



ANCHORED TO OUR VALUES

37TH ANNUAL MEETING

SEPTEMBER 21-23, 2022

PALM BEACH COUNTY CONVENTION CENTER • WEST PALM BEACH, FL

AACVPR
American Association of Cardiovascular
and Pulmonary Rehabilitation

Promoting Health & Preventing Disease



**ANCHORED
TO OUR VALUES**

37TH ANNUAL MEETING

Session in a Box: A User's Guide to VBC Resources for CR/PR Professionals

Karen A. Edwards, MS, RCEP, RRT, FAACVPR

Tedd Walsh, BS, ACSM CEP, EIM, CCRP, FAACVPR

Jonathan David, MSN, RN, EBP-C, CCRP, NE-BC

Yvette Gerdes, MS, RCEP, CCRP, EIM

AACVPR

Disclosures

Karen - none

Tedd - none

Jonathan - none

Yvette - none



Objectives

- The value of cardiopulmonary rehab in Healthcare and how to have conversations with key people
- Population health and how this impacts the care we deliver across the continuum
- Quality, performance measures and how to utilize data to invoke change
- Practical strategies to implement value-based care principles in any rehab setting



What is Value-Based Care?

VALUE BASED CARE



What is Value-Based Care? What Does it Mean for Oral Health Care? Boston, Massachusetts: DentaQuest; 2019. Available on www.DentaQuest.com

VBC: a change in care delivery

Value-based care is delivering the **best quality** patient care with regards to the **cost** of that care through **data-driven analysis and service improvement**.

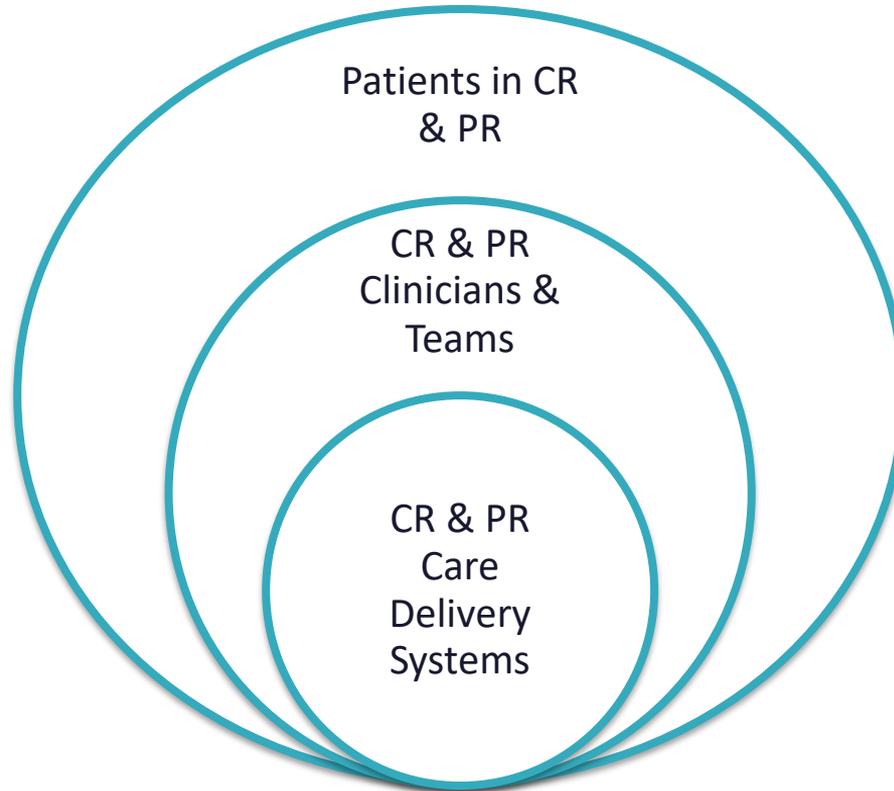
How can we modify or tailor the way we are currently delivering care to Cardiac & Pulmonary patients to:

- Optimize program outcomes
- Maintain costs
- Optimize efficiencies
- Improve patient & staff experience?

Defined by the AACVPR- HCRC Subcommittee -VBC Workgroup



VBC Defined by



Fee-for-Service vs. Value-based Care

❑ Fee For Service

- Productivity
- Billable units

❑ Value Based Care

- Value = Quality/Co

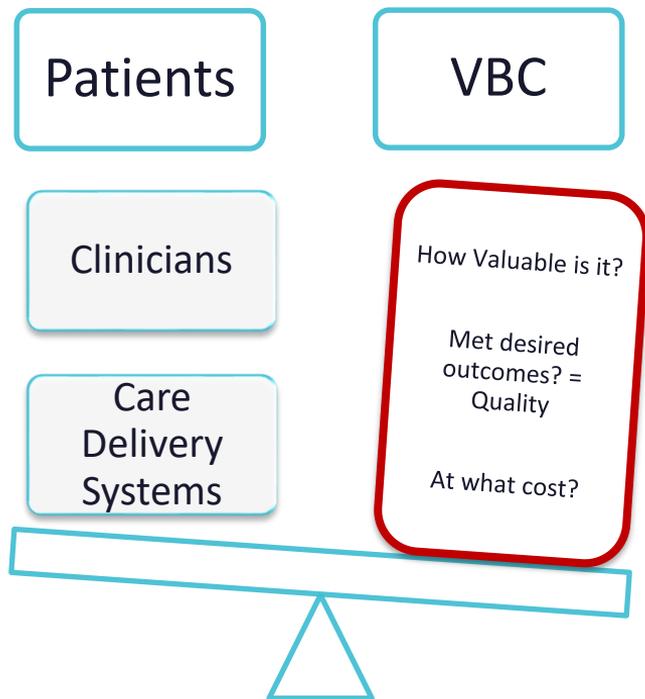


Application of VBC

VBC in simple terms:
A Balancing Act

Achieving Value,
Quality & Cost
desired by the
stakeholders in the
CR & PR practice

$$\text{Value} = \frac{\text{Quality}}{\text{Cost}}$$



Value Based Care in CR and PR

The AACVPR value based care initiative provides resources which assist cardiac & pulmonary rehabilitation professionals to:

