



Arizona Telemedicine Program Janet Major, B.S.

Associate Director for Telemedicine Education & Facilities Arizona Telemedicine Program Technical Coordinator Southwest Telehealth Resource Center **Telehealth Board Member & President United States Distance Learning Association** ATA mHealth, Technology & DL SIG **Board Member ATIC Arizona Telecommunications & Information Council**

Technology + Telecommunications = Telehealth/Telemedicine











Journal of Telemedicine and Telecare Volume 11 Number 1 2005

EDUCATION AND PRACTICE

Technology



Janet Major

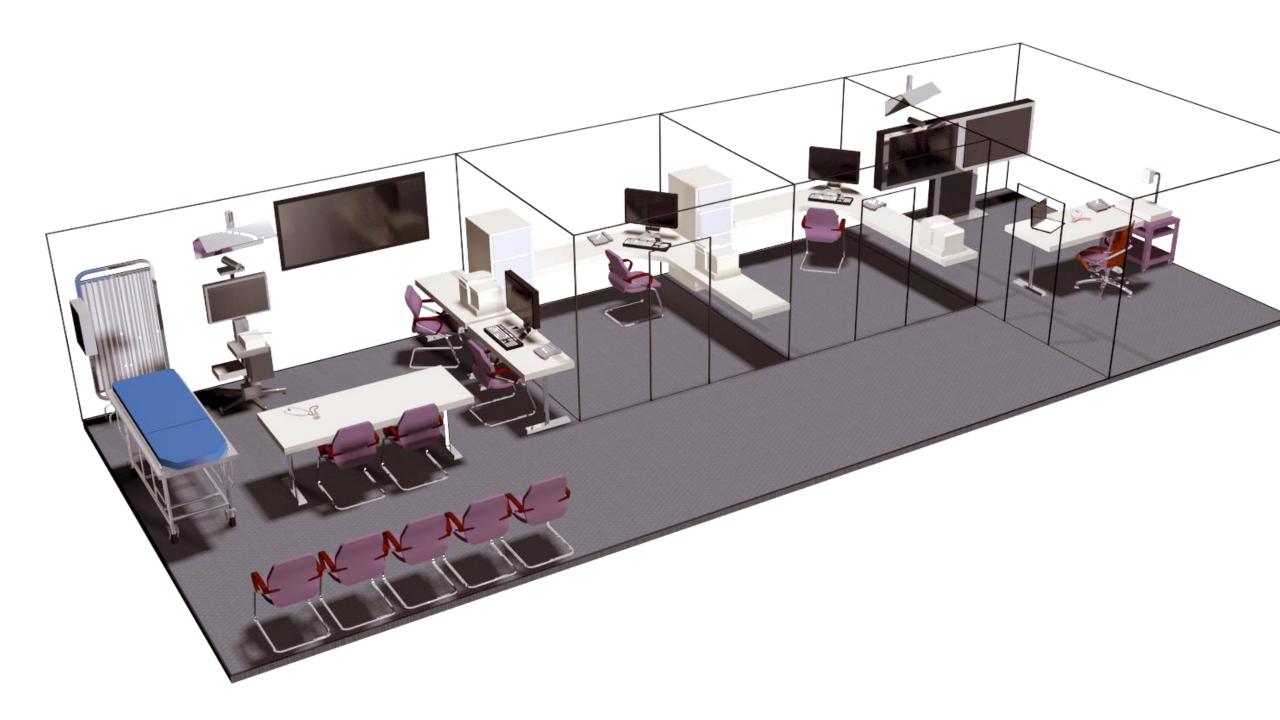
Arizona Telemedicine Program, University of Arizona, USA

Summary

Proper design of rooms for telemedicine store-and-forward and realtime interactive consultations is critical. The challenge is to incorporate communication technology into medical practice to facilitate efficient communication and effective patient care. If this is done properly, the technology becomes unnoticeable to those involved in the telemedicine interaction. This article describes some of the steps that can be taken in a telemedicine room design











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LEHEALTH TRESOURCE - CENTER TO









Telehealth Technology Resources

Arizona Telemedicine Program

Telemedicine & Telehealth Service Directory

Southwest Telehealth Resource Center

National Telehealth Resource Centers

ATA American Telemedicine Association

USDLA United States Distance Learning Association

University of New Mexico Center for Telehealth

Project ECHO

ATP Project ECHO

UNR Project ECHO

CO ECHO

TTAC Telehealth Technology Assessment

Resource Center

www.telemedicine.arizona.edu

http://telemedicine.arizona.edu/servicedirectory

www.southwesttrc.org

www.telehealthresourcecenter.org

www.americantelemed.org

www.usdla.org

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

http://echo.unm.edu/

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

https://med.unr.edu/echo

https://echocolorado.org/

www.telehealthtechnology.org





ARIZONA TELEMEDICINE PROGRAM





www.southwesttrc.org



Clinical Case Presentation











The Telemedicine Referral Case Process

Phyllis Webster,
Program Coordinator, Sr.
Arizona Telemedicine Program

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Case Management

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





TeleCon 1997









www.telemedicine.arizona.edu/webinar



The Arizona Telemedicine Program, the Southwest Telehealth Resource Center and the mHealth, Technology & Distance Learning Special Interest Group of the American Telemedicine Association invite you to a free webinar to review the telemedicine and telehealth technology recently exhibited at the American Telemedicine Association's 23rd Annual Telemedicine Meeting & Trade Show: ATA 2018

Webinar

Thursday, August 9, 2018 \sim 12:00pm Arizona Time (12pm PDT; 12pm Arizona; 1pm MDT; 2pm CDT; 3pm EDT)

"ATA 2018 Exhibit Hall Technology Review"

Learning Objectives:

- 1. Review some of the current trends observed at the annual signature event for telemedicine technology
- Take a virtual tour of the ATA 2018 Exhibit Hall & Showcase at the Chicago Convention Center.
- Learn who and where you can go to get access to the best resources in telemedicine and telehealth technology



