

GUIDE

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Clinical Guidelines for Medical Respite Care: Respiratory Conditions

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Introduction

Respiratory conditions are a significant health concern for people experiencing homelessness. This population has higher rates of asthma, chronic obstructive pulmonary disease, influenza, and pneumonia than the general population^{1,2,3,4}. Respiratory conditions have contributed to higher rates of mortality among people experiencing homelessness (PEH) historically and have been related to causes of death for adults experiencing homelessness and formerly homeless adults, especially when combined with other chronic conditions^{5,6}. Since 2020 this high burden of respiratory conditions among PEH has also contributed to increased mortality among those who contract COVID-19.^{5,6} Respiratory conditions can be exacerbated by risk factors commonly encountered by people experiencing homelessness including extreme weather, allergens and poor outdoor air quality, poor ventilation, exposure to infections in congregate facilities, and lack of access to routine primary and preventive care. Smoking tobacco and other drugs can also contribute to respiratory symptoms and disease progression. These risk factors contribute to an increased likelihood a person will seek out emergency and hospital care for respiratory conditions, and may experience more severe symptoms and long-term health effects. Due to the increased likelihood someone will be hospitalized for an acute respiratory infection or exacerbation, medical respite programs should be prepared to address respiratory conditions. Respiratory infections are a common reason for referral to medical respite programs, especially during cold-weather months⁷. Medical respite offers opportunity for stabilization of conditions and to address and develop long-term strategies for respiratory health. **This document provides guidance to addressing respiratory conditions within medical respite care programs.** Of note, although they are respiratory infectious diseases, COVID-19 and tuberculosis are not included in this document as they have separate guidelines for care within medical respite programs.

Key Terms and Definitions

Asthma is a chronic condition that affects the airways of the lungs. The airways can become inflamed and narrowed, making it harder for air to flow in and out when breathing. Signs and symptoms of asthma include shortness of breath (SOB), chest tightness or pain, wheezing, trouble sleeping due to SOB, and coughing/wheezing attacks worsened by other respiratory viruses. Asthma can be caused by a combination of genetic and environmental factors.

Chronic Obstructive Pulmonary Disease (COPD) is a chronic, inflammatory lung disease that causes obstructed airflow from the lungs. Symptoms include breathing difficulty, cough, mucus (sputum) production and wheezing. COPD is typically caused by long-term exposure to irritating gases or particles, such as cigarette smoke. People with COPD are at increased risk of developing heart disease, lung cancer and a variety of other conditions. Emphysema and chronic bronchitis are two common conditions that contribute to COPD.

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.

Influenza (flu) is a contagious viral infection that can cause mild to severe symptoms. Symptoms of the flu include fever, muscle, body, and head aches, chills, fatigue, cough, runny nose, sore throat, vomiting and diarrhea. Flu symptoms may have a sudden onset. Those who are over the age of 65, or who have chronic diseases, obesity, and weakened immune systems are more at risk for experiencing [flu complications](#). Additional complications can include pneumonia, bronchitis, asthma flare-ups, heart problems, ear infections, and acute respiratory distress.

Pneumonia is an infection that inflames the air sacs in one or both lungs. The air sacs may fill with fluid or pus (purulent material), causing cough with phlegm or pus, fever, chills, and difficulty breathing. A variety of organisms, including bacteria, viruses, and fungi, can cause pneumonia. Symptoms of pneumonia can include cough, fever, and shortness of breath.

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

The development of respiratory conditions is highly influenced by the environment, the existence of comorbidities, substance and tobacco use, and can also be influenced by some genetic factors.⁷ Those living in poverty may have additional environmental exposure due to less safe housing conditions, proximity to areas with more pollutants, or work jobs with increased exposure to respiratory irritants⁸. This points to ongoing multifactorial causes, including environmental and occupational exposures, increased stress, and poor access to care. Specifically for people experiencing homelessness, the environment plays a significant role in the development of, and ability to manage, respiratory conditions:

- Those staying within shelter settings have increased risks for contracting infectious conditions such as the flu, COVID-19, and tuberculosis due to the close proximity to other shelter residents⁹.
- Individuals may be staying or sleeping in poorly ventilated areas, or with increased allergens and dust. Those who stay/sleep outside are more exposed to pollution and allergens.
- Experiencing homelessness increases the risk for respiratory conditions due to increased exposure to cold and extreme weather, and accessing locations for safety during emergency weather may increase risk of other respiratory diseases due to congregate settings.

