Extending the Reach of Cardiac Rehabilitation with Telehealth

Robert Berry MS, ACSM-RCEP, FAACVPR
Henry Ford Health System, Detroit, MI

Disclosures

None

Outline

1. Overview of benefits and utilization of cardiac rehabilitation (CR)
   a. Review benefits of CR
   b. Discuss Million Hearts Initiative
   c. Discuss need for alternative delivery models
2. Review and discuss telehealth
   a. Methods of delivery
   b. Policy, laws, and reimbursement
3. Review and discuss the HFHS telehealth model

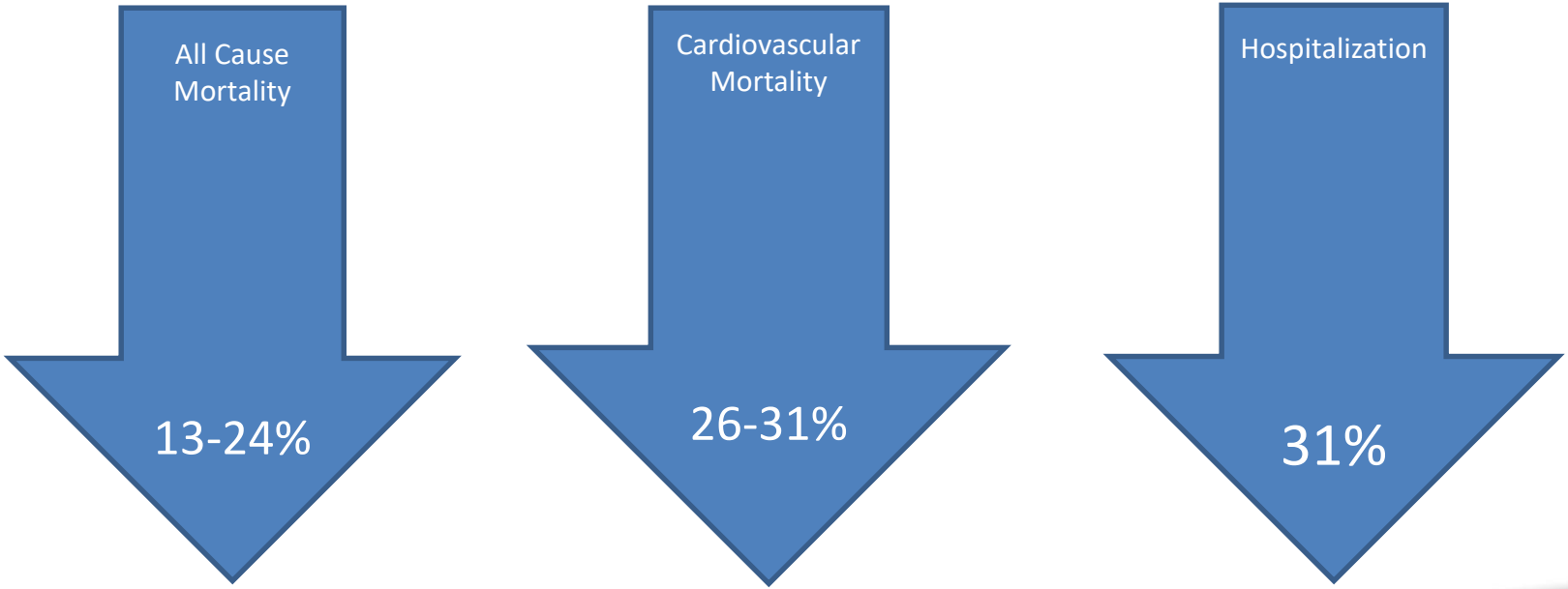
Henry Ford Health System

List of abbreviations

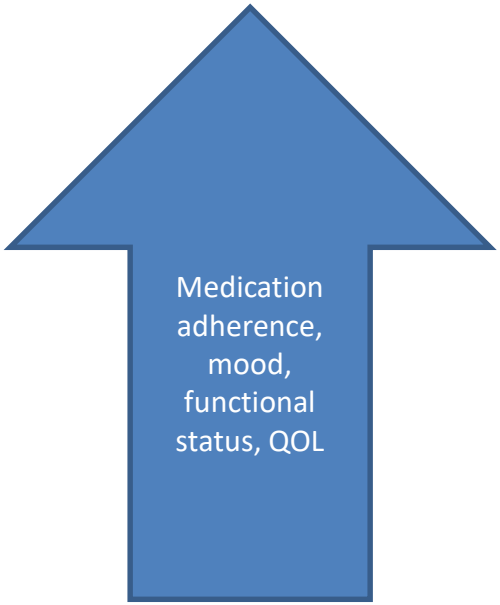
- CBCR = center-based cardiac rehabilitation
- HBCR = home-based cardiac rehabilitation
- HYCR = Hybrid CR (some combination of CBCR and HBCR)
- TH = telehealth

© Henry Ford Health System 2012. All Rights Reserved.

Effects of Cardiac Rehabilitation



Effects of Cardiovascular Rehabilitation



More is Better

- 36 vs fewer sessions reduces risk of heart attack and death
- 25 sessions is generally considered a healthy “dose”

