"Eyes in the Home": Addressing Social Complexity in Veterans Affairs Home-Based Primary Care

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BACKGROUND: Home-Based Primary Care (HBPC) has demonstrated success in decreasing risk of hospitalization and improving patient satisfaction through patient targeting and integrating long-term services and supports. Less is known about how HBPC teams approach social factors.

OBJECTIVE: Describe HBPC providers' knowledge of social complexity among HBPC patients and how this knowledge impacts care delivery.

DESIGN, SETTING, AND PARTICIPANTS: Between 2018 and 2019, we conducted in-person semi-structured interviews with 14 HBPC providers representing nursing, medicine, physical therapy, pharmacy, and psychology, at an urban Veterans Affairs (VA) medical center. We also conducted field observations of 6 HBPC team meetings and 2 home visits.

APPROACH: We employed an exploratory, content-driven approach to qualitative data analysis.

RESULTS: Four thematic categories were identified: (1) HBPC patients are socially isolated and have multiple layers of medical and social complexity that compromise their ability to use clinic-based care; (2) providers having "eyes in the home" yields essential information not accessible in outpatient clinics; (3) HBPC fills gaps in instrumental support, many of which are not medical; and (4) addressing social complexity requires a flexible care design that HBPC provides.

CONCLUSION AND RELEVANCE: HBPC providers emphasized the importance of having "eyes in the home" to observe and address the care needs of homebound Veterans who are older, socially isolated, and have functional limitations. Patient selection criteria and discharge recommendations for a resource-intensive program like VA HBPC should include considerations for the compounding effects of medical and social complexity. Additionally, staffing that provides resources for these effects should be integrated into HBPC programming.

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INTRODUCTION

In the USA, there are approximately 2 million older adults who are completely or mostly homebound due to functional impairments and complex, chronic illness.[1] These individuals experience great difficulty leaving their homes without assistance and often face significant social limitations.[2, 3] They experience greater disease and symptom burden than their non-homebound counterparts and have higher mortality rates.[2–4] Homebound persons also have higher rates of hospitalization and emergency department (ED) visits, and utilize more post-acute care services.[5–7] Compounding their medical complexity, there is evidence that being homebound or near-homebound is associated with indicators of socioeconomic vulnerability, including low income.[1, 3, 8] While persons who are homebound often have medical conditions that limit their functional capacity, confinement to the home can also stem from lack of social support and limited financial resources which restrict their access to personal assistance required to leave the home.[1, 9, 10] Current approaches to meeting the care needs of homebound individuals often involve a patchwork of services that present coordination challenges.[11]

Home-Based Primary Care (HBPC) is an interdisciplinary care model that attempts to address these challenges by providing comprehensive primary care services for patients with chronic illness who are unable to access or have great difficulty accessing clinic-based care. Although HBPC programs serve diverse groups of patients, their primary focus is on serving older adults who are homebound, frail, and have multiple chronic conditions.[12] The largest HBPC program in the USA is run by the Department of Veteran Affairs (VA). VA HBPC typically includes visits from a primary care provider, nurse care management, service coordination by a social worker, mental health services from a psychologist, nutrition counseling from a dietician, and help with medication management.[13] Primary care clinicians typically refer individuals

to HBPC, or they are referred at hospital discharge, and HBPC teams consider whether to enroll referred individuals based on personal factors, program capabilities, and capacity. HBPC teams typically meet weekly to develop care plans to arrange appropriate longitudinal home care services, and to consider discharge if patients no longer need HBPC care. Veterans served by VA HBPC have, on average, eight chronic conditions and take around 15 medications.[14]

VA HBPC has demonstrated success in decreasing risk of hospitalization[15] and improving patient satisfaction.[14] HBPC reduces hospitalizations and costs by targeting patients at high-risk for hospitalization and integrating long-term services and supports.[16] Qualitative research examining mechanisms of success in HBPC has shown that interdisciplinary team-based care,[11, 17] longitudinal and trusting relationships between patients and providers,[11, 14] and sensitivity to contextual enablers and barriers[18] support effective HBPC function. HBPC teams are designed as multidisciplinary to enable them to meet the complex medical and social needs of their patients. Yet little information is available regarding how HBPC approaches social factors and how HBPC teams integrate medical and social care.

We define social complexity as a composite of social factors that come together to impact a person's health. This definition is grounded in the wider literature on social determinants of health, or "the resources individuals have access to and the environments they reside in, that have powerful and lasting effects on the development and maintenance of good health across the lifespan."[19] It is well established that social factors, in particular education, income, and social support, influence people's health outcomes through patterning how they engage in certain health behaviors as well as how they are able to access and utilize health care services.[20] Health care systems have an important role to play in addressing social health factors whether it is by integrating primary care and social services or connecting patients to community resources. Thus, the purpose of this study was to explore how clinicians and staff understand and address concurrent medical and social needs in the context of HBPC.

