

REPORT

**Medical Respite Literature Review:
An Update on the Evidence for
Medical Respite Care**

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Introduction

Medical respite is a critical service for persons experiencing homelessness, closing gaps in care in the health and homeless services continuum. The National Health Care for the Homeless Council (NHCHC) defines medical respite as “acute and post-acute medical care for people experiencing homelessness who are too ill or frail to recover from a physical illness or injury on the streets, but who are not ill enough to be in the hospital” (NHCHC, 2019). As people experiencing homelessness lack a stable and secure place to stay, medical respite programs are essential for consumers to recover and prioritize health while providing basic needs. Medical respite programs vary in structure and size in response to their communities but are anchored in the Medical Respite Standards to provide quality care and promote recovery (NHCHC, 2016; Zlotnick et al., 2013). Medical respite has grown substantially in the United States over the past several years, with 116 programs existing as of December 2020 and with several programs in development (NHCHC, 2020).

In addition to the proliferation of programs, research and publications available on medical respite care has also increased. Medical respite literature now includes several international programs, including Australia, Denmark, Italy, and the United Kingdom. The last synopsis of the literature by the NHCHC was completed in 2009. A systematic review in 2013 (Doran et al., 2013) provided a detailed overview of program descriptions and outcomes of medical respite. These documents have identified the positive outcomes of medical respite care for consumers, health care systems, and overall cost savings (Doran et al., 2013; NHCHC, 2009). In response to the continued expansion medical respite and subsequent research, this literature review was conducted to: 1) provide an updated and comprehensive overview of existing medical respite programs; 2) identify the need for medical respite programs; and 3) identify the outcomes of medical respite programs and interventions. This document is a resource to support current medical respite practices and organizations developing new programs. Several recommendations and best practices for medical respite programs are included based on the findings of this literature review.

Methods

Although the authors of this literature review took cues from formal academic examples, its methodology was flexible to suit the needs of the field. The identification of databases, search criteria, and article review processes are replicable, even though they were not intended for formal peer-review. NHCHC’s standing medical respite providers’ network acted as an informal quality panel to ensure competence in conducting this review.

Databases

Six databases were identified for this literature review: Cumulative Index of Nursing and Allied Health Literature (CINAHL) Complete, American Psychological Association (APA) PsycInfo, Medical Literature Analysis and Retrieval System Online (MEDLINE), Embase, Global Health, and Academic Search Premier. These databases were chosen based on reputation, relevance to the medical and homeless services sectors, ease of access, and inclusion of academic and non-academic sources.

Search Criteria

To remain consistent with NHCHC’s definition of medical respite care, the following search terms were chosen: “*Medical Respite*,” “*Recuperative Care*,” and “*Convalescent Care*,” with the additional keywords, “*Homelessness*,” “*Hospital Discharge*,” and “*Readmission*.” These search terms also reflect those used by Doran et al. (2013) in a systematic review of medical respite programs.

To perform a comprehensive search of contemporary literature since NHCHC's 2009 review, this search excluded articles published before 2010. The search was performed in November 2020, limiting the final scope to articles published between January 1st, 2010 and November 1st, 2020.

The inclusion criteria for publications in this review were intentionally broad to gather a diverse set of authors and sources. Articles were included as long as they discussed the medical respite model, described or evaluated an existing program, or mentioned the need for new programs.

Review Process

This search produced 45 unduplicated articles, which were read by NHCHC staff. Articles were not reviewed or analyzed for quality or academic rigor. Rather, the review process was intended to synthesize how findings can inform and support existing or prospective medical respite programs. Articles were analyzed for emergent themes based on study type, data collection, assessment of need, program description, implications, and more. Final themes were identified after a consensus was reached by the document's authors.

NHCHC Respite Care Providers' Network

NHCHC's Respite Care Providers' Network (RCPN) is a national network of respite care providers, stakeholders, and administrators. The RCPN Steering Committee was engaged for recommendations and quality control of this review. The Committee's recommendations were instrumental in guiding the organization of this review in a manner that is comprehensive, digestible, and useful to the field.

Results

Larger themes were identified after reviewing the retrieved articles, including: need for medical respite; partnerships for medical respite program development and funding; program descriptions; medical profiles of persons served by medical respite programs; outcomes of medical respite; consumer perspectives on medical respite; and medical respite interventions.

Need for Medical Respite

Several publications detailed needs assessments to identify health needs for persons experiencing homelessness or a need for medical respite. The needs assessments were completed through interviews with providers and/or consumers, through data analysis of hospital admissions, or through reviews of publications and evidence. Each method highlights different perspectives, all supporting the establishment of medical respite programs.

Provider Interviews

Needs assessments that included provider interviews identified common themes experienced by both hospital discharge planners and community health care providers when working with persons experiencing homelessness. Post-hospitalization care is a profound gap. Not having a medical respite care program in the community was found to result in "sub-optimal" outcomes for consumers and frustrating for health care providers when completing care planning to identify a stable place for recuperation (Biederman et al., 2014; Hauff, 2014; Johnson, 2020; Petith-Zbiciak, 2016; Zur et al., 2016). Providers also identified a specific need for medical respite for both older adults following hospital stays and to address gaps in care exacerbated by COVID-19 (Canham et al., 2020;

Johnson, 2020). Providers recommended engagement with local health centers for developing a respite program as they already provide health care and enabling services (Zur et al., 2016).

Data Analysis

Data analysis primarily focused on hospital admissions and readmissions to support the need for medical respite care. Several studies identified that without a medical respite program in the community, people experiencing homelessness overall had longer hospital stays resulting in increased costs for hospitals (Biederman et al., 2019; Buck et al., 2012; Doran et al., 2015; Dorney-Smith et al., 2016; Shetler & Shepard, 2018). Analyses also identified a high number of persons admitted that would have benefited from a medical respite program, with one study finding 67% of persons experiencing homelessness spent their first night out of the hospital in shelters and 11% on the streets (Biederman et al., 2019; Buck et al., 2012; Doran et al., 2015; Dorney-Smith et al., 2016; Shetler & Shepard, 2018). An additional study found persons sleeping on the street (versus shelters) experience significantly higher mortality rates and would benefit from access to medical respite to address life-threatening health conditions (Roncarati et al., 2020).