- Assign accountability
- Target efficiencies
- Strategize operational transformation
- Restructure the care delivery model
- Implement effective technology solutions in management
- Improve the patient and practitioner experience

<https://www.aacvpr.org/Value-Based-Care>



Association Priorities

Affiliate Link:

- Joint Affiliate membership
- Outstanding Affiliate Award

Strategic Relationships

- Million Hearts Campaign CR Collaborative- strengthen partnerships to advocate increasing CR Referral, Enrollment & Adherence

Advocacy

- Accessibility
- Fiscal viability
- Regulatory impact
- Value Based Care
- Roadmap Two Reform
- Education
 - Lawmakers
 - Providers
 - Consumers

Education

- Webcasts
- Best Practice Essentials series
- Annual Meeting
- Web site

Certification/Registry/PM

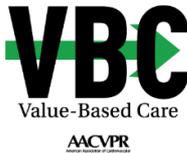
- Online cert application
- Experts panels
- National registry development
- Outcomes tracking
- Performance Measures

Research and Innovation

- Evidence-based care
- Define standards
- Credibility
- Instigating change
- Position papers
- Innovation Award

Value Based Care Resources

VALUE-BASED CARE



Quality patient care is at the core of all we do. Delivering value-based care means providing the best quality patient care with regards to the cost of that care through data-driven analysis and service improvement. The value-based care initiative provides resources which assist cardiac and pulmonary rehabilitation professionals to:

- > Assign accountability
- > Target efficiencies
- > Strategize operational transformation
- > Restructure the care delivery model
- > Implement effective technology solutions in management
- > Ultimately improve the patient and practitioner experience

This webpage contains comprehensive resources for CR and PR professionals aiming to implement value-based care practices at their facility. Click below for webinars, articles, turnkeys, and supplemental resources. AACVPR members can access additional resources in [AACVPR Central](#).

Turnkey Enrollment and Adherence Strategy Documents

These turnkey strategies are valuable resources for improving your cardiac and pulmonary rehabilitation program.

ADMIN

BEHAVIOR

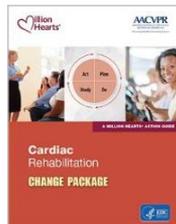
EXERCISE

NUTRITION

<https://www.aacvpr.org/Value-Based-Care>

Change Packages

In 2018, AACVPR partnered with Million Hearts and the Center for Disease Control (CDC) to create the Cardiac Rehabilitation Change Package. In 2019, Million Hearts and the CDC released the Tobacco Cessation Change Package.



[PDF Download](#) | [Website](#)



[PDF Download](#) | [Website](#)

Webinars

AACVPR's Value-Based Care Committee has curated a series of webinars to share implementation strategies for value-based care practices from improving referrals, enrollment, group screening, adherence, ECG telemetry monitoring, to incorporating a registered dietitian.

AACVPR is pleased to offer complimentary registration to AACVPR members for all value-based care webinar presentations. Non-members may register for \$25. All live webinars are recorded for later viewing in the Learning Center. Please note that CE will not be provided. To access these presentations, simply login to your AACVPR profile and navigate to the [Learning Center](#).

[View VBC webinars available >>](#)

Value-Based Care at the AACVPR Annual Meeting

Value-based care practices are highlighted each year at the AACVPR Annual Meeting. Presentation recordings are available for purchase in the [Learning Center](#). As a courtesy, we've linked the PDF handouts from the presentations for free below.

[View the presentation handouts from the selected sessions >>](#)

News & Views

Here, we've rounded up all the value-based care articles in [News & Views](#).

Additional Reference Documents

AACVPR has developed the [Executive Summary for Payers](#) and [Summary for Payers](#) as resources for CR implementation and funding. However, AACVPR is not the only organization taking the lead on value-based care implementation. Click below to view resources from key industry leaders.

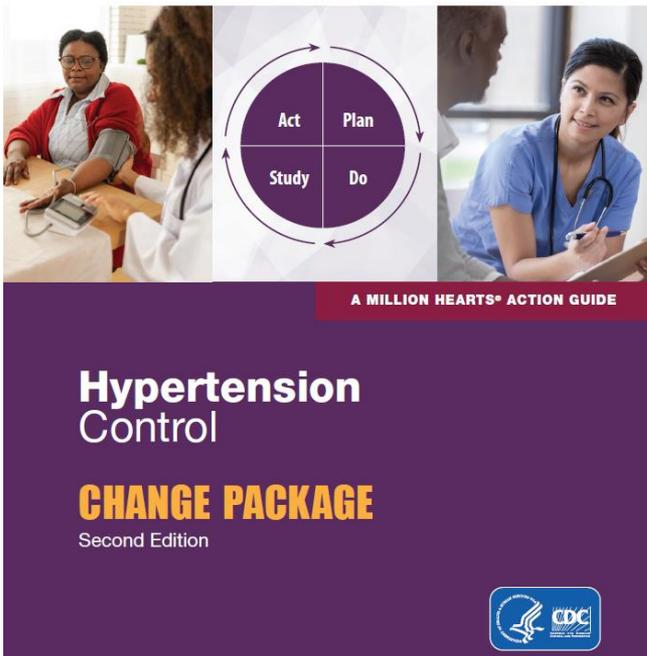
[Million Hearts](#)

[Industry Partners](#)

37TH ANNUAL MEETING

AACVPR

NEW Resource!



