Provider perspectives regarding the health care needs of a key population: HIV-infected prisoners after incarceration

Turquoise Sidibe, MPH[*] **[Graduate Student]**,
University of North Carolina Gillings School of Public Health, Chapel Hill, North Carolina, USA

Carol Golin, MD [Associate Professor of Medicine],
School of Medicine at the University of North Carolina, Chapel Hill, North Carolina, USA

Kea Turner, MA, MPH [Graduate Student],
University of North Carolina Gillings School of Public Health, Chapel Hill, North Carolina, USA

Niasha Fray, MA [Graduate Student],
University of North Carolina Gillings School of Public Health, Chapel Hill, North Carolina, USA

Cathie Fogel, PhD [Professor],
University of North Carolina School of Nursing, Chapel Hill, North Carolina

Patrick Flynn, PhD [Director],
Texas Christian University Institute of Behavioral Research, Fort Worth, Texas, USA

Michele Gould, MPH [Research Project Specialist],
Texas Christian University Institute of Behavioral Research, Fort Worth, Texas, USA

Kevin Knight, PhD [Associate Director], and
Texas Christian University Institute of Behavioral Research, Fort Worth, Texas, USA

David Wohl, MD [Associate Professor of Medicine]
School of Medicine at the University of North Carolina, Chapel Hill, North Carolina, USA

Abstract

During incarceration, many HIV-infected prisoners receive care and are adherent to medication. However, following release, many have difficulty engaging in HIV care and remaining on antiretroviral therapy (ART). Community-based service providers for HIV-infected releasees have a deep understanding of the health needs and challenges these individuals face on community re-entry. We conducted in-depth qualitative interviews with 38 health care and service professionals in 2 U.S. southern states regarding the barriers releasees faced in meeting their health needs, including HIV care and treatment post-release. Individual, community, and organization-level barriers to HIV care and treatment adherence post-release were identified and offered unique

insight into the ways that these multi-level obstacles affect HIV-infected former prisoners' abilities to engage in care and access necessary social services. Provider perspectives should be considered when designing interventions to support HIV care after release.

Keywords

health care disparities; HIV; minority health; prisons

Incarcerated individuals are increasingly recognized as a key population at increased risk of HIV infection. Incarceration is viewed as an opportunity to detect HIV infection and enhance HIV care, education, and prevention skills for those found to be seropositive. In 2012, prison systems in the United States released more than 637,400 individuals back into communities across the nation (Carson & Golinelli, 2012). Of those released from prison each year, more than 135,000 had been diagnosed with HIV infection, although the proportion receiving their diagnosis in prison relative to those who were aware of their serostatus prior to incarceration is unknown for the United States as a whole (Spaulding, Seals, et al., 2009). While many prison systems screen for HIV infection and provide effective HIV care to inmates during incarceration, most correctional facilities are not funded to provide a comprehensive package of HIV services after release (Palepu et al., 2004; Springer et al., 2004; Stephenson et al., 2005). The lack of transitional services, combined with the personal challenges many prisoners face in accessing and using HIV care after release, results in a disruption in care for many HIV-infected, former prison inmates (Eldred & Malitz, 2007). Antiretroviral therapy (ART) adherence drives both individual health outcomes and an HIV-infected person's infectiousness to others. Therefore, inadequate engagement in care of recently released HIV-infected prisoners poses a significant threat not only to the individual's personal health but also to the public health.

Research we have conducted has shown that HIV-infected released prisoners experience a number of barriers to engaging in HIV care. The research showed that, during in-depth interviews conducted with former prisoners living with HIV, many perceived the infection to be manageable and a secondary priority to other basic needs, such as housing, family reconciliation, and avoidance of substance abuse relapse (Haley, Scheyett, Golin, Kaplan, & Parker, 2006). While HIV-infected released prisoners encountered numerous competing demands and other barriers to care, several factors have also been identified that can facilitate successful engagement in HIV care, such as receiving education courses during incarceration, arranging care coordination between correctional facilities and community care providers (Booker et al., 2013), and providing transportation assistance (Althoff et al., 2013).

Community-based agencies are often the first point of contact for HIV-infected releasees and they may serve as a facilitating factor that can enhance prisoner access to needed health-related services. Therefore, health care and service professionals at these agencies, particularly nurses and case managers, offer an important perspective regarding the health-related needs of their clients and the barriers these clients face after reentry. However, few studies have been published to date that express the perspectives of health care professionals

regarding the challenges of reentering a community for an HIV-infected person recently released from prison (Seal, Margolis, Sosman, Kacanek, & Binson, 2003).

The objective of this study was to explore community-based health care providers' (HCP) perspectives regarding individual, community, and organizational level factors that affect HIV care engagement in HIV-infected persons recently released from prison. The views and experiences of these professionals can provide critical insights to inform interventions to enhance transition from prison to the community for incarcerated individuals living with HIV.

Methods

Our study was conducted as part of the formative phase of the Individuals Motivated to Participate in Adherence Care and Treatment (imPACT) Study; a National Institute on Drug Abuse-funded trial of a multidimensional intervention to maintain suppression of HIV following prison release in North Carolina and Texas. The main aim of this sub-study was to assess health care workers' experiences with and perceptions of the health care needs of HIV-infected, formerly incarcerated individuals.