Evidence Review

Reviews of the evidence represented a broader perspective, often proposing medical respite as a solution to problems in the continuum of care. Medical respite was recommended to increase discharge options for persons experiencing homelessness, to facilitate recovery and connection with needed community resources, to address acute and chronic medical conditions, to reduce hospital readmissions, and to reduce barriers to health care (Biederman et al., 2016; Cornes et al., 2017; Dorney-Smith et al., 2016; Feigal et al., 2014; Klein & Reddy, 2015; Whiteford & Cornes, 2019). One review identified potential barriers to initiating a respite program, noting the importance of community buy-in for funding and to overcome potential bias (Lawson, 2018).

Partnerships for Medical Respite Programs

Several articles identified the importance of engaging with the community and stakeholders for both the development and funding of medical respite programs. **Table 1** provides an overview of recommendations for partnering with community entities.

Program Descriptions

Seventeen of the 44 publications in this review described existing medical respite programs. Fifteen peer-reviewed studies included program profiles to describe their study setting and sample. Five articles of other types (i.e., newspaper articles, case studies, and literature reviews) provided descriptions of medical respite programs as examples or focal points. After accounting for duplicates and redundancies, 11 programs were captured in this review. **Table 2** summarizes these descriptions.

Respite programs vary in size, capacity, staffing, length of stay, and referral criteria. The programs identified in this review were no exception. Bed capacity ranged from 5-124 over various types of sites. Staffing structure ranged from single, full-time practitioners to robust teams of providers and specialists. At minimum, referral criteria included individuals experiencing homelessness that are too ill to recover from an illness or injury while on the streets or in shelter, but do not require or qualify for inpatient hospitalization. Some programs included additional criteria, such as independence in activities of daily living (ADLs) or limits on onsite substance use.

There are over 100 programs in the United States alone, with growing evidence that the medical respite model is gaining traction in other countries. The descriptions summarized in this review supplement the existing knowledge of currently operating medical respite programs. The National Institute for Medical Respite Care (NIMRC) a special initiative of NHCHC, maintains a directory of medical respite programs in the United States. As of December 2020, this directory included 116 programs representing 35 states and the District of Columbia. Five of the programs summarized in Table 2 are not included in the NIMRC directory for one of the following reasons: the program is located outside of the United States, the program name is unspecified, or the article in question describes a broad intervention with respite care as a single component.

In 2013, Doran et al. performed a medical respite systematic review and provided a method of program description that was instrumental to the current approach. Considering the scope of the current review, there are only two articles coinciding with those published in the 2013 review. Those instances are indicated with an author acknowledgement.

Medical Profiles of Persons Served by Medical Respite Programs

Medical respite programs serve populations experiencing homelessness or housing instability that are medically complex, often with a history of frequenting emergency rooms and inpatient hospital settings. Seventeen of the 45 articles in this review describe specific common conditions and situations resulting in, or demonstrating the need for, medical respite intervention. Those include: *cardiovascular disease; diabetes; HIV; post-operative care; acute psychiatric disorders; acute respiratory tract infections; skin conditions; substance use disorders; traumatic brain injury; and wound care.*

Cardiovascular Disease (CVD)

CVD is a leading cause of death in populations experiencing homelessness (Roncarati et al., 2020; Klein & Reddy, 2015). People with CVD are generally at risk for hospitalization readmission, especially when experiencing comorbidities or social challenges (McIntyre, et al., 2016). Those experiencing homelessness with CVD often face difficult tradeoffs between basic needs and disease management. Medical respite enables the stability and structure instrumental to addressing the overlapping concerns posed by homelessness and chronic CVD (Pendyal et al., 2020).

Diabetes

Diabetes is a risk factor for hospital readmission (McIntyre et al., 2016). The risk is especially high for people experiencing homelessness due to various challenges and factors leading to high rates of uncontrolled diabetes. Medical respite programs provide shelter for consumers with diabetes, in-turn promoting safe access and storage of insulin, nutritious food, and access to glucose monitoring. Connection to primary care services is paramount for those with uncontrolled diabetes; respite programs can offer warm handoffs to encourage outpatient service linkage and improve health outcomes (Zur et al., 2016).

Human Immunodeficiency Virus (HIV)

Rates of HIV infection in unhoused populations is at least three times the rate of the general population, and routine HIV screenings should be made accessible to inform treatment or necessary referrals (Lipato, 2012). Homelessness is also associated with poorer health outcomes for persons living with HIV. Integrated housing and health care interventions must be considered in treatment planning for this population (Stanic et al., 2019).

Medical respite is an intervention tailored to the needs of consumers with complex medical profiles and can improve access and continuity of care for people experiencing homelessness who are living with HIV.

Post-Operative Care

Gazey et al. (2019) found post-operative care to be a top prerequisite to medical respite referral. Without post-discharge support, people experiencing homelessness are at risk for complications and readmissions following inpatient operations. A retrospective review of medical records at a major medical center in Seattle, WA, revealed that many cases of post-surgery readmission were due to issues of homelessness, mental health, or substance use (McIntyre et al., 2016). The implementation of safe step-down options for completing post-operative care plans is critical, and medical respite programs can facilitate such options (Lipato, 2012).

Acute Psychiatric or Behavioral Health Conditions

Psychiatric and behavioral health diagnoses are common in medical respite patients, reaching as high as 50% in some programs (Bring et al., 2020). People experiencing homelessness who are admitted to the hospital are more than four times as likely to have a mental health diagnosis as those that are housed (Buck et al., 2012). Severe and persisting mental illnesses are also likely to co-occur with physical health conditions and substance use disorders, underpinning the need for comprehensive and integrated primary care and behavioral services provided by medical respite programs (Beieler et al., 2016).

