

# James A. Haley Cardiac Rehab Program

Mike Rohr – Physical Therapist

Warren Hucks – Physical therapist

Joanna Tabisz – Physical therapist

Lamarcus Grayson– Dietitian

Vanessa Milsom – Psychologist

Dr. Siddique – Medical Director

# Objectives

- Review evidence for Cardiac Rehab
- Review general guidelines for cardiac rehab
- Discuss structure of the cardiac rehab program at Tampa VA
- Review ordering process

# AHA/ACCF Secondary Prevention and Risk Reduction

- **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 [1]**
  - **Class I indication**
    - Immediately post CABG or post PCI Prior to discharge or at first follow-up office visit
      - *Level of evidence A*
    - Outpatients with diagnosis of ACS, CABG, or PCI
      - *Level of evidence A*
    - Outpatients with chronic, stable angina
      - *Level of evidence B*
  - **Class IIa indication**
    - Stable patients with CHF
      - *Level of evidence B*

# Cardiac Rehab in the Literature

- 2017 Meta-regression analysis [2]
  - 33 trials(22 RTCs, 7 nonrandomized, 4 observational cohort. 15133 patients
    - Lower all cause mortality with high (36 session) and medium (12-36 sessions) dose:
      - High dose - RR 0.56 (95% CI 0.41 - 0.78)
      - Medium dose – RR 0.58 (0.41-0.78)
    - High dose is needed to prevent effect on CV hospitalization, CABG, and PCI
- 2016 metanalysis: [3]
  - 63 trials that randomly assigned 14,486 patients to exercise-based cardiac rehabilitation or non referral following MI or revascularization
    - Lower risk of Cardiovascular (CV) death: RR 0.74 (95% CI 0.64 - 0.86)
    - Lower risk of hospital admission: RR 0.82 (95% CI 0.70 – 0.96)
    - No difference on all cause mortality

2. Sntiago de Araujo C, Marzolini S, Pakosh M, Grace SL. Effect of Cardiac Rehabilitation Dose on Mortality and Morbidity: A systematic Review and Meta-regression Analysis. *Mayo Clin Proc* 2017;92(11): 1644-1659
3. Anderson L, Oldridge N, Thompson DR, Zwisler AD, Rees K, Martin N, Taylor RS. Exercise-Based Cardiac Rehabilitation for Coronary Heart Disease: Cochrane Systematic Review and Meta-Analysis. *J Am Coll Cardiol*. 2016;67(1):1

# Cardiac Rehab in the Literature

- 2011 Meta-analysis [4]
  - 34 RTCs, 6,111 patients who recently survived a MI
    - Lower risk of all-cause mortality: OR 0.74 (95% CI 0.58 - 0.95)
    - Lower risk of CV mortality: OR 0.64 (95% CI 0.46-0.88)
    - Lower risk of reinfarction: OR 0.53 (95% CI 0.38 – 0.76)
- 2010 Retrospective of Medicare beneficiaries [5]
  - 30161 elderly patients who attended at least 1 CR session 2000-2005
    - 14% lower risk of death and 12% lower risk of MI for those who attended 36 vs 24 sessions:
      - HR 0.86 95% CI 0.77-0.97, HR 0.88 95% CI 0.83-0.93 respectively
    - 22% lower risk of death and 23% lower risk of MI for those who attended 36 vs 12 sessions:
      - HR 0.78 95% CI 0.71-0.87, HR 0.77 95% CI 0.69-0.87 respectively
    - 47% lower risk of death and 31% lower risk of MI for those who attended 36 vs 1 session:
      - HR 0.53 95% CI 0.48-0.59, HR 0.69 95% CI 0.58-0.81 respectively

4. Lawler PR, Filion KB, Eisenberg MJ. Efficacy of exercise-based cardiac rehabilitation post-Myocardial infarction: A systematic review and meta-analysis for randomized controlled trials. *Am Heart J.* 2011; 162:571-584
5. Hammill B G, Curtis L H, Schulman KA, Whellan D J. Relationship Between Cardiac Rehabilitation and Long-Term Risks of Death and Myocardial Infarction Among Elderly Medicare Beneficiaries. *Circulation.* 2010; 121: 63-70

# Cardiac Rehab in the Literature - Summary

- Cardiac Rehab Can reduce all cause/Cardiac mortality, subsequent MIs, and hospitalizations
- Improve Modifiable risk factors
- Increased dose = increased effect
  - Some is better than none
  - optimal dose is 36 or more sessions
    - 3 sessions per week x 12 weeks

# Only a fraction of those who will benefit from Cardiac Rehab Get referred

- Only 20 to 30 percent of people eligible for Cardiac Rehab are referred [6-10]

