Title

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Journal

Journal of Professional Nursing, 37(6)

ISSN

8755-7223

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Publication Date

2021-11-01

DOI

10.1016/j.profnurs.2021.10.008

Peer reviewed

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Journal of Professional Nursing 37 (2021) 1175–1179

Contents lists available at ScienceDirect

Journal of Professional Nursing

journal homepage: www.elsevier.com/locate/jpnu

Health services and the Project RoomKey COVID-19 initiative for the unhoused: A university and community partnership

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ARTICLE INFO

Keywords:
Covid-19
Unhoused
Hotel
Healthcare
Clinical learning environment
Shelter

ABSTRACT

A hotel-based clinic to serve Project RoomKey residents is a model for meeting the health care needs of an unhoused population. The purpose of this paper is to describe the health services provided by students and licensed clinicians at a hotel that was designed to allow unhoused community residents to shelter in place during the early stages of the Covid pandemic (May 1–June 30, 2020). Documents developed for the project may be useful to others who are setting up similar services for unhoused residents in their own communities.

Introduction

Individuals and families are seeking shelter on the street in record numbers, with 161,548 estimated unhoused California residents as of January 2020 (U.S. Interagency Council on Homelessness, n.d.). According to CalMatters, the current number of unhoused residents in California is the highest since 2007 and a 17% increase since 2018 (Levin & Botts, 2020). Unhoused residents are primarily from the local community with only 8% from out of state (Levin & Botts, 2020). People experiencing homelessness have needs that involve multiple service systems, including housing, health care, employment, education, mental health, and substance abuse (Gabrielian et al., 2021; Kertesz et al., 2021; Pham et al., 2021; Schreiter et al., 2021; Willison et al., 2021). Unhoused residents often have difficulty prioritizing their primary care needs, which puts them at risk for conditions that should be preventable (Becker & Foli, 2021). Unhoused residents are at greater risk of trauma resulting from muggings, beatings, and rape, and are at increased risk of contracting HIV and other communicable diseases from transactional sex, assaults, or both (Decker et al., 2016; Pottie et al., 2020). Being unhoused precludes good nutrition, personal hygiene, and basic first aid, which only adds to the complex health needs of people living without homes (Ballard et al., 2021; Seale et al., 2016).

The COVID crisis has only exacerbated these conditions, with a shift in economic demands and transition to electronic/online platforms for previously in-person services, such as social services and healthcare (Benfer et al., 2020; Pham et al., 2021; Rodriguez et al., 2021). According to the U.S. Department of Housing and Urban Development (2018), the U.S. began seeing a rise in homelessness year over year in 2017 for the first time since the most devastating part of the housing crisis in 2010. In a United Nations Special Report on Adequate Housing (Farha, 2018), the informal settlements in the San Francisco Bay Area are described as “cruel and inhumane treatment… a violation of multiple human rights. (p. 12/23)” Best practice recommendations are that health care providers for the unhoused be fully informed of the ways in which homelessness affects health outcomes (Andermann et al., 2020; Bonin et al., 2010).

In addition to the challenges of providing health care to unhoused residents, the Covid-19 pandemic created a challenge to the education of health professions students. When hospitals and clinics responded to the Covid-19 pandemic by eliminating non-essential personnel, including students in clinical settings, educators were forced to explore alternatives to the usual clinical learning environment. They turned to online education (Roskvist et al., 2020), telehealth (Kohan et al., 2020), extended program length (Gupta et al., 2020), and early deployment of nursing students to paid positions (Leigh et al., 2020).

The purpose of this paper is to describe the health services provided by family nurse practitioner students and other clinicians at a hotel that was designed to allow unhoused community residents to shelter in place during the early stages of the Covid pandemic (May 1–June 30, 2020). Lessons from this university-public service-nonprofit partnership,

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https://doi.org/10.1016/j.profnurs.2021.10.008
Received 20 May 2021;
Available online 28 October 2021

including document templates and forms that have been provided in the online supplement (see Table 1), can be used by other communities to set up health services to serve their unhoused residents.

