OSU Telemedicine

Madhuri J. Lad, DO, FACOI, AAHIVS
Assistant Medical Director
Oklahoma State University Internal Medicine Specialty Services

Disclosures

- ViiV Pharmaceuticals Speaker's Bureau 2019-2020
- Gilead Advisory Board November 2018

Learning Objectives

- Become familiar with telehealth platforms, equipment, and costs
- Learn telehealth regulations and billing
- Discuss challenges of telehealth and ways to overcome them

OSU Internal Medicine Specialty Services Clinic

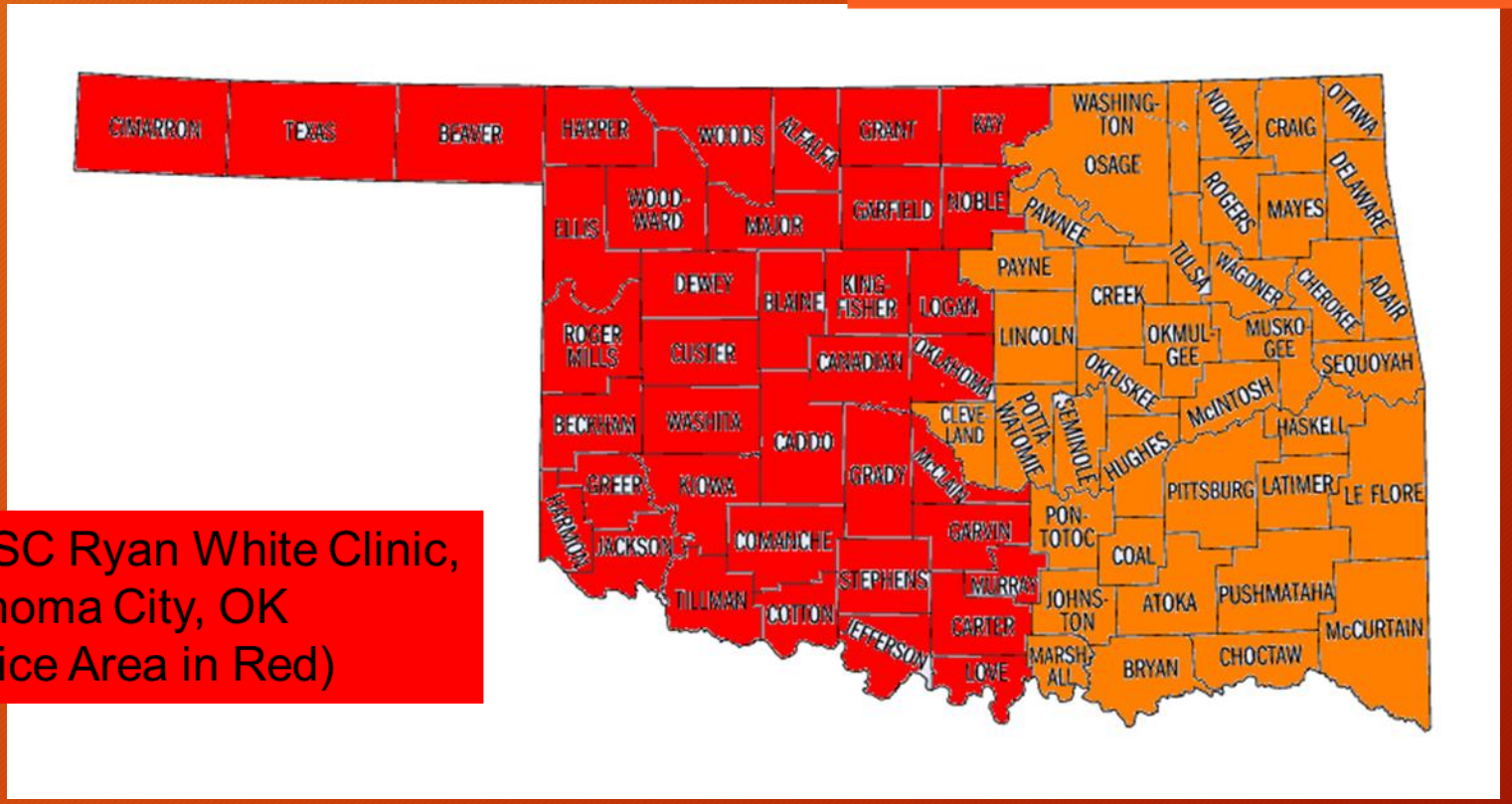
*Established in September 1996 by Thomas Stees, DO

