AMERICAN COLLEGE of CARDIOLOGY

COVID-19 Hub

Intro to Telemedicine 101
The New Normal for Outpatient Cardiology

Dr. Ami Bhatt
Director of Outpatient Cardiology
Massachusetts General Hospital
Associate Professor, Harvard Medical School

Session Plan

- Introduction
- Telemedicine Terminology
- Overview of Technology in Telemedicine
- Telemedicine Tenets : Traversing its Tumultuous Tentacles

- Will this work?
- Yes, let me explain
- Not so difficult, feels familiar
- Agility is key: We are here to help

Why Telemedicine?

Keep clinicians and patients safe from exposure

Ensures a continued workforce in the face of quarantines

Avoid healthcare standstill: continue to provide routine care

Mitigate financial losses

Up to 75% of outpatient volume in COVID rich areas will be virtual over the next year.

The Outpatient Toolbox

- In-person visits
- Virtual Synchronous Visits
- Asynchronous communication
- Electronic Consultation
- Remote Monitoring
- Digital Tracking
- Wearables
- Data

Source: American Hospital Association, January 2015 *Trend Watch*, The Promise of Telehealth For Hospitals, Health Systems, and Their Communities

Telemedicine Improves Access and Quality

Provider

- Reduce No-Shows
- Improve adherence
- Increase clinic capacity
- Physician flexibility
- Expanded clinic hours
- Multi-disciplinary care
- *Engagement*

Patient

- Increase convenience
- Improve education
- Incorporate family
- Contribute to community
- Decreased cost/time
- Improved access to care
- *Respect*

Types of Virtual Visits in Telemedicine

- Phone
- Stand alone video
- Integrated EMR based Video

Virtual Visit Patient Requirements

Patients can use a smartphone, tablet, laptop or desktop computer (with camera)

May require download of virtual visit system

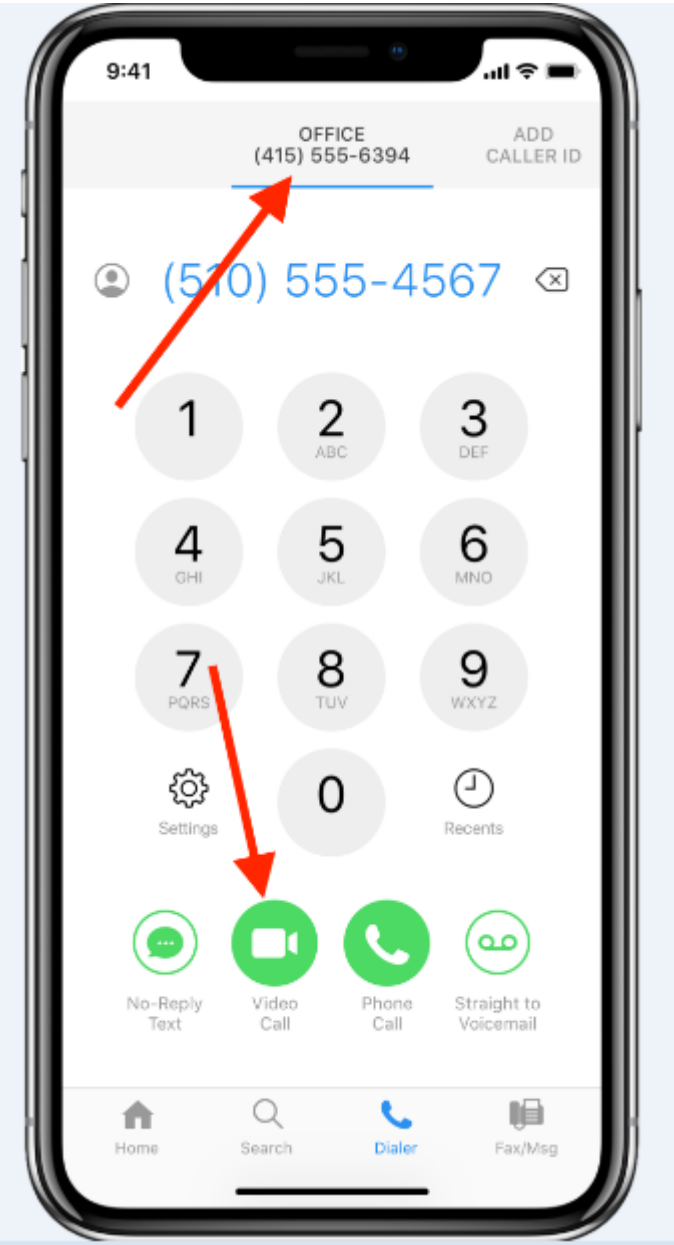
May require enrollment in patient portal

Virtual Visit Clinician Requirements

- A smartphone, laptop, tablet or desktop computer (with camera)

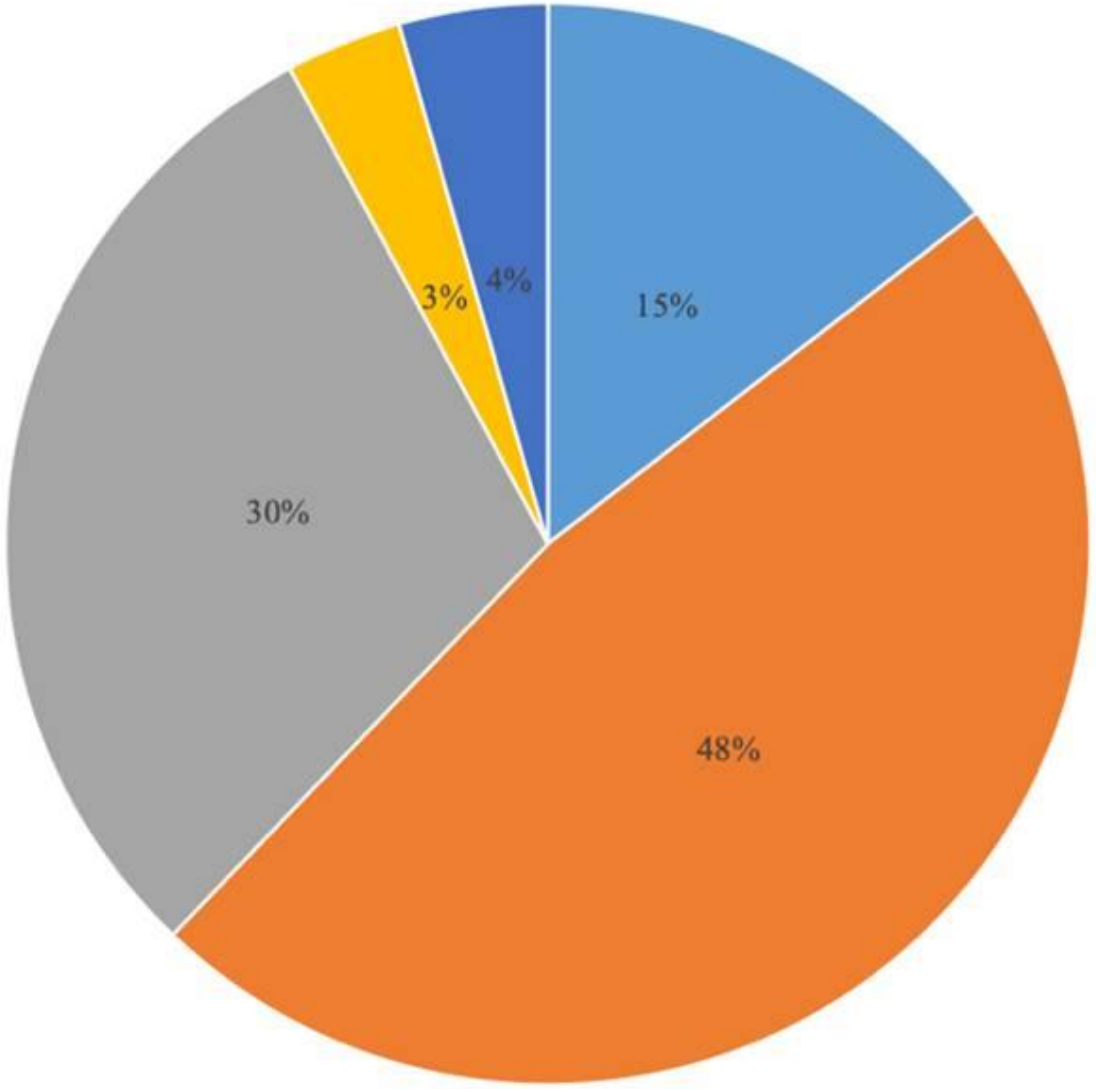
- A video conferencing system
  - EMR integrated HIPAA-compliant conferencing system
  - Stand-alone HIPAA-compliant system*