Project RoomKey was a California initiative that provided private hotel rooms as shelter-in-place temporary housing for older (65 years and above) unhoused adults or unhoused adults of any age with co-morbid conditions that made them at-risk for COVID-19. When the local hotel opened in Vallejo, California, an urban area north of San Francisco, city and county human services personnel assessed residents who were living outside and reached out to local nonprofit organizations and hospitals to identify eligible residents who wanted to move to the hotel. Patients who were discharged after a Covid hospitalization were required to test Covid negative before moving into the hotel. Known covid-positive patients were housed elsewhere. Education was provided to the residents regarding masking, social distancing, and frequent handwashing. House rules limited hotel room access to the residents of that room and required masking in all common areas, signing in and out whenever leaving the facility, and a 10 pm curfew. Residents maintained their own autonomy regarding their activities outside the facility. Some essential workers left the hotel for work each day. Quarantine with food delivery to the room was available for anyone who had a suspected Covid exposure. The California initiative required verification of age, housing status, and covid comorbidities for all hotel residents but it quickly became obvious that additional in-depth healthcare was desperately needed by the residents. The planning, implementation, and evaluation of the initial two months of the health services provided at the hotel are described in the following sections.

Planning

Touro University of California (TUC), located in Vallejo, California, is an education and health sciences university with a strong commitment to social justice as part of its institutional values. The university's partnerships with community agencies supported rapid implementation when the State of California announced the Project RoomKey opportunity in April 2020. During a planning meeting of interested parties from the university, nonprofit sector, and public agencies, an assistant professor/family nurse practitioner from TUC and a local family practice physician volunteered to oversee health services. Their goal was to develop an onsite health service for the unhoused residents of the Project RoomKey hotel while offering a clinical learning opportunity for nursing students at the masters degree and post-masters family nurse practitioner level, and an optional volunteer experience for other health professions students. The plan was for patients who were too ill to be managed through the clinical services at the hotel to be referred to local primary care or urgent care clinics, or the hospital emergency room.

The family nurse practitioner's experience with One Love Center for Health, a small nonprofit organization that provides health education and preventive services to the unhoused community in Oakland, California, and the family practice physician's experience with Vallejo Mobile Health, a mobile clinic that provides 4 h per week of episodic medical care to unhoused Vallejo residents, supported their successful collaboration on this project. No other volunteers stepped forward to provide healthcare for the project; the health services were up and running within a month of the initial planning meeting. Most care was provided by the two lead clinicians. Occasionally, other clinicians from the university or community with a passion for service would hear about the project and volunteer to assist with clinical services.

This project was approved with exempt status by the TUC Institutional Review Board (IRB letter dated 12/7/2020). City of Vallejo employees provided day-to-day operations. The city contracted with Fighting Back Partnership, a longstanding local nonprofit whose mission focuses on ending poverty and improving community public health, to provide case management. TUC was contracted to provide medical care through its existing affiliation agreement with One Love. One Love and Vallejo Mobile Health created a memorandum of understanding to provide clinical operations and health professions student oversight. Standardized procedures required for nurse practitioners, workflow, and documentation forms were developed based on existing documents from the clinicians' nonprofit agencies (see online supplement, Table 1). All clinical staff volunteered their time. Supplies were donated by One Love and by Vallejo Mobile Health with some diabetic supplies donated by TUC. A letter was sent to the local Medicaid managed care provider, primary care organizations, pharmacies, and county health department officials, introducing the program and requesting contact information for the person in each organization that would be willing to collaborate. Political leaders, community advocates, emergency responders, and public safety personnel supported the residents as they moved to the hotel. Each hotel resident was also asked to sign a consent form that allowed the sharing of medical information with their primary care organizations and hospitals as needed.

Implementation

One hotel room near the hotel front desk was designated as the clinical staff office and stocked with a locked file cabinet and medical equipment. A portable scale to monitor fluid retention, equipment for monitoring vital signs, oximetry, an ophthalmoscope and otoscope, Glucometers and diabetes monitoring supplies as well as first aid and wound dressing supplies were available in the clinical staff office.

Project RoomKey health services were consent-based and not mandatory. When they moved into the hotel, residents were offered a complete history and physical and medication reconciliation, provided by either the nurse practitioner or physician of the day assisted by any students onsite that day, according to their scope of practice and level of education. Medication refills and episodic visits to either follow up on issues identified during the history and physical or to address new health concerns were offered five afternoons per week by students supervised by the nurse practitioner and physician.