*Cared for over 3000 HIV-positive persons since 1996

*Coverage of the eastern half of the state

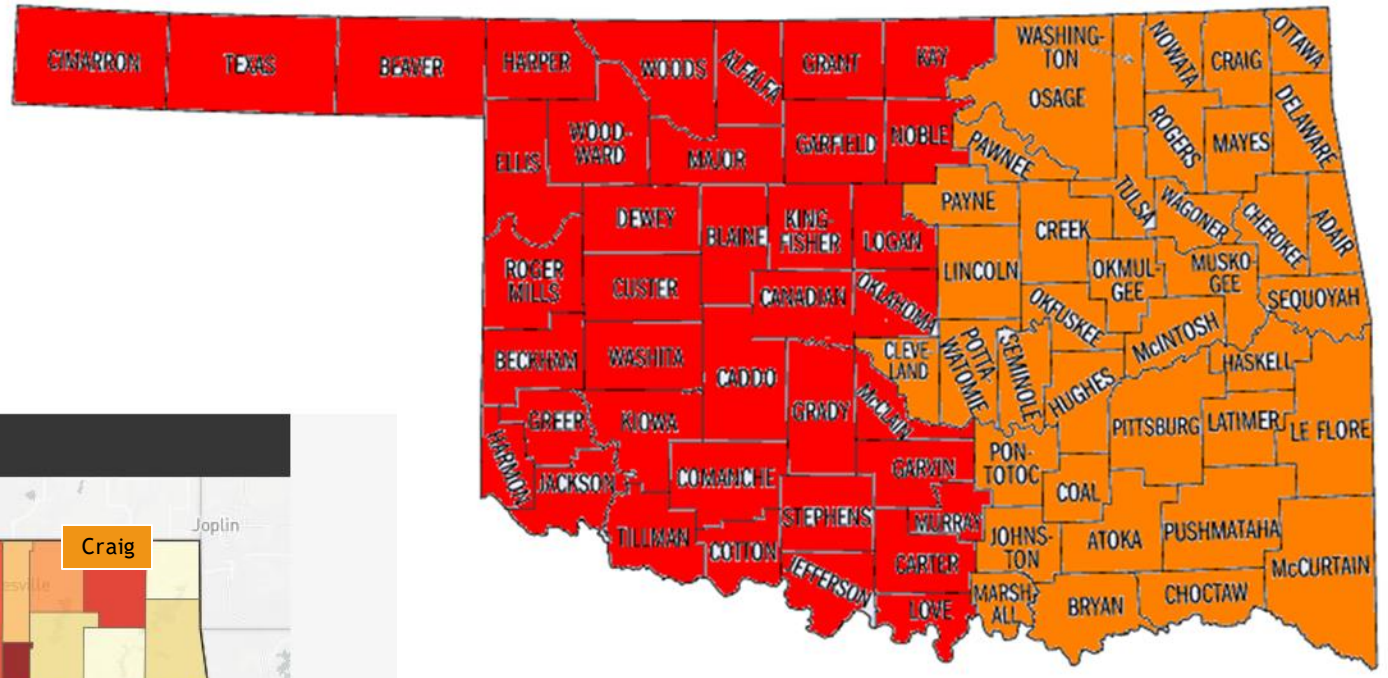
Oklahoma Service Areas

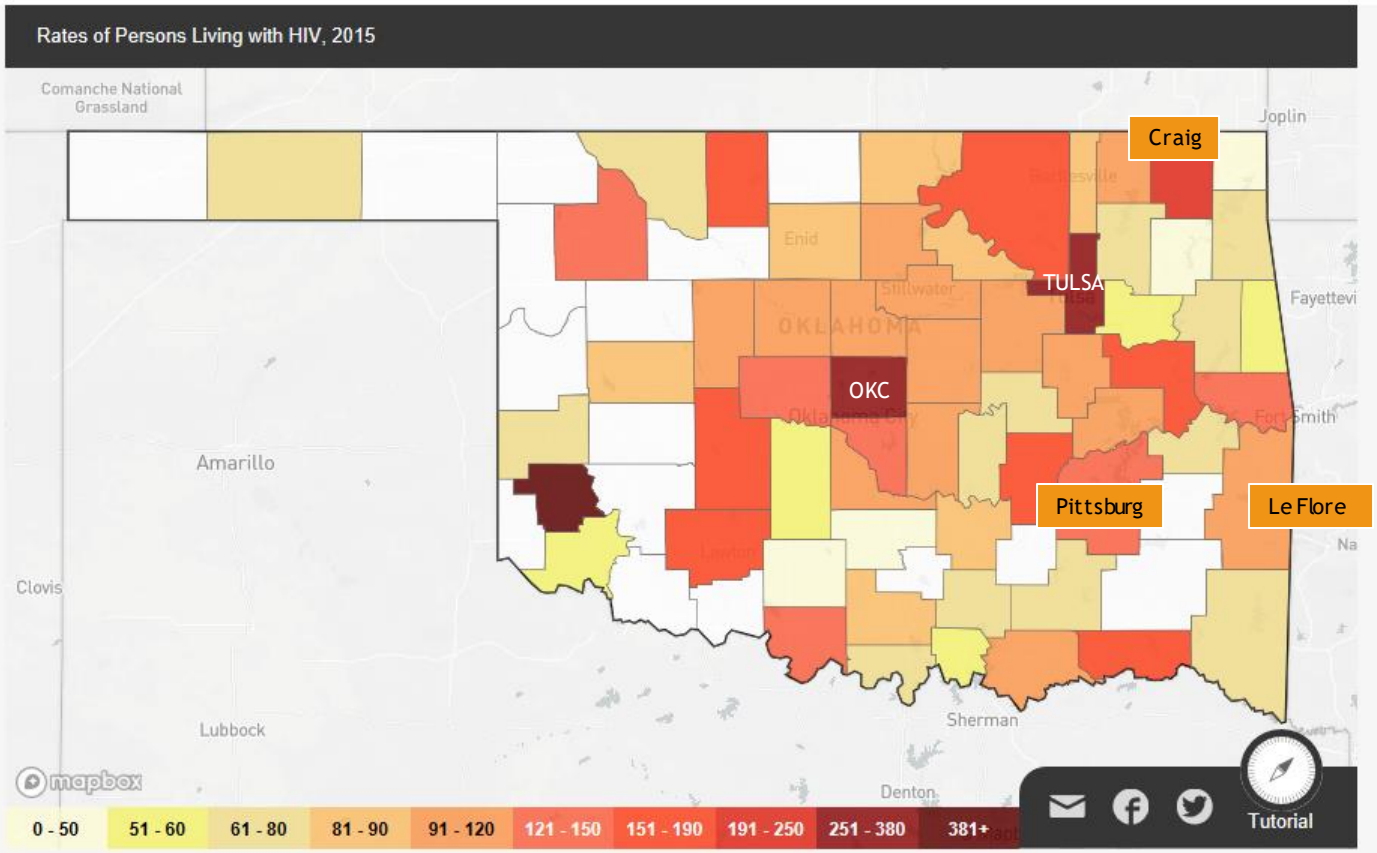
OSU-CHS Ryan White Clinic, Tulsa, OK
(Service Area in Orange)



