ARIZONA TELEMEDICINE PROGRAM

SOUTHWEST TRC TELEHEALTH RESOURCE · CENTER™

# Effectively Engaging Patients in Telehealth

**Elizabeth A. Krupinski, PhD**

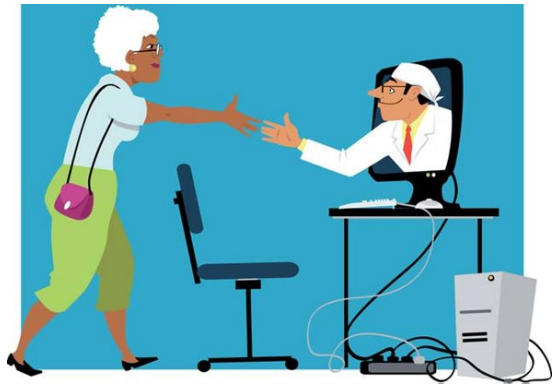
**Associate Director of Evaluation ATP**

**Co-Director SWTRC**

**Professor & Vice Chair for Research Department of Radiology & Imaging Sciences Emory University**

# Goals

- Understand importance of establishing rapport during telehealth encounters
- Appreciate impact of technology & virtual environment on rapport
- Recognize importance eye contact in establishing & maintaining rapport
- Gain useful tips on communication information & styles in rapport

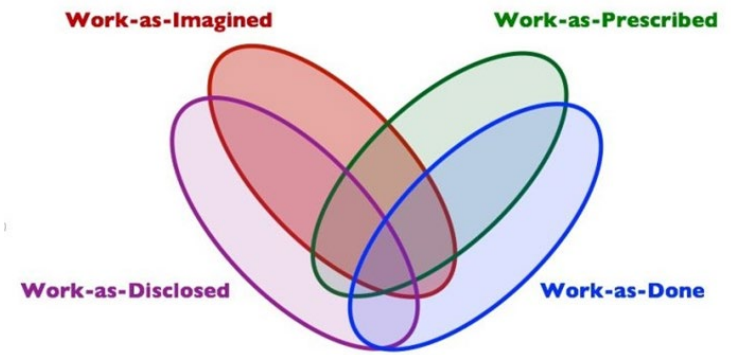


# Keys Successful Telemedicine Practice

- Business plan, reimbursement, licensure, champion, technology etc. etc. etc.
- Integration into existing practice
- Hub-spoke, enterprise-wide system, service provider, direct-to-patient
- Workflow, workflow, workflow
- It's the people – not the technology!

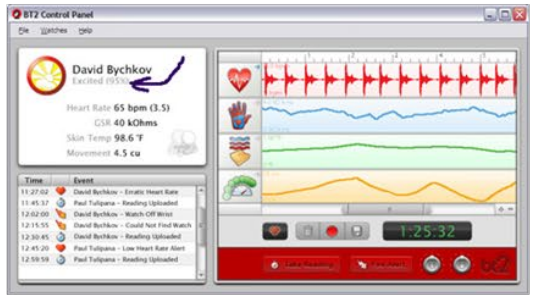
# What is Human Factors?

- Examine social, psychological, biological & physical components that inform design, development & operation products or systems
- Goal = optimize performance, user safety, satisfaction with ultimate goal maximizing benefits user experience