- The Hypertension Control Change Package, 2nd Edition is a new resource for professionals to utilize with their patients.



AACVPR Strategic Initiative

Goal #2: Program Quality and Sustainability

- *AACVPR will drive program sustainability through integration of VBC and quality initiatives by engaging professionals and programs*
- By Q3 2021 (Value Based Care) develop a “session in a box” for affiliates to provide VBC presentation at the local level that is consistent with the national message
 - Utilize an outline and framework developed in collaboration with VBC and affiliate leaders at ALF (session objectives, agenda, slide outline). Approved for credits

A new resource for CR-PR professionals: Session-in-a-Box



Why Session-in-a-Box?

- Concise, easy to follow presentation for CR & PR professionals to use to explain VBC concepts to key stake holders.
- Learn VBC strategies related to administration, population health, outcomes & value to drive change in rehab



Session-in-a-Box Sections

- Administration
 - The process or activity of running an organization (rehab)
- Population Health
 - an interdisciplinary, customizable approach that allows health departments to connect practice to policy for change to happen locally (<https://www.cdc.gov/pophealthtraining/whatis.html>)
- Outcomes & Value
 - **Outcomes** are the changes you expect to result from your program
 - **Value** is the usefulness, **or importance in comparison with something else**



Administration

What Metrics are Important, to Whom and Why?

■ Payers/Hospital Administration

- Cost per patient episode
- Readmission Rate
- Excess Days in Acute Care (readmission, ED, observation)
- HCAHPS
- Mortality

■ Cardiac Rehab Programs

- Number of referrals (including source)
- Time to enrollment
- Number of patients enrolled
- Number of visits (total)
- Number of visits (per patient)
- Clinical Outcomes



Glossary of Terms

- In the session in a box, you will have a glossary of terms to help you learn terminology that administration is usually quite familiar with.
- As a clinician, they may not be in your normal vocabulary and this will be a valuable resource for you to talk to administration.



AACVPR Website: Value Based Care Turnkey Administration Strategies



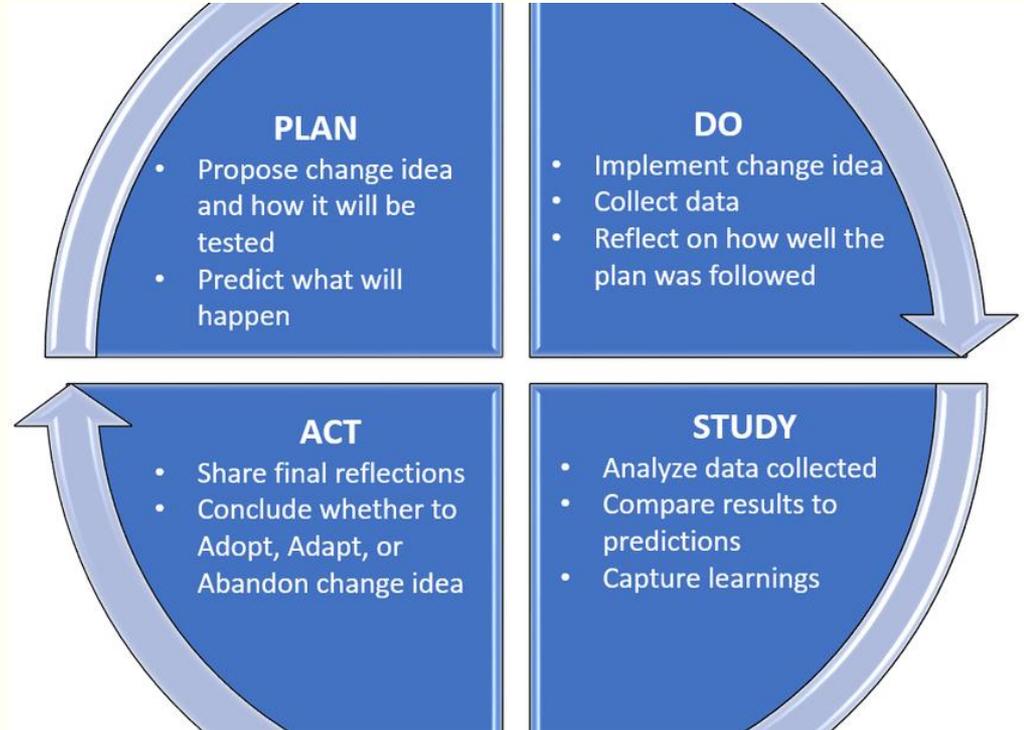
- Reducing Hospital Admissions/Readmissions for Patients with COPD through Enrollment in Pulmonary Rehabilitation
 - COPD Patient Barriers to Adherence in Pulmonary Rehabilitation
 - 12-Month Cardiovascular Condition Episode (Bundle)
 - Connecting with Psychosocial Providers
 - CR Referral Performance Measures in a Quality Improvement System
 - Establish a Philanthropic Fund
 - Group Screening
 - Inpatient Liaison for Outpatient CR [inpatient tracking form]
 - Reduce the Delay from Discharge to Enrollment
 - COPD Referral & Enrollment to PR

<http://www.aacvpr.org/VBCRepository>



Plan-Do-Study-Act

The Plan, Do, Study, Act (PDSA) cycle is a method for rapidly testing a change - by planning it, trying it, observing the results, and acting on what is learned. This is a scientific method used for action-oriented learning.



