

**ARIZONA
TELEMEDICINE
PROGRAM**



Arizona Telemedicine Program

Janet Major, B.S.

**Associate Director for Telemedicine
Education & Facilities**

**Arizona Telemedicine Program
Southwest Telehealth Resource Center
Chair, USDLA
ATA mHealth, Technology & DL SIG
ATIC**

SWTRC since 2007



<https://southwesttrc.org/> = SWTRC

Resources

Arizona

Colorado

Nevada

New Mexico


Utah






- Telemedicine & Telehealth Service Provider Directory
- Business & Finance
- Form Templates
- Policy & Sustainability
- Standards & Guidelines
- Telemedicine Information
- Tools & Tips
- General

National Consortium of Telehealth Resource Centers (NCTRC) - Find your TRC

Southwest Telehealth Resource Center





The Southwest TRC is a subsidiary of
 **ARIZONA
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[Home](#) [About Us](#) [Region](#) [Blog](#) [Online Education](#) [Resources](#) [Events](#) [Training](#) [Contact Us](#)

Events

USDA Grant Funding
Tuesday, February 11,
2020 - 12:00pm to
1:00pm

Valerie Schaibley, PhD -
Incorporating Genetics in
the Clinic: Common
Indications for Genetic Services
Thursday, February 13, 2020 -
12:00pm to 1:00pm

Connie Ihde -
Constitutional Yaku





Welcome to the Southwest TRC!

Service
Provider
Directory

Events


On-Line
Library

Resources




SWTRC Blogs


Phoenix VA : Electronic Daily
Reminders Can Increase Home
Telehealth Utilization



Announcing the New Southwest
Telehealth Resource Center
Website!

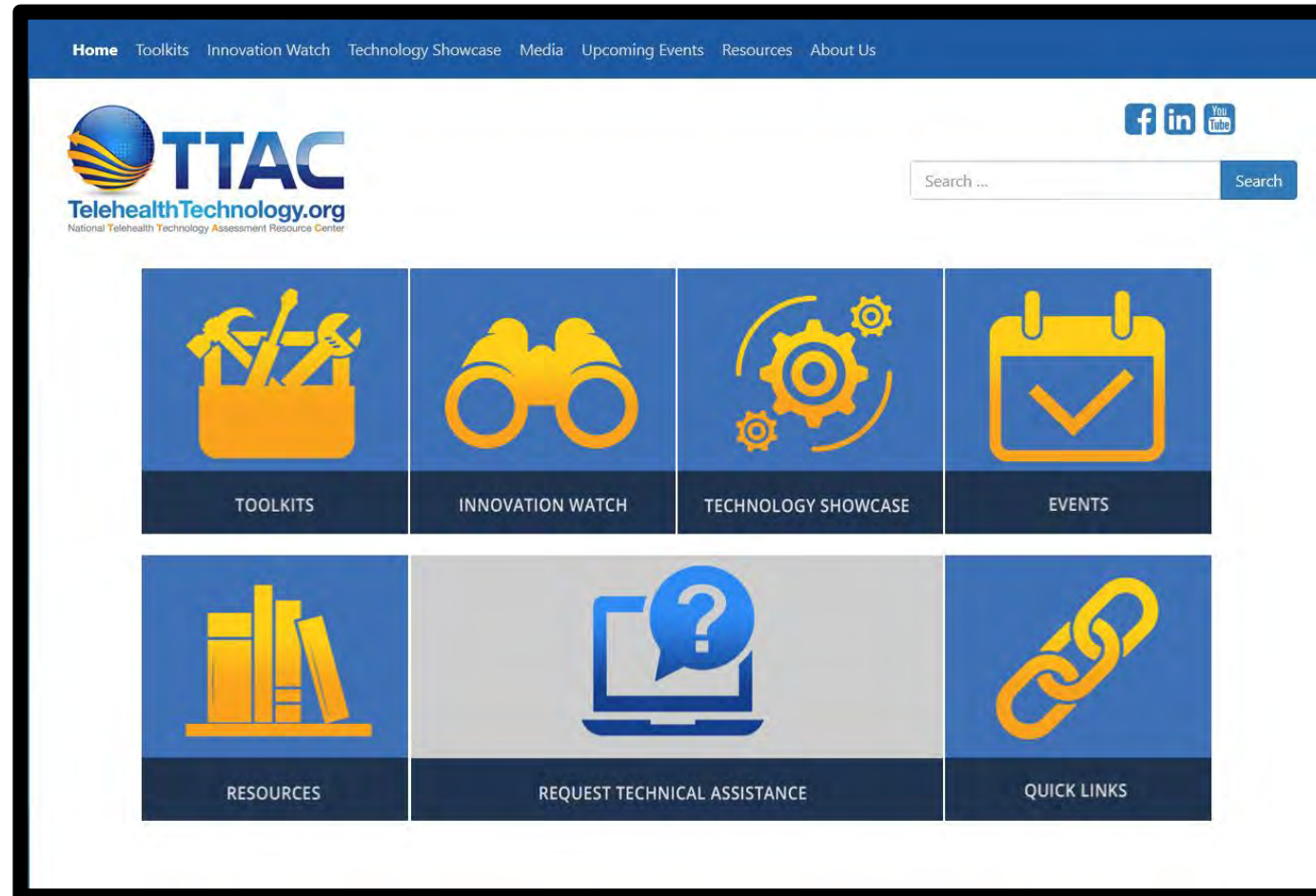
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TTAC National Telehealth Technology Assessment Center

telehealthtechnology.org



Center for Connected Health Policy

Fall 2020 Version

State Telehealth Laws & Reimbursement Policies



Technology for Telehealth

- Resources/where to shop
- How to shop
- Network and interview who has been doing what – with what!
- Pricing
- Ease of use/training protocols/end user
- Network support
- Contractual agreements/licenses/maintenance fees
- Efficiency?



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Telehealth Technology Resources

Arizona Telemedicine Program

www.telemedicine.arizona.edu

Telemedicine & Telehealth Service Directory

<http://telemedicine.arizona.edu/servicedirectory>

Southwest Telehealth Resource Center

www.southwesttrc.org

National Telehealth Resource Centers

www.telehealthresourcecenter.org

ATA American Telemedicine Association

www.americantelemed.org

USDLA United States Distance Learning Association

www.usdla.org

University of New Mexico Center for Telehealth

<http://hsc.unm.edu/community/telehealth/>

Project ECHO

<http://echo.unm.edu/>

ATP Project ECHO

<http://telemedicine.arizona.edu/echo/>

UNR Project ECHO

<https://med.unr.edu/echo>

CO ECHO

<https://echocolorado.org/>

TTAC Telehealth Technology Assessment

www.telehealthtechnology.org

Resource Center

Distance Learning for Telehealth





Robots for Education



A scenic view of the Grand Canyon, showing the deep, layered rock formations and the winding Colorado River in the distance. The canyon is framed by dark, silhouetted pine trees in the foreground. The sky is blue with scattered white clouds. The word "Telepresenting" is overlaid in the center in a bold, blue, sans-serif font.

