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Exploring the Medical Home in Ryan White HIV Care Settings: A Pilot Study

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Abstract

Amid increased attention to the cost of health care, health information technology, and specialization and fragmentation in medicine, the medical home has achieved recognition as a model for more effective and efficient health care. Little data are available on recently funded HIV medical home demonstration projects, and no research richly describes existing medical home characteristics, implementation challenges, and impact on outcomes in longstanding HIV outpatient settings. The Ryan White HIV/AIDS Program (RWP) provides federal funding for primary and specialty care for people living with HIV. Although RWP clinics developed independently of the medical home model, existing data indirectly support that, with emphasis on primary, comprehensive, and patient-centered care, RWP clinics operate as medical homes. This study explores the development, definition, and implementation of medical home characteristics by RWP-funded providers in order to better understand how it fits with broader debates about medical homes and health care reform.

Keywords

HIV; medical care; medical home; Ryan White

Introduction

Amid increased attention to the rising cost of health care, health information technology, and specialization and fragmentation in medicine, the medical home has achieved national

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recognition as a viable model for advancing care quality, improving outcomes, and reducing costs, while providing treatment for patients with chronic diseases. The medical home, including its development within the Ryan White HIV/AIDS Program (RWP), was identified by the Obama Administration as a crucial component of the National HIV/AIDS Strategy (White House Office of National AIDS Policy, 2010). In the past few years several HIV medical home demonstration projects have been funded and are in the implementation phase, but little data are yet available. To date, there has been scant research with rich descriptions of medical home characteristics, implementation challenges, and impact on outcomes in RWP outpatient settings with a long history of providing care. Despite this, the RWP community has been charged with sharing medical home model experiences with community health centers and private physicians providing HIV care. Our study explores the development, definition, and implementation of medical home concepts and characteristics by RWP-funded providers to better understand how the experiences of RWP providers fit within broader debates about and institutionalization of the medical home.

The American Academy of Family Physicians, the American Academy of Pediatrics, the American College of Physicians, and the American Osteopathic Association (2007) outlined patient-centered medical home principles as “coordination of care to enhance the patient physician relations, focus on quality and safety, enhanced access to care, a payment structure that recognizes the value of and pays physicians appropriately for coordinated services and care management” (p. 86). These principles have since been adopted by the delegates of the American Medical Association (Bein, 2009). Over the past 2 decades, patient-centered medical homes (*medical homes*) have been described as providing holistic, continuous, comprehensive, and coordinated services with a focus on patient–provider relationships and patient engagement (Kilo & Wasson, 2010).

There has been speculation that the adoption of medical home principles will lead to improved health outcomes because identification with a personal physician would facilitate more effective and equitable care (Starfield & Shi, 2004) and because the fundamental objective of the medical home is to improve individual- and population-level health outcomes (Gottlieb, 2009). There is increasing evidence of reduced morbidity and mortality in medical homes. For example, the Patient-Centered Primary Care Collaborative reported on 14 prospective medical home evaluations and consistently found that clinics experienced reductions in both costs and emergency room hospitalizations (Grumbach, Bodenheimer, & Grundy, 2010). Eight of these 14 evaluations compared control groups to medical homes and found the latter to reduce morbidity, as measured directly or by hospitalization rates; two of those medical homes reported a reduction in mortality. Medical home interventions were also found to lower staff burnout, reduce appointment waiting times, increase screenings, and improve patient satisfaction. Health plans and state Medicaid programs are also implementing medical homes, with promising cost-savings and returns on investment for infrastructure development, but challenges remain (Rosenberg, Peele, Keyser, McAnallen, & Holder, 2012).