Study Sample and Design

We conducted a qualitative study using in-depth semi-structured interviews with community-based health care and service professionals with at least 1 year of experience working with recently released HIV-infected individuals. To obtain a diversity of perspectives on the health care needs of HIV-infected individuals who have been recently released from prison, we recruited several categories of professionals including nurses, physicians, case managers, and counselors/therapists. To ensure that we interviewed participants who were sufficiently knowledgeable about the issues facing recently released HIV-infected individuals in their communities, we only interviewed HCP employed at their agencies for at least 1 year and older than the age of 18. Prior to data collection, the University of North Carolina at Chapel Hill and Texas Christian University Institutional Review Boards approved all study procedures.

Participant Recruitment and Data Collection

The 38 health care and service professionals who participated in the interviews were recruited using purposive sampling from health care agencies and community-based organizations over a 4-month period in North Carolina and Texas. Agencies and organizations were identified through referral from health care workers in the community and agencies that had a mission of serving people who were HIV-infected. The agencies were members of the imPACT Study team; we initially contacted each of the organizations to introduce the study and obtain permission to approach the agency's staff. Team members from each participating university then continued the recruitment process at participating sites. The research team actively recruited participants for the interviews through distribution of promotional materials, phone calls, and in-person conversations. We recruited equally in rural and urban health care facilities. In addition, the research team passively

recruited participants by providing study flyers and business cards to agencies to place in mailrooms, on bulletin boards, in lunchrooms, and in staff break areas.

The interviewees participated in either a telephone interview or a face-to-face interview that lasted approximately 75 minutes. All five interviewers gave an overview of the study before participants volunteered and provided their consent. All interviews were audio-recorded and de-identified. At the completion of the interview, respondents received a $25 (USD) gift card.

The interview guide was developed based on the Socio-Ecological Framework (SEF; Sallis, Owen, & Fisher, 2008) and a literature review of what was known about barriers to and facilitators of accessing care post-release for incarcerated individuals living with HIV (Althoff et al., 2013; Booker et al., 2013; Haley et al., 2006). The SEF maintains that multiple levels of influence guide health behaviors including intra-individual, inter-individual, community, and organization level factors. To facilitate discussion between the interviewer and interviewee, the interview guide asked questions about three main issues: (a) description of the agency and the interviewee's role at that agency, particularly with regard to contact with released HIV-infected prisoners; (b) services that the agency provided to HIV-infected patients who were newly released from prison; and (c) the processes by which newly released HIV-infected prisoners transitioned into services at the agency (Table 1). Through discussions in these three areas, the guide helped interviewers focus on factors (barriers and facilitators) affecting prisoner health care access that included social, structural, cultural, and individual level barriers.

Analysis

Each audio-recorded interview was transcribed verbatim for data analysis. Using NVivo 9, the transcripts were systematically analyzed according to the principles of structural thematic analysis applying interview guide questions consistent with the SEF to define the initial topical structural codes (Braun & Clarke, 2006). Each transcript was reviewed by at least two members of the research team to ensure that it matched the audio file and to remove all identifying information from the transcripts. Next, four researchers read and reviewed all of the transcripts and created memos of identified themes. Creating memos allowed the researchers to reflect on the accumulation of ideas and record concepts and relationships that emerged while reading the transcripts. After reviewing all of the transcripts, a codebook was created based on the memos and two of the researchers used the codebook to ensure coding consistency. Disagreements in coding were resolved collaboratively and adjustments to the codebook were made iteratively until the coding team came to consensus on all codes. Finally, the entire research team reviewed the codebook to identify overarching themes. The final codebook included topical structural codes that were based on the SEF and emergent codes that were based on additional unanticipated themes that coders identified during the analysis.

Results

The study sample was composed of 38 health care and service professionals representing 20 agencies (Table 2). Twenty (53%) were case managers or outreach workers including social

workers; 12 (32%) were mental health care professionals (e.g., psychologists and therapists); 6 (15%) identified as HCP (e.g., registered nurses, nurse practitioners, and physicians). The number of years that participants had worked at their current agencies ranged from 1 to 17 years (mean = 6.5 years). Most reported extensive experience working with persons living with HIV infection and/or clients with incarceration histories.

Reflective of our interview structure, this article focuses on specific barriers identified and grouped according to the level at which they fell within the SEF, including inter-individual, intra-individual, community, and organization levels (Table 3).

Intra-Individual Level Barriers

Participants described a number of intra-individual level barriers that prevented recently released individuals from engaging in care.

Learning to think on one's own—An overarching theme that emerged was that respondents perceived that former prisoners found it particularly challenging to relearn how to think on their own and do things for themselves again when free from confinement. Respondents reported that released prisoners found it extremely difficult to learn how to think as persons who were responsible for their own wellbeing rather than as incarcerated individuals whose needs were met by others.

> They have been told what to do, given their medications in their hand when they were supposed to take them, and now everything is their responsibility without giving any strategic teaching or training prior to their release. So they go from having everything done for them to having nothing done for them. (Social Worker, 6 years working for agency)

According to the study participants, prison regulation of inmate activities created a dependency on the care provided during incarceration. Ultimately, this dependency negatively affected individuals' abilities to make their own decisions. Study participants stressed that providers of care for former prisoners need to consider the salient challenges this phenomenon poses for patients when designing a treatment plan.

The participants also explained that some individuals were not prepared for the stressors they encountered when they returned to their communities, which could precipitate backsliding into risky behaviors.

> I think when their expectations, when it doesn't meet with what they expected, it's a big let down and they don't have those coping skills and they don't have those things to be able to help themselves get out of that, that they just revert to what they know. (Social Worker, 10 years working for agency)

Reintegration activities represent competing demands to accessing care—The participants also suggested that adjusting to life outside of prison, especially for individuals imprisoned for an extensive time, impeded former prisoners' abilities to access HIV care. They explained that the longer patients had been in prison, the more activities they needed to carry out to reintegrate into their communities. Reintegration activities competed with

efforts to get health care. For example, if former inmates had to work to reconnect with friends and family, this would make it harder for them to maintain HIV care compared to someone who still had connections with friends and family. A social worker said, "If they have been incarcerated for such a long duration of time that they don't know how to function in non-incarcerated life, all of those things could overwhelm their health care as a priority" (Social Worker with 5 years of experience working for agency).

