Building Partnerships in Health and Housing through Medical Respite: First Year Evaluation of the ***Recuperation In a Supportive Environment (RISE) Center of Cook County***

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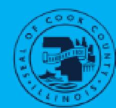

COOK COUNTY HEALTH

housing FORWARD
ending homelessness

Executive Summary

In December 2020, the Cook County Medical Respite Center was created as a new temporary supportive housing program designed to better serve people who were experiencing homelessness and had post-hospital healthcare needs. The **Recuperation in a Supportive Environment (RISE) Center of Cook County**, formerly known as the Cook County Medical Respite Center, leverages the strengths of Housing Forward and Cook County Health to provide integrated healthcare and tailored housing assistance with dignity and respect to residents throughout Cook County. Cook County Health provides medical supervision, care coordination, data management, and primary leadership over the development of protocols and procedures. Housing Forward provides the housing infrastructure, case management, and linkages to longitudinal housing resources.

Original funding was provided by the Federal Emergency Management Agency (FEMA), Cook County Health's Medicaid managed care plan, CountyCare, and the Cook County Department of Planning & Development. Additional support was provided by the J.B. & M.K. Pritzker Family Foundation, Michael Reese Health Trust, the Robert Wood Johnson Foundation, the Reva & David Logan Foundation, and individual contributions.

The RISE Center of Cook County played a key role in the public health response to the COVID-19 pandemic, but also addressed other public health threats, including substance use disorders, unsheltered homelessness, and acute crises arising from temporary and chronic diseases. For the 110 clients served in the first year of operation, outcomes related to health and housing were measurably improved. The program helped to avoid inappropriate use of nursing homes while lowering clients' access barriers to medical care. Our collective experience serves as the foundation on which to further improve clinical outcomes and the quality of medical respite care and to develop sustainable funding models. This work is concrete evidence that a deep partnership in the health and housing sectors can move us one step closer to ending homelessness in Cook County.

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1. Introduction

Accelerated in part by the COVID-19 pandemic, medical respite programs are spreading, filling an important gap in the housing continuum of care. The National Health Care for the Homeless Council defines medical respite care as “acute and post-acute care for persons experiencing homelessness who are too ill or frail to recover from a physical illness or injury on the streets but are not ill enough to be in a hospital.” In Cook County, Illinois, a regional housing provider (Housing Forward) and a large public health care system (Cook County Health) partnered to establish the Cook County Medical Respite Center, now known as the Recuperation in a Supportive Environment (RISE) Center of Cook County. The RISE Center addresses various post-acute care needs—well beyond the need for COVID-19 isolation—of Cook County residents experiencing homelessness.

2. The Need

2.1. Homelessness in Chicago and Suburban Cook County

According to the 2020 Annual Homeless Assessment Report to Congress, point-in-time counts estimated a 2% increase in the number of households experiencing homelessness in the United States during the year prior to the COVID-19 pandemic, driven partly by a 15% increase in chronic homelessness and a 7% increase among households experiencing unsheltered homelessness. Considering Chicago and Suburban Cook County together, the increase in the total number of homeless households from 2019 to 2020 was more attenuated at 1%. However, the increases of 44% in chronic homelessness and 21% in unsheltered homeless suggest a growing concentration of high-risk characteristics including disabilities, substance use disorder, and other medical comorbidities among the region’s homelessness population. These trends suggest that the population in need of medical respite care is growing.

By December 2021, COVID-19 infection affected nearly one million residents of Cook County, inclusive of the City of Chicago, and caused death in over 12,000 residents. Particularly among those experiencing homelessness, an elevated risk of COVID-19 was widely forecasted. Rising to the challenge, the Housing Continua of Care, healthcare and social service organizations, charitable foundations, and local government agencies of Chicago and Suburban Cook County responded to COVID-19 through a timely and coordinated public health response. These collaborations, called Chicago Homelessness and Health Response Group for Equity (CHHRGE), and the Suburban Cook Housing & Health Taskforce organized testing, distributed resources, conducted education, implemented public health policies, and coordinated the movement of clients into medical respite programs for quarantine and isolation. The RISE Center emerged from these activities along with a prior successful emergency deployment of a medical respite isolation program, initiated by Cook County Health, located on Chicago’s South Side that decompressed hospitals of patients who could not return to shelter due to COVID-19 infection.

2.2. Domino Effects and Unintended Consequence

The unmet needs of households experiencing homelessness are immense. Our collective experience while providing COVID-19 mitigation services exposed the complexities of needed resources and policies. Although measures to screen, isolate, and treat COVID-19 among people experiencing homelessness were largely successful, other problems grew worse.

For example, Cook County saw a doubling in the number of fatal opioid overdoses between 2019 and 2020, hypothesized to have resulted from a reduction in access to support groups and treatment programs during the lock down period. Hospitals also faced challenges with finding safe discharge destinations for medically and socially complex patients. These factors prompted stakeholders, led by Cook County Health, to design a medical respite program, not just focused on COVID-19 isolation, but to respond to the broader needs experienced by Cook County's residents without stable housing.

Establishment of the RISE Center in winter of 2020 was fortuitous because movement restrictions within emergency shelters compelled more individuals to remain outdoors, the consequence of which included a spike in substance use and frostbite cases cared for by the RISE Center during the historically frigid February 2021. By providing supervised, sanitary, regular dressing changes of wounds, we provided resources to help avert additional cold-related morbidity.

3. Setting

The RISE Center offers medically-supported, temporary housing to individuals and families experiencing homelessness. The program occupies the first floor – with 19 beds in 15 rooms – in a repurposed vintage hotel building located in the village of Oak Park in the western suburbs of Cook County and adjacent to the City of Chicago's Austin neighborhood. Each room is equipped with a refrigerator, television, and bathroom. There is a community room on the floor with a microwave oven and desktop computer. Wi-Fi service and onsite laundry are also available. The upper floors of the building function as a hotel-based, non-medical interim housing program for Housing Forward. The MRC is ideally situated one-block north of a downtown area of Oak Park. The proximity to community amenities allows clients the convenience of accessing public transportation (bus and train lines), the community's main public library, and a neighboring community park.

3.1. Partner Organizations

3.1.1. Housing Forward

Housing services are provided by Housing Forward. Housing Forward is a recognized leader in suburban Cook County offering a coordinated response that allows people experiencing a housing crisis to resolve their situation. It offers comprehensive, wrap-around support from the onset of a financial or housing crisis to its resolution, preventing homelessness whenever possible, and

providing permanent, stable housing for the most vulnerable members of our community. Housing Forward's programs are designed as interventions tailored to the immediate needs of the presenting individual or family household based on their point of engagement with the RISE Center. The organization has developed a three-pronged strategy for addressing housing crisis and ending homelessness:

- Prevent: Keeping people in their home is the best approach to the prevention of homelessness. Housing Forward builds strategic partnerships that work to reduce the flow of people entering the homeless system.
- Respond: Quickly connecting people experiencing homelessness with basic needs like safety, food, and shelter, and then linking them to services to begin resolving their crisis. Housing Forward works to align a community, and its programs and services, around one common goal—to make homelessness rare, brief, and nonrecurring.
- Stabilize: Housing Forward works to end homelessness one person at a time through housing. Safe, stable housing is the foundation on which clients become self-sufficient and rebuild their confidence so they can not only live, but thrive, in their community.

Housing Forward offers an array of crisis responses and longer-term housing options including interim housing, rapid-rehousing, permanent supportive housing, and long-term rental support for 400+ individuals annually. Housing Forward also offers on-going case management, housing location and pre-tenancy services, an employment readiness program, street outreach, and a homeless prevention program that offers financial assistance, diversion, and stabilization services.
The strength in Housing Forward's programming lies with their determination to end homelessness for those served by implementing effective programming and partnering with other nonprofit/community stakeholders to find innovative, systemic solutions to end homelessness in the 28 suburban communities they serve. Each year, more than 2,000 individuals and families rely on these services. Since the inception of Housing Forward, they have served over 17,000 individuals experiencing homelessness or at risk of homelessness.

3.1.2. Cook County Health

Clinical support is provided by Cook County Health (CCH), one of the nation's largest public integrated healthcare delivery systems, serving more than 130 contiguous urban and suburban municipalities within Cook County, including the City of Chicago. CCH operates two hospitals, fifteen community health centers, correctional health care services for the county jail and juvenile detention center, a comprehensive medical home for patients with HIV/AIDS, and the Cook County Department of Public Health serving suburban Cook County. As of 2014, CCH also administers CountyCare, a Medicaid managed care plan for Cook County residents. CCH's patients are some of the most economically disadvantaged and disconnected from regular care in the region, evidenced by the fact that 40% were uninsured in 2020.

J’s story

“...if I weren't here, I feel like I wouldn't be taking that good care of myself and I would have been dead...”

J had always been wary of doctors and hospitals, which led her to ignore a mass that had been growing in her left breast for at least eight years. After the pain became severe, she went to the hospital. Noting tumors in her lungs as well, doctors said it looked like cancer and recommended chemotherapy. J wasn't ready.