Telepresenting

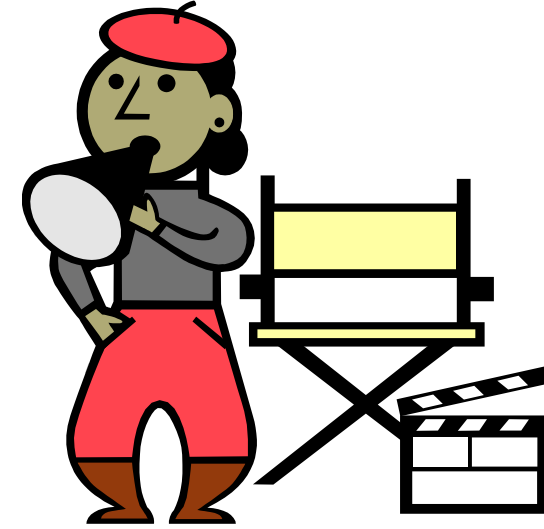
How to put the TELE into Telehealth for Educational & Clinical Applications



**Technology
+
Telecommunications
=
Telehealth/Telemedicine**

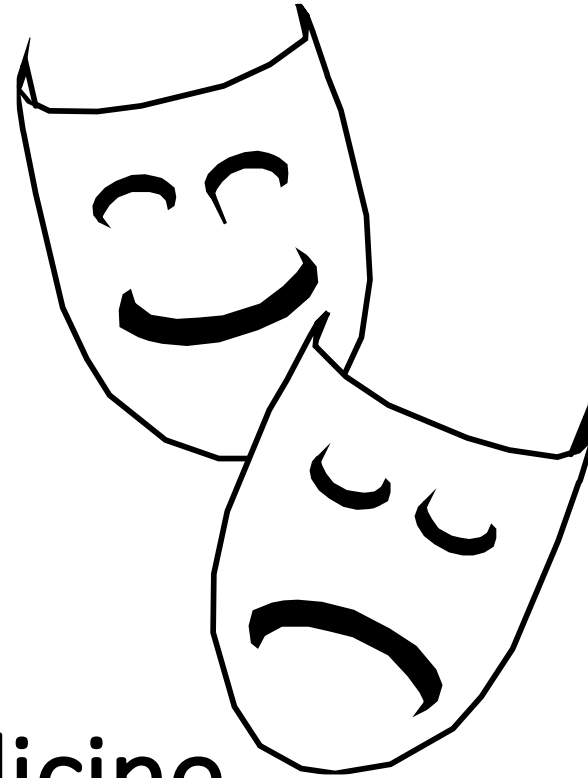
Communication Technology

- **Lights, Camera ACTION!**
- **Two way videoconferencing**
Using hardware/software
- **Web cams using secure sites over the internet**
- **Other devices or programs which connect to your laptop or desktop @home or bedside**



Telemedicine = 

The Art of Telemedicine



Elements of Production

- Sound
 - microphones
 - electronic stethoscope
- Lighting
 - color temperature
 - angle
- Space and geography of the room

- Same Elements of production whether you are in a state-of-the-art videoconferencing suite, using a videophone or a webcam @ your desktop!
- Background
- Lighting
- Audio
- Camera skills – be sure you are looking GOOD – and medically accurate!

BYOD + BYON



- **Bandwidth and managing your bandwidth**
- **Back-up plan**
- **Old/new technology combinations**
- **Data Access & Management**
- **Test in advance - and the day of – and repeat!**

Best Practices

- **Technical Protocols**
- **Clinical Protocols**
- **Mock Patients**
- **Training**

Cameras

- Angle
- Framing
- Lighting
- White balance
- Choosing the right one
- Focus on communication and
NOT the technology



