Published in final edited form as:

AIDS Educ Prev. 2017 October ; 29(5): 443–456. doi:10.1521/aeap.2017.29.5.443.

BARRIERS AND FACILITATORS TO THE IMPLEMENTATION OF A NATIONAL HIV LINKAGE, RE-ENGAGEMENT, AND RETENTION IN CARE PROGRAM

Cathy Maulsby, PhD, MPH,

Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland

Paul Sacamano, MPH, CRNP,

Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland

Kriti M. Jain, MSPH,

Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland

Blessing Enobun, MBBS, MPH,

Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland

Meredith L. Brantley, PhD, MPH,

Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland

Hae-Young Kim, MPH,

Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland

Morey Riordan, MSW,

AIDS United, Washington, D.C

Melissa Werner, MAT, MPH,

AIDS United, Washington, D.C

The A2C Implementation Team, and David R. Holtgrave, PhD

Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland

Abstract

The 2020 National HIV AIDS Strategy (NHAS) sets a target of 90% of diagnosed people living with HIV (PLWH) retained in HIV care. Access to Care (A2C) was a national HIV linkage, re-engagement, and retention in care program funded by AIDS United with support from the Corporation for National and Community Service that aimed to link and retain the most vulnerable PLWH into high-quality HIV care. This study explores the barriers and facilitators of implementing the A2C program from the perspective of program staff. Ninety-eight qualitative interviews were conducted with staff at implementing organizations over the 5 years of the project. Barriers included challenges with recruiting and retaining participants, staffing and administration, harmonizing partnerships, and addressing the basic and psychosocial needs of participants. Facilitators included strong relationships with partner organizations, flexible program models, and

the passion and dedication of staff. Findings will inform the development of future programs and policy.

The National HIV/AIDS Strategy (NHAS) is a 5-year plan developed by the White House Office of National AIDS Policy (ONAP) that sets priorities to guide the response to the HIV epidemic in the United States. A key step in meeting the plan's goal to increase access to care and improve health outcomes for people living with HIV (PLWH) is promoting linkage to and continuous retention in HIV care. The updated plan to 2020 sets a target of increasing the number of people diagnosed with HIV that are retained in HIV medical care to at least 90% (White House Office of National AIDS Policy, 2015). AIDS United's Access to Care (A2C) initiative was highlighted by ONAP as an exemplary program helping to meet the NHAS goals (Office of National AIDS Policy, 2013). The A2C initiative is a multi-site public-private partnership with support from the Corporation for National and Community Services' Social Innovation Fund (SIF) and others. The initiative aims to improve engagement in care and reduce disparities of economically and socially marginalized populations of PLWH. Specifically, it seeks to address barriers and support innovative approaches that promote linkage to and continuous retention in HIV care. In partnership with the A2C sites and AIDS United, the Johns Hopkins University (JHU) has conducted an evaluation of staff perceptions from implementing organizations regarding their programs and interventions (Kim et al., 2014). This article reviews findings from the evaluation and distinguishes cross-cutting themes related to barriers and facilitators to linkage and retention in care. Findings from this evaluation can help to identify effective approaches to improve engagement in HIV care along the care continuum.

CARE CONTINUUM

The HIV care continuum depicts the progression from diagnosis, linkage to care and treatment to effective viral suppression (Gardner, McLees, Steiner, Del Rio, & Burman, 2011). Retention in care has been defined by the NHAS as having two or more HIV medical visits at three or more months apart documented during the most recent year (White House Office of National AIDS Policy, 2010). Retention in care is essential for PLWH to adhere to and consistently receive antiretroviral treatment (ART), which results in reduced HIV-related morbidity and prevention of new infections through suppression of viral load (Panel on Antiretroviral Guidelines for Adults and Adolescents, 2016). It has been estimated that only about 45% of those diagnosed with HIV are retained in continuous care (Hall et al., 2012). Following diagnosis, PLWH can progress forward along the continuum as they link to and stay in care or backward as they fall in and out of treatment (Kay, Batey, & Mugavero, 2016). Suboptimal retention has been associated with use of more costly emergency and hospital resources (Knowlton et al., 2001), avoidable disease progression and ongoing HIV transmission (Skarbinski et al., 2015; U.S. Department of Health and Human Services, 2014). Given the role of viral suppression in improving individual health outcomes and limiting population level HIV incidence, there is a heightened need to implement interventions that can increase the proportion of PLWH linked to and retained in continuous care.