While these results are encouraging, implementation challenges remain. Moreover, no research exists evidencing the association between medical homes, improved health outcomes, and linkages to health disparities. Despite this, there has been a push to establish

the operational and financial feasibility of medical homes, both through demonstration projects and through the National Committee for Quality Assurance certification process (Nutting et al., 2009). Health disparities are particularly problematic with HIV and are exacerbated by the fact that Black Americans are overrepresented in people living with HIV (PLWH) and in estimated deaths (Fullilove, 2006). RWP clinics are specifically funded to address health disparities, making them uniquely positioned to impart experience based on more than 20 years of providing care. Most recently, the HIV Medical Home Resource Center, funded by the Health Resource and Service Administration's HIV/AIDS Bureau, is providing training and technical assistance for RWP-funded clinics to become certified medical homes. The HIV Medical Home Resource Center works closely with the AIDS Education and Training Centers, a national network of clinical experts offering training and technical assistance for those providing or seeking to integrate HIV care into their practices.

The Ryan White Model of Care

Initiated in 1990, the RWP allocated federal funding to facilities to provide support services and primary and specialty care for PLWH with insufficient health care coverage and access to HIV medications. The availability of combination antiretroviral treatment in the United States has significantly increased the life expectancy of PLWH (HIV-CAUSAL Collaboration, 2010), effectively transforming HIV into a chronic disease that requires both specialty and primary care expertise. As with other chronic diseases, the management of HIV requires months and years of therapeutic interventions, including comprehensive medical and social services to ensure adherence to HIV treatment and access to care. Consequently, the model of health care delivery in RWP-funded clinics naturally evolved into "medical homes" as HIV disease has evolved from a terminal to a chronic condition (Saag, 2009).

Access to an HIV specialty care site or HIV primary care provider is increasingly found to contribute more to improved outcomes than access to a specialist physician (Wilson et al., 2005) because of the way services are coordinated. The development of personal providers and multidisciplinary care teams are crucial elements of the RWP model of care. One study demonstrated that a successful multi-disciplinary HIV care team needed to include an HIV specialty provider, care coordinator, medication support staff, benefits and insurance coordinator, social worker, and services such as behavioral health support and health education (Cheever, Lubinski, Horberg, & Steinberg, 2007). This team-based model has gained favor for effective management of HIV and other chronic diseases (Rodriguez, Marsden, Landon, Wilson, & Cleary, 2008) and is a core feature of medical homes. Additional precursors to the RWP model include models of health care delivery that attempted to systematize coordinated care, such as the San Francisco eligible metropolitan area's Centers of Excellence network. The Centers of Excellence network has developed an innovative "safety net," based on medical home principles, for PLWH with severe need (San Francisco Department of Public Health, HIV Health Services, 2012).

The Medical Home in RWP Settings

Although RWP clinics developed independently of the medical home model, they have been accepted as exemplars of this model of care, but little research has explored in detail how

this was accomplished. As we have seen, the configuration of specialty clinics is more important than the availability of physicians who specialize in HIV medicine, yet practicable approaches to medical home transformation are not well-operationalized (Gottlieb, 2009). RWP clinics offer a unique opportunity to explore the medical home model of care. With a better understanding of how RWP clinics adhere to the principles of medical homes, these facilities can serve as models to assess patient outcomes in medical homes and can provide a vehicle to test the most effective models of health care delivery.

The Affordable Care Act (ACA) contains several key provisions that will impact health care services for PLWH, including expanding Medicaid coverage to all low-income Americans, eliminating the disability eligibility requirement, and enabling individuals with income no more than 133% of the federal poverty level to qualify (Alsentser & Terlikowski, n.d). For those not meeting the Medicaid eligibility income requirement, insurance exchanges may provide increased access to private insurance. Importantly for PLWH, the ACA bars insurers from denying coverage or increasing premiums for anyone with a preexisting condition. Additionally, PLWH will also see improvements in prescription drug benefits as the ACA phases out the Medicare Part D gap in coverage, otherwise known as the “donut hole,” and makes medications more affordable for people covered by Medicare (Ellwood, Terlikowski, & Peller, 2012). Unfortunately, 24 states have opted out of Medicaid expansion (Center on Budget and Policy Priorities, 2013). For those states, a gap in coverage will continue to exist for many PLWH.