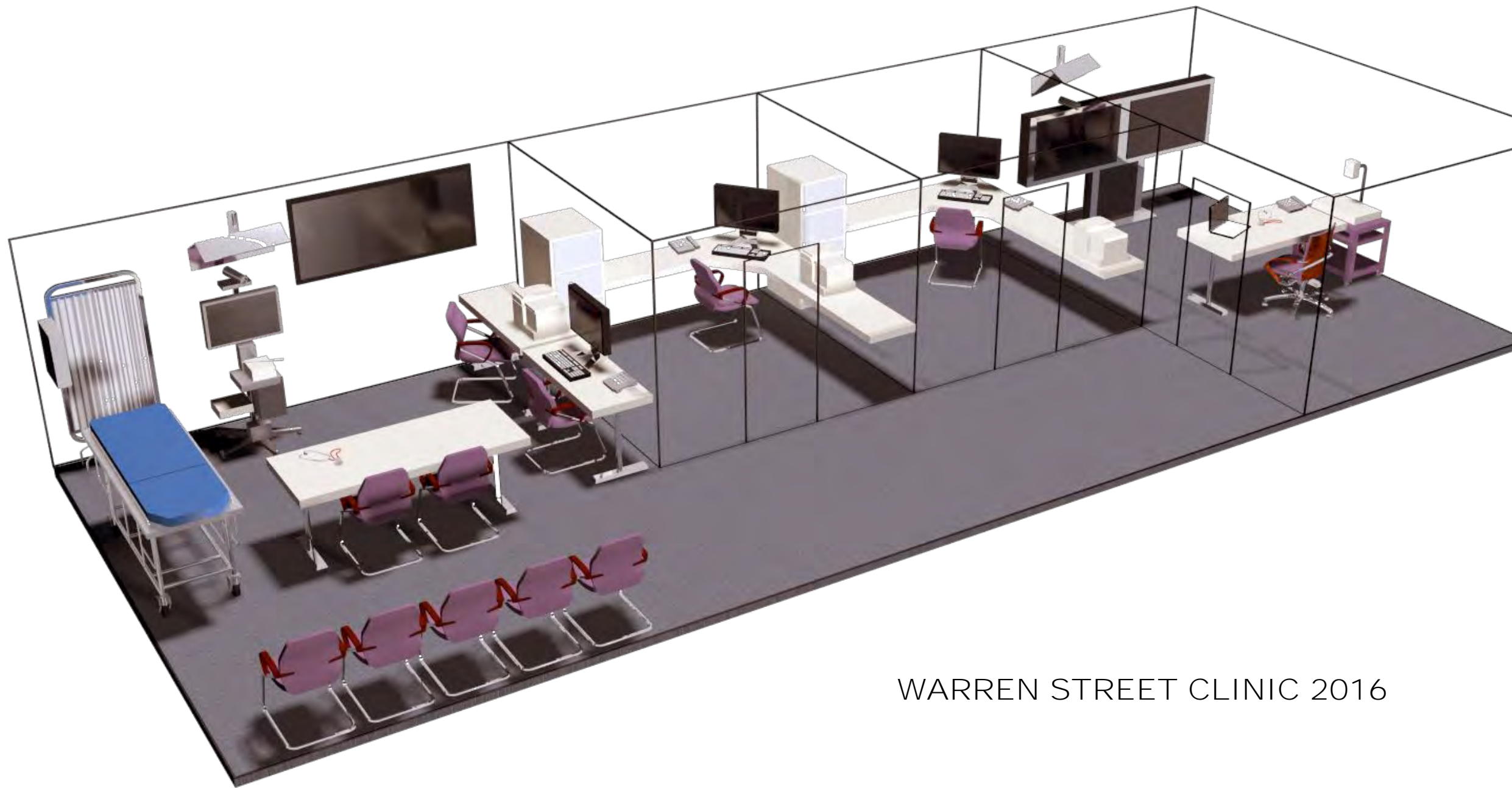










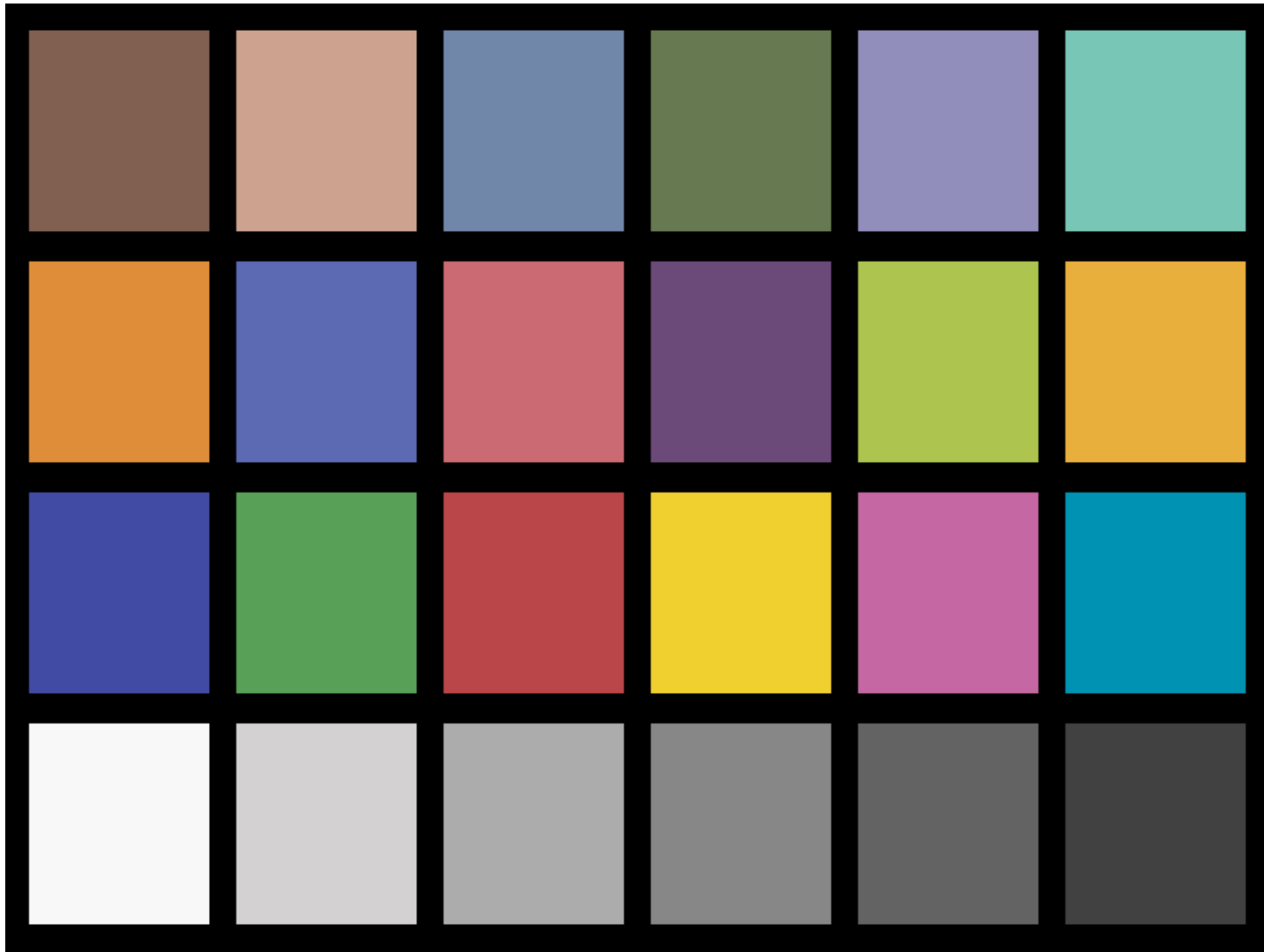


WARREN STREET CLINIC 2016

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telemedicine
=
medicine at a distance













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Shriners Clinics

- Children pre-registered and presented to Orthopedic Specialist @Shriners Hospital in Salt Lake City
- Gait studies, physical exam and oral interview
- Background
- Practice exam
- Height/Weight onscreen



Clinical Case Presentation

SOUTHWEST TRC TELEHEALTH RESOURCE CENTER™

Home About Us People Resources Online Education Events Partners Links Help Desk Blog

Our History. Our Mission

The Southwest Telehealth Resource Center (SWTRC) is a federal grant (#G221T16262) to advance telemedicine services throughout the Southwest. It is one of the largest telemedicine Centers in the United States, each serving a distinct geographic region. SWTRC serves hospitals, clinics, public health offices, and other providers in the broader Southwest region.

The SWTRC assists start-up telehealth programs and serves as a resource for existing programs regarding changes in technology and other issues affecting telehealth in the Southwest region.

Telemedicine has been shown empirically to improve access to quality medical care for many patients living in rural and medically underserved areas. The SWTRC draws expertise from the internationally recognized [Arizona Telemedicine Program](#), which has been providing telemedicine services throughout the state of Arizona since 1996.

This website has been made possible by grant G22RH24279 from the Office for the Advancement of Telehealth, Federal Office of Rural Health Policy, Health Resources and Services Administration, DHHS

SWTRC Services

- Full-Day Training Program
- Online Learning Modules
- Help Desk
- Technical Assistance
- Tools & Templates
- Program Development
- Business Models
- Evaluation
- Best Practices
- Clinical Operations
- Sustainability
- Equipment Recommendations
- Program Operations

Search

Key Contacts

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[Email](#)

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Administrative Director
520.626.2493
Toll Free: 1.877.535.6166
[Email](#)

[Find us on Facebook](#)

[SWTRC Blog](#)

[SPS Telemedicine](#)
Service Provider Showcase

[Arizona Service Provider](#)
Telemedicine & Telehealth

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The Telemedicine Referral Case Process

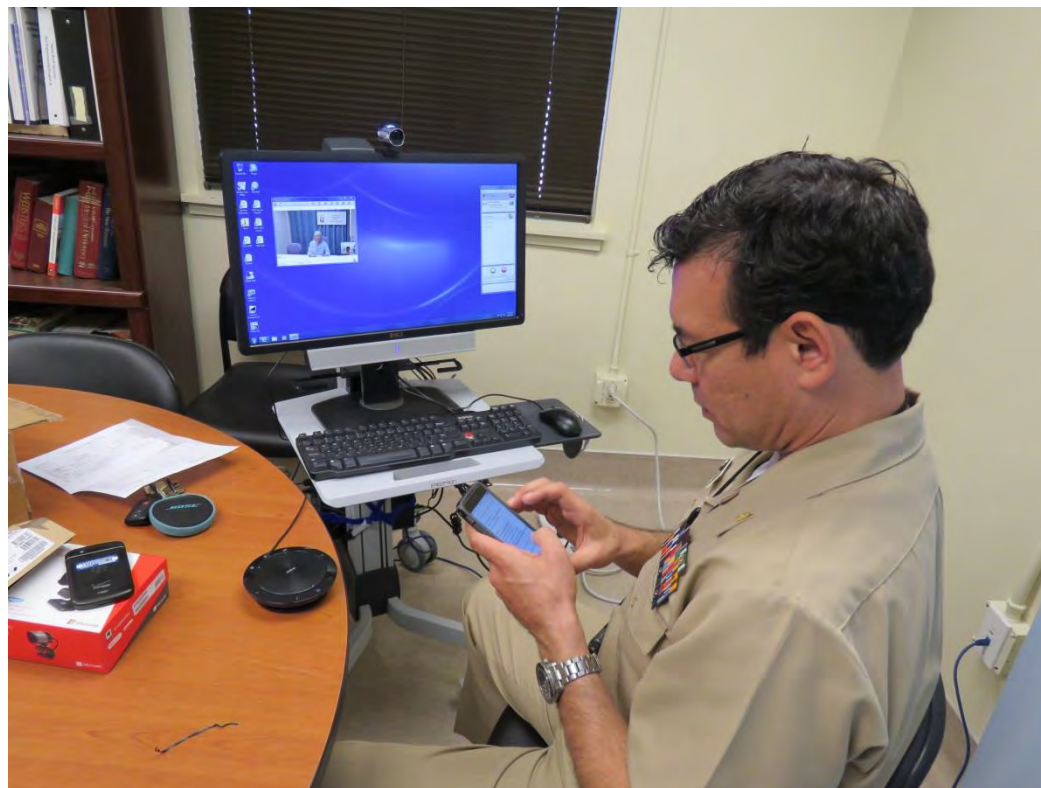
Phyllis Webster,
Program Coordinator, Sr.
Arizona Telemedicine Program

Case Management

Go through the steps required to set up, carry out and complete a clinical telemedicine referral.



