IMPROVING OUTCOMES BY INVESTING IN CARDIAC CARE

Readiness Considerations
Introduction

Post-acute providers are familiar with caring for residents with cardiac conditions. But as CMS implements its new measure intended to reduce rehospitalizations and improve discharges to the community, many providers are searching for ways to expand their cardiac care programs.

A comprehensive cardiac care program may include, but is not limited to:

- Nursing assessment
- Observation
- Medication management
- Exercise
- Nutrition counseling
- Fluid management
- Rehabilitation services
- Management of comorbidities
- Respiratory services
- Prevention education, such as stress management and smoking cessation
- Self-care education
- Discussion of outpatient cardiac rehabilitation
- Post-discharge monitoring
When caring for cardiac patients, the goal is often to achieve and maintain stability of their blood pressure, heart rate and oxygen saturation while simultaneously improving their strength, endurance and ability to regain independence in daily living activities. Most residents will have a goal to return home. Depending on diagnosis and treatment decisions, some patients may become long-term residents and/or choose hospice or palliative care.

Several organizations and publications offer Skilled Nursing and Rehabilitation providers evidence-based guidance for implementing cardiac care services. Resources to consider include, but are not limited to:

- American Medical Association Clinical Practice Guidelines, “Heart Failure in the Post-Acute and Long-Term Care Setting”
- American Association of Cardiovascular and Pulmonary Rehabilitation
- American Heart Association and Heart Failure Society of America’s scientific statement, “Heart Failure Management in Skilled Nursing Facilities”
- American Geriatric Society
- Hartford Institute for Geriatric Nursing

This tool has been developed for providers of post-acute nursing and therapy services. The following sections and questions are designed to help you gain insight and information into enhancing clinical capabilities to develop or evolve your cardiac care program.

**Section I: Understand What’s at Stake**

As part of the Affordable Care Act, the Hospital Readmission Reduction Program (HRRP) and the IMPACT Act will bring significant changes to post-acute providers starting in October 2018. CMS expects to implement a measure for rehospitalization and discharge to community in 2016. The results of this publicly reported data will be used to reward or penalize providers by linking payment to quality and outcomes.

The IMPACT Act will require standardized clinical assessments for all post-acute Medicare providers, including Skilled Nursing facilities. Public reporting of quality measures will be required. Measures include:

- “Skin integrity and changes in skin integrity;
- Functional status, cognitive function, and changes in function and cognitive function;
- Medication reconciliation;
- Incidence of major falls;
- Transfer of health information and care preferences when an individual transitions;
- Resource use measures, including total estimated Medicare spending per beneficiary;
- Discharge to community; and
- All-condition risk-adjusted potentially preventable hospital readmissions rates”
Currently, congestive heart failure and myocardial infarction are two of the top three drivers for 30-day rehospitalization rates for Medicare beneficiaries. All-cause rehospitalization rates from nursing homes are approximately 25%.\textsuperscript{6}

**REHOSPITALIZATION RATES**

in Skilled Nursing facilities
for heart failure can range from

27% to 43%\textsuperscript{5}

Because heart failure, myocardial infarction and COPD contribute to a high level of rehospitalization, many post-acute care providers are looking for ways to build or enhance a cardiac care program to care for residents with these conditions.

**Section II: Define Your Role in the Community**

Consider developing collaborative relationships across the continuum of care, including hospitals, cardiologists, rehabilitation services, pharmacists, dietitians, cardiac rehabilitation providers and home health agencies, to share best practices, establish expectations and align on communication strategies. Having strong relationships will help ensure a smooth transition of care when the resident is ready to go home. Use the checklists in this guide to identify opportunities and facilitate communication.

**Section III: Outcomes, Outcomes, Outcomes**

Ultimately, it’s critical to define goals, monitor results and articulate performance to providers within your continuum of care. Outcomes are the currency and value you provide to the systems you belong to and the residents you serve. Outcome measures to consider focusing on include, but are not limited to:

- Rehospitalization rates
- Number of discharges to community
- Average length of stay
- Functional and cognitive status
- Medication reconciliation

Additional measures to consider tracking against the resident care plan may include, but are not limited to:

- Pain
- Strength
- Endurance
- Infection rates
- Vaccinations
- Lifestyle changes (smoking cessation, diet management)
- Independent activities of daily living
Section IV: Ready, Check, GO!