Participants explained that many clients experiencing the freedom of being released after a long sentence prioritized spending time with friends and family before going to a physician. "Simply doing anything about their health care may become a very low priority in that person's life once they are just released" (Case Manager, 8 years working for agency).

Meeting basic needs—Adjusting to life outside of prison also involved learning how to meet basic needs. The health professionals described often being called upon to help newly released individuals address basic needs, such as accessing food, housing, and transportation, as a step to enable the client to focus on medical needs.

> There is a need hierarchy. If they don't have housing, if they don't have a place to stay or a roof over their head, food to eat, and/or income, then medical needs are the furthest thing that they are concerned about. (Case Manager, 7 years working for agency)

Providers discussed the notion that to successfully engage in care, individuals first needed to meet their basic needs, such as housing and food.

> A lot of them that get out, from my experience, are homeless, then you have to find shelter for them, and sometimes the shelters are full. You also have to make sure they have food as well; this can take time to meet their needs. (Case Manager, 9 years working for agency)

Another HCP said, "They need housing. Even though they might have an income, they might be restricted because they have a record and especially felons" (HCP, 11 years working for agency).

Navigating new technologies—Individuals released from prison often experience challenges when navigating new technologies, which can serve as a barrier to accessing care. One participant recalled a time when one of her clients called her multiple times.

> I realize[d] he didn't know how to leave a voice message, I had to walk him through leaving a message. And you and I may not think anything about leaving a voicemail, but if you have someone that's been incarcerated anywhere from 12 to 23 years, it's very difficult. (Mental HCP, 7 years working for agency)

Inter-Individual Level Barriers

Disclosure—Participants stated that many former prisoners living with HIV were fearful about disclosing their HIV status to friends and family members, which prevented them from accessing key forms of social support. When accessing case management services, for

example, prisoners were often reluctant to provide the contact information necessary for follow-up. As one participant stated,

> A lot of times, they don't want to put a phone number on the ADAP (AIDS Drug Assistance Program) application. They won't give adequate or correct addresses on the application because family members and friends are not aware of their diagnosis. And they are fearful of being treated differently or put out of the house and not having a place to stay because of their diagnosis. (Outreach Worker, 2 years working at agency)

Because many individuals were afraid to disclose their status, they were afraid to ask for assistance with transportation to and from medical care, especially to organizations that were associated with HIV-related disease. A case manager said, "I know a lot of [clients] don't wanna' tell anybody. They usually have to figure out a way to get transportation, and if they're coming to a place that is specifically related to HIV, they may not go" (Case Manager, 3 years working for agency).

Participants also mentioned that individuals who had not disclosed their status were concerned about taking medications for fear of being identified as HIV-infected. "People – if they are able to access their medications, they don't wanna' take 'em, especially if they're in a setting like a shelter" (Outreach Worker, 8 years working at agency).

Community-Level Barriers

Participants explained a number of features of the communities to which individuals returned after release that impeded their access to HIV care, such as exposure to negative environments and lack of essential services including housing and transportation.

Exposure to pre-release environments and social networks—Participants explained that many individuals returned to environments where they re-connected with social circles that promoted risk behaviors, such as substance abuse, rather than supporting health-inducing activities, such as clinic visits. As one participant explained, once individuals were released, "I think the biggest barrier that they are faced with is going back into that same environment in which they caught their case [of HIV] in or where they used drugs" (Mental HCP, 5 years working at agency).

There was often a lack of community resources needed to address behavioral health problems, such as substance abuse. "The most common reason to go to prison is drug offenses. So they struggle with their substance use and going back to the same world you came from doesn't help you" (HCP, 5 years working at agency).

Lack of available housing in communities—The participants also felt that housing posed a substantial barrier to accessing HIV care and described extensive waiting lists and strict eligibility criteria for public housing.

> Certain clients don't fit the criteria for the housing programs, whether it is for being on parole, a sex offender, drug convictions, or being a convicted felon, it's very

difficult to secure housing within the first 6 months after their release. (HCP, 5 years working for agency)

Not only was stable housing difficult to find, but without it there was also a greater potential for lost or stolen medication.

I have had several clients report that they did not take their medicine because it was stolen at a homeless shelter, it's a catch-22 for them because they're right back where they started. Because even though you've been given the medication, someone has stolen it and once they give you the … supply, you've got to wait … to get another regimen of medication. (HCP, 5 years working for agency)

Lack of transportation—Throughout the interviews, participants expressed the view that transportation was a primary barrier for HIV-infected, recently-released individuals accessing medical treatment and that lack of transportation prevented many individuals from accessing HIV outreach agencies, keeping medical appointments, and receiving other services, such as housing assistance programs. "In managing their HIV, it's getting to treatment, getting to their medical provider, making their appointments" (HCP, 11 years working at agency). "When we get them in case management we talk to the doctors and we make some agreement, and we get them there a little bit quicker. Barriers would be money, insurance, transportation" (Mental HCP, 3 years working at agency).

Participants described a number of factors that influenced an individual's ability to access transportation. For example, participants indicated that social support systems affected an individual's access to transportation. Some individuals who are recently released do not have the friends and family they may need at first to help with rides.