J had grown up in Chicago’s West Side and had two brothers and a sister. Her parents were strict, and J said “all we did was go to school and church.” She had a son from an early relationship, eventually married and had two daughters. When her marriage broke up, she began using heroin to dull the pain and grief.

“Part of just feeling sad or just living on the West Side and being around people who are using, I guess.”

In late 2021, longstanding bouts of abdominal pain and nausea got so bad that she laid down on the kitchen floor and stayed there for hours at a time over several days. After a hospitalization, she was transferred to the RISE Center, which provided her an opportunity to reconsider chemotherapy —a prospect that terrified her as her sister had been diagnosed with lung cancer and had been struggling with chemotherapy’s side effects for over a year.

However, thinking about the possibility of dying, J realized that she really wanted to live. Her youngest brother had died of a drug overdose five years earlier, and her other brother had died of COVID-19 early in the pandemic. Her sister was dying of lung cancer. Her partner’s mother had died after 18 days in a nursing home, and another elderly friend had also died. She had had enough of death.

J realized that she needed to talk with someone about her hopes and her fears, but her family only reinforced hopelessness.

“I wanted to talk about it, but I guess it was too much for them. It's a hard thing – maybe the hardest thing of all – but this is being sick. Family and everyone I was close to, they just didn't know what to say. They don't wanna talk about sickness, like it don't exist, but I can't pretend that it don't exist.”

She was, however, able to talk about her illness with staff at the RISE Center and finally went ahead with the recommended mastectomy and chemotherapy. She was taken to the hospital wearing a T-shirt made for her and was greeted by staff wearing the same shirt, which said “Hope is stronger than Fear.”

J’s sister died in the fall of 2021. It’s not clear what 2022 will bring, but her goal is to beat the cancer and to become a motivational speaker to encourage other people with cancer. She’d also like to get back to work with children in her church – to help them find their sense of hope.

“I say thank you because I would have been dead, I believe. I really just can't wait for the new year. I always like New Year's Eve—my favorite holiday because I think about the mistakes I made. But this year, I feel like I'm really really blessed and happy in the world just to wake up.”

John H. Stroger Jr. Hospital of Cook County is CCH's flagship academic tertiary care hospital. The hospital includes the country's oldest comprehensive Level 1 Trauma & Burn Center, which remains one of the most respected in the nation. The hospital's adult emergency room treats more than 110,000 patients annually. As an institution committed to "delivering integrated health services with dignity and respect regardless of a patient's ability to pay," it provides outpatient primary and specialty care (including elective surgeries and cancer treatments) regardless of patients' insurance status. CCH provided $360 million in charity care services in 2021, more than half of all charity care provided in the whole of Cook County that year.

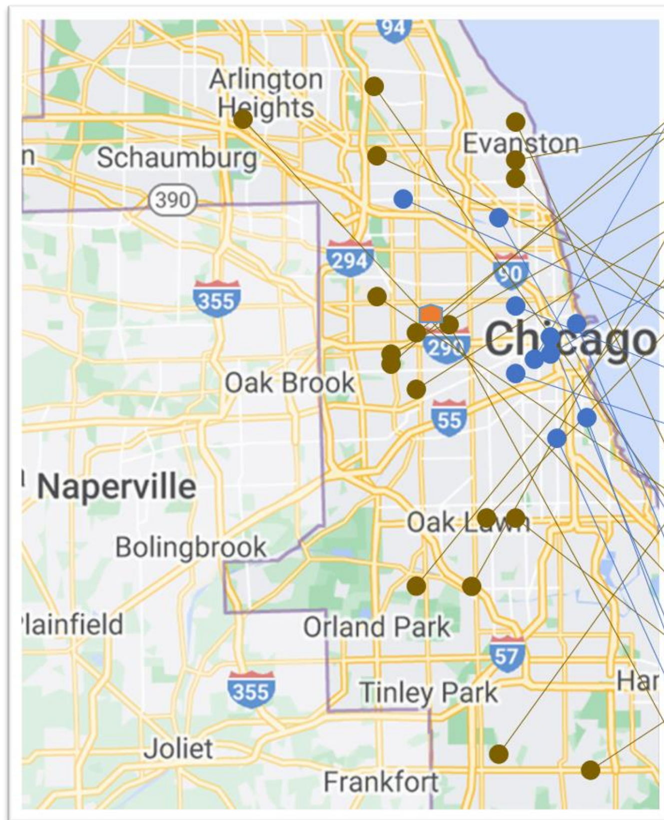
CCH has a large footprint in the provision of healthcare to the region's people experiencing homelessness. In 2018, 80% of unaccompanied adults in Chicago's Homelessness Management Information System (HMIS) had a patient record in CCH's electronic health record, indicating that adults served in Chicago's emergency shelters and street outreach services were likely to have received healthcare at CCH at some point in time. Additionally, more than 2,000 CCH patients recognized as high-risk homeless have no corresponding record in the HMIS for either the City of Chicago or suburban Cook County, suggesting that many unsheltered and hard-to-reach people experiencing homelessness regularly receive crisis care through CCH.

4. Clinical Program Features

4.1. Client Referral Source

The population of Chicago and suburban Cook County in 2020 were 2.7 million and 2.6 million, respectively. Although populations counted in the homeless point-in-time counts in the same year were 6-fold greater in the City of Chicago compared to the suburbs, funding from the U.S. Department of Housing and Urban Development to the respective Continuum of Care was proportionate to the number of clients served. To serve the entire County equitably, the RISE Center accepts referrals from (1) institutions located in suburban Cook County, (2) CCH (with its two hospitals located in the City of Chicago), and (3) any institution referring a client with ties (e.g., prior employment or residence) to the suburbs. This last criterion was subjective due to itinerancy exhibited by the service population and was interpreted permissively.

Organizations that referred clients to the MRC are shown below. Of 240 referrals that we received from December 2020 through 2021, 66% were from Stroger Hospital and 28% from suburban hospitals. Referring institutions covered the entire span of Cook County, including the underserved southern suburbs.



Referral Source	Referrals,n
John H. Stroger Jr Hospital, Cook County Health, Chicago	>100
Loyola University Medical Center, Maywood	10-100
Rush Oak Park Hospital, Oak Park	
Connections for the Homeless, Evanston	3-9
Cook County Department of Public Health, Cook County Health	
Housing Forward, Maywood	
MacNeal Hospital, Berwyn	
Northwestern Medicine Palos Hospital, Palos Heights	
Rush University Medical Center, Chicago	
Advocate Christ Hospital, Oak Lawn	1-2
Advocate Lutheran General Hospital, Park Ridge	
AMITA Resurrection Medical Center, Chicago	
AMITA St. Francis Hospital, Evanston	
AMITA St Mary and Elizabeth Medical Center, Chicago	
Access Community Health Network, Chicago	
Cermak Health Services/Public Defender, Cook County Health	
Franciscan Health Olympia Fields	
Gateway Foundation Corrections	
Loyola Gottlieb Memorial Hospital, Melrose Park	
Northshore Evanston Hospital, Evanston	
Northshore Glenbrook Hospital, Glenview	
Northshore Swedish Hospital, Chicago	
Northwest Community Hospital, Arlington Heights	
Northwestern Memorial Hospital, Chicago	
OSF Little Company of Mary Medical Center, Evergreen Park	
Respond Now, Chicago Heights	
Revive Center for Housing & Healing, Chicago	
Provident Hospital, Cook County Health, Chicago	
St Bernard Hospital, Chicago	
West Suburban Hospital, Oak Park	

4.2. Clinical Pathways and Eligibility

To rapidly develop competency in the first year of operation, the RISE Center offered services focusing on a few prescribed post-hospital care needs. We extended services associated with the following clinical pathways.

Clinical Pathway	Referred	Accepted	Referred Elsewhere
Surgical/Pathologic Wound Care	86	66 (77%)	11 (13%)
COVID19 Isolation	81	53 (65%)	19 (23%)
Outpatient Parenteral Antibiotics	22	13 (59%)	4 (18%)
Protective Isolation	15	10 (67%)	4 (27%)
Other	36	7 (19%)	13 (36%)
TOTAL	240	149 (62%)	51 (21%)

The RISE Center was able to accommodate admission for 62% of all referrals and, when unable to accommodate due to capacity issues, assist with information about an alternate placement for 21%. For the 40 (17%) of referrals that the RISE Center did not accept, the common reasons for denial were: clients did not fit into one of the clinical pathways (40%), were not homeless (25%), required skilled nursing-level care (10%), or were on the sex offender registry (10%). Denials illustrated the high demand for supportive housing, in general. Not all accepted clients were ultimately transferred

to the RISE Center; the most common reasons included changes in plan by the referring institution or by the referred client.

Each of the clinical pathways are discussed in detail in the following sections. Expansion of clinical pathways involving, maternal child health, the treatment of hepatitis C virus infection, and isolation of other transmissible diseases are under development.