Student participants and their roles

During the early days of the pandemic, most clinical sites were closed to students so the Project RoomKey clinic was one of the only locations where students could have patient contact. The students were not placed there as a formal rotation but were invited to sign up for four-hour shifts whenever the student was available. The family nurse practitioner students worked with their faculty as preceptor, and they were able to count hours toward completion of the 135 adult primary care hours required in their initial FNP Management clinical course. The masters degree nursing students counted their time toward the 80 h of public health experience required by the 3-unit “Community Health Nursing” course. One of the university values is community service, and the hours completed by medical students counted toward their community service hours. All students were supervised by the faculty or community preceptors on site. Students were evaluated by preceptors during clinical conference discussions and when cosigning charts or filling prescriptions. Students reported hours through the Typhon clinical management system and were overseen by the school's clinical experience

Table 1
Online Supplement Files available at https://ucsf.box.com/s/ev13goyfgx01svpx9mo6efbb8d3p24ed.

1. Community Partner Letter
2. Consent form
3. Initial Encounter Form
4. Subsequent Encounter Form
5. Follow-up Form
6. Medication List
7. Workflow
8. Description of Medical Care at Project RoomKey
9. Standardized Procedure for Nurse Practitioners

coordinator.

The student role was modified depending upon individual student and educational program needs. Family nurse practitioner students completed health histories and depending on their level of progression within the FNP program, either observed/scribed while the licensed clinician performed the history and physical (H&P), did the H&P themselves with observation, or performed the H&P independently and jointly developed a plan of care with the precepting clinician. Nursing students in a master's degree program did case management, health education, and managed the office, equipment, and supplies. Medical students assisted licensed providers on a voluntary basis when they were available.

Clinic services

All visits included a brief or complete history and physical examination, but not all residents who received a visit from the clinical team required an intervention. Table 2 provides a summary of the type of interventions that were provided, and the number of residents who received each intervention. A majority of residents had uncontrolled hypertension; many also had chronic obstructive pulmonary disease or heart failure that was not adequately managed. Other requests for assistance included: hemorrhage following a miscarriage, contusions after being assaulted with rubber bullets at a protest march, asthma exacerbation, falls related to intoxication, dressing changes, post-op care following surgery, and dental abscess requiring antibiotics. Some residents were discharged from the hospital to the hotel after a Covid admission and the clinic team monitored their recovery as they sheltered in place. The clinic also provided Covid testing to any resident or staff who requested it. No residents developed new Covid symptoms during the first two months of the program. If the clients were too ill to be cared for through the project, they were referred to their primary care provider, a local urgent care, or the emergency department, depending on the level of care they needed.

Faculty/preceptor participation

One family nurse practitioner faculty with a passion for serving the needs of unhoused residents volunteered to take the lead for the faculty participation in the hotel clinic, with strong support from the Dean for the College of Education and Health Sciences. One other faculty from the School of Nursing, one from the College of Medicine, and one faculty from the Physician Assistant program occasionally volunteered to precept students when the lead faculty was unavailable. The opportunity for additional faculty to participate was publicized through word-of-mouth and during faculty meetings. The volunteer clinic time was not compensated in addition to usual faculty salary, but was considered to be part of the service expectation of the university. No teaching load adjustments were made for any of the faculty who volunteered to serve the hotel clinic.

Table 2
Interventions required during Project RoomKey medical visits ($n = 62$).

Number of interventions	Type of intervention
16	Medication reconciliation/refill
5	Referrals to mental health providers or groups
4	Dental referral
4	New prescription
4	Smoking cessation
4	Pain or symptom management
3	Durable medical equipment
3	Hospital discharge follow-up
3	Chronic disease management
2	Primary care referral
2	Acute musculoskeletal evaluation
2	Diabetic supplies
2	Wound care
2	Covid testing
2	Request gynecology evaluation
1	Podiatry
1	Urinary catheter/urinary tract infection evaluation
1	De-prescribe medications
1	HIV test

A community family practice physician who had already developed a volunteer practice serving the needs of local unhoused residents collaborated with the family nurse practitioner faculty and recruited health care providers from other agencies. She served as medical director and signed the standardized procedures required by California for nurse practitioner practice. Three additional community physicians volunteered for occasional clinic days when they precepted the students or provided clinical services to the residents. The community physicians volunteered to serve during time off from their regular full-time positions.

