

# GUIDE

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MEDICAL  
RESPITE  
CARE

## Clinical Guidelines for Medical Respite Care: Cardiovascular Conditions

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## Introduction

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Cardiovascular disease (CVD) is one of the leading causes of morbidity and mortality among people experiencing homelessness (PEH)<sup>1,2</sup>. The disproportionate cardiovascular disease burden among people experiencing homelessness is multifactorial, resulting from a high prevalence of risk factors, barriers to care, and challenges managing CVD without stable housing. Risk factors include tobacco use, substance use, chronic stress, physical inactivity, decreased access to healthy foods, and untreated hypertension and diabetes<sup>2</sup>. These risk factors add to the complexity of managing CVD. Care is further negatively impacted by fragmented service delivery, late presentation to care, and comorbid behavioral health conditions. Additional challenges include difficulty following medication regimens, barriers to specialty care, and implementing exercise and dietary interventions. PEH can experience early onset disability and premature mortality as a consequence of cardiovascular disease states.

[Medical respite care](#) (MRC) programs create an opportunity and environment for patient-centered disease management strategies. These can be implemented in collaboration with Health Care for the Homeless (HCH) health centers and their respective interdisciplinary teams. Cardiovascular conditions may be the reason for referral to medical respite or may be diagnosed during the person's stay. **This document provides guidance to address cardiovascular conditions within medical respite care programs.**

### Key Terms and Definitions

[Congestive Heart Failure](#) (CHF) is a chronic progressive disorder caused by a weakness of the heart's ability to effectively pump blood into the systemic circulation, often times as a result of a myocardial infarction. Symptoms include shortness of breath and fatigue, and if left untreated by dietary adjustments and medication management, it can have devastating consequences.

[Coronary Artery Disease](#) (CAD) occurs when the major blood vessels perfusing the heart become damaged or diseased. Symptoms of advanced CAD can include chest pain and shortness of breath. CAD can occur as a result of plaque buildup in arteries perfusing the heart. Treatments can range from aggressive medication management to surgical intervention.

**Harm Reduction:** A philosophical approach to medical care that extends beyond substance use and, in general, establishes individual agency and self-determination as central to any health intervention or efforts towards well-being. Harm reduction approaches call for the non-judgmental, non-coercive provision of services and resources to people experiencing homelessness to assist people in reducing harms related to chronic health conditions or health behaviors. Harm reduction-based care is collaborative, provides education on available interventions, and centers the goals of the individual in care planning.

[Hypertension](#) (HTN) is defined by an increased force of blood pushing against the wall vessels and is classified by systolic and diastolic readings. These readings and classifications dictate treatment approaches. Often individuals are asymptomatic, and if not treated or adequately monitored, it can result in long lasting disability from cerebrovascular accidents.

[Hyperlipidemia](#) refers to any acquired or genetic disorder resulting in high level of lipids, which increases risk of atherosclerosis. Atherosclerosis is a precursor to vascular disease including coronary artery disease, cerebrovascular disease, and peripheral vascular disease. Individuals typically have no

symptoms with HLP and require dietary consultation, laboratory monitoring and, in some cases, medication management to avoid the detrimental effects of this disease.

**Peripheral Vascular Disease** (PVD), also known as Peripheral Artery, is a common circulatory problem in which narrowed arteries reduce blood flow to the limbs, kidneys, and/or intestines. PVD occurs as a result of narrowing, blockage, or spasms in a blood vessel, and often causes pain and fatigue. Narrowing and blockage can be caused by plaque build-up or injuries, infections, or injections to the limbs.

**Trauma Informed Care (TIC)**: A patient-centered approach to care that recognizes the impacts of trauma and actively works to prevent re-traumatization and promote recovery. The principles of TIC are grounded in establishing a trusting relationship and a safe physical and psychological space in which to address needs.