The following questions and prompts are not considered inclusive. Rather, they are meant to provide you and your teams with ideas for building a cardiac care program. Refer to the Cardiac Care: Enhance Capabilities for Improved Outcomes whitepaper for further information and research supporting the information in this list. Add and remove items as you see fit.

**Program and Staffing**

Consider the following when defining the scope and services you plan to provide in your cardiac care program.

- Determine the types of diagnoses, cardiac devices and post-surgical residents your center plans to serve
- Advance directives – define roles, responsibilities and expectations for completion and communication
- Nurse staffing – changing the mix toward more RNs
- Partnering with or hiring a nurse practitioner specializing in cardiac care
- Partnering with or hiring a cardiologist
- Provision of RN nursing care 24 hours a day
- Access to a nurse practitioner or cardiologist 24 hours a day
- Therapists available seven days a week
- Laboratory services, including CLIA-waived, point-of-care testing for immediate results and contract laboratory services with 24/7 stat capability. Clarify what the lab considers “stat” response time and share that information with physicians and nurse practitioners
- Diagnostic services, including on-site ECG for immediate testing and response and/or mobile services with 24/7 stat capability
- Pharmacy services, including on-site, first-dose medications and stat-service capability
- Dietitians available to meet and provide nutrition counseling and education for residents upon admission and throughout stay
- Social worker or recreational therapists to provide education and support on lifestyle changes
- Transitional care planning at time of admission, as appropriate
- Staff and/or contracted services to conduct follow-up phone calls or visits after resident goes home
- Strategies to engage residents and families upon admission in goal setting and healthcare planning for their entire stay and post-discharge
- Emergency plans to allow for a quick response to changes in resident condition
Staff Education

Competency has three parts: knowledge, skill and attitude. Consider current staff competencies and evaluate for opportunities to enhance knowledge, skills and attitudes for providing cardiac care. Considerations may include, but are not limited to:

- Specialty certification for nursing staff, such as Advanced Cardiac Life Support (ACLS) and/or the American Nurses Credentialing Center (ANCC) Cardiac-Vascular Nursing Certification
- Incorporate competency-based education topics into orientation and ongoing staff education.

Recommendations by the American Heart Association and Heart Failure Society of America include:

- Physiology of cardiovascular conditions, such as heart failure
- Knowledge of common heart medications, dosing and side effects
- Signs and symptoms of changes in condition, such as shortness of breath, fluid retention and chest pain
- Monitoring for changes in lab values
- Signs and symptoms of decreased cardiac output
- Exercise prescriptions for resistance and cardio exercises
- Knowledge of implantable devices, such as pacemakers, cardiac resynchronization therapy and implanted cardiac defibrillators (ICD)
- Proper weighing procedures
- Discharge plan and education
- When to notify the nurse or therapy supervisor
- When to call the healthcare provider
- How to respond in an emergency situation

Interprofessional Team Processes

As a team, consider how the following suggestions already exist in your cardiac care program, or use this as an opportunity to discuss how these might be incorporated:

- Identify residents with cardiac care needs on admission, and communicate to team members the reason for admission, diagnosis, plan and clinical risks or concerns
- Assess and document advance directives, including type and location of cardiac implantable electronic devices and residents’ wishes regarding resuscitation
- Define clinical pathways that incorporate the resident’s functional goals across the continuum of care
- Develop an individualized treatment plan, focusing on resident’s diagnosis, prognosis and individualized goals
- Obtain medical supervision to oversee an exercise program, establish exercise prescriptions, assess exercise tolerance and provide ongoing assessment of cardiac function as the resident increases exercise and daily activities
- Optimize treatment for risk factors and comorbidities, such as hypertension, high cholesterol, diabetes, depression, weight management and smoking
- Perform a medication reconciliation with the physician, nurse and pharmacist
- Prepare a response to changes in condition and emergency response plan
- Engage residents in care, especially exercise and self-care
- Provide specialty care for patients with Left Ventricular Assist Devices (LVADs)
Nursing Care