Because many individuals face barriers to obtaining rides from family and friends, access to public transit becomes an important resource for recently released individuals seeking medical treatment. Many participants, however, reported that accessible and convenient public transportation was lacking in communities where the clients resided. "Waiting outside for public transportation, particularly if one is ill with HIV, becomes very difficult, and many of the public bus-line shelters are not shelters" (Case Manager, 8 years working for agency). "…some bus routes from some parts of the city might take several hours to get here" (Case Manager, 8 years working for agency).

If you're 15 minutes late, you get your appointment canceled and you get rescheduled. So there's some of those things that go on where a client knows, "If I'm running late, I'm not going to be seen anyways, so why do I show up?" (Case Manager, 12 years working for agency)

Infrequent and inaccessible transportation can prevent clients from engaging in HIV care. One agency representative reported that funding declines and budget cuts, were affecting the agency's ability to provide transportation services. "And with funding, all of the social service agencies are having significant funding cuts, and transportation is one that's being cut" (HCP, 5 years working for agency).

Organization-Level Barriers

Participants described a number of organization-level barriers that prevented former prisoners from engaging in HIV care.

Poor coordination between care systems—Participants discussed the lack of coordination between systems of care and its effect to greatly reduce access to care and impede care quality, particularly for individuals with co-occurring behavioral health conditions. For example, health care and medication access were often disrupted at release because linkage to community care before release was inadequate. Participants said that HIV-infected inmates received a supply of medication prior to release that was not sufficient to cover the length of time it would take to enroll in assistance programs, such as ADAP. One interviewee explained that this is a common barrier,

> Even if they're eligible for ADAP, they're not on it, so making sure that they're released with enough medication that can get them through at least till they can sign up for ADAP or whatever program they're going to use to get their medication. (Case Manager, 10 years working at agency)

Participants also said that former prisoners experienced disruptions in health care due to a lapse in health care coverage. Lapses in coverage were often caused by lack of eligibility for public insurance programs or failure to complete insurance enrollment paperwork prior to release. "…when they leave their incarceration setting they're often not eligible for or certainly have not done the necessary paperwork to get access to any of the available health care options, such as Medicare/Medicaid" (Social Worker, 12 years working at agency).

In addition to medication assistance and health care coverage, participants explained that former prisoners needed to be linked to a case manager before release for them to engage in care. Interviewees felt that a failure to link individuals to a case manager could also serve as a barrier to health care access and utilization.

> They may have a case manager while they're in prison or in jail, but they need to be also connected or linked with us who are outside of the prison walls, because if there is not a linkage there, then I can guarantee you that there's going to be a drop in service. (Social Worker, 4 years working for agency)

During the interviews, participants also described how poor care coordination across behavioral and health care systems lead to sub-optimal care for HIV-infected former prisoners with co-occurring behavioral health conditions. As one individual said, "They're dealing with some mental health issues. She's gonna' need someone meeting with her on the inside and then helping in transition to more services than just medical" (Social Worker, 3 years working for agency).

According to participants, care coordination challenges were common because of differences in policies, procedures, and terminology across different systems of care. "They don't talk the same language. When people get released, they have to follow this because there's just so—each agency has so many rules within itself" (HCP, 3 years working at agency).

Shortage and lack of diversity in the HIV care workforce—Participants also thought that shortages in the HIV care workforce and the lack of diversity among providers could serve as a barrier for HIV-infected former prisoners engaging in care. Interviewees explained that the demand for HIV care exceeded available resources, preventing providers from taking on new patients. "If we had enough resources, we could hire people for the gaps we are missing. We don't have the medical staff to be able to accept all of the new HIV referrals" (HCP, 7 years working for agency).

Declines in funding had also reduced the number of available clinics, creating a disruption in medical care for HIV-infected patients. "They're being released, but there's nowhere to go. There's only a few people who are doing HIV case management. And the ones who are doing it, they don't have any room" (Outreach Worker, 5 years working for agency). "Clinics are shutting down, funding is drying up" (Mental HCP, 4 years working at agency).

In addition to shortages in the HIV care workforce, interviewees explained that the lack of diversity in the workforce could serve as a barrier to engagement for HIV-infected former prisoners. Interviewees said that insufficient representation of African American and Latino providers served as a barrier for African American and Latino patients engaging in HIV care.

> Because many of our clients are African American and Hispanic and perhaps our providers may be underrepresented in terms of those ethnic backgrounds, there may be a lack of identification with their provider. There may be less enthusiasm for that person to see the provider, because they don't feel like that they identify with them as much as perhaps a similar ethnicity for the provider. (Case Manager, 6 years working at agency)

Prison and HIV-related discrimination—During the interviews, participants said that many former prisoners with HIV experienced discrimination when engaging in care systems, which in turn discouraged them from engaging in future care. For example, participants explained that clients faced discrimination when filling prescriptions, which lead to patients being turned away.

> I sometimes deal with folks on the outside, at retail pharmacies where I've had pharmacists that tell me, "I really don't want this patient coming here." And basically, they get out of it by saying, "We don't stock that medication. It's way too expensive." (HCP, 7 years working at agency)

Participants explained that clients had also had pharmacists announce what type of medication they are picking up. One participant recalled that pharmacists would say, "'Mr. So and So, I've got your HIV meds here'. Or, 'I got your AIDS medicine.' We hear those kinda' stories, and that does happen" (HCP, 4 years working at agency). Participants said that such instances of discrimination influenced whether an individual adhered to medication and whether s/he returned for follow-up medical appointments.