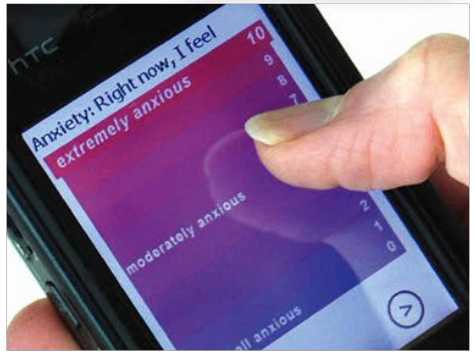


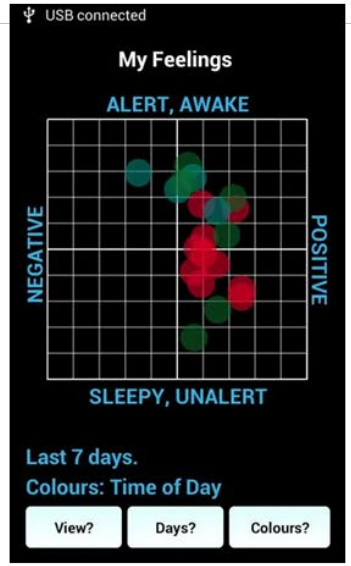
# CLINICAL ENCOUNTERS

# WEARABLE/USABLE DEVICES







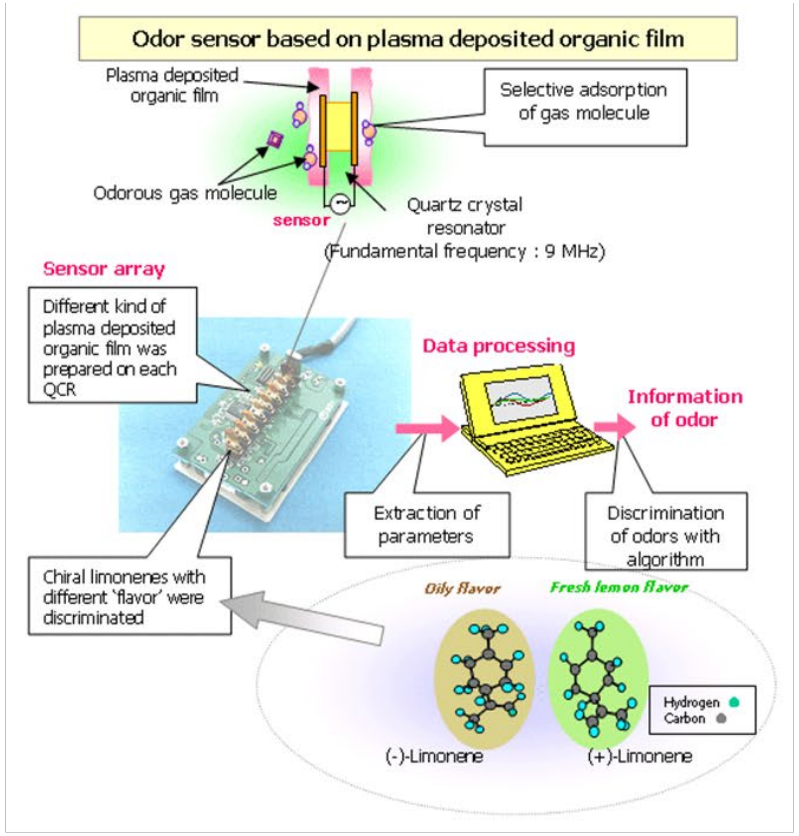



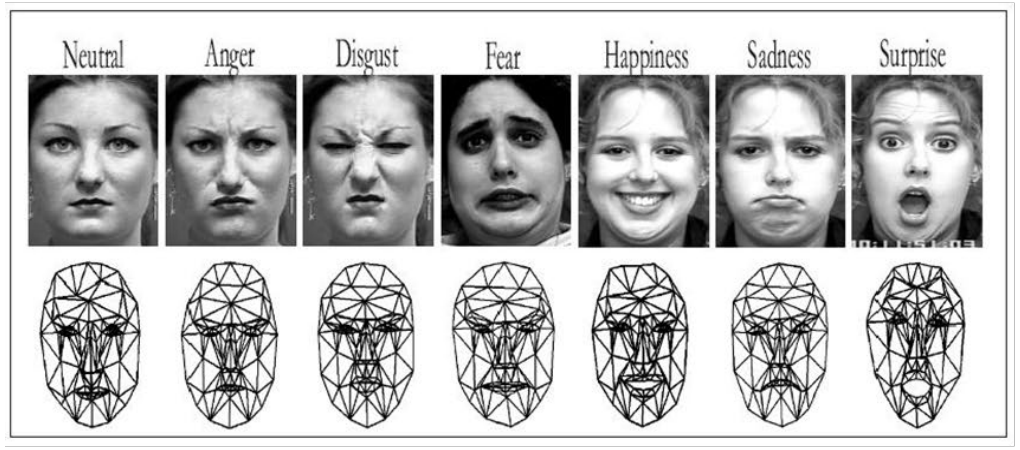


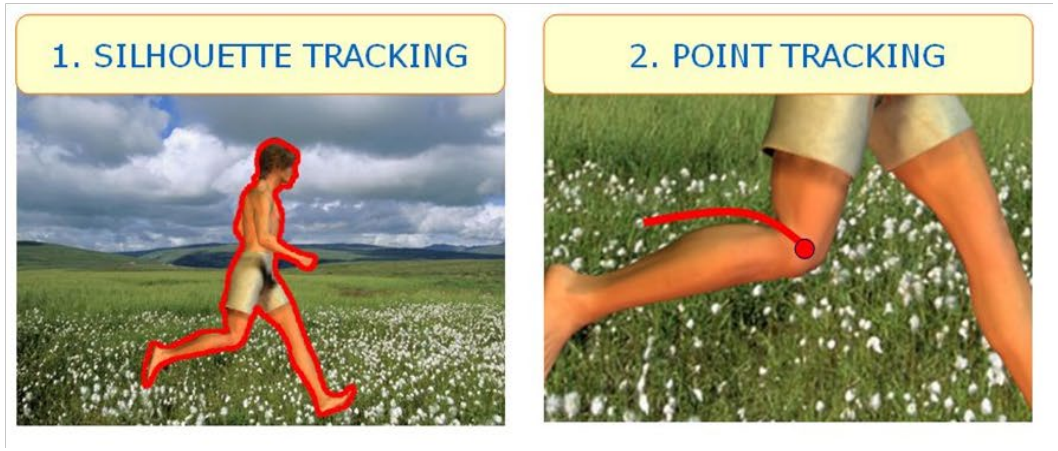
t2 mood tracker

# "Human" Factors

- Senses
  - Touch – healing/therapeutic, handshake, pat on back, hug
  - Visual – impairment, scope/FOV, subtle movements
  - Smell – alcohol, drugs, hygiene
  - Hearing – impairment, changes tone, volume, tremor
  - Taste - ?
  - 6th sense – presence, gut reactions
- Comfort, ease, rapport, satisfaction