## Clinical Considerations

### Background

Cardiovascular disorders can have many causes including physiological, lifestyle, and environmental factors. Common risk factors for HTN, hyperlipidemia, CHF, CAD, and PVD include:

- Diets high in sodium or fat content
- Genetic predisposition
- Medical comorbidities such as kidney disease, diabetes, or other cardiovascular conditions
- Advanced age (for PEH, middle age is more likely a risk factor due to decreased access to care)
- Behavioral health diagnoses
- Substance and alcohol use
- Tobacco use
- Excessive stress or long-term stress (including the experience of homelessness, systemic racism, and inequality)
- Obesity
- Physical inactivity
- Cognitive delay

**For people experiencing homelessness, lack of access to resources can exacerbate pre-existing risk factors and limit the ability to implement recommendations to prevent the onset of disease or manage conditions once diagnosed, such as:**

- Limited access to medications or inability to safely store medications, or expensive or complicated medication regimens that are difficult to follow.
- Lack of access to bathrooms when medications may increase urination/bathroom use.
- Lack of access to foods that meet dietary recommendations, such as low fat or low sodium foods.
- Limited ability to engage in cardiovascular exercise due to concurrent musculoskeletal disorders or pain, and limited resources for activity such as adequate shoes and safe spaces to exercise.
- Health education materials that are not within literacy/health literacy recommendations.
- Limited access to health management activities, such as taking vital signs or weight, completing diagnostic or follow-up testing, laboratory testing, transportation to appointments, etc.
- Lack of access to personal devices to complete activities (such as blood pressure cuffs or scales).
- Complications in managing other health co-morbidities such as mental health.
- Lack of access to stable housing, affecting a person's ability to follow or prioritize disease management recommendations.

Medical respite care can be an opportunity to:

- Stabilize conditions following hospitalization,
- Develop self-management skills to prevent a significant health event,
- Learn and implement strategies to improve cardiovascular health,
- Mitigate social and environmental stressors that contribute to CVD, and
- Move towards housing to support overall health.

## Assessment

In all assessment processes, it is important to implement a [trauma-informed](#) and harm reduction-based approach, recognizing that people may not be ready to share their entire health history in the first encounter. A good history is key to creating an appropriate plan of care and can be built over several visits. A comprehensive assessment for cardiovascular conditions includes the following:

**[ASCVD risk calculator](#)**: Calculates 10-year risk of CVD based on age, gender, blood pressure, cholesterol levels, medical history, smoking status and medication use.

### Complete a History and Physical which includes:

- Gather medical history as available
- Vital Signs, Body Mass Index (BMI)
- Lungs, heart, extremities, skin, eyes
- Monitor for signs and symptoms of [alcohol](#) or [opiate](#) withdrawal
- Check status of immunizations and drug allergies
- Family history
- Assess dietary intake ([food frequency questionnaire](#))
- Assess [smoking/tobacco use habits](#) and interest in reduction
- Assess behavioral health (BH) disorders and substance use disorders, incorporating screening tools ([PHQ9](#), [DAST-10](#); [ASI](#))
- Assess current cognitive status, incorporating tools such as a [Mini-Cog](#) or [Mini Mental Status Exam](#)
- Assess living conditions, current and where the person may discharge to
- Assess [literacy](#) and [health literacy](#)
- Assess ability to attain self-management strategies to better maintain chronic CVD
- Assess [activity level](#) and barriers to activity
- Determine where the patient is going for care and any use of specialty services
- Reconcile medications, including over the counter (OTC) preps, and assess dosing frequency

### Congestive heart failure specific assessment includes:

- Assess for symptoms including shortness of breath, chest pain, rapid heartbeat, swelling in extremities, exercise intolerance
- Assess frequency of hospitalizations and disease comorbidities
- Assess access to bathroom facilities and potable water for hydration when not in the medical respite program
- Assess presence of, and need for, treatment for leg edema, including severity, symmetry, and skin breakdown

**Diagnostic:**

- Assess labs including those reflecting blood sugar, renal function and lipids, urine
- Assess EKG, ECHO, chest x-ray (CXR)

**Coronary Artery Disease specific assessment includes:**

- Assess for symptoms including chest pain, shortness of breath, fatigue, nausea, pain in arms/shoulders, exercise intolerance
- Assess frequency of hospitalizations and disease comorbidities

**Diagnostic:**

- Assess labs including those reflecting blood sugar, renal function and lipids, urine
- Assess EKG, CXR

