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Exploring "What Works" in Veterans Affairs Home-Based Primary Care

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Exploring “What Works” in Veterans Affairs Home-Based Primary Care

by

Elizabeth Catherine Hulen

A dissertation submitted in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy
in
Sociology

Dissertation Committee:
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Abstract

Home Based Primary Care (HBPC) is an interdisciplinary care model involving comprehensive primary care services for patients with chronic illness who are unable to access clinic-based care. The largest HBPC program in the United States is run by the Department of Veterans Affairs (VA) and provides team-based primary care service to Veterans with complex, chronic conditions. The VA HBPC model includes primary care visits from a physician, nurse practitioner, or physician assistant, nurse care management, service coordination by a social worker, mental health services from a social worker or psychologist, nutrition counseling from a dietician, and help with medication management. In both VA and non-VA settings, HBPC has demonstrated success in improving patient and system outcomes. It is largely unknown how and in what circumstances HBPC positively impacts patients' health outcomes but may be related to the integration of long-term services and supports, strong patient-provider relationships, and highly functioning interprofessional teams. Thus, the specific aims of this study are: 1) explore how HBPC providers understand and address concurrent medical and social needs; 2) examine the ways in which providers in the VA HBPC program understand and manage their relationships with patients with respect to patient power and decision-making; and 3) investigate HBPC team function and coordination between clinic-based primary care physicians. Aims 1 and 2 are qualitative studies and Aim 3 utilizes an explanatory mixed-methods design. Data collected for Aims 1 and 2 are based on 14 semi-structured interviews with HBPC providers and 6 field observations of HBPC team meetings. Data collected for Aim 3 involves a cross-sectional survey administered to 33 HBPC providers and 10 semi-structured interviews with clinic-based primary care

providers. Additionally, data from the HBPC provider interviews is used for Aim 3. For Aims 1 and 2, an exploratory, content-driven approach and analytic expansion approach, respectively, is used for data analysis. For Aim 3, survey data is used to assess the strength of relational coordination within HBPC teams and between HBPC teams and clinic-based primary care providers and staff, while qualitative data from semi-structured interviews with HBPC providers and clinic-based providers are used to explicate survey results. Findings from this study drive three main conclusions. First, having the home visit component of VA HBPC gives providers unparalleled insight into the impact that overlapping medical and social complexity has on HBPC patients. The home visit combined with the flexible nature of HBPC programming allows for providers to directly address patients' care needs. Second, HBPC providers experience relationship boundary challenges stemming from patient's social isolation and the mutual emotional attachments that form between patients and providers. However, HBPC providers have developed individual and team-based strategies to address these challenges. Third, HBPC teams are highly functioning when it comes to intra-team collaboration and care coordination, but they have substantial gaps in the coordination of patient care activities with clinic-based primary care providers and staff. This gap has caused confusion and frustration over the role of HBPC and what types of patients HBPC should serve and reveals a need for increased horizontal communication between HBPC teams and clinic-based primary care providers and staff. These findings provide evidence for the development of future studies that investigate the wider impact that these care patterns may have on patient care outcomes. Additionally, these findings provide data for health policies targeted towards patients with complex medical and social care needs.

Acknowledgements

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Chapter 1 – Introduction

Research Problems and Purpose of the Study

Home Based Primary Care (HBPC) is an interdisciplinary care model involving comprehensive primary care services for patients with chronic illness who are unable to access clinic-based care. HBPC programs typically target three patient populations. The first and primary patient population are frail, homebound older adults with multiple chronic conditions. Next, HBPC serves younger homebound patients with neuromuscular disease such as Amyotrophic Lateral Sclerosis and quadriplegia from spinal cord injury. The third patient population is made up of people with high rates of acute-care utilization but for whom engaging in clinic-based care is difficult due to serious mental illness or behavioral conditions. The largest HBPC program in the United States is run by the Department of Veterans Affairs (VA) and provides team-based primary care service to Veterans with complex, chronic conditions. The VA HBPC model includes primary care visits from a physician, nurse practitioner, or physician assistant, nurse care management, service coordination by a social worker, mental health services from a social worker or psychologist, nutrition counseling from a dietician, and help with medication management (HBPC Handbook 2017).

In both VA and non-VA settings, HBPC has demonstrated success in decreasing hospitalization and institutionalization by working to shift patterns of healthcare usage from inpatient, specialty care to community-based generalist care all while also increasing patient satisfaction (De Jonge et al. 2014; Edes et al. 2014; Edwards et al. 2014). Possible mechanisms for this success may involve the use of high-functioning,

interdisciplinary teams (Haverhals et al. 2019; Temkin-Greener et al. 2017), sensitivity to contextual enablers and barriers (Kramer et al. 2017), targeting of patients at high risk for hospitalization, and the integration of long-term services and supports into primary care (Edwards et al. 2017). However, not all research on HBPC has shown an association with decreased hospitalizations and costs. For instance, Kinoshian and colleagues (2008) showed that the top third of HBPC programs reduced hospitalizations by 68% while the bottom third of programs only reduced hospitalizations by 7.3%. This likely indicates that different approaches to HBPC yield different results. Within the VA system there is variation in the implementation of HBPC programs given that national guidelines allow for flexibility in program design, so that local HBPCs can accommodate individual and community needs (HBPC Handbook 2017). While researchers have described possible mechanisms for HBPC's success in certain contexts (De Jonge et al. 2014; Edes et al. 2014; Edwards et al. 2014), it is largely unknown how and in what circumstances HBPC positively impacts patients' health outcomes.

In 2010, the VA implemented Patient Aligned Care Teams (PACT) as part of its iteration of the patient-centered medical home (PCMH), to transform VA primary care (Rosland et al. 2013). PCMH focuses on team-based care, patient access, care coordination activities, and continuity between patients and providers (Cassidy 2010). VA PACT involves primary care teams that provide comprehensive, coordinated care to a dedicated panel of patients (Veterans Health Administration 2014) and is associated with higher quality of care, increased patient satisfaction, and decreased emergency department (ED) use (Helfrich et al. 2014; Nelson et al. 2014). While PACT has been largely successful, there have been barriers to its implementation in some VA settings

that include inadequate staffing, unclear team roles (Tuepker et al. 2014) and questions over whether PACT should be adapted to the needs of special populations such as those with certain health conditions or greater complexity of care needs (Yano, Haskell and Hayes 2014). This might mirror issues within VA HBPC as variability in its programming may have also led to disparate patient health outcomes. However, currently available data is lacking, and it remains less clear about barriers and enablers specific to successful HBPC functioning.

Literature on primary care for patients with multiple, chronic conditions links trusting relationships between patients and providers, flexible program design, interdisciplinary care teams, and care coordination services to successful care delivery and improved patient outcomes (Hong et al. 2014; Peikes et al. 2012; Brown et al. 2012). VA HBPC targets patients with multiple, chronic conditions for whom clinic-based care is not effective and has programmatic elements that have been associated with success in other intensive primary care settings. However, the research on HBPC, in general, shows an overall association between HBPC enrollment and improved patient outcomes (De Jonge et al. 2014; Edes et al. 2014; Edwards et al. 2014) but few studies provide detailed analyses of how HBPC programming supports success. While researchers have provided evidence that interprofessional teams, patient targeting, and integration of long term services may be contributing factors, there is an overall lack of nuanced data on how HBPC providers integrate medical and social care, manage relationships with patients, and engage in patient care coordination activities – all of which are important components of successful primary care in any setting, but especially those where patients have multiple conditions and impacted by social complexity. As such, the nature of this

dissertation is exploratory and is driven by the following question: How do care delivery patterns surrounding social complexity, patient-provider relationships, and care coordination support effective HBPC functioning in the VA system?

For this dissertation, I present three research chapters to address my overall research question that are targeted towards gaps in the HBPC literature. More specifically, the first chapter explores how HBPC providers address concurrent medical and social needs; the second chapter examines how HBPC providers perceive and manage their relationships with patients; and the third chapter investigates the coordination of patient care activities within HBPC and between HBPC and clinic-based primary care providers.

Data and Methods

This dissertation work is part of a larger project entitled “Optimizing Outcomes in Home-Based Primary Care” which is funded by the Department of Veterans Affairs. The principle investigator is Samuel T. Edwards, a physician-investigator at the VA Portland Health Care System. The overall aims of this project are to determine correlates of preventable hospitalizations, assess provider perceptions of appropriate patient selection and care delivery patterns, and to develop a pilot intervention that promotes best practices in HBPC. Data used for this dissertation work were originally collected for larger project, with specific research questions developed for this dissertation.

While I include more detailed information about the data sources for each chapter, the first data set includes 14 semi-structured interviews with VA HBPC providers that represented multiple disciplines and 6 field observations of HBPC team meetings. The interview guide used in these interviews consisted of questions involving patient

selection, care patterns, core functions of HBPC, and barriers and facilitators to HBPC performance (Appendix 1) and is used for all three research chapters. The second qualitative data set consists of 10 semi-structured interviews with clinic-based physicians regarding their perceptions of the use of home care services in the VA and is used for the third chapter. The interview guide includes a set of questions aimed at specifically assessing their views of HBPC functioning as it relates to the coordination of patient care activities (Appendix 2). The quantitative data set is from a cross-sectional survey administered to 33 HBPC providers working across different VA HBPC sites in Oregon – Bend, Portland, Vancouver in Washington, and Salem, and is used for the third chapter. The survey consists of a seven-item scale to assess relational coordination within HBPC teams and between HBPC teams and clinic-based primary care physicians (Appendix 3).

Outline of the Dissertation: Empirical Research Chapters

For this dissertation, I present three research chapters that will be developed into manuscripts acceptable for peer-reviewed publication. The first chapter draws from the literatures on social determinants of health (SDOH) and patient complexity to investigate the ways in which providers address overlapping medical and social complexity in VA HBPC. The second chapter titled “Provider Perspectives of Patient-Provider Relationships in Home-Based Primary Care” examines how HBPC providers view their relationships with patients in a care setting where boundaries of care are often unclear. The third chapter assesses HBPC team functioning in the coordination of complex patient care activities across multiple health care settings.

Little is known about how HBPC addresses SDOH and how HBPC providers integrate medical and social care. In the first chapter entitled *Eyes in the Home*”:

Addressing Social Complexity in Veterans Affairs Home-Based Primary Care, I

investigate HBPC providers' knowledge of social complexity among HBPC patients and describe how they use this knowledge to impact care delivery. For this work, I use a qualitative study design involving semi-structured interviews with HBPC providers representing multiple disciplines (nursing, medicine, social work etc.), field observations of HBPC team meetings, and a content-driven approach to data analysis (Guest, MacQueen and Namey 2011). I borrow from the literatures on SDOH and patient complexity in primary care delivery to theoretically situate my findings. Specifically, I point to how the unique social factors associated with Veteran and homebound status structures patient engagement with the health care system and how primary care providers take into account the intersection of multidimensional variables and patients' life circumstances when determining the best course of care. Through research for this chapter, I document the different ways HBPC providers perceive the overlap of medical and social complexities in the lives of HBPC patients and provide an exploration of how HBPC, as a care model, may function as a proxy for social support for vulnerable, homebound and nearly homebound patients. Findings from this work contribute to the overall literature on care delivery for complex patient populations and SDOH specific to homebound and near-homebound patients.

The second chapter is designed to address how HBPC providers view their relationships with patients and to my knowledge no studies exist on boundary maintenance between patients and providers within HBPC, specifically. In this chapter, I examine the ways in which HBPC providers understand and manage their relationships with patients in the home care setting. For this work, I engage in a secondary analysis of

the qualitative data collected for the first chapter which are 14 semi-structured interviews with HBPC providers and 7 field observations of HBPC team meetings. I employ the analytic expansion approach (Thorne 1998) to further examine providers' perspectives of their relationships with patients. Underpinning this work is the notion that patient care activities occur in the context of relationships of reciprocal influence (Beach and Innui 2006). In this chapter, I provide rich descriptions of how HBPC providers view their relationships with patients while providing insight on the facets of patient-provider relationships in home-care settings that involve unique and/or contextually dependent relational dynamics and boundary maintenance.