The ACA supports medical home models of care by reimbursing primary care providers at a rate of 100% and by offering 90% federal matching funds for qualifying health homes with health provider teams that coordinate comprehensive care for patients with two or more chronic conditions (Henry J. Kaiser Family Foundation, 2011). HIV is now approved for consideration as a chronic condition under the health home option. These initiatives highlight the importance of determining which aspects of the medical home model RWP clinics are best positioned to provide and how these characteristics may translate to other settings.

Given that clinical management of HIV is complicated and requires highly specialized care, the preservation of the most effective components of the RWP is essential for positive health outcomes for many PLWH. Increased life expectancy, non–HIV-related malignancy diseases, and kidney and liver disease call for the integration of HIV specialty and primary care to effectively manage conditions and to monitor drug–drug interactions. Chu and Selwyn (2011) encouraged the combination of HIV and primary care in a medical home context and offered two models of care. The first model incorporated an HIV specialist into the primary care setting. The second model integrated generalists providing primary care into a practice of HIV specialists.

RWP-funded HIV clinics typically offer a blend of the two models; however, limited research has evaluated the scope of RWP HIV care in the context of the medical home. In 2004, 143 RWP-funded and non–RWP-funded clinics were surveyed (Valverde et al., 2004). RWP-funded sites reported providing statistically significantly more services, including transportation assistance, case management, multilingual staff, mental health and substance

abuse therapy, risk-reduction counseling, on-site pharmacies, and medication adherence support compared with non–RWP-funded clinics (Valverde et al., 2004). Although this study did not evaluate services offered by RWP clinics through the lens of the medical home model, findings suggested that RWP care was consistent with some characteristics of the medical home.

Despite considerable national attention, most recently in the National HIV/AIDS Strategy (White House Office of National AIDS Policy, 2010), RWP-funded HIV care in the context of the medical home has not yet been richly described across multiple clinics and diverse locales. Research is needed to address this knowledge gap, inform future research, and ensure that systematic reform to HIV health care delivery supports high-quality care. The results of this exploratory pilot study will begin to describe the extent to which RWP-funded HIV clinics with large client populations align to the recognized characteristics of the medical home model in a context of uncertainty with RWP funding and the ACA.

Methods

Participants

Seven key informants (KIs; 4 men and 3 women) were identified and agreed to participate in semistructured interviews. Five of the participants were coemployed as infectious disease physicians and medical directors for at least 5 years at RWP-funded HIV clinics. The two remaining participants directed either a state-level HIV quality-improvement program or community planning groups. Participants who provided and oversaw direct patient care were employed at a federally funded community health center, or a county-, community-, university-, or hospital-affiliated clinic. Interviewee workplace locations were geographically diverse and included clinics in southeastern, northeastern, and southwestern urban centers in the United States. The clinics received a combination of RWP Parts A, B, C, or D funding; the other settings had close affiliations with RWP-funded clinics and administrators. To protect the identity of key informants, direct quotes used in this paper are identified by KI number.

Research Design

KIs were identified using purposive and “snowball” sampling techniques. Potential KIs were initially sought and selected based on known expert knowledge of, and experience with, the subject (e.g., publications, presentations, policy work, clinic capacity), then were asked to provide names and introductions to additional KIs knowledgeable and experienced on the subject matter. In addition to the above, participants met three inclusion criteria: (a) age of at least 18 years, (b) employment in an RWP setting for at least 5 years, and (c) current title of medical or administrative director. We used an open-coding approach to identify and code themes (Strauss, 1987). After the interviews were transcribed, two researchers (R.C. & S.B.) independently coded transcripts, compared their findings, and reached consensuses on identified themes.