Acute Respiratory Tract Infections

Respiratory tract infections (influenza, pneumonia, bronchitis, common cold, etc.) are the most common conditions experienced by unsheltered populations during the winter and are consistently a primary reason for medical respite admission (Doran et al., 2013). In one study, acute respiratory tract infections were found in 47% of those referred to a cold-weather respite program (De Maio et al., 2014). Given that these infections occur with exposure to winter conditions, they are also likely to co-occur with, and complicate the symptoms of, existing chronic illnesses. This emphasizes the importance of shelter, permanent or intermediate, when managing the symptoms of a chronic disease.

Skin Conditions

Exposure to outdoor elements can lead to skin infections or complications. Common examples include cellulitis, abscesses, frostbite, and various foot infections (Klein & Reddy, 2015). Skin problems are common factors for medical respite admissions and are often paired with a need for antibiotics (Doran et al., 2013). Respite providers can screen for and treat dermatological issues, which often co-occur with the chronic illnesses most associated with inpatient hospitalization.

Substance Use Disorders (SUDs)

Several articles in this review described the experience of *triple diagnoses*, or co-occurring medical, psychiatric, and substance use disorders (Bauer et al., 2012; Beieler et al., 2016; Gazey et al., 2019; Roncarati, 2020). Detoxification units are a common referral source for medical respite programs, especially those offering low-barrier services or employing harm-reduction strategies. SUD has been found as a common factor for consumers that leave services before discharge (Bauer et al., 2012; Kimmel et al., 2020). Medical respite programs provide

the structure and supportive environment for those recovering from different types of illnesses and referrals for those interested in initiating rehabilitative services.

Traumatic Brain Injury (TBI)

Rates of TBI are significantly higher among those experiencing homelessness, pointing to a widespread need for screenings and linkages to neuropsychological rehabilitation tailored to this population (Lipato, 2012). TBI can significantly impair a person's ability to manage medical conditions and follow treatment plans, posing a major concern for those transitioning out of inpatient hospital care. Medical respite programs can act as a point of service access for people experiencing homelessness that have also experienced a TBI. This has been achieved through tailored services involving screenings, trained clinicians, a modified clinical environment, and linkages to ongoing rehabilitation services (Brocht et al., 2020).

Wound Care

Untreated wounds are common for unsheltered populations, especially for those not connected to primary care or outpatient services. In their retrospective study, Bauer et al. (2012) found wounds to be a top precipitating factor for admission at a respite facility. Consumers, providers, and stakeholders all identify wound care as an unmet need in communities without adequate medical respite programs (Petith-Zbiciak, 2016). Wound care is a common treatment post-hospital discharge and a crucial step in preventing readmission (Lipato, 2012). Medical respite programs can offer a safe, sanitary environment for individuals with wounds needing treatment or aftercare.

Outcomes of Medical Respite

The 2013 literature review completed by Doran et al. found that medical respite programs: reduced hospital readmission rates and length of inpatient stays; provided cost savings to health systems; and reduced hospital and emergency department visits. This literature review also noted increased costs for community care, such as housing and outpatient care, indicating a transition from use of emergency and hospital services to community-based services (Doran et al., 2013). These findings continue to be supported by current evidence, with additional outcomes regarding reducing gaps in services and outcomes related to medical respite specific interventions. **Table 3** summarizes these outcomes.

Consumer Perspectives on Medical Respite

Although much of the literature focuses on cost-effectiveness and health care system usage, valuable qualitative experiences of consumers have also been published. Seven of the identified articles included consumer perspectives that served either to identify a need for medical respite services in the community or to share consumers' experiences of the medical respite program.

Need for Medical Respite

Consumer perspectives highlighted the critical need for medical respite in communities to provide stability and opportunity to address health and basic needs. Without such a program, consumers experienced major uncertainty regarding discharge and overall medical care (Biederman et al., 2014). Consumers additionally noted that medical procedures had been delayed, often multiple times, and were threatened to be cancelled altogether due to the dearth of safe discharge placements (Biederman et al., 2014). Consumers also identified other barriers

to care that could be mitigated by medical respite care, including lack of basic needs, need for connection to mental health and enabling services, and experiencing stigma by mainstream health care providers (Petith-Zbiciak, 2016; Zur et al., 2016).

Experience in Medical Respite

Overall, consumer experiences within medical respite were positive and supported health and recovery. Consumers noted that the “caring ethos” of medical respite programs enable recovery and provide a safe space for recuperation, and support consumers’ ability to re-engage with the health care system and develop health and self-management routines (Gazey et al., 2019; Pedersen et al., 2018; Pendyal et al., 2020; Zur et al., 2016). They also noted the importance of the program as a way to build key relationships as part of the recovery process (Gazey et al., 2019; Pedersen et al., 2018; Zur et al., 2016). Consumers also identified the importance of having basic needs met as a priority for medical respite programs in order to support development of self and health management skills (Pedersen et al., 2018; Pendyal et al., 2020).

Medical Respite Interventions

The literature published on medical respite since 2010 provides insight into the strategies that existing programs have adopted to meet the needs of their patient populations. Medical respite is a growing field; this review suggests that practitioners and stakeholders are continuing to learn which approaches should accompany the standard respite provisions. Strategies and interventions are wide-ranging and often tailored to the needs of respective communities. However, new and existing programs can take cues from what others have learned and shared in their processes of growth and adaptation.