The third chapter of this dissertation deals with team functioning in VA HBPC. Despite its importance, little is known about teamwork within HBPC and collaboration between HBPC and affiliated primary care clinics is poorly understood. In the chapter "Relational Coordination in Veterans Affairs Home-Based Primary Care", I employ a mixed methods approach to understand how task interdependence and relational processes impact care coordination in VA HBPC and how clinic-based physicians and HBPC providers perceive current team functioning. A cross-sectional survey was administered to 33 HBPC providers and 14 HBPC providers and 10 in-clinic primary care physicians participated in semi-structured interviews. The outcome measures are a seven-item relational coordination scale that include questions on communication quality (frequency, accuracy, and timeliness), shared goals, shared knowledge, and mutual respect as well as perceptions of the coordination of patient care activities among clinic-based primary care physicians and HBPC providers. The mixed-methods research design facilitates a direct engagement with the complexity inherent in the coordination of patient

care activities across different workgroups – HBPC teams and clinic-based primary care physicians.

Significance and Limitations of the Study

This research makes several contributions in terms of advancing the empirical literature on HBPC and supporting programmatic functioning of HBPC in the VA system. First, this research describes how HBPC providers integrate medical and social care delivery which is largely missing in the literature on HBPC. Particularly, the in-depth descriptions of how HBPC providers address SDOH in concert with patients' medical needs contributes to the wider literature on complex care delivery, specifically, how specialized primary care programs can meet the health care needs of patients not adequately served by current configurations within the health care system. Second, this research adds to the patient-provider relationship literature by identifying whether and how the home care context does or does not disrupt traditional-patient-provider relationship dynamics. It also provides practical implications based on strategies that HBPC providers have adapted for boundary maintenance in more flexible care settings when the professional relationship between patient and health care provider needs to be established. Third, findings of this research on relational coordination in HBPC will also contribute to understanding the extent to which team-based care models are able to address the care coordination needs of patient populations with complex medical and social care needs. Findings can also be used to inform the development of interventions to address identified coordination challenges as well as to reinforce strengths in HBPC programming.

Outside of making contributions to the HBPC literature, this dissertation provides evidence for a sociological discussion surrounding the ways in which organization and structure shape care delivery patterns. Each research chapter investigates a different aspect of VA HBPC care delivery with attention to how organizational characteristics support patient health from the perspectives of providers. These patterns of care involve patient social complexity, patient-provider relationships, and the coordination of patient care activities. Additionally, this dissertation engages the sociological notion that research is key to addressing health disparities and that one avenue for this research is to understand how patients access and utilize health care services. This dissertation provides rich description of how VA HBPC delivers care to patients who experience poorer health outcomes that may be linked to their homebound and Veteran status. Evidence from this work may be used to inform both local and national VA HBPC policies and provide important lessons for non-VA primary care programs that serve patients with complex medical and social needs, of which I discuss a at the end of this dissertation.

Despite the significance, there are limitations to this work as well. For the first research chapter, *“Eyes in the Home”: Addressing Social Complexity in Veterans Affairs Home-Based Primary Care*, interview data were collected from a single HBPC site. As such, analysis of interview data my produce findings that are site-specific with other HBPC programs having different strategies for addressing SDOH. In the second chapter *Provider Perspectives of Patient-Provider Relationships in Home-Based Primary Care*, patient and caregiver perspectives regarding the patient-provider relationship in HBPC are missing, although findings from provider interviews will contribute to the development of data collection instruments in future studies that specifically assess

patient and caregiver views of HBPC. For the third research chapter, *Relational Coordination in Veterans Affairs Home-Based Primary Care* limitations include the cross-sectional nature of the RC survey whereby the timing of the data collection may undermine the generalizability of results. Additionally, the RC survey is only from the HBPC provider perspective; however, qualitative interview data from the clinic-based PCPs help to add additional perspective to the interpretation of results.

Ethics

This study is approved by the Institutional Review Board (IRB) at the VA Portland Health Care System (VA IRB No. 3903) (see Appendix 4). Written informed consent was obtained and documented from all interview participants and participants were assured that any potentially identifying information would not be reported in publications. A waiver of documentation of informed consent was obtained for the relational coordination survey. There was no participant compensation for this study. Several safeguards have been put in place to protect and maintain confidentiality for participants. Digital audio recordings of interviews, and transcriptions of these recordings have been uploaded to and stored on a password secure server behind the VA firewall. Additionally, personal identifiers were removed during the transcription process. Survey data collected for this project have been collected and maintained by RC Analytics via Amazon Web Services, a secure, cloud-based computing and data storage platform that complies with ISO 270019, an internationally accepted code of practice of personal data in the cloud and is certified under the EU-US Privacy Shield. The IRB at Portland State University determined that this work does not require Human Research Protection Program (HRPP) review under the federal regulations because this project does not meet

the federal definitions of “research” with “human subjects” per 45 CFR Part 46 (see Appendix 5).

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Chapter 2 - “Eyes in the Home”: Addressing Social Complexity in Veterans Affairs Home-Based Primary Care

The text of this chapter includes a reprint of previously published material:

Hulen, Elizabeth, Avery Z. Laliberte, Sarah Ono, Somnath Saha, and Samuel T. Edwards.

2021. Relationship-centered care. *Journal of General Internal Medicine*. “Eyes in the Home”: Addressing Social Complexity in Veterans Affairs Home-Based Primary Care. *Journal of General Internal Medicine*. Jan 11. DOI: 10.1007/s11606-020-06356-2.

Introduction

In the United States, there are approximately 2 million older adults who are completely or mostly homebound due to functional impairments and complex, chronic illness (Ornstein et al. 2015). These individuals experience great difficulty leaving their homes without assistance and often face significant social limitations (Cohen-Mansfield et al. 2010; Qiu et al. 2010). They experience greater disease and symptom burden than their non-homebound counterparts and have higher mortality rates (Cohen-Mansfield et al. 2010; Kellogg and Brickner 2000; Qiu et al. 2010). Homebound persons also have higher rates of hospitalization and emergency department (ED) visits and utilize more post-acute care services (Desai et al. 2008; Jencks et al. 2009; Kronish et al. 2006). Compounding their medical complexity, there is evidence that being homebound or near-homebound is associated with indicators of socioeconomic vulnerability, including low income (Cohen-Mansfield et al. 2010; Cohen-Mansfield et al., 2012; Ornstein et al. 2015). 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 (Ornstein et al. 2015; Simonsick et al. 1998; Verbrugge and Jette 1994). Current approaches to meeting the care needs of homebound individuals often involve a patchwork of services that present coordination challenges (Haverhals et al. 2019).

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. The largest HBPC program in the United States 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 (VHA 2017). 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 (Edes et al. 2014).

VA HBPC has demonstrated success in decreasing risk of hospitalization (Edwards et al. 2014) and improving patient satisfaction (Edes et al. 2014). HBPC reduces hospitalizations and costs by targeting patients at high-risk for hospitalization

and integrating long-term services and supports (Edwards et al. 2017). Qualitative research examining mechanisms of success in HBPC has shown that interdisciplinary team-based care (Haverhals et al. 2019; Temkin-Greener et al. 2019), longitudinal and trusting relationships between patients and providers (Edes et al. 2014; Haverhals et al. 2019), and sensitivity to contextual enablers and barriers (Kramer et al. 2017) 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.

I 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 (SDOH), 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" (Quiñones et al. 2015). 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 (Adler et al 2016). 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.

Theoretical Orientation

Social Determinants of Health of among Veterans and Homebound Persons

It is well established that SDOH, 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 healthcare services (Alder et al. 2016; Phelan, Link, and Tehranifar 2010). Health care systems have an important role to play in addressing SDOH whether it is by integrating primary care and social services or connecting patients to community resources. The VA system serves a patient population that are more medically complex, have less socioeconomic resources, face greater functional limitations, and have a higher prevalence of trauma than the general patient population (Agha et al. 2000, Duan-Porter et al. 2018; Selim et al. 2004; Tsai et al. 2012). Higher rates of trauma among Veterans is not limited to combat-related exposures (Naifen et al. 2008), but also include adult experiences with sexual violence when compared to non-Veterans (Cerulli et al. 2014) and physical violence (Naifen et al. 2008; Lahavot et al. 2016). Trauma-exposed Veterans are more likely to have depression, smoke, drink alcohol heavily, and have worse overall health than Veterans and non-Veterans who have not had traumatic experiences (Cerulli et al. 2014; Dichter et al. 2011; Katon et al. 2015). Beyond work on trauma exposure and health, there is surprisingly little published literature on SDOH among Veterans despite VA System initiatives (VHA Office of Health Equity 2020) to address health disparities. Overall, this literature lacks consistent measures of social determinants and conceptual frameworks for which to better understand and characterize SDOH among Veterans

(Duan-Porter et al. 2018). Missing from this literature are the unique SDOH faced by Veterans who are homebound or near homebound.

Research on non-Veteran patient populations indicate that there is evidence that being homebound or near-homebound is associated with indicators of socioeconomic vulnerability like older age, low income, and increased rates of hospitalization (Cohen-Mansfield et al. 2012; Ornstein et al. 2015). While persons who are homebound often have medical conditions that limits their functional capacity, confinement to the home might also be the result of lack of social support, limited financial resources, and other factors that work to restrict access to personal assistance to leave the home (Ornstein et al. 2014; Simonsick et al. 1998; Verbrugge and Jette 1994). For Veterans who are homebound or near-homebound, the high prevalence of trauma exposure (when compared to non-Veterans) (Duan-Porter et al. 2018) may intersect with homebound status to create a unique set of factors that impact health. It is likely, given the research on SDOH of Veterans, that those served by VA HBPC are impacted by trauma in addition to the SDOH associated with their near or total homebound status.

Patient Complexity and Primary Care Delivery

VA HBPC patients tend to be very frail, have an average of 8 chronic conditions and take 15 medications (Edes et al. 2014) and, as such, can be considered “complex”. Patient complexity is an inherently difficult concept to describe or measure. According to the Vector Model of Complexity (Safford et al. 2007), multiple components (socioeconomics, culture, biology, environment, and behavior) determine patient complexity and each component may exert a force that either increases or decreases overall complexity. For instance, two patients with similar levels of biological

complexity, but different levels of behavioral and socioeconomic complexity are likely to have different health outcomes. The implications of the Vector Model of Complexity for providers is then to avoid solely relying on biological complexity when designing treatment plans. Another framework for understanding patient complexity is the Cumulative Complexity Model (Shippee et al. 2012) which emphasizes how various factors interact to shape a patient's health outcomes. In addition, the Cumulative Complexity Model (Shippee et al. 2012) focuses on how patients as individuals contend with the accumulation of different, competing demands that impacts their capacity to get well or stay well. For example, a person may have many demands on their time like employment, family responsibilities in addition to scheduling and attending medical appointments for their role as a patient. A person's ability to access and effectively utilize health care and then positively engage in self-care activities shapes and is shaped by their socioeconomic status, fatigue, and health literacy (Shippee et al. 2012). Both models show that when it comes to patient complexity there are several multidimensional variables that providers must take into consideration when determining what is appropriate care for an individual patient with unique life circumstances.

In the wake of demographic changes (West et al. 2014), complex patients are increasingly common in primary care settings and the wider healthcare system. Many of these patients are older, have multiple chronic conditions, and functional limitations and are at greater risk for hospitalization, emergency department (ED) visits, and mortality when compared to non-complex patients (Prados-Torres et al. 2014). In complex care delivery, patient-level factors and wider health care system structures often intersect create challenges in care delivery (Chan et al. 2019; Shippee et al., 2012; Safford et al.