Nursing care for cardiac patients may include medical management as well as the potential for caring for post-surgical patients. Consider:

- Establishing a baseline and ongoing frequency of clinical assessments, including:
  - Blood pressure
  - Heart rate
  - Oxygen saturation
  - Respiratory assessment
  - Weight
  - Heart rhythm/ECG
  - Extremity perfusion
- Pain management
- Oxygen administration, as ordered
- Suctioning, as needed
- Establish baseline information of most current labs and pending orders
- Medication management, including identification of side effects and monitoring for drug interactions
- Anticoagulation management (dosing, INR testing/monitoring, nutrition counseling, safety education)
- Post-operative care (incision care, drain management, cardiac catheterization sites)
- Infection prevention
- Nutrition and hydration management
- Skin integrity assessment and management
- ADL support, including bathing, toileting, dressing and eating
- Resident and family engagement and education
Rehabilitation Services

According to the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR), integrating cardiac-specific exercise and education into post-acute care can help ensure safe and comprehensive cardiac care. Consider application of modified principles of cardiac rehabilitation including, but not limited to:

- **Exercise prescription for resistance and cardio exercises**
- **Definition of the type of monitoring to be done before, during and after exercise**
  - Blood pressure
  - Heart rate
  - Oxygen saturation
  - Respiratory assessment
  - ECG
  - Distance
  - Time
  - Watts
  - MET score

- **Resistance exercises**
  - Start with low intensity and high repetition
  - Intensity should be 50 - 70% of one repetition maximum
  - Consider 4 - 6 exercises working arms and legs, two times a week

- **Cardio exercises**
  - Circuit training
  - Walking
  - Cycling
  - Rowing

- **Therapeutic and functional exercises (ROM, stretching, dynamic balance, transfers, mobility)**

- **Manual therapy (massage for mobility and swelling, passive stretching)**

- **Resident and family engagement and education**
**Resident & Family Engagement & Education**

Residents who actively participate in their healthcare are more likely to engage in activities and adapt behaviors that promote and maintain health.\(^2\) Enhancing patient and family teaching can result in a 50% reduction in hospitalizations.\(^3\)

Consider the following recommendations for resident and family education, compiled from AACVPR and AHA:

- Information about the resident’s diagnosis and what to expect
- Abilities needed to perform self-care after discharge
- Recognition of signs and symptoms of changes and when to contact the physician or emergency services
- How to monitor and record weight and respond to changes. Review how to select and use home scales for consistent readings
- How to monitor changes in blood pressure, both hypertension and hypotension, and when to notify the physician. Teach how to use home blood pressure monitoring devices and proper technique to obtain consistent readings
- How to monitor oxygen saturation and heart rate at home. Teach how to use home pulse oximetry equipment to obtain consistent readings and when to notify the physician
- Dietary change, especially restricting dietary sodium in residents with heart failure. Review meal planning and food preparation plans after discharge
- How to manage prescription and nonprescription medications, focusing on medications with the highest potential for adverse outcomes (e.g., anticoagulants)
  - Provide opportunities to practice identifying medications, removing them from a container and deciding when and how to take them
  - Discuss side effects, including what to look for and report
  - Teach how to record all medications and encourage bringing that information every time they visit a doctor, dentist or other healthcare provider
- Physical activity, including resistance and cardio exercises. Provide instruction and encourage a return demonstration. Discuss safety considerations and how to self-assess exertion when exercising
- How to manage other medical conditions, such as diabetes or depression, and to contact physician with any concerns
- How to stay well, including importance of immunizations, managing alcohol intake and accessing smoking cessation classes and support
- Importance of managing follow-up appointments. Teach the resident and family why a recent hospitalization makes a person more vulnerable to additional hospitalizations and emphasize importance of keeping appointments with physicians
**Section V: Invest for Success**

Post-acute care providers are finding value investing in technology and equipment to support better care, outcomes and enhanced marketability to residents, physicians and hospitals. Special considerations should be made for equipment that provides effective treatment and captures data related to outcomes. Considerations and quantity suggestions are based on customer experiences and purchasing patterns.