As with other health conditions, lacking safe, stable housing makes it more difficult to access needed health services or manage conditions once diagnosed. It can be difficult for individuals to keep up with supplies or medications, use specific equipment (such as nebulizers), and avoid triggers that can control or mitigate respiratory conditions, which results in the high rate of hospitalization for respiratory conditions. Additionally, higher rates of health comorbidities can increase risk, exacerbation, and development of respiratory conditions:

- Tobacco use contributes significantly to the onset of respiratory conditions and is more prevalent among people experiencing homelessness compared the housed population^{10,11}.
- Substance use, especially substances that are smoked or inhaled, can also worsen or contribute to the development of respiratory conditions¹².
- The presence of other chronic health conditions can increase susceptibility to airborne respiratory illness such as the flu or pneumonia. Chronic conditions and co-morbidities are more prevalent in people experiencing homelessness than the housed population¹³.

Medical respite care can be an opportunity to:

- Stabilize,
- Use recommended and prescribed supplies,
- Address co-occurring needs, and
- Implement health interventions (such as tobacco cessation), 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 respiratory conditions includes the following:

Complete a History and Physical which includes:

- Medical history, including family history
- Age of diagnosis of any respiratory conditions
- Past hospitalizations
- Any history of intubation while hospitalized
- History of pneumonia, recent or distant
- Surgical history
- Behavioral health history, especially anxiety ([GAD-7](#), [PHQ9](#))
- Comprehensive physical exam
- Any known allergies, including seasonal
- Assessment of current cognitive status incorporating tools such as a [Mini-Cog](#) or [Mini Mental Status Exam](#)
- Assess [literacy](#), [health literacy](#), and numeracy
- Prescribed and over the counter medications
- Pharmacy or pharmacies used
- Current and past inhaler use
- Any past or recent use of steroids to manage acute respiratory exacerbations
- Vital signs, including weight/BMI, and shortness of breath
- Substance use history/current use ([DAST-10](#); [ASI](#))
- Risk for aspiration: neurological or cognitive conditions, alcohol or substance use
- Tobacco use, including vaping – [history and current use](#), any efforts to quit
- Immunization status – especially influenza, COVID-19, and pneumococcal vaccines
- Diet and nutrition ([food frequency questionnaire](#))
- Most recent housing/living conditions and where the person plans to return to
 - Sleeping arrangements, e.g., in chair vs. bed
 - Past housing experiences
- Exercise and [activity level](#), any limits due to respiratory status, any recent changes
- Employment history, including potential exposures to irritants

Asthma specific assessment includes:

- Determine baseline respiratory status and inhaler use, and talk specifically with patients about deviations from that baseline
- Assess for signs of an asthma exacerbation: increased inhaler use, nocturnal cough/being awakened by coughing, and/or shift from baseline in the efficacy of the inhaler, as inhalers may work less well during an exacerbation
 - Assess [Asthma Control Test](#) (ACT) and monitor scores to assess for an exacerbation. It is important to note that question 1, in particular, that inquires about asthma's impact on work, school, and home life, may not pertain to PEH or their current living situation
 - Assess [Peak flow readings](#): baseline, serial, and when concerned about an exacerbation
- Assess for allergies and recent exposure to other triggers including pet dander, smoke from fires, occupational or environmental irritants, hot/cold weather extremes and time spent outdoors
- Assess for known diagnosis of gastroesophageal reflux disease (GERD) or acid reflux, and any worsening of GERD symptoms, changes in medication, diet, etc. GERD and asthma can be related and exacerbate each other
- Assess for current or recent upper respiratory or sinus issues – these can also trigger an asthma exacerbation
- Assess and observe how patients are using their inhaler(s) or limitations preventing use

Chronic Obstructive Pulmonary Disease (COPD) specific assessment includes:

- Assess for signs of an exacerbation: increased sputum production or changes to sputum, change in ability to walk or perform tasks they are typically able to do, increased shortness of breath, increased cough, and sleep disturbances
- Assess for use of accessory muscles/retracting with breathing
- Assess for changes in posture, e.g., tripod position
- Assess for signs of secondary infection: e.g., fever, increased sputum production/changes in sputum, and lung sounds indicative of pneumonia
- Assess how patients are using their inhaler(s)

Influenza specific assessment includes:

- Assess for typical signs of flu: fever, headache, body aches, and fatigue
- Differentiate from COVID-19, use rapid testing for both flu and COVID-19
- Assess for signs of dehydration.
- Assess for need for [antiviral for those at high risk of flu complications](#).