2007) as optimal care for patients with complex care needs requires collaboration across different health care providers and disciplines (Gillespie et al. 2018; Haverhals et al. 2019; Temkin-Greener et al. 2019). For instance, a patient with multimorbidity, functional limitations, and who is socially isolated may need more frequent primary care visits to prevent chronic disease exacerbation, in-home physical and occupational therapy services to address health and functional issues, and social work assistance to best manage their care. However, traditional primary care practices may lack the capacity to effectively coordinate and manage complex care leading to poor patient outcomes (Edwards et al. 2017). VA HBPC represents a non-traditional approach to primary care with more intensive and integrated services and may be better able to serve the needs of patients with complex care needs than clinic-based primary care.

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 (for interview guide see Appendix A). 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 (IRB) at the VA Portland Health Care System (VA IRB No. 3903) and all participation was voluntary. Additionally, the IRB at Portland State University

determined that their review was not required (HRPP No. 206956-18). 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

I 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, 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

I used an exploratory, content-driven approach to data analysis whereby patterns and emergent thematic categories were inductively identified throughout the research process (Guest et al. 2011). 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. 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 while simultaneously recording analytic observations in memos

(Bernard 2017). We identified themes by identifying segments of text where codes tended to co-occur and then organized co-occurring codes into larger thematic categories. 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

These 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. Findings are consistent with previous studies that show that HBPC patients have complex care needs that require collaboration across different providers and disciplines (Gillespie et al. 2019; Haverhals et al. 2019; Temkin-Greener et al. 2019) 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 (Chan et al. 2019; Gillespie et al. 2019; Shippee et al. 2012). 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 (2016) 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, this 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 (Chan et al. 2019; Edwards et al. 2017; Hong et al. 2014). 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 (NASEM 2020). 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 (Guest-Emerson and Jayawardhana 2015; Mullen et al 2019). 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 (Flowers et al. 2017; Godin et al. 2019; Maxwell et al. 2013). 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.

This 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, these findings may be site-specific and other HBPC programs may have different strategies for addressing social complexity. Additionally, while results indicate that HBPC providers valued flexibility in determining "homebound" status in selecting appropriate patients, 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. Further research is needed to understand which types of patients are served best by VA HBPC.

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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Chapter 3 – Provider Perspectives of Patient-Provider Relationships in Home-Based Primary Care

According to recent estimates, there are about 2 million older adults living in the United States who are near-homebound or completely homebound because of functional complex, chronic illness (Ornstein et al. 2015). These people may be especially vulnerable given that their homebound status may also stem from lack of social support and economic insecurity (Ornstein et al. 2015; Simonsick, Kasper and Phillips 1998; Verbrugge and Jette 1994) which can worsen the management of their medical conditions and impact their functional status. One approach to meeting the care needs of persons who are near or fully homebound is Home-Based Primary Care (HBPC), an interdisciplinary care model for providing comprehensive primary care services for patients with chronic illness who are unable to access clinic-based care. In the United States the largest HBPC program is run by the Department of Veteran Affairs (VA) and provides team-based, longitudinal care and enrollment has been associated with reduced hospitalizations (Edwards et al. 2014) and improved patient satisfaction (Edes et al. 2017). Longitudinal and trusting relationships between patients and providers (Haverhals et al. 2019; Edes et al. 2014) may underlie these successes.

Relationships between patients and their providers impact the quality of care that patients receive (Eton et al. 2017; Chipidza et al. 2015; Ong et al. 1995). For example, high-quality communication from providers has been shown to improve patient medication adherence through increasing patient trust in providers, engaging in healthy behaviors, and promoting patient's self-management capabilities (Street et al. 2009; Finney et al. 2016). Conversely, negative patient perceptions of providers may result in

the development of negative attitudes among patients surrounding prescribed care regimens, thus leading to poor health outcomes (Mohammed et al. 2016, Linetzky et al. 2017).

Health care providers possess power that is generated by their position of authority and the patient's position of needing care. This creates the need for professional boundaries to protect patient safety. Boundaries, or parameters for acceptable behavior "define the helping pathway" (Everett and Gallop 2001:229) for both patients and providers. Egregious boundary violations like verbal, physical, or sexual abuse are easier to identify while less obvious violations may arise in situations where patients and providers form "dual relationships" in which the overlap between professional and personal roles undermines clinical objectivity (Peternelj-Taylor and Yonge 2003). Gutheil and Simon (2002) make the distinction between boundary violations and boundary crossings. Particularly, they define boundary crossings as deviations from normal patient care activities that are not harmful and potentially positive, while boundary violations as harmful and exploitative behavior that takes advantage of the patient-provider relationship. Physician self-disclosure, for example, is associated with increased patient satisfaction in surgical visits but decreased patient satisfaction in primary care visits possibly indicating that patients appreciate this type of boundary crossing when in a vulnerable position, but otherwise deem such behavior to be inappropriate (Beach et al. 2004). In less structured care environments, like in patient's homes, boundaries may be difficult to identify, and professional roles may become more relaxed to accommodate the nature of care being delivered (Walker and Clark 1999). In the home care setting patient-provider relationships may appear to be social since it

involves providers coming to the patient's residence and observing how they live and interact with family members or caregivers. Thus, an important component of boundary maintenance for providers is to take into account the unique vulnerabilities of their patients based on treatment modalities and context.

Little is known about how VA HBPC providers view their relationships with patients and how they approach building trust and meaningful engagement. In one qualitative study, researchers showed that VA HBPC providers viewed their relationships with patients and caregivers as pivotal in the delivery of high-quality care especially when it came to coordinating care and connecting patients and caregivers to resources in outside agencies (Haverhals et al. 2019). These providers reported that patients were more willing to be open and trusting because they perceived providers to be non-judgmental and their relationships with them to be genuine (Haverhals et al 2019). Findings from other work in VA and non-VA HBPC settings support the notion that building trust (Kramer et al. 2017), providing emotional support (Wool et al. 2019), and treating patients as autonomous individuals (Smith-Carrier et al. 2016) supports effective care delivery. Thus, the goal of this study is to provide a descriptive account of patient-provider relationships in VA HBPC to better understand how patient-provider relationship dynamics contribute to HBPC success. Additionally, this study seeks to add empirical evidence to the literature on how the home care setting shapes relationship interactions between patients and providers.

Theoretical Orientation

Patient care activities occur in the context of relationships. According to the Relationship Centered Care (RCC) framework (Beach and Inui 2006), these relationships

are: 1) patient-provider relationship; 2) provider-provider relationship; and 3) provider-community relationship. Underlying the RCC framework are four guiding principles that include the acknowledgement of personhood of all participating actors, the importance of affect and emotion in interactions, the achievement of care outcomes under conditions that foster reciprocal influence, and lastly, a view that positive relationships in healthcare are morally valuable (Beach and Inui 2006). More recently, the RCC framework includes the notion that providers must focus on cultivating their knowledge, skills, and behaviors to improve their practice through informal and formal forms professional development (Nundy and Oswald 2014).

RCC situates the relationship between patients and their providers at the center of service delivery, but also considers how relationships among patients, caregivers, providers, care teams and the wider community impact care (Beach and Inui 2006; Nundy and Oswald 2014). These relationships have relevant applications for primary care for patients with complex medical and social care needs. First, patient-provider relationships that are characterized by trust and respect, allow for comprehensive health assessments and the identification of shared treatment goals (Millstein and Gilbertson 2009; Chan et al. 2019). Next, positive relationships between members of a care team facilitate the coordination of patient care activities through information sharing among team members (Bodenheimer et al. 2008). Providers' relationships with community members and organizations help to connect patients and their caregivers to needed resources that may be located outside of the health care system, like food delivery programs and home care services. In addition, collaboration with community members in program planning and decision making are an application of the provider-community

relationship in RCC (Driscoll et al. 2013; Johnston et al. 2013). Lastly, this paradigm also includes the provider's relationship with him or herself with an emphasis on self-reflection and continuous learning to improve their functioning within the health system (Etheredge 2007; Nundy and Oswald 2014).

Methods

Research design, participants, and data

This study relies on a secondary data analysis of interview data previously coded to meet the aims of the parent study entitled "Optimizing Outcomes in Home-Based Primary Care" that aimed to identify correlates of preventable hospitalizations among HBPC patients. Interview participants included 14 HBPC providers representing the following disciplines: nursing, medicine, social work, psychology, pharmacy, and physical therapy. See Appendix A for interview guide. Participants were recruited at HBPC team meetings and through email invitations sent by the study team. The data set also included information collected from field observations of 6 HBPC team meetings. All interviews were audio-recorded and transcribed verbatim. Interview duration ranged from 30 to 60 minutes and took place in a secured office on participant's work breaks. Field observations at team meetings were first documented by hand in field notes that were later transcribed. The Principal Investigator of the parent study and I conducted the interviews and performed the field observations. This study was approved by the Institutional Review Board at the VA Portland Health Care System (VA IRB No3903) and all participation was voluntary. Additionally, the IRB at Portland State University determined that their review was not required (HRPP No. 206956-18).

Data Analysis

The goal of this analysis was to elicit a nuanced exploration of how providers negotiate relationship boundaries with patients in the home care setting. To accomplish this, we employed the analytic expansion approach (Thome 1998) which involves the researcher performing a secondary interpretation of qualitative data to answer new or extended research questions using directed content analysis (Hsieh and Shannon 2005). We reviewed the parent study's existing codes and associated quotations on patient-provider relationships and developed a more refined coding schema focusing on relationship dynamics between providers, patient, families, and caregivers. We applied the refined codes using Atlas.ti software and then reviewed the coded segments of text to identify key concepts. Data from field notes were used to contextualize findings from the interview data. We then synthesized our findings to describe provider experiences, and selected participant quotations to illustrate results

Results

In presenting results from this secondary qualitative data analysis, we first describe the relationship dynamics between HBPC patients and providers according to the perspectives of providers. We then provide examples of the kinds of challenges HBPC providers faced in their relationships with patients and how they addressed these challenges in their care delivery.

Understanding relationship dynamics in HBPC

Providers reported that a programmatic strength of HBPC was the longitudinal nature of care where providers could build rapport with patients over several visits to facilitating trust, patient satisfaction with care and the development of high-quality, therapeutic relationships.

So, once we get to know the Veterans and they get to know us, they tend to be pretty happy with home-based care.

I can address their needs over a longer period of time. There are a lot of Veterans that benefit from this [HBPC] because they develop pretty close relationships with all of the team so they're more trusting of who we are and what we can do for them

And they're much more willing to talk about it once they know you a little bit better, but having these hard conversations it's understandable that people put up a barrier like "this is hard for me to talk about and I'm not going to talk about it with someone I don't know" and so building that rapport is really important.

The home setting, according to providers, this serves to imbue patients with a sense of control which helped patients to feel at-ease and be willing to reveal care-related information that would be otherwise be hidden from providers in clinic-based settings.

When you get to know the patient, they open up to you and they tell you a lot of the struggles they are having, you become their confidant.

I think that in their own home they are more open about things, you're in their space and they're in control so they seem to be more comfortable, so I think usually by the third visit they are more trusting, there is more rapport, they can't hide things, so I don't think there is as much hiding as in clinic and when there is, we are able to confront the issue

In interviews and team meetings, providers frequently spoke of the importance of patient education so that patients had adequate information to make their own treatment decisions and communicate their care preferences to the HBPC team. Providers framed this in terms of respecting patient autonomy and discussed different ways to use patient education to develop rapport and build trust with patients in ways that are specific to the home care setting.

I don't push hard when I sense somebody is private or they are paranoid or maybe a little untrusting. My goal is to establish rapport and then after you establish rapport you can...I ask them about their life, I ask them about their hobbies, I ask them about their day-to-day routine. I'm not super technical in how I approach my questions. I'm more like "I'm a guest in your home, I respect you and your home environment" and then we go from there.

As a team we're pretty good about saying they need to make those decisions, and we want to provide them the information so that they- because we all make better decisions when we have better information...ultimately the choice is theirs and if we want to have a working relationship with them, and we want to be able to build trust and be able to provide care however we can, then we need to respect those things

While providers described aspects of high-quality patient-provider relationships such as building trust and respect for patient autonomy, they also pointed out challenges associated with delivering care to patients who are homebound or nearly homebound, as their homebound status often stemmed from conditions of social isolation, even if a caregiver or family member was present. According to providers, the VA was the sole or main source of support of care needs for many patients and that the loss of the VA connection could have serious consequences. This presented difficulties to providers when it came to discharging patients from HBPC, even when clinically appropriate.

