

Million Hearts® Private Partner Call

July 18, 2017
1:00pm ET



Introductions and Overview

Robin Rinker, MPH, CHES
Health Communications Specialist,
Division for Heart Disease and Stroke
Prevention



Agenda

- Welcome
- Cardiac Rehabilitation in the Million Hearts® Framework
- Cardiac Rehabilitation Overview and Actions You Can Take
- Discussion/Q & A*
- Share Your Commitment*
- Partner Updates*
- Closing



Welcome

Janet S. Wright, MD, FACC
Executive Director
Million Hearts®



Cardiac Rehab: Getting to 70% Participation

Haley Stolp, MPH
Public Health Analyst, IHRC Inc.
Centers for Disease Control and Prevention



Disclaimer

The opinions expressed by authors contributing to this project do not necessarily reflect the opinions of the US Department of Health and Human Services, the Public Health Service, the Centers for Disease Control and Prevention, or the authors' affiliated institutions. Use of trade names is for identification only and does not imply endorsement by any of the groups named below.



Cardiac Rehab: What is it?

- Comprehensive, team-delivered programs designed to
- Limit the effects of cardiac illness
 - Reduce the risk for another heart attack or sudden death
 - Control cardiac symptoms
 - Stabilize or reverse the atherosclerotic process
 - Enhance the psychosocial and vocational status of patients

Typically administered in 36 sessions over ~12 wks



John's Story at https://www.youtube.com/watch?v=8DQo3uCK5_Y&feature=youtu.be

Cardiac Rehab: Who Benefits?

For whom is there strong evidence of benefit---and good insurance coverage---for cardiac rehabilitation?

- Those with a prior heart attack or stable angina
- Systolic heart failure and EF < 35%
- Stent or angioplasty
- Bypass, valve, or heart or lung transplant surgery



Cardiac Rehab: What is the Evidence?

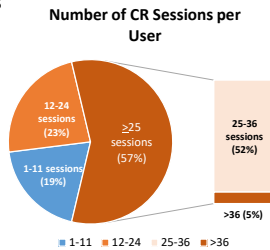
- **Reduces**
 - Death from **all** causes by 11-24%
 - Death from **cardiac** causes by 26-31%
 - Hospitalizations by **31%**
- **Improves**
 - Adherence to medications by 31%
 - Functional status, mood, and Quality of Life scores
- **More is Better**
 - 36 vs fewer sessions reduces risk of heart attack and death



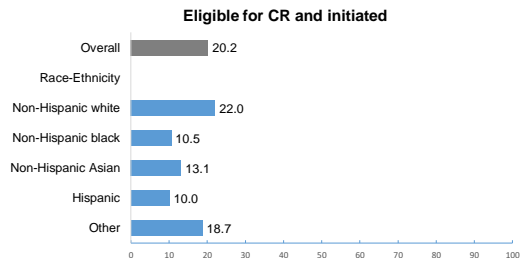
Use among Medicare Fee-for-service Beneficiaries

~450,000 beneficiaries were eligible in 2013

- **20%** used CR at least once in 12 months
- **57%** of CR users completed 25 or more sessions



Cardiac Rehab Use by Race/Ethnicity



*Completed 25 or more CR sessions

Source: Centers for Medicare and Medicaid Services' Chronic Conditions Data Warehouse

ARTICLE IN PRESS SPECIAL ARTICLE



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

Abstract

The primary aim of the Million Hearts initiative is to prevent 1 million deaths and 10 million hospitalizations annually in the United States. Concordant with the Million Hearts focus on achieving more than aspirin for those at risk, blood pressure control, cholesterol management, and smoking cessation, the Million Hearts initiative outlines the cardiovascular events that would be prevented if participation in cardiac rehabilitation (CR) increased. Secondary aims of the initiative include increasing the number of people who receive CR. Rehabilitation is a class Ia recommendation of the American Heart Association for patients with a recent myocardial infarction, angina, or heart failure. Lifestyle counseling and exercise, which are components of CR, are associated with decreased total mortality, cardiac mortality, and rehospitalizations. However, current participation rates for CR in the United States generally range from only 20% to 30%. This road map focuses on interventions, such as electronic medical record–based prompts and decision support systems that increase referrals of appropriate patients to CR, increase enrollment of appropriate individuals into CR, and increase adherence to long-term CR. We also calculate that increasing CR participation from 20% to 70% would save 25,000 lives and prevent 180,000 hospitalizations annually in the United States.