OUHSC Ryan White Clinic,
Oklahoma City, OK
(Service Area in Red)

Telemedicine





Oklahoma Highlights

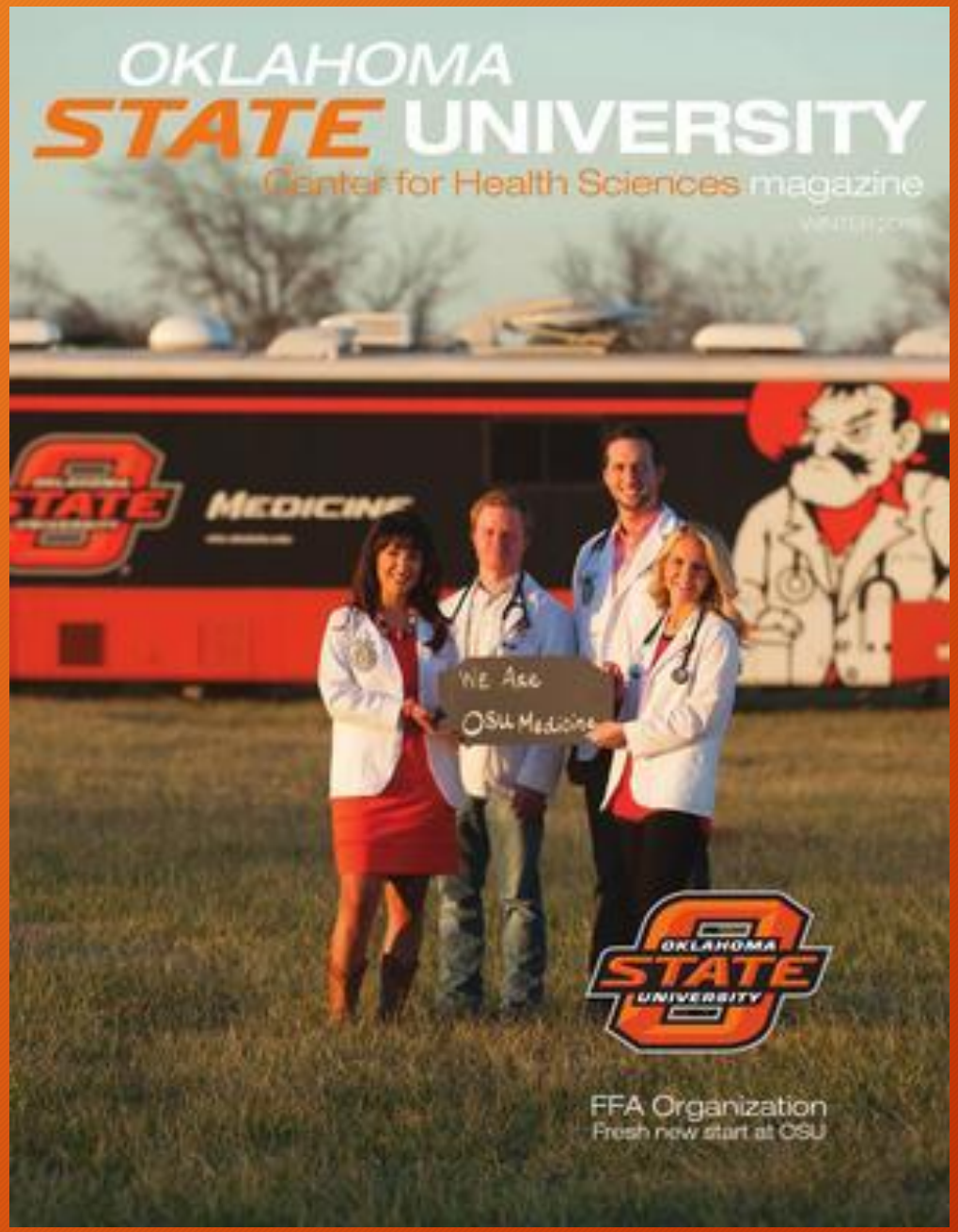
Patient Case

- 55M, HIV-positive in Poteau,OK
- Barrier - transportation
- Treated with Reyataz/Norvir/ Descovy
- CD4=300, VL<20 (scanned)
- Cough – Azithromycin and Flonase prescribed yesterday
- Rash – “itchy spot” on right leg

- Telemed appt
- Labs & appt in Poteau
- Rx refills e-scribed
- Meds/labs reviewed with pt
- Interaction between Flonase and Norvir discussed
- Stethoscope – lungs clear
- Dermascope used to diagnose and treat tinea corporis

Barriers to HIV Care

- Mental Health
- Substance abuse
- Nutrition
- Transportation
- Housing


OKLAHOMA
STATE UNIVERSITY
Center for Health Sciences magazine
STATE
MEDICINE
We Are
OSU Medicine
OKLAHOMA
STATE
UNIVERSITY
FFA Organization
Fresh new start at OSU