Materials

A semistructured interview guide was developed and included questions on KI role, clinic characteristics and funding, patient population, scope and coordination of medical and support services, and incorporation of medical home concepts in care. Interview questions can be found in Table 1. Questions included probes to facilitate rich descriptions of the interviewees' conceptions of medical homes generally, applications of the model in HIV care, and implications for RWP settings. KIs were also asked about their titles and roles and the characteristics of their clinics and patient populations, including insurance status. Two researchers (R.C. & S.B.) conducted all telephone interviews and, with permission of participants, digitally recorded and transcribed the interviews verbatim.

Procedures

Interviews were conducted and recorded via Skype and lasted approximately 1 hour. At the start of each interview, participants were provided with an overview of the study, including the purpose, voluntary nature of participation, and principal investigator's contact information. Participants were assured that their identities would be kept confidential. KIs provided verbal consent prior to the interview. At the close of each interview, KIs were asked to identify additional potential participants. Emory University's institutional review board (IRB00047279) approved the study, with a waiver of written informed consent.

Results

Workplace Patient Population Characteristics

The five KIs directly providing or overseeing patient care described HIV-infected populations ranging in size from 1,110 to 5,100 patients. The majority of patients were Black (55%–78%) or White (7%–45%), with Latino (<1%–28%) patients comprising the remainder. Most patients were men (70%–83%; women, 16%–29%); transgender persons accounted for less than 1% of the patient populations. Approximately half of patients were uninsured, the other half received Medicaid or Medicare, and 5% to 8% had private insurance. Most patients were ages 21 to 55 years, and approximately half had an AIDS diagnosis.

KI Definitions of *Medical Homes*

Medical home definitions provided by KIs focused on integrated exhaustive care. For example, one KI defined a *medical home* as "taking responsibility for coordinating all of the services that a patient needs, both clinical and non-clinical comprehensive system of care and care coordination with access to HIV clinical expertise" (KI1). A medical director emphasized that medical homes provided "comprehensive team-based provision of health care in a single center that is patient centric" (KI2). KIs were quick to assert that current and common *medical home* definitions are illustrative of the longstanding model of care provided in RWP settings, despite its more recent prevalence at professional meetings, in the literature, and with certifying bodies. For example, KI1 noted, "I was recently at a conference where in fact it [the medical home] was a major topic of discussion, it's clearly… all over health care reform."

Application of the Medical Home Model in HIV Care Settings

Medical director KIs stressed that their clinics provided care aligned with many facets of the medical home model: “We’ve tried to actually, I think, be in the spirit of medical home long before we knew what a medical home was” (KI1). Physician-directed, comprehensive, holistic, team-based, coordinated, and high-quality care emerged as themes supportive of the medical home model in RWP care settings. Interviews also yielded information on health care reform as it is related to care quality, barriers to providing care, and medical home certification.

Physician-directed care and patient–provider relationships—Emphasizing the importance of patient–provider continuity, KI1 asserted that each patient in her clinic saw providers from his/her assigned care team at each clinic visit, instead of meeting with any available provider. A variety of professionals composed the team, including, but not limited to, an HIV clinician, nurse–educator, adherence nurse, and case manager; teams were assigned a panel of patients, expediting familiarity with a subset of the clinic’s population. By consistently pairing support staff with an HIV clinician, the team leader could direct services provided by the rest of the care team. In turn, this structure facilitated communication with the patient’s HIV provider, so that all staff were aware of the patient’s challenges and successes. KI3 echoed the importance of patient–provider relationships, stating that patients knew their providers. Likewise, providers had personal knowledge of their patients and expressed concern when they did not show up for appointments, which patients appreciated.

Holistic care—KIs described structural elements supportive of the medical home model, such as access to comprehensive services under one roof. Represented clinics offer a minimum of primary and HIV specialty care, obstetrics/gynecology and pediatric care, case management, medication adherence support, mental health services, and on-site pharmacy. The provision of other types of specialty care on-site at these clinics was common, including oral health services, ophthalmology, oncology, dermatology, neurology, and, in one case, an on-site diabetes sub-clinic. Three KIs described how their clinics’ abilities to treat chronic and acute conditions on-site were key to reducing hospitalizations and referrals. KI2’s summary of services offered included “primary patient care, social service support, research, … community outreach and physician provider education.” In summary, the KIs illustrated the wide range of RWP care, including, but not limited to, HIV specialty and primary care, acute and chronic conditions, with attention to patients’ psychosocial needs.