Sells IHS, AZ





LogiTech

Logitech USB Webcam Drivers

Logitech Webcam Install without Disk

Logitech Webcam Installation Program

Install Logitech Webcam Drivers

Logitech Webcam Drivers

Logitech Webcam QuickCam Software

Old Logitech Webcam

Logitech Webcam Software

Logitech Webcam Pro 9000


Logitech Webcam Drivers Auto Detect

Logitech Webcam Pro 9000 Setup

Logitech Webcam Installer No CD

C920

Ads




20% Off

\$159.99 ~~\$199.99~~

Logitech - 4K Pro Webcam

Best Buy




17% Off

\$50.99 ~~\$61.99~~

Logitech - C920 Pro Webcam


Best Buy



\$99.99

Logitech - C922 Pro Stream Webcam


Best Buy



\$99.99

Logitech C920 HD Pro Webcam


Kohl's



\$69.10

Logitech C615 1080P HD Webcam


Full Compass Systems



\$37.99

Logitech 960000694 C270 Webcam


WebRestaurantStore



\$65.79

Logitech 960000733 C640 Webcam


OfficeWorld.com



\$38.13

Logitech HD Webcam C310


Full Compass Systems



\$69.99

Logitech HD Pro Webcam C910


Office Depot



\$75.60

Logitech HD Pro Webcam C920

Lenovo



A grid of 24 Logitech webcam models, including various C-series and 4K Pro models, shown in different colors and angles.

Tuesday, April 17, 2018

Echo Cancellation Microphones

Jabra Speak Series

Conference calls made simple; collaboration made easy.

Speak 810

★★★★★ (200)



From \$599.00

- ✓ Meeting with up to 15 people
- ✓ Great for calls
- ✓ Stationary (USB & 3.5mm jack)
- ✓ Kensington Lock adaptor

Speak 710

★★★★★ (115)



From \$299.00

- ✓ Meeting with up to 6 people
- ✓ Great for calls and music
- ✓ Portable (Wireless & USB)
- ✓ Up to 15 hours charge

Speak 510

★★★★★ (2499)



From \$149.00

- ✓ Meeting with up to 4 people
- ✓ Great for calls
- ✓ Portable (Wireless & USB)
- ✓ Up to 15 hours charge

Speak 410

★★★★★ (1199)



From \$129.99

- ✓ Meeting with up to 4 people
- ✓ Great for calls
- ✓ Stationary (USB)
- ✓ LED Indicators

Headphones

- Jabra
- Plantronics
- JBL
- Great for private conversations!