...Increasing CR participation from 20% to 70% would save 25,000 lives and prevent 180,000 hospitalizations annually in the United States.

Million Hearts® 2022

Aim: Prevent 1 Million Heart Attacks and Strokes in 5 Years



Keeping People Healthy

Goals	Effective Public Health Strategies
Reduce Sodium Intake Target: 20%	<ul style="list-style-type: none"> Enhance consumers' options for lower sodium foods Institute healthy food procurement and nutrition policies
Decrease Tobacco Use Target: 20%	<ul style="list-style-type: none"> Enact smoke-free space policies that include e-cigarettes Use pricing approaches Conduct mass media campaigns
Increase Physical Activity Target: 20% (Reduction of inactivity)	<ul style="list-style-type: none"> Create or enhance access to places for physical activity Design communities and streets that support physical activity Develop and promote peer support programs



Optimizing Care

Goals	Effective Health Care Strategies
Improve ABCS* Targets: 80%	<p><i>High Performers Excel in the Use of...</i></p> <ul style="list-style-type: none"> Teams—including pharmacists, nurses, community health workers, and cardiac rehab professionals Technology—decision support, patient portals, e- and default referrals, registries, and algorithms to find gaps in care Processes—treatment protocols; daily huddles; ABCS scorecards; proactive outreach; finding patients with undiagnosed high BP, high cholesterol, or tobacco use Patient and Family Supports—training in home blood pressure monitoring; problem-solving in medication adherence; counseling on nutrition, physical activity, tobacco use, risks of particulate matter; referral to community-based physical activity programs and cardiac rehab
Increase Use of Cardiac Rehab Target: 70%	
Engage Patients in Heart-healthy Behaviors Targets: TBD	

*Aspirin use when appropriate, Blood pressure control, Cholesterol management, Smoking cessation



Optimizing Care

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Improving Outcomes for Priority Populations

Priority Populations	Major Strategies
Blacks/African Americans	Improving hypertension control
35- to 64-year-olds, because event rates are rising	<ul style="list-style-type: none"> Improving hypertension control and statin use Increasing physical activity
People who have had a heart attack or stroke	<ul style="list-style-type: none"> Increasing cardiac rehab referral and participation Avoiding exposure to particulate matter
People with mental illness or substance use disorders	Reducing tobacco use



Million Hearts® 2022 Clinical Quality Measures

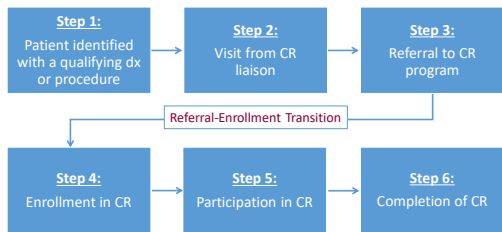
Measure	Measure Number	Measure Description
Aspirin When Appropriate	NQF 0068	Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic Percentage of patients aged 18 years and older with IVD with documented use of aspirin or other antithrombotic.
Blood Pressure Control	NQF 0018	Hypertension: Controlling High Blood Pressure % of patients aged 18 - 85 years with a diagnosis of HTN and an office BP of <140/90 during the measurement year.
Cholesterol Management	PQRS 438	Statin Therapy for the Prevention and Treatment of Cardiovascular Disease % who were prescribed or on statin therapy during the measurement period: <ul style="list-style-type: none"> Adults aged ≥ 21 years who were previously diagnosed with or currently have an active diagnosis of clinical atherosclerotic cardiovascular disease; OR Adults aged ≥ 21 years with a fasting or direct LDL-C level ≥ 190 mg/dL; OR Adults aged 40-75 years with a diagnosis of diabetes with a fasting or direct LDL-C level of 70-189 mg/dL.
Smoking Cessation	NQF 0028	Preventive Care and Screening: Tobacco Use % of patients ≥ 18 years who were screened about tobacco use one or more times within 24 months and who received cessation counseling intervention if a tobacco user.
Cardiac Rehab Referral	NQF 0643 NQF 0642	Referral to CR from Inpatient or Outpatient Setting % of patients with an eligible diagnosis who are referred from a hospital (or office) to an early outpatient CR program.
BMI	NQF 0421	Screening and Follow-Up % of patients ≥ 18 years with a documented BMI during the current encounter or during the previous six months AND when the BMI is outside of normal parameters, a follow-up plan is documented during the encounter.



Getting to 70% CR Participation



Cardiac Rehab Work Flow



Stay tuned for the cardiac rehab webpage!