MASSACHUSETTS GENERAL HOSPITAL
CORRIGAN MINEHAN HEART CENTER



Option for no-cost Telemedicine Phone or Video Visits (mobile application and desktop)

Use Cases for Telemedicine Abound



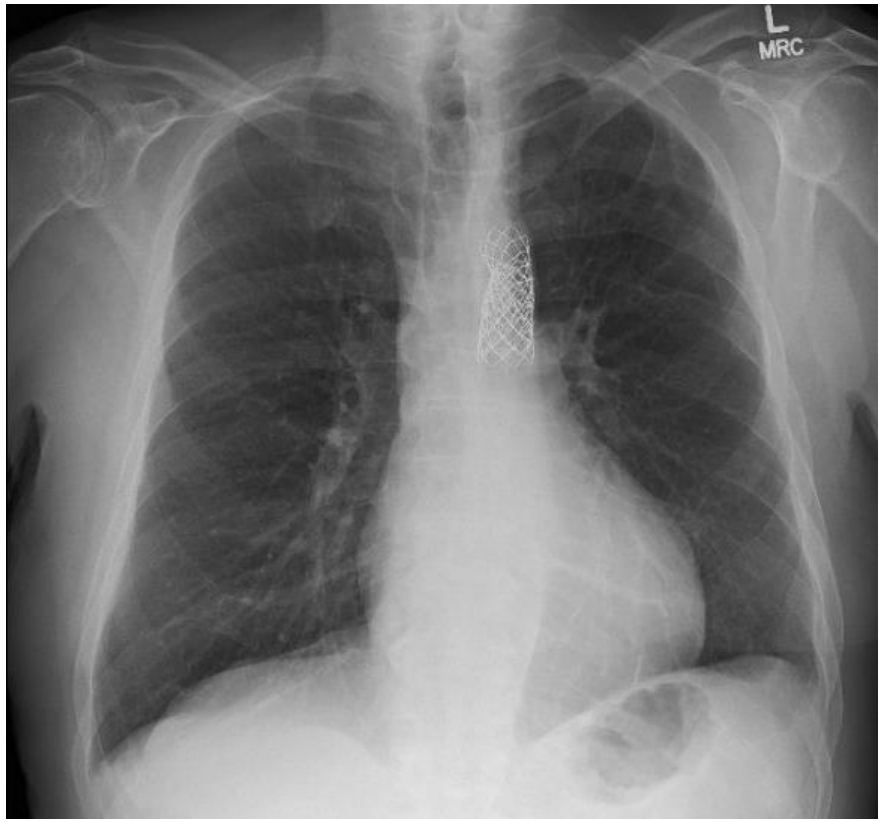
Chronic Disease Care

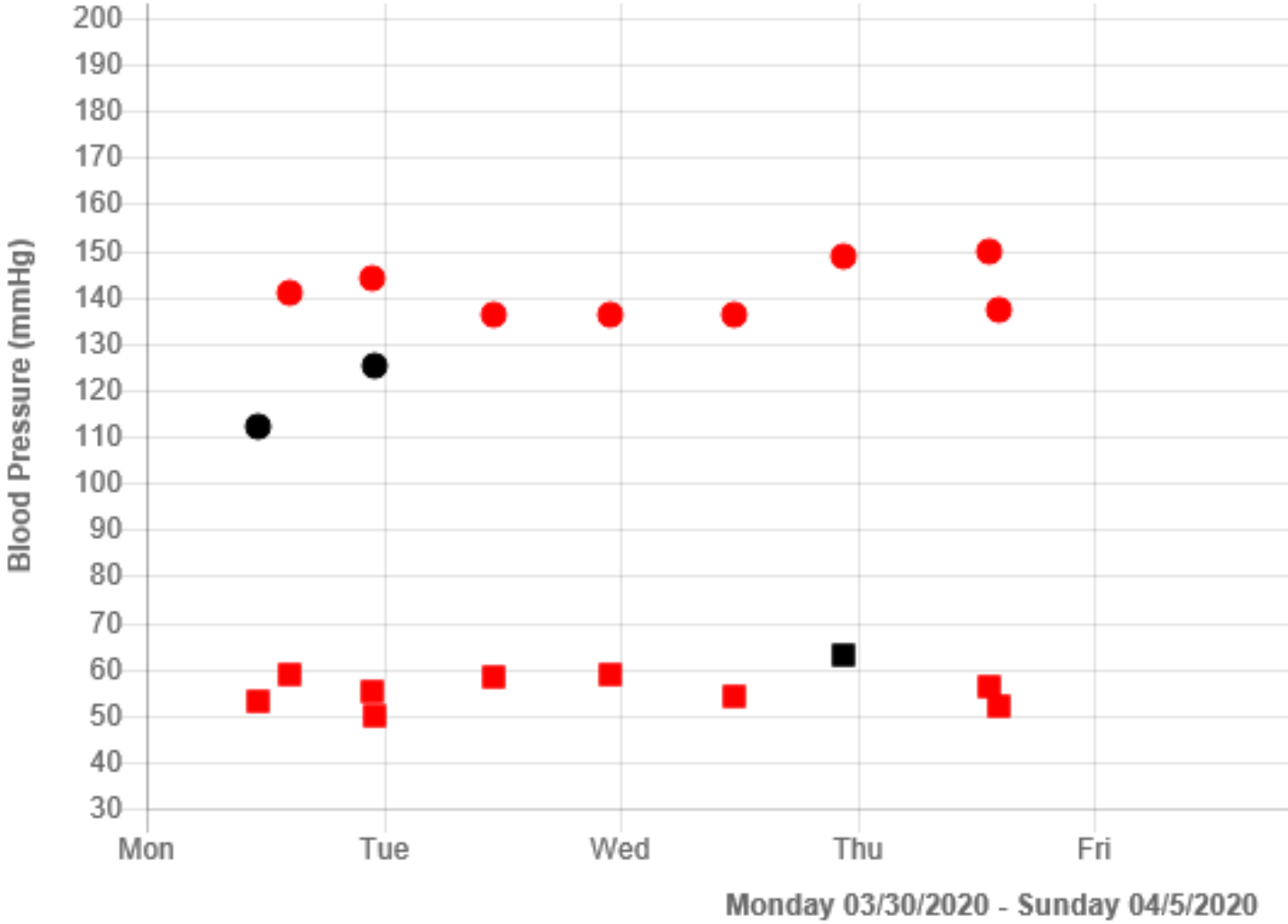
- Lifestyle education
- Vital digital tracking
- Early symptom detection
- Cardiac Rehabilitation