Coordinated team-based care—The integral role of team-based coordinated care surfaced during our interviews. Four KIs underscored the significance of coordinating care in the HIV setting to meet patient needs across a variety of clinical specialties and direly needed support services. Case managers responsible for care coordination were mentioned no less than 10 times during interviews. KI4 described case managers as the “glue” holding together both the clinic and patients. This KI also reported that his clinic held a weekly patient meeting in which three services were delivered: medication fulfillment, group psychotherapy, and an educational session: “So people come every Tuesday. They have an educational session. They have sort of a little group psychotherapy session and they have

lunch. And they get their—they fill their med box. The patients fill the med box themselves under the supervision of our pharmacist and pharmacy tech. And that's weekly—we have, one week is English, one week is Spanish."

All KIs reported the importance of communication for care coordination and described conversations concerning patient health and care needs, ranging from formal scheduled morning "huddles" with psychologists and clinicians to impromptu chats. These conversations and meetings relayed necessary information about patient health, housing, substance abuse, family, and even transportation needs that aided the development of holistic care strategies using "a team of people that can talk and communicate with each other about what the challenges may be. An adherence nurse may say to me, 'Hey did you know this person has blah blah issue in their life right now?'" (KI1).

Two KIs stated that RWP patients received care surpassing the quality of nonspecialty medical homes due to the RWP history of providing coordinated support services with an emphasis on behavioral health (KI2 and KI3). In the same vein, KI4's clinic staffed five types of behavioral health professionals: a half-time psychiatrist, a quarter-time psychiatric nurse–practitioner, a psychiatric registered nurse, three behavioral health therapists, and three psychotherapists. KI3 argued that the coordination of support services in the RWP setting, otherwise unavailable to patients, was the backbone of effective clinical care.

Electronic medical records and measuring patient outcomes—At the time of the interviews, some clinics had an established electronic medical record (EMR) database in place, while others were in the process of transitioning to EMR. Three KIs highlighted their use of EMR systems to track patient outcomes. EMRs enabled clinics to report trends for undetectable viral loads and reduced hospitalizations. KI2's clinic with a longstanding EMR system also utilized waiting room kiosk–administered surveys to gauge patients' physical and psychological symptoms prior to each visit. For this clinic, the EMR system and kiosk surveys amassed data that have been used to publish more than 50 papers, a significant contribution to the literature and influence on policy. KI2 discussed the utility of these data for quality measures, generating quarterly patient reports to assess laboratory measurements, clinical manifestations, and the appropriateness of medication regimens.

Quality of care and health care reform—Regarding health care reform, the KIs were unanimously concerned with maintaining the level of care and comprehensiveness of services for their patients. They expressed concern that the quality of care would be seriously compromised as more patients became eligible for private insurance, Medicare, and Medicaid. As KI5 stated, "We feel [Ryan White] services need to be provided because they're better services than what they might get from their managed care plan." The KIs also commented on the nature of subpar health care systems compared to the RWP model, emphasizing the necessity of RWP funding to maintain current levels of care. KI6 indicated a need to use various sources of funding and reimbursement to provide comprehensive services, and that "in addition, our funding for… the services as I've described… is very kind of patchwork." KI2 mentioned, "I hear that health care reform will happen and more and more of our patients might have insurance. Ironically that could be a threat because our collections from Medicare and Medicaid are not enough to cover the costs of providing the

type of medical home that we have." KI4 said, "I'm afraid it's actually going to lower the ceiling as far as HIV care is concerned and… the bottom line is the quality of HIV care is going to have to fall to the quality of the health care in general in this country—which is not good."