Pneumonia specific assessment includes:

- Assess lung sounds, including for fever and decreased oxygen saturation, and shortness of breath.
- Assess for recent sickness followed by improvement and then re-worsening – this can indicate pneumonia as a secondary infection.
- Assess for recent hospitalization, intubation, or treatment of pneumonia
- Assess for factors that could contribute to aspiration pneumonia, e.g., alcohol or substance use, and history of a stroke or other neurological changes

Care Plan and Management

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. Additionally, more detailed guidelines for overall management of respiratory conditions for people experiencing homelessness can be found in: *Adapted Clinical Guidelines for HCH Providers: Respiratory Conditions*.

Person Specific Strategies

- Offer up-to-date immunizations for influenza, pneumonia, and COVID-19 to reduce risk for additional respiratory infection.
- Utilize a harm reduction approach to address behaviors impacting respiratory health:
 - Offer strategies for reduction in tobacco use (not just full cessation), such as use of nicotine replacement interventions.
 - Discuss reduction in substance use; focus on strategies to decrease use that could aggravate respiratory conditions, such as smoking substances like cocaine, methamphetamine, or K2/spice.
 - Connect patients with providers that can prescribe medications for opioid use disorder (MOUD) to decrease overall use and overdose risk.
- Complete medication reconciliation and simplify medication regimens. Finding a medication regimen that a patient understands, supports, and that fits into their lifestyle and daily schedule, for example, antibiotics that can be taken only twice daily rather than four times daily.
 - Consider labeling inhalers or working with a patient to differentiate a short acting/rescue inhaler from a daily long-acting inhaler and how and when to use each.
 - Find ways to promote proper inhaler use, such as using a simplified regimen or using a spacer.
- Address co-occurring mental health symptoms, especially anxiety, which may be a trigger for a respiratory exacerbation and/or a result of exacerbation or respiratory illness.
- Provide education on deep breathing and recommend breathing strategies (such as diaphragmatic breathing or incentive spirometer).
- Provide support for patient to learn self-management skills for condition, including:
 - Self-monitoring of inhaler use, including keeping a simple log if possible.
 - Self-monitoring for signs of an asthma or COPD exacerbation through monitoring inhaler use, mucus production, cough, and exercise tolerance.
 - Practice and support to independently complete nebulizer treatments or use CPAP machine.

- If the person also has impacted mobility or other fall risks (such as incontinence), place the person close to the bathrooms to prevent rushing that may cause shortness of breath or dizziness.
- Connect to community transportation resources to attend appointments, especially if ongoing exercise and activity tolerance is decreased.
- Assess for need for mobility devices and support patient in accessing needed mobility supports.
 - Patient may also need assistance identifying and acquiring additional equipment to carry inhalers or personal items with them (such as a rolling cart, stable backpack).

Environmental Strategies

- Provide adequate space and storage for medications and equipment to support breathing, such as nebulizers or CPAP machines.
 - Space to complete nebulizer treatments should be provided in a closed room with a HEPA air filter, and the room should remain unused with the HEPA filter running for [one hour](#) following the treatment.
 - An individual room for CPAP machine usage may also be beneficial to minimize disturbance to other medical respite patients.
- Consider setting up spaces to support individuals who need oxygen support. This includes:
 - Access to electrical outlets at all times.
 - Safe storage for portable oxygen units and for oxygen canisters.
 - Education for patient, staff, and other medical respite residents on fire hazard, safety, and the importance of following program rules (e.g., no smoking inside) for safety.
 - Education and arrangement of environment to minimize fall risk, especially with oxygen devices or tubing.
- Provide adequate nutrition and meals that can accommodate for dietary recommendations (e.g., to minimize GERD) and support maintaining hydration (such as providing bottles of water to take throughout the day).
- Allow adequate space for rest/recovery. This may include providing different types of seating or additional pillows/blankets to support the person in finding a comfortable, supported, or upright position for sitting and sleeping.
- Provide adaptive equipment for completing activities of daily living (ADL) and functional mobility to support for decreased endurance, such as shower chairs, grab bars, and wall railings.
- Provide adequate space for home health, such as physical therapy, and spaces for safe engagement in light exercise (as recommended).

