

Cardiac, Pulmonary & PAD Rehab

2019

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Purpose & Agenda

- Provide an overview of Cardiac, Pulmonary and PAD SET Rehab for OhioHealth
- Review program components

Cardiac Rehab

OhioHealth Cardiac Rehab Programs

- McConnell Heart Health Center
- Grant Medical Center
- Doctor's Hospital
- Grady Memorial Hospital
- Dublin Methodist Hospital
- Westerville Medical Center
- Grove City Methodist Hospital
- Pickerington Medical Center
- OhioHealth Mansfield Hospital
- Hardin Memorial Hospital
- Marion General Hospital
- O'Bleness Hospital

CMS Appropriate Diagnoses for Cardiac Rehab

- MI within the past year
- CABG
- Stable angina
- Valvular repair or replacement (including TAVR)
- PCI
- Heart transplant
- Chronic systolic heart failure
 - LVEF 35% or less & NYHA II to IV symptoms despite being on optimal heart failure therapy for at least six weeks.
 - Stable patients are defined as patients who have not had recent (≤ 6 weeks) or planned (≤ 6 months) major cardiovascular hospitalizations or procedures.

Cardiac Rehabilitation: Class IA AHA/ACC Recommendation



- Coronary Heart Disease
- Bypass Surgery
- Heart Failure with ↓EF
- Valvular Heart Disease
- Transplant
- PAD???



Sandesara PB. JACC. 2015;65:389-95

Steps to Get into CR:

- Timing of intake depends on admitting diagnosis:
 - PCI – within 7 days of hospital discharge
 - TAVR – within 2 weeks
 - CABG/surgical valve – 4 weeks (or after follow up with surgeon)
 - HF – stable for at least 6 weeks
- To Refer:
 - Ambulatory Referral to Cardiac Rehab in CareConnect
- Scheduled intake
 - One Hour Long: Consult/Interview with Patient
 - 6 Minute Walk
 - Risk factor assessments
 - Goal Setting

Exercises

- Various Cardiovascular modalities including:
 - Treadmill
 - Upright & recumbent bikes
 - Elliptical
 - Seated stepper / elliptical
 - UBE, Rower, etc.
- Strength exercises:
 - Body weight
 - Dumbbells
 - Bands



Progression

- Progression of exercise is based on individual needs and risk factor modification
- Factors that are considered include:
 - Initial fitness level
 - Patient motivation
 - Patient goals
 - Presence/absence of symptoms
 - Musculoskeletal limitations

CR utilization

- Utilization is defined as a patient who attends one Cardiac Rehab exercise session
- YTD, 40% of patients who qualify participate in Phase II cardiac rehab
- Goal is to get to 50% participation in FY19
 - 70% participation by 2022 (CMS target)

Pulmonary Rehab

OhioHealth Pulmonary Rehab

- McConnell Heart Health Center
- Grant Medical Center
- Doctor's Hospital
- Grady Memorial Hospital
- Grove City Methodist Hospital
- OhioHealth Mansfield Hospital
- Hardin Memorial Hospital
- Marion General Hospital
- O'Bleness Hospital

Pulmonary Rehab

- Physician-supervised exercise program geared toward improving the well-being of people with chronic/on-going breathing problems

POTENTIAL DIAGNOSES			
COPD	Chronic Emphysema	Chronic Bronchitis	Sarcoidosis
Restrictive Lung Disease	Pulmonary Fibrosis	Asthma	

Program Components

- Access to a comprehensive, integrated program with a team of experienced clinicians
- An individualized treatment plan
- Structured exercise program supervised by clinical exercise physiologists, nurses and Respiratory Therapists
- Stress management, lifestyle and health responsibility counseling
- Physician supervision and program management to ensure patients can participate in a safe, comprehensive program
- Diet & nutrition education
- Opportunities for family participation
- Free month of fitness membership for pulmonary rehabilitation graduates @ McConnell Heart Health Center & Grant Health & Fitness*
- Risk factor reduction education, including tobacco abuse and obesity

Steps to Get into PR:

- Patient needs to complete:
 - PFTs within 6 months (COPD Diagnosis)
- To Refer:
 - Ambulatory Referral to Pulmonary Rehab in CareConnect
- Scheduled intake
 - One Hour Long: Consult/Interview with Patient
 - 6 Minute Walk
 - Gather Pre-program Paperwork (Chronic Respiratory Questionnaire, Rate Your Plate, Pulmonary Knowledge Test, mMRC dyspnea scale)
 - Goal Setting

Rehab classes

- 8 weeks of classes
- 8 -10 people per class
- 1 hour exercise
 - 40 min machines (treadmill, NuStep, recumbent bike, elliptical)
 - 20 min resistance and stretching
- 20 min education