KIs were also apprehensive about the ACA's emphasis on community health centers (CHCs) as providers of HIV care and viewed this as another potential source of care quality reduction. KI2 summarized this point emphatically: "A requirement of having the community health centers see HIV patients I think will be a big mistake and… is a potential threat to the existing… high-quality care that a lot of our patients currently get." KIs also expressed concern around CHCs' capacity to replicate the medical home characteristics of the RWP facilities they described, unless the model became the standard of HIV care for CHCs. KI4 summarized the sentiment expressed by others: "Are clinics like mine going to be viable in the future?"

Medical home certification—At the time of the interviews, two clinics were pursuing medical home certification and one had received a grant to support the process. In both cases, KIs described the administrative burden of the application to be so great that additional staff were needed. Two other clinics were associated with a medical home–certified health center or hospital; however, the RWP clinics themselves had not yet become certified. One clinic was not pursuing medical home certification. KIs were largely motivated to complete the process, with KI1 noting, "The clinics are all very anxious to be certified as medical homes." Most of the KIs we interviewed believed that medical home certification was to the advantage of RWP clinics because Medicaid reimbursement rates might be higher: "Maybe that's where certification will come into play because I assume that if you're certified as a medical home you might get paid a little more" (KI2).

KI3 told us that certification also served as "just solidifying and being recognized in some way for—for work that they've done already as Ryan White providers." Another noted, "My sense is from what I've read about what is a home, I think we're there and the certification would just be jumping through the hoops and checking boxes" (KI2). KIs also reported the certification process was more than just paperwork and documentation. Additional changes, such as converting to EMRs or slightly redesigning care teams already in place, would be required to obtain certification and further improve patient care; for example, "There's not been a requirement [for Ryan White] that you use an electronic information system to track patient care and I think that's where the Ryan White programs are going have the biggest challenge in meeting the criteria for certification" (KI3).

Barriers to Providing Care

We asked KIs to describe barriers to providing care in their RW settings. Unanimously, they indicated that insufficient funding and inability to hire and retain qualified staff were the most challenging barriers to care: "Our Ryan White money had been slowly whittled back. So for instance we've laid off in the past year—we've laid off 2 social workers" (KI6). In addition to the influence of funding restrictions on hiring and retaining qualified staff, KIs indicated that there was less incentive for providers to enter HIV care. Small increases in

RWP funding over the years were reported to be inadequate to meet ever-expanding patient loads. KI2 noted that the clinic's affiliated university absorbed deficits on a regular basis. KIs less frequently mentioned a variety of other barriers: difficulty communicating with transient patients, spotty patient adherence to scheduled visits, insufficient clinic space, and even competition with other clinics. Understanding the barriers faced in RWP settings may be useful as CHCs become responsible for the care of more patients with similar needs.

Discussion

Recent studies (Adams et al., 2012; Anderson et al., 2012; Sitapati et al., 2012) in adult HIV care settings adopted the *medical home* label but failed to inventory and richly describe the structures and processes that align with medical home principles and their effects on health outcomes. RWP clinics are a unique and ideal setting for studying the relationship between medical homes and health outcomes in the context of health disparities because the typical structures and processes in use to deliver care possess prominent characteristics of what is now known as a medical home and are recognized as "unintentional" medical homes (Saag, 2009). Our study has illustrated several key themes important to successful operationalization and standardization of HIV medical homes in large RWP-funded facilities. The RWP clinics we studied reported high-quality, physician-directed, holistic, comprehensive, and coordinated care through the use of multidisciplinary care teams.

The RWP model of care shares many of the same characteristics of the medical home but evolved independently from traditional medical homes in primary care settings. Three KIs in our study indicated that while some work was required for their clinics to become certified medical homes, most of the modifications were a matter of documenting and creating policies for things that they already do. The KIs expressed concern around future capacity to deliver HIV medical home care due to the diminishing HIV workforce. These concerns were confirmed by the HIV Medicine Association's survey findings, in which RWP Part C providers reported difficulty attracting and retaining clinicians, a workforce challenge not addressed in health care reform (Hauschild et al., 2011).