Janet Major, B.S. Associate Director for Telemedicine Education & Facilities



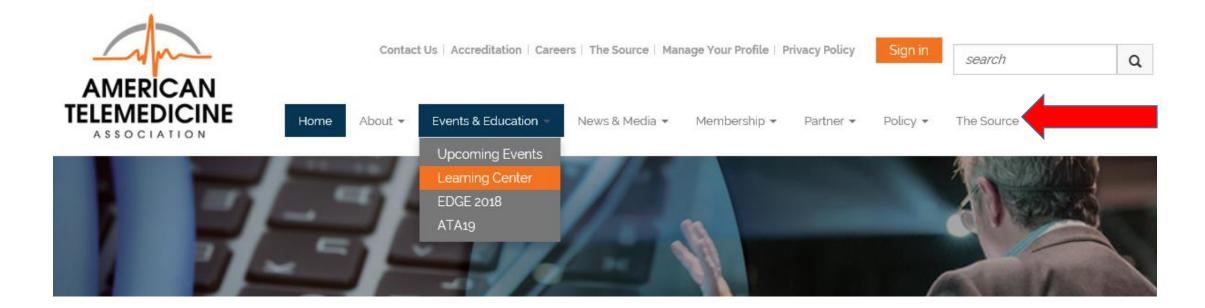
Janet Major is the Associate Director of Facilities for the Arizona Telemedicine Program (ATP). She earned her B.S. Degree in Telecommunications from Northern Arizona University with her major emphasis in producing and directing. She has worked at the University of Arizona for 30 years and was initially the primary manager of videoconferencing services at the Arizona Health Sciences Center. She has since been employed by ATP for 20 years. As Associate Director of Telemedicine Education & Facilities, her current responsibilities include the design, development and installation of the teleconferencing and telemedicine peripheral equipment used for telemedicine services. She also provides training to healthcare professionals in the effective use of teleconferencing for both clinical and educational applications. Ms. Major has served as Co-Chair as well as Chair for the mHealth, Technology & Distance Learning Special Interest Group of the American Telemedicine Association as well as for the board of USDLA; the United States Distance Learning Association, representing the telehealth constituency and ATIC; the Arizona Telecomn and Information Council where she is currently working with fellow telecommunications experts to implement a broadband plan to eliminate telecommunications disparity in rural and urban Arizona.

For more information and registration instructions please visit our website: http://www.telemedicine.arizona.edu/webinar





http://americantelemed.org/home







SIG's

- Telemental Health
- Home Telehealth & Remote Monitoring
- Pediatric Telehealth
- Business & Finance
- mHealth, Technology & Distance Learning
- Telerehabilitation
- ATA Institutional Council
- Telehealth Nursing





- ATA Member Group Leaders
- Human Factors
- International
- ATA Industry Council
- Teledermatology
- Pacific Islands Chapter (PICATA)
- Interstate Telehealth
- Latin American & Caribbean Chapter (ATALACC)
- TeleICU
- Ocular





- Canadian Discussion Group
- President's Circle & Institutional
- ATA-DR Guidelines Writing Committee
- ATA Student Council
- State Forums
- Open Forum





mHealth, Technology & Distance Learning Special Interest Group of the ATA

aka: mH, T & DL SIG/ATA

Chair Alex Chiu, MD

Co-Chair Jonathan Savage, MD

Past Chairs: David Maughan, Janet Major, Pramod Gaur

Mike Holcomb, Stewart Ferguson







mHealth, Technology, and Distance Learning SIG

Post New Message

Jul 13, 2018

Check out the LIBRARY in The Source for the handout and Video Link from our Teck Talk about Stethoscopesps

Reply to Group

Reply to Sender

1. Please join us next month for a technology... Sanet Major

Check out the LIBRARY in The Source for the handout and Video Link from our Teck Talk about Stethoscopesps

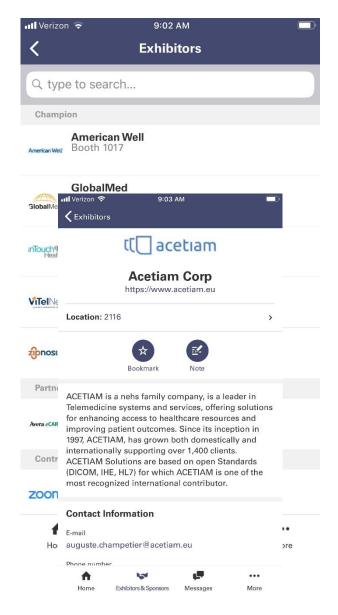


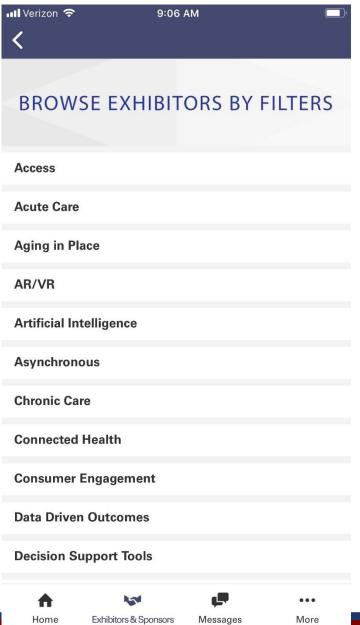
Jul 13, 2018 5:41 PM | **⋄** <u>view attached</u> Janet Major

Please join us next month for a technology review and virtual tour of the ATA 2018 Exhibit Hall! Details are attached and on our SIG calendar - see you there!

Janet Major











http://www.telehealthresourcecenter.org/







TelehealthResourceCenters.org











12 Regional Resource Centers



TexLa Telehealth Resource Center

Serving Texas and Louisiana

Phone: 877-391-0487 Direct: 806-743-4440



Mid-Atlantic Telehealth Resource Center

Serving Virginia, West Virginia, Kentucky, Maryland, Delaware, North Carolina, Pennsylvania, Washington DC, and New Jersey [shared]

Phone: 855-MATRC4U (628.7248) Direct: 434-906-4960



Upper Midwest Telehealth Resource Center

Serving Indiana, Illinois, Michigan and

Phone: 855-283-3734



Southeastern Telehealth Resource Center

Serving Georgia, South Carolina, Alabama, and Florida

Phone: 1-888-738-7210



Pacific Basin Telehealth Resource Center

Serving Hawaií and Pacific Basin

Phone: 808-956-2897



Heartland Telehealth Resource

Center

Serving Kansas, Missouri and Oklahoma

Phone: 877-643-HTRC (4872)



South Central Telehealth Resource Center

Serving Arkansas, Mississippi and

Phone: 855-664-3450



Southwest Telehealth Resource Center

Serving Arizona, Colorado, New Mexico, Nevada and Utah

> Phone: 877-535-6166 Direct: 404-712-3868



Northwest Regional Telehealth Resource Center

Serving Washington, Oregon, Idaho, Montana, Utah, Wyoming and Alaska

Phone: 888-662-5601



Great Plains Telehealth Resource & Assistance Center

Serving North Dakota, South Dakota, Minnesota, Iowa, Wisconsin and Nebraska

Phone: 888-239-7092



California Telehealth Resource Center

Serving California

Phone: 877-590-8144



NorthEast Telehealth Resource Center

Serving New England (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey [shared], New York, Rhode Island, and Vermont)

Phone: 800-379-2021





National Resource Centers



National Telehealth Policy Resource Center

Serving all Telehealth Resource Centers and All States

Phone: 877-707-7172 Direct: 916-285-1860



National Telehealth Technology Assessment Resource Center

Serving All Telehealth Resource Centers and All States

Phone: 877-885-5672 Direct: 907-729-4703





TTAC National Telehealth Technology Assessment Center telehealthtechnology.org









Technology for Telehealth: No longer the tail wagging the dog!