Table 4 summarizes the interventions found or implied by literature in this review. Recommendations belong to the following categories: *specific medical interventions, substance use disorder (SUD) strategies, accommodation strategies, and social support strategies.*

Table 1. Recommendations for Partnering with Community Entities

Purpose	Recommendations	Source(s)
Identifying Community Needs and Generating “Buy-in”	<ul style="list-style-type: none"> • Use Community-Based Participatory Action research as a model for bringing together stakeholders • Build connections between hospitals and homeless service providers • Identify overall community needs • Educate on how medical respite can improve and increase the continuum of care • Evaluate how homelessness and persons experiencing homelessness are discussed and viewed in the community • Provide education to address community attitudes towards people experiencing homelessness • Propose medical respite as a response to community needs and emergencies, such as lack of services or COVID-19 	<p>Doran et al., 2015; Dorney-Smith et al., 2019; Fader & Phillips, 2012; Johnson, 2020; Kimmel et al., 2020; Lawson, 2018; Petith-Zbiciak, 2016; Whiteford & Cornes, 2019; O’Connell et al., 2010.</p>
Engaging a Health System	<ul style="list-style-type: none"> • Build connections between homeless service providers and hospitals • Identify health system and hospital specific needs and provide solutions that are mutually beneficial • Encourage referral to medical respite and improve discharge practices for persons experiencing homelessness • Use effectiveness outcomes of medical respite programs to gain support and funding 	<p>American Society on Aging, 2017; Biederman et al., 2014; Fader & Phillips, 2012; Shetler & Shepard, 2018; Whiteford & Cornes, 2019.</p>
Engaging Community Programs	<ul style="list-style-type: none"> • Build connections between homeless service providers and hospitals • Identify barriers to care • Identify needs specific to community programs 	<p>Biederman et al., 2014; Doran et al., 2015; Petith-Zbiciak, 2016.</p>

Table 2. Articles Including Medical Respite (MR) Program Descriptions

Publication(s)	Article Type(s)	Site Name(s); Location(s)	Bed Capacity; Staffing	Length of Stay	Referral Criteria; Patient Characteristics	Key Program Takeaways
American Society on Aging, 2017.	Newspaper Article	Bay Area Community Services (BACS); Oakland, CA and Fairfield, CA	30 beds (Oakland), 10 beds (Fairfield); Unspecified Staffing	Unspecified	Patients with nowhere to transition post-hospital stay, as identified by discharge planners; Majority of referrals older homeless adults.	These BACS programs are the result of a successful pilot partnership between BACS and local hospital system, which has resulted in reduced readmission rates and hospital costs.
Doran et al., 2013; Basu et al., 2012.	Literature Review Peer Reviewed Study	Interfaith House; Study examined Chicago Housing for Health Partnership (CHHP), a partnership between 14 health care and housing entities in Chicago, Illinois.	64 beds; Intervention had three components: 1) Interim housing at MR, 2) Stable housing after recovery, 3) Case management based in hospital, MR, and housing sites.	Unspecified	Study eligibility: 18+ years old, 30+ days of homelessness prior to hospital stay, history of chronic medical illness; Those referred and eligible for this study had 1 of 15 high-risk conditions, including: hypertension, diabetes, renal failure, cirrhosis, congestive heart failure, and more; All patients referred from two major hospitals.	Connection to MR as a result of discharge planning. Intervention included intensive case management and housing navigation.

<p>Doran et al., 2013; Bauer et al., 2012.</p>	<p>Literature Review Peer Reviewed Study</p>	<p>San Francisco Medical Respite; Study focuses on first three years of MR program in San Francisco, CA (2007-2010)</p>	<p>45 beds; Onsite medical respite staff (24/7) include: registered nurses, nurse practitioners, physicians, physician assistants, and medical assistants. Additional supportive services provided by social workers and CHWs.</p>	<p>Mean length of stay for all patients: 34 days; Mean length of stay for absent without leave (AWOL) or against medical advice (AMA)patients: 5 days</p>	<p>Patients are medically complicated, have medical, psychiatric, and SUD, as well as multiple chronic conditions. Common referrals for wound care, post-assault or post-op care. Minority referred for chronic or infectious disease; Referrals are accepted from local, public, and private hospitals.</p>	<p>Overwhelming majority of patients have no PCP (65%), income benefits (79%), or identification (75%). Most common discharges: self-care (45%), AWOL (22%), AMA (9%). Special considerations are needed for people at risk for leaving MR AWOL or AMA.</p>
<p>Beieler et al., 2016.</p>	<p>Peer Reviewed Study</p>	<p>Unspecified; Seattle, WA</p>	<p>34 beds; Onsite staff include physicians, nurse practitioners, registered nurses, medical assistants, mental health specialists, and case managers.</p>	<p>Unspecified</p>	<p>Patients must be homeless and require ongoing RN care; This study found 53 occurrences of outpatient antimicrobial treatment (OPAT) at this program over a 2-year span. Common comorbidities: current intravenous drug use (IDU) (53%), remote IDU (17%), Hep C (60%), and mental illness (26%).</p>	<p>Program employs harm-reduction model to encourage OPAT treatment completion and patient engagement in outpatient services. This study suggests MR could be an appropriate environment to complete OPAT treatment for persons experiencing homelessness.</p>

<p>Biederman et al., 2018;</p>	<p>Peer Reviewed Study</p>	<p>Durham Homeless Care Transitions;</p>	<p>5 beds.</p>	<p>Mean length of stay: 33.9 days</p>	<p>Referrals from providers specializing in needs of patients without homes: hospital discharge planner, HCH clinic staff, an outpatient clinic nurse practitioner, and Project Access of Durham County (pilot program lead agency);</p>	<p>Scattered site program design, utilizing apartment and motel rooms.</p>
<p>Biederman et al., 2016.</p>	<p>Overview/Case Study</p>	<p>Durham, NC</p>	<p>29 individuals participated in 2-year pilot study;</p> <p>Staff include nurse practitioners, nurse case manager, CHWs. Partner organizations and providers make in-home services (home health, physical therapy, and hospice) possible.</p>		<p>Majority of patients admitted in pilot period were: Black (52%), non-Hispanic (97%), and male (90%). Mean age was 47.3 years.</p>	<p>Focus on connection to primary and specialty care, mental health and substance use services, connection to benefits, transportation, social supports, and housing.</p>