The KIs described superior care aligned with best practices and guidelines for HIV management. While KIs were generally supportive of health care reform, they were apprehensive about shifting HIV management to primary care providers in non-RWP settings. Evidence supports our KIs' claims, including a chart-abstraction study comparing HIV care quality in RWP and non-RWP settings for 18,720 clients (Sullivan et al., 2008). That study found that patients of RWP and non-RWP facilities received the same frequency of routine laboratory monitoring; however, statistically significant differences in favor of RWP clinics were found for other measures, such as hospi-talizations, tuberculosis screening, prophylaxis, and Papanicolaou smears. Patients of the non-RWP clinics were more likely to have been hospitalized and less likely to have received essential screenings or correct treatment for opportunistic infections.

In addition to clinical management of HIV, the clinics in our study provided primary care with a focus on support services and behavioral health. We found the informants' definitions of the medical home model in RWP settings to be more exhaustive than traditional

definitions of the model; this was likely due to the comprehensive RWP medical and support services that clinics coordinated for patients, such as primary care, substance abuse counseling, mental health services, medication adherence counseling, food pantry, housing support, and transportation assistance.

Other studies support our findings related to the scope of services reported by KIs, such as a survey of 143 RWP and non-RWP funded HIV clinics (Valverde et al., 2004). After controlling for facility type and public versus private clinics, Valverde et al. (2004) found that RWP clinics offered significantly more services for most measures, including extended hours, adherence support, risk-reduction counseling, and on-site support services such as nutrition counseling, medical and support service coordination, transportation assistance, and child care. Of the 69 RWP clinics surveyed, 90% offered case management (Valverde, et al., 2004). Similarly, all KIs in our study reported the provision of case-management services and lauded the case managers as imperative to care coordination. Primary care and mental health services were provided at each KI's clinic in our study. Comparably, Valverde et al. (2004) reported that 90% of RWP clinics provided primary care and that 74% offered mental health services. Sixty percent of KI clinics in our study had on-site pharmacies compared to 61% of RWP clinics in the Valverde et al. (2004) study. In a more recent study, Hirschhorn et al. (2009) surveyed a random sample of 114 providers and directors in five RWP-eligible metropolitan areas; 95% of respondents indicated that mental health, substance abuse, and housing services were available in the care network. Furthermore, 93% of primary care providers and 80% of case managers acknowledged regular communication with one another (Hirschhorn et al., 2009). Our KIs also confirmed the use and necessity of communication for coordinating services for successful health outcomes.

Although these studies were not focused on the medical home and several predated widespread discussions of the model, they offered the most detailed alignment with medical home principles. The parallels between these studies and ours indicate that many RWP clinics have likely been situated to provide holistic care focused on coordinated psychosocial services in addition to primary and specialty HIV care, the building blocks of an HIV medical home.

Strengths and Limitations of the Study

The KIs selected for participation in our study represented several strengths of the study. The diverse geographic distribution (the southeast, northeast, and southwest) allowed us to speak with RWP providers in markedly different settings that were impacted by local political and policy influences. These outside forces may impact medical home characteristics such as funding, patient insurance coverage, and reimbursable services. For example, some states have a remarkably generous AIDS Drug Assistance Program that covers primary care visits in addition to medications, while others are more restrictive. Despite these differences, many similarities were found across the clinics, which all serve large populations of clients. We selected KIs who represented excellence in the field of HIV primary care to focus our interviews on those sites most likely to be ahead of the curve in implementing a medical home model. The sites developed their clinical models over years of participation in the RWP and were well-situated to provide valuable information on

successes and challenges when adopting a medical home model. The snowball sampling method used to identify informants was a weakness in terms of the variety of medical home capacity that truly represented the RWP system of care. However, our goal was to provide a basis for further research that might also address smaller clinics with fewer resources. Furthermore, while we hypothesized that these clinics had adopted some medical home characteristics, we learned information unknown at the outset of the study. For instance, we learned about morning staff huddles to discuss patients and weekly patient meetings to deliver multiple services with peer support. Additionally, we learned of the use of waiting room kiosks for patient data collection and extensive on-site specialty services such as ophthalmology and neurology. Our study also described attitudes toward and the administrative burden of patient-centered medical home certification, competition for RWP clients, and operating deficits.