Trends 2017, 2018 – 2019?



- Multi-purpose cameras
- Multi-purpose devices
- Cart of the year
- Stethoscopes
- Audio processing software
- More wearables
- More Robots
- More Box "to-go" with more varieties of end-users/applications
- Wall mounted systems
- Kiosks





Technology for Telehealth

- Resources/where to shop
- Tips on 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?

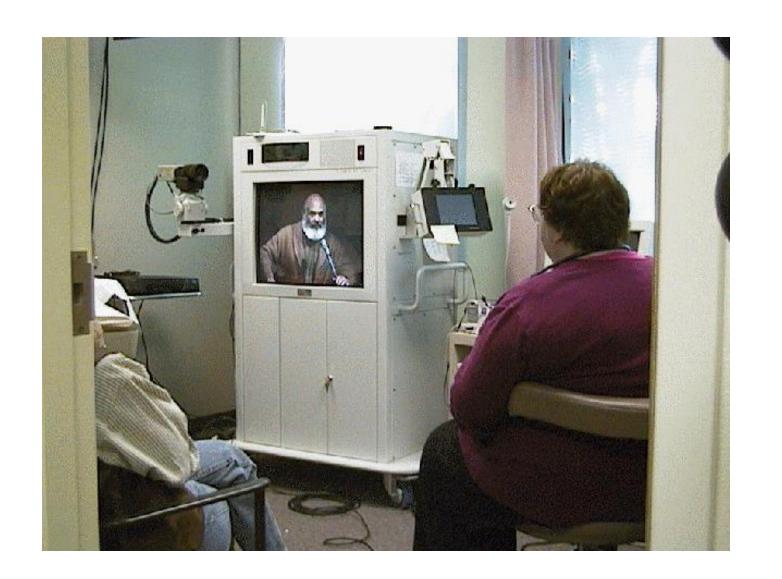