- Outcomes

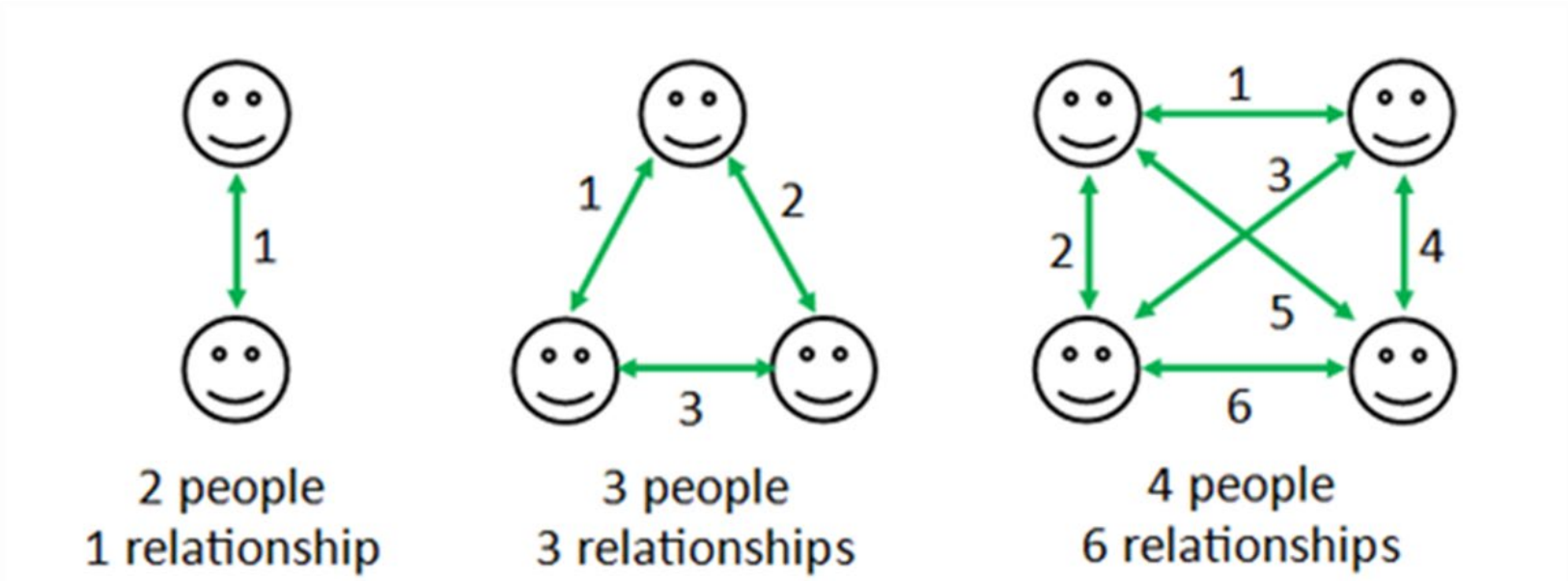

Odor sensor based on plasma deposited organic film
Plasma deposited organic film
Selective adsorption of gas molecule
Odorous gas molecule
sensor
Quartz crystal resonator
(Fundamental frequency : 9 MHz)
Sensor array
Different kind of plasma deposited organic film was prepared on each QCR
Data processing
Information of odor
Extraction of parameters
Discrimination of odors with algorithm
Chiral limonenes with different 'flavor' were discriminated
Oily flavor
Fresh lemon flavor
Hydrogen
Carbon
(-)-Limonene
(+)-Limonene