It's not uncommon for the Veterans to not have a whole lot of social support...it's that situation where we're the one person that they know. But other times, if they do have a spouse or a significant other, that we're their connection to the VA and that they don't want to lose us because then it makes it, it is final...if we back out it's just too hard on them, so we really stay there sometimes to help support the family as well.

...when it's time to discharge patients for legitimate reasons, the nurses want to hold on to them. "Oh we can't

give him up, we've had him for 10 years!" Or "if I'm not there, who's gonna take care of him?"

The hesitancy to discharge patients from HBPC may also be related to the development of mutual emotional attachments between patients and providers. Evidence of this emotional attachment is illustrated by patient's grief reactions when a provider transfers to another position or when a family mentions an HBPC provider in a patient's obituary.

Even when I go there to see the patients they are so happy that I am there, they rely on me, and they feel that I am so much more than the nurse and when I switched teams I had several Veterans brought to tears when I told them that I was transferring and I felt heavy hearted.

One of our nurses that retired a while ago, one of her very long-time veterans had passed away and his obituary said survived by wife, children and his longtime home health nurse.

These examples illustrate the types of relationship dynamics that occur in home care setting among providers, patients, and their families and how these dynamics impact patient care delivery.

Challenges in the negotiation of boundaries in the patient-provider relationship

Given the close relationships that providers developed with patients (and their family), areas of concern arose around the maintenance of appropriate boundaries in the patient-provider relationship. In my observation of team meetings, discussions of appropriate boundaries in patient-provider relationships usually centered on how to politely decline offers of coffee or tea from patients. However, in interviews providers would describe instances of boundary crossings that almost always involved performing non-medical tasks for the patient or scheduling visits outside regular hours to make sure patients had their medications available.

I came the next day which was a Saturday of the goodness of my heart, no charge, and filled his medicine box or else he wouldn't have been able to take it and they gave him a once a day, he did have that in his head to take his medicine once a day, I had asked if they could give him a once day if possible, and he got better. I didn't know how else to do it, there just wasn't anybody to set it up for him on the weekend. I had spent most of Friday afternoon getting him squared away, calling here and calling there.

We have one guy who's demented and he can't quite figure out how to answer that phone so we just drop in. So we don't have a scheduled appointment, these guys don't have the transportation, they're not going to get to their routine medical care. And while it's not ideal, we sometimes just show up on their doorstep, planning on seeing them and making interventions that way

While these boundary crossings could be therapeutic and contribute to the betterment of patient health and quality of life, they also presented ethical dilemmas like whether it is appropriate for providers to spend extra time on tasks that they are not compensated for or whether providing extra help puts patients in a position where they do not take accountability for their lives and do not take the necessary steps to support their own wellbeing.

In the short term you're doing them a favor, and in the long term, if this program were to go away, or this nurse were to die or transfer or quit, they wouldn't then have that service that you've been providing for them, and then they're high and dry. They've come to rely on you for that.

Providers understood the dilemmas that these situations presented and developed strategies for navigating them. One strategy involved asking team members or themselves if they would be comfortable documenting a particular action in the chart, and if not, then not to do it.

We're all human, right? We're good people- we went into the helping professions for a reason, but I always try to ask my team, "would you be comfortable documenting that in the chart? And having other people know that you did that?"

Additionally, interview participants described how providers would bring their concerns to team meetings so that fellow team members could come up with a strategy to address a patient's need while also maintaining appropriate boundaries. A common strategy from team meetings included engaging in a process of self-reflection with team members to determine the best course of action.

I think sometimes even though we try to have our professional boundaries, we get invested. And I think you know it's good. You know in our team discussions we talk it about so that someone else could hear, it's like, are you in because you're worried about this person? Is that valid? Is it something that we should really as a team look at and have everyone's perspective because you can get a little too myopic if you use you're seeing them for that long they become a member of the family practically.

Discussion

These results illustrate the types of relational dynamics that may occur between patients and providers in VA HBPC. These dynamics include the longitudinal nature of care that facilitates rapport building and trust, patient's sense of control in the home, and the support of patient autonomy through sensitivity to patient preferences and tailored patient care. Patient-provider relationships in HBPC are high-quality, but also present unique challenges surrounding the maintainence of appropriate boundaries given that providers have deep insight into their patient's personal lives and may be the primary source of instrumental and social support. Boundary crossings like visiting patients

outside normal scheduling hours or performing non-medical tasks may be beneficial in that care needs get addressed but also detrimental in that it can undermine patient autonomy. In response to this challenge HBPC providers have developed individual and team-based strategies to address the appropriateness of particular actions and determine what is in the patient's best interest and integrating these into care plans.

These results align with current evidence that high-quality relationships characterized by trust (Kramer et al. 2017, Haverals et al. 2019), emotional support (Wool et al. 2019), and respect for patient autonomy (Smith-Carrier et al. 2016) are key to the delivery of effective patient care in HBPC. Study results extend earlier findings that patients are more willing to yield sensitive, but clinically relevant information in the context of authentic, non-judgmental relationships (Haverhals et al. 2019) developed in the patient's home, a setting where they retain a sense of control over the medical encounter. The finding that emotional attachments between patients and providers may hinder the appropriate discharge of patients illustrates the importance of acknowledging the challenges that arise when providers develop in-depth relationships with patients. This work further adds to the HBPC literature by providing descriptions of how providers navigate the identification and maintenance of appropriate boundaries in a care setting where boundary crossings both help and hinder patient care as well as the clinical implications of not delineating clear boundaries.

These results are consistent with the RCC framework and other ways of approaching health care, like Patient-Centered Care (PCC) that seek to shift away from medical care that is physician-centered and disease-focused (Epstein et al. 2010). HBPC service delivery occurs in the context of multiple relationships, primarily the patient-

provider relationship but also in the relationships providers have with themselves and their colleagues. HBPC providers enable PCC through building trusting relationships with patients, providing patients with instrumental and social support, but also through engagement in an individual and team-based process of self-reflection to identify and navigate boundary challenges associated with close relationships to patients. Proponents of patient-centered and relationship-centered care approaches emphasize the importance of close patient-provider relationships to build trust, provide social support, and promote patient self-efficacy to increase patient wellbeing (Eton et al. 2017; Nundy and Oswald 2014). However, there is a lack of discussion surrounding the identification and maintenance of appropriate care boundaries in these settings. This provides evidence for this kind of discussion as well as an example of how one group of providers navigate this challenge.

There are limitations to this work. First, these data are from providers interviewed at a single HBPC site. Results presented here may be site-specific and providers working in other HBPC programs may experience different types of relationship dynamics with their patients and have different ways of addressing relationship challenges. Additionally, while these findings show that providers view close relationships with patients as both a help and hinderance to patient care, they do not show how boundary challenges impact provider satisfaction with their work and whether these challenges increases burnout. Future work should investigate whether close patient-provider relationships and associated boundary challenges impact provider's level of workplace engagement.

Conclusion

HBPC providers describe their relationships with patients and how the home care setting shapes relational dynamics and the types of challenges that arise. Challenges surrounding the maintenance of appropriate boundaries with patients stem from patient's social isolation coupled with the emotional attachments that between patients and providers. Providers have developed team-based strategies to address these challenges.

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Chapter 4 – Relational Coordination in Veterans Affairs Home-Based Primary Care

Veterans Affairs (VA) home-based primary care is an intensive primary care program that uses interdisciplinary teams to care for patients who are homebound with complex, chronic medical and social needs (VHA 2017) and studies of VA HBPC have shown improved quality of care, decreased costs and increased patient satisfaction compared with clinic-based primary care (De Jonge et al. 2014, Edes et al. 2014, Edwards et al. 2014). The success of HBPC depends on team functioning and coordination of care as patients with complex medical and social care needs require expertise from multiple disciplines (Barceló 2010; Janson et al. 2009; Helitzer et al. 2011, Mitchell et al. 2012). Research on HBPC teams show that high-quality team functioning is tied to access to resources and supports, adequate staffing, and a collaborative, non-hierarchical workplace culture (Haverhals et al. 2019, Temkin-Greener et al. 2019). However, prior studies have not explicitly examined relational and communication processes within HBPC teams and have not examined coordination with non-HBPC providers and staff.

Relational coordination (RC) offers a framework for measuring and understanding team functioning and coordination. According to this framework shared goals, shared knowledge, and mutual respect facilitate coordination of work tasks and high-quality communication characterized by frequency, accuracy, and timeliness underlie effective coordination and completion of work tasks (Gittell 2011). Studies of RC in health care settings show that high levels of RC among team members are associated with improved quality of care, patient satisfaction with less burnout and

increased engagement among staff (Gittell et al. 2008; Gittell et al. 2000; Gittell et al. 2020; Havens et al. 2010). While the RC framework is useful for understanding how communication dynamics supports effective coordination, an investigation of circumstances where communication fails or breaks down may reveal additional opportunities for improvement in organizational functioning.

I investigated RC, both quantitatively and qualitatively within the VA Portland Health Care system, to evaluate coordination of care within HBPC teams and between clinic-based primary care providers (PCP).

Theoretical Orientation

In this paper, I draw from the literatures on interprofessional care and RC to theoretically situate my analysis. I combine insights from the interprofessional care literature and RC literature to illustrate the ways in which interprofessional care teams can positively impact patient care. In particular, I focus on the coordination of patient care activities within and across teams to better understand how HBPC teams operate.

Interprofessional Care

Interprofessional care is the provision of health care services to patients by multiple providers from different disciplines. Policy makers have advocated for the use of interprofessional team-based care to ensure that patients receive comprehensive and effective care (Institute of Medicine 2013, World Health Organization 2010). Research has shown that interprofessional care is associated with favorable patient and system outcomes including reduction in medical errors, streamlined communication processes, and improvements in diabetes and depression care (Barceló et al. 2010; Edwards et al. 2019; Helitzer et al. 2011, Thompson et al. 2000). However, there are facilitators and

barriers to successful collaboration, a key feature of successful interprofessional care. In primary care settings, factors that facilitate collaborative team-based care are clear communication, shared mission, physical co-location, and feelings of trust and respect among team members (Harris et al. 2016; Supper et al. 2015; Szafran et al. 2018; Xyrichis and Lowton 2008). Barriers to collaboration include dysfunctional power dynamics, professional cultures, lack of a shared mission, disrespect among team members, and poor leadership (Supper et al., 2015). In addition, there is evidence that a practice culture that gives prominence to a physician-led model of care and traditional hierarchies can undermine collaboration (Brandt et al. 2018; Szafran et al., 2018).

Relational Coordination

RC is a concept describing organizational performance defined as “a mutually reinforcing process of communicating and relating for the purpose of task integration” (Gittell 2002:301) and occurs “through relationships of shared goals, shared knowledge, and mutual respect” (Gittell 2006:74). Shared goals refer to objectives surrounding work processes that are shared collectively by all team members and transcend individual-level work related functions. Given that team members bring their unique skills sets and professional knowledge to interprofessional care teams, shared knowledge of what each team member contributes to overall work processes is an important dimension of RC. Having shared goals and knowledge ensures that each person knows how their role and others’ roles fit into big-picture work processes. RC theory contends that mutual respect in the form of acknowledging the competence of each team member builds upon the shared knowledge dimension and further contributes to optimal team performance by fostering working relationships (Gittell 2002, 2011).