Facilities





Tuba City Installation















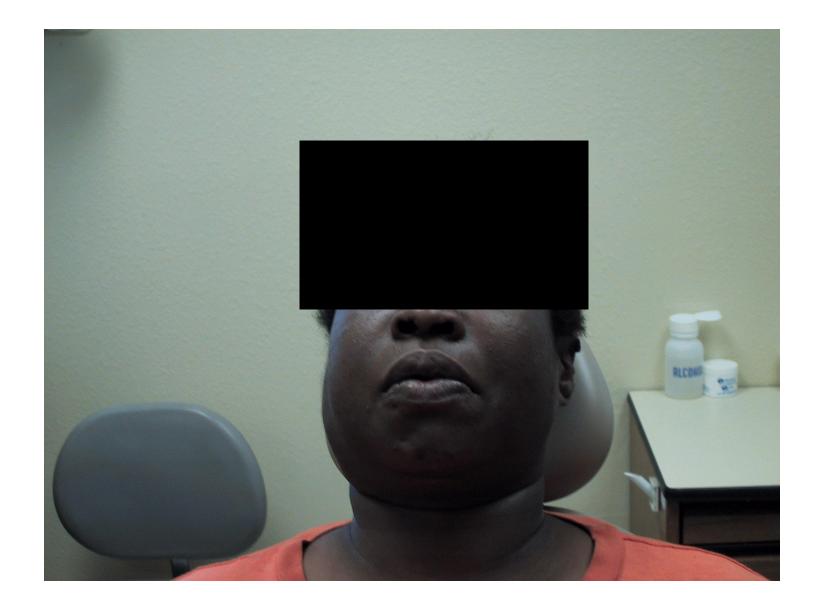






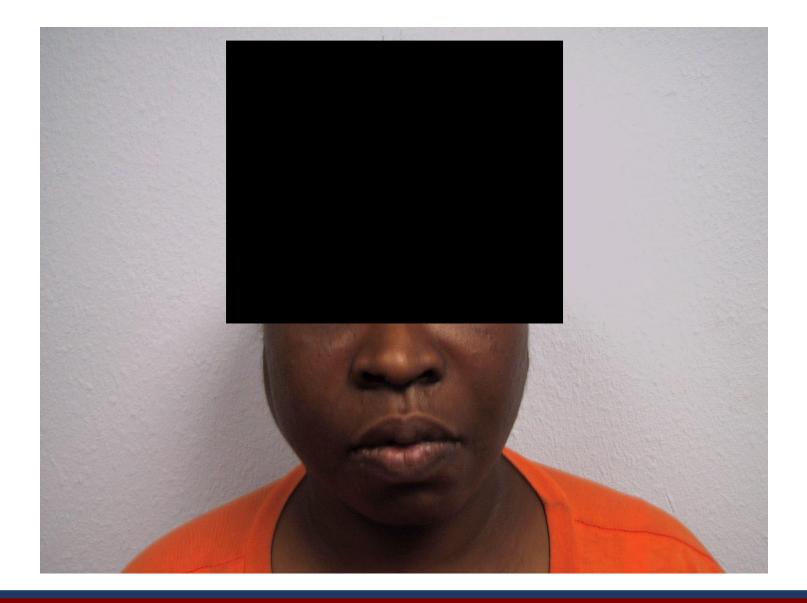






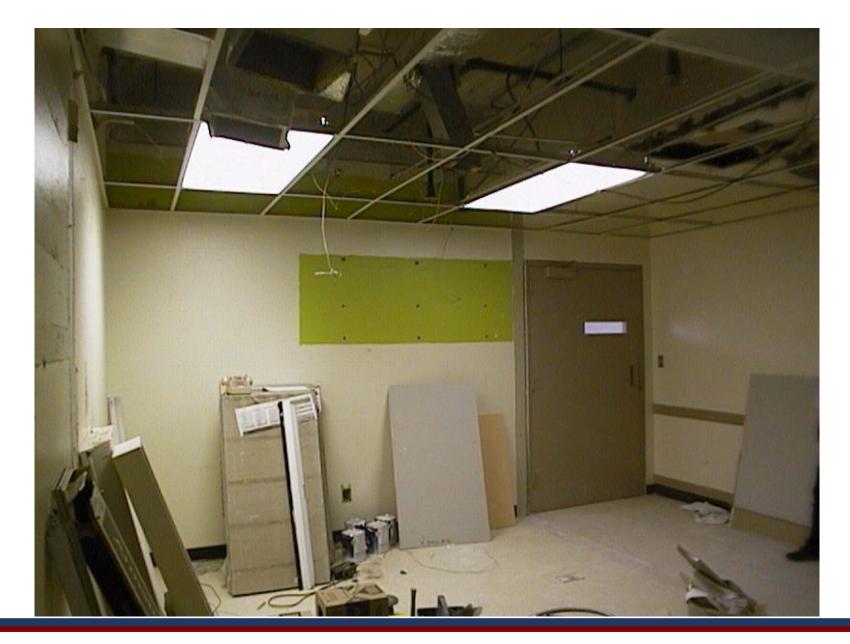






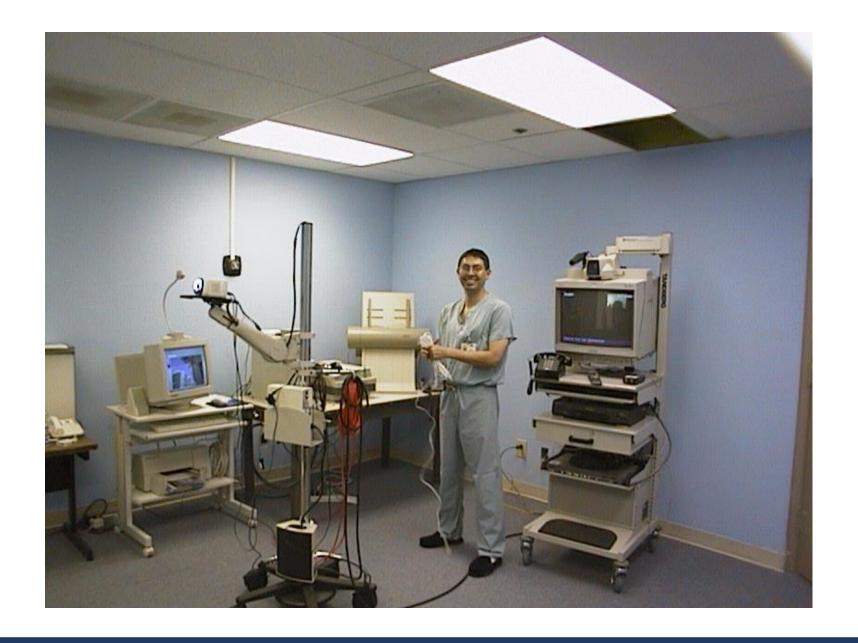
















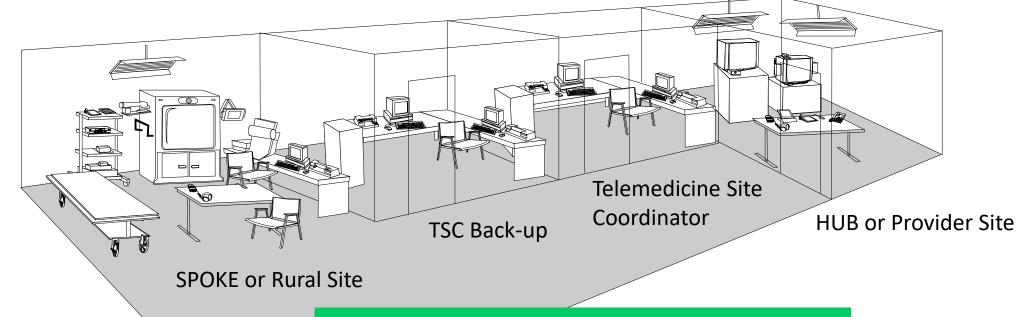




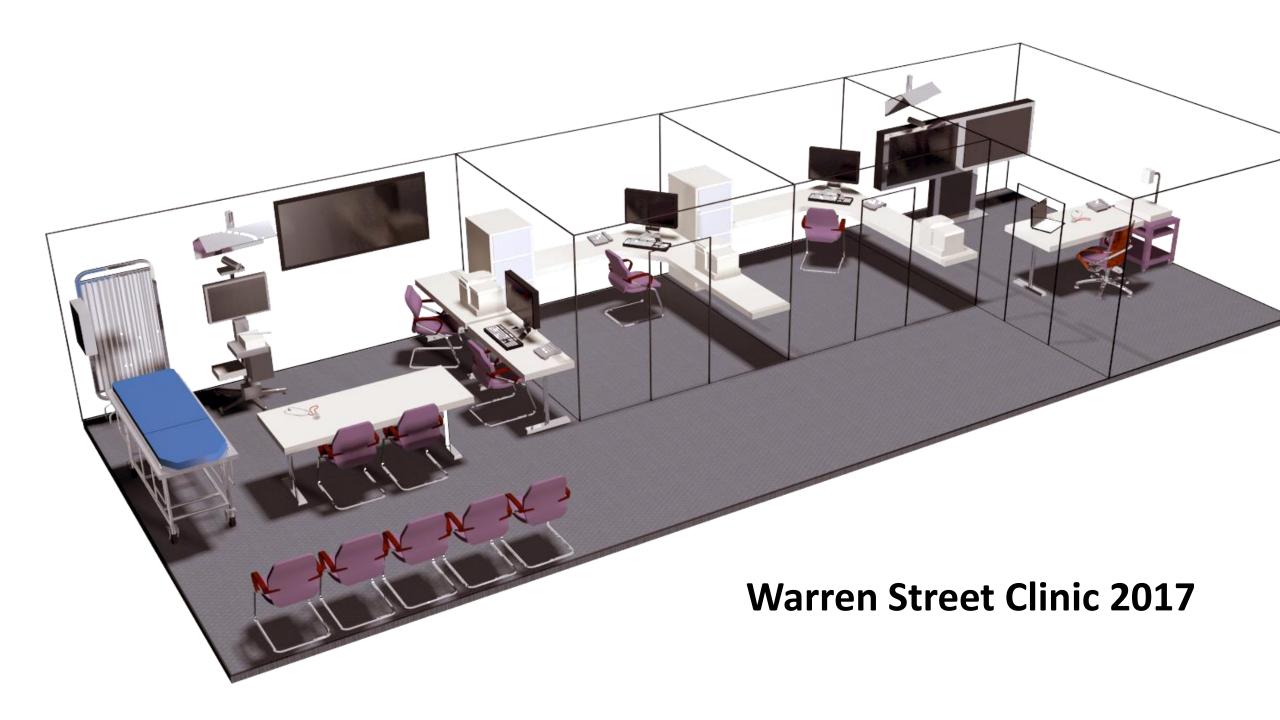




Telemedicine Training CenterThe University of Arizona Health Sciences Center Tucson, Arizona