Henry Ford Health System

Million Hearts *2012-2016*

Background

- Million Hearts is a national initiative co-led by CMS and CDC
- Over 120 partners, 20 federal agencies, all 50 states, and DC
- Initial target in 2012 was preventing … 1,000,000 MI's and strokes in 5 years
- By the end of 2016 … missed target (estimated at 50%) … funding extended through end-2021

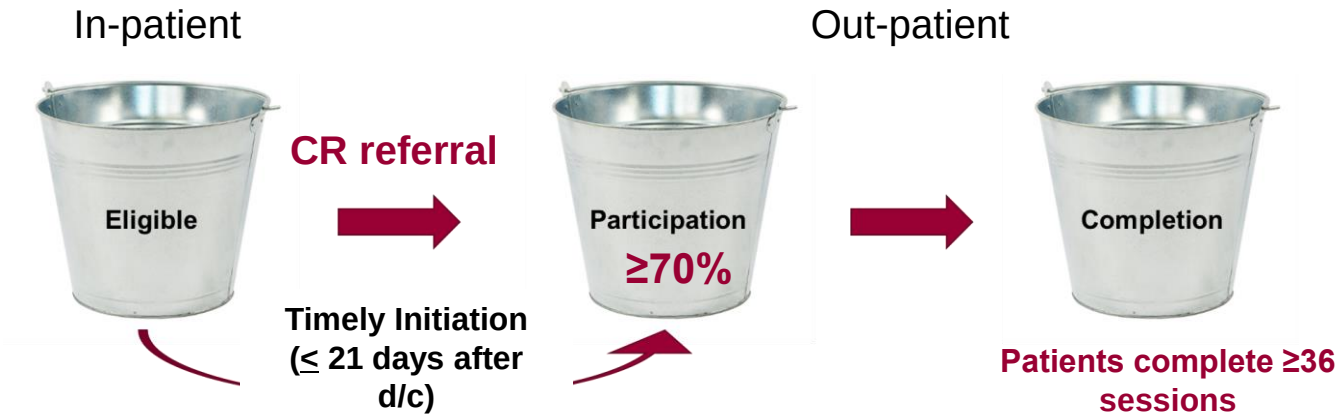
Million Hearts Initiative

Increasing Cardiac Rehabilitation Participation From 20% to 70%: A Road Map From the Million Hearts Cardiac Rehabilitation Collaborative

Philip A. Ades, MD; Steven J. Keteyian, PhD; Janet S. Wright, MD; Larry F. Hamm, PhD; Karen Lui, RN, MS; Kimberly Newlin, ANP; Donald S. Shepard, PhD; and Randal J. Thomas, MD, MS

The Ideal Cardiac Rehabilitation Coordinated Care Process*:

- Nearly all Eligible Patients are Referred
- ≥ 70% of These Patients are Enrolled
- All of Those Enrolled Receive the "Full Dose"



*Adapted from Ritchey M, et al, ACC Scientific Sessions, New Orleans, March 18, 2019.