4.3. Staffing

4.3.1. Clinical Support Roles

At the outset, at least one clinical staff was present onsite at the RISE Center 24 hours a day, 7 days a week. During the busier daytime hours, staff-to-client ratio was no less than 2:19. During evening and overnight hours, the ratio was no less than 1:19. The clinical staffing model evolved throughout the year, but the consistent feature was medical assistants (MAs) providing the bulk of supportive services. MAs collected clinical assessment data during wellness checks and assisted clients with wound dressing, medications, meals, laundry, arranging transportation, and housekeeping. Four fulltime MAs provided coverage divided into 8.5-hour shifts, including a half hour devoted to warm handoffs between shifts. MAs functioned under the supervision of the physician Medical Director. A nurse covered weekend shifts during the day and sporadically during the week to supplement client care coordination and program management responsibilities. In the first year, CCH's Housing Director actively built connections between the housing and health sector agencies and provided onsite guidance to staff as the program developed.

We hired clinical staff through a staffing agency. The Medical Director employed by CCH supervised all clinical staff. CCH also provided volunteer physicians who served half-day shifts in-person, providing clinical consultations and care coordination; these volunteer physicians also provided nighttime and weekend on-call coverage for urgent clinical consultations. Because the RISE Center was not an official site-of-care for CCH clinicians, physician volunteers did not perform billable services. Rather, they facilitated outpatient management of medical conditions, either by supporting the plan established by the discharging hospital or by arranging linkages to routine primary and specialty care. The RISE Center supported traditional medical visits with the provision of transportation and supported telehealth encounters with loaner communication devices.

4.3.2. Case Management Support Roles

Housing Forward provided two case managers who reported to the RISE Center's Director of Medical Respite. Case managers are charged with assisting the client in several areas including accessing benefits and creating a housing plan for when the client leaves the RISE Center. The Director leads a discussion group alongside a former client with lived experience of homelessness and medical respite care. Other volunteers such as social work interns supplement the case managers' efforts. All case

management staff are hired directly through Housing Forward and are supervised by Housing Forward's Director of Medical Respite.

In addition to these staff, groups of volunteers provided evening activities for clients such as games, movies, and discussion groups. Ad hoc volunteers also assisted some clients in getting to clinical appointments and obtaining identification cards.

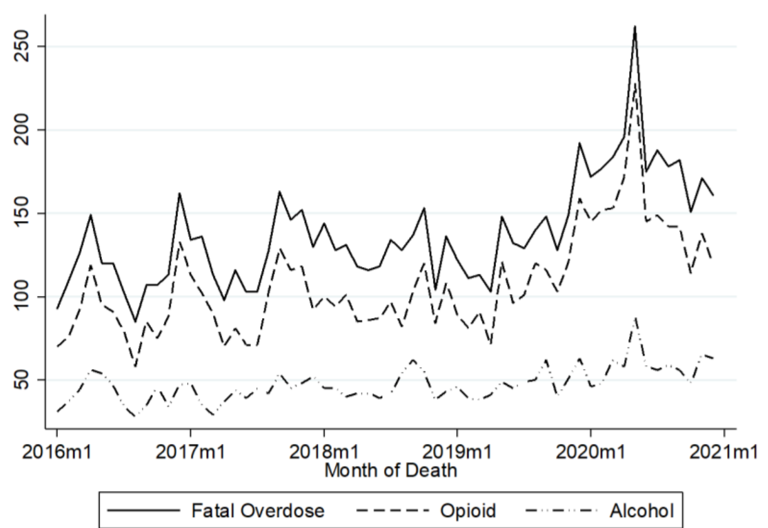
4.4. Criminal-Corrections Involvement

Homelessness and the correctional system are deeply intertwined, characterized by the 13-fold greater risk of homelessness experienced by people detained/incarcerated more than once compared to the general public. Except for the exclusion of individuals listed on a sex offender registry, criminal history was not an exclusionary criterion for the RISE Center. Moreover, we worked with healthcare staff based in Cook County Jail to create a pathway from jail release into RISE Center for clients whose release from detention was delayed by lack of housing.

Among clients with pending criminal cases, the RISE Center provided various ad hoc support. For example, we made various accommodations for a client on electronic monitoring to comply with pretrial requirements. For another client, we worked with the Office of Public Defenders to write a letter seeking leniency for sentencing from a judge. Still for another client, we recruited a *pro bono* attorney to assist with an expungement and sealing process for a client seeking to return to work.

4.5. Harm Reduction

Well over half of the population experiencing homelessness suffer from substance use disorder and 2020 was associated with an alarming rise of fatalities from alcohol and illicit drugs in Cook County as illustrated in the figure plotting monthly overdose cases as the primary cause of death in the Cook County Medical Examiner Record during 2016-2020. The RISE Center upholds the principle of harm reduction to preserve life. According to the National Harm Reduction Coalition, harm reduction is "a set of practical strategies and ideas aimed at reducing negative consequences associated with drug use...[and] also a movement for social justice built on a belief in, and respect for, the rights of people who use drugs." The RISE Center strives to lower barriers to



entry and to avoid excluding clients based on patterns of substance use. The RISE Center provides

support for clients with substance use disorders through coordination with recovery treatment providers. Staff are trained to recognize overdoses and to administer rescue naloxone. Finally, the RISE Center is committed to discouraging dysregulated substance use without resorting to coercion. Witnessed episodes of intoxication almost always invited a conversation in which staff educated clients on the dangers of the unpredictable potency of street drugs. Safe consumption practices were reinforced. Staff are trained never to exploit the universal need for housing to induce behavioral change related to drug use.

Across programs serving the homeless, fidelity to the harm reduction principle is far from uniform. To establish clarity within the RISE Center, Housing Forward and CCH engaged in mentoring led by the Midwest Harm Reduction Institute toward reconciling practices and policies between the two partner agencies. The months-long exercise led to revisions in local policies to reduce undue penalties for substance use. Our program is committed to never placing housing at risk to induce changes in clients' behavior related to drug use. Simultaneously, we confronted challenges to operationalizing harm reduction approaches with a small number of clients whose drug use remained dysregulated or were suspected of trafficking. Evidence of drug trafficking within the building was considered grounds for dismissal from the programs as it posed harm to the community at large.

The RISE Center supports pharmacologic therapy for clients with alcohol or opioid use disorders. In clients using opioids regularly, receptor agonist medications like methadone and buprenorphine-naloxone are evidence-based protection against fatal overdoses. We coordinate closely with methadone programs to allow clients – particularly those localized on-site for COVID-19 isolation or OPAT – to receive multiple "take home" doses with each dispensing, which were securely stored by staff. We also worked closely with discharging hospitals to ensure that clients choosing maintenance methadone or buprenorphine-naloxone avoided gaps in treatment days by enrolling them into a treatment regimen prior to arriving at the RISE Center.

Among RISE Center clients, 56 (51%) self-reported substance use disorder. Among clients with recent use, 66% had used opioids and 18% had used crack/cocaine. For agonist maintenance treatment for opioid use disorder, 18 (16%) were supported with methadone and 9 (8%) with buprenorphine-suboxone during their MRC stay.

4.6. Outpatient Parenteral Antibiotic Therapy

Outpatient parenteral antibiotic therapy (OPAT) is effective and lifesaving for individuals suffering serious infections. The homeless population is at risk for acquiring these infections through the higher prevalence of intravascular drug use, complicated wounds, and for not receiving full courses of OPAT due to unstable housing conditions. During the first year, the RISE Center supported six clients who successfully completed their prescribed intravenous antibiotic course (one client

completed two separate courses). For clients with co-occurring intravenous drug use disorder, abstinence from illicit drug use was facilitated with intensive relational and instrumental social support coupled with enrollment in a maintenance methadone program. Chaperoned visits to clinical appointments were opportunities for supportive dialogue. Outside of chaperoned visits, we required clients to remain localized on-site for the multiple weeks that the indwelling IV line was maintained. We provided cigarettes or tobacco substitutes to smokers to ease the burden of localization. We considered but did not use anti-tampering devices on the indwelling IV lines. Misuse of indwelling IV lines was not observed in the program.

The median (IQR) length of stay at the MRC for OPAT patients was 28 (14, 39) days. Dosing regimen as frequently as every 6 hours were accommodated. Each client successfully completed the OPAT course and post-treatment clinical visits confirmed resolution of infection.

4.7. Wound Care and Peri-Procedural Support

The experience of homelessness raises risk of injuries from exposure and trauma. Sometimes these injuries require emergency surgeries. As an additional matter, access to elective procedures is severely limited to people experiencing homelessness because unstable housing and associated conditions like substance use disorder and criminal-corrections involvement may cause a surgeon to refuse or delay procedures. The RISE Center served as a resource for clients needing a place to recover from emergency surgeries and a stable place to allow elective procedures to be scheduled. Surgical services and the conditions they treated for the 54 clients served under this pathway are tabulated below.