> It has a lot to do with how you being treated for you to stay on your medication. I'm not gonna' go somewhere where I don't feel comfortable. It's bad enough that

> I'm living with this, but when I get somewhere and to be treated different, why
> would I want to come back? (Mental HCP, 9 years working at agency)

Discussion

HIV-infected prisoners have to overcome substantial challenges to successfully reintegrate
into society and engage in health care. We sought to understand the unique perspectives of
health care and service professionals who had worked with HIV-infected individuals
immediately following prison release and were familiar with immediate post-incarceration
needs. These providers were accustomed to navigating health care and social service
systems and had insights into the community- and organization-level barriers that affected
care engagement. What emerged was a complex picture of the factors that determined
whether or not HIV-infected individuals continued successfully along the HIV care
continuum after incarceration. The perspectives of community professionals also provided
guidance on intervention approaches to support uninterrupted engagement in care after
release.

Training in New Technologies

Our research suggests that prisoners may require training regarding the use of new
technologies, such as mobile phones and social media upon release from prison. For security
reasons, most prison systems do not allow inmates to communicate using social media, other
Websites, or mobile communication devices while incarcerated. An unintended consequence
of this restriction is that prisoners are at an extreme disadvantage when they are released
years or decades after exponential advancements in technology. Because many HIV
interventions use new technologies, such as text-messaging, it is important to ensure that
newly released individuals are able to use technology to benefit from such interventions.
Few studies have been published on best practices for educating and training formerly
incarcerated prisoners on technology (Kurth et al., 2013). Future studies should focus on
professional development of released individuals, such as trainings on text messaging, web
browsing, social media, and other mobile technology applications.

Providing Peer-to-Peer Social Support

Our findings strengthen existing evidence indicating that social support systems are an
important part of ensuring successful engagement in HIV care for former prisoners. Peer-to-
peer and navigator programs have proven successful in helping individuals reintegrate into
the community (Spaulding, Sumbry, et al., 2009). Being able to contact individuals who
have successfully re-entered the community could provide positive social support for
formerly incarcerated individuals. These mentors or peer navigators would be able to
provide personal referrals to the centers, shelters, clinics, and food banks that can address
their needs. Research has shown that prisoners share their reentry experiences with one
another (Trimbur, 2009). A peer navigator would be more likely to commit time to create a
formal support system and provide risk reduction techniques and strategies (Berry, 2012;
Bradford, Coleman, & Cunningham, 2007; Fuqua et al., 2012). Given the effectiveness of
pairing newly released individuals with people who have successfully reentered the same

community, future research should examine how such programs could be integrated with new health care delivery models such as medical homes and team-based care.

New Roles for Medical Case Management: Housing and Transportation Assistance

Similar to other research, the findings of our study indicated that housing and transportation remain common barriers for HIV-infected recently-released inmates engaging in HIV care (Milloy, Marshall, Montaner, & Wood, 2012). Research has shown that when individuals reenter the community and cannot find housing, they often connect with negative influencers in their lives that can potentially lead to recidivism (Luther, Reichert, Holloway, Roth, & Aalsma, 2011). Therefore, it is important to consider how to address the housing and transportation demand for inmates immediately after release. Evaluations of rapid rehousing programs, such as the Housing Opportunities for Persons with AIDS program, have shown that housing assistance has a positive impact on medication adherence for HIV-infected patients (Wolitski et al., 2010).

Similar federally funded HIV-related assistance programs, such as those provided through the Ryan White Care Act, provide housing services and medical transportation services that have been demonstrated to be effective in increasing care engagement (Sagrestano, Clay, Finerman, Gooch, & Rapino, 2014). However, these programs have relied on community-based case managers, often through Ryan White funded programs, to link uninsured and under-insured, HIV-infected individuals with support services, such as housing and transportation assistance. As the Patient Protection and Affordable Care Act (ACA) is implemented, and patients gain access to better coverage, researchers will need to examine how the role of case management is shifting and what types of programs ensure that individuals are linked with the support services needed to optimally engage with care. For example, research could examine how public health information exchange can support coordination between community service programs such as Ryan White providers and other HCP.

Improved Linkage to Health Care/Discharge Planning

Consistent with previous research, providers in our study described the benefits gained by establishing a pre-release discharge plan (Mellow & Greifinger, 2007). Findings from our study indicated that both enrollment in assistance programs, such as ADAP, and establishing an appointment with a medical and/or community case manager were key components of discharge planning. In addition, due to recent health care coverage changes under the ACA (Crowley & Kates, 2012), providers recommended discharge planning models that included health insurance enrollment. The ACA offers a number of provisions that will expand access to the health care insurance market for individuals living with HIV, such as the expansion of Medicaid coverage and open enrollment in the health insurance exchanges (Crowley & Kates, 2012). Researchers have also predicted that broader eligibility for Medicaid will not only improve health care access for HIV-infected inmates after release but also reduce state health care spending (Rosen et al., 2014). The ACA can also expand essential services under Medicaid, including prescription drugs, and mental health and substance use services, which have important implications for formerly incarcerated populations who disproportionately suffer from mental and behavioral health problems (Crowley & Kates, 2012).

As health insurance access is expanded, researchers will need to examine how state policies regarding insurance expansion affect those living with HIV. Similarly, interventions will be needed to inform people living with HIV of insurance options and eligibility requirements and to provide assistance with insurance enrollment. For those who do not have access to insurance coverage, research is needed on how prison systems of care can work with health departments to ensure continuity of care through state HIV-related programs, Ryan White providers, and other programs that serve uninsured persons.