Plan-Do-Study-Act

- Slides relating to PDSA cycle will be included in the session in a box presentation.
- The Plan-Do-Study-Act cycle is vital to present to administration and to keep them informed of changes in your program.
- Very rarely do projects get greenlighted with no further oversight. You will report back to the committee/administrator and show your progress/data.



But How do I Collect all That Data?

We are all busy and sometimes data collections seems like another task piled on our plates but...

- Data doesn't always have to be collected at the department level.
- Most hospitals are participating in outcome registries and many of those have items directly relating to referrals, attendance, and disease cohorts.
- Check to see what yours is doing, and how you can leverage that to affect change in your department.



Program Level

- How do I implement change within my program?
- Listen to staff: what do they want to improve? Where do they see inefficiencies?
- Empower staff to make changes. Staff, ask your supervisor/manager about making changes.
- It can seem daunting with limited staff. Tackle one little project at a time. Break bigger projects into smaller, measureable steps.



Review Progress

- Remember to look at data points before and after your changes. Is it making a difference?
- Remember it may be as simple as doing chart reviews and marking whether staff is following through on the changes.
- Don't be afraid to change back to the old way if the new way isn't working. Or tweak the process even further and evaluate again.



Administration Summary

- Don't be afraid to get out in the hospital! Show the great work you are doing in the rehab setting.
- Look to highlight the changes you have already made without a directive.
- Use the session in a box presentation from your state(s) annual conference to drive change.
- Look for examples in the value based care section on the AACVPR website.



Population Health

Definitions

- **Public Health:** is the science of protecting and improving the health of people and their communities, through promoting healthy lifestyles, researching disease
- **Population Health:** an opportunity for health care systems, agencies, and organizations to work together in order to improve the health outcomes of the communities they serve



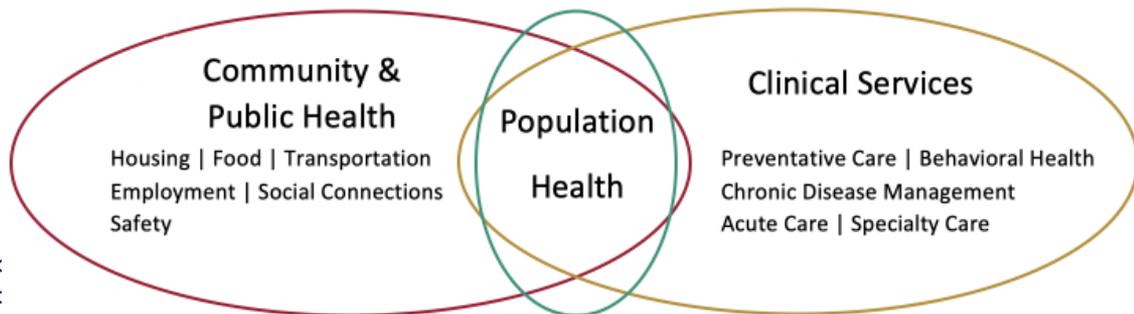
Definitions

- **Social Determinants of Health (SDOH):** conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.
- **Population Health Management:** Improving clinical health outcomes in a defined group of individuals through improved care coordination and patient engagement supported by appropriate care models



Social Determinants of Health

Social Determinants of Health



SDOH, PHM & CR/PR

Example Considerations for addressing SDOH to help prevent ASCVD events

Topic/Domain	Example Considerations
Cardiovascular risk	Adults should be routinely assessed for psychosocial stressors and provided with appropriate counseling. ^{S2.1-31}
	Health literacy should be assessed every 4 to 6 y to maximize recommendation effectiveness. ^{S2.1-36}
Diet	In addition to the prescription of diet modifications, body size perception, as well as social and cultural influences, should be assessed. ^{S2.1-37/S2.1-48}
	Potential barriers to adhering to a heart-healthy diet should be assessed, including food access and economic factors; these factors may be particularly relevant to persons from vulnerable populations, such as individuals residing in either inner-city or rural environments, those at socioeconomic disadvantage, and those of advanced age*. ^{S2.1-39}
Exercise and physical activity	In addition to the prescription of exercise, neighborhood environment and access to facilities for physical activity should be assessed. ^{S2.1-38/S2.1-40/S2.1-41}
Obesity and weight loss	Lifestyle counseling for weight loss should include assessment of and interventional recommendations for psychosocial stressors, sleep hygiene, and other individualized barriers. ^{S2.1-42/S2.1-44}
	Weight maintenance should be promoted in patients with overweight/obesity who are unable to achieve recommended weight loss.
Diabetes mellitus	In addition to the prescription of type 2 diabetes mellitus interventions, environmental and psychosocial factors, including depression, stress, self-efficacy, and social support, should be assessed to improve achievement of glycemic control and adherence to treatment. ^{S2.1-45/S2.1-48}
High blood pressure	Short sleep duration (<6 h) and poor-quality sleep are associated with high blood pressure and should be considered. ^{S2.1-49} Because other lifestyle habits can impact blood pressure, access to a healthy, low-sodium diet and viable exercise options should also be considered.
Tobacco treatment	Social support is another potential determinant of tobacco use. Therefore, in adults who use tobacco, assistance and arrangement for individualized and group social support counseling are recommended. ^{S2.1-50/S2.1-51}

*Advanced age generally refers to age ≥75 years.
ASCVD indicates atherosclerotic cardiovascular disease.