RC theory provides a conceptual framework for understanding how relational dynamics among team members impact the coordination and completion of work tasks in healthcare settings. For instance, patient care often involves the transfer of patients across different care and organizational settings like hospitals, rehabilitation facilities, specialty care, and ambulatory primary care practices. Contextual conditions, like uncertainty and time constraints, further shape how health care providers carry out patient care tasks that by their nature are highly interdependent and require the expertise of multiple providers across disciplines (medicine, nursing, social work, pharmacy etc.). Interdependency refers to the notion that task completion relies on drawing from a common pool of resources and/or is dependent on the sequential or reciprocal completion of other tasks. The coordination mechanism that facilitates interdependent work process is high-quality communication occurring between individual team members (Gittell 2002, 2011). According to RC theory, high-quality communication is characterized by its frequency, timeliness, accuracy, and orientation towards problem-solving (Gittell 2002, 2011). Frequent communication supports the development of relationships among team members while timely communication allows for team members to make decisions and coordinate work based on the most recent information. Lastly, communication that is accurate and oriented towards problem solving is necessary for effective service delivery (Gittell 2002, 2006, 2011).

Methods

Research Design

We conducted an explanatory mixed-methods study (Morse 1991) using the RC survey (RC Analytics 2019), a validated instrument to measure the relational aspects of

teamwork, and semi-structured interviews to explore provider perspectives of HBPC functioning to further explicate survey findings. Data analysis occurred sequentially in 2 phases. The first phase involved quantitative analysis of data from the RC survey and the second phase a qualitative analysis of interview data. This study was approved by the Institutional Review Board (IRB) at the VA Portland Health Care System (VA IRB No. 3903) and all participation was voluntary. Additionally, the IRB at Portland State University determined that their review was not required (HRPP No. 206956-18).

Quantitative

Participants

A cross-sectional sample of VA HBPC providers representing nursing, medicine, psychology, pharmacy, social work, and physical therapy working in four sites within the VA Portland Health Care system. Of the 33 HBPC team members who were invited to participate in the RC survey, all completed the survey (100% response rate).

RC Survey

The RC survey was administered via weblink to HBPC providers where they were asked to evaluate each other and clinic-based PCPs, nurses, and medical support assistants (MSA) along the seven dimensions of RC: communication frequency, communication timeliness, communication accuracy, shared goals, shared knowledge, and mutual respect. See Appendix C for RC Survey questions as response categories as they appeared to participants.

Data Analysis

RC survey data were analyzed according to procedures developed at RC Analytics in which RC indices are constructed at the individual participant level across

all seven dimensions of RC and then aggregated at the group level to provide an RC index that indicates the strength of RC between and within workgroups. The strength of ties was categorized as weak, moderate, and strong. For the overall RC team and between workgroups scores, “weak” is less than 3.5, “moderate” is 3.5 to 4.0, and “strong” is greater than 4.0.

Qualitative

Participants

A purposive sample of 10 clinic-based PCPs and 14 HBPC team members working in the VA Portland Health Care System completed semi-structured interviews. See Appendix A for the interview guide used with HBPC team members and Appendix C for the interview guide used with clinic-based PCPs.

Semi-structured Interviews

Semi-structured interviews were conducted with HBPC providers and clinic-based PCPs. Interview questions involved communication, care coordination, and patient enrollment and discharge criteria. Informed consent was obtained, and interviews were audio-recorded. Interview duration ranged from 30 to 60 minutes.

Data Analysis

Interviews were transcribed verbatim and reviewed by each member of the research team. Interview data were analyzed using the matrix analysis approach, where a descriptive matrix was constructed to create a graphical representation of data (Averill 2002). Our matrix analysis was guided by the study’s research objective and contained columns for categories of interest (team function, coordination between HBPC and clinic-based PCPs etc.) and rows for individual interview participants. Research team members

then completed their own matrix and met to compare matrices and resolve any discrepancies. After which a single matrix was constructed for all reviewed data. Meaning was then derived from thematic patterns evidenced in the descriptive matrices (Morse and Field 1995) and discussed among research team members to ensure consistency and accuracy in interpretation of data.

Results

The RC survey indicated strong internal RC within HBPC teams and low to moderate RC between HBPC teams and clinic-based primary care staff. In the qualitative analysis, two thematic categories were identified: 1) HBPC teams utilize program-specific resources to support collaboration and communication and 2) Too much or not enough: communication challenges between HBPC and Clinic-based PCPs.

RC Survey

The overall RC within the HBPC team is strong (RC=4.20) and the overall RC between HBPC and clinic-based primary care staff is low moderate (RC=3.55). Within the HBPC team the following RC dimensions were strong: timely communication (RC=4.17), frequent communication (RC=4.52), accurate communication (RC=4.40), problem-solving communication (RC=4.28), shared goals (RC=4.24), and mutual respect (RC=4.06). Within the HBPC team the shared knowledge (RC=3.73) RC score was moderate. RC scores between the HBPC team and clinic-based primary care staff ranged from weak to moderate. The RC scores for shared knowledge (RC=2.81), mutual respect (RC=3.44), and timely communication (RC=3.45) were weak. The RC scores for frequent communication (RC=3.90), accurate communication (RC=3.79), problem-

solving communication (RC=3.74), and shared goals (RC=3.70) were moderate. Table 1 contains a contains RC survey results.

HBPC teams utilize program-specific resources to support collaboration and communication

According to HBPC participants, in-person team meetings facilitated essential face-to-face interaction whereby team members could come together to exchange information about patients, access each other's professional expertise and collaboratively develop plans of care.

The TTPs [team meetings] are very informative and helps us come together as a team to talk about what's working well and what's not working well with the patients and coming up with a formative plan. – HBPC team member

I think what I really like about the team meetings is the ability to interface with staff, the opportunity to have an interdisciplinary approach and to have the resources to reach out to our social worker and psychologist to address the needs that come up with our population. – HBPC team member

In addition to team meetings, HBPC team members pointed out that having VA-provided cell phones combined with a "two-ring policy", willingness to problem-solve in real time, and shared commitment to get back to each other were key aspects of effective communication.

We all have government-assigned cell phones which aren't given to Veterans they're for us to communicate with each other. I'll often get a call from one of the nurses where this guy has something going on and if I can get out there in the next week or so or a nurse will call from a Veteran's home and say this person's got a bill and he's really distressed about it, can you talk to him really quick – HBPC team member

...if you need a quick answer you just pick up the phone, we have a two-ring policy, if someone calls you twice then you answer the phone because it's an urgent issue otherwise you just leave a message. I think we all have that priority to back to each other as soon as we can. -HBPC team member

When patients were followed by an HBPC physician (rather than a separate clinic-based PCP), it helped close the communication loop between all providers and supported timely care. For instance, communication surrounding medication adjustments was more easily accomplished.

Like say someone who has brittle heart failure, and the nurse is starting to do a home visit and notices that their weight is up, and they might be having an exacerbation and will want some verbal order for a med adjustment, usually adjusting the diuretics. That sounds very straightforward and easy to do, but sometimes it's hard for a nurse to get the okay from the doc [in primary care], it's very easy for us to do that. – HBPC team member

Too much or not enough: communication challenges between HBPC and Clinic-based PCPs

Clinic-based PCPs expressed frustration that the patients they referred to HBPC were often not accepted. A commonly held perception among physicians was that HBPC “picks and chooses” patients for enrollment.

We place a consult and then basically the home-based primary care team selects which patients they feel are appropriate. – Clinic-based PCP

Several HBPC providers remarked that clinic-based providers “don't know what we do,” are unfamiliar with the referral process, or put in non-specific referrals, making HBPC team members figure out if HBPC is the right fit for the patient.

...it was a lack of understanding of what we did, and an unwillingness to learn about what we did. – HBPC team member

The providers that fill them [the HBPC referral form] out, a small handful do a very nice job and the rest check every box and you have to do all the work to try and figure out what it is that home health is needed for this person. – HBPC team member

Additionally, HBPC providers pointed out that clinic-based physicians may be unaware of key aspects of patients' lives and that an in-depth review by the HBPC team may reveal information about a patient that physicians were unaware of.

I've had doctors call me in tears, "please take Mr. Smith. Please, please, please, he's a perfect candidate for your program. I don't understand why you won't take him." So, we go see Mr. Smith, and Mr. Smith, it turns out, would get on his little electric scooter and go to the nearby bar every day and drink 8 or 12 beers a day. Doctor had no idea that he was drinking at all. Much less that he was that mobile. So, there is a very narrow slice you get in primary care. – HBPC team member

For those HBPC patients who were followed by a clinic-based primary care physician, physician participants reported communication issues such as notes being "too comprehensive" or containing unnecessary information as well as lack of communication between primary care and HBPC which, according to these participants, placed an unnecessary burden on them.

This comprehensive evaluation.... doesn't facilitate communication, we're interested in 1 or 2 issues usually, and the communication doesn't really focus on that. – Clinic-based PCP

They- particularly the nursing staff just write these long notes with all the stuff that they have to do which I know some of that is for joint commission and that's fine. They really need to figure out a way to have- if you're putting me

on a note, what is it specifically that you're wanting me there to read? Just basic- the rest of it is just stuff that I don't need to know, like it's not clinically relevant to me at all. – Clinic-based PCP

Primary care physicians also reported that there is also a lack of communication surrounding the HBPC discharge process when patients are transferred back to primary care, which they deemed to be often inappropriate and without a warm handoff.

This is a progression, for the most part, progression of decline of a patient to a higher and higher level of care. To have a patient that has now failed HBPC and to think that they're going to come back to a clinic situation and get the care they need, is faulty thinking. But we haven't created a system to figure out how to have that discussion and warm handoff. – Clinic-based PCP

We had a patient last week that HBPC had been following, complex and briefly lost housing. And part of their policy is that they don't follow people who are homeless, and so they were just gonna drop him. We heard it through social work- social work let me know that they thought this patient was gonna get discharged and assigned to our team. So, I was like, "that's fine. His next HBPC appointment is in, I think three weeks, so can you guys just follow him until then?" And there was never any communication with me about- from the provider- because he actually was followed in the HBPC by an MD. No communication at all...I feel like you should follow them for a couple weeks and see if things straighten out and then there should be a warm handoff to the provider that you're transferring the complicated patient to. – Clinic-based PCP

HBPC team members indicated that these communication issues were often a source of contention between them and primary care providers and pointed to the absence of face-to-face relationships and lack of knowledge of clinic work processes.

...that can create some lack of communication and some problems, because as a nurse or as a team we care for patients that have a primary care provider that's in primary care at a CBOC. So, it can be anywhere, so then we have to

report to them, we don't know them, never seen them, we don't know their way of doing things. – HBPC team member

The communication piece is a huge [challenge]. Especially just between most of the patients on my panel aren't HBPC providers, they're PACT [clinic based primary care] providers. So, it just makes it harder to deal with those providers who you never see. – HBPC team member

Discussion

Survey findings indicated that there is overall strong RC within HBPC except for moderate RC for shared goals among HBPC team members. While the overall RC score between HBPC teams and clinic-based primary care staff is moderate, RC scores for timely communication, shared knowledge, and mutual respect were weak. Interview data revealed that HBPC members held positive views of their own team functioning, however, both groups indicated gaps in communication between each other. Clinic-based PCPs expressed frustration over the HBPC patient selection process, while HBPC team members reported that clinic-based PCPs lacked knowledge regarding the referral process and specifics of patients' lives (i.e. mobility, access to resources etc.) that impact patient selection and subsequent enrollment. Aspects of patients' lives not accessible in the outpatient primary care clinic are revealed by an HBPC assessment visit and qualitative results indicated that there is an absence of communication between clinic-based PCPs and HBPC team members regarding this issue, undermining shared knowledge of relevant patient characteristics between PCPs.

Survey findings also showed that HBPC team members reported weak RC when it comes to timely communication with clinic-based primary care staff. Qualitative findings from interviews with clinic-based PCPs and HBPC team members, reveal two main

communication challenges that elucidate the shared knowledge deficit between groups. First, PCPs report that HBPC notes are “too comprehensive” and requires that they spend additional time sifting through notes to find the relevant clinical information. Second, PCPs reported that they did not receive adequate communication from HBPC involving patient discharge and without a warm handoff. HBPC team members acknowledged that lack of face-to-face communication and lack of understanding of how clinic work is done day-to-day was a source of contention between them and PCPs, which may contribute to a delay in timely information transfer regarding patient care.