A 40 yo male needs his 3rd Valve Replacement

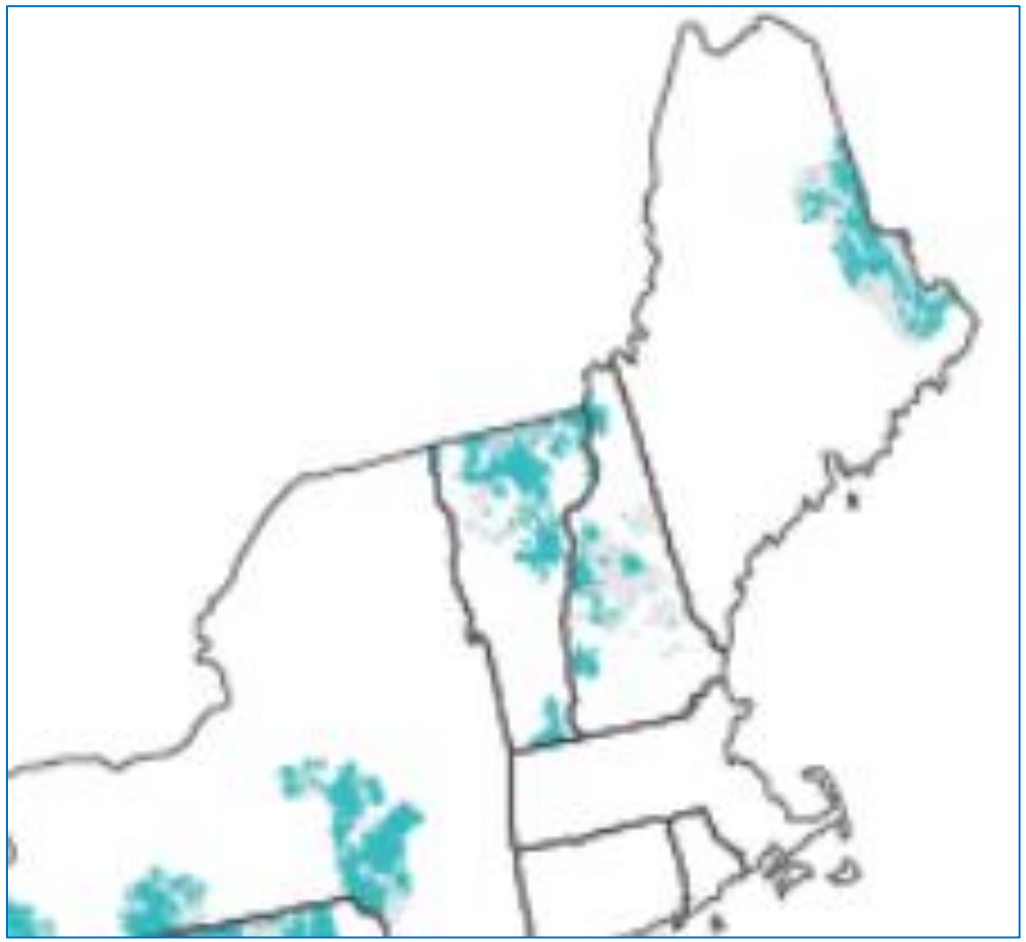
- Pulmonic valve disease needing reoperation
- Goal is to hold his hand and tell him
- Patient response is surprising

Complex virtual care is possible for all





Improve Access to Care



Common Concerns

Physical Exam

Vital Signs

Technical Issues

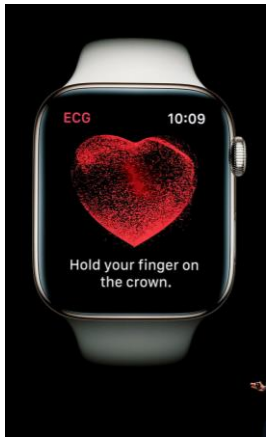
Special Populations

3 Major Technology Pitfalls

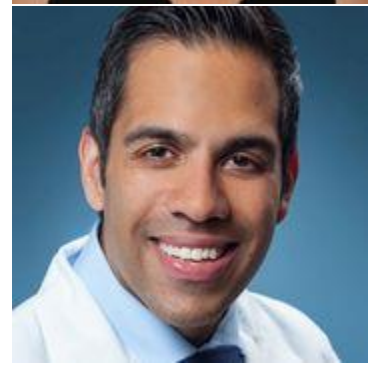
- The internet has high volume: grabbing an address from a frozen browser and opening and pasting it into a new browser often works.
- Make sure your video and sound is on, remind your patient of the same
- Allow pop-ups, often needed in televisit scenarios

Regulatory Considerations

- Rapidly changing, helps to have assigned individuals reviewing governmental and private insurer policies
- Out-of-state provision now available
- Telephone may fade: aim for video for the long-run
- Digital add-ons will need to be studied for approval



Telemedicine Takeaways



- Technology and Workflows will evolve
  - agility is essential
- Recording and publishing process and outcomes is key
  - improve quality and inform payor policies
- Evolution of medicine to ensure high-quality, safe care
  - partnership between clinicians and patients