Documentation

← Snapshot Chart Review Review Flowsheets Care Teams Search

LPOC

LPOC Facesheet

General Risk Score

9 0 - 3 Points: Low Risk
4 - 5 Points: Medium Risk
6 - 16 Points: High Risk

Details

1 Age: 79
Current as of about an hour ago

2 All Admissions Count (1 yr): 2
Current as of about an hour ago

2 All ED Visits Count (1 yr): 2
Current as of about an hour ago

0 Has Chronic Obstructive Pulmonary Disease: No
Current as of about an hour ago

1 Has Diabetes: Yes
Current as of about an hour ago

1 Has Chronic Kidney Disease: Yes
Current as of about an hour ago

1 Has Congestive Heart Failure: Yes
Current as of about an hour ago

0 Has Liver Disease: No
Current as of about an hour ago

0 Has Depression: No
Current as of about an hour ago

0 Current PCP: Javier Baez, MD
Current as of about an hour ago

1 Has Medicaid: Yes
Current as of about an hour ago

Social Determinants of Health

Tobacco Use
Jul 27 2022: Medium Risk

Financial Resource Strain
May 16 2022: Low Risk

Stress
May 16 2022: No Stress Concern Present

Depression
Jul 7 2022: At risk

Food Insecurity
Not on file

Alcohol Use
Jul 18 2022: Not At Risk

Physical Activity
May 16 2022: Inactive

Social Connections
May 16 2022: Socially Isolated

Housing Stability
May 16 2022: Unknown

Active Plans

Fall Risk Care Plan

ALTERED CEREBRAL FUNCTION	ⓘ Patient remains free from falls.	No active tasks
HISTORY OF FALL-RELATED DIAGNOSES	ⓘ Patient remains free from falls.	No active tasks
IMPROPER USE OF AIDS (W/C, CANE, WALKER)	ⓘ Patient remains free from falls.	No active tasks
TETHERING DEVICES (FOLEYS, WOUND VACS)	ⓘ Patient remains free from falls.	No active tasks
MEDICATIONS	ⓘ Patient remains free from falls.	No active tasks
HOME ENVIRONMENT BARRIERS	ⓘ Patient remains free from falls.	No active tasks
DECREASED LOWER EXTREMITY STRENGTH	ⓘ Patient remains free from falls.	No active tasks
(FREE TEXT)	No active goals	

HTN Management

HTN MANAGEMENT		
ⓘ BP will be <140/90		No active tasks
ⓘ Medication Adherence		No active tasks
ⓘ Pt will follow DASH diet or heart healthy diet		No active tasks
ⓘ Pt will engage in at least 150 mins of aerobic activity/wk		No active tasks
ⓘ Pt will attend appropriately scheduled follow up appointments		No active tasks

Documentation

Navigation: Snapshot | Chart Review | Review Flowsheets | Care Teams

LPOC

Tools: LPOC | Facesheet

General Risk Score

0 - 3 Points: Low Risk
4 - 5 Points: Medium Risk
6 - 16 Points: High Risk

7

Details

- 1 Age: 74
Current as of yesterday
- 0 All Admissions Count (1 yr): 0
Current as of yesterday
- 2 All ED Visits Count (1 yr): 2
Current as of yesterday
- 1 Has Chronic Obstructive Pulmonary Disease: Yes
Current as of yesterday
- 0 Has Diabetes: No
Current as of yesterday
- 0 Has Chronic Kidney Disease: No
Current as of yesterday
- 0 Has Congestive Heart Failure: No
Current as of yesterday
- 1 Has Liver Disease: Yes
Current as of yesterday
- 1 Has Depression: Yes
Current as of yesterday
- 0 Current PCP: Terri Lynn Brody, MD
Current as of yesterday
- 1 Has Medicaid: Yes
Current as of yesterday

Social Determinants of Health

- Tobacco Use
Jun 22 2022: High Risk
- Financial Resource Strain
Not on file
- Stress
Not on file
- Depression
Jun 14 2022: At risk
- Food Insecurity
Not on file
- Alcohol Use
Not on file
- Physical Activity
Not on file
- Social Connections
Not on file
- Housing Stability
Not on file



Documentation

General Risk Score

!! 7
 0 - 3 Points: Low Risk
 4 - 5 Points: Medium Risk
 6 - 16 Points: High Risk

Details

- 0 Age: 61
Current as of yesterday
- 0 All Admissions Count (1 yr): 0
Current as of yesterday
- 3 All ED Visits Count (1 yr): 5
Current as of yesterday
- 1 Has Chronic Obstructive Pulmonary Disease: Yes
Current as of yesterday
- 0 Has Diabetes: No
Current as of yesterday
- 0 Has Chronic Kidney Disease: No
Current as of yesterday
- 1 Has Congestive Heart Failure: Yes
Current as of yesterday
- 0 Has Liver Disease: No
Current as of yesterday
- 1 Has Depression: Yes
Current as of yesterday
- 0 Current PCP: Tiffany Diers, MD
Current as of yesterday
- 1 Has Medicaid: Yes
Current as of yesterday

PROBLEM LIST

Cardiovascular and Mediastinum
 Diastolic heart failure, unspecified
 HF chronicity (CMS Dx)
 Hypertension
 PVD (peripheral vascular disease)
 (CMS Dx)
 Respiratory
 OSA and COPD overlap syndrome
 (CMS Dx)