STATE
MEDICINE

HTRC
Heartland
Telehealth Resource Center

Mobile Telemedicine Clinic

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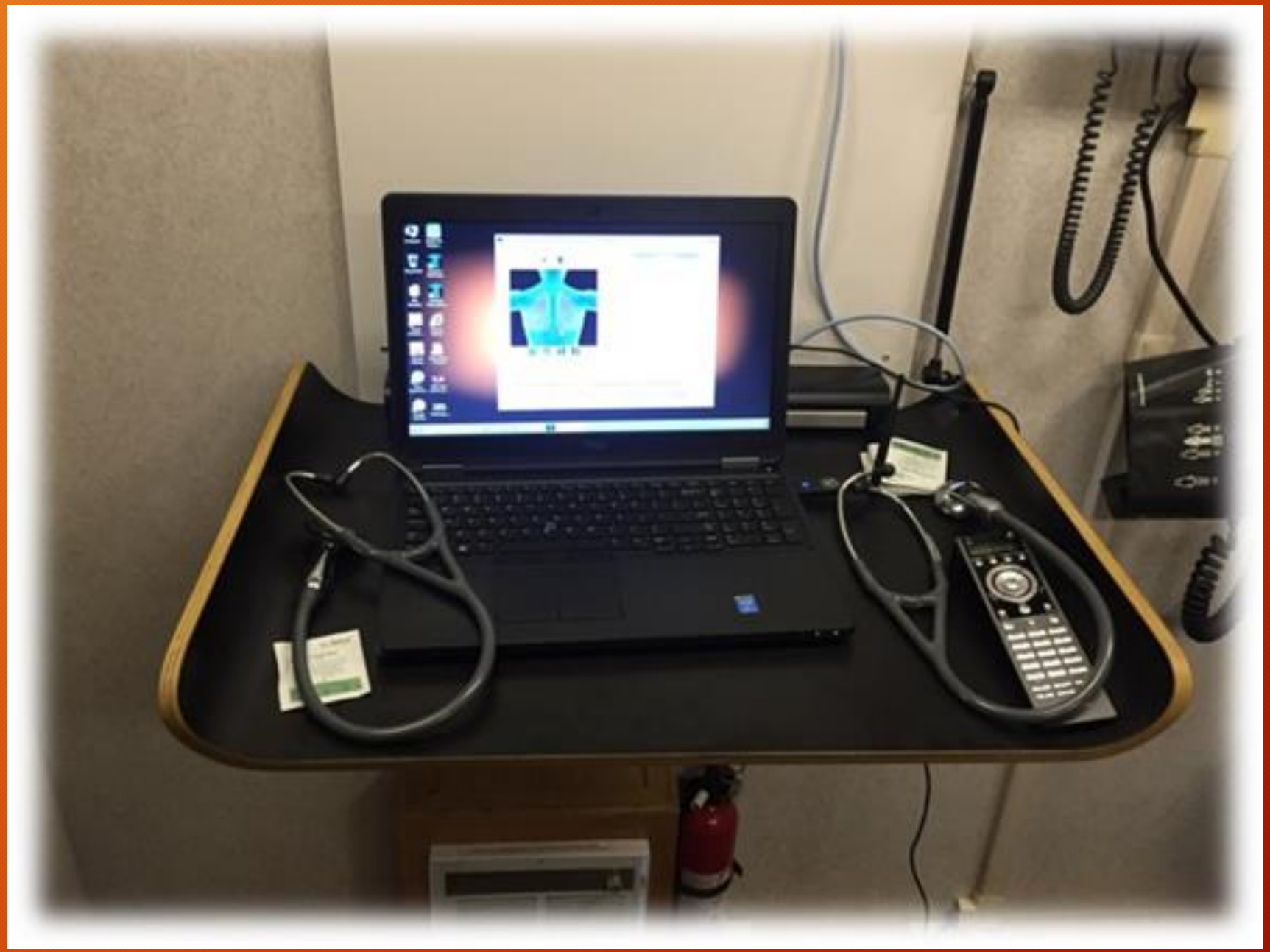
CENTER FOR RURAL HEALTH



Polycom
Authorised Distributor

ConnectMed & Zoom:
Best Practices in Global Telehealth and Tele-education

*Audio will be on mute until the webinar begins

zoom

Comparison: Polycom vs. Zoom

POLYCOM

- Expensive $4000-$5000 for unit and annual fee
- High quality camera
- More difficult set-up and use
- Requires updates
- Limited use

ZOOM

- Cost effective
- Easy to use
- Use on desktop, laptop, tablet, or cell phone
- Less equipment
- Multi-purpose platform

zoom

Making Video Communications Frictionless

- ✓ 100 interactive video participants (add-ons for larger meetings available up to 500)
- ✓ Participants join from mobile, tablet, desktop, H.323/SIP room systems, telephone, and Zoom Rooms
- ✓ Audio options for attendees (VoIP, Call-In, Call-Out, and Global Toll-Free available)
- ✓ Share any content, including video clips with audio
- ✓ Simultaneous screen sharing
- ✓ Record your meetings – local or cloud, MP4 and M4A
- ✓ Personal meeting URL
- ✓ Works with Skype for Business and Slack
- ✓ Mobile apps that allow you to schedule, start, or join a meeting – even present content from your phone or tablet
- ✓ Video Breakout Rooms for small group work
- ✓ Completely secure with end-to-end encryption

Zoom Meeting Plans for Your Business

Zoom for Education | Zoom for Telehealth | Zoom for Developers

Basic

Personal Meeting

Free

SIGN UP, IT'S FREE

- Host up to 100 participants
- Unlimited 1 to 1 meetings
- 40 mins limit on group meetings
- Unlimited number of meetings
- Online support
- + Video Conferencing Features
- + Web Conferencing Features
- + Group Collaboration Features
- + Security

Pro

Great for Small Teams

$14.99/mo/host

Buy Now

All Basic features +

- Includes 100 participants
  Need more participants?
- Meeting duration limit is 24 hrs
- User management
- Admin feature controls
- Reporting
- Custom Personal Meeting ID
- Assign scheduler
- 1GB of MP4 or M4A cloud recording
- REST API
- Skype for Business (Lync) interoperability
- + Optional Add-on Plans

Business

Small & Med Businesses

$19.99/mo/host

*Minimum of 10 hosts

Buy Now

All Pro features +

- Includes 100 participants
  Need more participants?
- Dedicated phone support
- Admin dashboard
- Vanity URL
- Option for on-premise deployment
- Managed domains
- Single sign-on
- Company branding
- Custom emails
- LTI integration
- Cloud Recording Transcripts

Enterprise

Large Enterprise-Ready

$19.99/mo/host

*Minimum of 50 hosts

Contact Sales

All Business features +

- Up to 1,000 participants
  Unlimited Cloud Storage
- Dedicated Customer Success Manager
- Executive Business Reviews
- Bundle discounts on Webinars and Zoom Rooms

zoom

INVOICE

Zoom Video Communications Inc.
55 Almaden Blvd, 6th Floor
San Jose, CA 95113
billing@zoom.us

For ACH and Wire Transfer payment:
Account Name: Zoom Video Communications, Inc.