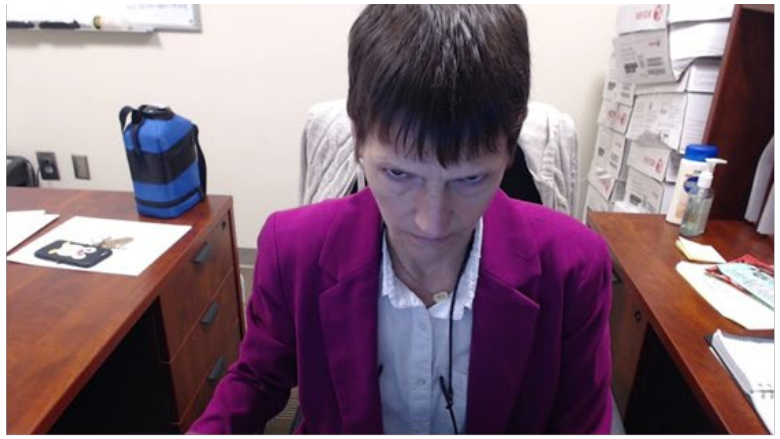

Neutral
Anger
Disgust
Fear
Happiness
Sadness
Surprise

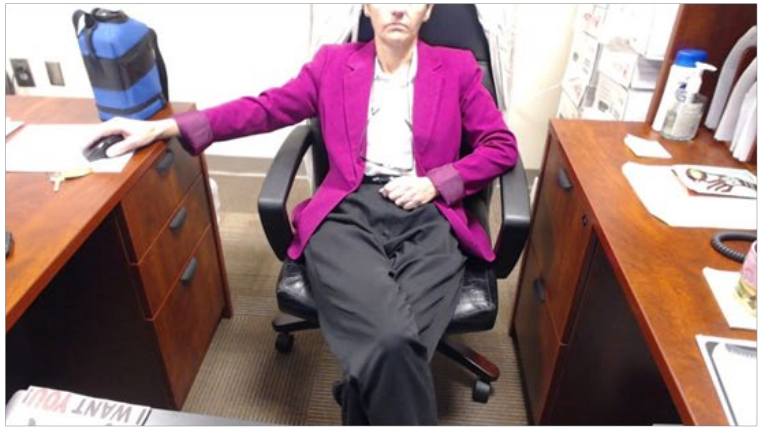

1. SILHOUETTE TRACKING
2. POINT TRACKING

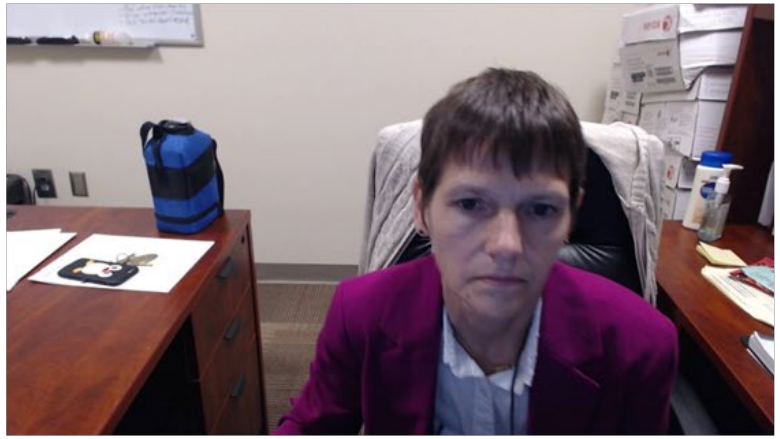
# Relevant Dyads

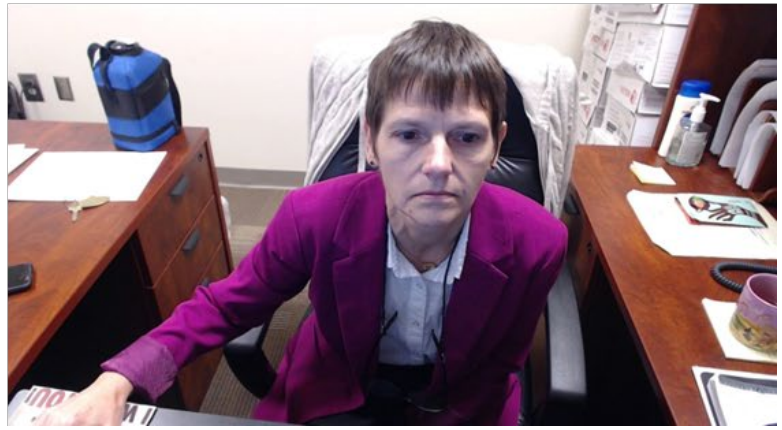
- Clinician - Consultant
- Consultant - Patient
- Consultant - Facilitator
- Humans - Machines