Barriers impacting PARTICIPATION in CR

Patient

- Demographics (*e.g.,* female, older age, socio-economic, race)
- Return to work
- Transportation, co-pay obligations

Patient – medical

- Multiple co-morbidities
- Depression

Barriers

Health Care System/CR Providers

- Referral type & initial engagement (passive vs. liaison facilitated)
- Provider endorsement
- Program operations (e.g. hours of operation, wait times)

Policy and Payors

- Non-coverage (e.g. Afib, HFpEF for Medicare)
- High deductibles and co-payments

Henry Ford Health System

Background/Assumptions/Stipulations:

Less than optimal attendance (e.g., attending < 24 vs 36 sessions) may be limiting the magnitude of benefit that patients derive from CR

- Alternate delivery models other than CBCR alone are needed
- AHA/ACLS analogy

Henry Ford Health System

HBCR, either alone or in combination with CBCR (hybrid), represents a possible alternate strategy of delivery

Potential Advantages

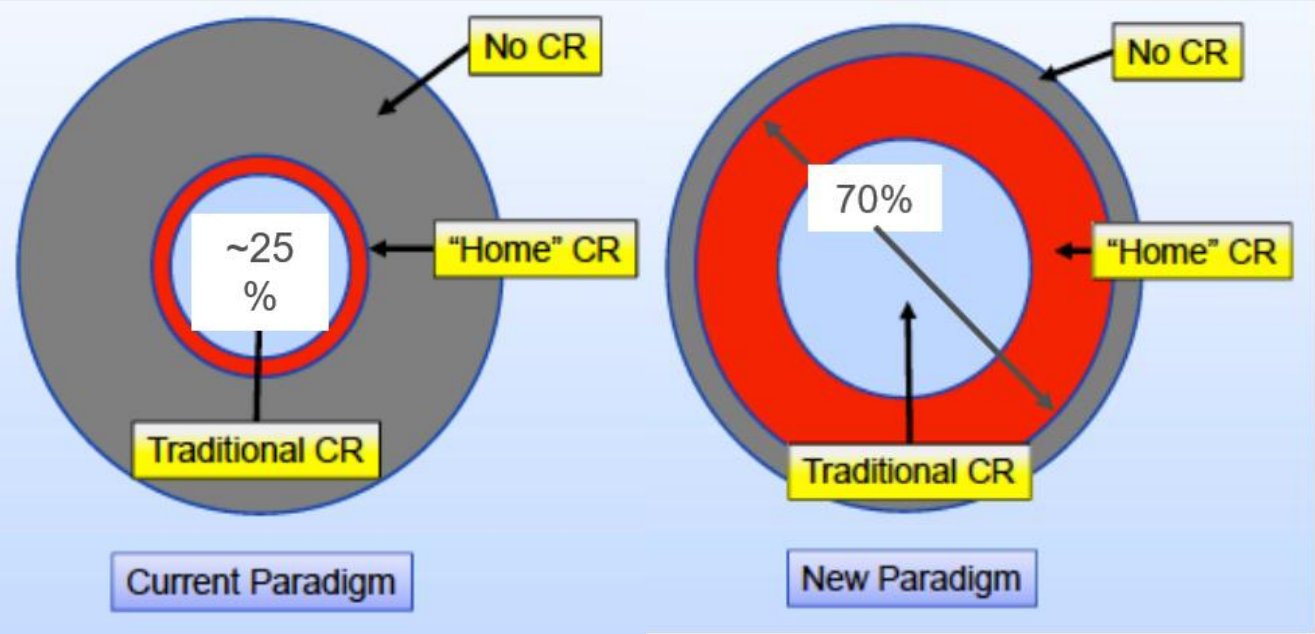
- ↓ Enrollment delays
- ↑ Capacity/access
- Individually tailored programs
- Flexible, convenient scheduling
- Minimal travel/transportation barriers
- ↑ Privacy while receiving CR
- Integration with home routine

Potential Disadvantages

- Lack of reimbursement
- ↓ intense exercise training
- ↓ social support
- ↓ patient accountability
- Lack of published standards for HBCR
- ↓Face to face monitoring & communication
- Safety concerns for patients at ↑↑ risk

© Henry Ford Health System 2012. All Rights Reserved.