Enhancing Care Coordination

As more people are enrolled in care, additional research will be needed on successful models of care coordination. Prisoners are at greater risk for substance abuse and have a higher burden of chronic illness, such as hypertension (Binswanger, Krueger, & Steiner, 2009; Fazel, Bains, & Doll, 2006). The Health Resources and Services Administration (HRSA, 2013) has created a funding opportunity called HIV Medical Homes Resource Center (HIV-MHRC) that provides funding and training for HIV Service Organizations to become certified medical homes. The goal of the program is to provide team-based care through primary care services and integrated specialty care, such as HIV care. The impact of programs such as HIV-MHRC on the health outcomes of individuals living with HIV, particularly people with multiple chronic conditions, as often happens with HIV infection, should be examined. The ACA has also created an optional Medicaid provision that allows states to establish Health Homes to provide coordinated care for individuals with multiple chronic conditions. Currently, HIV is not included as a qualifying chronic condition (Centers for Medicare and Medicaid Services, 2013). If this provision is expanded, researchers will need to track the implications of Health Homes for individuals living with HIV.

Strengthening the HIV Health Care Workforce

Our HCP participants provided unique perspectives, illuminating the difficulty many patients had in locating HIV medical providers because of clinic closures and closed patient panels due to high caseloads. Research findings have shown that shortages in the HIV workforce stem from a number of factors, including the aging of the HIV medical workforce (American Academy of HIV Medicine, 2011), long-standing primary care shortages in underserved areas, and lack of specialized HIV training (Millett et al., 2010). The National HIV/AIDS Strategy (NHAS) outlined the Obama Administration's priority goals and approaches for preventing HIV, improving access to care, and reducing persistent disparities (Millett et al., 2010). The NHAS included a call for increasing the number and diversity of HIV medical providers through strategies such as increased funding for scholarship and loan programs to alleviate workforce shortages and strengthened HIV specialist training.

A number of innovative approaches have been tested in other health care fields that could prove effective to address HIV medical workforce shortages. Community health worker and peer educator programs, for example, have proven effective in alleviating primary care shortages and assisting patients with care for diabetes, cardiovascular disease, and maternal health and child care (Shah, Kaselitz, & Heisler, 2013; Sudhof et al., 2013; Thomson et al., 2014). Other innovative approaches might include models of telemedicine, which are being

piloted to improve access to provider training in underserved areas and as a tool to provide care to individuals in rural areas and in prisons (Fortney et al., 2013).

Building Multi-Level Programs to Expand the Evidence Base

Our study indicated that it is essential to intervene on multiple levels to successfully engage former prisoners in HIV care in the community. The Centers for Disease Control and Prevention (2013) has identified several evidence-based interventions to improve HIV treatment adherence but there are currently no programs tailored specifically for formerly incarcerated individuals and funding such interventions is challenging. Further research is needed to examine tailoring evidence-based HIV treatment adherence programs for formerly incarcerated individuals to increase knowledge and provide better care.

Conclusion

Community health care and service providers offer unique insight into the ways that individual, inter-personal, community, and organization facilitators and barriers affect a person's ability to engage in care. It is critical that, when developing programs that address the specialized needs of recently incarcerated HIV-infected people, these perspectives are considered. The views of front-line providers of services to recently released HIV-infected men and women, suggest that a number of interventions to support continued HIV care after community re-entry can be applied and studied. HIV interventions designed for newly released individuals should test new strategies, such as technology training and peer-to-peer social support, while strengthening health care delivery systems by improving discharge planning, care coordination, and workforce support.

Acknowledgments

References

American Academy of HIV Medicine. HIV workforce, 2011. 2011. Retrieved from http://aahivm.org/hivworkforce

Althoff AL, Zelenev A, Meyer JP, Fu J, Brown SE, Vagenas P, Altice FL. Correlates of retention in HIV care after release from jail: Results from a multi-site study. AIDS Behavior. 2013; 17(Suppl. 2):S156–S170. [PubMed: 23161210]

Berry J. Guiding lights: Peer navigators help others after finding their own way. Positively Aware. 2012; 24(4):6–9. [PubMed: 23094301]

Binswanger IA, Krueger PM, Steiner JF. Prevalence of chronic medical conditions among jail and prison inmates in the USA compared with the general population. Journal of Epidemiology and Community Health. 2009; 63(11):912–919. [PubMed: 19648129]

Booker CA, Flygare CT, Solomon L, Ball SW, Pustell MR, Bazerman LB, Spaulding AC. Linkage to HIV care for jail detainees: Findings from detention to the first 30 days after release. AIDS Behavior. 2013; 17(Suppl. 2):S128–S136. [PubMed: 23224290]

Bradford JB, Coleman S, Cunningham W. HIV system navigation: An emerging model to improve HIV care access. AIDS Patient Care and STDS. 2007; 21(Suppl. 1):S49–S58. [PubMed: 17563290]

Braun V, Clarke V. Using thematic analysis in psychology. Qualitative Research in Pyschology. 2006; 3(2):77–101.

Carson, EA.; Golinelli, D. Prisoners in 2012. 2012. Retrieved from http://www.bjs.gov/content/pub/pdf/p12tar9112.pdf

Centers for Disease Control and Prevention. Diffusion of effective interventions (DEBI): HIV prevention that works, 2013. 2013. Retrieved from http://www.effectiveinterventions.org/en/Home.aspx

Centers for Medicare and Medicaid Services. Health homes, 2013. 2013. Retrieved from http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Long-Term-Services-and-Supports/Integrating-Care/Health-Homes/Health-Homes.html

Crowley, J.; Kates, J. The Affordable Care Act, the Supreme Court, and HIV: What are the implications, 2013?. 2012. Retrieved from http://kaiserfamilyfoundation.files.wordpress.com/2013/03/8363.pdf

Eldred L, Malitz F. Introduction to the supplemental issue on the HRSA SPNS outreach initiative. AIDS Patient Care STDS. 2007; 21(Suppl. 1):S1–S2.