Referrals

- Pulmonary: for complex care needs, repeated exacerbations and/or emergency department visits or hospitalizations, worsening of symptoms even with appropriate and correct use of inhalers, or concern for need for supplemental oxygen.
- Physical therapy: for assessment and treatment for impacted mobility, exercise, activity tolerance, and endurance.
- Occupational therapy: for decreased activity tolerance, if endurance has impacted ability to complete ADLs, or community mobility for development of compensatory strategies.

Discharge Planning

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

- The patient is stabilized (e.g., decreased shortness of breath, resolution of hypoxia, decreased use of emergency inhalers).
- The patient is able to independently implement their medication regimen and treatment plan for ongoing self-management, such as recognizing symptoms of exacerbation. If the patient needs more support, connection to ongoing resources/supports in the community should be made.
- It has been confirmed with pharmacy that the patient's inhalers are covered by insurance and can be picked up at the pharmacy.
- The patient is connected to, and has attended at least one appointment for, primary care providers or specialists who will be following or treating conditions ongoing.
- In the case of influenza or pneumonia, the patient's symptoms have resolved, treatment has been completed, and their vital signs are stable.
- The patient's discharge location provides adequate space and security to store medications and devices (such as inhalers).

Advanced Training and Advocacy

- Set up the medical respite space to support individuals who need oxygen treatment.
- If the medical respite space is not able to accommodate oxygen use, advocate for patients to be able to complete oxygen treatment within the hospital prior to discharge to medical respite.
- Advocate for housing pathways for those who need long-term oxygen who may not be able to return to shelter with oxygen use.
- Awareness of which formularies for medications and inhalers the patient's insurance will/will not cover. Advocate for coverage of prescribed medications, or support patient in advocating with outside providers (e.g. pulmonology) to prescribe a regimen that is covered.
- Advocacy for the patient to have safe storage space for inhalers and equipment, and space to complete nebulizer treatment if returning to shelter or other non-permanent housing settings.

Case Example 1

Background: James (he/him/his) is 63 years old staying at an emergency shelter. The medical respite nurse encountered James while doing outreach at the night shelter. James was significantly underweight and was breathing very rapidly. After getting his permission, she assessed his vital signs and lung sounds. He was tachypneic, had a fever of 102, oxygen saturation of 93%, and had crackles at the base of his right lung. James had been living in his car in a rural area for over a year. He had no source of income, was estranged from his family, and had major depression. He had been unemployed for several years and had depleted his savings so he decided to seek shelter and services in a metropolitan area. In addition to pneumonia, James had poorly managed asthma and hypertension, and he had not engaged in medical care for many years. He acquired pneumonia while staying in the night shelter, likely a result of (or exacerbated by) poor nutrition, chronic stress, and compromised lung function. James also had a long history of smoking cigarettes, although he recently reduced his smoking due to lack of funds to purchase cigarettes. James was taken to the hospital for stabilization and treatment, with a diagnosis of community acquired pneumonia.

He was discharged from the hospital into the medical respite program to continue his recovery and stabilize his asthma. After admission to the medical respite program James appeared to have improved lung function but had limited engagement with staff and in various activities.

Assessment: The medical respite clinical staff monitored James's oxygen saturation, lung sounds, vital signs, and peak flows. James also completed a comprehensive primary care history and physical in order to establish a plan of care for asthma and hypertension management that he would be able to follow. James was screened using the PHQ-9, which identified symptoms of depression. James was able to complete an initial evaluation with the onsite behavioral health consultant (BHC), as he currently lacked insurance to be referred to outside programs. James appeared to be neutral about smoking cessation or reduction.

Intervention: The medical respite program gave James the opportunity to rest and focus on continued stability of his health. James benefited from continued and intensive support due to symptoms of depression, which caused him to isolate and limit seeking out support. Structured daily check-ins enabled James to participate in health routines and learn health management skills. He was able to use oxygen as needed and was educated on how to self-administer nebulizer treatments. Staff coordinated referrals to primary care and helped him with transportation to these appointments. The staff also routinely offered supports for smoking cessation (patches, gum), which, after the first week, James was agreeable to trying. The case manager assisted with applying for expedited health insurance and for Supplemental Security Income (SSI) through [SOAR](#). The medical respite nurse provided health education about his chronic conditions and the impact of tobacco use. After meeting with the BHC several times James identified a goal of reconnecting with his daughter. They also helped James locate and reconnect with her.