<p>Bring et al., 2020; Pedersen et al., 2018.</p>	<p>Peer Reviewed Study Peer Reviewed Study</p>	<p>Red Cross Copenhagen Medical Respite Care Center; Copenhagen, Denmark</p>	<p>8 beds. 53 individuals received MR services during 2-year evaluation period; Staffed by an on-site RN, 2 part-time support staff, and volunteers. Staff RN provides wound care, medicine assistance, catheter care, blood glucose monitoring. Support staff and volunteers assist with social support and connection to services.</p>	<p>Median length of stay: 12 days</p>	<p>Patients offered participation if they self-identified as homeless and were to be discharged from one of 10 hospitals in Copenhagen. Program criteria excluded: patients unable to spend a night alone, patients not self-reliant in ADLs, and patients that were unauthorized immigrants.</p>	<p>Program offers 2-week stay with three meals a day. Services are free of charge, with no restrictions regarding substance use. There is no waiting list for this program. MR services were financed by the government during evaluation period.</p>
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<p>Brocht et al., 2020;</p> <p>Zur et al., 2016.</p>	<p>Peer Reviewed Study</p> <p>Peer Reviewed Study</p>	<p>Baltimore Health Care for the Homeless Convalescent Care Program;</p> <p>Baltimore, MD</p>	<p>25 beds;</p> <p>Clinical services include 12-hour daily nursing care, medical provider visits, CHWs, social workers, occupational therapy, and physical therapy (if needed).</p>	<p>5-week average length of stay.</p>	<p>Referrals come from local hospitals, rehabilitation facilities, or skilled nursing facilities. Patients must be independent in ADLs and hospitals must deem patients able to recover in 'home' environment.</p>	<p>This shelter-based MR program is a collaboration between the city of Baltimore, Catholic Charities, and Baltimore HCH.</p> <p>Nursing services include care coordination, nursing education, medication reconciliation, and wound care. CHW services include transportation and linkage to care. Social work services include psychosocial evaluation, counseling, referrals, and case management.</p> <p>This program employs specific strategies to tailor services to patients with TBI, including screening, staff education, modifying clinical environment, and referrals to rehabilitation services.</p>
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<p>De Maio et al., 2014.</p>	<p>Peer Reviewed Study</p>	<p>Médecins Sans Frontières (MSF) Intermediate Care Program; Milan, Italy</p>	<p>24 beds. 123 individuals admitted to intermediary care services in 4-month evaluation period; Team of 5 nurses providing 24-hour care, and 3 half-time clinician performing rounds twice daily.</p>	<p>41% of all admissions in evaluation period required more than 1-week of services.</p>	<p>Patients were referred by hospital discharge teams or by municipal social services. Admission criteria included: persons who were sick and not requiring hospitalization, or who needed intermediate care post-hospitalization, experiencing any clinical conditions requiring daily medical and nursing care; Main diagnoses included: acute respiratory tract infections, psychiatric disorders, skin diseases, diabetes, and surgical cases.</p>	<p>This program was developed in response to an emergency cold weather response plan. In addition to inpatient intermediary care, outpatient health services were also provided for persons experiencing homelessness. Inpatient and outpatient care provided in an existing 120-bed hostel for people without homes.</p>
<p>Gazey et al., 2019.</p>	<p>Peer Reviewed Study</p>	<p>The Cottage; Melbourne, Australia</p>	<p>6 beds. 139 individuals served by program in one-year evaluation period; Staff includes nurses and case manager who link patients to support services.</p>	<p>Average length of stay: 8.8 days.</p>	<p>Most patients in case studies were referred by a partner hospital, with which the Cottage is co-located. Patients had complex health conditions and most recently had an unplanned inpatient hospital admission. The most common reasons for MR admission were post-operative care, behavioral health disorders, and SUD.</p>	<p>The Cottage is a MR program co-located with a large hospital in Melbourne. Clients present with complex health and psychosocial needs. Staff emphasize that this program offers a place for patients to build key relationships and reengage with the health system as a means of preventing or managing health challenges.</p>

<p>Pendyal et al., 2020;</p> <p>Doran et al., 2015.</p>	<p>Peer Reviewed Study</p> <p>Peer Reviewed Study</p>	<p>Columbus House Medical Respite;</p> <p>New Haven, CT</p>	<p>12 beds;</p> <p>24-hour supervisory staff, part-time patient navigator, part-time case manager, full-time respite program coordinator;</p> <p>Visiting nursing services offered on-site. Outpatient services provided by federally qualified health center part of the week.</p>	<p>Projected 4-week length of stay.</p>	<p>Referrals are accepted from Yale-New Haven Hospital inpatient units, the local emergency department, and other agencies.</p> <p>Referrals must be experiencing homelessness, have a medical need that can be met by MR, and have ability to complete all ADLs. Program rules prohibit substance use during admission, though patients in methadone programs are permitted.</p>	<p>Columbus House MR developed as result of community based participatory research.</p> <p>Services for patients in MR include care coordination through connection to PCP, behavioral health, substance use treatment, social services, and housing. Meals are provided 3x/day.</p> <p>On-site nursing services include wound care, IV medications, and other skilled nursing needs.</p>
<p>Racine et al., 2020;</p> <p>Roncarati et al., 2020;</p> <p>Stanic et al., 2019;</p>	<p>Peer Reviewed Study</p> <p>Peer Reviewed Study</p> <p>Peer Reviewed Study</p>	<p>Barbara McInnis House, Boston Health Care for the Homeless Program;</p> <p>Boston, MA</p>	<p>124 beds, approximately 2,200 served/year.</p> <p>2-sites, including step-down facility;</p> <p>24-hour nursing and medical</p>	<p>Average length of stay: 2 weeks.</p>	<p>To initiate services at BHCHP, patients must be homeless or unstably housed.</p> <p>Patients referred to Barbara McInnis House must have acute medical need that cannot be managed in shelter or on the street. Patients must be able to complete ADLs.</p>	<p>Program offers a wide range of clinical services that includes acute, subacute, pre- and postoperative, rehabilitative and recuperative, palliative and end of life care.</p> <p>Key services include: Medication-assisted treatment, behavioral health care, chronic disease</p>

<p>O’Connell et al., 2010.</p>	<p>Overview/Case Study</p>		<p>program, staffed by physician, nurse, medical assistant, case manager, social worker, psychiatrist, and psychiatric nurse practitioner. Specialists (e.g. podiatry, neurology) serving BHCHP patients are available to provide services on site as well.</p>			<p>management, post-hospital care, detox and SUD treatment, and dental care.</p>
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Table 3. Outcomes of Medical Respite (MR)