LogiTech CC3000e



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Vidyo

Google Hangout

Adobe Connect

Bluejeans

Skype

WebEx

Elluminate

RealPresence

Windows

ZOOM

LIVE

GoToMeeting

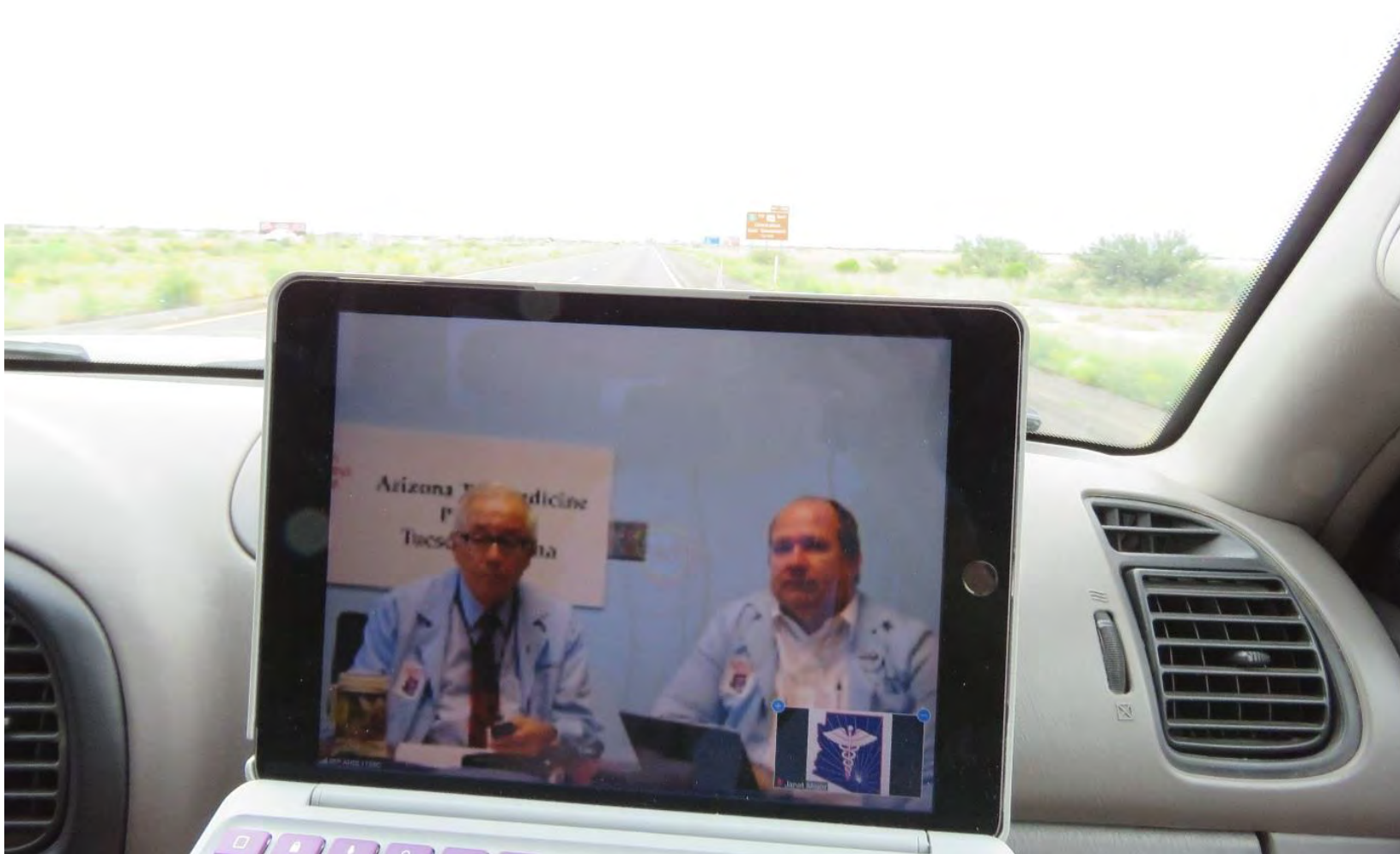
Blackboard

HIPAA Health Insurance Portability And Accountability Act of 1996





- Mute your audio
- View
 - Speaker mode
 - Gallery mode
 - Full Screen



Teleconferencing Tips

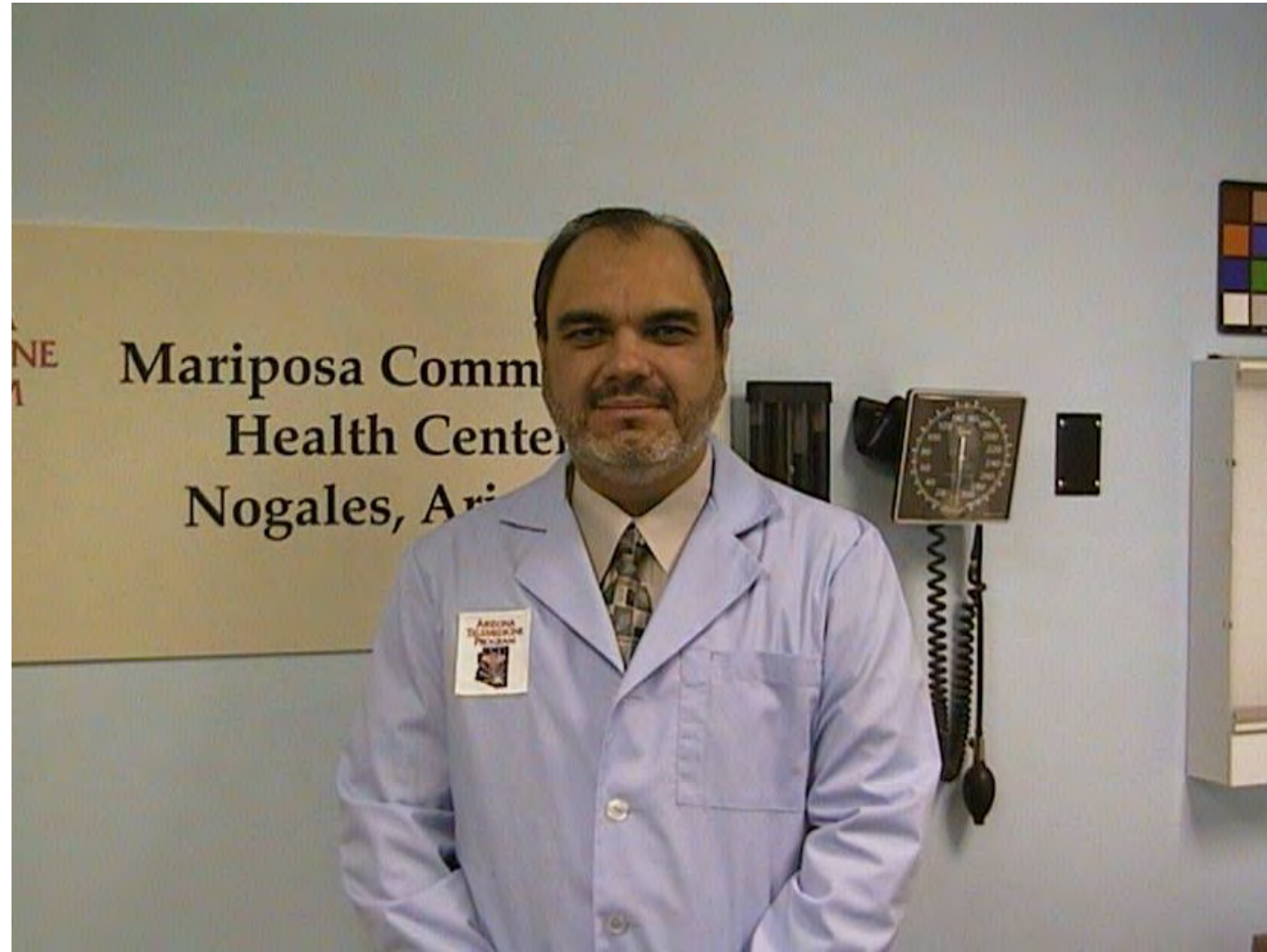
- wear appropriate clothing and jewelry
- be aware of your body language
- use an agenda and facilitate introductions
- develop protocols for questions
- be familiar with the equipment
- test all equipment in advance

7 DAY FORECAST

FIRST
ALERT

ON





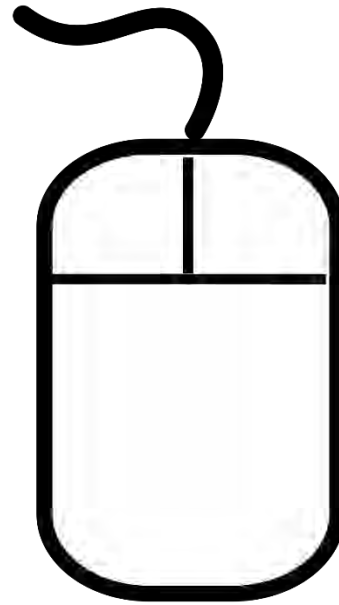


Educational Materials

- send in advance whenever possible
- suggest powerpoint from a computer
- use 24 point font or greater
- use fonts like Arial or Times New Roman
- use a medium blue background with white or yellow font (high contrast)
- use a document camera for 3-D objects
- don't use red font



Remote control = mouse!



Be Interactive

- Journal Club
- Pass the Laserpointer
- EKG Bingo
- Team Competition
- Small Group Discussions
- Use photos, nametags or a namelist
- Use Multi-point and PIP options
- don't be just another talking head

microphones

- Require the ability to easily to turn on/off
- Laptop mics and cameras can be adequate but you absolutely have to be able to control on/off quickly
- Echo cancellation is necessary for two-way communication
- Multi-Point events need testing and practice
- Just one open microphone can make or break the conversation or crash a really good time!



Background for Video
Background Audio - Dogs Barking, Children, Spouses

**MY WIFE ASKED ME WHY I
SPOKE SO SOFTLY IN THE
HOUSE.**

**I SAID I WAS AFRAID
MARK ZUCKERBERG WAS
LISTENING!**

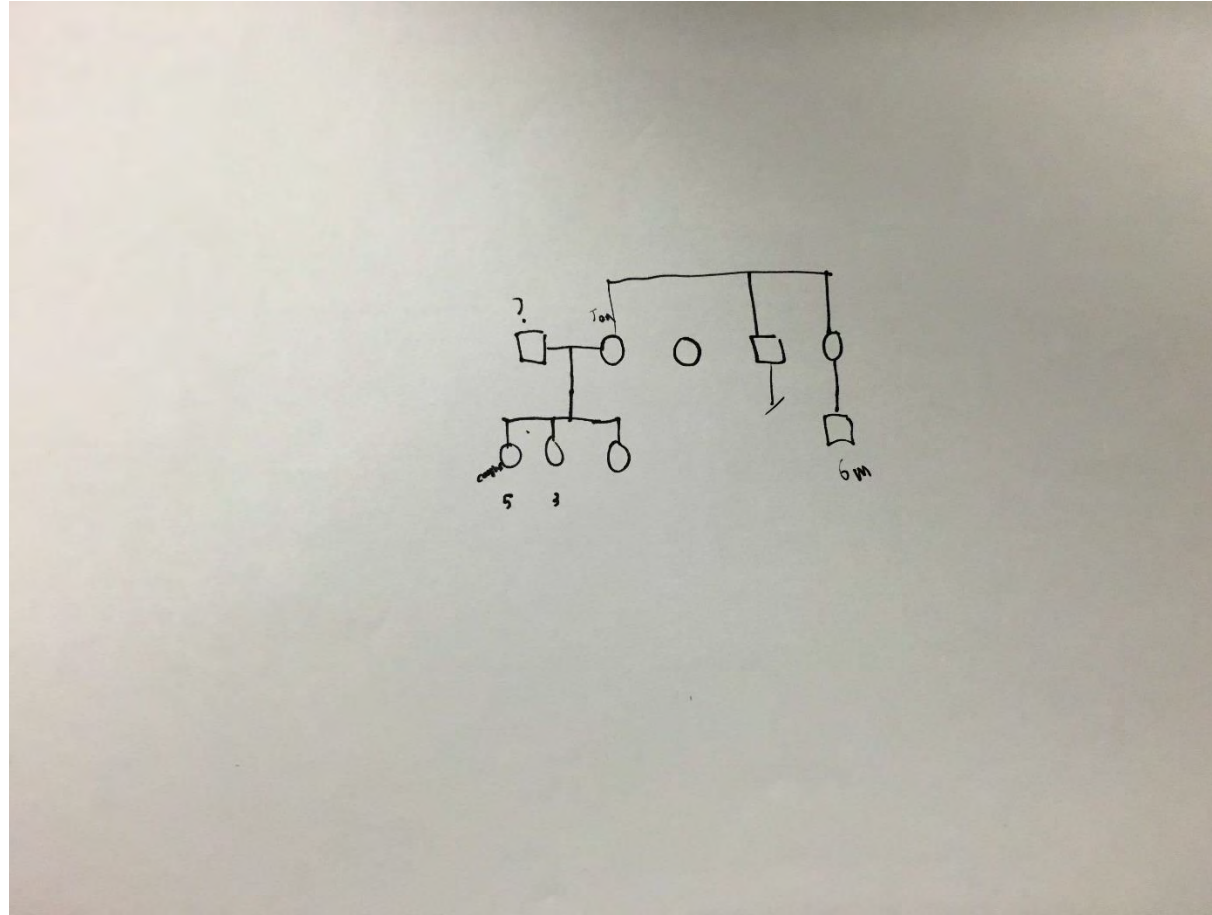
SHE LAUGHED.