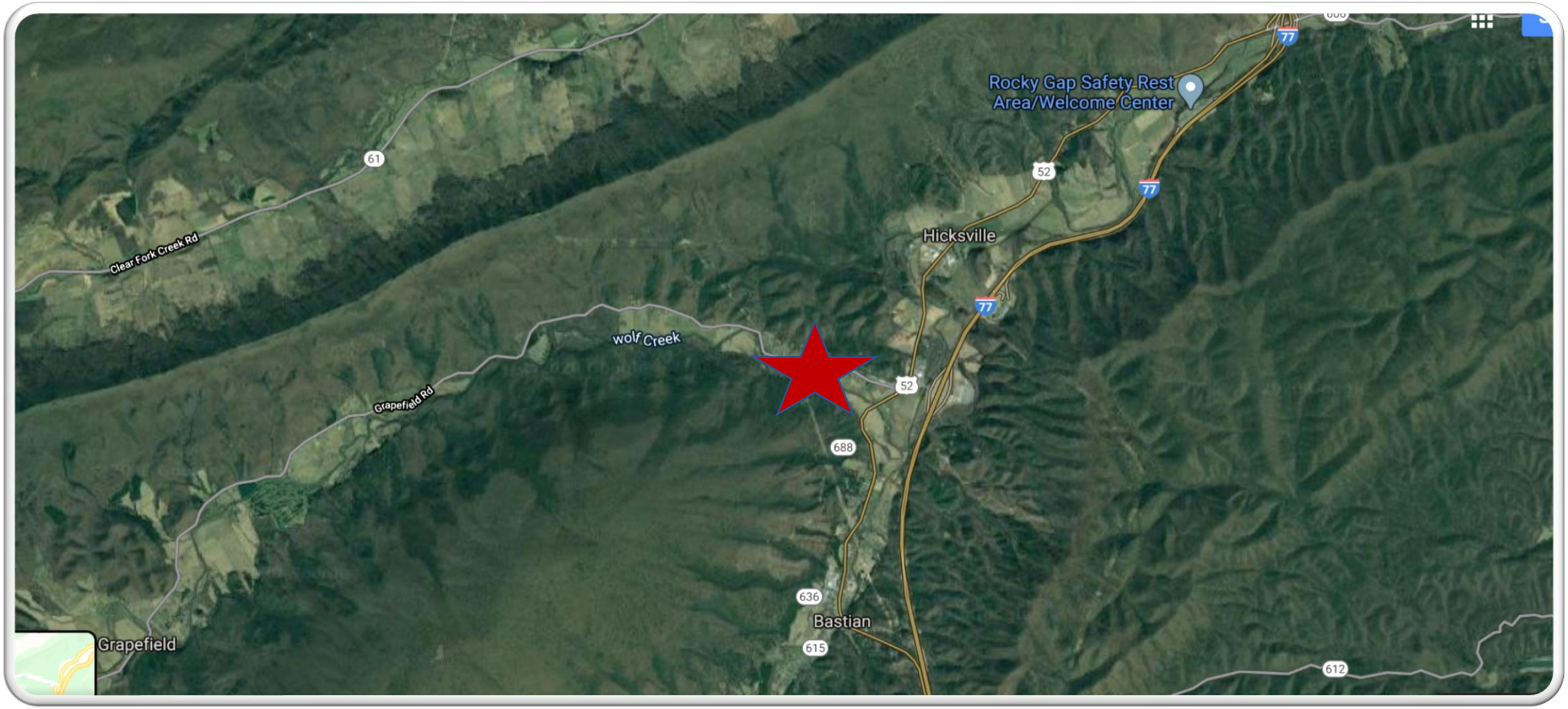
AMERICAN COLLEGE of CARDIOLOGY

COVID-19 Hub

Telemedicine Terminology

Deborah Croy DNP, ANP-BC, AGPCNP-BC, CLS, FNLA, AACC
Bland County Medical Clinic
Bastian, Virginia
drdebcroynp@twitter.com

Bastian, Virginia



https://www.google.com/maps/place/Bastian,+VA+24314/@37.1465026,-81.1866499,8612m/data=!3m2!1e3!4b1!4m5!3m4!1s0x884e17ef204a2cc7:0xeb71e8a2da9b37f8!8m2!3d37.1520432!4d-81.1500648

Telehealth

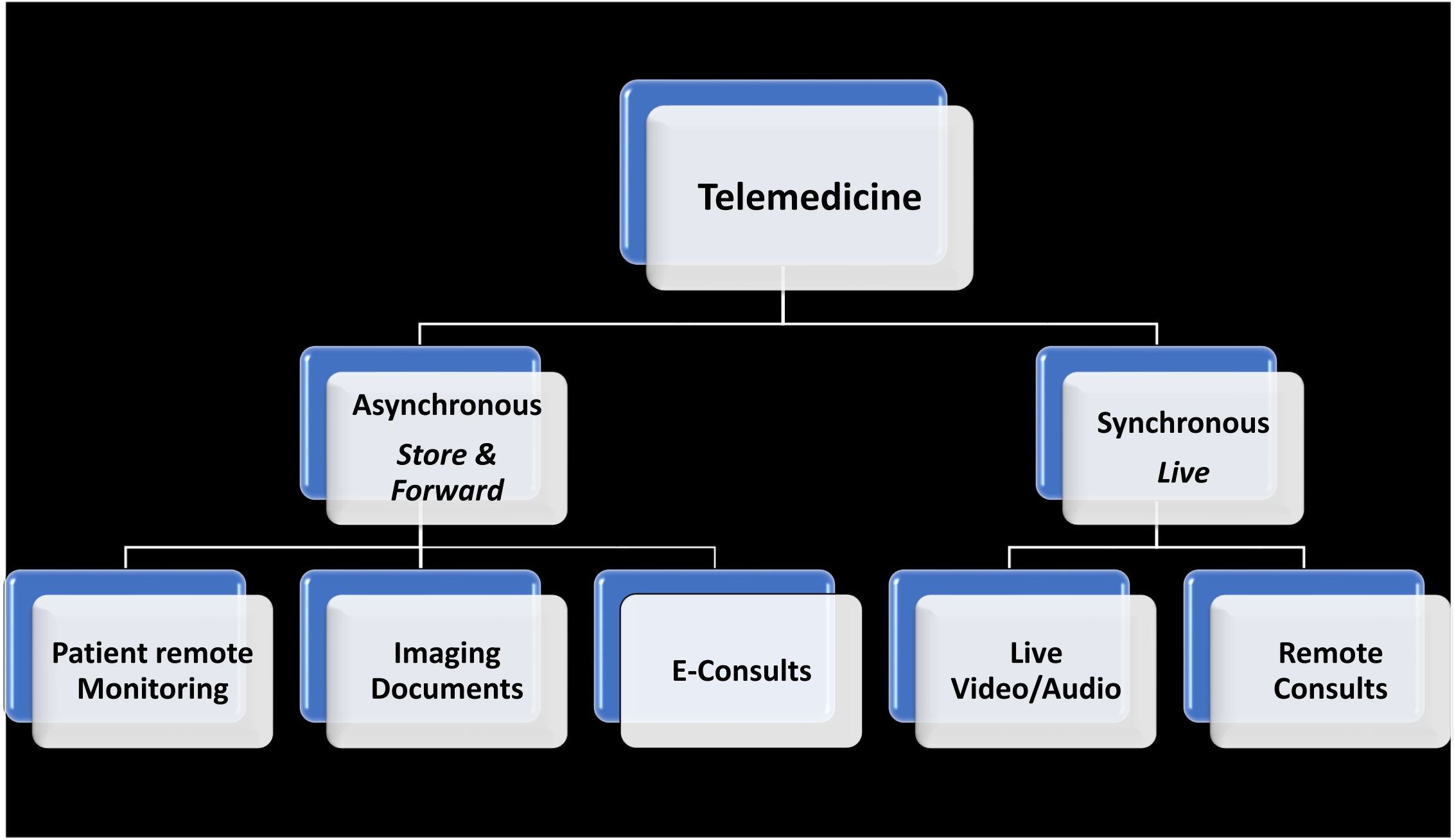
"The Health Resources Services Administration defines telehealth as the use of **electronic information and telecommunications technologies to support long-distance clinical health care, patient and professional health-related education, public health and health administration**. Technologies include videoconferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications"

https://www.healthit.gov/faq/what-telehealth-how-telehealth-different-telemedicine

Telemedicine

"The delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication **technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation,** and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities"

- A health telematics policy in support of WHO's Health-For-All strategy for global health development: report of the WHO group consultation on health telematics, 11–16 December, Geneva, 1997. Geneva, World Health Organization, 1998.