**Hypertension specific assessment includes:**

- Psychiatric history
- Assess for symptoms including headache, chest pain, dizziness, visual disturbance, fatigue, nosebleed
- Assess frequency of hospitalizations and disease comorbidities

**Diagnostic:**

- Assess Labs including those reflecting blood sugar, renal function and lipids, urine
- Assess electrocardiogram (EKG), echocardiogram (ECHO)

**Hyperlipidemia specific assessment includes:**

- Identify medications used to manage BH disorders that can have adverse effect on lipids

**Diagnostic:**

- Assess labs including those reflecting blood sugar, renal/hepatic function and lipids, urine

**Peripheral Vascular Disease specific assessment includes:**

- Assess for symptoms of claudication
- Assess for peripheral pulses
- Assess for blue or purple skin discoloration of an extremity
- Assess skin integrity
- Measure the [Ankle Brachial Index](#)

## Care Plan and Management

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Strategies and treatment plans implemented should be person-centered, collaborative, and based on priorities and needs identified during the assessment process. As noted, interventions should be trauma-informed and integrate harm reduction principles to minimize risks and improve care. Providers can find additional detailed guidance on assessment and intervention of specific cardiovascular conditions in the *National Health Care for the Homeless Council Adapted Clinical Guidelines on Cardiovascular Conditions*.

### Person Specific Strategies

#### Individual strategies for management of HTN, hyperlipidemia, CHF, CAD, and PVD:

- Use of [motivational interviewing](#) to better collaborate with patient in developing patient-centered treatment plan.
- Discuss diet based on extent of food choices while at medical respite and in community/discharge locations.
- Medication management that is uniquely tailored to an individual's situation:
  - Simplify medication regimens as much as possible.
  - Account for cognition/presence of cognitive impairment and literacy levels.
  - Reconcile medication use.
  - Use medication boxes.
  - Review indication for each medication with patient.
  - Consider medication storage issues when prescribing, reconciling, and suggesting strategies for organization.
  - Consider the cost of medications prescribed and ability to continue medication after discharge.
- Monitoring for adverse side effects of medications.
  - Make adjustments as needed before discharge.
  - Supporting communication to prescribing provider regarding experience of side effects.
  - Education and discussion on what side effects are tolerable versus an emergency
- Support access to medical appointments, lab work appointments, and address transportation barriers.
  - Supporting the communication of lab work and results to the patient and their providers.
- Provide education and opportunity for self-management of chronic CV disease:
  - Self-monitoring weight and blood pressure.
  - Self-monitoring diet and sodium intake and hydration.

- Identifying appropriate and safe ways to exercise within the person's resources.
- Identifying symptoms of exacerbation and when to see their outpatient provider versus going to the emergency department (ED).
- Provide written materials that meet health literacy guidelines.
- Implement harm reduction strategies to decrease use of tobacco or other substances that might exacerbate cardiac conditions.
- Education on symptom management and recognition of appropriate time to use ED services.
- Use of peer support to provide mentorship to those who are receptive.
- Engagement with case management/care coordinator to identify current benefits or need for benefits and support implementation of plan of care.

**Congestive Heart Failure specific considerations:**

- Education on adverse effects of abrupt discontinuation of medications.
- Monitoring blood pressure, weight, and symptoms.
- Consider access to bathrooms when prescribing diuretics that will be taken after discharge from MRC.
- Management of leg edema through supplies for elevation and compression stockings as needed.

**Coronary Artery Disease specific considerations:**

- Education on adverse effects of abrupt discontinuation of medications.
- Access to foods that are heart healthy and low in sodium and saturated fats.
- Education on the use of nitroglycerin and storage, if prescribed.
- Education on when to seek emergency treatment for symptoms/angina.

**Hypertension specific considerations:**

- Schedule timely appointments for labs and other necessary diagnostic tests including EKG and ECHO.
- Monitor blood pressure and make modifications to medication regimen.
  - Daily vital signs may be necessary initially for monitoring.

**Hyperlipidemia specific considerations:**

- Follow-up to monitor lipids and hepatic function.
- Identify non-pharmacological strategies to address hyperlipidemia and consider feasible and accessible dietary choices that are culturally appropriate.
- Education on the need for long term medication management.