Invoice Date:	10/01/2018
Invoice #:	INV04341336
Payment Terms:	Net 30
Due Date:	10/31/2018
Account Number	517411
Currency:	USD
Account Information:	Oklahoma State University - OSU

CHARGE SUMMARY

Charge Detail	Service Period	Subtotal	Tax	TOTAL
Charge Name: Education Annual Quantity: 40 Unit Price: $15.00	*10/01/2018-09/30/2019*	*$600.00*	*$0.00*	*$600.00*
Charge Name: Room Connector Annual Quantity: 16 Unit Price: $400.00	*10/01/2018-09/30/2019*	*$6,400.00*	*$0.00*	*$6,400.00*

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Custom Quote

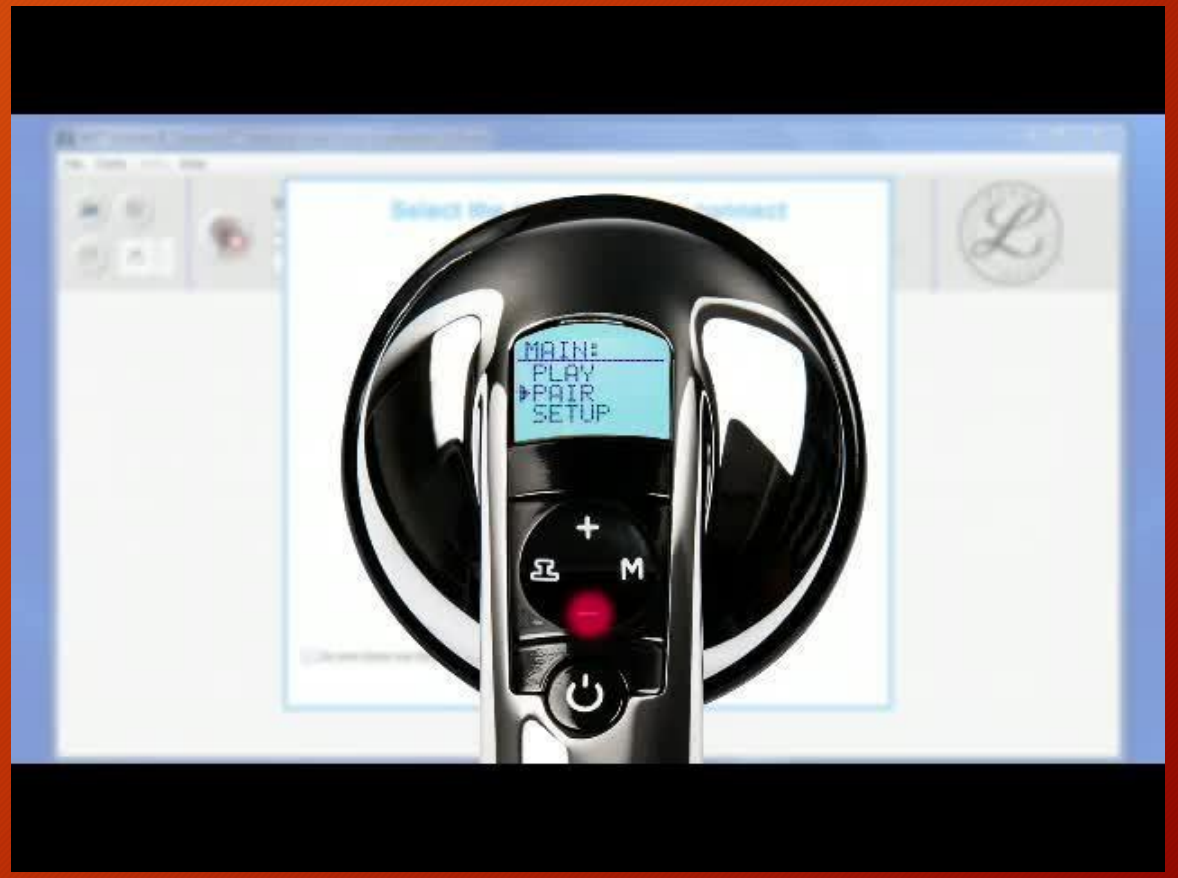
Date of Quote:	6/10/2015	**Expiration Date:**	7/10/2015
Quote #:	10277-42117-68325	**Account Executive**	Greg Maniss
Revision #:	1	**Phone:**	(918)521-5131
Customer:	OSU Center for Health Sciences	**Opportunity #:**	
Room Name:	Quote A	**Contract:**	E&i: CNR01317
Contact:	Steve Casady		
Address:	1111 W. 17th S Tulsa, Ok 74107		

Total: $6,333.70

Qty	Part Number	Description	List Price	Unit Price	Extended Price
1	AVZ-HS-BUNDLE	Avizia HORUS Scope + 3 Cam (Gen/Oto/Derm) Bundle	6,500.00	$5,699.53	$5,699.53
1	AVZ-HS-BUNDLE-ACS	Avizia Core Service - Avizia HORUS Scope + 3 Cam (Gen/Oto/Derm) Bundle	650.00	$634.17	$634.17

Section Subtotal: $6,333.70

STETHOSCOPE



TeleSteth Software Cost.pdf - Adobe Acrobat Pro DC
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Date of Quote:	2/2/2016	**Expiration Date:**	3/3/2016
Quote #:	10277-42117-68325	**Account Executive**	Greg Maniss
Revision #:	1	**Phone:**	(918)521-5131
Customer:	OSU Center for Health Sciences	**Opportunity #:**	
Room Name:	AV	**Contract:**	E&i: CNR01317
Contact:	Steve Casady		
Address:	1111 W. 17th S Tulsa, Ok 74107		