RC provides the information-processing capacity to coordinate highly interdependent work through high-quality communication and relationships characterized by shared goals, shared knowledge, and mutual respect (Gittell et al. 2002, 2006). Our findings show that there is high RC among HBPC team members, but suboptimal RC between HBPC providers and clinic-based PCPs and staff, with weak RC in shared knowledge and timely communication, potentially undermining the coordination of patient care activities. Functional specialization may weaken RC by breaking down communication and relationships between people working in different specializations (Gittell et al. 2008) given that participants who work together in the same specialization possess shared knowledge of how each other’s work fits together (Havens et al. 2010), but those in different specializations inhabit different “thought worlds” (Dougherty 1992) with different sets of expertise. HBPC team members possess shared experience carrying out patient care for a unique patient population which works to strengthen internal team relationships but undermine RC with outside participants and potentially contribute to service fragmentation for HBPC patients who are followed by a clinic-based PCP.

Findings from this study are specific to a single HBPC program, which may be unique because patients may be followed by a clinic-based PCP or HBPC physician while in other HBPC programs all patients are followed by an HBPC PCP. However, these data provide insights on how the coordination of patient care activities occurs through relationships within and across departments.

In the VA system converting all HBPC teams to the full PACT model would optimize internal RC among team members serving HBPC patients; however, HBPC teams would still need to communicate with clinic-based primary care surrounding patient referral and discharge. Interventions should focus on increasing capacity for team processes that facilitate frequent communication through telephonic conversations and face-to-face interactions. These modalities allow for information exchange and clarification of meaning in real time, sensemaking in conditions of uncertainty, and reciprocal learning (Jordan et al. 2009), all of which support timely patient care and sustainable relationship building (Abu-Rish Blakeney et al. 2020). Increased capacity for communication may be accomplished through the creation of structured inter- and intra-team processes that facilitate the coming together of HBPC team members and clinic based PCPS and staff to collaboratively develop shared plans of care.

Conclusion

HBPC teams show strong internal RC, but substantial gaps with clinic-based primary care staff. These weak relations cause confusion and frustration over the role of HBPC and what types of patients should get HBPC care. Increasing horizontal communication between HBPC teams and clinic-based primary care may improve HBPC effectiveness.

Table 1. RC Results

Relational Coordination	Within HBPC Team	Between HBPC and Clinic-Based Primary Care Staff
Overall	4.20	3.55**
Timely communication	4.17	3.45***
Frequent communication	4.52	3.90**
Accurate communication	4.40	3.79**
Problem-solving communication	4.28	3.74**
Shared knowledge	3.73*	2.81***
Shared goals	4.24	3.70**
Mutual respect	4.06	3.44***

RC Score: Strong >4.0; Moderate 3.5-4.0*; Weak <3.5***

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Chapter 5 – Conclusion

Summary of Findings

In this dissertation, I present three research chapters where I explore potential mechanisms of success in VA HBPC. In chapter two, I consider how HBPC providers' knowledge of social complexity among HBPC patients and how this impacts care delivery. In chapter three, I examine how HBPC providers view and manage their relationships with HBPC patients and how the home care context may alter traditional patient-provider relationship dynamics. In chapter four, I investigate HBPC team function and coordination between clinic-based primary care providers and HBPC teams. Earlier evidence has suggested that the use of interprofessional teams, patient targeting, high-quality patient-provider relationships, and the integration of long-term services and supports (Edwards et al. 2017, Haverhals et al. 2019, Temkin-Greener et al. 2017) may underlie HBPC effectiveness; however, there has been limited research documenting how these factors play out in HBPC. Findings from this dissertation provide detailed analyses of team functioning, integration of social and medical care, and provider perspectives of relationships in HBPC and helps to address gaps in the literature regarding how and in what kinds of circumstances HBPC positively impacts patient outcomes. Additionally, these findings provide a starting point to address important questions regarding what types of patients are most appropriate for HBPC and what kinds of long-term services and supports are most helpful for this patient population. More broadly, this research provides supporting evidence for the importance of adapting primary care services to the social and medical needs of patients who are homebound or nearly homebound to promote health equity.

Chapter Two: *Eyes in the Home: Addressing Social Determinants of Health in Home-Based Primary Care*

HBPC has demonstrated success in decreasing risk of hospitalization and improving patient satisfaction, potentially through patient targeting and integrating long-term services and supports into primary care functioning (Edwards et al 2017). But less is known about how HBPC teams approach social factors. This chapter presents descriptions of HBPC providers' knowledge of social complexity among HBPC patients and how this knowledge impacts care delivery. The principal investigator of the parent study and I conducted in-person semi-structured interviews with HBPC providers representing multiple disciplines and performed field observations of HBPC team meetings and home visits. I, along with members of the research team, employed an exploratory, content-driven approach to qualitative data analysis and identified four thematic categories. First, HBPC patients are socially isolated have multiple layers of medical and social complexity that compromise their ability to use clinic-based care. Second, providers having "eyes in the home" yields essential information not accessible in outpatient clinics. Third, HBPC fills gaps in instrumental support, many of which are not medical. Fourth, addressing social complexity requires a flexible care design that HBPC provides. These findings show that HBPC providers emphasize the importance of having "eyes in the home" to observe and address the care needs of patients who are homebound or nearly homebound and who are older, socially isolated, and have functional limitations. I argue that 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.

Findings in this chapter are consistent with the literature on HBPC that show that caring for HBPC patients requires collaboration from providers from different disciplines (Gillespie et al. 2019; Haverhals et al. 2019; Temkin-Greener et al. 2019) as well as the literature on complex patient populations that recognize how gaps in care stem from interactions between patient-level factors and broader health care system structures (Chan et al. 2019; Gillespie et al. 2019; Shippee et al. 2012). These findings demonstrate that providers can assess and then directly address patient deficiencies in basic needs and inadequate social support in the home visit. Moreover, the flexible nature of HBPC as a program allows for providers to concurrently address medical and social needs through the tailoring of care to individual patient needs. This research provides lessons for programs that focus on adults with overlapping medical and social needs including use of home visits to gain understanding of patients' care needs and flexibility in service delivery. Missing from this research is an in-depth exploration of what kinds of patient characteristics, outside of homebound or near homebound status, are most appropriate for HBPC enrollment; however, findings presented here constitute a useful starting point for better understanding what kinds of patients are best served by HBPC and how to target these patients for HBPC enrollment.

Chapter Three: *Provider Perspectives of Patient-Provider Relationships Home-Based Primary Care*

The quality of patient-provider relationships impacts the kind of care that patients receive (Eton et al. 2017; Chipidza et al. 2015), but the power possessed by health care providers through their position of authority over patient care often patterns relationship dynamics. Additionally, the setting where care takes place impacts the kinds relationship dynamics that take place between patients and providers. Professional boundaries serve as a guide for appropriate interactions (Everett and Gallop 2001) but also work to protect patient safety (Peternelj-Taylor and Yonge 2003). This chapter presents findings regarding how HBPC providers describe their relationships with patients and the kinds of challenges that arise when delivering primary care services in the home. The dataset for this chapter consisted of the HBPC provider interviews collected for the study objectives of the first chapter. In this secondary qualitative data analysis, I examined how providers understand the types of relationship dynamics that occur in HBPC and the challenges that providers faced when navigating boundaries in their relationships with patients. Relationship dynamics involved the building of trust through longitudinal care, patients sense of control in the home, and providers' efforts to support patient autonomy through sensitivity to patient preferences and tailored patient care. Given that care took place in the home and many patients were socially isolated, providers developed close relationships with patients and mutual emotional attachments developed. Relationship and boundary maintenance challenges stemmed from these attachments and providers reported that while these attachments enriched patient care through in-depth relationships, it also potentially undermined patient autonomy and hindered the appropriate discharge of patients. HBPC providers reported individual and team-based strategies to address these types of issues as they arose.

Patient-provider relationships in HBPC are underexplored in the literature, but existing evidence shows that HBPC providers highly value their relationships with patients and view them as pivotal to HBPC functioning (Kramer et al. 2017, Haverhals et al. 2019, Smith-Carrier et al. 2016, Wool et al 2019). The findings in chapter 3 provide empirical support for the importance of relationships characterized by trust, non-judgemental support, and authenticity in HBPC and other primary care settings and provides evidence that supports the importance of longitudinal care in the development and maintenance of these kinds of patient-provider relationships. Importantly, this work also reveals that challenges that providers face, the clinical implications of these challenges, and ways to navigate them which is generally lacking in the patient- and relationship-centered care literatures.

Chapter Four: *Relational Coordination in Veterans Affairs Home-Based Primary Care*

VA HBPC uses interdisciplinary teams for patients who are homebound with complex care needs and its effectiveness depends on team functioning and coordination of care; however, little is known about relational and communication processes within HBPC teams and between HBPC teams and clinic-based providers. Using a qualitatively driven mixed methods research design, I investigate team function and coordination with HBPC teams and between clinic-based PCPs and HBPC team members. Data sources include semi-structured interviews with clinic-based PCPs and HBPC team members and a cross-sectional survey administered to HBPC team members. Relational coordination (RC) among HBPC teams is strong across all dimensions while the overall strength of relational coordination between HBPC team members and clinic-based PCPs is weak for

timely communication and shared knowledge and low-moderate for mutual respect. HBPC team members report the use of program-specific resources to support effective internal team communication and collaboration, while both HBPC team members and clinic-based PCPs point to shared knowledge deficits and communication challenges of relevant patient characteristics, clinic processes, and appropriate information transfer. These weak relations between HBPC team members and clinic-based PCPs cause confusion and frustration over the role of HBPC and what types of patients should get HBPC care. Increasing horizontal communication between HBPC and clinic-based PCPs may improve HBPC effectiveness.

Based on the RC literature that high levels of RC in health care settings is associated with improved quality of care and increased work engagement among providers (Gittel et al. 2020; Havens et al. 2010), I was interested in provider views of their relationships with each other when it came to the coordination of patient care activities in HBPC. While the RC survey provided important insights on areas of strengths and limitations within HBPC teams and between HBPC teams and clinic-based PCPs, evidence from the qualitative data support the notion that providers working in groups develop a sense of functional specialization and that working with providers outside their primary working group is more difficult because they lack firsthand knowledge of each other's work processes (Dougherty 1992, Havens et al. 2010). In order to optimize HBPC care, interventions should focus on the creating capacity for structured inter- and intra-team processes that facilitate real time communication and provide the space for the development of strong working relationships between HBPC team members and clinic-based PCPs.

Methodological and Theoretical Contributions

Previous research on HBPC has shown global association between program enrollment and positive patient outcomes and researchers have offered explanations for how HBPC programs support success, mainly through the use of interprofessional teams and integration of long-term supports (De Jonge et al. 2014; Edes et al. 2014; Edwards et al. 2014). However, studies that specifically investigate potential mechanisms of success are lacking and there is little research that uses in-depth, qualitative methodologies to examine HBPC functioning. As this dissertation work is part of a larger mixed-methods study that seeks to determine correlates of preventable hospitalizations and assess provider perceptions of successful care delivery in HBPC, it is uniquely situated to explore questions involving specific patterns of care, like how HBPC providers address social factors, build relationships with patients, and engage in the coordination of patient care activities using qualitatively-driven mixed methods.

The literature on SDOH provides ample evidence that social factors pattern how people access and utilize healthcare services with direct implications for health outcomes (Phelan, Link, and Tehranifar 2010). Findings from chapters two and three show that HBPC patients are impacted by limited functional capacity and social isolation, which according to HBPC providers, is directly linked to their homebound or near-homebound status. This is consistent with previous studies that have shown that persons who are homebound or near-homebound experience greater disease and symptom burden that limit their functional capacity as well as having an inability to access resources to leave the home stemming from limited social support and financial insecurity (Cohen-Mansfield et al. 2010, Ornstein et al.2015). In this dissertation, social isolation, or the

objective lack of social connections with others, is a key SDOH that impacts HBPC patients. In chapter two, providers discuss how HBPC patients face social isolation in situations where dysfunctional or missing family relationships prevent them from accessing needed resources and that HBPC providers work to fill this gap by providing care that concurrently addresses social and medical needs. In chapter three, HBPC providers recognize that they are often the primary source of instrumental and social support for patients and this leads to high-quality patient-provider relationships but also creates the need for active boundary maintenance given that mutual emotional attachments are formed. Providers point out mutual emotional attachments may undermine patient autonomy and prevent the appropriate discharge of patients to other care settings, so attention to this issue is warranted.