Social Determinants of Health

Tobacco Use ↕
 Jul 26 2022: Medium Risk



Jul 26, 2022: Medium Risk

Smoking Tobacco Use
Former Smoker
 Smokeless Tobacco Use
Never Used

Alcohol Use ↕
 Not on file

Financial Resource Strain ↕
 Not on file

Stress ↕
 Not on file

Depression ↕
 Jul 25 2022: Not at risk



Jul 25, 2022: Not at risk

PHQ-2 Score
 2

Physical Activity ↕
 Not on file

Social Connections ↕
 Not on file

Housing Stability ↕
 Not on file

Food Insecurity ↕
 Jul 19 2022: No Food Insecurity



Jul 19, 2022: No Food Insecurity

Worried About Running Out of Food in the Last Year
Never true
 Ran Out of Food in the Last Year
Never true

Active Plans

Cardiac Care Plan	
BP MONITORING NONCOMPLIANCE plan	No active tasks
ABNORMAL BLOOD PRESSURE plan	No active tasks



Value Quality & Performance

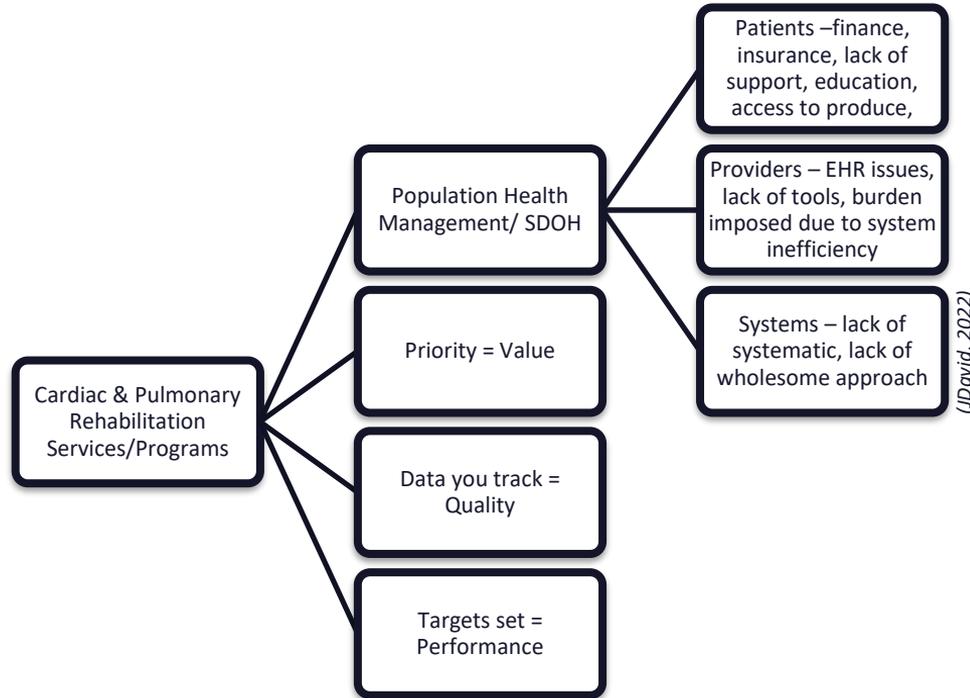
Simplifying Value, Quality & Performance

Value = current state of health -> To desired state of health achieved/Cost of intervention/s

Quality = current quality of life-> To desired quality of life experienced/type of intervention/s x Cost/intervention

Performance (The outcome of interventions among CR & PR eligible patient populations) = Baseline metrics (clinical & behavioral) -> Improved patient and clinical reported outcomes

How does it all connect Value, Quality and Performance



Performance Measures - Overview

- Guideline based
 - ACC/AHA, 2018 Quality and Clinical Performance Measures
 - find any specific guideline for PR)
- Program based
 - Clinical Metrics (LOS, 30-day readmission, major adverse cardiovascular event (MACE), mortality & morbidity)
 - Patient reported outcomes (physical, psychosocial)
 - Organizational Metrics (Patient experience-HCAPHS)



Performance Measures – Overview

- Organizational Metrics
 - Patient Satisfaction
- CR/PR Specific Metrics
 - Measurements (Phase I/Phase II/Phase III specific elements)



Performance Measures – Examples

- CR/PR Program Specific Metrics
 - Measurements (Phase I/Phase II/Phase III specific elements)
 - Include Core Components of CR & PR
 - Clinical Outcomes - exercise testing and responses, BP, A1c, Lipid levels, 6MWT, Dyspnea assessment, quality of life assessment
 - Behavioral Outcomes – smoking cessation, adherence to diet and exercise, use of effective coping mechanisms
 - Morbidity and Mortality – Readmission, emergency room visits, sick days, loss of workdays, return to work