(Coming Fall 2017)



Haley Stolp, MPH
IHRC Inc. Contractor
Million Hearts®



Division for Heart Disease and Stroke Prevention
Centers for Disease Control and Prevention

Cardiac Rehabilitation Overview and Actions You Can Take

Steven J. Keteyian, PhD, Henry Ford Hospital
Kimberly Newlin, ANP, Sutter Roseville Medical Center
Randal J. Thomas, MD, MS, Mayo Clinic



Why Cardiac Rehabilitation is So Important

Steven J. Keteyian, PhD
Director, Preventive Cardiology Unit
Henry Ford Hospital
Detroit




No conflicts to disclose

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Definition: Cardiac Rehabilitation (CR)


- CR is a multidisciplinary, systematic approach to applying secondary prevention therapies of known benefit to patients with certain cardiovascular disease. Strategies include:
 - Regular exercise
 - Nutrition therapy/counseling
 - Medication management/compliance
 - Tobacco counseling
 - Counseling/therapy for emotional well-being and mood disturbance



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Cardiac Rehabilitation

- 24 to 36 exercise visits
- Structured education




Who's Eligible?

- Myocardial infarction
- Heart surgery:
 - coronary artery bypass
 - valve replacement/repair
- Stable angina
- Percutaneous coronary intervention (PCI)
- Cardiac transplant
- Heart failure (CMS limited to reduced ejection fraction only)

Smith et al., AHA/ACCF Secondary Prevention and Risk Reduction Therapy for Patients with Coronary and other Atherosclerotic Vascular Disease: 2011 update: a guideline from the American Heart Association and American College of Cardiology Foundation. Circulation. 2011;29:124:2458-73.


Relevant Professional Guidelines Addressing CR

- 2014 AHA/ACC Guideline for the Management of Patients with Non-ST-Elevation Acute Coronary Syndromes: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines
- 2013 ACCF/AHA guideline for the management of ST-elevation myocardial infarction: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines
- 2015 ACC/AHA/SCAI Focused Update on Primary Percutaneous Coronary Intervention for Patients With ST-Elevation Myocardial Infarction: An Update of the 2011 ACCF/AHA/SCAI Guideline for Percutaneous Coronary Intervention and the 2013 ACCF/AHA Guideline for the Management of ST-Elevation Myocardial Infarction
- 2013 ACCF/AHA Guideline for the Management of Heart Failure
- 2012 ACCF/AHA/ACP/AATS/PCNA/SCAI/STS Guideline for the Diagnosis and Management of Patients With Stable Ischemic Heart Disease
- AHA/ACCF secondary prevention and risk reduction therapy for patients with coronary artery and other atherosclerotic vascular disease: 2011 update
- 2011 ACCF/AHA Guideline for Coronary Artery Bypass Graft Surgery



Summary of the Effectiveness of CR/Exercise Training in Secondary Prevention

Improved disease-related symptoms Definite	Improved exercise capacity, 10%-30% Definite
Improved resting blood pressure – Definite	Anti-inflammatory effect – Probable
Improved blood triglyceride – Definite	Improved endothelial function – Definite
Improved high density lipoprotein – Probable (mild)	Improved skeletal muscle strength – Definite
Improved blood glucose – Definite	Improved skeletal muscle endurance – Definite
Reduction in body weight – Partially	Decreased risk all-cause mortality – Definite/Probable
Improved mood (depression/anxiety) – Definite/Probable	Decreased risk all-cause hospitalization – Definite



Progress in Cardiovascular Disease. 2011;53:385-386, 397-403, and 419-446

AACVPR/ACCF/AHA 2010 Update: Performance Measures on Cardiac Rehabilitation for Referral to Cardiac Rehabilitation/Secondary Prevention Services

A Report of the American Association of Cardiovascular and Pulmonary Rehabilitation and the American College of Cardiology Foundation/American Heart Association Task Force on Performance Measures (Writing Committee to Develop Clinical Performance Measures for Cardiac Rehabilitation)

Endorsed by the American College of Chest Physicians, the American College of Sports Medicine, the American Physical Therapy Association, the Canadian Association of Cardiac Rehabilitation, the Clinical Exercise Physiology Association, the European Association for Cardiovascular Prevention and Rehabilitation, the Inter-American Heart Foundation, the National Association of Clinical Nurse Specialists, the Preventive Cardiovascular Nurses Association, and the Society of Thoracic Surgeons

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 Karen Lui, RN, MS, FAACVPR
 Neil Oldridge, PhD, FAACVPR, FACS
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 John Spertus, MD, MPH, FACC