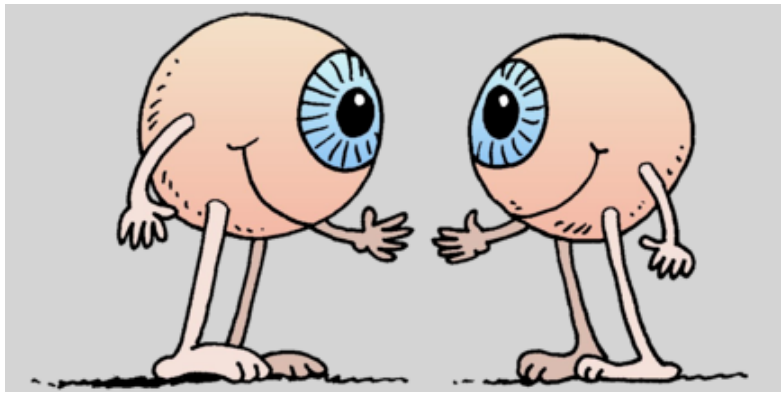


# The Eyes are the Windows……

- Eye contact one of most important aspects human interaction
- Fundamental to REDE (Relationship, Establishment, Development, Engagement) model patient provider interaction
  - Skill set checklist covers eye contact
  - Impacts patient's sense dignity

# “Eye Contact Effect”

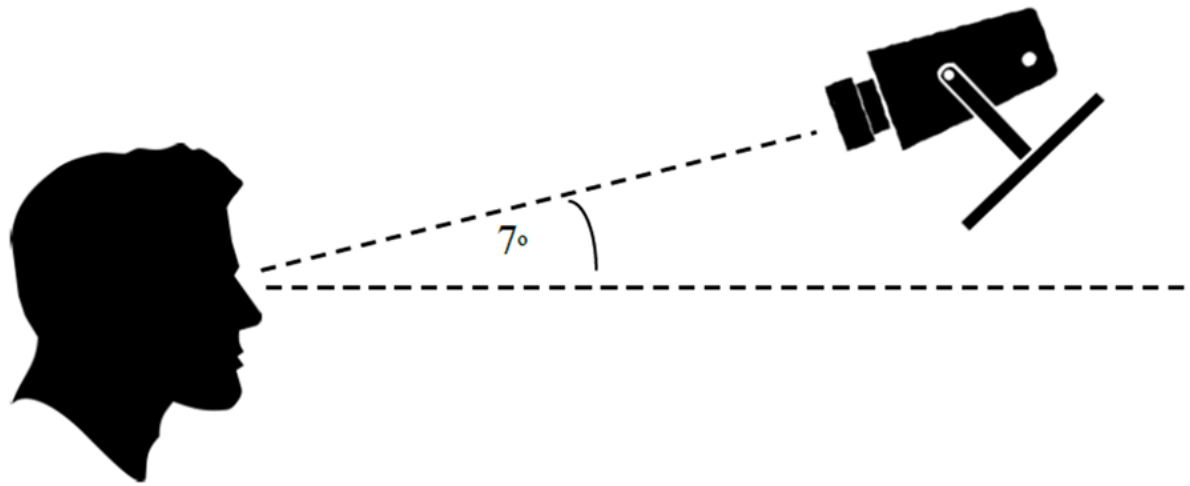
- **Perceived eye contact with another human face modulates aspects concurrent &/or immediately following cognitive processing**
- **Functional imaging reveals eye contact can modulate activity in structures in social brain network**
- **Developmental studies show evidence for preferential orienting toward, & processing  faces with direct gaze early in life**