Conditions Requiring Surgical Services for RISE Center Clients

Burn Center, n		
	Frostbite	16
	Burns	9
Trauma, n		
	Gun shot wounds	3
	Other violence injuries	3
	Accidental injuries	2
Orthopedic, n		
	Joint conditions	4
	Bone fractures	3
Other, n		
	Infectious wounds	5
	Vascular wounds	4
	Nontraumatic eye surgery Inguinal hernia repair Colonoscopy Tumor resection	1-2

Eighty-five percent of these clients were referred from John H. Stroger, Jr. Hospital of Cook County. Notably, CCH's Burn team worked closely with the RISE Center to provide the full spectrum of care from hospital-based crisis care to continuity care in clinics. Many frostbite cases inundated the CCH Burn Center in February 2021 with the convergence of record cold temperature and reduced access to emergency shelters due to COVID-19-related movement restrictions. Many of these patients were discharged to a warm and supportive environment at the RISE Center. Wound care supplies and wound care management guidance were provided by CCH.

The median (IQR) length of stay at the MRC for these patients was 33 (14, 77) days. Twenty-six percent of clients were uninsured.

4.8. Cancer and Protective Isolation

The most common cancers among men experiencing homelessness involve the lung, prostate, and colorectum, whereas for women, they involve the lung, breast, and cervix. Disparities in cancer deaths between the homeless and the housed are as high as 2-fold for lung and bronchial cancers. Part of what drives this disparity is the complexity of cancer care, which requires a high level of health literacy to navigate. CCH is one of the region's few cancer treatment centers for the uninsured and underinsured, but patients often struggle to maintain continuity of care involving multiple visits. Uncomfortable treatments are difficult to tolerate without stable housing and substantial social support. The RISE Center provided supportive housing for five clients who started cancer treatment in 2021. The remarkable recovery of a client with stage 4 lung cancer and the struggles of another client with stage 4 breast cancer are detailed in the client voice inserts in this document. All clients underwent turbulent clinical courses as staff provided daily support, surveillance, encouragement, and transportation back to the hospital as needed. The provision of door-to-door transportation was critical to clients' ability to maintain a regimen of frequent outpatient appointments for infusion, radiation, radiology, oncology check-ups, palliative medicine follow-ups, COVID-19 vaccinations, methadone dosing, and other specialty clinic visits. Staff, other clients, and volunteers of the program formed a supportive community around individuals who often had little social support otherwise.

Three other clients with a need for protective isolation had immunocompromising conditions including HIV/AIDS, advanced diabetes, and conditions that required immunosuppressive medications. The median (IQR) length of stay at the MRC for patients in this pathway was 65 (56, 87) days. Patients without health insurance coverage was 43%.

D’s story

“I couldn’t eat...I couldn’t see...I couldn’t walk...I was almost not here anymore...”

D had been living in the basement of an apartment building for about four years. A friend let him stay there in exchange for doing odd jobs. There was no toilet or shower; he would wash himself with water in a bucket and would go to the hospital across the street to use the toilets. He didn’t have a bed at first. When he eventually got one, he’d step into flood water on rainy days. Some building residents didn’t know he was living in the basement, so he was careful to remain unnoticed.

D came to the U.S. from Belize decades ago. He had no friends or family back in Belize and by the time he and his wife had split up, they were not on good terms. He had lost contact with his two adult daughters and his 11-year-old adopted daughter. He lived with his mother and took care of her until she died. After her death, there was no more money for lawyers and his application for legal residency was lost.

Late in the spring 2021, D felt fatigued and noticed his vision was getting worse. He lost his appetite and became so weak that he could barely get out of his bed. He became short of breath with even minimal effort. He ran out of food. He began to feel confused. He fell and hit his head.

In the midst of this, D was hit with another tragedy. His daughter was killed in the crossfire of urban gun violence. D was too physically sick to go to her funeral.

“*I was staying in the darkness...I prayed to God...I was afraid to die...This was the worst year for me”*

That summer, D’s friend took him to the hospital where was diagnosed with brain tumors. He underwent urgent surgery, with his surgeons saying that if he had waited any longer before coming in, he would have died. Without insurance, he was discharged and told to seek further care in the public hospital. He arrived at the Stroger Hospital Emergency Department in pain, short of breath, confused, and afraid.

A chest CT scan showed a large lung tumor which had metastasized to his brain. The oncologist recommended radiation therapy followed by immunotherapy against lung cancer. He was referred to the RISE Center for housing and assistance with care coordination.

At first, D spent most of his time in bed and had difficulty eating because he had no appetite. He had chest pain and felt extremely weak. A few times he had to go to back to the hospital because of trouble breathing, but he was able to complete his radiation treatment and started immunotherapy.

By the fall, his appetite was improving, his pain was decreasing, and he was able to walk around more. He reconnected with one of his adult daughters. In November, he turned 54 and one of the medical assistants brought him cake. The staff sang “Happy Birthday” to him—he said this was the first time in his life anyone had done that for him.

In December, he moved into his own apartment. He’s feeling much better and looks forward to completing his treatment soon and hopes to be able to work again after that.

4.9. SARS CoV-2 Isolation

Cook County experienced four distinct waves of COVID-19 transmission over the two years spanning 2020 and 2021. CCH supported isolation programs for people experiencing homelessness during each of these peaks, with the three most recent peaks at the RISE Center. Isolation protocols were informed by public health guidelines issued by agencies at the national, state, county, and city levels. The RISE Center functioned, primarily, to decompress the region's hospitals. We received referrals from, both, emergency departments and inpatient units. Our work fit within a broader context of organizations providing COVID-19 isolation including the CARReS COVID+ Medical Respite Center (for Chicago-based emergency shelter residents), CDPH Hotel-Based Protective Housing Program (for Chicago-based shelter residents at risk for severe COVID-19), and the CCDPH Alternate Housing Initiative (for suburban residents).

RISE Center clients in COVID-19 isolation were required to remain in their rooms to minimize their direct contact with not only clients and staff in the building, but with the surrounding community. Clinical staff performed clinical assessments during each shift. MAs also delivered meals and other essentials directly to clients' rooms. We offered chaperoned smoking breaks for nicotine-dependent clients. The RISE Center provided COVID-19 isolation for 41 distinct clients. The median (IQR) length of stay for these patients was 10 (4, 14) days.

4.10. Mental Illness Crisis Management

In addition to substance use disorder, 31 (28%) of 110 RISE Center clients who completed the intake questionnaire self-reported having a mental health disorder. Outside of self-report, a quarter of clients had a clinical diagnosis of a serious mental illness during 2020-21. Serious mental illness, comprised of several disabling conditions – such as schizophrenia, bipolar disorder, and major depression – is found in only 4% of the general public. Support for clients with mental health disorders involved a tailored response to each client's individualized needs. For example, some clients preferred to receive assistance with prescribed medications while others requested being left alone except for regular clinical check-ins.

Whenever possible, mental health crises were deescalated using communication techniques. On isolated occasions when escalated clients posed a danger to themselves or others, we completed a petition for involuntary emergency evaluation to facilitate a safe transfer to a more controlled care environment by first responders.

4.11. Transportation and Communication

Effective post-acute recovery depends on adherence to scheduled outpatient continuity care. But the geographic distance between the RISE Center and the many health care organizations that referred and treated clients posed transportation challenges. We set expectations for referring hospitals to

provide the initial transportation to the RISE Center. After, we used a combination of public transit passes and commercial hailing services to ensure clients kept all scheduled outpatient appointments. The use of commercial hailing services imposed a significant cost burden (nearly $3,000 per month) on our operating budget, but the value of this investment was evident in the successful medical management of various conditions, and reduction in avoidable emergency room utilization.

In terms of alternative resources, Medicaid managed care plans often provide transportation services, but in general, these were not reliable. Some plans required staff to spend 30-90 minutes on the phone to set up a single ride, without guarantee that the ride would arrive. The public transportation system around Chicago is fairly extensive, but many clients had disabilities that posed difficulties for even a few minutes of walking, especially in inclement weather.

Return rides from clinic appointments back to the RISE Center were arranged when clients called staff to signal their readiness to return. When clients did not have their own mobile telephone, the clinic's nurses or registration staff were asked to call the RISE Center to coordinate the return trip. These routines were functional, but not failsafe. Not having mobile communication devices is a significant impediment to independent functioning. The process for securing a prepaid telephone service through the federal Lifeline Program can last as long as 4-6 weeks – exceeding the average length of stay in our program – and we were unable to provide this benefit to eligible clients on a routine basis.

4.12. Health Harming Legal Needs

According to the landmark 2017 Justice Gap Report, 41% of low-income households had at least one civil legal problem associated with healthcare. CCH's medical-legal partnership with Legal Aid Chicago provided pro bono legal services according to the I-HELP (Income, Housing & utilities, Education & employment, Legal status, Personal & family stability) framework. The most common assistance received by MRC clients were related to public benefits, housing, and immigration status. A special program within Legal Aid Chicago also offered assistance with expungement and sealing for several clients of the MRC.

4.13. Trauma-Informed Care

Trauma-informed care encourages deeper curiosity into the circumstances of underlying uncooperative or distrustful behaviors. The change in mindset that recasts "what's *wrong* with you?" to "what *happened* to you?" fosters solidarity among clients and caregivers who may identify the effects of even minor emotional trauma in our past. The impact of this approach yielded several noteworthy observations. (1) Almost without exception, clients who entered the program with an adversarial attitude shed their defensiveness within two weeks of their stay. Lack of engagement appeared to evaporate with compassionately delivered supportive housing. (2) Leadership faced many opportunities to practice trauma-informed care to resolve interpersonal conflicts among staff

as often as between staff and clients. Not giving up on people as a guideline bore the fruits of trust and loyalty for the program.