Change the CR Paradigm



Adapted from Olson, T. Balancing Technology with the Human Touch to Promote Exercise is Medicine. AACVPR 2018

© Henry Ford Health System 2012. All Rights Reserved.

Telehealth Modalities

Henry Ford Health System

30

The electronic transmission of medical information, such as digital images (e.g. MRI, x-rays), documents, and pre-recorded videos through secure email communication to provider for later analysis.

Uses digital technologies to collect medical and other forms of health data from individuals in one location and electronically transmit that information securely to health care providers.

Mobile health or mHealth, a relatively new and rapidly evolving aspect of technology-enabled health care, is the provision of health care services and personal health data via mobile devices.

??

16

Two-way interaction between a person (patient, caregiver, or provider) and a provider using audiovisual telecommunications technology

May be referred to as “real-time” or “synchronous” and serve as a substitute for an in-person encounter when it is not available.

Reimbursement

National Policy

- Medicare only reimburses for specific services delivered through live video (www.CMS.gov)

State Policy

- 50 states = 50 different approaches

Private Insurance

- Coverage varies widely

Reimbursement

- Medicaid: only for live video under some circumstances
- Private Payer: Interactive audio, video, or other telecommunications technology
  - Includes treatment of patient in real time OR through store and forward technology
  - Does NOT include audio-only telephone, e-mail, fax

Legal Considerations

HIPPA

- Telehealth provider must meet same HIPPA requirements as an in-person encounter

Cross State Licensing

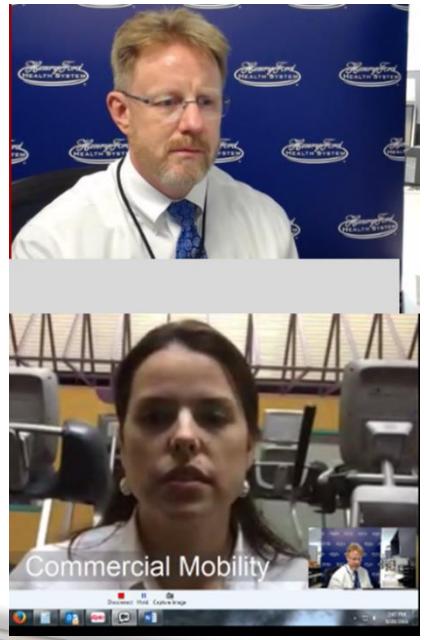
- In general the provider must be licensed in the state where the patient is physically located at the time of service