Fazel S, Bains P, Doll H. Substance abuse and dependence in prisoners: A systematic review. Addiction. 2006; 101(2):181–191. [PubMed: 16445547]

Fortney JC, Pyne JM, Mouden SB, Mittal D, Hudson TJ, Schroeder GW, Rost KM. Practice-based versus telemedicine-based collaborative care for depression in rural federally qualified health centers: A pragmatic randomized comparative effectiveness trial. American Journal of Psychiatry. 2013; 170(4):414–425. [PubMed: 23429924]

Fuqua V, Chen YH, Packer T, Dowling T, Ick TO, Nguyen B, Raymond HF. Using social networks to reach Black MSM for HIV testing and linkage to care. AIDS Behavior. 2012; 16(2):256–265. [PubMed: 21390535]

Haley, D.; Scheyett, A.; Golin, C.; Kaplan, A.; Parker, S. Perceptions of release among incarcerated HIV-infected persons and implications for practice: The UNC Bridges to Good Health and Treatment (BRIGHT) Project qualitative sub-study; Toronto (Canada). Paper presented at the XVI International AIDS Conference; 2006.

Health Resources and Services Administration. HIV medical homes resource center, 2013. 2013. Retrieved from https://careacttarget.org/mhrc

Kurth A, Kuo I, Peterson J, Azikiwe N, Bazerman L, Cates A, Beckwith CG. Information and communication technology to link criminal justice reentrants to HIV care in the community. AIDS Research and Treatment, Article ID547381. 2013

Luther JB, Reichert ES, Holloway ED, Roth AM, Aalsma MC. An exploration of community reentry needs and services for prisoners: A focus on care to limit return to high-risk behavior. AIDS Patient Care STDS. 2011; 25(8):475–481. [PubMed: 21663540]

Mellow J, Greifinger RB. Successful reentry: The perspective of private correctional health care providers. Journal of Urban Health. 2007; 84(1):85–98. [PubMed: 17131191]

Millett GA, Crowley JS, Koh H, Valdiserri RO, Frieden T, Dieffenbach CW, Fauci AS. A way forward: The National HIV/AIDS Strategy and reducing HIV incidence in the United States. Journal of Acquired Immune Deficiency Syndrome. 2010; 55(Suppl. 2):S144–S147.

Milloy MJ, Marshall BD, Montaner J, Wood E. Housing status and the health of people living with HIV/AIDS. Current HIV/AIDS Reports. 2012; 9(4):364–374. [PubMed: 22968432]

Palepu A, Tyndall MW, Chan K, Wood E, Montaner JS, Hogg RS. Initiating highly active antiretroviral therapy and continuity of HIV care: The impact of incarceration and prison release on adherence and HIV treatment outcomes. Antiviral Therapy. 2004; 9(5):713–719. [PubMed: 15535408]

Rosen DL, Dumont DM, Cislo AM, Brockmann BW, Traver A, Rich JD. Medicaid policies and practices in US state prison systems. American Journal of Public Health. 2014; 104(3):418–420. [PubMed: 24432881]

Sagrestano LM, Clay J, Finerman R, Gooch J, Rapino M. Transportation vulnerability as a barrier to service utilization for HIV-positive individuals. AIDS Care. 2014; 26(3):314–319. [PubMed: 23876086]

Sallis, JF.; Owen, N.; Fisher, EB. Ecological models of health behavior. In: Glanz, K.; Rimer, BK.; Viswanat, K., editors. Health behavior and health education theory, research, and practice. San Francisco, CA: Jossey-Bass; 2008.

Seal DW, Margolis AD, Sosman J, Kacanek D, Binson D. HIV and STD risk behavior among 18- to 25-year-old men released from U.S. prisons: Provider perspectives. AIDS Behavior. 2003; 7(2): 131–141. [PubMed: 14586198]

Shah M, Kaselitz E, Heisler M. The role of community health workers in diabetes: Update on current literature. Current Diabetes Reports. 2013; 13(2):163–171. [PubMed: 23345198]

Spaulding AC, Seals RM, Page MJ, Brzozowski AK, Rhodes W, Hammett TM. HIV/AIDS among inmates of and releasees from US correctional facilities, 2006: Declining share of epidemic but persistent public health opportunity. PLoS One. 2009; 4(11):e7558. [PubMed: 19907649]

Spaulding AC, Sumbry AR, Brzozowski AK, Ramos KL, Perez SD, Maggio DM, Wingood GM. Pairing HIV-positive prisoners with volunteer life coaches to maintain health-promoting behavior upon release: A mixed-methods needs analysis and pilot study. AIDS Education and Prevention. 2009; 21(6):552–569. [PubMed: 20030499]

Springer SA, Pesanti E, Hodges J, Macura T, Doros G, Altice FL. Effectiveness of antiretroviral therapy among HIV-infected prisoners: Reincarceration and the lack of sustained benefit after release to the community. Clinical Infectious Disease. 2004; 38(12):1754–1760.