I LAUGHED.

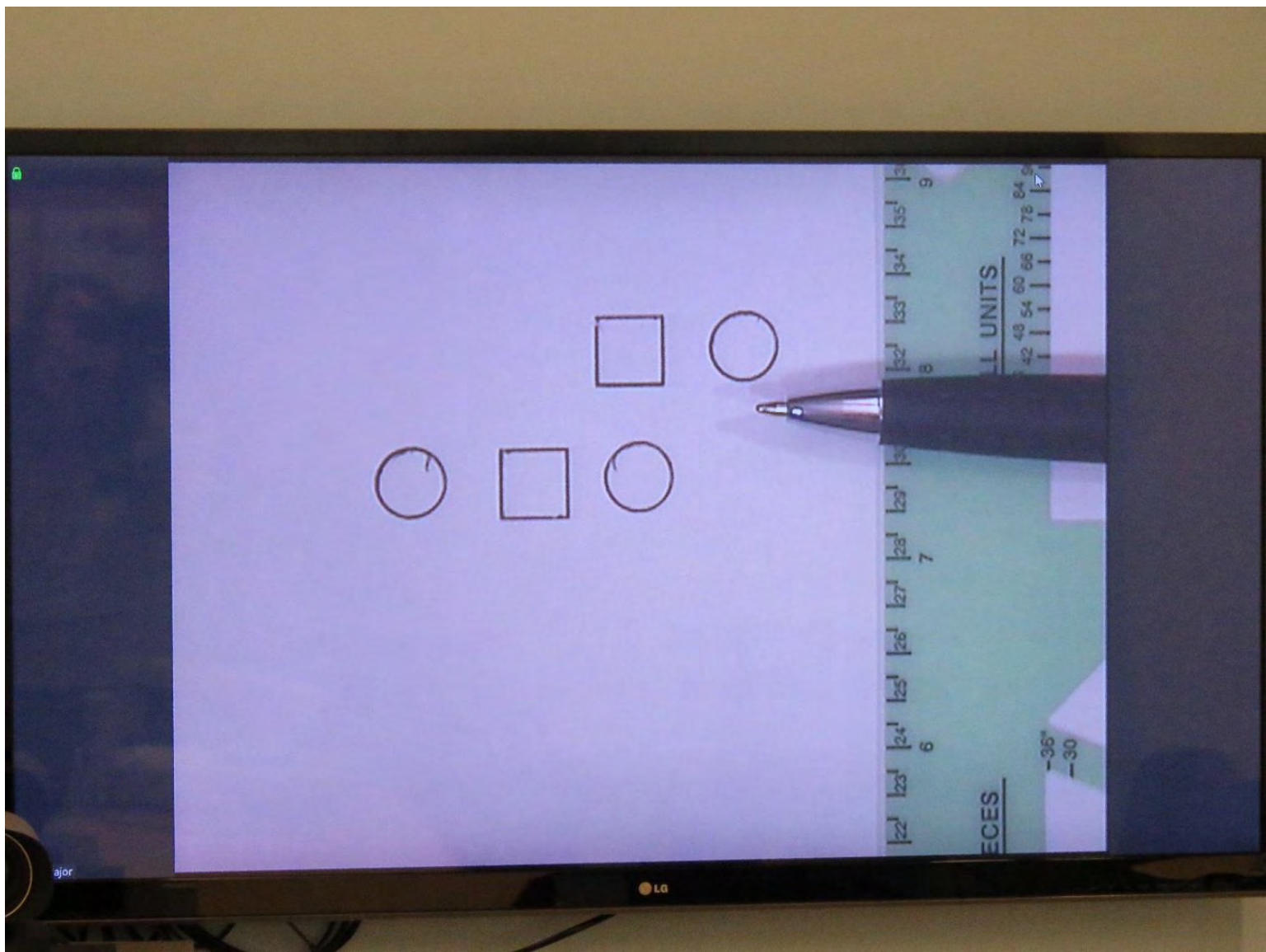
ALEXA LAUGHED.

SIRI LAUGHED.

Telegenetics







Hands-on!