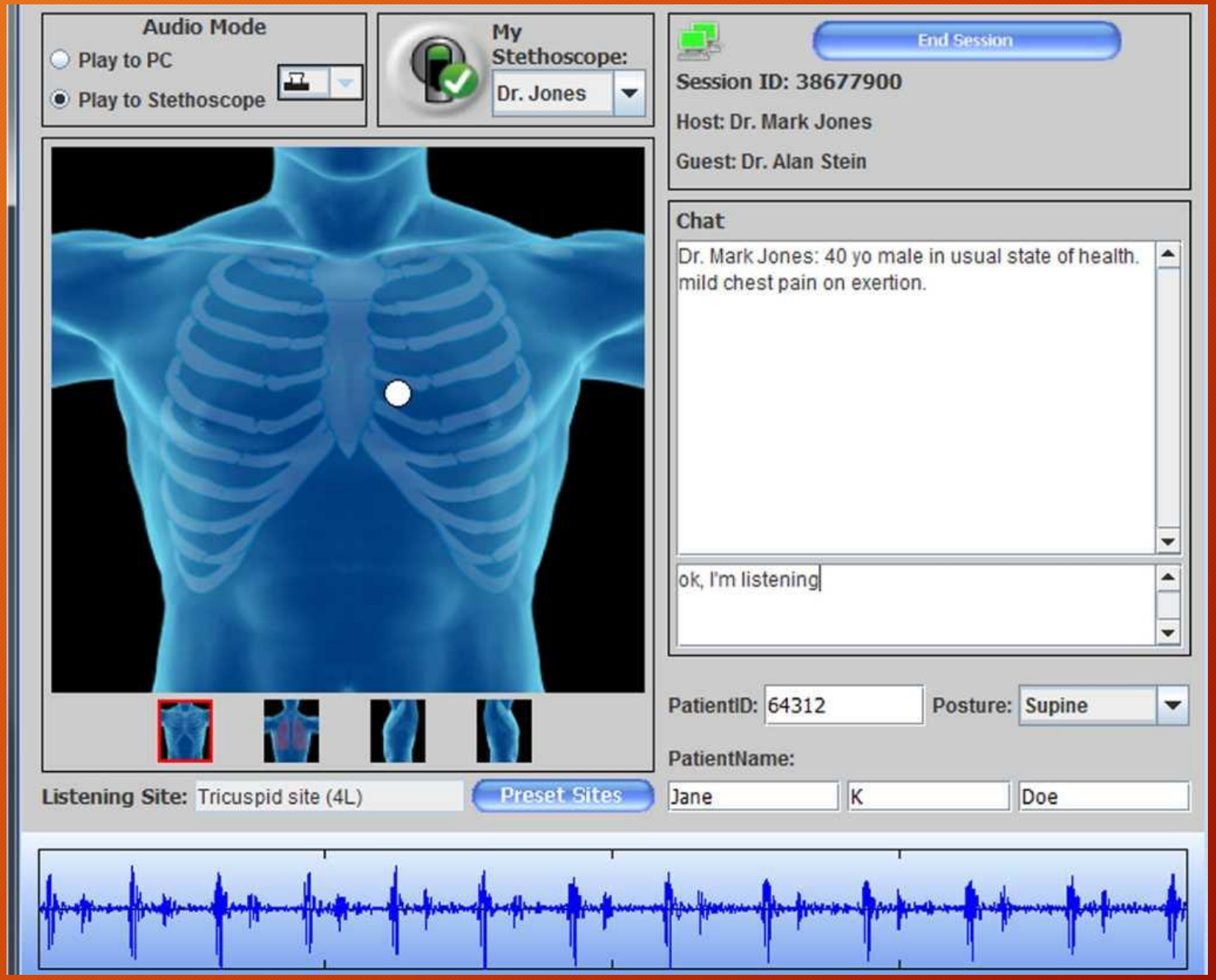
Total: $4,095.00

Qty	Part Number	Description	List Price	Unit Price	Extended Price
10	3200BK27	3M LITTMAN ELECTRONIC STETHOSCOPE MODEL 3200, BLACK		$386.10	$3,861.00
10	78-8083-2928	3M LITTMAN MINI USB BLUETOOTH ADAPTER		$23.40	$234.00

Section Subtotal: $4,095.00

Total	**$4,095.00**
Estimated Freight	**$102.38**

Search tools
Create PDF
Combine Files
Edit PDF
Export PDF
Organize Pages
Send for Review NEW
Comment
Fill & Sign
Send for Signature
Enhance Scans
Protect
More Tools
Your current plan is Creative Cloud
Learn More


Audio Mode
Play to PC
Play to Stethoscope
My Stethoscope:
Dr. Jones
End Session
Session ID: 38677900
Host: Dr. Mark Jones
Guest: Dr. Alan Stein
Chat
Dr. Mark Jones: 40 yo male in usual state of health. mild chest pain on exertion.
ok, I'm listening
PatientID: 64312
Posture: Supine
PatientName:
Jane
K
Doe
Listening Site: Tricuspid site (4L)
Preset Sites

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Edit PDF
Export PDF
Organize Pages
Send for Review NEW
Comment
Fill & Sign

3M Littmann Stethoscopes

3M TeleSteth™
3M Center, 275-01-W-14
St. Paul, MN 55144-1000
1-651-737-9332
Fax: 1-651-732-9212
Email: littmanntelesteth@mmm.com

Quotation

Today's Date:	08/15/18
Expiration Date:	09/14/18

This Quotation Is Firm For 30 Days.

Ship to:

Name
Oklahoma State University- Center for

Address
1111 West 17th St
Tulsa OK 74107

Attn
Heather Hagan

Email
heather.hagan@okstate.