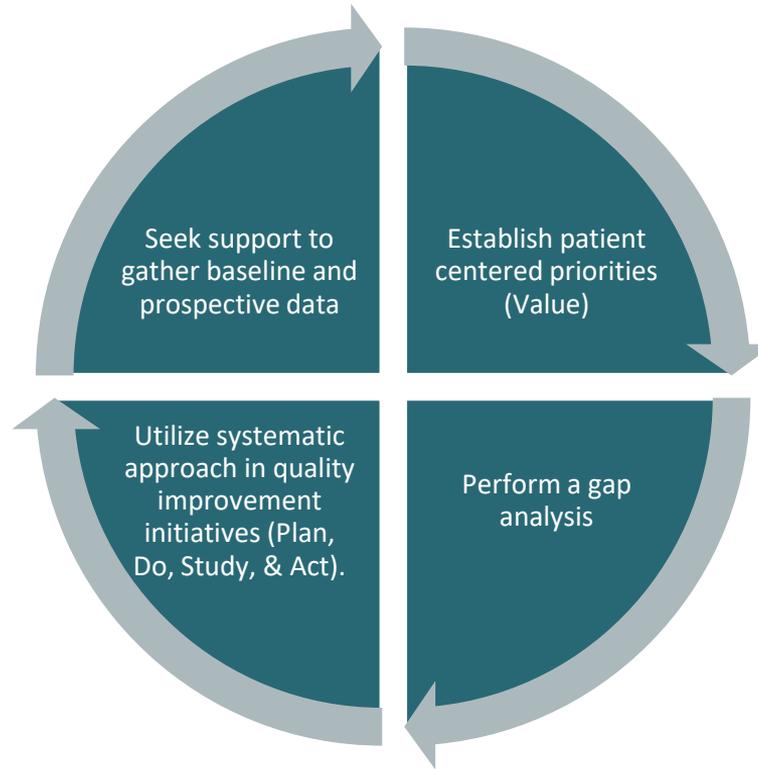


Performance Measures – Examples cont.

- Healthcare Effectiveness Data and Information Set (HEDIS)
 - Enrollment – hospital discharge to first billed session
 - Engagement
 - ≥ 2 sessions in 30 days
 - ≥ 12 sessions in 90 days
 - ≥ 24 sessions in 180 days
 - Completion
 - ≥ 36 sessions in 180 days



Strategies in Implementing VBC



Strategies in Implementing VBC

- Track CR & PR care delivery components
- Visualize gaps in the process in improving outcomes
- Compare performance outcomes rate with national benchmarks
- Engage stakeholders at all levels in addressing barriers



Case Study

Problem: Pulmonary rehab referrals were obtained manually by visiting the pulmonology office or having the office fax referrals.

Background: Before 10/7/20, the pulmonology medical office associated with our hospital used a different EMR than the hospital. We had to manually retrieve referrals from the office, or they would fax them to our department. We would then have to send standing orders back to the referring doctor for signature.

Gap/Barriers: This resulted in up to a weeks' delay to call a patient for scheduling since we were only retrieving consults weekly.



Case Study – Poster S150 (AACVPR, 2022)



Inpatient Cardiac Rehabilitation Building A Case For Value-Based Care A Quadruple Analytical Approach

Jonathan David, MSN, RN, EBP-C, CCRP, NE-BC, Stanford Health Care, Palo Alto, California



BACKGROUND

The 2018 ACC/AHA Clinical Performance and Quality Measures guidelines recommend that inpatient settings refer eligible patients before discharge to support early enrollment and participation in outpatient cardiac rehabilitation (OPCR)¹.

Referral before discharge is the first step to promoting early access and is a strong determinant of enrollment of patients in outpatient cardiac rehabilitation.

Achieving a systematic and automated referral process is long drawn. It requires the support of leadership, information technology and multidisciplinary clinical teams.

GAP

Often teams are faced with challenges in implementing AACVPR Value-Based Care Turnkey Strategies.

Healthcare organizations face competing priorities. The inpatient cardiac rehabilitation service members find it challenging to receive prioritization to help implement optimized EMR and workflow enhancements.

Opportunities to provide value-added service to patients and families are missed while waiting to complete the automated referral system and enhancements within the electronic health records.

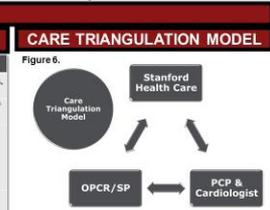
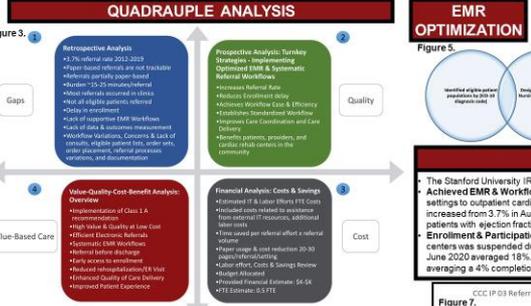
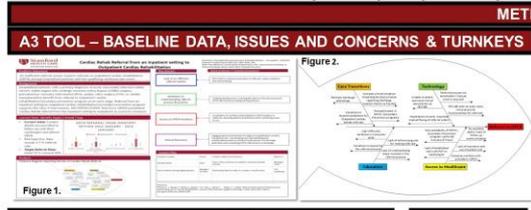
Stanford Health Care Context: Over 4,000 patients annually require screening for eligibility for referrals to outpatient cardiac rehabilitation. A retrospective review yielded a 3.7% referral rate, manually faxed and paper-based referrals could not be tracked.

OBJECTIVES & AIMS

Achieve EMR and workflow optimization. Implement referral before discharge from the hospital and clinic. Increase referral before discharge and promote early enrollment and participation in outpatient cardiac rehabilitation.

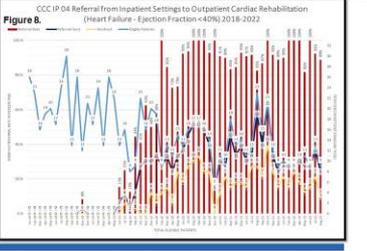
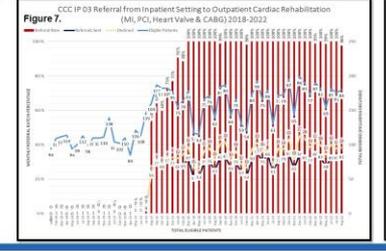
METHODS

A quality improvement process began in 2019. A3 Lean Methodology (Figure 1), Issues & Concerns (Figure 2), Quadruple Analysis Matrix (Figure 3), SBAR Communication Tool (Figure 4), EMR & Workflow Optimization (Figure 5), Paperless E-Referral Communication (Figure 6), Care Triangulation Model (Figure 6).