METHODS

Research Design and Participants

We conducted in-person, semi-structured interviews with 14 HBPC providers and field observations of 6 HBPC team meetings and 2 home visits. Interview participants represented the following disciplines: nursing, medicine, social work, psychology, pharmacy, and physical therapy. Participants were recruited at HBPC team meetings and through email invitations. Recruited participants, at the time of this research, exclusively worked in VA HBPC where part of their jobs involved having interactions with clinic-based primary care but did not work in a hospital-based clinic themselves. This study was approved by the Institutional Review Board at the VA Portland Health Care System (VA IRB No. 3903) and all participation was voluntary. To protect participants' confidentiality, we do not provide potentially identifying information, such as professional role, gender, or race and ethnicity, alongside quotations presented in the results, given the small sample size.

Data Collection

We conducted a focused analysis to describe how HBPC addresses social factors and integrates medical and social care using a qualitative data set from a larger study aimed at broadly exploring HBPC processes, roles, and care delivery, from the perspective of HBPC team members. The interview guide was organized according to the following domains: patient selection, care delivery patterns, core functions of HBPC, and barriers and facilitators to HBPC performance. Two members of the study team (EH and SE) conducted the interviews and field observations. All interviews were audio-recorded and then transcribed verbatim. We documented field observations at team meetings and home visits by hand in unstructured field notes that were later typed out and coded.

Data Analysis

We used an exploratory, content-driven approach to data analysis whereby patterns and emergent thematic categories were inductively identified throughout the research process.[21] Three team members (AL, EH, SE) reviewed each transcript independently and open coded individually, assigning categories to segments of text without the use of a priori codes.[21] We then developed a common coding schema to be used for systematic analysis based on similarities between open codes during group data analysis meetings. We applied codes to the interview and field observation data using Atlas.ti software[22] while simultaneously recording analytic observations in memos.[23] Team members met regularly to review and resolve coding discrepancies, discuss consistency of interpretation across data sources until consensus among all group members was reached, and worked together to identify relevant quotations to represent themes.

RESULTS

We identified four interrelated themes. First, HBPC patients are socially isolated and have dynamic, overlapping layers of medical and social complexity that compromise their ability to use clinic-based care. Second, HBPC providers having "eyes in the home" yields essential contextual information that cannot be obtained in outpatient clinics. Third, HBPC fills gaps in instrumental support, many of which are not medical and are typically performed by families and caregivers in other settings. Fourth, addressing social complexity requires a flexible care design that HBPC provides.

Overlapping Complexities

HBPC providers frequently described strained or missing family relationships and how this served to isolate their patients from important medical and community resources. Tenuous

connections to resources coupled with fractured family relationships rendered many HBPC patients disconnected from needed care.

> I think that well over half of our population do not have a good connection to the community and community resources in terms of family and financial resources

> I see so many people that don't have family and don't have the financial means to pay a caregiver to come into their home…they don't have anybody to help them with their meds and help them with their care needs.

Providers reported that in addition to having multiple chronic medical conditions—typically diabetes, cardiovascular disease, congestive heart failure (CHF), and pulmonary disease—their patients had a high prevalence of mental health diagnoses such as depression, as well as more serious mental illnesses requiring psychiatric care. The combination of significant physical and mental illness added to patients' medical complexity. Additionally, providers reported that patient complexity was often compounded by significant functional limitations, financial hardship, food insecurity, and safety concerns involving caregivers, family members, and the home environment. Providers almost always combined descriptions of medical and social factors when describing "complexity" among HBPC patients and explained that these factors overlapped in unique and challenging ways.

> Complex because they are usually closer to the end of their life, so they have more chronic disease that we help manage - diabetes, cardiovascular disease, lung disease - and a lot of social issues. Since we're in the home we see a lot of interaction with the family and even things like access to food. And then complex because there is a lot of mental health diagnoses. We juggle all that so that makes it complex.

> …it's housing insecurity, food insecurity, just general level of cleanliness and hygiene in the home, whether there's neglect, whether there are safety concerns, sometimes all the above.

In team meetings, providers' reviews of current patients illustrated this complexity. In one example, a nurse described a patient with CHF and diabetes with frequent past hospitalizations. While this patient had been able to improve their nutrition and blood sugar with support from Meals on Wheels, they were being financially exploited by their daughter. In a similar example, one patient was financially supporting a multi-generational household with their disability benefits but had limited help from their family regarding personal care needs. In both examples, the patients experienced compounding social and medical problems that prevented them from getting the care they needed, like transportation to specialist visits, personal care assistance, medication management, and access to professional fiduciary services. In instances where HBPC could not provide direct care, the HBPC social worker would connect patients with VA and community resources to address these challenges. Examples include VA resources for homemaker and home health aides, county agencies on aging, the state Medicaid office, and caregiver support groups.