Telemedicine
Asynchronous
Store & Forward
Synchronous
Live
Patient remote Monitoring
Imaging Documents
E-Consults
Live Video/Audio
Remote Consults

Distant Site

Site at which the physician or other licensed practitioner delivering the service is located at the time the service is provided via telecommunications system

https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/TelehealthSrvcsfctsht.pdf

Originating Site:

Location of the patient at the time the service being furnished via a telecommunications system occurs.

https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/TelehealthSrvcsfctsht.pdf

https://thesource.americantelemed.org/resources/telemedicine-glossary

Broadband

Communication capable of carrying different types of data on separate channels permitting a large number of messages to be transmitted simultaneously

https://thesource.americantelemed.org/resources/telemedicine-glossary

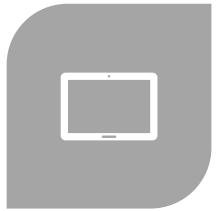
Encryption: A system of encoding electronic data provides security in protecting confidential information.

https://thesource.americantelemed.org/resources/telemedicine-glossary

M-Health

Mobile devices used for health services and treatment

MOBILE PHONES



TABLETS

SMART WATCHES

FITNESS TRACKERS

GLUCOMETERS

WEARABLE DEVICES

APPLICATIONS

https://thesource.americantelemed.org/resources/telemedicine-glossary

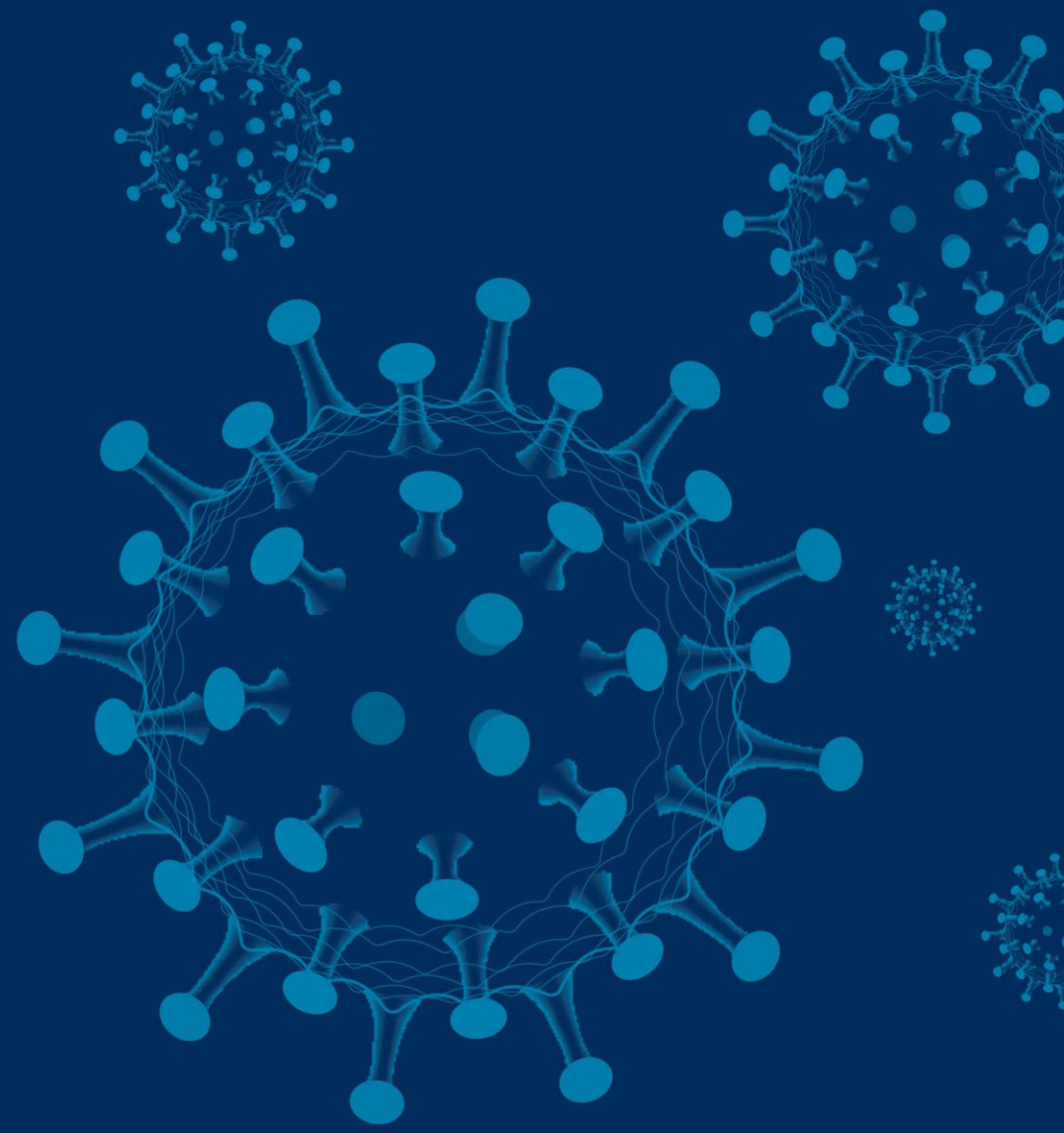
Peripheral Devices

AMERICAN COLLEGE of CARDIOLOGY

COVID-19 Hub

Overview of Technology in Telemedicine

S. Elissa Altin, MD, FACC
Yale University
VHA Connecticut



Learning Objectives

- Identify different technology platforms for telemedicine and examples of which platforms work for different patient encounters
- Explore telemedicine peripherals for remote patient assessment
- Identify pitfalls

Telehealth Technology Platforms

Patient-to-provider

Virtual visits

Wearables

Secure messaging

Telehealth modalities

Real-time video virtual visits

Remote patient monitoring

Asynchronous store-and-forward

Provider-to-provider

E-consults

Implantables

Second opinion consults

Source: Service Line Strategy Advisor research and analysis.