The Stanford University IRB Protocol Number: 67067 determined that this project did not meet the definition of human subject research defined in federal regulations and was approved. **Achieved EMR & Workflow Optimization (Figure 5).** Referral Rates: (Figure 7 & 8) Comprehensive Cardiac Center (CCC) Inpatient (IP) Measure U3-Referrals from inpatient settings to outpatient cardiac rehabilitation/secondary prevention programs among patients with coronary artery bypass graft, myocardial infarction, and heart valve surgeries increased from 3.7% in August 2019 to 77% in December 2019, then consecutively over 98% from January 2020 – August 2022. Measure O4-The referral rate among heart failure patients with ejection fraction <40% progressed from 3.7% to over 90% in February 2020 and averaged 92% as of August 2022.

Enrollments & Participation Rates: (August 2019 – June 2020) limited data during the public health emergency. Data collection on enrollment and participation status from outpatient centers was suspended during the public health emergency. The enrollment rate in outpatient cardiac rehabilitation within 21-90 days of discharge from the hospital from August 2019 to June 2020 averaged 18%. The participation rate among all enrolled patients in outpatient cardiac rehabilitation completing the recommended 36 sessions was substantially low, averaging a 4% completion rate.



DISCUSSION

- Low Cost: IT Teams were able to support the Epic EMR and workflow Optimization without additional FTE or financial cost.
- Value & Quality: The efficient Paperless electronic referral communication averaged 5-7 minutes to complete a referral (Figure 5).
- Value & Quality: Teams received education and standardized workflows. The referral communication to the point of care providers, cardiologists/PCP, and outpatient cardiac rehabilitation (OPCR)/secondary prevention centers (SP) in enrolling patients (Figure 6).

LIMITATIONS

- Limitations include variations in data extraction methods, initially manual chart reviews and later automated.
- Enrollment and participation data collection were suspended during the pandemic.
- Heart transplant services were excluded during this initiative.

CONCLUSIONS

Inpatient cardiac rehabilitation successfully implemented the optimized EMR workflow and provided value-added service to patients, teams, and providers.

REFERENCES

1. Thomas, R. J., Baxley, G., Burka, G., Becker, T., Chu, J., Gokak, C., Veng, T. Y. (2018). 2018 ACC/AHA Clinical Performance and Quality Measures for Cardiac Rehabilitation. Journal of the American College of Cardiology. 71(10), 1014-1037. <https://doi.org/10.1016/j.jacc.2018.01.004>
2. 1997/ACA-0000000000000001

ACKNOWLEDGEMENT

I thank the SHCC IT Teams for the tremendous work, Inpatient Cardiac Rehabilitation Nurse Coordinators, Heart Failure Clinical Nurse Specialists for their contributions, and Cardiovascular Health Leadership for their unwavering support.

CONTACT INFORMATION

Jonathan David, MSN, RN, EBP-C, CCRP, NE-BC
Registered Nurse Coordinator (RNC Level III)
Inpatient Cardiac Rehabilitation
Office location: H1200L, B1 16 1st floor
Cardiovascular Health
Stanford Health Care
300 Pasteur Drive, Stanford, CA 94305
jodavid@stanfordhealthcare.org
Mobile: 950.550.2195



Turnkey Implementation Tool

Dear Leader,

We seek your support in implementing Turnkey Strategy/s, closing the gaps, and eliminating barriers to best practices in caring for our patients and families in the cardiac rehabilitation program/pulmonary rehabilitation/ cardiopulmonary rehabilitation program.

Topic: Example: Referrals to Cardiopulmonary Rehabilitation Program

Date: 5/18/2022

Program Manager/Clinical Lead: Jonathan David

Organizational Leader: Karen Edwards

S	<ul style="list-style-type: none">• Referrals to the cardiopulmonary program are obtained manually by visiting nursing units and clinics.
B	<ul style="list-style-type: none">• Patients with an eligible diagnosis benefit from participating in Cardiopulmonary Rehabilitation Program.• Improves early return to regular life routines, promotes cardiovascular/pulmonary wellness, and reduces readmits.
A	<ul style="list-style-type: none">• Among 3,000 eligible patients during 2020-2021, less than 11% were referred before discharge, and 26% of referrals were obtained manually.• Data collection is manually obtained when possible through chart reviews.• Unable to track 63% of the eligible patient population due to lack of EMR workflows.
R	<ul style="list-style-type: none">• Automating opt-out order sets with referral to the cardiopulmonary rehabilitation program.• Creating EMR workflows to enable real-time tracking and reporting through dashboard visuals.



Strategies EMR Data Extraction

- Design EMR workflows for CR & PR.
- Contact information technology team.
- Build and pilot EMR workflows.
- Validate data report.
- Track and review performance.
- Revise process and close gaps in practice.
- Monitor for consistency in patient and clinical outcomes.
- Once achieved, include new measures.



Questions?

Thank you for attending.

**Please rate this session in the
mobile app**

Contact Us

Karen:

karen.edwards@multicare.org

Tedd:

tedd.walsh@nkch.org

Jonathan:

jodavid@stanfordhealthcare.org

Yvette:

yvette.gerdes@UChealth.com