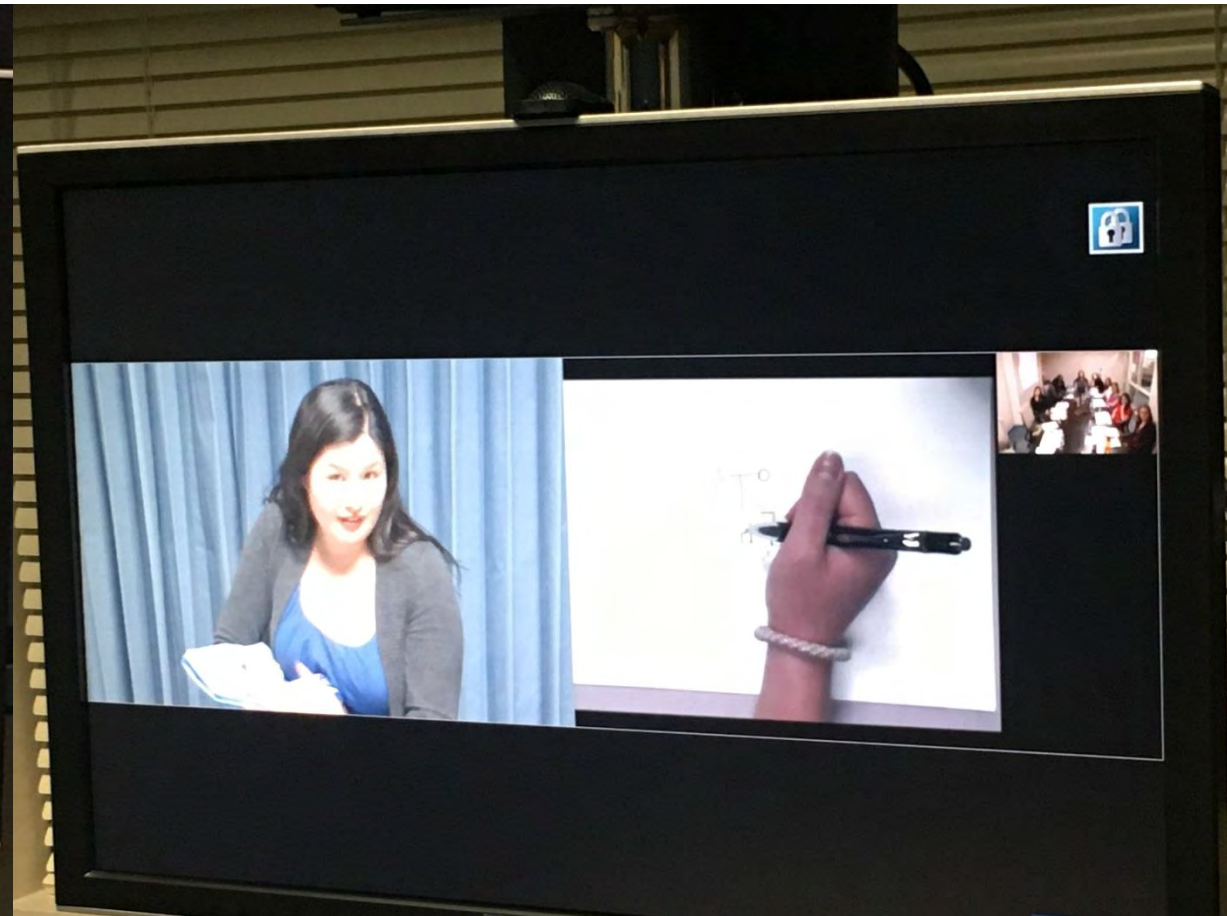


The Story of Eli Coli













To be a good telepresenter you must be a good communicator.

- verbally
- non-verbally

SELFIES!





Technology



- Makes the world a smaller place
- Keeps people in their communities

The Best Telemedicine Apps of 2020

[MDLIVE](#) | [Lemonaid](#) | [LiveHealth](#) | [PlushCare](#) | [Doctor on Demand](#) | [Amwell](#) |
[Talkspace](#) | [Teladoc](#) | [BCBSM Online Visits](#) | [Spruce](#) |
[Telehealth by SimplePractice](#) | [DocsApp](#) | [oladoc](#)



Ipads or Tablets

UA Nursing Professor Receives Telemedicine Grant to Study Tablet Use by Home Hospice Patients to Communicate with On-Call Nurses

Arizona Telemedicine Program Equipment Grant to provide technology for real-time visualization between the nurse and the patient and their caregiver.

It's the middle of the night. An elderly man in end-stage heart failure receiving at-home hospice awakes gasping for breath. His caregiver immediately phones the on-call nurse, but the drive could take her 30 minutes or more. The caregiver is too afraid to take action on her own, so she anxiously awaits the nurse. As the minutes tick by, the man becomes increasingly distressed and the caregiver grows more upset.

Shortness of breath (also known as dyspnea) is a common challenge faced by caregivers and patients in home hospice, and the leading cause of admissions to the emergency room for hospice patients.

Interested in shortening the time it takes to alleviate patient symptoms and caregiver anxiety, **Kimberly Shea, PhD, RN**, assistant professor at the [University of Arizona College of Nursing](#), conceived of using tablet technology with real-time visualization for patients and caregivers to communicate with on-call hospice nurses in urgent situations.

To support testing her idea, Dr. Shea recently was awarded a grant from the [Arizona Telemedicine Program](#) as part of its **Innovation Awards** for her project: "Real-Time Visualization for Reducing Symptom Severity in End-of-Life Care." The grant supports purchase of five iPad-minis with retina display.

"Previous studies evaluating tablet use in at-home hospice have been focused on overall quality of life and anxiety," said Dr. Shea, who has 15 years of experience as a home health/hospice nurse. "What makes my study different is I'm evaluating tablet use in urgent situations. Patient and/or caregiver anxiety can often lead to unnecessary emergency room admissions."

Each tablet will be equipped with real-time meeting software that allows the on-call nurse to immediately visualize important factors, such as a patient's positioning (lying down, sitting up) or breathing patterns and medications available. Accordingly, more individualized guidance can be given to the caregiver for intervening appropriately prior to nurse arrival.



<http://telemedicine.arizona.edu/blog/telehealth-valuable-addition-hands-comfort-care>

Telehealth is a Valuable Addition to Hands-On 'Comfort Care'

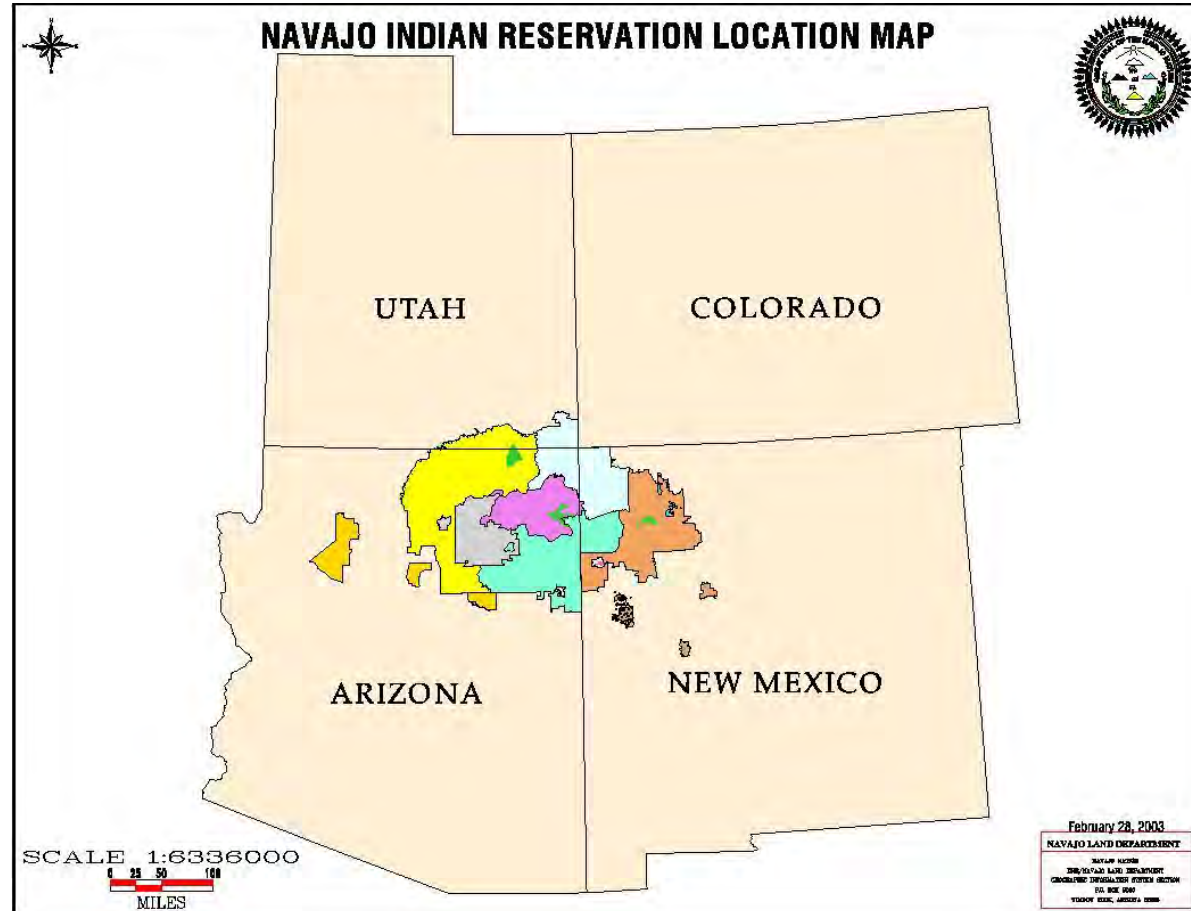
By Kimberly Shea, Ph.D., RN on Oct 15, 2015



Dr. Shea consults with a remote hospice patient via telemedicine.