Phone

OSUTH4 OSUTH19
OSUTH5

Quantity	Cat Number	Description	Unit Price	Extended Price
5	TS1200CI	Direct - 1 Year Term - TeleSteth™ Software, Hosted Client License	$750.00	$3,750.00

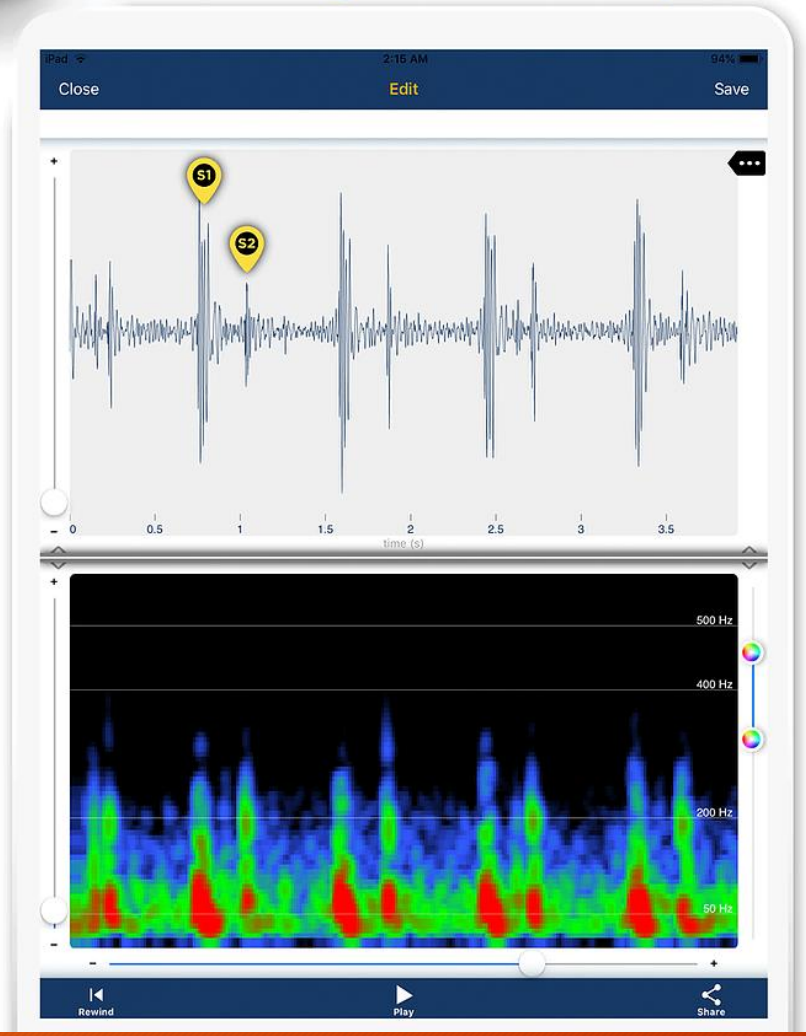
Subtotal	$3,750.00
Total *	$3,750.00

* Applicable Sales Tax will be applied

3M Representative	Phone #	Email	Fax

CAPTURE SOUND

from your Thinklabs One Digital Stethoscope



RECORD AND SAVE

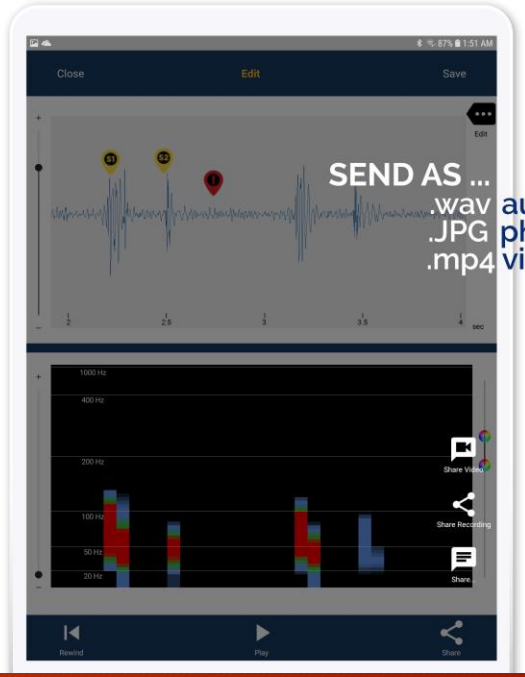
Save to your mobile device

wired connection for top notch sound quality

Thinklink Mobile Kit included with your One

SHARE SOUND

through email or messaging apps...



Thinklabs Digital Stethoscopes

Thinklabs

INVOICE

OSU Center for Rural health
Attention: Tim Davis
1716 S. Phoenix Ave.
TULSA OK 74107

Invoice Date
Oct 18, 2019

Invoice Number
INV-7419

Reference
DEMO

Thinklabs Medical LLC
6500 South Quebec, Suite 210
CENTENNIAL CO 80111
USA

DEMO

Description	Quantity	Unit Price	Tax	Amount USD
Thinklabs One - Digital Stethoscope with ThinklLink pkg. Serial #93301076	1.00	499.00	Tax on Sales	499.00
Audio-Technica USB Audio Adapter	1.00	20.00	Tax on Sales	20.00
FedEx or UPS Ground Shipping / Signature required.	1.00	15.00	Tax on Sales	15.00
Demo unit / Postponed Payment	1.00	0.00		0.00

Please return the units to Thinklabs after the 30 day demo period. You may contact us if extra time is required for evaluation.
All accessories and boxes need to be returned with the stethoscope to avoid any re-stocking charges.

Merchandise Total	47,727.22	-37,927.44
Shipping	477.27	
Document Total	$48,204.49	

ove quoted pricing is valid until 6/05/2015.

The Polycom® RealPresence® Practitioner Cart® 8000, developed for Polycom by Rubbermaid Healthcare, helps healthcare professionals bring expert care to patients from a distance.