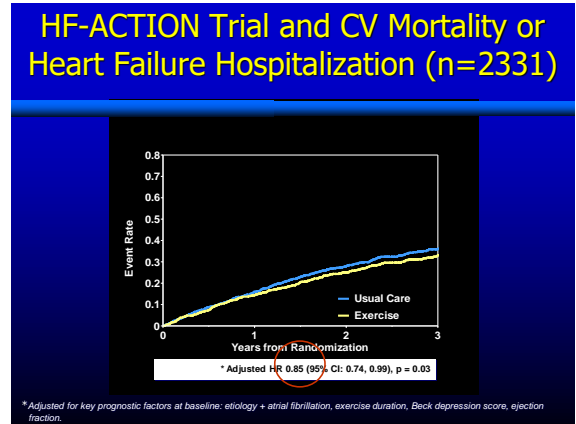
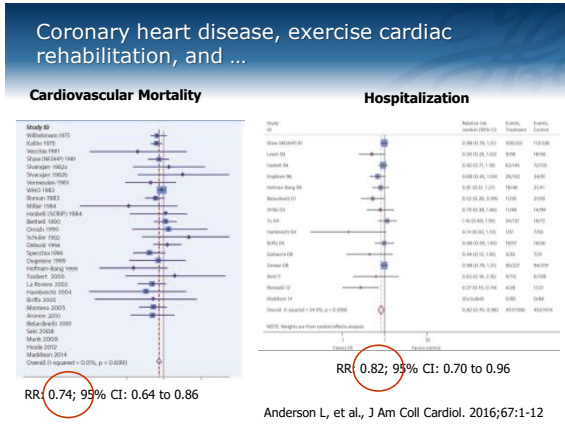
Cardiac Rehabilitation Patient Referral
 From:
 Inpatient Setting (Measure A-1)
 Outpatient Setting (Measure A-2)

Thomas et al., J Am Coll Cardiol. 2010;56:1159-1167

Meta-Analysis of Exercise Training in Patients with Coronary heart disease

- All-cause mortality (>12 mo follow up)**
 - N = 16 trials; n = 5,790 subjects
 - ↓ 13% (RR 95% CI = 0.75, 0.99)
- Cardiovascular mortality (>12 mo f/up)**
 - n = 12 trials; n = 4,757 subjects
 - ↓ 26% (RR 95% CI = 0.63, 0.87)
- Hospital readmission (6 - 12 mo follow up)**
 - n = 4 trials; n = 463 subjects
 - ↓ 31% (RR 95% CI = 0.51, 0.93)

Heran et al. Cochrane Database Syst Rev. 2011 Jul 6;(7):CD001800.



Increasing Cardiac Rehabilitation Participation From 20% to 70%: A Road Map From the 1 Million Hearts Cardiac Rehabilitation Collaborative

...increasing CR participation from 20% to 70% would save 25,000 lives and prevent 180,000 hospitalizations annually in the U.S.

The primary aim of the 1 Million Hearts initiative is to prevent 1 million cardiovascular events over 5 years. Concordant with the American Heart Association's focus on achieving more than 70% performance in the "ABCs" of aspirin for those at high risk, blood pressure control, cholesterol management, and smoking cessation, we outline the cardiovascular events that would be prevented and a road map to achieve more than 70% participation in cardiac rehabilitation (CR)/secondary prevention programs by the year 2022. Cardiac rehabilitation is a class Ia recommendation of the American Heart Association and the American College of Cardiology after myocardial infarction or coronary revascularization, promotes the ABCs along with lifestyle counseling and exercise, and is associated with decreased total mortality, cardiac mortality, and rehospitalizations. However, current participation rates for CR in the United States generally range from only 20% to 30%. This road map focuses on interventions, such as electronic medical record-based prompts and staffing liaisons that increase referrals of appropriate patients to CR, increase enrollment of appropriate individuals into CR, and increase adherence to longer-term CR. We also calculate that increasing CR participation from 20% to 70% would save 25,000 lives and prevent 180,000 hospitalizations annually in the United States.

© 2014 Mayo Foundation for Medical Education and Research • Mayo Clin Proc. 2017;92(2):244-242



Summary

1. CR is a multidisciplinary, systematic approach to applying secondary prevention therapies of known benefit to patients with certain cardiovascular disease.
2. CR represents guideline-based care
3. CR is effective, associated with:
 - improving many physiologic and behavioral outcomes
 - reducing all-cause mortality, cardiovascular mortality and re-hospitalization

Henry Ford Health System

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How are We Doing with CR Delivery?