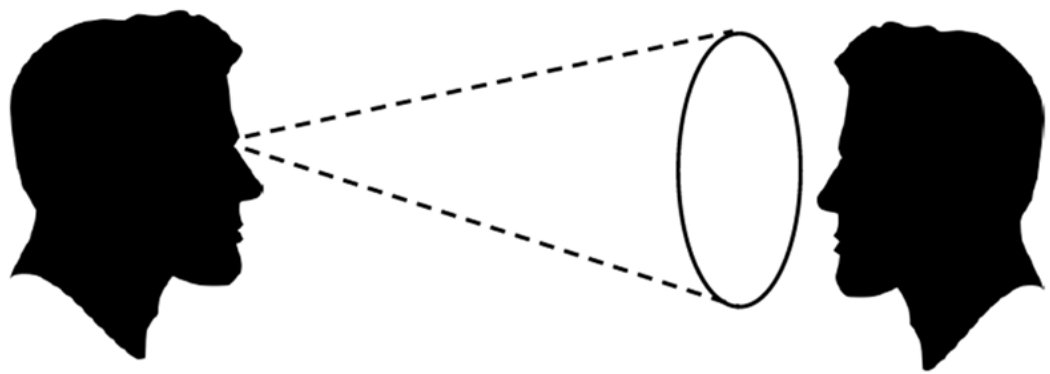
# Gaze vs Eye Contact

- Gaze = directed looking at person/object
- Eye contact = gaze directed at another's eyes
- Mutual eye contact = two people make eye contact simultaneously
  - Helps establish rapport & trust
  - Keeps participants focused on each other (i.e., gaze directs attention)
  - Encourages interaction
  - Facilitates memory
  - Influences likeability & attractiveness
  - Affects perceived emotion
  - Creates sense inclusion when present & sense isolation when not
  - Allows use non-verbal cues