Implications for Future Research

Future research is needed to provide further insight into the results of our pilot study, especially as RWP clinics increasingly devote resources to obtaining medical home certification. The outlay of resources required for medical home transformation underscores the importance of learning from the experiences of RWP clinics functioning as medical homes. In a national demonstration project of 36 highly motivated family practices, the American Academy of Family Physicians found that, in order to be consistent with principles of medical homes, more than 2 years, rather than incremental change, is required for transformation (Nutting et al., 2009). Furthermore, medical home transformation requires an investment of resources to redesign the workforce (Grumbach et al., 2010).

Results from our study contribute to a better understanding of how large RWP clinics evolved into what we now know as medical homes and operate in a broader atmosphere of patient-centered medical home certification, which can inform how their experiences are best translated to others. Results from our study indicate that future research is warranted and should systematically examine the extent to which RWP clinics, with varying client loads and resources, operate as medical homes and impact health outcomes. This and future research should be shared with primary care settings that are increasingly assuming care for PLWH.

Conclusions

Essential components of HIV care mirror the RWP model characterized by a multidisciplinary team of providers delivering comprehensive care, with support systems and linkages to community-based organizations (Gallant et al., 2011). In the integrated model of care in RWP settings, not only do patients have access to a comprehensive array of needed services, but also these services are well-coordinated. Gallant et al. (2011) found that models of HIV care resulting from health care reform and the ACA should use or extend on the RWP model.

With more than 20 years of experience in providing exhaustive care for a medically underserved population with support service needs, the RWP has a great deal of wisdom to impart to new HIV care providers as health care becomes accessible for more PLWH. While

the fate of the RWP remains largely unknown, future models of HIV care should look to RWPs as archetypes of high-quality, comprehensive, and coordinated health care. The RWP model may prove especially helpful for CHCs serving a population with many of the same needs as RWP patients.

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Key Considerations

- Ryan White Program (RWP) clinics are an ideal setting to study the relationship between the medical home and health outcomes for underserved populations.
- Key informant definitions of the medical home model in RWP settings were more exhaustive than traditional descriptions of the model; this is likely due to extensive Ryan White support services.
- Essential components of HIV care mirror the RWP model characterized by a multidisciplinary team of providers delivering comprehensive care, with support systems and linkages to community-based organizations.
- The RWP has a great deal of wisdom to impart to other HIV care providers as health care becomes accessible for more people living with HIV.

Table 1

Overarching Interview Questions

Category	Question
Priorities and funding	• In terms of your organization's priorities, where does HIV care fall? • Does your organization receive Ryan White funding?
Service coordination and comprehensiveness	• What HIV and HIV-related services does your organization provide? • Of these, which services are provided under the same roof and which are provided by referral/linkage to another organization?
Barriers to providing care	• What would you describe as your organization's current single biggest challenge to providing HIV services?
Medical home definitions and context	• Have you heard the term *medical home?* • If yes, where/in what context, how often, by whom? • How would you define *medical home?*
Integration of medical home concepts in practice	• Is your organization integrating medical home concepts and/or practices into its practices/processes? • Please describe in detail practices being changed/implemented. • Please describe motivation/reasons for implementing these changes. • What barriers has your organization encountered when making these changes? • Are there any aspects of your organization that seem to have facilitated this change? • Has your organization seen results from these changes?
Accreditation and health care reform	• Has your organization pursued accreditation/certification as a patient-centered medical home with the National Committee on Quality Assurance? • How do you think HIV health services at your organization will be impacted by health care reform and/or reauthorization of the Ryan White Program?

Note. Not all questions used for interviews are included in the table.