Kim Newlin, MS, ANP-C, FPCNA, FAHA
PCNA Board Member
Sutter Heart and Vascular Institute

Sutter Health

Current Participation & Capacity

- Current participation rates for CR in the U.S. generally range only from 20% to 30%
- Participation rates depend somewhat upon cardiac diagnosis: patients after surgical revascularization have higher participation rates than patients after MI or percutaneous revascularization
- Even with modest expansion of all existing programs operating at capacity, a maximum of 47% of qualifying patients in the United States could be serviced by existing CR programs
 - This limit probably contributes to CR underutilization and has important policy implications.

Sutter Health Journal of Cardiopulmonary Rehabilitation and Prevention, 34(5), 318-326

PCNA PREVENTIVE CARDIOVASCULAR NURSES ASSOCIATION

Current Referral Process

- Low referral rate for women, older adults and ethnic minorities, lower socioeconomic status
 - Women and minorities are significantly more likely to die within 5 years after a first MI compared with white male patients
- For every 1 day delay to start CR, there is an approximate 1% less likelihood of the patient enrolling



Current Referral Process

- Referrals are not always automatic and often CR is not offered to patient at time of event
 - Automatic referral alone increased the referral rate to 70%
 - Automatic referral combined with a liaison attained referral rates of 86% compared to 32% in controls who received neither intervention
- CR Referral is not a mandatory quality performance measure
 - Studies show an increase in referral rate at hospitals participating in quality improvement activities



Standard Model



Standard Model

- Outpatient and/or hospital based exercise program
 - Often far from where patients live without good parking or public transportation access
 - 2-3 times per week
 - Class times throughout day, most often 7 AM – 3 PM on weekdays
 - Lack of diversity among patients and clinicians
 - Physician supervision required
 - Expensive to operationalize
 - Many patients have copay of \$20-\$40 per visit
- Reimbursement has improved



Alternative Models: A Few Out There!

- Home Based or Hybrid Programs
 - Data supports efficacy and safety of programs
 - Reimbursement doesn't support these programs
- Kaiser MULTIFIT: Patients attend a 2-hour class and then are monitored by a nurse over the phone



MAYO CLINIC

Cardiac Rehabilitation
 How Can We Work Together To Improve Delivery?

Ray W. Squires, PhD
 Randal J. Thomas, MD, MS
 Cardiac Rehabilitation Program
 Mayo Clinic
 Rochester, Minnesota

Disclosures

No relevant financial relationship(s) with industry

No off-label use of treatments to be discussed



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Future of Cardiac Rehabilitation

- CR will grow in importance and impact
 - Growing evidence, need, policy support
 - High value service (outcomes/cost)
 - Largest performance gap in cardiology today



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Future of Cardiac Rehabilitation

- CR will grow in importance and impact
- CR will continue to evolve



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Cardiac Rehabilitation Evolution

- New Populations
 - PAD: Approved by CMS 2017, Class IA rec*
 - HFpEF: Strong evidence, private insurance
 - Afib: Growing evidence
 - Cancer: Growing evidence
 - Pediatric CR: Few studies
 - Non-CV Transplant: Few studies
- New Delivery Models
 - Optimize center-based CR capacity
 - Different models: Home-based and eHealth models



*JACC 2017;69(11):1465–1508

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What Can We Do To Improve Cardiac Rehabilitation Delivery?



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Cardiac Rehabilitation Improving Delivery

- Implement tools that work
- Provide ongoing, updated evidence for new delivery models
- Push for policy change



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Cardiac Rehabilitation Improvement Win-Win-Win

- If CR use increases from 20% to 70% (USA)
 - 180,000 fewer hospital admissions/year
 - 25,000 lives saved/year
 - Other benefits
 - Functional status
 - Quality of life
 - Symptom control
 - Financial benefits



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Roadmap to 70% CR Participation

Cardiac Rehabilitation Adherence

- Set 36 CR Sessions as Goal
- Home-Based CR Option
- Flexible CR Hours
- Work to Minimize CR Co-Pays

3

Cardiac Rehabilitation Enrollment

- CR Staff Liaison
- Early Appointment at CR
- CR Enrollment as Performance Measure
- Work to Minimize Co-Pays