Stephenson BL, Wohl DA, Golin CE, Tien HC, Stewart P, Kaplan AH. Effect of release from prison and re-incarceration on the viral loads of HIV-infected individuals. Public Health Reports. 2005; 120(1):84–88. [PubMed: 15736336]

Sudhof L, Amoroso C, Barebwanuwe P, Munyaneza F, Karamaga A, Zambotti G, Hirschhorn LR. Local use of geographic information systems to improve data utilisation and health services: Mapping caesarean section coverage in rural Rwanda. Tropical Medicine & International Health. 2013; 18(1):18–26. [PubMed: 23279379]

Thomson DR, Rich ML, Kaigamba F, Socci AR, Hakizamungu M, Bagiruwigize E, Franke MF. Community-based accompaniment and psychosocial health outcomes in HIV-infected adults in Rwanda: A prospective study. AIDS Behavior. 2014; 18(2):368–380. [PubMed: 23443977]

Trimbur L. "Me and the law is not friends": How former prisoners make sense of reentry. Qualitative Sociology. 2009; 32(3):75–100.

Wolitski RJ, Kidder DP, Pals SL, Royal S, Aidala A, Stall R, Courtenay-Quirk C. Randomized trial of the effects of housing assistance on the health and risk behaviors of homeless and unstably housed people living with HIV. AIDS Behavior. 2010; 14(3):493–503. [PubMed: 19949848]

Key Considerations

- Health care professionals should ask HIV-infected individuals who have been released from prison about barriers that may impact medication adherence.

- HIV-infected individuals who have been recently released from prison should be connected with peer navigator programs in their communities.

- As the Affordable Care Act is implemented, the role of case management may change, increasing the importance that health care professionals link HIV-infected individuals with necessary support services such as housing and transportation.

- Successful models of care coordination are needed for HIV-infected releasees who may have complex health care and social needs.

- Innovative strategies are needed to strengthen the diversity and geographic distribution of the HIV work force.

Table 1

Interview Guide

Section 1. Description of agency and interviewee's role at agency.	
Question 1	Describe the type of place where you work.
	1 What is the goal of this agency?
	2 What kind of services does your agency offer?
Question 2	Please describe the work that you do at your agency.
Section 2: Explanation of how organization/agency serves HIV-infected patients who are newly released from prison.	
Question 1	What barriers are you aware of that your newly released HIV-infected patients face in managing their HIV? (prompts asked if interviewee does not address)
	1 Barriers that get in the way of linking to HIV care after prison?
	2 Barriers that get in the way of continuing in HIV care once they have gotten linked after prison?
	3 Barriers to adhering to ARV medications?
	4 Barriers to adhering to medical appointments?
	5 Barriers due to stigma associated with HIV status?
Question 2	What facilitators are you aware of that help your newly released HIV-infected patients manage HIV after release from prison? (prompts asked if interviewee does not address)
	1 Facilitators that help them link to care after release from prison?
	2 Facilitators that help them continue in HIV care after prison?
	3 Facilitators that help them take HIV medications after release?
	4 Facilitators that help them adhere to their medical appointments after release?
Section 3: Transition of newly released HIV-infected prisoners into services at the agency.	
Question 1	How are first appointments scheduled for HIV-infected patients post-release?
Question 2	What information do you get from the DOC about newly released HIV-infected patients before or after release?
	1 What information, if any, do you wish you got from the DOC but haven't?
	2 Describe the extent of your interaction with DOC medical staff about these patients.
	3 Do you get any type of a needs assessment report from the prison staff?
	a. If Yes:
	i. What information is most useful in the assessment?
	ii. What information is least useful?
	iii. What additional information would be useful?
	b. If No: What information would you find useful to obtain through such a needs assessment?
Question 3	How long after prison release do people attend their first appointment with you?
Question 4	What are the most common needs of patients at these first appointments with you post-release?
	1 Which needs are you NOT able to address?
	2 Which needs ARE you able to address?
	3 What referrals do you commonly make?
	a. What types of referrals are easiest to make? Why?
	b. What types of referrals are most difficult to make? Why?

	4	What services do you wish existed, but don't?
Question 5	What has to be done regarding HIV or ART prescriptions on the first appointment post release? (renew prescription, refer to pharmacy, completing ADAP, labs, etc.)	
	1	Do you assist patients with Ryan White funding? If so, what is the process?
Question 6	How often do patients/consumers no-show for their first medical/agency appointment after release?	
	1	What do you do when someone no-shows for a first post-release appointment?
	2	What has happened to this person, generally, since prison release?
Question 7	How do patients/consumers get to their medical/agency appointments?	
Question 8	What does your agency do well to provide services and care to recently released individuals? Where does your agency need to improve?	

Note: ARV = antiretroviral; DOC = Department of Corrections.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Table 2

Characteristics of Health Care and Service Providers ($N = 38$)

Variable	$n(\%)$
Gender	
Female	30 (79%)
Male	8 (21%)
Race/Ethnicity	
White	1 7 (4 5 %)
African American	16 (42%)
Multi-racial	2 (5%)
Other	3 (8%)
Hispanic Ethnicity	6 (18%)
Education	
Some college	5 (13%)
College Graduate	10 (26%)
Some graduate school/graduate degree	23 (61%)
Occupation	
Mental Health Care Professional	12 (32%)
Health Care Provider	6 (15%)
Case Manager/Outreach Worker/Social Worker	20 (53%)
Length of Time at Job	
0–4 years	16 (42%)
5–10 years	12 (32%)
11–16 years	7 (18%)
16–21 years	3 (8%)

Table 3

Barriers of Care Engagement by Socio-Ecological Level

Socio-Ecological Level	Barrier
Intra-Individual	Learning to think on one's own Reintegration activities represent competing demands to accessing care Meeting basic needs Navigating new technologies
Inter-Individual	Disclosure
Community	Exposure to pre-release environment and social networks Lack of available housing in their communities Lack of transportation
Organization	Poor coordination between care systems Shortage and lack of diversity in HIV care workforce Prison and HIV-related discrimination