## Camera Position




## Cone of Gaze

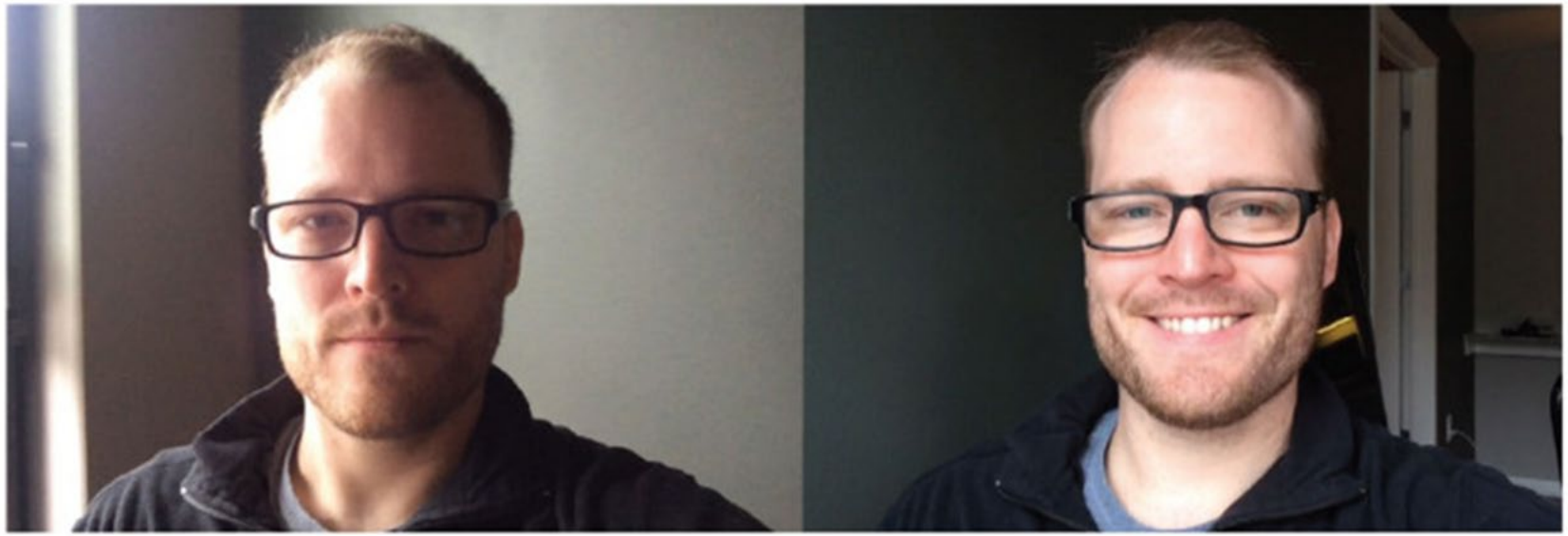


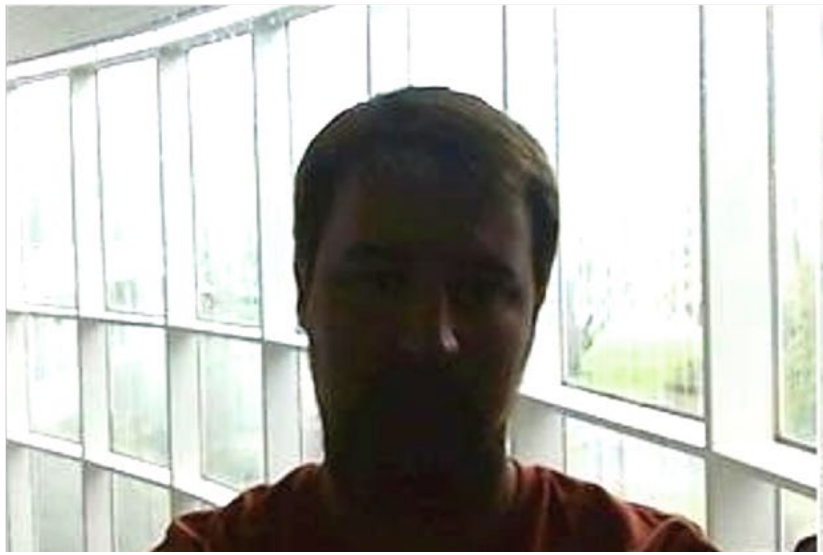
# Cultural Factors

- Different cultural associations with direct eye contact versus indirect eye contact
  - Arabs, Latin Americans & Southern Europeans make more eye contact during conversation than Asians & Northern Europeans
  - Japanese consider eye contact rude & people taught to look at person's Adam's apple instead of eyes; also social rank - eye contact with superiors avoided
  - In general women make more eye contact than men
  - Eye contact changes with age: increases ages 4-6 & 6-9, decreases from 10-12, increases into adulthood

Bad Lighting

Good Lighting





# Crucial First Minute

- Important aspect developing rapport over TH is having professional, confident, authentic tone - if provider anxious, unsure, hesitates awkwardly, has informal tone at visit beginning caller doesn't trust provider with personal thoughts & feelings
- After be warm, open & respectful – "Sure, I'll be happy to help you with that" – implies know what talking about & prepared
  - Be participatory (not 1-way) – be in their world, talk at their level, explain things using common language, smaller words, metaphors, be motivational
- Setting stage or pre-education – let patient know what to expect, limitations, follow-up processes etc. & allow for Q&A – solidifies trust & makes everyone comfortable
- Informed consent – may not be required for this type of encounter but always useful to get

# Additional Factors

- Environmental factors – minimize distractions (both sides), lighting, room size, need for activity, furniture, toys, tools
- In case lose connection – this is what we'll do
- Cultural competencies – selecting right provider, if possible someone with similar background as patient or at least experience/comfort with
  - Gender, race, ethnicity, age, sexual orientation …….
- Clarify roles & expectations – include others (parents, caregivers etc.)
- Review prior info/history with them
- Teachable moments
- Post-visit communication
- Always be aware of escalations & ER contacts

- Be conscious warmth of opening & closing greetings – smile!
- Confirm patient can hear & see you clearly
- Allow for extra pause after patient speaks to ensure they have completed their sentence to avoid interruptions
- Explain when you have to look away to reference EHR or other documents
- Identify reason for visit & priorities
- ID anyone else in room + their room
- Ask twice, is there anything else – keep asking until confirm nothing else
- Negotiate if needed – that's a lot to cover today, let's deal with X since it sounds like your most pressing concern & Y next time as is less critical – then restate agenda
- Consistently convey empathy – be active listener, get their opinions

# Basic TH Intro

- Ask if ever seen a doctor on a phone or computer - may be helpful use common technology (e.g., Facetime) & explain key differences
- Explain why telehealth being used - “we are using technology to meet with patients during COVID-19 so everyone can stay as healthy as possible”
- Communicate/affirm session happening in “real time” - comment on the patient’s gestures, or what they are wearing - children in particular seem to enjoy as proof being seen
- Discuss security if needed – adults & teens might understand encrypted technology & HIPAA but if younger children express concerns about who else can hear/see them so describe as “electronic tunnel from the camera where I am to where you are.”
- Some patients appreciate being reassured session not “on the internet” nor will it be placed online
- Inform patients if session being recorded & must obtain explicit consent from the patient
- Establish visual context of where you are sitting - ask patients if would like to see your office & use camera’s zoom & pan features or manually move to give patients a virtual tour of your office

# Closing Checklist

- Summarize plan
- Reinforce any care provider actions, such as calling in prescription, labs,
- Reinforce any actions patient will take, such as increasing activity, changing diet, complying with medication
- Review questions & answers
- Provide guidance on what to watch for should problem worsen
- Offer instructions for follow-up questions or concerns

CARAVANHEALTH

# Telehealth Physical Exam

*"Listen to your patient, he is telling you the diagnosis." — Sir William Osler*

Performing a physical exam via telehealth can seem challenging, especially if the patient is in their home where assessment tools, such as a blood pressure cuff or digital stethoscope, may not be available. But with some thoughtfulness, cooperation of the patient, and adequate lighting and camera, providers are able to examine several organ systems. And, as Osler reminds us, let's not forget our most keen diagnostic tool: a thorough patient history.