Eyes in the Home

HBPC providers reported that being in the home yielded information that was not accessible in clinic-based visits. As one participant explained, a home visit was like "catching them in the act" where one can observe real-time processes of how patients live and interact with other people in the home, environmental conditions, and safety concerns. In addition, providers were able to collect information that enabled them to tailor their care.

> ... the assessment in the home to see what is really going on allows us to get the bigger picture and gear our education towards that, whereas the clinic doesn't have access to all that information.Common examples discussed in interviews and team meetings included: awareness of where patients spent most of their time in the home, how they stored and organized their medications, food quality and availability, home hygiene, pet care, and whether there were any identifiable problems with caregivers. Additionally, providers could assess whether patients were having difficulty or needed assistance with activities of daily living. This information allowed providers to identify barriers and facilitators to patient care in ways that would not be possible in clinic.

> In the home, I learn so much more about the interactions that they have with caregivers and family. I learn a lot about the safety of their home, how they spend their time because I can see how they spend their time. I get more information about cognitive and memory problems because I can check in the home to see if they're taking their medications.

> … you're not in a clinic receiving somebody in your office, but you're actually on their turf, so you see the cleanliness, the size, the way people live, where they sleep, if they sleep on a couch, they have animals, if the place is falling apart and then you get to know the

background of the family, if they're helping or not. It's part of our job to include that in our care.

Several providers were quick to point out that there was often a disconnect between the way a patient may present themselves in a clinic visit and the way they live their life at home.

…nobody is entirely truthful about what they are capable of doing… you can see someone on an outpatient basis and ask them how many steps [on the stairs] they can take and they will say "seven steps" and you will say "do you have a railing" and they say "yes." Well that railing may be rotted and the steps may be six inch depth, not the standard, and if they have neuropathy or visual loss you would clue into that. You get your eyes on the situation…. you can get a better environmental sense of what might be contributing to their falls, that we can impact.

What I see is Veterans lying around all day and on the day of their clinic visit they put on a brand-new Ralph Lauren button down and new jeans and they go into the office and they [providers] don't know what's going on in the home.

Having a provider visit the patient in the home was particularly valuable for supporting patient safety. Providers identified a variety of safety concerns including substance use by other people in the household, evidence of neglect, animal infestation, unsanitary conditions due to inadequate care of pets, and clutter that impeded movement and use of the home.

HBPC Fills In Support Gaps

Providers reported performing tasks that are outside of their normal HBPC job description, which would typically be done by a family member or paid caregiver in other situations. Given the functional limitations of HBPC patients, these included basic needs such as hygiene maintenance, food procurement, and other forms of instrumental support.

…as a nurse when you get there you can provide nursing services, but because he doesn't have any support, the patient ends up asking you to do a lot more than just your nursing duties. So, I would change light bulbs and make calls for him, change his clothes… it's out of what I am supposed to do, but what am I going to do? The guy is home by himself.

We go out and monitor the situation, what's going on and who else do we need to get involved. He doesn't really have any family, and he doesn't have the capacity to make decisions, and coordinating with his fiduciary and his finances, making sure his bills get paid, he has electricity, he has food, and that kind of thing.Discussions in team meetings and interviews indicated that providers, when in the home, would observe an unmet need not normally addressed by health care and would find some way to address it either by doing it themselves or connecting patients to relevant resources because "there is no one else."

…if I don't go, that patient is going to be out of meds in a couple of days.

We had a patient who literally had zero groceries in the house, it was three days before the end of the month, and the cupboards were bare. So, we as a department got him a gift certificate grocery card.In team meetings, the providers who observed a patient's need would present this information to their team members and then a plan, under the guidance of social work, would be put in place or other creative solutions identified. However, it was often the case that the provider would address the unmet need in the moment as they observed it because they perceived it to be urgent and in the patient's best interest.

Flexibility in Care Design

When asked about HBPC functioning, providers emphasized the flexible nature of the program with an overall goal to set up care in a way that promotes patient independence, which keeps patients from needing hospitalization or institutionalization. Providers' discussions of patient eligibility centered around the distinctions between VA and Centers for Medicare and Medicaid Services (CMS) home care guidelines.

Eligibility has to be flexible enough that you can use judgment and capture the right people. You can't have such rigid guidelines that you're missing people who need your care.In contrast to Medicare's definition of homebound as "confined to the home," providers pointed out that not all the patients enrolled in VA HBPC were homebound, but that without HBPC team services they may not be able to adhere to their medication regimens.

> It's better if they're close to homebound, but we have patients that are not homebound. They do drive but with some mild dementia. If we go and set up their medicines, it's worth it in the long run because they'll take them regularly then.