4.14. Electronic Data Management and Routine Data Use

During the first year of operation, RISE Center services were not CCH encounters. Thus, electronic documentation of clinical activities required a data management system outside of CCH's electronic health record. To uphold HIPAA requirements for administrative, physical, and technical safeguards for securing protected health information, we built a customized data management tool using an instance of REDCap running on a server behind the CCH data firewall. The customized module involved separate data input forms for prearrival communication, medical intake, daily records, controlled substance storage, care coordination, and discharge. The use of REDCap data for the coordinated work between the clinical and case management staff was grounded on signed release of information at intake.

5. Housing Program Features

5.1. City vs. Suburban Continuum of Care

Housing Continuum of Care (CoC) is a grouping of homeless service agencies in a geographical jurisdiction joined by a shared application for federal housing resources. The CoCs of suburban Cook County and the City of Chicago operate exclusively of one another in the Cook County region. The RISE Center's service area spans these two local CoCs because it receives referrals from both the city and the suburbs. All program clients received temporary housing and support services at the RISE Center regardless of their referral source. However, Housing Forward administers HUD housing resources that were allocated exclusively to residents of suburban Cook County. Due to itinerancy, many people experiencing homelessness reside or spend significant time in both the city and some suburban areas. Our program tried to up-resource stable housing stock for residents of Chicago by equitably offering housing resources controlled by CCH through the Flexible Housing Pool and vouchers issued by the Housing Authority of Cook County (HACC) as described in further detail below.

5.2. Partnership with Housing Forward Interim Housing Program

The RISE Center is co-located in a building with Housing Forward's Interim Housing Program (IHP), which occupies the upper floors. IHP beds were often available to suburban clients who completed their course in the medical respite program. Although the RISE Center and IHP were conceived as separate programs, interdependencies emerged such that the two programs became more integrated over the course of the year. For example, the RISE Center's clinical staff were called upon to provide consultation and instrumental support to IHP participants with health concerns. Also, when several new cases of COVID-19 were identified among IHP clients, both programs acted in concert to control further spread with on-site testing and supportive services to those in isolation.

5.3. Stable Housing Resources

5.3.1. Housing Authority of Cook County (HACC) Vouchers

In 2019, CCH received an allocation of mainstream housing vouchers from HACC to support patients in sustaining permanent independent housing. Voucher holders choose their own housing within suburban Cook County rather than being told where to go. The Housing Department works with HACC staff, CCH care coordinators, and voucher holders to assist in the annual voucher renewal process. To date, approximately 90% of participants have sustained their voucher status. In 2021, CCH received an additional allocation of housing vouchers from HACC and has worked with Housing Forward staff to make these vouchers accessible to RISE Center patients. To date, nine patients have completed their applications and are awaiting confirmation of the disbursement of vouchers.

5.3.2. Chicago-Cook County Flexible Housing Pool Program

The Chicago-Cook County Flexible Housing Pool is a permanent supportive housing program that creates new housing stock using public and private-sector investments into a public escrow fund maintained by the City of Chicago. The program prioritizes individuals and families dealing with chronic medical conditions which often lead to persistent utilization of crisis services. Cook County Health is a key partner and financial contributor to the Flexible Housing Pool program that, among several responsibilities, identifies eligible clients through analysis of cross-sector data and places them into the housing outreach list. RISE Center clients who meet the eligibility criteria are referred to the Flexible Housing Pool for housing.

5.3.2. Coordinated Entry

Chicago and suburban Cook County's coordinated entry system facilitates an accessible and racially equitable path to housing. The majority of RISE Center clients complete a standardized housing assessment of each respective CoC and follows a prioritization plan to refer youth, individuals, and families to housing.

5.4. Client Disposition at Discharge

By the end of December 2021, we had discharged 96 RISE Center clients. At time of discharge, about a third of clients were discharged to suburban-based transitional housing, which includes those who moved into Housing Forward's IHP program in the same building. The next most common discharge destinations were to stable housing, homes of family/friends, or a non-endorsed/unknown location. Regarding this last category, we actively review each such case to determine how similar instances might be avoided in the future.

Discharge Destination	n (%)
Stable Housing	15 (16%)
Interim/Transitional Housing, Suburbs	33 (34%)
Interim/Transitional Housing, Chicago	3 (3%)
SUD Treatment Housing	7 (7%)
Emergency Shelter, Chicago	2 (2%)
Family/Friends	15 (16%)
Hospital	9 (9%)
Unknown/Absconded/Streets	12 (13%)
TOTAL	96

Although the RISE Center was not designed to transition clients exclusively into stable housing (permanent housing or rapid rehousing), the majority of discharged clients were successfully placed on a pathway toward stable housing.

Notably, jurisdictional ineligibility was a serious impediment to optimal discharges. Clients who did not have ties to suburban Cook County could not access resources administered by the suburban Cook CoC. Furthermore, the Chicago emergency shelter system did not accept clients who were not located within the city's boundaries at the time of referral. Case managers worked creatively to ensure safe housing destinations for all clients.

6. Performance Evaluation

We conducted analyses of data from the first year of operating the RISE Center, which we present in this section. These analyses generated several performance measures that serve as benchmarks for prospective quality improvement. In summary, we successfully served a population that reflected the racial disparities seen in the region's experience of homelessness. We did not detect reductions in the average length of hospitalization that preceded clients' transfer to the RISE Center compared to average hospitalizations for high-risk homeless patients at John H. Stroger Jr Hospital of Cook County. Clients of the RISE Center exhibited medical and behavioral comorbidities that are associated with a substantially elevated risk of death. Programmatic features of the RISE Center are designed and continuously revised to directly mitigate mortality associated with the most prevalent conditions including substance use disorder, injuries, and serious infections.

6.1. Clients Served

As of the end of December 2021, the RISE Center provided medically supported interim housing for 110 distinct clients in 104 households, including 2 couples and one family with 3 minor children, over 115 admissions. The sociodemographic characteristics of clients are shown below.

Age Category, n(%)	
<18	3 (3%)
25-34	8 (7%)
35-44	18 (16%)
45-54	33 (30%)
55-64	39 (35%)
≥65	9 (8%)
Sex Category, n(%)	
Male	86 (78%)
Female	22 (20%)
Other	2 (2%)
Race Ethnicity Category, n(%)	
Black/African American	64 (58%)
White	23 (21%)
Hispanic/Latino	19 (17%)
Other	4 (4%)
Insurance Category, n(%)	
CountyCare Medicaid Managed Care	27 (25%)
Self pay	25 (23%)
Other Medicaid Managed Care	44 (40%)
Medicare	6 (5%)
Medicare Managed Care	2 (2%)

RISE Center clients' demographics were similar to the unsheltered homeless population from Cook County's point-in-time counts in terms of age, sex, and race-ethnicity categories. Clients among the region's recent immigrant communities from Latin America and Poland were more likely to be uninsured.

6.2. Homelessness History

We routinely asked about client's history of homelessness at intake. Of our 110 clients, 33 could not quantify the duration of their homelessness, often due to the non-standardized way the phenomenon is experienced. For example, some who were long-term clients in an emergency shelter or doubled-up denied they were homeless at all; while others could not recall the last time they were not housing insecure; still others could not compute the cumulative duration of fragmented periods spent on the streets. About one-third of clients who did not identify as homeless had become functionally homeless due to a medical condition for which they were referred; inability to self-isolate for COVID-19 or to find a safe place to undergo OPAT were some examples. Of the 77 clients who could quantify the duration of their homelessness, the median duration (min, IQR, max) of homelessness was 6 (1, 2, 24, 156) months. The large majority (71%) of MRC clients bounced between being unsheltered and doubled-up and had never spent time in an emergency shelter.

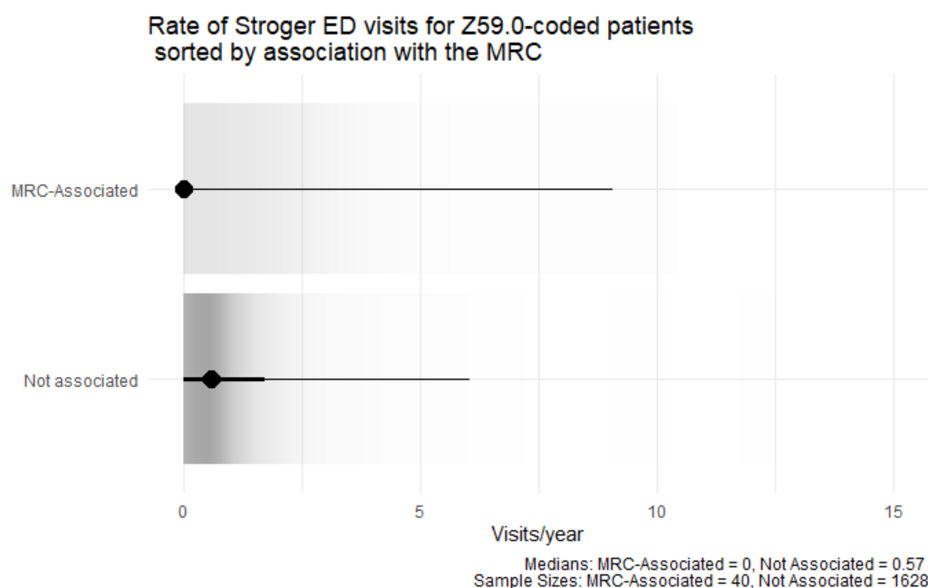
6.3. Medical Respite Impact on Health care Utilization

We were interested in how our clients interacted with our health system after their entry into the RISE Center. Analyzing CCH electronic health records over a 22-month period from January 1, 2020 to October 31, 2021 enabled us to compare the health care utilization patterns of our clients compared to other CCH patients coded as experiencing homelessness (ICD10 Z59.0).