Telehealth Delivery Mechanisms and Examples

- Networked Programs
  - Link tertiary care centers to outlying clinics
- Point-to-Point Connections
  - Telestroke, tele-ICU, radiology,
  - mental health

Telehealth Delivery Mechanisms and Examples

- Primary or Specialty Care to Home
  - Home-based rehab, vital sign monitoring
- Home to Monitoring Center
  - Implantables, monitoring devices
- eHealth Consumer Services
  - Education/outreach, epidemic tracking, glucometers

Specialties Leading Way in Telehealth

Certain specialties are leading the way partly because technology can address the needs they have to take care of their patients remotely!

Where is the technology now?

Technology feature	Function	Example use
• Camera • Video • Bluetooth peripherals	• Image capture • Audio-visual conferencing • Manual biometric data collection	• Teledermatology store-and-forward • Primary and urgent care virtual visits • Monitoring CHF and COPD patients
• Smartphone, wearable-based sensors • Ingestible sensors	• Manual and automatic biometric data collection • Automatic biometric data collection	• Monitoring heart rate, steps, food intake, etc. • Digestible pill for tracking medication adherence
• Artificial intelligence and machine learning • Virtual and augmented reality	• Diagnosis and treatment recommendations • Simulated therapy	• Imaging interpretations • Chat bot for mental health • Provider training • Tele-rehabilitation

Source: Service Line Strategy Advisor research and analysis.

Learning Objectives

- Identify different technology platforms for telemedicine and examples of which platforms work for different patient encounters
- Explore telemedicine peripherals for remote patient assessment
- Identify pitfalls

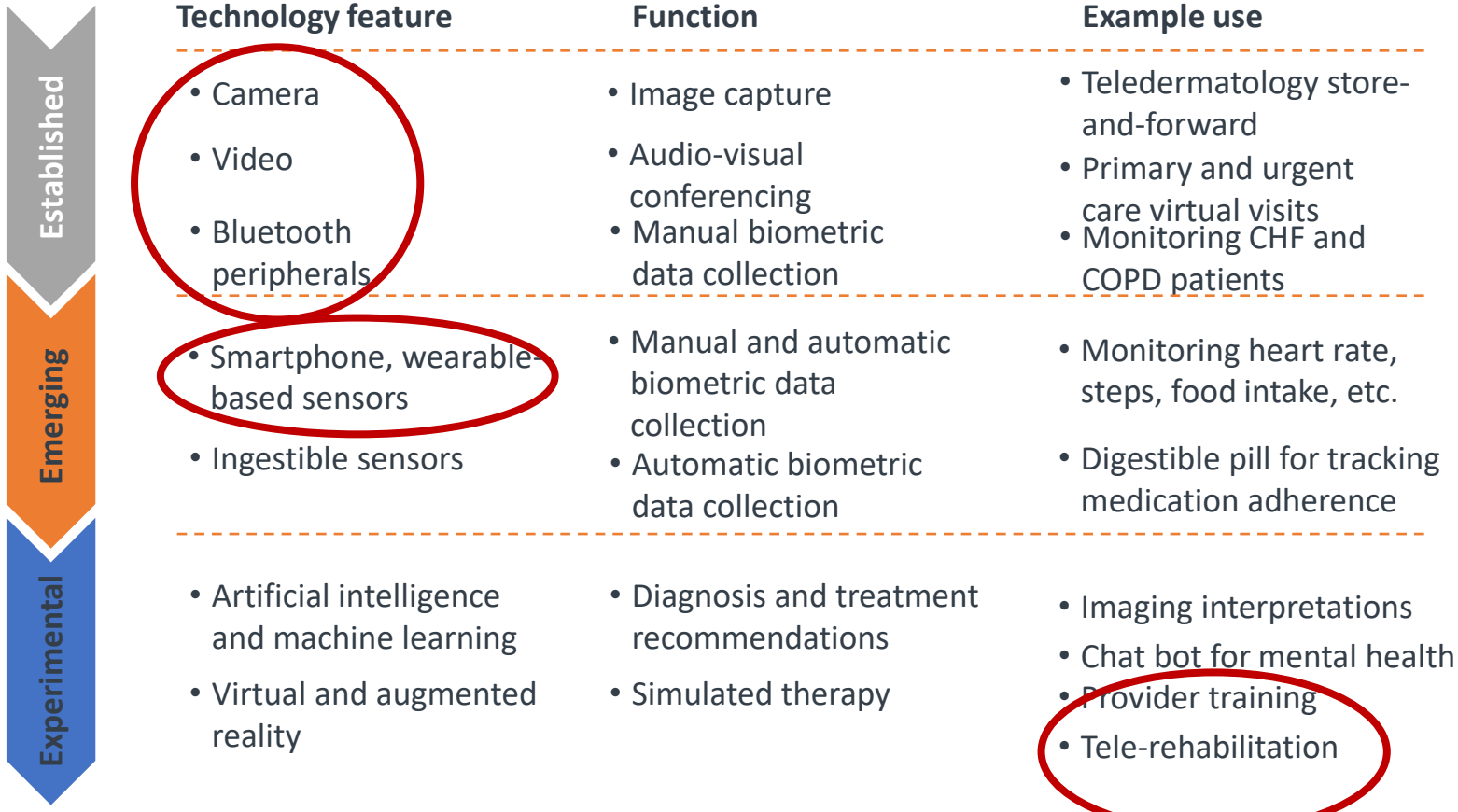
Peripherals

All rely on established telehealth peripherals of video and store-and-forward technology

Established

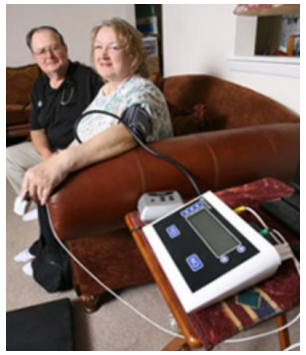
Technology feature	Function	Example use
• Camera • Video • Bluetooth peripherals	• Image capture • Audio-visual conferencing • Manual biometric data collection	• Teledermatology store-and-forward • Primary and urgent care virtual visits • Monitoring CHF and COPD patients

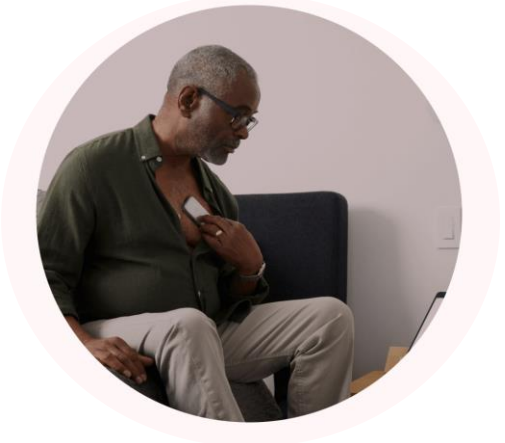
What peripherals do cardiologists need in the remote care of patients?