Outcome	Findings
Effect on Hospital Use	<ul style="list-style-type: none"> • Consumers of respite had a 5% hospital readmission rate over a 1-year period (American Society on Aging, 2017). • Reduced days in the hospital and fewer ER visits over an 18-month period (Basu et al., 2012). • Hospital admissions decreased by 37% and inpatient days decreased by 70% in 1 year after the Medical Respite MR) stay (Biederman et al., 2018). • Reduced 30-day hospital readmission rate for persons experiencing homelessness by 50.8% - 21.5% as a result of MR program during the first 15 months of the program’s operation (Doran et al., 2015). • Of 123 referred clients in one year, only 7% required a re-referral to the ER or hospital during the medical respite stay (De Maio et al., 2014). • Medical respite programs in the UK all demonstrated reduced emergency care usage over a 5-year period (Dorney-Smith et al., 2019). • One program in New Jersey had a 40% reduction in emergency room visits and 56% reduction in overall hospital charges following connection to the program(Fader & Phillips, 2012). • Medical respite care reduced unplanned inpatient hospitalizations 12 months following the respite care stay (Gazey et al., 2019). • Medical respite was found to not reduce risk of readmission after surgery, identified more intensive support may be needed following surgery (McIntyre et al., 2016). • In a 2-year period, Medical respite decreased likelihood of readmission in clinical ways (but was not found to be a statistically significant difference) (Racine et al., 2020). • “High service utilizers” were less likely to be readmitted to the hospital following a medical respite stay than those discharged to other settings over a 2-year period (Racine et al., 2020). • Medical respite decreased emergency department length of stay by 2 days and reduced readmissions by 45% in a 1-year period (Shetler & Shepard, 2018).

Effect on Service Utilization	<ul style="list-style-type: none">• In an 18-month period, one program increased days in respite care vs. hospital and overall increased outpatient visits following a MR stay (Basu et al., 2012).• Decreased time spent in other institutions (residential treatment nursing home, prison) with more days in stable housing (Basu et al., 2012).• Outpatient visits tripled in 1 year after the MR stay (Biederman et al., 2018).• Those who discharged to medical respite had higher costs for rehabilitation, drug and alcohol therapy, and general care expenditures (indicating higher utilization of outpatient services) (Bring et al., 2020).
Cost Savings	<ul style="list-style-type: none">• Respite care, a transition into housing, and case management resulted in \$6,300 of cost savings per participant compared with those who received care as usual (Basu et al., 2012).• Completing OPAT treatment at medical respite resulted in \$25,000 cost savings per episode (Beieler et al., 2016).• Persons experiencing homelessness who lacked access to medical respite had higher costs for acute admissions and in-hospital days. Patients who had access to medical respite care had overall lower average costs (Bring et al., 2020).• Overall, the cost of care for a stay at the medical respite program was lower than the cost of hospitalization (Gazey et al., 2019).• Medical respite stays overall resulted in \$1.81 of cost savings for the hospital for each dollar they invested (Shetler & Shepard, 2018).
Impact on Consumers	<ul style="list-style-type: none">• Health-related quality of life improved for those who had a medical respite stay (although not statistically significant) (Bring et al., 2020).• Consumers reported that medical respite had a positive impact and especially should include: basic needs; social support in addition to health care; a safe space to provide security and comfort; and opportunity for reflection (Pedersen et al., 2018).• Factors associated with leaving the medical respite program absent without leave (AWOL) or against medical advice (AMA) include: being a women, under the age of 50, living outside prior to entering medical respite, having no income, arriving without identification, and substance use (Bauer et al., 2012).• For women, many factors are expected to lead to early discharge from medical respite, including lack of privacy, power dynamics, and history of victimization (Bauer et al., 2012).

MR-Specific Outcomes

- 31% of respite clients were absent without leave (AWOL) or against medical advice (AMA) and were most likely to leave within one week (Bauer et al., 2012).
- Female and clients under 50 were more likely to leave AWOL or AMA (Bauer et al., 2012).
- Increased likelihood of leaving also included: living outside before entering respite, having no income or ID, substance use (AWOL) (Bauer et al., 2012).
- 64% of clients referred for OPAT treatment were able to successfully complete the intervention; 87% were able to complete a defined course of antibiotic therapy (Beieler et al., 2016).
- Medical respite programs in the UK overall showed improved health outcomes for consumers (Dorney-Smith et al., 2019).
- Case studies indicated positive outcomes through screening for and addressing brain injury within medical respite (Brocht et al., 2020).

Reducing Gaps in Services

- 45% of MR consumers were approved for Medicaid and 48% secured income (Biederman et al., 2018).
 - 24% of MR consumers were connected with a PCP and 31% connected with behavioral health (Biederman et al., 2018).
 - Medical respite can serve as a place for persons with a history of TBI to connect with needed services (Brocht et al., 2020).
 - The number of referrals within a one-year period (123) for a novel medical respite/intermediary care program supported the need for medical respite to fill an otherwise gap in care (De Maio et al., 2014).
 - An intermediate care program with a medical respite service had an 80% improvement in housing status for its participants (Field et al., 2019).
 - Connection to a primary care provider significantly lowered the risk of readmissions among those who had been hospitalized (Racine et al., 2020).
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Table 4. Specific or Implied Recommendations for Medical Respite (MR) Programs

Medical Interventions		
Intervention or Strategy	Key Recommendations	Source(s)
Outpatient Parental Antimicrobial Therapy (OPAT)	<ul style="list-style-type: none"> MR has been found to be a successful setting for OPAT. Stable housing and outpatient support lead to higher rates of OPAT success. MR programs with multidisciplinary teams should explore the feasibility of providing OPAT onsite. 	Beieler et al., 2016.
Colorectal Cancer (CRC) Screenings	<ul style="list-style-type: none"> MR facilities can facilitate CRC prevention by minimizing environmental barriers to screenings. Programs should inquire about up-to-date CRC screenings and make appropriate referrals for colonoscopies when needed. MR staff can also assist in preparation for colonoscopies, leading to more successful screenings and overall better outcomes. 	Asgary et al., 2014.
SUD Strategies		
Intervention or Strategy	Key Recommendations	Source(s)
Harm Reduction & Medication-Assisted Treatment (MAT)	<ul style="list-style-type: none"> Medical respite programs should identify consumers who may be at a higher risk for leaving AWOL or AMA to focus on relationship building to increase comfort and stay in the medical respite program. Harm-reduction approaches prevent disease transmission, reduce fatal overdoses, and help link individuals to treatment. 	Bauer et al., 2012; Dorney-Smith et al., 2019; Kimmel et al., 2020; O’Connell et al., 2010.