WARREN STREET CLINIC







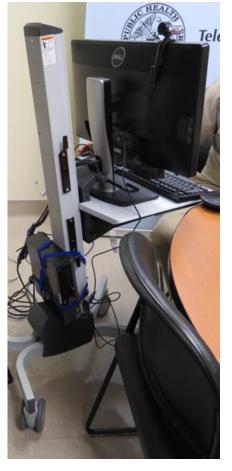
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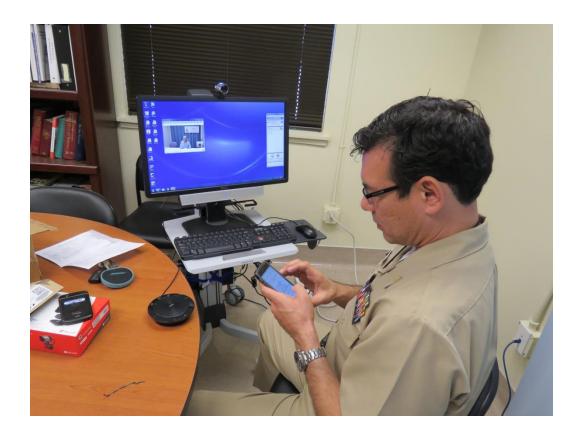
HUB





Sells IHS, AZ



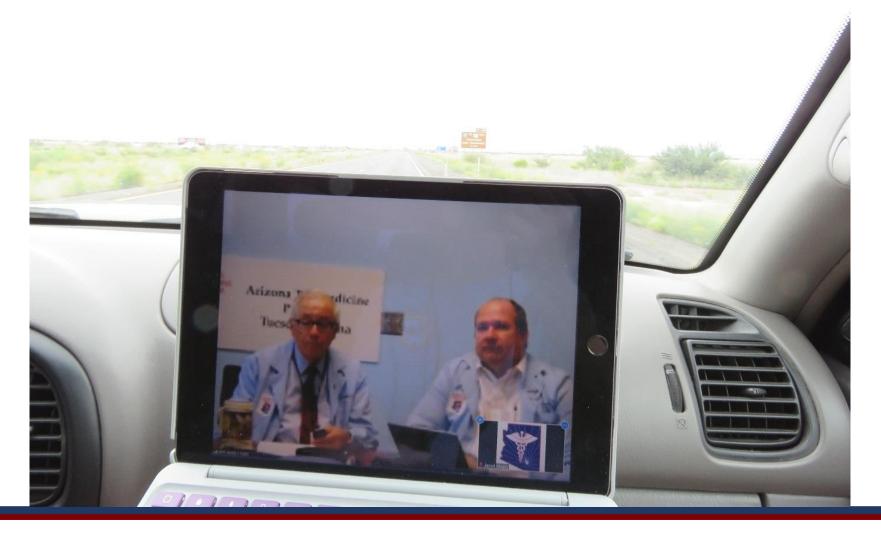
















SELFIES!







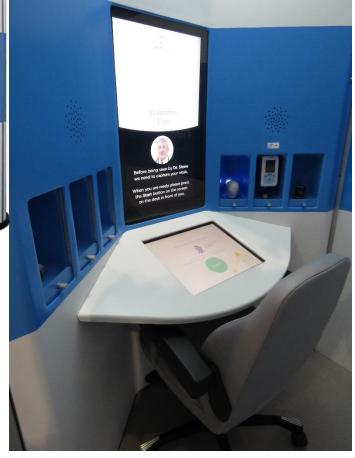








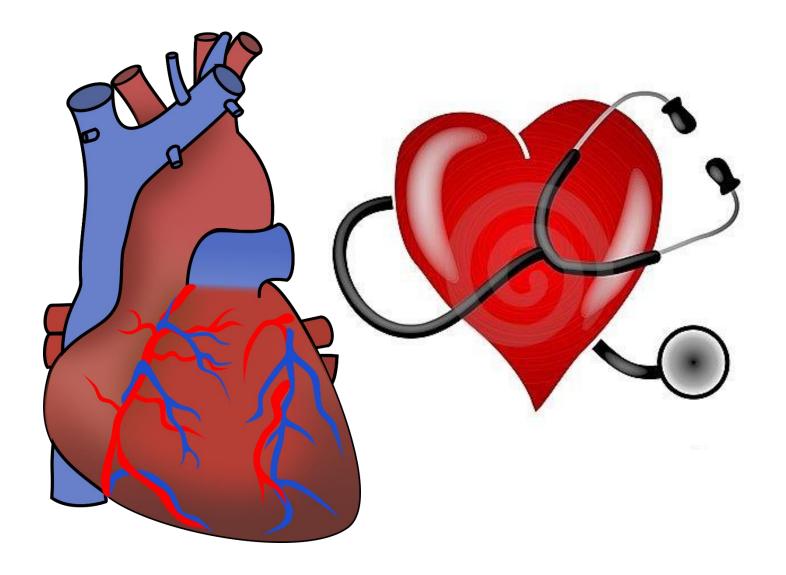
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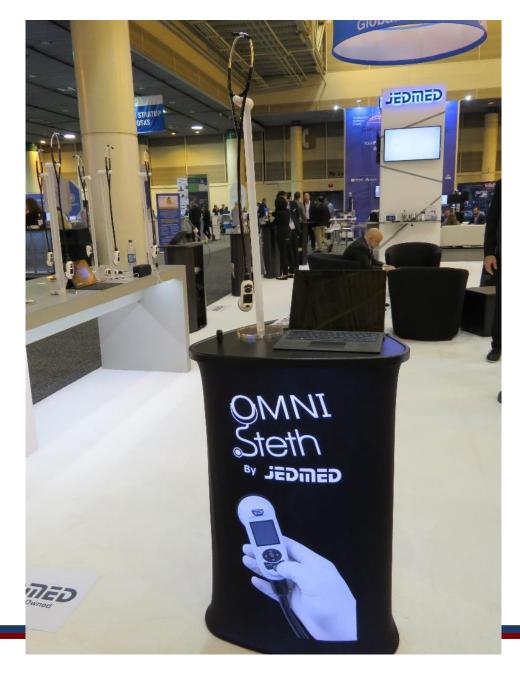