Evaluation

Evaluation of the health services provided during the first two months of the Project RoomKey hotel included the number of residents served, the number of visits and interventions provided, the number of student participants, and student and faculty reflection on their experience with the program. During the first two months of the project, 68% ($n = 78$) of the 115 residents in the hotel received H&Ps. The clinical staff and students provided 109 episodic visits, 17 brief vital signs/wellness checks, and 62 interventions to residents. During the first two months of operation, eight NP students (39 shifts total), four masters' degree nursing students (26 shifts), and two medical students (8 shifts) worked at the clinic.

Student reflections

Four nursing students provided written reflections on their participation in this project. Student comments focused on the importance of the work for enhancing the care that the Project RoomKey residents received and the educational value of the experience for the students (See Table 3).

Faculty reflections

Faculty reflections related to three topics. The first topic was collaboration with primary care. An NP assisted by health professions students is in an ideal position to monitor medications and manage care in collaboration with the primary care provider (PCP). Secondly, the faculty re-envisioned their assumptions related to logistics. Residents were not required to stay at the hotel during the day, so connecting with some residents was difficult. Many residents were wary about the clinical team, so to foster trust, the team mingled freely with the residents rather than maintaining a formal “clinic” environment. Care was provided wherever the resident felt most comfortable—in their room, in the lobby, or even at the smoking area.

Finally, outcomes that are realistic and appropriate for this population are very different from outcomes typically measured in healthcare or public health settings. For example, the hotel setting provided the opportunity for students to identify untreated conditions and visit the resident repeatedly over a short period of time. The students observed dramatic responses to therapy and the residents experienced the benefits of successful treatment. The relationships that the students built with the residents served as a foundation for the students as they taught and empowered the residents to manage their conditions on their own. Consequently, outcomes that could be measured to demonstrate improvement in this population when they move from unstable housing to the hotel include number of newly diagnosed and/or treated conditions, regular medication refills, and follow-up on referrals, specialists, and health maintenance. The community partners advocated for re-envisioning metrics of success for the program. Rather than focusing

Table 3
Program Evaluation Responses ($n = 4$).

Themes	No. of responses	Representative Student Reflections
Importance of the work	2	"Project RoomKey has highlighted the ongoing medical needs for our local unhoused population. Without this program, I can't see ANY way that this population could have managed their complex medical issues." (FNP Student)
		"As an advanced practice nurse, I am very excited and fortunate to be part of an amazing opportunity provided by Touro University. A life-saving mission that the Project RoomKey provides for the 'unhoused' population. Not only to reduce the spread of COVID-19 but also to help this population receive the health care that they need. Everyone in Project RoomKey has a story to tell, and I am honored to be the one they can share it with." (FNP Student)
Educational Value	2	"During the COVID crisis, student nurse practitioners have had limited access to clinical opportunities. Creating a positive environment for students to learn, and for patients to receive high quality care has been a great collaboration." (MSN Student)
		"Project RoomKey provided one of the best experiences of my nursing career. Meeting this resilient group of people and dedicated healthcare professionals helped to elevate my nursing practice. I experienced a deeper nurse-client relationship in this nontraditional setting. I have a better understanding of the unique life and healthcare challenges unhoused people face, and a restored commitment to reducing health disparities in vulnerable populations. Thank you for this experience!" (FNP Student)

on longer term metrics such as lab values and biometrics, employment and housing, short-term outcomes such as medication adherence, clean clothing, and re-engagement with primary care are important steps toward independence and/or stability.

Sustainability and plans for the future

Although this paper is focused on the first two months of operation to highlight strategies for rapid deployment, the project has transitioned to permanent supportive housing with a volunteer clinical team on staff that supervises student clinical rotations. Now that the university-public service-nonprofit partnership has transitioned from Covid-related shelter-in-place housing to a longer-term collaboration, the health services are provided three days each week by volunteer clinicians and students. The care focuses on providing episodic care, medication refills, and bridging with resident's primary care providers using telehealth. The medical team is regularly on weekly calls with city and county leadership where the model of providing care is being adapted for sustainability.