Patient-level factors, like absence of social connections, intersect with wider healthcare system structures to create gaps in care (Chan et al. 2019; Shippee et al., 2012). For VA HBPC patients, who tend to be very frail, have an average of 8 chronic conditions (Edes et al. 2014), and are socially isolated, there is a need for increased primary care visits and social work assistance to prevent disease exacerbation, support functional issues, and provide care management. In traditional primary care, there is limited capacity to adequately address and coordinate the complex care needs patients with overlapping medical and social issues, which can lead to poor outcomes (Edwards et al. 2017). However, built into the structure of VA HBPC are interprofessional care teams, adequate resourcing for staff, and site-specific program flexibility. As demonstrated by findings in this dissertation, the combination of these structural characteristics allows for HBPC providers to address social complexity, collaborate across disciplines, and engage

in the coordination of complex care delivery. This dissertation adds to the literature on patient complexity and primary care that shows that flexibility in care programming and the provision of social support to patients are crucial structural components of programs that serve patients with medical and social complexity.

Findings from this dissertation lend support to the notion that medical care takes place in the context of multiple relationships. In chapters two and three, findings show that an absence of social connection negatively impacts the health of HBPC patients, but as part of the structure of HBPC practice providers work to fill in these support gaps and develop meaningful relationships characterized by trust, respect, and authentic engagement. The patient-provider relationship in HBPC is the primary relationships for patients and where important information about patient's everyday lives and wellbeing are assessed by providers. However, since HBPC involves multiple providers across different disciplines, relationships among providers are an important relational context for care delivery. In chapter four, results indicate that HBPC teams are highly functioning but that there are coordination gaps when it comes to relational dynamics between HBPC teams and clinic-based PCPs. These gaps involved deficits in shared knowledge, shared goals, and mutual respect. These findings provide an empirical example of how healthcare teams who have different functional specializations within the healthcare system may lack opportunities to build collaborative relationships where effective information exchange about patients can take place. In all, results from this dissertation that center on the importance of relationships are consistent with medical care that shifts away from physician-centered and disease-focused care (Epstein et al. 2010).

Contributions to Health Care Research in Sociology

As health care systems have changed and become more focused on chronic health conditions rather than acute care and infectious diseases, medical sociologists have increasingly explored the ways in which the organizational and structural dynamics of health care systems shape access and utilization patterns for specific patient populations (Wright and Perry 2010). Importantly, medical sociologists recognize that health services are delivered by people who exist within varying social contexts and whose ability to provide care is both enabled and constrained by these contexts. In this dissertation, I explore potential mechanisms of success in VA HBPC by focusing attention on provider perspectives of HBPC care delivery in the VA Portland Health Care System. This work is in lines with a growing sociological recognition that sociological perspectives on health services research emphasize the ways in which organizational and structural contexts impact the type of care patients receive (Freidson 1970; Burns and Wholey 1991; Aiken, Clarke and Sloane 2002; Lutfey and Freese 2005; Malat and Hamilton 2006). Findings from this dissertation provide insight into how the structure of VA HBPC and its organizational characteristics enable providers to engage in flexible care delivery, develop strong relationships with patients, and support interprofessional care. However, unique site characteristics associated with how HBPC is operationalized in the VA Portland Health Care System hinders effective collaboration between HBPC providers and clinic-based PCPs.

Organizational changes stemming from an overall shift from autonomous hospitals and clinics to integrated health care systems have led to the blurring of professional boundaries (Wright and Perry 2010) among health care workers. Previous

sociological work has centered on how these organizational changes have worked to weaken the professional dominance of physicians and the rise of managed care (Hafferty and Light 1995; Light 2004), while more recent work has shown that in the current configuration of large health care systems there is a broad range of professional expertise and this is needed to support the increasingly complex care needs of patients (Wright and Perry 2010). Findings from this dissertation support the notion that expertise from multiple disciplines in the form of interprofessional care teams are necessary to provide care in an integrated fashion, especially when it comes to meeting the care needs of patients impacted by concurrent medical and social complexity. Additionally, results from this dissertation provide evidence that organizational characteristics can also give rise to the blurring of boundaries in patient-provider relationships. As shown in chapters two and three, program flexibility around scheduling and home visits enables HBPC providers to be sources of social and instrumental support to patients in ways not possible in clinic settings. This dynamic between patients and providers leads to mutual emotional attachments that are not characteristic of traditional patient-provider relationships.

Implications for Health Policy

According to most recently available data, there are approximately 2 million homebound or near-homebound persons living in the United States and only 12% of them receive primary care services in the home (Ornstein et al. 2015). For these individuals, their only access to health care is through the emergency room or hospital which is not ideal for either patients or the health care system. There are demonstrated benefits to HBPC including reducing hospitalizations, preventing institutionalization, and improving patient and caregiver experience (Independence at Home Fact Sheet 2019) but have been

slow to scale because of the predominance of the traditional fee-for-service payment model that reimburse providers for individual services (Cornwell 2019), unlike VA HBPC which is part of the VA's capitated health care payment system. Many people who receive home care services rely on Medicare, which is the United States government health insurance plan for people age 65 or older. Medicare beneficiaries may be eligible for home health services under Medicare Part A and/or Part B and a provider must certify that the beneficiary is homebound and has a skilled nursing or therapy need (Medicare Benefit Policy Manual 2019). Medicare does not have a specific HBPC benefit but does cover select home health services like skilled nursing care, physical therapy, occupational therapy, and medical social services on an episodic basis, unlike HBPC which is comprehensive and longitudinal. Medicare has strict homebound criteria that may not be encompassing of all persons who could benefit from home care services and do not consider the needs of patients who may be homebound as a secondary issue to severe mental illness or dementia or those who without ongoing home care services experience reductions in daily functioning and disease exacerbation.

Findings from this dissertation show that the types of services provided by VA HBPC work to stabilize patients and provide ongoing management which prevents disease exacerbation and acute service utilization. Additionally, this dissertation shows that VA HBPC uses flexible enrollment criteria when compared to Medicare home health and may be better able to identify patients for whom HBPC may be effective, whether they are fully homebound or not. Medicare should change the homebound criteria so that it is inclusive of beneficiaries for whom home care services prevents disease exacerbation and/or functional decline as a way to prevent hospitalization, avoid

institutionalization, and to promote better quality of care. Additionally, VA HBPC provides an example of how to successfully deliver home care services in the community but is supported by a capitated payment system and the National VA system allows for greater flexibility in local program configuration. Health care systems seeking to replicate VA HBPC success must acknowledge the role that their reimbursement model has on patterns of care and patient outcomes.

Limitations

This dissertation is not without limitations, the primary one being the site-specific nature of data collection. Given that the data collected for this dissertation came from a single HBPC site in the VA's national system, findings may not be generalizable to all VA HBPC programs. For instance, the HBPC program in the VA Portland Health Care System is unique because patients may be followed by a clinic-based PCP or HBPC physician while in other HBPC programs all patients are followed by an HBPC PCP. Additionally, providers at other VA HBPC sites may have different strategies for addressing social complexity based on the needs of their local population coupled with differences in resource availability stemming from variability in VA HBPC program configurations. However, findings from this research align with the existing literature on the primary care delivery for patients with complex medical and social care needs and thus contain important lessons for HBPC and other intensive primary care programs.

Specific limitations for each research chapter are as follows. In chapter two, findings indicate that providers value flexibility in determining "homebound" status in selecting patients for HBPC enrollment, however these data do not show how HBPC providers consider other aspects of social complexity that are not linked to homebound

status in determining which patients to enroll in the program. Additional research is needed to understand what types of patients are best served by VA HBPC. Findings from chapter three show that providers view close relationships with patients as both helpful and detrimental to patient care, but they do not provide insight into how boundary challenges impact provider satisfaction with their work or whether these challenges increase provider burnout. Future research should explore the ways in which patient-provider relationships influence provider's workplace engagement. Lastly, chapter four investigates the coordination of patient care activities through relationships within and across departmental workgroups at a VA HBPC site where patients may be followed by a clinic-based PCP or HBPC physician. This is unique as most other HBPC programs all patients are followed by an HBPC PCP. However, these findings provide supporting evidence for the importance of high RC to support high quality care delivery for patients with complex care needs.

Conclusion

Findings from his dissertation indicate three main conclusions. First, having the home visit component of VA HBPC gives providers unparalleled insight to the multilayered impact that social and medical complexity has on the lives of people who are homebound or nearly homebound. This insight along with the flexible nature of the program allows for HBPC providers to directly address the complex care needs of patients. Second, HBPC providers experience challenges surrounding the maintenance of appropriate boundaries with patients that stems from patient's social isolation and mutual emotional attachment between patients and providers. In response, HBPC providers have developed strategies that mitigate these challenges in ways that promote the best of

interest of patients. Third, HBPC teams are highly functioning interprofessional teams, but there are substantial gaps in the coordination of patient care activities with clinic-based PCPs. This gap has caused confusion and frustration over the role of HBPC and what types of patients HBPC should serve and reveals a need for increased horizontal communication between HBPC teams and clinic-based PCPs and staff.

This dissertation stemmed from an overall goal to qualitatively describe potential mechanisms of success in VA HBPC. Findings from this dissertation provide important empirical evidence to inform the development of studies to investigate wider impacts of HBPC functioning on patient care outcomes as well as provide supporting evidence on the importance of allowing HBPC programs to have flexibility to tailor care to the complex medical and social needs of patients who are homebound or nearly homebound. Flexibility in programming has wider implications for intensive primary care programs who serve patients with complex care needs as individuals in this patient population manifest complexity in different ways and require an individualized approach to care. There is an overall gap in health care system functioning for patients with complex care needs like those who are homebound or nearly homebound, and VA HBPC provides an important example of a program that addresses this gap with success.

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Appendix A – HBPC Interview Guide

“We are conducting this study because we want to understand what makes HBPC effective. This interview will take approximately 60 minutes and will be audio-recorded for accuracy. As explained during informed consent, all responses are confidential, and you can pass on any question you prefer not to answer. Your name will not be linked to this interview; once I start recording I will only refer to you by a study ID number. Your participation is voluntary, and you may choose to end the interview at any time. Do you have any questions before we get started?”

1) Area 1: Patient Selection and Care Delivery Patterns

a) Patient complexity and appropriateness for HBPC

- What makes a patient “complex”?
- What kinds of patients benefit from HBPC?
- Can you give me an example of a recent patient who was a great fit for the program?
- Who is an inappropriate patient for HBPC? Why?
- Can you describe an example of a patient who was a poor fit for the program?

b) Referral and Admission Process

- How does the admission process work at your location?
- Tell me about whether or not this process is effective. Why or why not?
- What happens when a patient is wait-listed or rejected?

c) Care Delivery Patterns

- How do you decide what services a given patient needs? Who is involved in this decision?
- How frequently do you visit patients? What are steps that lead to a home visit?
- Who needs the whole HBPC team, and who doesn't?
- When do people not need to be in HBPC anymore? What happens when someone gets to this point?

2) Area 2: Core Functions of HBPC

a) Provider Patient Relationships

- Can you tell me about a patient that you know really well or who you have worked with personally?

- How has this relationship impacted the care you provide?

b) Medication Management

- What is the role of HBPC in medication management?
- How do you help your patients with their medications?

c) Social Determinants

- How often are your patients lacking fundamental needs, such as food or a safe home environment?
- How does HBPC respond when aware of these issues?

d) Palliative Care

- What is HBPC's role in caring for patients near death?
- What is the HBPC approach to end-of-life symptom management?

e) Coordination of Care

- How do you coordinate care for your patients?
- Do you communicate directly with specialists about your patients' care? Why or why not?
- What other services do you order or coordinate for your patients?
- How do you ensure that things get done? What happens if things are not getting done?