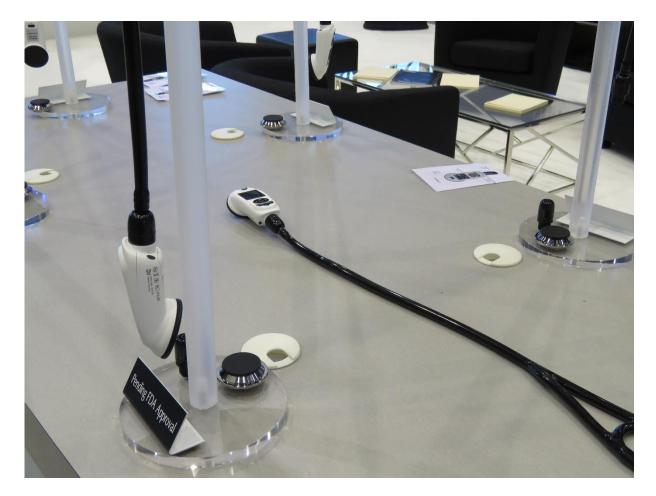


























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TELEHEALTH RESOURCE CENTER IN





Specialty Cameras



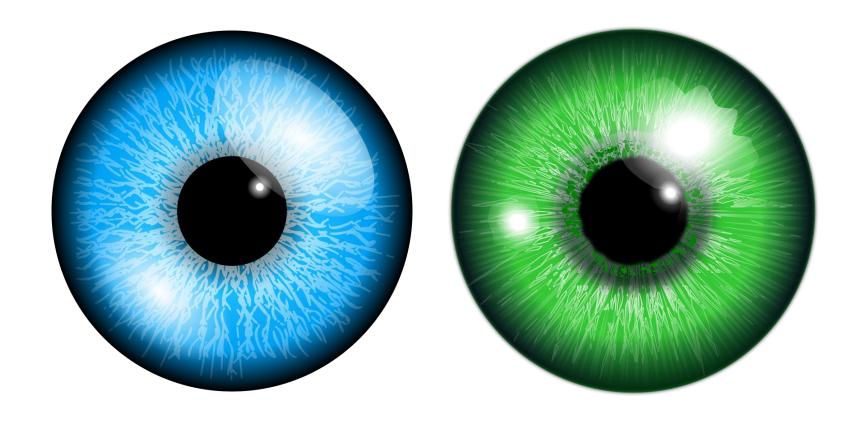








TeleOphthalmology



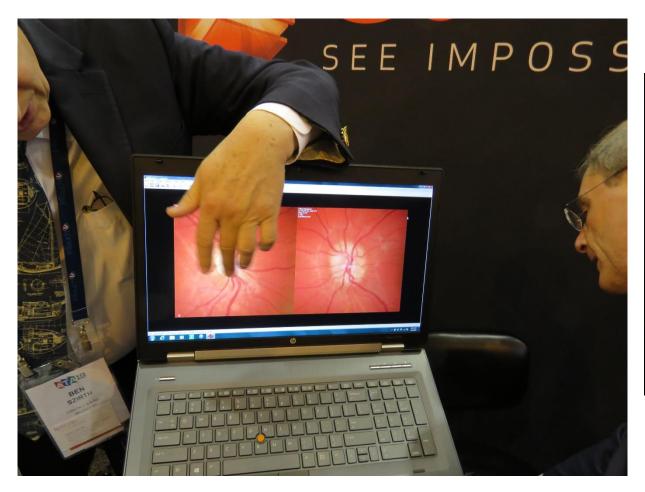


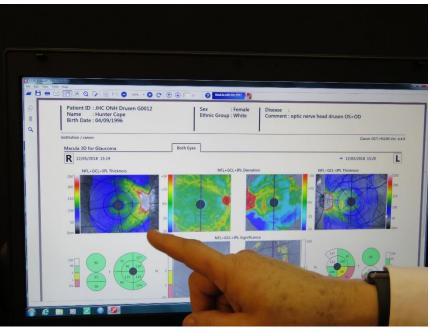


















- Community outreach
- Education
- Research
- Clinical Care





"Diabetes Days" Facilitated by Telemedicine

- Teleconsultations
 - Telepodiatry
 - Teleophthalmology
 - Telepharmacy
 - Telenutrition

- Tele-education
 - Patients
 - Health Care Professionals
 - Physical activity sessions





Dr's Initial			
Di o midai		Initial	
	Eye Screening		Labs done
	Foot Screeening		Insulin & Pump
	Medication Consult		Nutrition Education
	Dentist Screening		Glucometers Education
	Immunization Screening		Gestational Education
	Circulation Screening		Effects of Diabetes
Name:		D.O.B:	
Clinic:		Provider:	
Comments:			





"Telediabetes & ADVICE: The Arizona Diabetes Virtual Center for Excellence"

ARIZONA TELEMEDICINE PROGRAM



Ana Maria López, MD, MPH, FACP Associate Dean for Outreach & Multicultural Affairs Professor of Medicine & Pathology

Medical Director, Arizona Telemedicine Program

Janet Major, BS
Associate Director for Facilties
Arizona Telemedicine Program
Distance Learning Outreach Coordinator
BioCommunications

















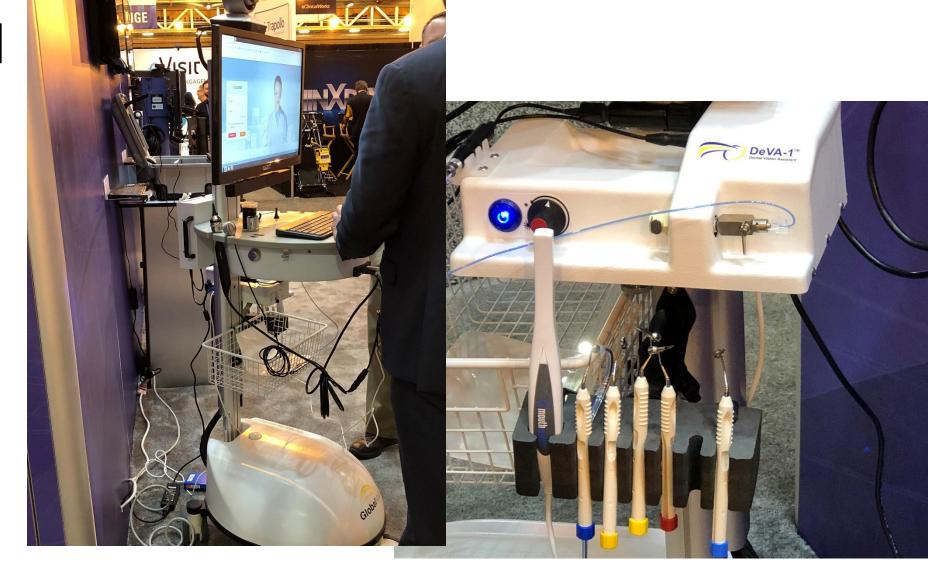








GlobalMed







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Our intraoral cameras are recognized not just for being affordable, but for their ease of use and