As a result of this Project RoomKey collaboration, the university's School of Nursing is developing a nurse-run faculty practice/health clinic that will augment current medication management services at a 90-resident shelter in a neighboring community. Graduate nursing students are working on quality improvement projects and clinical procedures for this new clinic. Clinic development is following the steps outlined by Torrisi and Hansen-Turton (2015) with a needs assessment, strategies for sustainability, formation of an advisory board, and development of vision, mission, meeting credentialing needs, establishing practice agreements, and developing policies and procedures.

Lessons learned

An unanticipated issue was the number of residents with serious medical diagnoses who required assistance with obtaining their medications. Many of the residents were no longer connected with their primary care provider, so urgent refills were called into the pharmacy. An emergency fund was used to pay for the refills if needed and one pharmacy offered delivery services. The clinical team coordinated with the PCP offices to re-establish care, and city-sponsored case managers coordinated follow-through. As the program expands to other facilities, establishing processes and relationships with pharmacies and PCPs prior to the implementation of care will streamline refills and PCP referrals.

The informal clinical environment was disconcerting for some clinicians and students. Most clinicians are socialized to wear a white coat or other uniform when working in a clinic setting. Many hotel residents have had negative experiences with healthcare and avoid white coats and clinical settings. Although a designated clinic room and a list of appointment times would be most efficient from the clinician's perspective, the most effective care was provided by the clinicians and students who maintained visibility in the public spaces of the hotel and became friendly on a personal basis with the residents. Healthcare monitoring and interventions were then integrated into the social ebb and flow of the day.

Recognizing resilience is important when working with unhoused residents with chronic medical problems. They already cope with inadequate shelter with nowhere safe to store their belongings, lack of transportation, negative healthcare experiences, health and healthcare disparities, racism, poverty, and mental health challenges (Andermann et al., 2020; Hwang, 2001). A focus on the strengths and interests of unhoused residents, and attention to how they have coped and managed their care in the past, help to build a partnership with them around shared goals (Henwood et al., 2013; Kraybill & Olivet, 2006). Making decisions *with* the unhoused residents rather than *for* them, with the goal of teaching students to provide healthcare "fit for your own parents," enhances the care the residents receive and boosts the rapport that is built between the healthcare team and the unhoused residents.

This project was designed to be interprofessional with clinicians and students representing multiple professional perspectives included in the healthcare team. In addition, the project highlighted the importance of interprofessional and collaborative relationships with political leaders, case managers, community advocates, PCPs, emergency responders, pharmacists, and police, all of whom participated in providing care for residents of the hotel (Carpenter et al., 2020).

Limitations

The evaluation plan was limited by the rapid implementation of this project in response to the Covid-19 pandemic. With more preparation time, a more thoughtful evaluation plan that included demographics of the residents and tracking of health outcomes could have been implemented. The vaccine was not yet available when this project was implemented so vaccination was not offered during the time period reported here. Vaccination has subsequently been added to the services provided by the clinic. All clinicians and students who volunteer at the clinic are required to be fully vaccinated. Reflections were only provided by a few students and faculty, and were not requested from city and nonprofit personnel, volunteer clinicians, or from residents, given the vulnerable nature of the population.

Summary

In this paper, the rapid development of an innovative program that provided health care to unhoused residents who were offered hotel rooms to shelter-in-place during the Covid-19 pandemic is described. At the same time, the setting offered a clinical site for health professions students who were shut out of traditional clinical placements during the

initial months of the pandemic. The health needs, procedures, and documentation for this project can be used as a model by other programs providing medical support for unhoused residents with the assistance of health professions students.

This project was developed to meet the needs of unhoused older adults and residents with multiple comorbidities during the rapidly evolving Covid-19 pandemic. A community of volunteers from many walks of life, committed to addressing the needs of unhoused residents in their community, can rapidly make a big difference in the lives of those residents. The residents' health needs are an important component of the equation, and partnering with a health sciences university can provide students with valuable clinical experiences that teach adaptability while enhancing the care provided to the residents. Although providing clinical care in this setting can be overwhelming—it can also be highly rewarding work. Thinking even one step ahead is often a challenge for unhoused folks. This project demonstrates that, even in the times of Covid-19, a community can come together to support unhoused neighbors to re-establish medical care and provide a sense of stability in their lives.

Declaration of competing interest

None.

Acknowledgements

No funding was provided for this project. The authors appreciate the work of the students and volunteer clinicians, and the participation of the hotel residents in developing the medical services described in this paper.

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