	<ul style="list-style-type: none"> • Harm-reduction services, including MAT, have also been found to encourage care plan completion. • MR programs can consider implementing these strategies to improve outcomes of clients with SUDs requiring hospitalization. When possible, programs should consider offering MAT such as access to methadone and buprenorphine on-site or making community referrals. 	
Reducing Requirements and Barriers for Consumers with SUDs	<ul style="list-style-type: none"> • Individuals are often turned away from programs due to SUDs even when experiencing symptoms of complex comorbidities. • These abstinence requirements have also been found to increase risk for patients leaving before discharge. • MR programs should consider reducing or eliminating barriers to care that involve substance use and connect patients with supportive services for recovery. 	<p>Bauer et al., 2020; Beieler et al., 2016; Tobey et al., 2017.</p>

Accommodation Strategies

Intervention or Strategy	Key Recommendations	Source(s)
Addressing Specific Needs of Women within Medical Respite	<ul style="list-style-type: none"> • MR programs should consider changes that foster trust with female patients, including female-only spaces and addressing potential for victimization. • Making trauma-informed decisions that create safe spaces for women can improve overall experience and health outcomes for this population. 	Bauer et al., 2012.
Addressing Specific Needs of Older Adults within Medical Respite	<ul style="list-style-type: none"> • Older adults experiencing homelessness have unique vulnerabilities post-hospital discharge. MR programs are a critical resource for these individuals, providing needed structure for recovery and rest. 	Canham et al., 2020.

	<ul style="list-style-type: none"> • MR programs serving older adults should consider training staff to assess need for additional support in ADLs, treatment plans, and physical mobility. • The physical environment of MR locations should account for the needs of this population. 	
<p>Simplification of Medication Regimens</p>	<ul style="list-style-type: none"> • Medically complex patients experiencing homelessness are often prescribed burdensome treatment plans that ignore environmental circumstances. MR staff should provide guidance and, when possible, coordinate with external providers to simplify medication regimens (i.e., lesser frequent dosing, longer acting agents, and medications without storage restrictions). • Treatment plans that are informed by the social determinants of health will lead to better treatment and health outcomes. 	<p>Klein & Reddy, 2015; Pendyal et al., 2020.</p>
<p>TBI Screenings, Adaptations, and Referrals</p>	<ul style="list-style-type: none"> • MR programs should become familiar with the unique challenges faced by patients that have experienced TBI. • Programs can adopt ‘TBI-Friendly’ strategies such as: TBI screening, staff education, modifying the physical environment to be more accessible, and connecting patients with appropriate outpatient and community resources. 	<p>Brocht et al., 2020.</p>
<p>Adapting Clinical Environment to Improve Accessibility</p>	<ul style="list-style-type: none"> • Mobility challenges are common in populations served by MR programs and must be considered in the development phases of new MR sites. • The physical MR environment should be accessible and easy to navigate. • Existing programs can explore the literature for what others have done to make services most accessible for patients. 	<p>Brocht et al., 2020; Canham et al., 2020; Dorney-Smith et al., 2019.</p>

- Programs should also consider providing transportation with mobility support during transition from hospital to MR stay.

Social Support Strategies

Intervention or Strategy	Key Recommendations	Source(s)
Person-Centered Care	<ul style="list-style-type: none"> • Due to negative experiences with health institutions, hospital settings intimidate many consumers. MR providers have an opportunity to restore faith and trust in the health care system by providing person-centered care. • Services that are trauma-informed, emphasize consumer choice and input, and address stigma and discrimination are key. • Providing quality care while upholding dignity and respect of patients will lead to service completion and positive health outcomes. 	<p>Cornes et al., 2017; Gazey et al., 2019; Hwang & Burns, 2014; Klein & Reddy, 2015; Pedersen et al., 2018; Pendyal et al., 2020; Tobey et al., 2017; West et al., 2020; Zur et al., 2016.</p>
Addressing Health Literacy and Skills to Navigate Healthcare Systems	<ul style="list-style-type: none"> • To improve care coordination for patients entering and exiting their programs, MR providers must assess patients' comfort navigating health and supportive services. • It is important to implement transition strategies that emphasize patient autonomy while also providing warm handoffs to referral sources when desired. • MR discharge staff should be educated on resources available locally and assist patients in reviewing their options, enabling patients to define for themselves what next steps are comfortable and appropriate. 	<p>Cornes et al., 2017; Hwang & Burns, 2014; Zur et al., 2016.</p>

Community Health Workers (CHWs)	<ul style="list-style-type: none"> • CHWs are integral to health services for vulnerable populations. They are a critical resource for patients experiencing major transitions (new health care settings, new housing opportunities, etc.). • The CHW model has been particularly successful for patients transitioning from institutional to community settings. Existing MR programs should assess their capacity for accompanying participants in the various stages of transition before, during, and after respite stay. • Hiring CHWs can be an effective step for programs hoping to bridge gaps between patients' clinical and community experiences. 	<p>Bauer et al., 2012; Biederman, 2016; Brocht et al., 2020; Petith-Zbiciak, 2016.</p>
Linking Patients to Primary Care Services	<ul style="list-style-type: none"> • Primary care has been shown to significantly reduce risk of hospital admission and readmission, making it a central concern for MR patients. MR program discharge planning should center around continuation of care, preventative services, and wellness checks. • Effective care transitions can be supported by follow-up home visits, telehealth appointments, medication reconciliation, and client advocacy led by nurses, case managers, or other program staff. • MR programs that are not already associated with clinics can consider partnering with local outpatient providers, providing warm handoffs and even case-conferencing during transitional periods. The importance of this connection to the success of the MR model cannot be understated. 	<p>Biederman, 2016; Petith-Zbiciak, 2016; Racine, 2020; Zur et al., 2016.</p>