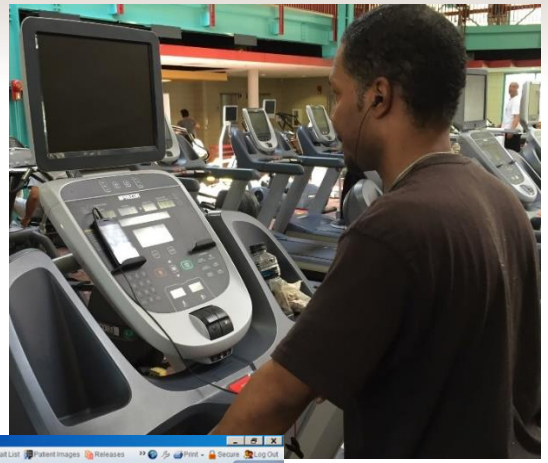
Legal Considerations

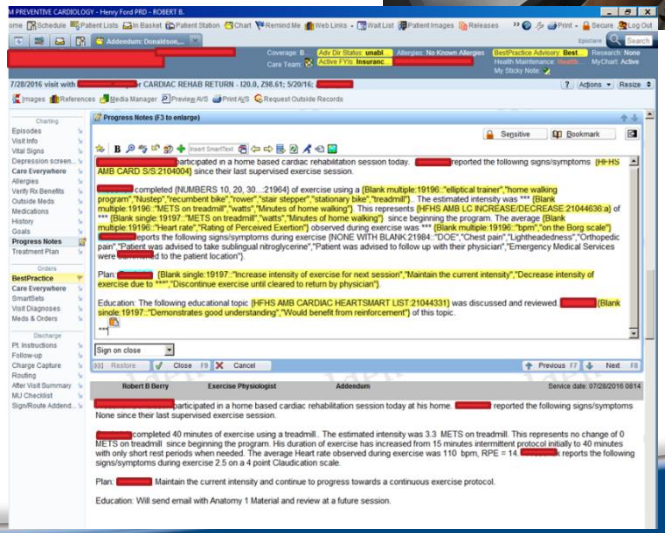
Parity Laws

- Insurers reimburse providers using telehealth to treat patients for services covered during an in-office visit
- NOT necessarily equal payment
- 39 States and the District of Columbia have Parity Laws as of 12/31/2018

Henry Ford Hospital HBCR via Mobile Video Telehealth



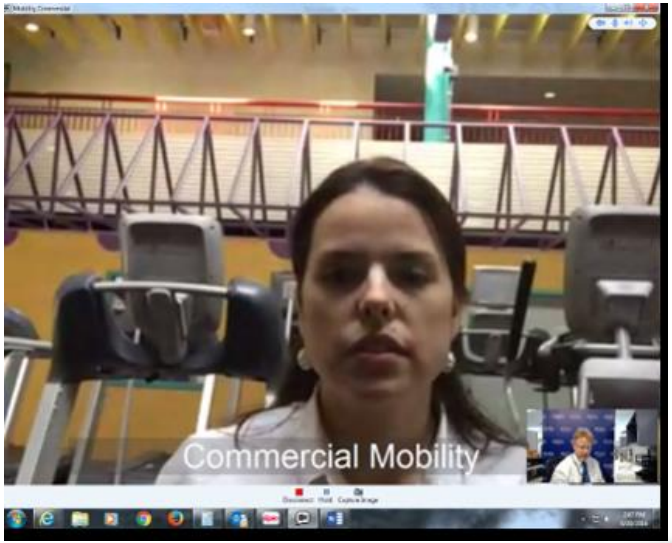




HBCR

Mobile video telehealth technology is just a alternate delivery model for CR.

- Same guidelines
- Same outcomes



ACC/AHA Core Components of CR… delivered at home.

- Assessment
- Exercise training
- Dietary/weight management
- Psychological support/management
- Medication adherence
- Risk factor management

Henry Ford Health System

Henry Ford Health System
HBCR Program Design

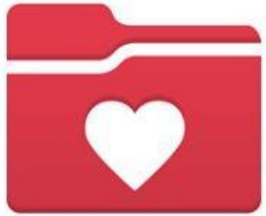
Patients recruited from those unable to commit to attending traditional, facility based CR (FBCR)

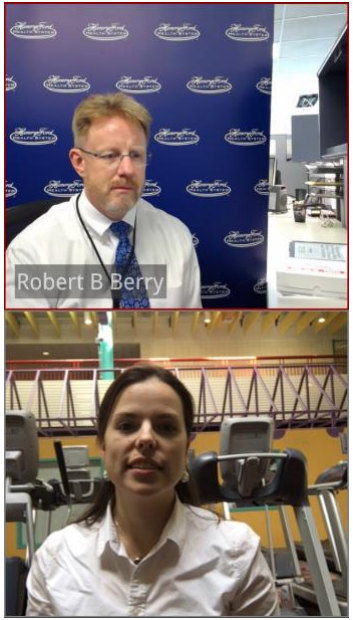
- “High risk” patients (e.g. ESRD on dialysis, LVAD, milrinone, ventricular dysrhythmia w/o ICD, significant hx of non-compliance are NOT candidates at this time
- 1 to 3 sessions conducted in a FBCR, if possible, before transitioning to HBCR

HBCR

Sessions scheduled in EMR. Up to three 20 minute sessions per week. Usually a calendar month at a time.

