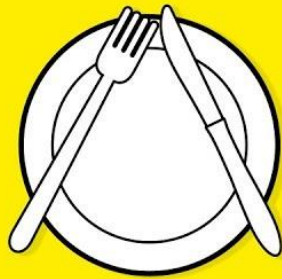
II. ETIQUETTE, TRAINING, & EVALUATION



II. ETIQUETTE, TRAINING, & EVALUATION

**DON'T SEND
AN EMAIL THAT
JUST SAYS
“THANKS!”**

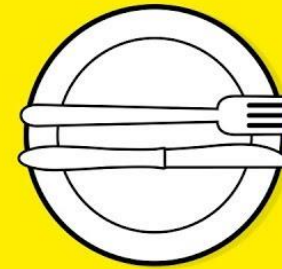
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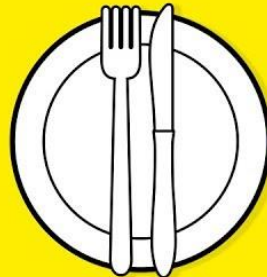
STILL EATING



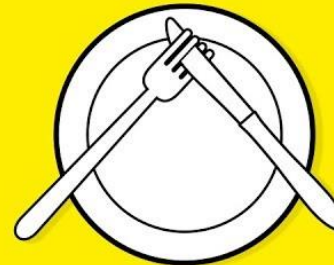
**EXPECTING ANOTHER
COURSE**



**IT WAS
DELICIOUS**



I'VE FINISHED



I DIDN'T LIKE IT

Training and Competencies

- Consider how much and what kind of training operators need
- Consider including information about image quality
- Continuously monitor and improve your image

Training and Competencies

- Telemedicine procedures should mirror “normal” procedures
 - Telemedicine is a mode of delivery, NOT a special treatment or different service
 - Adapt usual procedures as much as possible, or include telemedicine points in usual procedures
- Train everyone thoroughly, but...
 - avoid making telehealth something “special”, risky, or difficult

Best Practices

Familiarization, normalization, and practice

- Everyone should be comfortable using the equipment
- Using live video in other situations helps normalize it
- PRACTICE - use mock encounters to learn BEFORE it matters
- If a hesitant provider (or patient) has one bad encounter, they will need 10 good encounters to trust the technology again

Best Practices

Building Rapport

- Talk normally
- Look at the patient (whose face is near the camera)
- Use gestures (your hands are on screen)
- “Talk to the person, not the screen.”

Best Practices

Building Rapport

- Monitor your self-view (but don't obsess about it)

Universal Video Etiquette

- Everybody in the room is on screen
(or at least comes on to be introduced)
- Everybody should be identified by name and role
- Prior patient consent is obtained
- Alternatives are understood
- No recordings are made without explicit consent

Evaluation

Making sure your presenters are conducting effective, high quality encounters.

Using a Checklist

Telepresenter Competency Checklist (gpTRAC.org)

Telepresenter Competency Check List – (RN)

CRITICAL ELEMENTS	MET	NOT MET
States facility's procedure for telemedicine scheduling, room and staffing reservations		
Maintains confidentiality, video and audio privacy during a telemedicine consult. Introduces those present at both locations		
Educates patient on the telemedicine process and obtains informed consent according to facility policy		
Assists with patient examination <ol style="list-style-type: none"> Specialty forms are completed and faxed as needed Faxes or enters electronically patient information as needed Prepares patient for exam <ol style="list-style-type: none"> Performs assessment specific to specialty and presenting problem Assesses clothing and has patient put on gown as needed Positions patient for best viewing of the patient and patient condition Assists with exam at direction of specialty provider 		
Maintains medical record <ol style="list-style-type: none"> Admits patient according to facility policy Documents according to facility policy Documents patient seen by telemedicine, provider and those present 		
Discharge planning <ol style="list-style-type: none"> Provides discharge instructions as needed Schedules any follow-up appointments or additional testing as needed 		
Assists in data collection, evaluation and performance improvement <ol style="list-style-type: none"> Maintains logs as required Provides patient satisfaction survey Reports any patient complaints or adverse outcomes according to the facility's policy 		
Can move and set up equipment according to procedure <ol style="list-style-type: none"> Turn off video equipment as necessary before moving Unplug power and network from source Moves video cart to designated area Plugs into appropriate network and power sources Position in room for best viewing for and by the patient Turns video unit on Places microphone near presenting area Adjusts camera and establishes pre-sets as needed 		

General Session Checklist

- ☐ Have equipment ready beforehand
- ☐ Introduce all participants (name/role)
- ☐ Orient and answer questions
- ☐ Say: “Video sessions are never recorded without permission”
- ☐ Discuss “call dropped” procedure
- ☐ Place and monitor your self-view
- ☐ Speak clearly and normally
- ☐ Engage the patient with eye contact and gestures
- ☐ Structure the encounter effectively
- ☐ Give a clear “end” to the encounter (“I’m disconnecting now”) and clear instructions for the patient on what to do next

Standardized Training Evaluation Tool

Tina Haney, PhD
Assistant Professor of Nursing
Old Dominion University
Interprofessional Team Telehealth
Performance Evaluation



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Interprofessional Team Telehealth Performance Evaluation

© Tina Haney (thaney@odu.edu)

This tool was developed to evaluate trainees on conducting team-based clinical encounters using live video (telemedicine).

Introduction

1. Did all participants introduce themselves?	Y	N	NA
2. Did all participants state their role?	Y	N	NA
3. Did participants ask what the patient wanted to be called?	Y	N	NA

Preparation

4. Were participants dressed appropriately?	Y	N	NA
5. Were rooms kept quiet and private (doors closed)?	Y	N	NA
6. Did participants ensure the patient was comfortable?	Y	N	NA

Beginning

7. Were microphones muted before the visit began?	Y	N	NA
8. Did participants indicate all phones/pagers were off?	Y	N	NA
9. Were all participants visible on screen?	Y	N	NA
10. Was the patient's permission elicited explicitly?	Y	N	NA

Questions & Discussion

Jonathan Neufeld

Great Plains Telehealth Resource & Assistance Center

jneufeld@umn.edu

574-606-5038

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