**Nursing Care**

- **Vital signs monitor with spot and continuous monitoring, with or without EMR connectivity**
  
  *Consideration:* 1 - 2 per 30-bed unit. Consider short- vs. long-term resident monitoring needs, including frequency of continuous monitoring applications

- **Manual blood pressure cuff/sphygmomanometer**
  
  *Consideration:* 3 per 30-bed unit

- **Pulse oximetry**
  
  *Consideration:* 1 - 2 handheld monitoring devices per 30-bed unit. 1 continuous monitoring device per 30-bed unit, depending on capabilities of existing combination VSMs

- **ECG, 12-Lead**
  
  *Consideration:* 1 per facility. Consider more based on acuity and facility layout

- **Scale**
  
  *Consideration:* 1 wheelchair platform scale per floor. Consider additional scales in rehabilitation/wellness settings or different types of scales – such as standing or chair scales – depending on building layout and resident mobility

- **INR testing**
  
  *Consideration:* 1 per 60 beds. Consider additional based on acuity and facility layout
Doppler

**Consideration:** 1 per facility

Oxygen concentrators

**Consideration:** Average 15 - 20 5-liter models and 1 - 2 10-liter models for every 100 residents, assuming rooms do not have piped-in oxygen

Stethoscopes

**Consideration:** 1 for each nurse, CNA and therapist

**Therapy**

When selecting the equipment and amount needed, keep in mind equipment recommendations should be tailored based on the size of your gym and resident population. Consider a “circuit training” approach when providing exercise instruction to residents and when organizing equipment in the gym to enable easy transitions between equipment. Consider including the following in your gym:

**Cardio circuit training**

**Consideration:** 3 to 5 different pieces of cardio equipment for circuit training. Variability increases utilization and works a variety of muscle groups

- Treadmill
- Recumbent stepper
- Upper- and lower-body ergometer
- Recumbent bike
- Hybrid or upright bike
- Rowing machine
- Parallel bars
- ADA staircase

**Resistance circuit training**

**Consideration:** 3 to 5 different pieces of resistance training equipment. Variability increases utilization and works a variety of muscle groups

- Leg press strength machine
- Leg extension strength machine
- Chest press strength machine
- Dip/shrug strength machine
- Ab/back strength machine
- Pulley system
  (Traditionally used for resistance training; however, strength machines are recommended instead)
- Exercise balls
- Exercise bands
- Dumbbells
- Cuff weights
Care Environment

Staff education

- Geri manikin – supports simulation learning, a key to competency-based education. Moderate fidelity manikin features programmable heart and lung sounds, blood pressure and heart rate simulator, I.V. arm and more
- CPR manikin – supports simulation learning for CPR training

Resident & family engagement & education

- Transitional care kits – provide tailored education and product needs for a safe transition home. Available topics include heart failure, cardiac surgery after-care, how to stop smoking and caring for multiple comorbidities
- Resident educational materials – Pritchett and Hull offers a variety of educational materials
Cardiac patient resident room
- Bed – consider a 5-function bed with Trendelenburg and reverse Trendelenburg positions
- Mattress – select mattresses based on skin integrity concerns, pressure reduction needs and resident comfort
- Furniture – consider furniture that supports safety, customer satisfaction and marketability of your cardiac care program

Emergency preparedness:
Include one of the following for every 30-bed unit:
- Emergency carts stocked with equipment and supplies needed for quick response (e.g., oxygen, masks and tubing, suction, extra ECG leads, CPR board, CPR mask, I.V. supplies, etc.)
- AED
- First aid kits

This assessment is not meant to be inclusive of all needs. We hope it serves as a useful tool for a multidisciplinary team to generate a conversation about improving clinical capacity to care for residents with heart disease.
References


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