Education Offered

- Dietitian: maintaining a healthy weight, proper nutrition, quick and easy meal prep, and dietary tips for better breathing
- Psychologist: stress management benefits, relaxation techniques, challenging negative thoughts, depression warning signs
- Clinical Exercise Psychologist and Respiratory Therapist: understanding lung function, take control of breathlessness, breathe easy, get to know your lung disease, meds to control breathlessness, maintaining an active lifestyle, risk of being obese/underweight
- Pharmacist (ad hoc): Medication education

PAD SET

Peripheral Arterial Disease Structured Exercise Therapy

OhioHealth PAD SET Programs

- McConnell Heart Health Center
- OhioHealth Mansfield Hospital
- O'Bleness Hospital

PAD

- PAD typically occurs when plaque builds up in the arteries of the legs, reducing blood flow to the legs and feet.
- Symptoms include **claudication** – which is leg pain and/or cramping, that happens when walking or climbing stairs. Patients with PAD are at greater risk of heart attack and stroke.



PAD SET

- SET for PAD is a supervised exercise program aimed at increasing the amount of time a patient is able to walk or exercise and decrease claudication.
- Patient must be symptomatic to qualify for the program

How does exercise help PAD?

- Improved oxygen uptake by exercising muscles
- Improved endothelial function
- Increase blood supply
- Reduction of CV risk factors
- Improved gait
- Increased pain tolerance

Initial appointment

GXT – graded exercise test

- Gardner Skinner protocol
 - 2.0mph 0%, increasing by 2% every 2 minutes
 - Stop test when patient reaches 5/5 claudication pain
 - Determine MET level



Intake Appointment

- Patient does not meet with NP or physician
- We will go over medical history, risk factors, medications, explain program, and set goals

Exercise Protocol

- Contrary to how we handle angina, we actually want patients to push through this claudication pain in their legs for the best benefit.
- The best exercise is interval treadmill walking to the point of moderate to near-maximal pain, and then sitting and resting until that pain resolves.
- Sessions are 3 days a week for 40-60 minutes.
- Planned Exercise “bouts” are used, but are individualized based on specific patient needs

Exercise Bouts – Example

≤2.9 METs

5 minute warm up
3 x 3 x 3 x 3 x 3
5 minute cool down



1

3.0-3.6 METs

5 minute warm up
4 x 4 x 4 x 4 x 4
5 minute cool down



2

3.7-4.1 METs

5 minute warm up
5 x 5 x 5 x 5 x 5
5 minute cool down



3

4.2-4.7 METs

5 minute warm up
6 x 6 x 6 x 6 x 6
5 minute cool down



4

4.8-5.2 METs

5 minute warm up
7 x 7 x 7 x 7 x 7
5 minute cool down



5

≥5.3 METs

5 minute warm up
8 x 8 x 8 x 8 x 8
5 minute cool down



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THE CLAUDICATION PAIN SCALE

NO PAIN	1
ONSET OF PAIN	2
MILD PAIN	3
MODERATE PAIN	4
SEVERE PAIN	5

Rate of Perceived Exertion

Please rate your activity according to the following scale:

6	7 Very, very light	
		8
		9 Very light
10	11 Fairly light	
12	13 Somewhat hard	
14	15 Hard	
16	17 Very hard	
		18
		19 Very, very hard
20		

Education

- After exercise, patients will be encouraged to attend an education session where they will learn about healthy food choices, develop tools to handle stress, and learn about PAD and its risk factors.

All Programs

Barriers to participation – all programs

- Lack of patient understanding / consistent education
- Cost – out of pocket expenses and insurance coverage
- Time commitment for the patient & family
- Location – proximity to home or work
- Timing of sessions during the day / week
- Physical space limitations at satellite facilities
- Delayed start to CR; Time between event / surgery
- Lack of appropriate order / referral

Various class times and sizes

- Class times during weekdays, from 7:30 am to 5 pm start
- Class size varies depending on location and staffing
- Typically about 1 hour, three days a week

Phase I Cardiac Rehab

- Phase I Cardiac Rehab – education strategies for inpatients
 - Provide education to patients and families about next steps, lifestyle change & improved outcomes
 - Referral for patients to an OhioHealth facility
 - Or, send to local CR program if patient is out of our service area
- At Doctor's Hospital, Riverside Methodist Hospital & Grant Medical Center

Future directions / issues

- Additional projects: Partnership with HH and SNF to transition care
- Add additional RT services
- Expand services to more sites in Central Ohio
- Enhance current Marketing for all programs
- Improve Affordability of the programs
- Enhance technology based care

How can you help?

- Encourage Post-Cardiac Surgery Class to patients and family members
- Partner with Phase I CR Team
- Use provided marketing materials in waiting rooms
- Talking Points:
 - “I encourage you to enroll in one of our outpatient cardiac rehab programs. Your doctor can put in a referral for that if he/she hasn’t already. You will learn about lifestyle changes, including diet and exercise, that will help keep you from having more heart trouble later on.”

Thank you