## EYES

- Appearance of conjunctiva and lids (lid droop, crusting/exudate, conjunctival injection)
- Appearance of pupils (equal, round, extraocular eye movements)
- Assessment of vision (seeing double)

## EARS, NOSE, MOUTH, AND THROAT

- External appearance of the ears and nose (scars, lesions, masses)
- Assessment of hearing (able to hear, asks to repeat questions)
- Inspection of lips, mouth, teeth and gums (color, condition of mucosa)
- Gross inspection of throat (tonsillar enlargement, exudate)
- Appearance of face (symmetric, appropriate movement of mouth, no drooling or labial flattening, ability to raise eyebrow, frown/smile, close eyes, show upper lower teeth, puff out cheeks)
- Pain or tenderness when patient palpates sinuses or ears

## NECK

- External appearance of the neck (overall appearance, symmetry, tracheal position, gross evidence of lymphadenopathy, jugular venous distention)
- Gross movement (degrees of flexion anterior, posterior and laterally)

## RESPIRATORY

- Assessment of respiratory effort (intercostal retractions, use of accessory muscles, diaphragmatic movement, pursed lip breathing, speaking in full sentences or limited due to shortness of breath)
- Audible wheezing
- Presence and nature of cough (frequent, occasional, wet, dry, coarse)
- Determine Roth Score[1]

## CARDIOVASCULAR

- Presence and nature of edema in extremities (pitting, weeping)
- Capillary refill
- Temperature of extremities per patient/other measure

## CONSTITUTIONAL

- Vital signs (heart rate and respiratory rate; if available, temperature, blood pressure, weight)
- General appearance (ill/well appearing, (un) comfortable, fatigued, attentive, distracted, disheveled/unkept)

## CHEST

- Inspection of the breasts (symmetry, nipple discharge)
- Chest wall or costochondral tenderness with self-palpation

## ABDOMEN

- Examination of the abdomen
- Tenderness on self-palpation or palpation by attendant
- Observation of patient jumping up and down

## MUSCULOSKELETAL

- Examination of gait and station (stands with/without use of arms to push off chair; steady gait, broad/narrowed based)
- Inspection of digits and nails (capillary refill, clubbing, cyanosis, inflammatory conditions, petechiae, pallor)
- Extremity exam may include:
  - Alignment, symmetry, defects, tenderness on self-palpation
  - Range of motion, pain, contracture
  - Muscle strength and tone (flaccid, cogwheel, spastic), atrophy, abnormal movements
  - Presence and nature of edema, temperature
- Self-Assessment using **Ottawa ankle and knee rules**

## SKIN

- Rashes, lesions, ulcers, cracking, fissures, mottling, petechiae
- Cyanosis, diaphoresis

## NEUROLOGIC

- Dermatomal distribution of numbness or pain
- Examination of sensation (by touch or pin)

## PSYCHIATRIC

- Orientation to time, place, and person
- Recent and remote memory
- Mood and affect
- Pressured speech
- Mood lability (crying, laughing)

[1] Roth score should be used only during telehealth visits, and in conjunction with a comprehensive assessment. This is not a reliable indicator of hypoxia.

**Suggested Citation:**

Showalter, G. (2020, April 14). Telehealth Physical Exam. Loengard, A., Findley, J. (Eds.). https://caravanhealth.com/

CaravanHealth.com

# Resources

- AMA Telehealth Implementation Playbook
- ATA QuickStart Guide to Telehealth
- AHRQ How to Obtain Consent for Telehealth
- TRC fact sheets, tips & videos for providers & patients
- Most professional societies especially psychiatry/psychology
- Talking with others to see what works

# Summary

- Technology should not be barrier to eye contact & establishing rapport
- Technological tools can facilitate & even enhance what we can learn about someone's health status & how we can help them
- TM creates very different work environment & devices that patients & providers must interact with
- Human factors studies can help optimize both experiences & reduce potential for injuries & errors
- Lots of resources with tips, methods, protocols etc.

# Thank you!

- For more information
- swtrc@telemedicine.arizona.edu
- Call toll free 1-877-535-6166
- ekrupin@emory.edu