Outcomes: James fully recovered from his pneumonia without subsequent visits to the emergency room or hospital. He began routine medications for asthma and did not need nebulizer treatments or oxygen upon discharge from the medical respite program. Although he had not completely cut out tobacco, he had significantly reduced his consumption of cigarettes with use of supports. His blood pressure stabilized after starting anti-hypertensive medication. His SSI was approved by working with the SOAR program. James was reconnected with his daughter, who supported him in finding an apartment close to her. Medical respite staff also helped him in this transition by facilitating connection to a primary and behavioral health care clinic in that town to continue treatment for both his lung conditions, hypertension, and depression.

Case Example 2

Background: Dominique (she/her/hers) is 55 years old and primarily stays in the local congregate emergency shelter. Dominique has gone to the emergency department (ED) multiple times over the past few months due to reports of difficulty breathing and is now well-known to ED staff. Dominique is frequently discharged from the ED within the day of arrival with the diagnosis of anxiety as a cause of breathing difficulties. Her case manager at the shelter believes there is more to her shortness of breath (SOB) than anxiety and accompanies her to the ED the next time she is experiencing symptoms. With the advocacy of her case manager Dominique was able to share more information regarding her symptoms. A more comprehensive history and exam determined that she is likely experiencing COPD exacerbations. At this ED visit her oxygen saturation levels are low enough that she is admitted to the inpatient unit for brief stabilization. Dominique's shelter case manager works with the hospital social worker to refer her to the medical respite program after discharge from the hospital. The hospital social worker, case manager, and medical respite intake nurse convene regarding Dominique's case. The hospital physician is recommending Dominique be discharged using oxygen, however, the medical respite program notes that they are unable to support someone on continual oxygen. Together, the medical respite nurse and shelter case manager advocate for Dominique to stay in the hospital an additional couple of days to complete the oxygen treatment, to then be discharged to medical respite for extended rest and connection to community care. Dominique agreed to transition to the medical respite program, with a desire to manage her COPD and prevent further admissions.

Assessment: As part of the initial intake assessment the medical respite team met with Dominique to establish a care plan. Dominique was agreeable to initially completing twice daily vital signs to monitor her breathing and pulse oximeter readings. She also was agreeable to meeting with the onsite behavioral health consultant (BHC), who identified a long history of anxiety related symptoms and likely post-traumatic stress disorder (PTSD). Dominique also identified she was not connected with a primary care provider due to difficulty trusting medical staff but was interested in engaging in more preventative care.

Intervention: Dominique continued to meet with the behavioral health consultant to address immediate symptoms of anxiety and establish coping strategies such as paced, deep breathing. Dominique's provider and BHC met with her for care coordination and education on how anxiety and COPD symptoms impact each other, and ways to identify if either condition was worsening. Dominique was connected with the local health center for primary care. Prior to her first appointment she met with the health center's community health worker (CHW) to establish a relationship and receive support for attending appointments. Dominique and the CHW were able to attend her first PCP appointment successfully. She was also provided with education on steps to take when her symptoms were worsening, including calling the health center's on call provider. With medication education and practice she was also able to demonstrate her ability to use her inhalers effectively for prevention and identify which one would be used for an exacerbation of symptoms. The BHC connected Dominique with the behavioral health providers at the health center to transfer ongoing mental health care and address her presumed PTSD.

Outcomes: Due to the lack of affordable housing in her community, Dominique returned to her shelter bed once stabilized in the medical respite program. The medical respite providers were able to work with her shelter case manager to coordinate and transition her care plan. Dominique participated in a meeting with the medical respite team, her case manager, and community health worker to discuss the ongoing plan of care and communicate where she would receive ongoing medical care. The shelter case manager was also able to support Dominique in finding a safe space to store her inhalers and posted reminders for her to take them with her throughout the day. Dominique continued care with her new PCP and behavioral health provider and was able to avoid returning to the ED for 6 months after her medical respite stay.

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