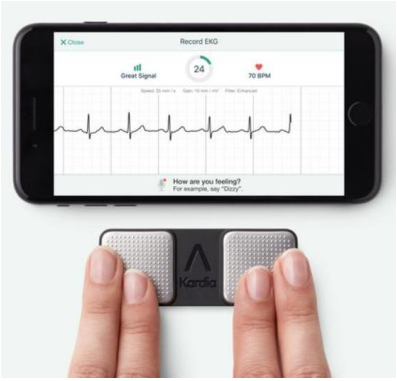


Source: Service Line Strategy Advisor research and analysis.

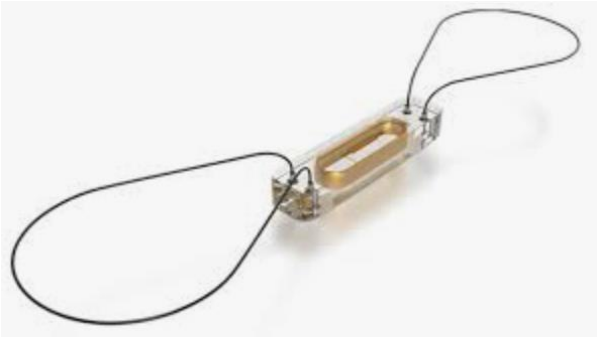
Cardiology Peripherals: Exam and Assessment



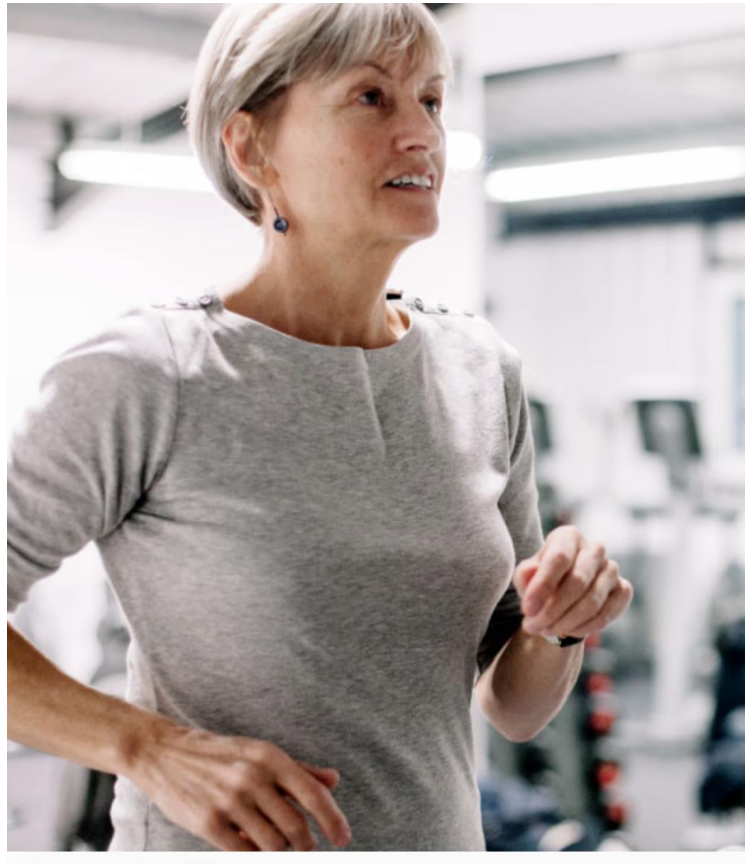




Adjunctive Data



Remote Treatments



Learning Objectives

- Identify different technology platforms for telemedicine and examples of which platforms work for different patient encounters
- Explore telemedicine peripherals for remote patient assessment
- Identify pitfalls

Patient Barriers – Technology should be seamless

Data Fragmentation

- Video-visit platforms have their own EHR that may or may not communicate with existing health records – EMR INTEROPERABILITY
- Need to merge ACCESS with CONTINUITY

Conclusions

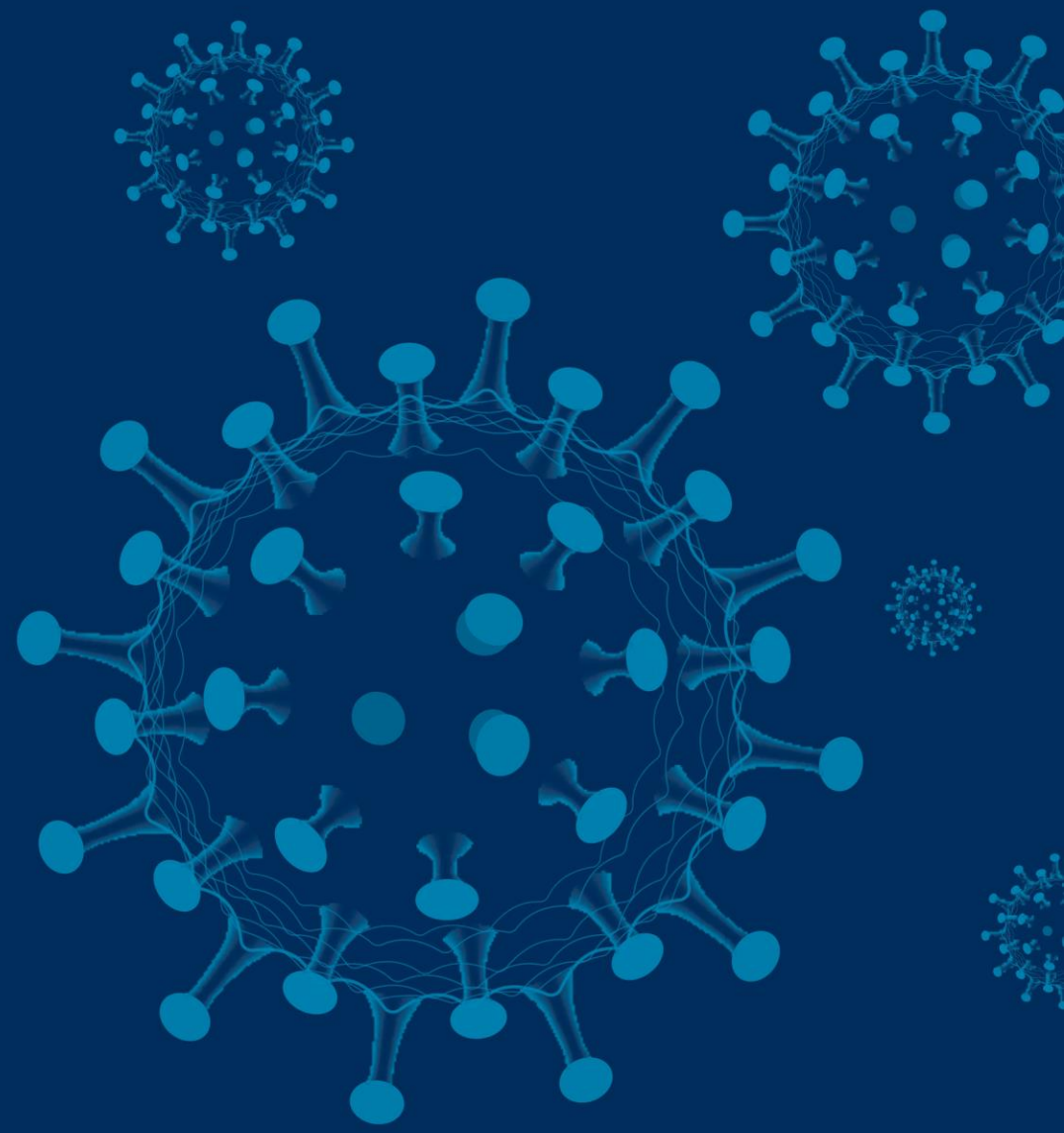
- Telehealth platform should suit the population served whether is patient-provider or provider-provider
- Peripherals are the key to telehealth for cardiology providers
- Ultimately, technology should be frictionless for patients and providers