We used two metrics to evaluate patterns of health care utilization: average projected rate of emergency department visits and average length of inpatient hospitalizations. For the latter, we compared the length of stay of our clients indexed just prior to RISE Center admission and compared this to the average inpatient length of stay for other patients coded for homelessness at CCH. We stratified these comparisons by diagnostic groups associated with the RISE Center's clinical pathways, expecting that the type of diagnosis would significantly contribute to variability. We used bloodstream infection/endocarditis, burn/frostbite, cancer (breast, colon, lung, and/or prostate), and COVID-19 as our diagnostic groups for stratification.

6.3.1. Emergency Department Utilization

A previously published study from Connecticut and Florida attributed a two-day reduction in the index hospitalization prior to Medical Respite Care, and a 45% reduction in subsequent emergency department visits (*Shelter D, J Health Care Poor and Underserved. 2018; 29(2):801*). Based on these out-of-state findings, it was reasonable to expect that discharges to MRC could decrease both index inpatient length of stay and ED utilization at CCH as compared with other patients coded for homelessness. Compared to 34% of all homeless coded patients, only 16% of MRC clients used the emergency department during their stay. In analysis detailed below, we found that the median projected number of ED visits for MRC patients is lower than that of non-MRC patients. This difference, however, was not statistically significant.



E’s story

“I don't believe in suicide, but it will take you to that road when you see you’re all alone and don't have nobody....”

E was born in Romania. From an early age, he was captivated by images of a more prosperous life in Western Europe and North America. E fled Romania when he was 18 and found himself in a refugee camp in Yugoslavia by 19. That year, he was granted asylum and flew to Idaho. He eventually ended up in Chicago where he found work as a truck driver. He was 54 years old.

“I just ended up finding a job here in Chicago and I was so happy to move here but after two months of working, I just collapsed. I’d never been that sick in my life.”

He had no health insurance, so did not want to go to a hospital. He couldn’t work due to his illness, but his boss let him live in his truck for two months before insisting that he go to an emergency department.

In June 2021, E was told he had a mass on his brain. Having avoided doctors for most of his life, he was also newly diagnosed with severe hypertension, autoimmune kidney disease, heart failure, hepatitis C, latent tuberculosis, and diabetes. Given the location of his brain mass, a biopsy was too dangerous. He needed to undergo a battery of diagnostic tests and treatments, mostly on an outpatient basis. That was when he was referred to the RISE Center.

By then, E’s wife and daughters had been out of contact for many years, and he had no family or friends in Romania, either. Without a job, friends, family, or a home, loneliness was a serious threat to his health.

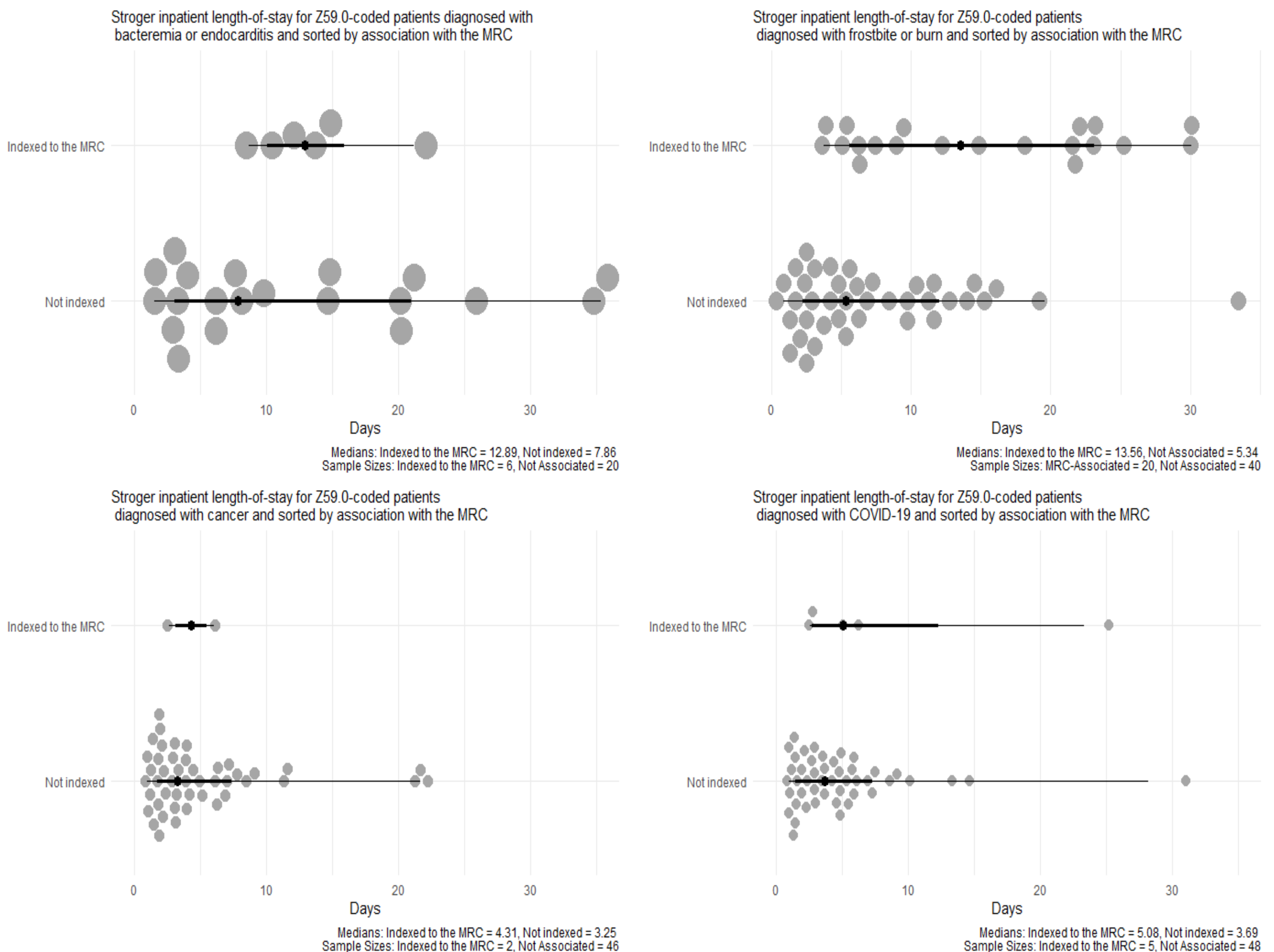
“To be honest with you I thought of committing suicide. Sometimes you get to that age when you see you don't have nobody in your life and you’ll end up on the street because that's what it is. I never believed in the suicide, I mean, but probably it will take you there when you don't have nobody.”

E is now in interim housing awaiting placement into his own apartment. He had another brain MRI which showed that the mass had not grown. His doctors now suspect that the brain mass might be an autoimmune problem and not cancer. Feeling more hopeful, E knows that his road to better health will be long and challenging. He is still being treated for depression, and hope has taken root through the relationships that he has formed. He says that the long road back to life is much more appealing route than a shortcut to death.

“I love being here. I love the people who are working here because you fall in love with them. They treat you with respect......I fell in love with them and just give me hope you know it's so amazing for me...”

6.3.2. Referring Hospital Length of Stay

We also did not detect statistically significant differences in the index inpatient length-of-stay comparisons. We hypothesize a few different reasons, which are not mutually exclusive. One, stratification by diagnosis codes alone may be inadequate to capture comparable hospitalizations and a separate measure of illness severity may be important. Another possibility for the lack of statistical significance is inadequate power. In other words, the number of admissions at the RISE Center in one year is insufficient to detect a large difference in health care utilization pattern. Finally, there may actually not be a meaningful difference between the study populations. Hospitalizations for “social reasons” comprise a significant proportion of CCH inpatient stays and CCH providers do not prioritize early discharges at the exclusion of humanitarian considerations. Cost savings are important for hospitals and we intend to repeat this analysis periodically in the future. However, health care utilization metrics are crude proxies for health care needs and refinements in the comparisons are also appropriate.