3) Area 3: Barriers and Facilitators to HBPC performance

a) Barriers/Facilitators

- What challenges do you face in trying to deliver good care?
- What additional resources would help your program work better?
- What are the key features that allow your program to work well?
- What is the thing you would most like to change in your program?
- What is one thing that HBPC could teach the rest of VA?

4) Wrap up

- Is there anything I haven't asked you about that you were hoping to discuss?

Appendix B – Clinic-based Provider Interview Guide

In this study, we are interested in understanding how primary care physicians think about, use, and interact with home health care in the community and VA Home-Based Primary Care. When we talk about home health care in the community, we mean care services in the home that are typically paid by Medicare versus enrollment in VA HBPC where they receive primary care services in the home more long-term but who may or may not have an clinic based primary care physician.

Be sure to get the interviewee to distinguish between who they refer to community home care and VA HBPC, if they can't briefly explore that. Ask two-part questions if they can and use home health care in general if they don't make that distinction.

Patient Selection

1. How do patients get referred to home health care?
 - a. Is there a difference in who gets referred to community home care versus VA HBPC?

Probes: Who are the people that get referred? Who are the people who should get referred? medical complexity, fragility, physical disability, cognitive issues, social isolation, specific needs; perceptions of other providers' referral practices when it comes to patient selection

2. How does home health care and/or VA HBPC help patients and families? Can you give me an example?

Probes: Medication management, assessment (home safety, cognition, mental health), social work, physical therapy etc.

3. Can you give me an example of a recent patient who benefited from either home health care or VA HBPC? What was it about the situation that really made it work?
4. What about a patient for whom home health care and/or VA HBPC didn't work at all, what happened?

Activities

1. What do you find most useful about home health care and/or VA HBPC?
2. Do you experience any challenges or frustrations in working with home health care and/or VA HBPC?

3. How do you communicate with home health care providers? How do you communicate with VA HBPC providers?
4. What do you think the role of home health care services, in general, be in the health care system?

Probes: Collect information for PCPs; identify new problems; management decisions; interface with social service agencies

VA Home-Based Primary Care

1. How does VA HBPC differ from home health care services in the community?
2. Is it better, worse, or just different?
3. What do you wish HBPC did that it doesn't do now?

Ending Home Care Services

1. What happens to patients when home health care and/or VA HBPC services end?

Probes: What changed? Higher Level of Care; Communication with PCP;

Appendix C – HBPC Relational Coordination Survey

Welcome! Thank you for taking the time to fill out this brief survey. Please fill it out from your perspective as part of the Clinic Nurse or Medical Support Assistant workgroup. When answering the questions about communication, be sure to consider all forms of communication including in person, phone, written, electronic, etc. The survey takes less than 10 minutes to complete. Your responses will be kept strictly confidential. We ask that you complete the survey by Jan 31, 2020.

1. Location - Which HBPC location do you represent?

- Bend
- Bridge City
- Metro North
- Salem

2. Frequent Communication - How frequently do people in each of these groups communicate with you about patient care?

When answering this question, be sure to consider all forms of communication, including in-person meetings, phone calls, e-mails, etc.

Select the Not Applicable (N/A) answer choice if interaction with the workgroup/individual listed is not needed with your role or if you do not wish to answer this question.

	Not nearly enough	Not Enough	Just the Right Amount	Too often	Much Too Often
HBPC Team Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Nurse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Pharmacist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Primary Care Provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Social Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Psychologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Rehabilitation Therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Dietician	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Medical Support Assistant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinic Primary Care provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Clinic Nurse or Medical Support Assistant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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3. Timely Communication – Do they communicate with you in a **timely** way about patient care?

When answering the question, be sure to consider all forms of communication, including in-person calls, e-mails, etc.

Select the Not Applicable (N/A) answer choice if interaction with the workgroup/individual listed is not needed with your role or if you do not wish to answer this question.

HBPC Team Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Nurse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Pharmacist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Primary Care Provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Social Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Psychologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Rehabilitation Therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Dietician	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Medical Support Assistant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinic Primary Care provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinic Nurse or Medical Support Assistant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Accurate Communication – Do they communicate with you **accurately** about patient care?

When answering the question, be sure to consider all forms of communication, including in-person calls, e-mails, etc.

Select the Not Applicable (N/A) answer choice if interaction with the workgroup/individual listed is not needed with your role or if you do not wish to answer this question.

	Not nearly enough	Not Enough	Just the Right Amount	Too often	Much Too Often
HBPC Team Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Nurse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

HBPC Pharmacist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Primary Care Provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Social Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Psychologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Rehabilitation Therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Dietician	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Medical Support Assistant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinic Primary Care provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinic Nurse or Medical Support Assistant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Problem-Solving Communication – When there is a problem about patient care, do people in each of these groups blame others or work with you to **solve** the problem?

When answering the question, be sure to consider all forms of communication, including in-person calls, e-mails, etc.

Select the Not Applicable (N/A) answer choice if interaction with the workgroup/individual listed is not needed with your role or if you do not wish to answer this question.

	Not nearly enough	Not Enough	Just the Right Amount	Too often	Much Too Often
HBPC Team Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Nurse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Pharmacist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Primary Care Provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Social Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Psychologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Rehabilitation Therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Dietician	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Medical Support Assistant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinic Primary Care provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Clinic Nurse or Medical Support Assistant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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6. **Shared Goals** – Do people in each of these groups **share your goals** about patient care?

When answering the question, be sure to consider all forms of communication, including in-person calls, e-mails, etc.

Select the Not Applicable (N/A) answer choice if interaction with the workgroup/individual listed is not needed with your role or if you do not wish to answer this question.

	Not nearly enough	Not Enough	Just the Right Amount	Too often	Much Too Often
HBPC Team Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Nurse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Pharmacist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Primary Care Provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Social Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Psychologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Rehabilitation Therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Dietician	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Medical Support Assistant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinic Primary Care provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinic Nurse or Medical Support Assistant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. **Shared Knowledge** – Do people in each of these groups **know** about the work you do with patient care?

When answering the question, be sure to consider all forms of communication, including in-person calls, e-mails, etc.

Select the Not Applicable (N/A) answer choice if interaction with the workgroup/individual listed is not needed with your role or if you do not wish to answer this question.

	Not nearly enough	Not Enough	Just the Right Amount	Too often	Much Too Often
HBPC Team Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Nurse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Pharmacist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Primary Care Provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Social Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Psychologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Rehabilitation Therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Dietician	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Medical Support Assistant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinic Primary Care provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinic Nurse or Medical Support Assistant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. **Mutual Respect** – Do people in each of these groups **respect** the work you do with patient care?

When answering the question, be sure to consider all forms of communication, including in-person calls, e-mails, etc.

Select the Not Applicable (N/A) answer choice if interaction with the workgroup/individual listed is not needed with your role or if you do not wish to answer this question.

	Not nearly enough	Not Enough	Just the Right Amount	Too often	Much Too Often
HBPC Team Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Nurse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Pharmacist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Primary Care Provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Social Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

HBPC Psychologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Rehabilitation Therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Dietician	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HBPC Medical Support Assistant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinic Primary Care provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinic Nurse or Medical Support Assistant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thank you for completing the survey. Your answers have been recorded and you can be assured that your submission will be held strictly confidential. If you are finished with the survey, you can close your browser window.

Please do not forward your personal, unique link to other participants. This is intended to protect your confidentiality and tailor follow-up communication to those who have not yet responded.

[End]

Appendix D – VA Portland Health Care System Institutional Review Board Determination

Institutional Review Board #1
VA Portland Health Care System
Portland, OR

IRB APPROVAL - Continuing Review

Date: January 14, 2021
From: Alex Mitchell, MS
Investigator: Samuel Edwards, MD, MPH
Protocol: Optimizing Outcomes in Home-Based Primary Care
Sponsor: 9024 = VA - Health Services R&D • Admin: 02 = VA
ID: 03903 Prom#: 0006 Protocol#: CDA 16-152; IK2 HX002282

Alex D. Mitchell
669357

Digitally signed by Alex D. Mitchell 669357
Date: 2021.01.14 15:07:44 -08'00'

The following items were reviewed and approved through Expedited Review:

- Abstract (12/16/2020; 12/29/2020)
- Consent Form - Focus Group (02/06/2019; 02/13/2020 rcvd)
- Consent Form - Interviews (02/06/2019; 02/13/2020 rcvd)
- Continuing Review (12/18/2020; 12/29/2020 rcvd)
- Protocol (03/31/2020; 04/06/2020 rcvd)
- Waiver of Process (Consent and Authorization) - Aim 1 (04/03/2020; 04/06/2020 rcvd)
- Waiver of Documentation - Aim 3 (11/06/2019; 11/08/2019 rcvd)
- Screening/Recruitment Waiver (09/16/2019; 09/20/2019 rcvd)
- Research Information Sheet - Aim 3 (10/17/2019; 10/17/2019 rcvd)

Expedited Approval [Expedited under:

Federal Regulation: 45 CFR 46.110(b)(1)(5) / VA Regulation: 38 CFR 16.110(b)(1)(5)
Federal Regulation: 45 CFR 46.110(b)(1)(6) / VA Regulation: 38 CFR 16.110(b)(1)(6)
Federal Regulation: 45 CFR 46.110(b)(1)(7) / VA Regulation: 38 CFR 16.110(b)(1)(7)] was granted on 01/14/2021 for a period of 12 months and will expire on 01/13/2022. The reviewer was Eric Cooley, PhD. This Expedited review will be reported to the fully convened Institutional Review Board #1 on 02/03/2021.

The protocol was approved to consent a maximum of 28 human subjects.
The protocol was approved to enroll a maximum of 28 human subjects.
The protocol was approved to screen a maximum of 6000000 medical records.
The protocol was approved to complete review on a maximum of 6000000 medical records.

Electronic data is approved for VA storage at the following network location:
\\R01PORHSM03.r01.med.va.gov\Research\SEdwards\Edwards

Approval for study continuation is contingent upon your compliance with the requirements of the Research Service for the conduct of studies involving human subjects.

The Portland VAMC IRB is not connected with, has no authority over, and is not responsible for human research conducted at any other institution, except where a Memorandum of Understanding specifies otherwise. Separate consent forms, initial reviews, continuing reviews, amendments, and reporting of serious adverse events are required if the same study is conducted at multiple institutions.

Appendix E – Portland State University Institutional Review Board Determination



Human Research Protection Program
1600 SW 4th Avenue, Suite 620
Portland, OR 97201
(503) 725-5484 psuirb@pdx.edu

Human Research Protection Program Notice of Review Not Required Determination

June 2, 2020

Dear Investigator,

The PSU Institutional Review Board (IRB) reviewed the following submission:

Investigator(s)	Hyeyoung Woo / Elizabeth Hulen
HRPP #	206956-18
Title	Exploring "what works" in Veterans Affairs Home-Based Primary Care
Funding Agency / Kualii #	N/A
Determination Date	06/02/2020
Expiration Date	N/A
Review Category(ies)	N/A

The IRB determined this project does not require Human Research Protection Program (HRPP) review under the federal regulations, as the project does not meet the federal definitions of "research" with "human subjects" per 45 CFR Part 46.

IMPORTANT: Effective March 18, 2020, all in-person interactions for the purposes of collecting data is suspended until further notice. All data collection must be through remote/virtual methodologies until this restriction is removed.

As a reminder, PSU faculty, staff, and students are responsible for maintaining the highest ethical standards when conducting any projects on behalf of PSU, regardless of whether HRPP review is required. Additionally, if there are planned changes to the project, please contact the HRPP prior to implementation of the changes to ensure this project does not require HRPP review.

If there are any questions, please contact the HRPP at psuirb@pdx.edu or call 503-725-5484.

Sincerely,

A handwritten signature in blue ink that reads "Eva Willis".

Eva M. Willis, CIP], HRPP Administrator
Research Integrity & Compliance