Providers explained that flexibility in service delivery was necessary to tailor patient care. This was helpful for patients with behavioral issues or those needing more frequent visits due to functional limitations and social isolation.

> You see people who have a lot of behavior flags. There are a few people that we go out and see in pairs, we just don't go out alone, because we want them to get the service, especially if we're making an impact. If they're benefitting from our service then we don't want to discharge them from the program, we want to figure out how to make it work.

> … [The HPBC Team] will bend over backwards for the patients and see patients more often. We're not really supposed to see patients more than once a week and hopefully even farther apart than that. I've been really impressed how they will go out of their way to make sure that our Veterans are well taken care of.

Other examples of flexibility included team members calling each other during home visits, deciding to go see a patient urgently, and frequent informal communication between team members. According to providers' accounts, work in HBPC involves going beyond their job description and doing the extra work to ensure that their patients' care needs are met. The flexible nature of the program enables them to provide this type of extra work.

DISCUSSION

Our findings provide insight into how HBPC providers perceive their role in meeting the complex needs of their patients, and the importance of addressing social complexity. Qualitative data showed that HBPC patients' social and medical complexities make them vulnerable and disconnected from needed resources, rendering them effectively socially isolated even in cases where family members are present in the household. HBPC providers observe this vulnerability through home visits that integrate patients' complex, interrelated medical and social needs, then tailor their care delivery accordingly. The flexible nature of the HBPC program enables them to go beyond their role as health care providers to fill in social support gaps for socially isolated patients. Our findings are consistent with previous studies that show that HBPC patients have complex care needs that require collaboration across different providers and disciplines[11, 17, 24] and align with current work on patient complexity that acknowledges the intersection of patient-level factors and wider health care system structures that create gaps in care.[24–26] For patients in HBPC, these care gaps involve deficiencies in basic needs and inadequate social support, which can only be assessed through home visits.

In a prior qualitative study, Loeb and colleagues[27] showed that in outpatient clinics, primary care providers perceived that lack of social work support, combined with productivity demands around scheduling and visit length, impeded their ability to provide optimal care to patients with complex medical and social needs. Complementing these findings, our study provides an account of providers who report that having flexibility in their everyday work to address non-medical care needs related to patient social complexity is an important aspect to providing care to their patients. Additionally, prior research has demonstrated that providers in other primary care programs designed for patients with complex care needs endorse the importance of flexible scheduling and the provision of social support to patients, such as embedding a social worker on the care team.[16, 25, 28] Our findings suggest that HBPC provides the necessary programmatic structures to support complex care delivery for homebound and nearly homebound patients with complex medical and social conditions.

Social isolation is the objective lack of social connections with others.[29] There is evidence that individuals impacted by social isolation utilize more outpatient, emergency department, and inpatient hospitalization services, have poorer overall health, and greater difficulties with activities of daily living than those with ample social connections.[30, 31] Individuals who lack adequate social support are more likely to be placed in a skilled nursing facility or other institutional care arrangement following hospital discharge.[32–35] Sub-optimal health care service utilization patterns and increased rates of institutionalization may be associated with factors related to patients' social isolation, such as lack of social connections to help gain access to transportation, caregiver services, and other basic needs that support health and health care access. Our findings indicate that many HBPC patients face social isolation in circumstances where strained or missing family relationships prevent them from accessing needed resources and that HBPC providers work to fill in these social support gaps by tailoring care accordingly.

Our research may contain lessons for other programs that focus on medically and socially complex older adults, such as those funded through the recent CMS Independence at Home Demonstration. Programs require home visits to gain a strong understanding of patient needs and require flexibility in enrollment and service delivery to best address complex medical and social needs in an integrated fashion.

There are limitations to this research. We interviewed providers from a single HBPC site in the VA's national system. As such, our findings may be site-specific and other HBPC

programs may have different strategies for addressing social complexity. Additionally, while we found that HBPC providers valued flexibility in determining "homebound" status in selecting appropriate patients, our data did not provide insights into how VA HBPC providers consider other aspects of social complexity in choosing patients to be enrolled in the program and determining which patients should be discharged from HBPC. Further research is needed to understand which types of patients are served best by VA HBPC in regard to how patient social complexity impacts enrollment and discharge criteria.

CONCLUSION

HBPC providers describe caring for older, socially isolated patients with functional limitations whose health is affected by dynamic, interdependent layers of social and medical complexity. "Eyes in the home" provided unparalleled insight into how the interactions of medical and social factors affected patient health. Clinicians both addressed these factors during visits and connected patients with other HBPC disciplines and other VA and community-based services to meet their needs. The flexibility of the program was critical to meeting the medical and social needs of HBPC patients. Future research should investigate the role of medical and social complexity in how patients are selected for and discharged from HBPC.

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