- Accessed through secure Patient Portal using free app on smart phone or other mobile device
- Uses the “selfie” camera on patient’s device





Software embedded in EMR establishes a Virtual Private Network (VPN)

Ensures secure video conferencing

- FaceTime and Skype ≠ secure!
- Quality of connection dependent on WiFi signal strength
- Cellular data use < 1GB/week

Henry Ford Health System

Exercise Prescription

Conduct Cardiopulmonary Exercise test

- Assess the hemodynamic and HR response to exercise
- Determine THRR
    - Initially 50-70% HRR
    - Titrate to 60-80% HRR
- Patients given a heart rate monitoring watch and chest strap

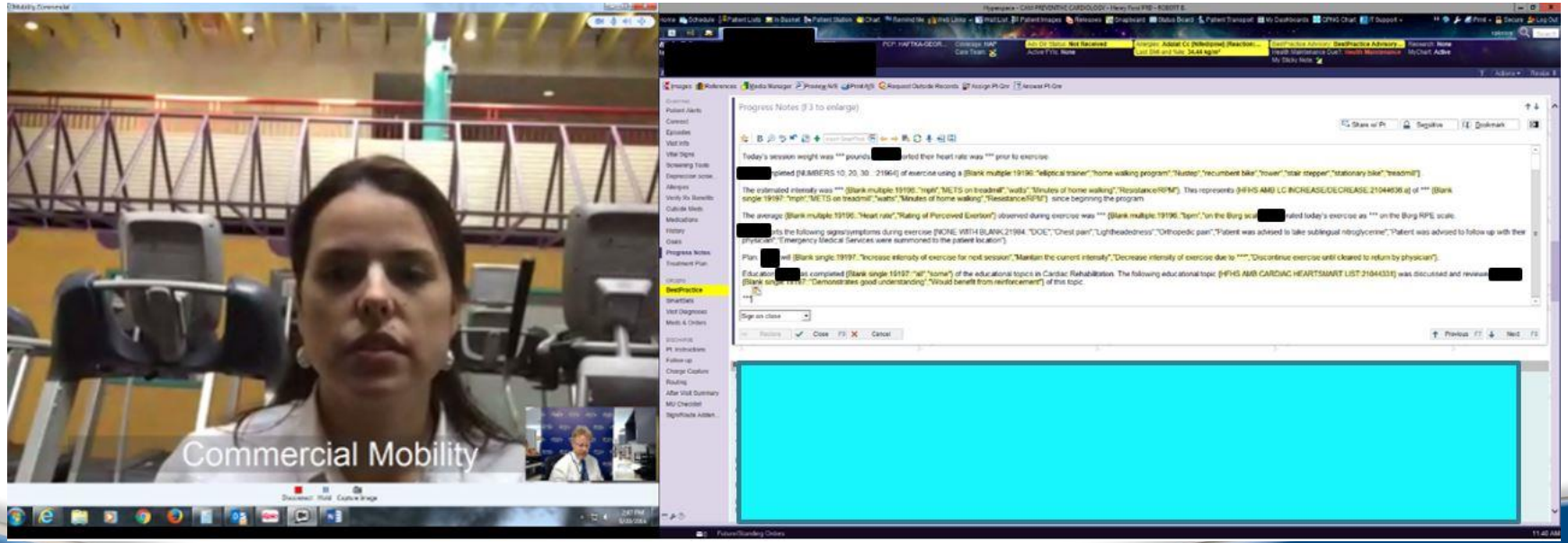
Exercise session

- Patients connect after warm up
- Health status of patient determined
- Physical location of patient verified
- Daily weight, resting HR obtained