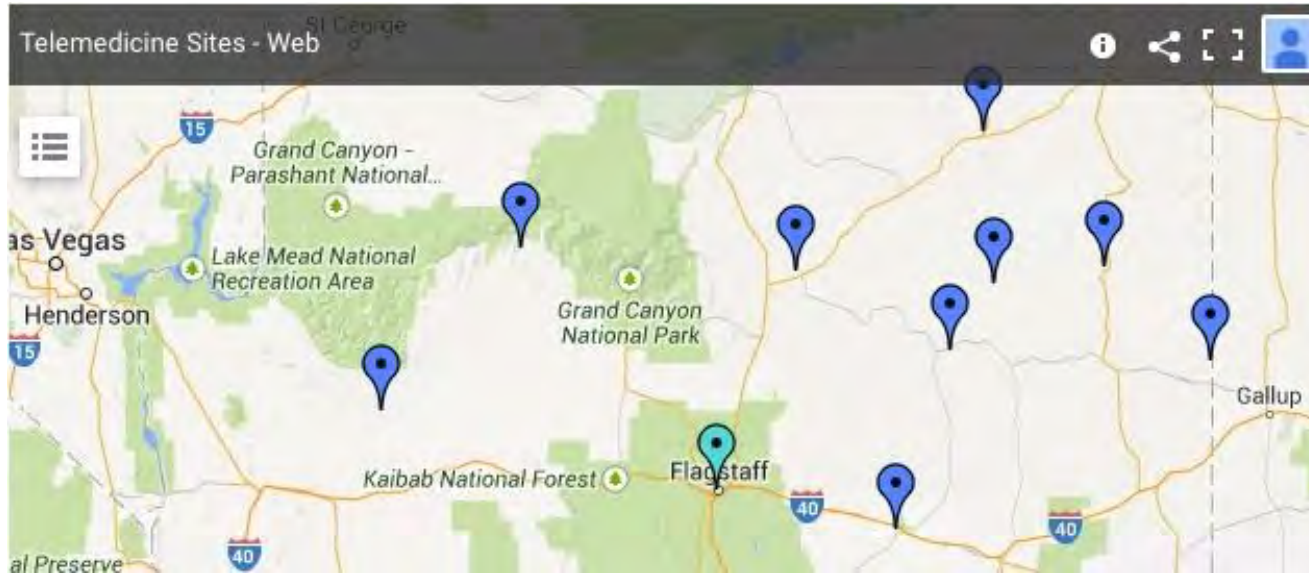
I am an assistant professor at the University of Arizona, College of Nursing, a full-time position that includes research in my chosen field of health care systems and informatics, in which I have a PhD.

I also work one day a week as a hospice nurse, providing palliative care, which is focused on comfort and quality of life for patients nearing the end of life.



Flagstaff Medical Center

<https://nahealth.com/telemedicine>



Care Beyond Walls and Wires: In-home monitoring

Using remote monitoring tools, this program is designed to improve the quality of life for people with chronic health conditions, helping patients and families get the care they need without leaving home.

With daily access to information including blood pressure, weight and symptoms of illness, care teams and patients can co-manage treatment plans. It's also possible to detect changes in a patient's health status early on and intervene at the right time to avoid unnecessary travel and hospital care.

“Care Beyond Walls and Wires”: In-Home Monitoring YouTube Videos @www.youtube.com

- <https://www.youtube.com/watch?v=qHXGRDtdjuc>
Four Corners - Navajo Area
- https://www.youtube.com/watch?v=4wvQbK_EPM
Winslow, AZ

Telehealth Best Practices



Telehealth Best Practices

Video developed by the Hawaii Department of Health Genomics Section and available on the Pacific Basin TRC Website www.pbtrc.org

Facility Design & Technology

- Room Treatments
 - carpet, paint, walls and doors
- Working from clinic or home
 - desktop
 - laptop
 - Tablet/I Pad
 - cellphone with video



Do the best
with what you have!



Telehealth Networking

The Future is NOW!



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Thank You, Merci, Gracias y CIAO!
jmajor@telemedicine.arizona.edu

UAZ College of Medicine “Tomorrow is HERE!”



Improving Access to Quality Medical Care Webinar Series

Please check our websites for upcoming webinars
and events

<http://www.telemedicine.arizona>

Improving Access to Quality Medical Care

The practice and delivery of healthcare is changing with an emphasis on improving quality, safety, efficiency, & access to care. Telemedicine can help you achieve these goals! The Arizona Telemedicine Program, Southwest Telehealth Resource Center, and Arizona Commerce Authority invite you to a **free** webinar on the

Telehealth Webinar

Thursday, November 12 ~ 12:00 pm MSN/2pm EST

**Celebrating the United States Distance Learning
Association's National Distance Learning Week:**

"The State of Broadband – in YOUR State"

<https://usdla.org/events/ndlw/>

The objectives for this webinar are:

1. Find out what's happening to identify broadband gaps at the national level
2. What are states doing at the local level to identify and eliminate broadband inequity with AZ as an example
3. Learn what funding opportunities and resources are available and where to find them



Moderator



Panelist



Panelist

Janet Major, BS
Associate Director for Facilities and
Education
Arizona Telemedicine Program
Southwest Telehealth Resource Center
www.telemedicine.arizona.edu

**Tim Moyer , Director National
Broadband Availability Map (NBAM)**
US Department of Commerce, National
Telecommunications and Information
Administration (NTIA)
<https://www.ntia.doc.gov/>

Jeff Sobotka
Vice President and State
Broadband Director for AZ
Arizona Commerce Authority
<https://www.azcommerce.com/>

For more information and registration instructions go to <http://www.telemedicine.arizona.edu>

This webinar is made possible through funding provided by
Health Resources and Services Administration, Office for the Advancement of Telehealth



Improving Access to Quality Medical Care

The practice and delivery of healthcare is changing with an emphasis on improving quality, safety, efficiency, & access to care. Telemedicine can help you achieve these goals! The Arizona Telemedicine Program, Southwest Telehealth Resource Center, Arizona Medical Association, Maricopa County Medical Society and Arizona Medical Group Management Association invite you to a **free** webinar on the implementation and practice of telemedicine.

“Billing for Telehealth in 2020 & Beyond”

Monday, November 16, 2020 ~ 12:00 pm MST/2:00 pm EST

Learning Objectives

- 1) Understand 2021 AMA E/M Guidelines including documentation guidelines and maximizing efficiency
- 2) Learn about the duration of the PHE and its effect on TH Payment by CMS and AZ
- 3) Review possible scenarios for post-PHE

Presenter:



Carol Yarbrough is a healthcare compliance and reimbursement specialist. Providing a unique background in legal, technology, revenue management, clinic management and both federal and state regulations, for the past four years, she has actively contributes to telehealth initiatives at UC Health. She works hands-on with professional fee and hospital-based fee professionals to implement billing strategies and provides real-time feedback to clinicians regarding documentation and staff with encounter guidance. She also trains CPT coding professionals at UC Medical Center in order to maximize EMR workflow with greater documentation and coding

For more information and registration instructions go to

www.telemedicine.arizona.edu

This webinar is made possible through funding provided by the Office for the Advancement of Telehealth, Office of Health Information Technology, Health Resources and Services Administration, DHHS (G22RH24749) and the Office of Rural Health Policy

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Your opinion is valuable to us.
Please participate in this brief survey:

<https://www.surveymonkey.com/r/SWTRCWebinar>

This webinar series is made possible through funding provided by health Resources and Services Administration, Office for the Advancement of Telehealth and the Office of Rural Health Policy, Rural Hospital Flexibility Program.