2

Cardiac Rehabilitation Referral

- EMR-Based Referral
- CR Staff Liaison
- CR Referral as Performance Measure

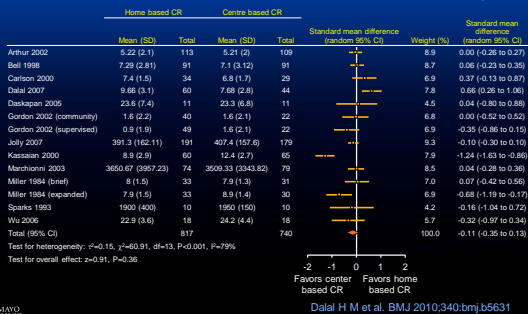
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Mayo Clin Proc. 2017;92(2):234-242



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Exercise Capacity: Home-Based vs Center-Based CR 3-12 Month Follow-Up



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Care Assessment Platform Smartphone-Based Cardiac Rehabilitation



Figure 1 CAP System diagram. The mobile phone acts as the communication medium through which a) the Community Care Team provides mentoring and goal setting, b) daily motivational messages, educational videos and relaxation audio are sent, and c) self observations and measurements are entered to the Wellness Diary application. All data is synchronised and stored on a daily basis to a Wellness Diary Connected portal on a remote server.



Heart 2010;100:1770-7914

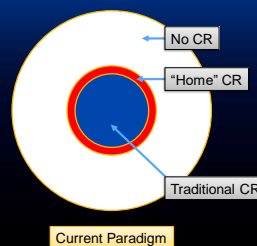
Cardiac Rehabilitation Centers for Medicare and Medicaid Services Pilot Studies

- Starting in January 2018
- Selected geographic areas will be assigned to "usual care" or to either or both of the following:
 - Financial incentive Model**
 - Large incentive for referring providers
 - Aimed at helping to reduce barriers to CR
 - Incentivizes center-based CR care
 - Bundled payment (episode payment)**
 - Bundled payment for CABG and MI care
 - Incentivizes lower cost CR care (home-based?)

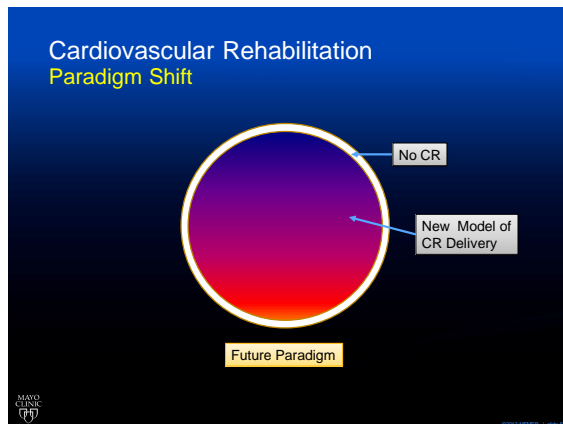
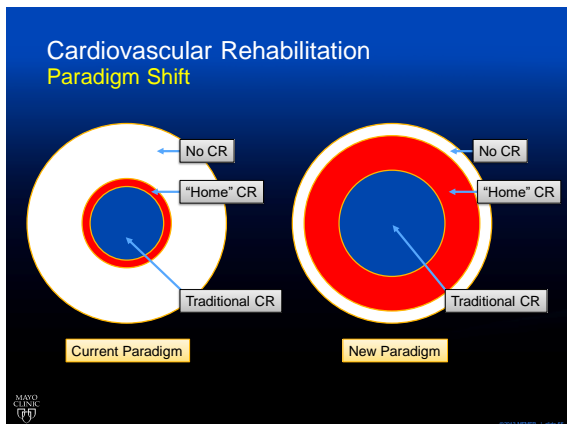


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Cardiovascular Rehabilitation Paradigm Shift



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Discussion/Q & A

**April Wallace, Program Initiatives Manager
Million Hearts® Collaboration**

Do you have a question for one of the panelist?
Please submit your questions in writing using the Q&A Panel located at the bottom right of your screen.
Following the online questions, we will open the phone lines for additional questions.



Share Your Commitment to Million Hearts® 2022

How do your organization's mission and goals align with Million Hearts® 2022?

What strategies will you implement to help prevent one million events by 2022?



Key Updates and Questions from Partners

**April Wallace, Program Initiatives Manager
Million Hearts® Collaboration**

Please "raise your hand" by clicking on the hand icon.
When recognized, please share your name, organization name, and a brief update.
Following the online requests, we will open up the phone lines for additional updates from partners.



Thank You!

**Next Partner Call
October 31, 2017, 1 p.m. EST**

Please submit any comments or feedback to millionhearts@cdc.gov.