**Peripheral Vascular Disease specific considerations:**

- If following a bypass procedure, assess incision for infection.
- If blue or purple skin discoloration of an extremity, send to emergency room.
- Education on foot and wound care.

## Environmental Strategies

- Provide transportation to appointments.
- Ensure ability to regularly monitor vital signs and weight.
- Education of food workers about dietary needs of those with CV disease.
- Ensure non-medical staff are trained in cardiac emergency response protocols.
- Consider ease and access of restroom facility with diuretic use.
- Provide supplies, such as water bottles, to support hydration throughout the day.
- Adequate space to store and use durable medical equipment (DME).
- Access to telehealth for follow-up and specialty care.
- Hold exercise-based activity groups to incorporate safe movement and physical activity.

## Referrals

- Cardiology: for diagnosis and management of cardiovascular conditions.
- Vascular: for diagnosis and management of conditions related to blood vessels.
- Physical Therapy: for evaluation to identify underlying physiological factors and impact of neurological conditions and mobility (including gait, balance, and motor skills).
- Behavioral Health: for assessment and ongoing treatment to adjust to management of cardiovascular conditions and support health-related behavior change.
- Timely appointments and follow-up to monitor labs.

## Discharge Planning

Patients with cardiovascular conditions may be ready for discharge from medical respite care when:

- Symptoms are stable and medications no longer need to be adjusted.
- Supports have been identified in the community that patient can access upon discharge to maintain care continuity.
- Patient is able to independently manage medication regimens or has support to manage medications.
- Patient has adequate supply of medications and other necessary supplies pending follow-up evaluation with provider.

- Patient is connected with available supports to address environmental factors, such as awareness of where they can access “heart-friendly” or “heart-healthy” foods.
- Patient is connected with, and is able to independently go to, specialist appointments, or has needed appointment management supports in place.
- Patient has completed needed diagnostic and follow-up testing.
- Patient demonstrates understanding of symptoms of worsening condition and cardiac emergencies, and impact of current temperatures/weather on cardiovascular conditions.
- Patient has enough endurance to navigate in the community between necessary resources/shelter/living arrangements and has adequate mobility devices, and, if not, patient is discharged to supportive housing with case management to assist with navigation.

## Advanced Training and Advocacy

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- Training for all medical respite program staff on emergency response to cardiovascular events: <https://cpr.heart.org/en/>
- Advocacy within the community to increase access to nutritious foods that meet dietary recommendations, including meal programs, food banks, and other food resources.
- Advocacy for safe, stable housing transitions so individuals can continue to focus on health management and stabilization.
- Encouraging the smooth transition of care upon discharge to respective providers including behavioral health, primary care providers and specialists.

## Case Example 1

**Background:** John (he/him/his) is a 60-year-old diagnosed with hepatitis C and known hypertension. He also has a long-standing history of heavy alcohol use. John was referred to the medical respite program due to exacerbation and uncontrolled hypertension, with concerns he was at high risk for a substantial cardiovascular event. John stayed both outside, and at the nearby emergency shelter, depending on when they had beds available. He also reported difficulty tolerating the shelter environment for “more than a few days at a time,” but went when he needed access to their shower facilities.

In the month prior to his respite stay, three of John’s family members passed away. Feeling sad about these losses, John did not refill his antihypertensive medications when they ran out and experienced a brief period of substantially heavier alcohol use. He presented to his PCP at a shelter-based HCH clinic in order to access medications for hypertension. He denied any physical symptoms but his PHQ-9 screen indicated risk for depression. His blood pressure was 178/102. He had no signs of alcohol withdrawal and his physical examination was essentially normal.

After admission to the medical respite program John spent a lot of time alone and sleeping, noting he felt very tired throughout most of the day, and reported headaches to the staff in the later afternoon. John engaged with the medical respite staff regularly to complete daily vital signs and routine check-ins.

**Assessment:** John was assessed by the medical respite provider to have severe, but asymptomatic hypertension. His medical respite team of providers and nurses observed him closely for symptoms and signs of alcohol withdrawal and monitored his blood pressure three times per day. He was also assessed frequently for symptoms that may indicate a complication of severe hypertension, including chest pain, shortness of breath, headache, and visual changes. The behavioral health consultant also met with John and indicated he likely was experiencing moderate depression and increased alcohol use prior to admission.