Linking Patients to Permanent Housing	<ul style="list-style-type: none"> • Stable housing is key for promoting health and ends homelessness. MR programs with housing navigators (on staff or via partner organizations) can work with patients to identify what housing resources are appropriate and available. • Though scarce, permanent supportive housing (PSH) can be an excellent discharge locale for MR patients, pairing wrap-around services with low-barrier housing. • Considering the cost savings associated with preventing inpatient hospital stays, MR and hospital administrators can partner by advocating for PSH and other housing units designated for persons with complex medical needs. 	<p>Biederman et al., 2018; Canham et al., 2020; Cornes et al., 2017; Doran et al., 2015; Field et al., 2019.</p>
Connecting Uninsured Patients with Medicaid Navigators	<ul style="list-style-type: none"> • MR programs should become familiar with local organizations that help with Medicaid or provide SOAR technical assistance (Supplemental Security Income/Social Security Disability Insurance Outreach, Access, and Recovery). • Linkage to this kind of assistance addresses several social determinants of health (i.e., income, healthcare coverage, etc.) at once. 	<p>Biederman et al., 2018; Hauff et al., 2014; Petith-Zbiciak, 2016.</p>

Discussion

The existing literature supports medical respite care as a valuable intervention for persons experiencing homelessness. Overall, studies identified several positive outcomes of programs, including reductions in hospitalization and costs of care, filling a needed gap within services, and improving the health of persons experiencing homelessness. The research continues to demonstrate medical respite as a necessary and vital component of the health care and housing continuum. These outcomes can be used by programs to support funding from community entities (such as hospitals) and to demonstrate need for a program within the community. Despite the heterogeneity of programs and structures, findings suggest that medical respite programs are collectively effective. This indicates that communities can establish a program that generates positive outcomes while responding to their specific needs and available resources.

Multiple approaches to conducting a community needs assessment were completed, both qualitative and quantitative. Interviewing providers, analyzing existing data, and reviewing current evidence all were successful in identifying community needs for medical respite. Those interested in developing a medical respite program can utilize any or all of these approaches to comprehensively identify their own community's need for medical respite, and gather relevant data for stakeholders, funders, and community partners.

Although only a small number of articles included the consumer perspective, these studies provided evidence that medical respite is a valued service that can promote health, wellbeing, and recovery for people without homes (Gazey et al., 2019; Pedersen et al., 2018; Pendyal et al., 2020; Zur et al., 2016). Furthermore, these perspectives highlight the delays in necessary health services that occur when no medical respite program is available (Biederman et al., 2014; Petith-Zbiciak, 2016; Zur et al., 2016). Inclusion of the consumer perspective is critical for both medical respite program development and evaluation, to ensure they are meeting consumers' needs. Although not quantified, the consumer perspective is valuable evidence to support the necessity of medical respite, as they represent an often stigmatized and under-represented population especially in health care and health services literature (Zlotnick et al., 2013).

Recommendations for Medical Respite Programs

- A needs assessment for medical respite care can be completed within communities through engaging with key stakeholders, evaluating available data, and evidence reviews.
- Medical respite programs should develop relationships with relevant community partners including hospital systems and community programs.
- New and existing medical respite providers can survey published literature and program directories to understand the different structural and programmatic approaches of fully operative programs. Consulting examples from the field can be helpful in various stages of medical respite program planning, assessment, and growth.
- Medical respite programs should identify the conditions most commonly experienced by their client population. Such an evaluation can be used to inform and improve approaches to screening, prevention, and disease management.

- Medical respite programs can evaluate for several outcomes including costs/cost savings, hospital usage, continuity of care, and consumer recovery.
- Engagement of consumers is critical to understand the need for medical respite, barriers to engaging in medical respite care, and to identify outcomes of medical respite care.
- Existing medical respite programs can improve services by adopting specific medical interventions, strategies focused on substance use disorders, policies around service accessibility and accommodations, and strategies for improving long-term social supports.

Limitations

Several limitations affect this literature review. First, although the search process was comprehensive, the nature of a literature review is to report on the status of the body of research. Thus, in-depth analysis of the quality of studies and affiliated interventions was not conducted. In order to capture any available information regarding medical respite programs and related needs assessments, non-peer reviewed literature was also included.

Identified Gaps and Recommended Actions

As this literature review identified a high number of publications related to medical respite within the past ten years, an updated systematic review is recommended to further evaluate the level and quality of evidence to strengthen the outcomes identified in this review.

Continued research on outcomes of medical respite programs will be beneficial, especially those that focus on clinical, health, and housing outcomes for participants, as much of the literature has focused on cost effectiveness. Although it is difficult to implement high-level research with this population (such as randomized control trials), research that evaluates the effectiveness of medical respite as a health intervention will further support the efficacy of these programs.

Additionally, further research is needed for specific interventions implemented within medical respite settings. Few articles investigated outcomes or strategies within medical respite programs, and most were unique in the interventions investigated (e.g., addressing brain injury, OPAT, etc.). Replication of these studies in other programs will support the effectiveness of these interventions and their applicability in various program structures.

New and additional research should incorporate and/or focus on the consumer experience, both quantitatively (e.g., quality-of-life measures) and qualitatively (e.g., interviews). Incorporating consumers is crucial for programs working with people experiencing homelessness to ensure programs are trauma-informed and consumer-centered.

Conclusion

This literature review presents an updated overview of the research and literature published on medical respite care, revealing the significant growth in medical respite programs both in the U.S. and internationally. The available publications identify the positive outcomes of medical respite and the need for it in a variety of communities, demonstrating its applicability to the diverse needs of people experiencing homelessness. As programs continue to develop, ongoing research is warranted to expand the knowledge and support the efficacy of the outcomes identified in this paper. Medical respite programs are encouraged to use the available evidence to develop and improve their programs to provide best possible care to those they serve.

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