AMERICAN COLLEGE of CARDIOLOGY

COVID-19 Hub

Telemedicine Tenets : Traversing its Tumultuous Tentacles

Debbi Lindgren-Clendenen RN, MN, GNP-BC, AGPCNP-BC, APNP, APRN, CNP



Disclosure:

Debbi Lindgren-Clendenen (Deb LC) is NOT an attorney, coder, biller, compliance or credentialing officer…

Objective:

- **At the end of this presentation, the cardiology attendee will be able to:**
- Define and differentiate tenets integral to an initial / evolving successful telehealth program environment

Determine your needs – “Who, What, Where, When, and Why”

- **Who**
  - Providers (Team)
  - Patients
- **What services/equipment**
  - Supplementary vs replacement
  - New/expansion
  - **HIPAA compliant–** platforms/peripherals
- **Where (Providers) (Patients)**
  - Dedicated Space
  - Portable
- **When**
  - Visit frequency
- **Why**
  - Rationale for offering telehealth/telemedicine services

Determine your “telehealth picture/plan”

- Contracting
  - Physician-owned
  - Joint venture
  - Subcontract
- Credentialing
  - Extension of provider’s relationship
  - Telehealth

Partner with legal/compliance

Tenets: Regulations

- **Tenets**
  - Regulations
    - Federal
    - State

Regulations	Pre-COVID	COVID (Now)	Post COVID
Federal	42 CFR 410.78 (etc)	CARES Act 1135 Waiver	?
State	Telemedicine Medicaid	Emergency Acts specific to state	?

Designate “expert” on regulations (provider)

Tenets: Licensing

- Licensing
  - Single State
  - Interstate
    - Physicians
      - IMLC – Interstate Medical Licensure Compact
    - NPs
      - No APRN Compact yet
    - PAs
      - Interstate Compact

Know your state's and surrounding region's licensing requirements for telehealth

Tenets: Reimbursement

- Payers
  - CMS (Federal)
    - Geographic limitations
  - State (Medicaid)
    - Visit Frequency
  - Commercial / Private Payers
    - “Telehealth Entity” contracts

Identify CMS “expert” within your practice/region and partner

Chart – CMS and Telehealth*

Item	Pre Covid	COVID	Post Covid
Telehealth services	**... interactive audio and video telecommunication system that permits real-time communication between provider at the distant site, and the beneficiary at the originating site.**	**Expanded to include telephone, virtual**	?
Patients Location	**Originating Site, must be in a county outside of a Metropolitan Statistical Area (MSA) or a rural Health Professional Shortage Area (HPSA) in a rural census tract.**	**Waived MSA, HPSA, Beneficiary's home is now included**	?
Authorized originating sites	**Physician and practitioner offices, hospitals, critical access hospitals (CAH) rural health clinics, federally qualified health centers, hospital-based or CAH-based renal dialysis centers (including satellite), skilled nursing facilities (SNF), community mental health centers (CMHC), renal dialysis facilities, homes of beneficiaries with end-stage renal disease (ESRD) getting home dialysis, mobile stroke unit**	**ED, inpatient services expansion, etc**	?

Chart – CMS and Telehealth (cont)

Item	Pre Covid	COVID	Post Covid
Distant Site Practitioners	Physicians, nurse practitioners, physician assistants, nurse midwives, clinical nurse specialist, certified registered nurse anesthetist, clinical psychologist and clinical social workers, registered dietitian or nutrition professional	Includes physical therapists, occupational therapists, speech pathologists	?
Remote evaluation of patient video/images	Limited to established patients only	Available to both new and established patients	?
E visits	noncovered	Licensed clinical social workers, clinical psychologists, physical therapists, occupational therapists can provide e-visits. E-visits are non-face-to-face communications with their practitioner by using online patient portals.	?
Remote patient monitoring	Multiple conditions, acute/chronic mix, 16 days of monitoring established patients	both new and established patients patients with only one disease Now shorter periods of 16 days are accepted as long as other requirements are met	
Telephone Evaluation	Non-covered service	When clinicians are furnishing any evaluation and management E/M service that would otherwise be reported as an in-person or telehealth visit, using audio-only technology, practitioners may bill using these telephone E/M Codes provided that it is appropriate to context of service using audio-only technology and all of the required elements in the applicable telephone E/M code description are met.	?

Chart – CMS and Telehealth (cont)

Item	Pre Covid	COVID	Post Covid
Frequency Limitations	inpatient visit once every three days; SNF visit once every 30 days Crit care consult once a day	Inpt - No restrictions on frequency SNF - No restrictions on frequency - Crit care consult can be more than once a day	?
Practitioner Location (Licensing)	Licensed in the State while enrolled in the Medicare program valid license furnishing services in a state in which the emergency is occurring	Temporarily waive CMS and Medicaid' requirements that physicians and non-physician practitioners be licensed in the state where they are providing services. State requirements will still apply.	?
Stark Law	cannot make referrals for certain healthcare services payable by Medicare if physician or immediate family member has a financial relationship with the entity performing the service.	Remuneration and referrals described in the blanket waivers must be solely related to COVID-19 purposes	?

Summary

- Establish your telehealth program framework, goals and surround yourself with a team willing to change/learn/evolve
- Partner with experts on federal and state regulations
- Be ready for change as telehealth environment is evolving
- HIPAA, Code of Federal Regulations and CMS MLN are your friends!

Resources:

- US Department of Health and Human Services: HIPAA standards for privacy of individually identifiable health information. 45 CFR Parts 160 and 164; August 14, 2002
- US Department of Health and Human Services, Centers for Medicare and Medicaid Services; Telehealth Services; 42 CFR 410.78; Oct 1, 2011 https://www.govinfo.gov/app/details/CFR-2011-title42-vol2/CFR-2011-title42-vol2-sec410-78
- CMS - Medicare Learning Network; https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/TelehealthSrvcsfctsht.pdf

Resources: (cont)

- Coronavirus Preparedness and Response Supplemental Appropriations Act, March 6, 2020
- Medicaid.gov Disaster Response Toolkit; https://www.medicaid.gov/resources-for-states/disaster-response-toolkit/index.html
- Center for Connected Health Policy; The National Telehealth Policy Resource Center: https://www.cchpca.org

AMERICAN
COLLEGE *of*
CARDIOLOGY

COVID-19 Hub