CARTS













Data Carts Computer Carts for Healthcare

Laptop Carts



Small Form Factor Tablet
Carts



Powered Carts



Telehealth Carts



Secure Tech Enclosure Carts

VIEW ALL



Accessories













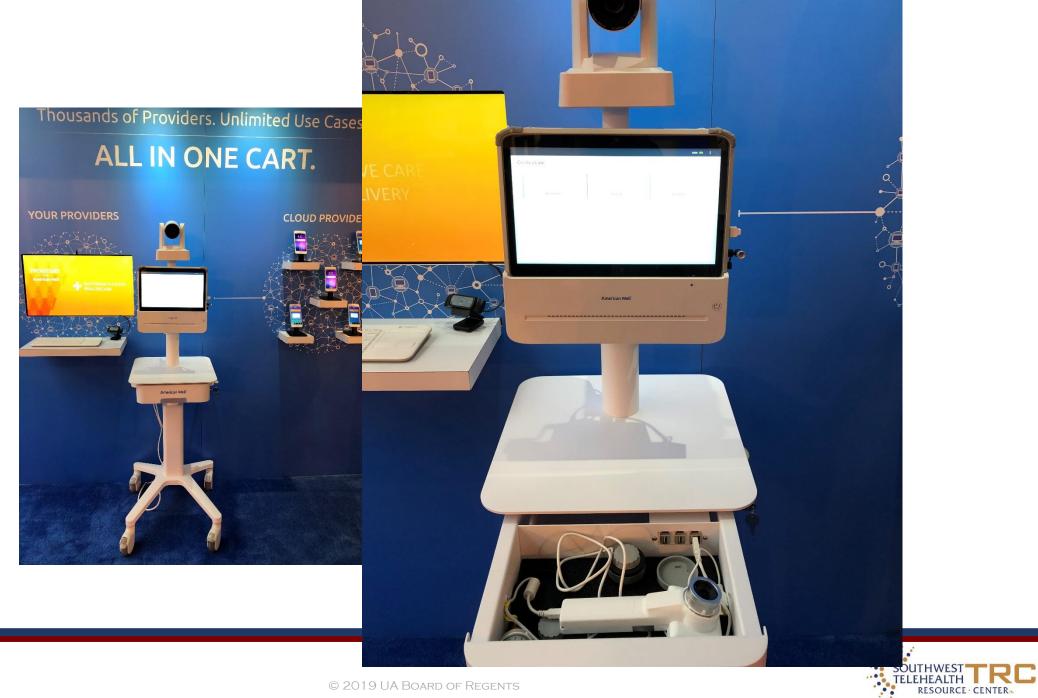






















Hardware vs Software Videoconferencing







Polycom















Multi-Purpose Cameras & Devices









Get reimbursed for HSA and FSA eligible products.3

Use your HSA or FSA funds on eligible items. Look for the "HSA/FSA eligible" badge on qualifying products.

Shop HSA/FSA eligible products>

Sho



- · Track your heart health over time
- · Run tests at home or on the go
- Share long-term trends with your doctor

Shop heart health products >



Diabetes

- · Track your numbers over time
- · Small enough to take anywhere
- Easily share results with your doctor

Shop diabetes products >



Food allergies

- Test for peanuts or gluten using just a crumb
- · Easy to use at home or away
- App notifications provide peace of mind for parents

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TytoCare

- Visit the doctor without leaving home
- Get a diagnosis, treatment plan, and prescription if needed
- · 24/7 access to convenient care

Shop TytoCare



Asthma

- Set reminders for taking your medication
- Track medication usage automatically
- · Share data with your doctor

Shop asthma products



Family care

- Track health history with a smart thermometer
- · Get medication reminders
- Find a smarter way to manage asthma and food allergies

Shop family care products>



ition



tytocare





Comprehensive exams

whenever and wherever you need them

















Heart Exam

Heart Rate

Lungs

Ears

Skin

Throat

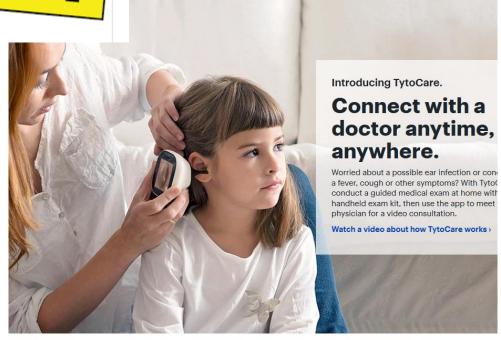
Temp

Abdomen













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Video + Audio in one device

LogiTech CC3000e

Turn any meeting room into a face-to-face video-enabled collaboration room.



The Logitech ConferenceCam CC3000e





Echo Cancellation Microphones







Headphones

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





IPads

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 <u>University of Arizona College of Nursing</u>, 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 <u>Arizona Telemedicine Program</u> as part of its <u>Innovation Awards</u> 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



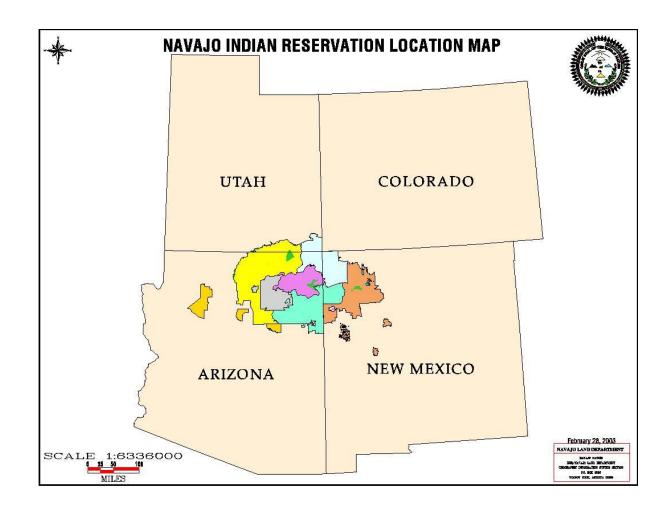
Dr. Shea consults with a remote hospice patient via telemedicine.

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.