6. Ades PA. Cardiac Rehabilitation and Secondary prevention of Coronary Heart Disease. N Engl J Med. 2001; 345(12):892
7. Mazzini MJ, Stevens GR, Whalen D, Ozonoff A, Balady GJ. Am J Cardiol. 2008; 101(8): 1084
8. Arena R, Williams M, Forman DE, Cahalin LP, Coke L, Myers J, Hamm L, Kris-Etherton P, Humphrey R, Bittner V, Lavie CJ. Increasing referral and participation rates to outpatient cardiac rehabilitation: the valuable role of healthcare professionals in the inpatient and home health settings: a science advisory from the American Heart Association. Circulation. 2012 Mar;125(10):1321-9
9. Jolly K, Lip GY, Taylor RS, Raftery J, Mant J, Lane D, Greenfield S, Stevens A. The Birmingham Rehabilitation Uptake Maximisation study (BRUM): a randomised controlled trial comparing home-based with centre-based cardiac rehabilitation. Heart. 2009;95(1):36
10. Blackburn GG, Foody JM, Sprecher DL, Park E, Apperson-Hansen C, Pashkow FJ. Cardiac rehabilitation participation patterns in a large, tertiary care center: evidence for selection bias. J Cardiopulm Rehabil. 2000 May;20(3):189-95

# Cardiac Rehabilitation: General Guidelines

- “Cardiac rehabilitation is a comprehensive exercise, education, and behavior modification program designed to improve the physical and emotional condition of patients with heart disease.”
  - AACVPR





# Cardiac Rehabilitation: General Guidelines

- AHA/AACVPR: All Cardiac Rehab program should contain components to:
  - Optimize Cardiovascular risk reduction
  - Foster healthy behaviors
  - Assist with compliance
  - Reduce disability
  - Promote an active lifestyle
- Mostly secondary prevention, though there is some component of tertiary prevention
- Should have the following 3 aspects:
  - Exercise training
  - Dietary counseling
  - Psychological interventions

# Cardiac Rehabilitation Indications

- Acute MI
  - Especially within the preceding 12 months
- CABG
- Stable angina pectoris
- Heart valve repair/replacement
- Percutaneous coronary intervention (PCI) with or without stenting
- Heart transplant
- LVAD
- Chronic heart failure
- Peripheral arterial disease



# Cardiac Rehab Contraindications

1. Active substance abuse.
2. Advanced heart failure.
3. Impaired cognition that significantly interferes with ability to make behavior changes.
4. Intractable orthopedic pain that inhibits ability to tolerate exercise.
  - Or other orthopedic condition that interferes with aerobic exercise
5. Severe pulmonary disease requiring supplemental oxygen
6. Neurological conditions that prohibit aerobic exercise.
7. Psychological conditions that interfere with ability to make lifestyle changes.
8. Uncontrolled resting hypertension
9. Severe Aortic Stenosis.
10. Unstable angina.
11. Uncontrolled Ventricular dysrhythmias.
12. High degree heart block.

# Cardiac Rehab

- Perform a moderate intensity aerobic exercise program 5-6 days/week
  - Tolerate sustained activity at some level for 20 minutes without stopping.
- Track dietary intake and make changes based on recommendations from a dietitian
- Attempt smoking cessation if they are currently smoking.
- Participate in a group-based program.

# Cardiac Rehab at the Tampa VA

# Cardiac Rehab Team

- Mike Rohr – PT
- Warren Hucks – PT
- Joanna Tabisz - PT
- Vanessa Milsom – Psychologist
- Lamarcus Grayson – Dietitian
- Dr. Siddique – Medical Director

# Structure of Cardiac Rehab at the VA

- Pre-enrollment process
- 12 week program
  - 1-2 supervised exercise sessions/week
  - 1 virtual session for education

# Process After Consult is Entered

- Chart Review
- Patients attend an initial session (virtually or in-person) to educate them about the structure and goals of the program:
  - Ensure they are appropriate candidates and that they are agreeable to enroll



# Process After Patients Agree to Enroll

- Exercise stress test is scheduled
  - Bruce protocol
  - Modified Bruce
  - WHO bike protocol
- Case is reviewed with Dr. Siddique
- Individual assessment by Psychology
- Program evaluation
  - Initial exercise session/baseline measures
    - Labs
    - Ht, Wt, Ab Circ, WHtR

# Program Structure

- Weekly virtual educational seminar
  - Wednesdays (10:00 – 11:00)
- Small group exercise sessions
  - Monday, Tuesday, Thursday
  - 1 to 4 patients per hour
  - Aerobic exercise – bike, treadmill, elliptical
  - Continuous, single lead telemetry monitoring
- Regular in-person check-ins with the dietitian
- Individual follow up from psychology as needed