**Intervention:** John’s antihypertensive medications were restarted and the nursing staff provided John with continued health education for management of hypertension, symptoms to monitor, potential side effects of medications, and potential complications of untreated hypertension. Over the course of two weeks John’s blood pressure gradually improved to 140/90. Upon consultation with his PCP, the medical respite team further titrated his antihypertensive medications, and with John’s input, his regimen was simplified to include only once-per-day dosing that he could take first thing in the morning. John was also provided information about the effects of alcohol and stress on blood pressure, and the relationship between his mental health and cardiovascular health. John continued to meet with the behavioral health consultant and was agreeable to transitioning care to the behavioral health team located within the HCH clinic. The case manager assisted John with assessing his status on the local Coordinated Entry housing list and identified and completed additional actions to update his housing application.

**Outcomes:** John overall had a 4-week stay at the medical respite program to address and stabilize his cardiovascular needs, and his mental health needs, as they were affecting his overall self-management. Prior to discharge, he was able to consistently re-engage in care with his primary care provider and attend two behavioral health appointments. John had reduced alcohol use in the context of the medical respite stay and noted this would be important to talk with his mental health provider about. John overall reported improved energy and noted that he experienced fewer headaches, enabling him to better care for his needs and access resources. John also had updated information regarding his housing application status and was able to demonstrate how to connect with the Coordinated Entry case manager for continued updates.

## Case Example 2

**Background:** Sam (he/him/his) is a 62-year-old referred to the medical respite program following multiple emergency room visits and hospitalizations for hypertensive crisis. He had left the hospital on several occasions against medical advice after declining admission and would return to the emergency shelter. He was referred by the Health Care for the Homeless program due to not following through with his medication regimen, resulting in life threatening blood pressure readings. He would present in clinic with unused medications and appear to be overwhelmed. Sam had experienced a stroke last year as a result of his poorly controlled hypertension, and since that time, has had difficulty with articulation and expressive speech and appears to have some degree of cognitive impairment.

At admission to medical respite care Sam struggled to remember the purpose of his medication and to understand the consequences of not following the medication regimen.

**Assessment:** The respite care provider reviewed Sam's medications and took time to explain each of the medications, the frequency in which they are taken and for what purpose. A cognitive assessment was done, demonstrating mild cognitive impairment, particularly related to memory, most likely secondary to recent stroke. Sam also indicated that his understanding of medication was to "take it so you feel better," but had difficulty comprehending taking medicine as a preventative measure (versus responding to symptoms). He most often took his blood pressure medication when he had headaches, after having learned that was a symptom of high blood pressure.

**Intervention:** The MRC provider completed medication reconciliation while engaging Sam, which included sorting through all of Sam's medications, some of which were expired. The provider then developed a simple medication regimen. They discussed the use of color-coded pill boxes that would be filled weekly. Once Sam was assisted by his case manager to acquire a working phone, they also discussed using alarms to assist with reminders for medication administration. Sam was able to transition to independently taking medications daily from his pillbox, and identified a routine to see his provider weekly for a refilled pillbox. In addition, Sam was introduced to the use of a blood pressure cuff to self-monitor his blood pressure readings, with discussions centered around normal and abnormal blood pressure readings. Sam was provided with education and practice identifying abnormal readings and discussed potential symptoms that may be associated with elevated blood pressure, including visual changes, headaches and a greater impairment in speech and gait. Sam also worked with the medical respite case manager to apply for senior housing options, and to re-start his monthly Social Security Income payments.

**Outcome:** Sam was able to establish more consistent care with an HCH provider during his 25-day stay at MRC. At discharge his medication regimen was reviewed and communicated to his HCH provider to ensure ongoing continuity of care. Sam had plans to return to the shelter while he awaited a vacancy at a senior housing building. He demonstrated understanding of the importance of blood pressure self-monitoring and following his medication regimen. He was able to identify his follow-up appointments at the HCH, including the standing weekly appointment to pick-up his pillbox, and had appointment reminders entered into his phone.

## References

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