Exercise session

- Exercise modality, peak HR, workload and RPE documented
- Educational topic discussed/reviewed
- Plan for next session determined
- Same conversation as FBCR, just conducted remotely

Sessions are documented in real time using a template in the EMR

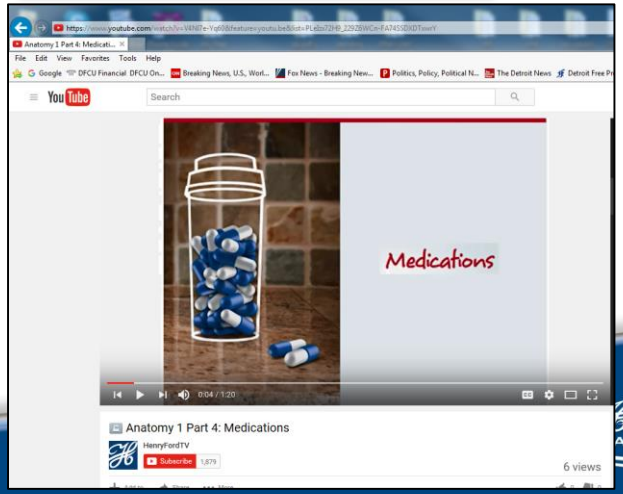


Patient Education

Eight, 50 min educational- behavioral sessions

These same sessions are broken down to 28 audio PowerPoint slide decks

- Each file is 3-9 min in length
- Accessed on-line via YouTube through Henry Ford Health System's channel: www.henryford.com/creducation



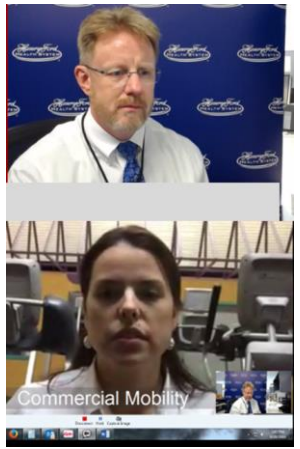
A picture is worth a 1000 words…

https://www.youtube.com/watch?v=80mAy77oC00&t=27s

A caveat…

Don’t get caught-up with the TM technology used for exercise supervision and monitoring in HFHS HYCR Program

- Real-time, synchronized TM is simply the method we chose to deliver some patient education and exercise supervision.
- We acknowledge and encourage the assessment of other synchronous and asynchronous tools.



© Henry Ford Health System 2012. All Rights Reserved.

Reimbursement

Health Alliance Plan (HAP) and BCBS of MI

- Consistent with MI statutes for telemedicine
  - Center for Connected Health Policy http://www.cchpca.org/
- Use CPT 93797 (without ECG monitoring)
  - GT modifier (telemedicine)
  - Same documentation as FBCR
- Reimbursed at same rate as facility based CPT 93797 (~$45/session)

Limitations

- Currently only reimbursed by 2 payers
- Selection bias in recruiting model
- Staff efficiency/productivity
- Connectivity dependent on signal strength
- Equipment availability/display options

Key Outcomes from 2017 HBCR Pilot Study

- Median number of completed visits: 27 in HBCR* vs 21 in FBCR
- Enrollment rate: 50% in HBCR vs ~ 45% in FBCR
- Adherence to schedule: 91% in HBCR vs ~60% in FBCR
- Δ Functional Capacity: both groups ↑ 1.3 MET
- QOL (Dartmouth CO-OP): both groups ↑ QOL, slightly greater magnitude of change in HBCR
- Patient satisfaction: HBCR and FBCR both rated as “Great” on a Likert scale, HBCR had marginally better scores

Henry Ford Health System

Questions?

Henry Ford Health System

Thank You

Henry Ford Health System

Resources

Center for Connected Health Policy (CCHP) www.cchpa.org

American Telemedicine Association (ATA) www.americantelemed.org

Henry Ford Health System