# Cardiac Rehab: Class list

- Intro to heart disease: what is the disease process and what are the treatments available
- Risk Factors/exercise for heart disease
- Medications and heart disease
- Social support/communication
- Healthy Sleep Habits
- Stress management
- Changing your eating habits
- Food labels and sodium
- Lipids and dietary fats
- Misc heart healthy information
- Grocery store tour
- Cooking demonstration and health food tasting

# Cardiac Rehab Consult Process

- Use one of the following consults
  - Cardiology/Cardiac Rehab Clinic - Outpatient
  - RMS Cardiac Rehab - Outpt

# POST COVID REHAB CLINIC

Joanna Tabisz, PT, DPT, CCS

Cardiopulmonary PT - Post COVID Rehab Clinic

James A. Haley VA

Slides adapted from Dr. Morgan Pine, DO

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# Most COVID Long-Haulers Still Having Symptoms 15 Months Later

May 25, 2022, at 11:39 a.m.



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Inflation

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LONG COVID

## 'Burning From the Inside Out': 2 NYC Long Haulers Say They Can't Shake These Symptoms

Long COVID patients describe the grueling stories of survival overcoming the acute coronavirus infection nearly two years ago yet still struggling with lingering symptoms.

By Linda Gaudino • Published April 4, 2022 • Updated on April 4, 2022 at 9:42 am





# Post COVID Condition Definitions

- CDC definition for a post COVID condition:
  - “health issues that persist more than four weeks after being infected with COVID-19.”<sup>1</sup>
- Other definitions/terms as well



1. Chippe V, Aleem A, Anjum F. Post Acute Coronavirus (COVID-19) Syndrome. [Updated 2022 May 4]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK570608/>

# Common Symptoms

- Fatigue
- Breathlessness
- Cough
- Chest pain
- Palpitations
- Headaches
- Joint pain
- Myalgias
- Weakness
- Diarrhea
- Rash
- Hair loss
- Impaired balance and gait
- Neurocognitive issues “brain fog”
- Worsened quality of life
- Increased anxiety/depression
- Dysphagia
- Altered smell and taste
- Worsening of pre-COVID conditions
- Insomnia

# Unique Features

Affects survivors of all COVID 19 disease severity

Persistent symptoms are reported in different durations and frequencies.

Autonomic Dysfunction

Loss of smell/taste

Multi-system involvement

# Our Post COVID Rehab Clinic

- Clinic's aim: To help veterans get back to their pre-COVID baseline
- Multidisciplinary Team
  - Physician (PMR), Morgan Pyne, DO; Elana Hartman, MD.
  - Cardiopulmonary PT: Joanna Tabisz, PT, DPT, CCS
  - Occupational Therapist: Kelsie Bell, MOT, OTR/L
  - Speech Therapist: Sarah Almaguer, SLP
  - Neuropsychology: Dr. Danielle Herring PhD
  - Psychology: Nathaniel Flores PhD, MAT
  - Music Therapist: Christian Mazza MT-BC
  - Social Worker: Bharatiben Jamro
  - Admin: Melissa Hoke, Kenneth Etienne
- Direct Scheduling Model
- Mix of in person and virtual appointments (majority virtual)

- Initial evaluation with the physiatrist
- Individualized plan
- Unique features
  - Mostly virtual
  - Support groups
  - Smell program
  - Ability to use cardiac rehab equipment for exercise sessions



# Cardiopulmonary Physical Therapy

- Evaluation and assessment of cardiopulmonary impairments
- Monitored exercise session
- 1:1 education regarding appropriate exercise response and progression
- Exercises/instruction to address breathing mechanics
- Follow-up as needed

# Post-COVID Clinic Consult

- Self-referral - Instruct patient to call 813-816-7150; option 2

# Questions?

Joanna Tabisz – [joanna.tabisz@va.gov](mailto:joanna.tabisz@va.gov)

Ext 6123



# References

- 1. Chippa V, Aleem A, Anjum F. Post Acute Coronavirus (COVID-19) Syndrome. [Updated 2022 May 4]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK570608/>
- 2. Logue, J. K., Franko, N. M., McCulloch, D. J., McDonald, D., Magedson, A., Wolf, C. R., & Chu, H. Y. (2021). Sequelae in Adults at 6 Months After COVID-19 Infection. JAMA network open, 4(2), e210830. <https://doi.org/10.1001/jamanetworkopen.2021.0830>

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1. Smith SC, Benjamin EJ, Bonow RO, et al. AHA/ACCF Secondary Prevention and Risk Reduction Therapy for Patients With Coronary and Other Atherosclerotic Vascular Disease: 2011 Update. *Circulation*. 2011; 124:2458-2473.
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