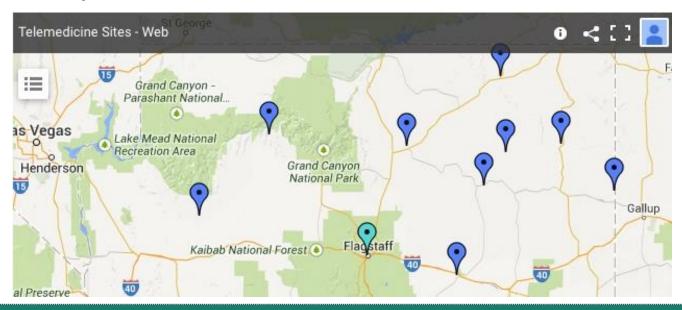








Flagstaff Medical Center https://nahealth.com/telemedicine



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.



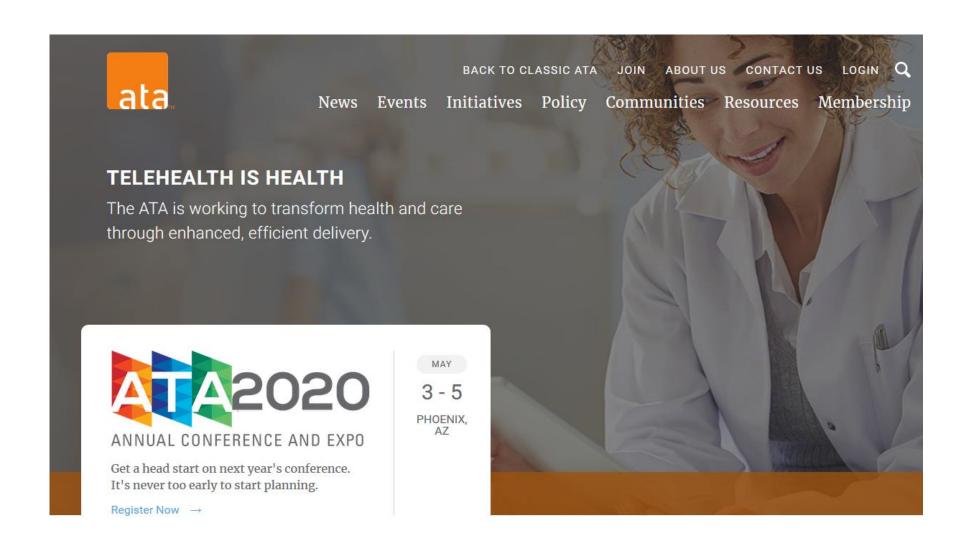


"Care Beyond Walls and Wires": In-Home Monitoring YouTube Videos @www.youtube.com

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









Policy Issues



Events



Community





AI = Artificial Intelligence PATH = Partnership for Artificial Intelligence, Automation and Robotics in Healthcare pathhealth.com



PATH is a new membership-based, mission-driven alliance to ensure the integration of automation, robotics, and artificial intelligence (AI) into the many components that comprise global healthcare. PATH's forward-thinking directives help to ensure that expertise critical for decision-making and funding makes its way into the many healthcare settings. PATH members range from professionals delivering care to health system executives in industry, public policy, academia, government, and educators – all of whom have a stake in the delivery of effective healthcare around the world in both on-site and remote care environments.

Al and related innovations have enabled industries such as banking, aviation, and entertainment to grow faster, provide higher-quality products, and allow consumers greater choice. With spiraling costs, increased need and decreasing resources, and rapidly advancing new technologies and participants, healthcare lags significantly behind. But innovation alone does not equal adoption and use, especially in healthcare. Innovations must gain the support of a spectrum of decision-makers – healthcare providers, regulators, payers, and consumers.

PATH is action-oriented, uniting stakeholders to identify the most critical technology innovations in automation, robotics, and artificial intelligence. This moves the field beyond research and innovation to enable an effective pathway for their adoption in the worldwide ecosystem of medicine.



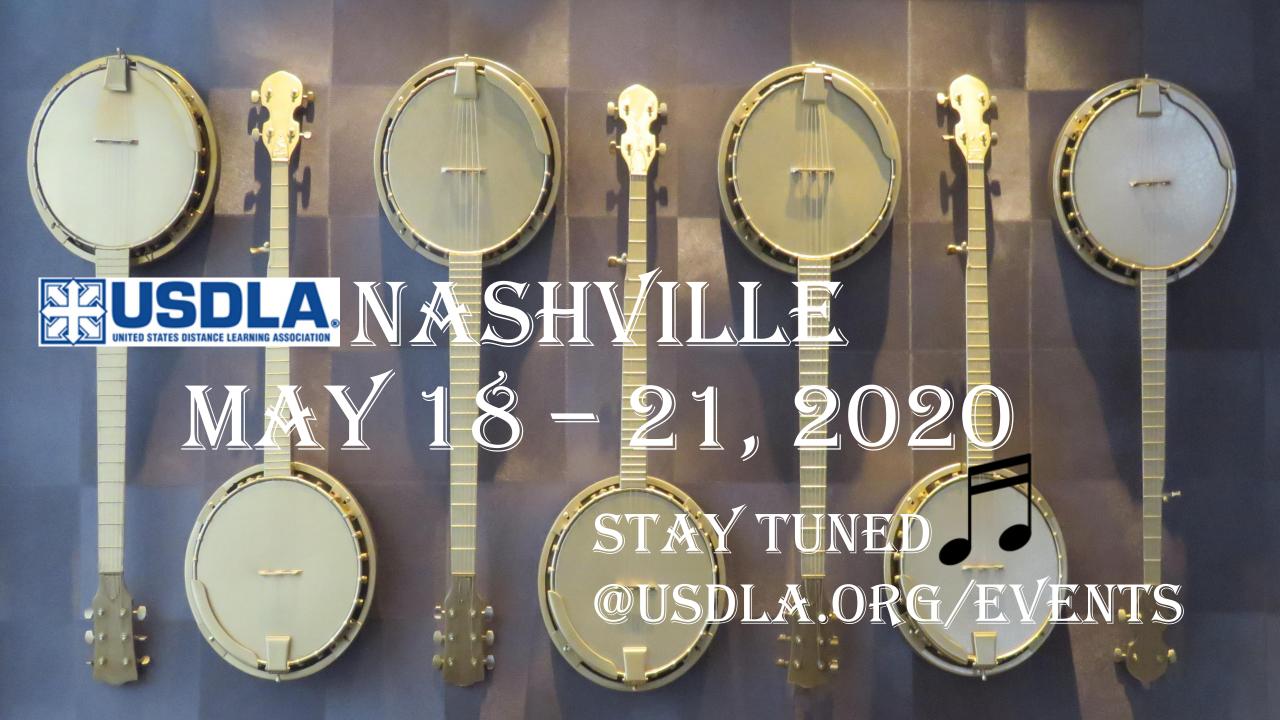


Pathhealth.com December 18 – 20, 2019



















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