6.4. Mortality

Beyond healthcare utilization patterns, we were also interested in how the RISE Center might impact the terminal outcomes of Cook County's homeless population. This analysis begins with understanding the burden of illness and death that perennially affects the local population experiencing homelessness. Looking at the Cook County Medical Examiner's data and CCH electronic health record data, we were able to determine the top causes of death and the extent to which they were reflected in the comorbidities burden of patients at CCH and the RISE Center. We found that substance use, especially opioid overdose, was the leading cause of death among Cook County's homeless population. Substance use disorders were also top diagnoses for CCH and RISE Center's clients, suggesting that interventions targeting substance use disorder in these settings could have a significant impact on reducing mortality. Also, by virtue of referral patterns, frostbite was one of the top diagnoses in RISE Center clients even though it is a relatively rare morbidity in the general Cook County homeless population. As a disease of exposure, frostbite was associated with an approximately threefold higher risk of all-cause mortality and a fivefold higher risk of overdose related mortality among the Cook County homeless population, suggesting that the RISE Center is serving a particularly vulnerable segment of an already high-risk group.

Using the Cook County Medical Examiner's data, we derived mortality statistics over a 22-month period from January 1, 2020 to October 31, 2021. Over this period, CCH had encounters with 2,281 patients who were coded as homeless or suspected of being homeless at some point over the recent three years (2018-2021). Z59.0 coding maps to homelessness with clinically deleterious complications. Out of this cohort, 61 were found to be deceased based on the Medical Examiner's registry by October 31, 2021, for an overall mortality rate of 2.7%. The primary or secondary causes of death are categorized in the table below:

Cause of Death	%Cause among CCME Deaths	Cause-specific death rate per 100,000 (95% confidence interval)	Cause-specific death rate in Cook County * or Illinois** in 2020
Substance			
Opioid	46%	1228 (816, 1774)	32*
Cocaine	16%	438 (210, 806)	
Ethanol	11%	307 (123, 632)	
Benzodiazepine	10%	263 (96, 573)	
Cardiovascular disease	30%	789 (468, 1247)	221**
Pulmonary disease	11%	307 (123, 632)	40**
Injuries	7%	175 (48, 449)	33**
COVID-19	3%	88 (11, 317)	95**
Cancer	2%	44 (1, 244)	192**

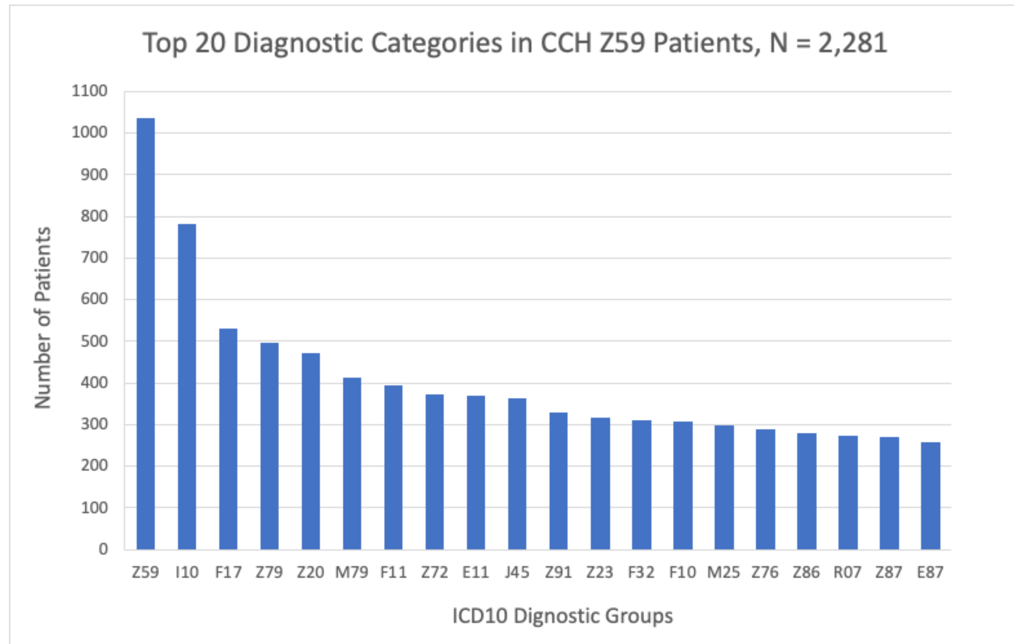
Noteworthy in the table above is an opioid-related fatality rate of 1228 per 100,000, which is almost 40 times greater than the same rate in the Cook County population at large. Fentanyl was involved in 96% of the opioid-related deaths. Another notable finding is the COVID-19-related fatality rate of 88 per 100,000 among CCH's homeless population, which is comparable to the rate in the Cook County population at large.

Overdose-related mortality account for over 50 percent of the deaths among the high-risk homeless population. The risk of substance-related deaths is predictable as shown by the elevated risk of overdose deaths in patients with previous diagnosis of opioid use disorder, and the elevated risk of all-cause deaths among patients whose alcohol use disorder is recognized. Also worth noting is the significant increases in mortality risk associated with a previous diagnosis of frostbite. From the patients with frostbite that we cared for at the RISE Center, we recognize that this diagnosis frequently represents the effect of unsheltered homelessness on high-risk opioid use during the brutally frigid winters of this region.

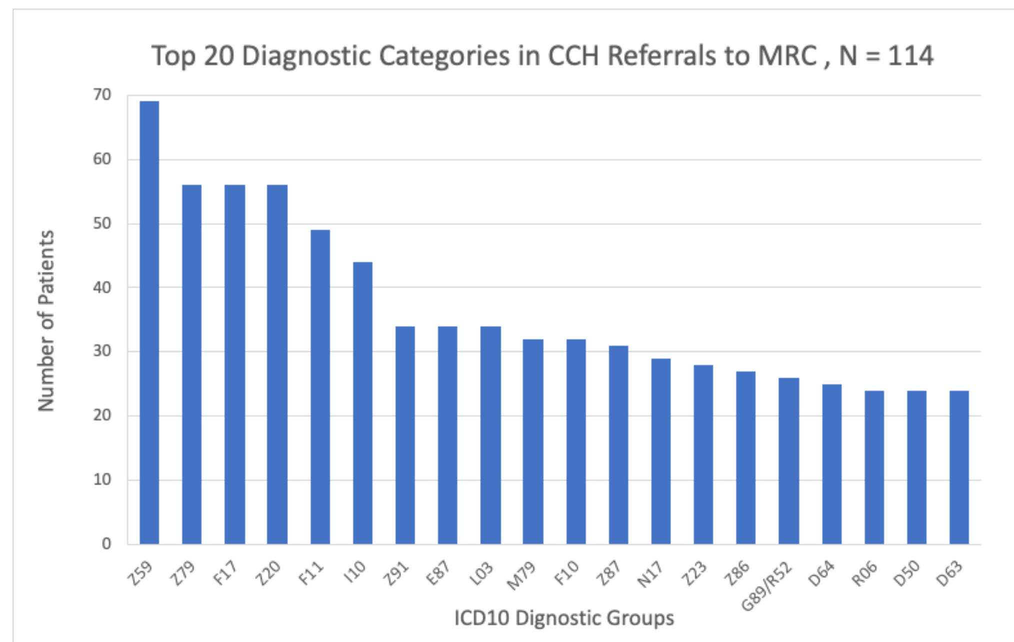
Diagnosis Codes	Cases, n	All Cause Death Risk, aOR (95% CI)	p-value	Overdose Death Risk, aOR (95% CI)	p-value
Opioid Use Disorder (F11)	395	1.70 (0.96, 3.01)	0.07	2.36 (1.11, 5.01)	0.03
Alcohol Use Disorder (F10)	307	1.98 (1.08, 3.64)	0.03	1.47 (0.58, 3.74)	0.42
Frostbite (T33, T34)	52	3.29 (1.20, 8.98)	0.02	5.13 (1.62, 16.25)	<0.01

Knowing the impact of substance use and diseases of exposure on the mortality of people experiencing homelessness, we turned to look at the extent to which CCH and the RISE Center are appropriately addressing these needs. One way of gauging whether our services are targeting the greatest risk factors is to examine the diagnoses most frequently assigned to persons served by CCH and RISE Center. Taking the first 3 digits of the ICD10 diagnostic codes that reflect a general category of diagnoses, we ranked them in order of the number of patients assigned that diagnostic category.

The figure on the right shows the top twenty ICD10 diagnostic groups associated with the 2,281 patients who had any encounters at CCH from January 1, 2020 to October 31, 2021. Unsurprisingly, the top diagnostic category was Z59 (1036/2281, 45%), showing that almost half of the patients associated with a Z59 code over the past three years continue to have their homelessness formally recognized in health care in the most recent 22 months. Note that substance use disorders including opioid use disorders (F11), alcohol use (F10) and tobacco use (F17) have already been identified as a common morbidity withing this group of patients, showing up as the seventh, fourteenth and third most frequent diagnoses respectively.