Oklahoma Reimbursement

Is telemedicine reimbursed? Yes, Medicaid and Private Insurance. Oklahoma has legislation mandating coverage, but it does not mandate that services provided by telehealth are reimbursed at the same rate as in-person services.

Geographic requirement: Both rural and urban patients can be reimbursed for telehealth services.

Patient location: Services can be provided to patient in health care facilities, their homes or nursing homes.

Provider location: No limit. Provider does not have to be in Oklahoma at the time of services but must be licensed in Oklahoma.

Provider types: Any provider contracted with SoonerCare and licensed for service.

Reimbursement amount: The provider payment is the same as face-to-face services

Service types covered: Most services are now covered, including primary care.

Network types: Being part of an approved telehealth network is no longer necessary. The only requirements are that the network is secure, HIPAA compliant and has good transmission.

Oklahoma State Board of Medical Licensure and Supervision Position Statement on Definition of Face to Face Encounter by Telemedicine in Oklahoma (Title 59 Section 478 of the Oklahoma Statutes)

It is the position of the Oklahoma State Board of Medical Licensure and Supervision that the face-to-face encounter required by OAC 435: 10-1-4 in order to establish a physician/patient relationship includes real-time telemedicine encounters with audio and video capability. In order to qualify as a face-to-face encounter set out in this definition, the telemedicine audio and video capability must meet those elements required by CMS (Centers for Medicare and Medicaid Services).

"the practice of healthcare delivery, diagnosis, consultation, evaluation and treatment, transfer of medical data or exchange of medical education information, by means of a two-way, real-time interactive communication, not to exclude store and forward technologies, between a patient and a physician with access to and reviewing the patient's relevant clinical information prior to the telemedicine visit."

Effective November 1, 2017

Coding

- CPT code for established patient outpatient visit
- Telehealth modifier GQ 3014

Telehealth during COVID-19

- On March 13, 2020, President Trump announced an emergency declaration under the Stafford Act and the National Emergencies Act. Consistent with President Trump's emergency declaration, CMS is expanding Medicare's telehealth benefits under the 1135 waiver authority and the Coronavirus Preparedness and Response Supplemental Appropriations Act.
- Prior to this announcement, Medicare was only allowed to pay clinicians for telehealth services such as routine visits in certain circumstances. For example, the beneficiary receiving the services must live in a rural area and travel to a local medical facility to get telehealth services from a doctor in a remote location. In addition, the beneficiary would generally not be allowed to receive telehealth services in their home.

Telehealth during COVID-19

- Patients can access their doctors using a wider range of communication tools including telephones that have audio and video capabilities and video chats allowing noncompliance with HIPAA.
- Clinicians can bill immediately for dates of service starting March 6, 2020. Telehealth services are paid under the Physician Fee Schedule at the same amount as in-person services. Medicare coinsurance and deductible still apply for these services.

Staff

- **Telemedicine bus driver** requires a commercial driver's license and competent with technology of equipment, software, and connectivity
- **Nurse** required for rooming (vitals, med rec) and needs to be competent with equipment
- **Physician** needs to be competent with the equipment and coding

Challenges

- Weather or mechanical issues for bus, maintenance and fuel costs
- Wifi and stethoscope connectivity
- Software updates
- Inexperienced staff on telemedicine equipment
- Cancelled appointments or “no shows”
- Secure site location of bus & Storage of bus when not in use
- Referrals in rural areas
- Time spent driving to and from location
- Inefficient use of time of bus driver/IT and nurse

Overcome Challenges

- Reschedule due to weather or mechanical issues for telemed bus
- Wifi hotspot or direct cable connection to local network
- Use of cell phones if Wifi connectivity issues
- Anticipation of software updates
- Use of earbuds instead of stethoscope improved sound/connection
- Education of staff on telemedicine equipment
- Secure and discrete location of bus and test signal strength
- Contract with hospital for use of building space for telemedicine

Connectivity Issues

- Test area for signal strength. Weather, trees, and buildings all effect signal strength.
- Direct cable connection to a local network is best. Usually difficult to obtain due to security issues.
  - Wifi on the telemed bus
  - Hotspot
  - Mulitple cell signals (AT&T, Verizon)

Initiation of Telemedicine Locations

- Find a secure location for parking
- Set a monthly date/schedule for visits
- Recruit patients
- Schedule staff coverage

PROS AND CONS OF TELEMED

PROS

- Convenience
- Affordable
- Saves time and transport

CONS

- Connectivity issues
- Loss of personal touch
- Difficult for complicated cases
- Limited physical exam

Future Goals

- Secure signed contract with outlying hospitals for use of space
- Combine HIV telemedicine days with other OSU departments to share expenses
- Recruit additional patients to reduce barriers to care
- Offer other services, such as counseling or test and treat programs
- Coordinate with FQHC's to refer new HIV positive patients in rural areas for care through telemedicine
- Start a third telemedicine location in eastern Oklahoma
- Share our experiences with other programs

Project ECHO

- Extension for Community Health Care Outcomes
- Platform from the University of New Mexico
- Expert teams use multi-point videoconferencing to conduct virtual clinics with community providers
- Case-based collaborative learning
- Small didactic session for CME credit

Project ECHO®

Oklahoma State University Center for Health Sciences

OSU CENTER FOR HEALTH SCIENCES
Project ECHO
Free CME Hours
Access to Specialty Clinicians
Collaborative Care Management
Transforming Medical Knowledge
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HIV ECHO TEAM

Project ECHO®

Oklahoma State University Center for Health Sciences

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OSU Medicine, Department of Internal Medicine

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OSU Medicine, Department of Internal Medicine

Crystal David, Pharm.D., BCPS
Clinical Assistant Professor
OSU Medicine, Department of Family Medicine

OSU HIV ECHO Team

Thank you to my telemedicine staff!

Madhuri J. Lad, DO, FACOI, AAHIVS

Assistant Medical Director

Oklahoma State University Internal Medicine Specialty Services