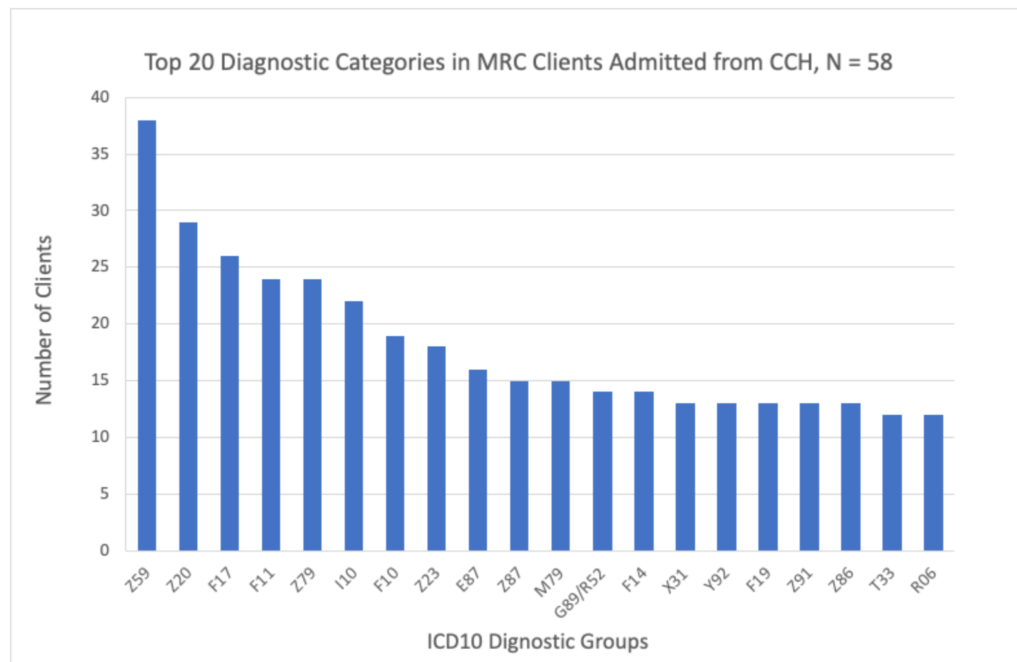


We then looked at two subgroups of patients: those referred to and those admitted to the RISE Center. The figure to the right shows the top twenty ICD10 diagnostic groups associated with patients referred to the RISE Center from CCH. The Z59 ICD code is again the most common code associated with both these groups of patients, accounting for 69 out of 114 (61%) of referrals and 38 out of 58 (66%) of all admissions. This is a higher percentage of Z59 association than the main CCH cohort, suggesting that CCH clinicians are appropriately referring a high-risk subgroup of homeless



patients for continued care at the RISE Center, and the RISE Center is accepting a high-risk cohort of this subgroup.

The figure to the right ranks the top diagnosis codes of CCH patients who were admitted to the RISE Center. Substance use disorders are also highly prevalent in the subgroups of patients referred and admitted to the MRC. The Z20 diagnostic category for "Contact with and exposure to communicable diseases" also appeared in the top twenty among all three groups, indicating that the health system and the RISE Center played a significant role in the isolation and quarantine of patients experiencing homelessness during the COVID-19 pandemic.



The table below shows the overlap between ICD10 diagnostic categories in the top twenty for people served at CCH, referred from CCH to the RISE Center, and those admitted to the Center. It shows that 13 out of 32 (41%) distinct diagnostic categories, including opioid use disorder (F11), alcohol use disorder (F10) and wound-related issues (M79) were ranked in the top twenty for all three groups.

ICD10 Category	Description	CCH	Referred	Admitted
D50	Iron deficiency anemia		X	
D63	Anemia in other chronic diseases		X	
D64	Other anemias		X	
E11	Type 2 diabetes mellitus	X		
E87	Other disorders of fluid, electrolyte and acid-base balance	X	X	X
F10	Alcohol related disorders	X	X	X
F11	Opioid related disorders	X	X	X
F14	Cocaine related disorders			X
F17	Mental and behavioral disorders due to use of tobacco	X	X	X
F19	Mental and behavioral disorders due to multiple drug use and use of other psychoactive substances			X
F32	Depressive episode	X		

G89/R52	Pain/chronic pain, not elsewhere classified		X	X
I10	Essential hypertension	X	X	X
J45	Asthma	X		
L03	Cellulitis		X	
M25	Unspecified joint disorder	X		
M79	Unspecified soft tissue disorders	X	X	X
N17	Acute renal failure		X	
R06	Abnormalities of breathing		X	X
R07	Pain in throat and chest	X		
T33	Superficial frostbite			X
X31	Contact with steam and other hot vapors			X
Y92	Place of occurrence of the external cause			X
Z20	Contact with and exposure to communicable diseases	X	X	X
Z23	Need for immunization against single bacterial diseases	X	X	X
Z59	Problems related to housing	X	X	X
Z72	Problems related to lifestyle	X		
Z76	Persons encountering health services in other circumstances	X		
Z79	Long-term drug therapy	X	X	X
Z86	Personal history of certain other diseases	X	X	X
Z87	Personal history of certain other diseases and conditions	X	X	X
Z91	Personal history of risk factors, not elsewhere classified	X	X	X

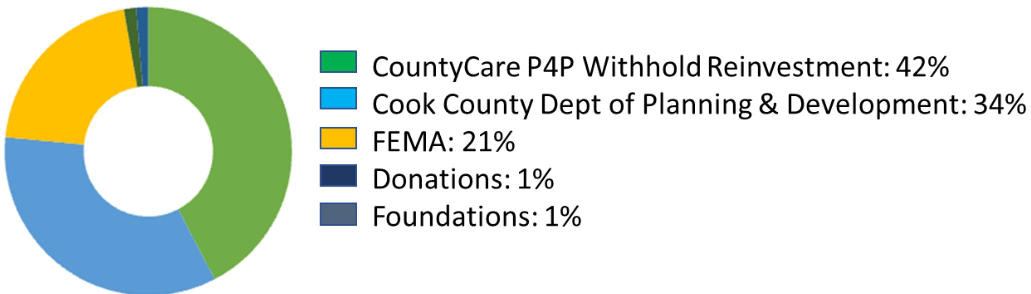
Superficial frostbite (T33) was among the few diagnostic categories that ranked in the top twenty only for people admitted to the RISE Center (12 out of 58) but not for the other two groups. Given that we recognized the T33 diagnostic category as associated with about a threefold higher adjusted mortality odds compared with homeless patients without this diagnosis, the high prevalence of this diagnosis among RISE Center clients signals the severity of sickness and injury that they experienced as a direct consequence of homelessness.

7. Support & Future

7.1. Funding Sources

There is currently no dedicated funding mechanisms for medical respite care programs in Illinois. Therefore, we braided together support from several government agencies that were aligned with our goals. The first year of operations was primarily funded by CountyCare (CCH-administered Medicaid managed care plan), Cook County Department of Planning & Development, and the Federal Emergency Management Agency (FEMA). CountyCare's contribution was obtained through a competitive process for Pay-for-Performance withhold dollars from the Illinois Department of Health care and Family Services that solicited proposals for investments in community-based resources during the COVID-19 pandemic. Additional grant funds or donations were made available from the

executive leadership at Cook County Health, the Robert Wood Johnson Foundation, the Reva & David Logan Foundation, and the J.B. & M.K. Pritzker Family Foundation.



Operations over the next three years will be supported principally by the Cook County government allocation of the American Rescue Plan Act. For further sustainability, we are in early discussions with Illinois Department of Healthcare and Family Services around extending Medicaid funding to cover medical respite care.

7.2. Expenditures

Annualized expenses over the first 13 months totaled $1.23 million. The calculated per diem rate of $177 per client was significantly lower than the average per diem for a skilled nursing facility or other forms of residential health care in Cook County. In light of the cost of an average inpatient day (approximately $2,000), any reduction in the length of hospitalization that may be obtained from medical respite care is expected to yield cost savings.

7.3. Scaling and Future Programming

The need for medical respite care still outpaces capacity in Cook County. We encourage local agencies capable of establishing new medical respite programs in the region to reach out to us for informational and instrumental support. We are eager to share our lessons learned.

Substance use disorder remains a prevalent risk factor of poor health outcomes. We recognize a need for a dedicated capacity to provide augmented treatment and support to the RISE Center's clients with substance use disorder. Several overlapping initiatives related to the concurrent management of housing insecurity and substance use disorder will help inform the development of treatment programming. These overlapping efforts include Housing Forward's participation in a permanent supportive housing program for clients with drug use disorder funded by the Illinois Division of Substance Use Prevention and Recovery. Additionally, CCH leads an effort to streamline

referrals into recovery homes funded by the Department of Justice's Comprehensive Opioid, Stimulant, and Substance Abuse Program (COSSAP).

We obtained consultative review of protocols from the National Health Care for the Homeless Council.

7.4. Recognition

The MRC was awarded the 2021 National Association of Counties (NACo) Achievement Award. The NACo Achievement Awards program is a non-competitive awards program that seeks to recognize innovative county government programs. Cook County Board President Toni Preckwinkle held a televised press conference to recognize the RISE Center of Cook County in September 2021.

7.5. Acknowledgements

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