PROGRAM IMPLEMENTATION

Research on the implementation of linkage and retention in care programs aims to identify those strategies that are effective for real-world application by enhancing our understanding of individuals, stakeholders, communities, and programs (Odeny et al., 2015). Research on the implementation of Positive Charge, a linkage to care program, found that successful implementation strategies focused on active outreach, staff training, and budgeting; internal and external collaboration and information sharing systems; clearly distinguishing the roles of care coordinators from social and medical providers; and hiring peers as care coordinators, among other factors (Kinsky et al., 2015). For peer workers in particular, consideration must be given to issues of disclosure, role strain, training, and integration into the healthcare system (Espino, 2015). Evidence-based interventions for promoting linkage and retention include case management (Craw et al., 2010; Higa, Marks, Crepaz, Liao, & Lyles, 2012), health system navigation (Bradford, Coleman, & Cunningham, 2007) and motivational interviewing (Konkle-Parker, Amico, & McKinney, 2014; Naar-King, Outlaw, Green-Jones, Wright, & Parsons, 2009). For clients with co-occurring disorders and multiple social needs, often related to substance use and mental illness, there is evidence for utilization of multidisciplinary care teams that deliver primary and ancillary services from a biopsychosocial perspective (Soto, Bell, Pillen, HIV/AIDS Treatment Adherence, Health Outcomes & Cost Study Group, 2004). Overall, increasing the number of outreach contacts outside the clinic setting that provide appointment reminders, service coordination, relationship building, counseling, and transportation can lower the likelihood of experiencing gaps in care (Cabral et al., 2007). While these findings have contributed to evidence for the use of particular linkage to care approaches for PLWH, there remains a need to expand our knowledge of barriers and facilitators that are commonly experienced across a wide variety of communities and programs. This study aims to advance our understanding of the themes broadly applicable to HIV linkage to care implementation through the exploration of cross-cutting barriers and facilitators of implementation of 12 linkage, retention and re-engagement in HIV medical care programs.

METHODS

SETTING AND DESIGN

The 12 A2C programs took place at various locations throughout the United States. Each sub-grantee location had a lead organization and collaborated with local partners to implement the project. Local partners included medical providers, other AIDS service organizations (ASOs), and social service organizations. All 12 programs sought to link, re-engage, and retain out-of-care PLWH to ongoing, HIV medical care. The programs served individuals who knew their HIV status but were not in care with a heavy focus on re-engagement in care for PLWH who had fallen out of care. The A2C programs used a range of evidence-based program models to link, re-engage, and retain PLWH into HIV medical care including care teams, strength-based case management, motivational interviewing, community health workers, and health navigation (Table 1). Each program was based in an area heavily affected by the HIV epidemic and specifically designed to address the needs of out-of-care individuals locally.

DATA COLLECTION AND ANALYSIS

Qualitative data were collected by JHU faculty and staff using an in-depth, semistructured interview guide. Interviewees were selected through purposive sampling. JHU worked closely with sub-grantees to identify appropriate individuals to interview. Where possible, two people were interviewed at each lead and partner organization (Kwait, Valente, & Celentano, 2001). To capture a variety of perspectives and activities, at each organization, we aimed to interview one individual who worked at the administrative level (e.g., an ASO director) and another who provided direct services to clients (e.g., a peer health navigator). During interviews, each respondent was asked about challenges to implementation, factors that facilitated program implementation, and inter-organizational collaboration. Each interview lasted between 45 and 90 minutes and was conducted by a single interviewer, either in person or on the phone. The interviewer was a JHU-based faculty or staff member. JHU's Institutional Review Board (IRB) found this work to be nonhuman subjects' research. There were no incentives for participating in the study.

The number of interviews was determined by the number of partners involved in the program, as well as the availability of interviewees. Table 1 provides information on data collection for the qualitative interviews by sub-grantee, specifically the number and type of interviews (service or administrative), the organizations interviewed, and the interview dates. Across all 12 sub-grantees, 98 interviews were conducted. As part of the evaluation of the A2C programs, data were analyzed and presented at the sub-grantee level. The findings in this manuscript include cross-cutting results that emerged across all A2C programs.

All interviews were audio recorded and transcribed. Conventional content analysis was used as the analytical approach (Hsieh & Shannon, 2005). In-depth interviews were read completely and analyzed using inductive coding to examine the categories within the broader themes of linkage and retention in care programs. Initially, open coding was conducted. Categories and category names arose from the data itself to form the basis of initial codes, which were then sorted into clusters. Inductive coding allowed exploration of new ideas and themes emerging from the data that were not originally anticipated. ATLAS.ti software was used to assign and organize codes (ATLAS.ti). While three different researchers analyzed different sub-grantees' data, all used the same coding guide to ensure consistency across individual sub-grantee data analysis. The coding guide was developed collaboratively by two researchers. To enhance trustworthiness of findings, coding and findings were reviewed across interviewers and by other evaluation team members (Lincoln & Guba, 1985). Throughout the text, quotes have been attributed to an organization but the attribution has been de-identified (e.g., Org. A).

RESULTS

BARRIERS TO IMPLEMENTING LINKAGE AND RETENTION IN CARE PROGRAMS

Four themes emerged across the A2C programs as barriers to program implementation: intensity of client needs; recruiting and retaining participants; staffing and administrative hurdles; and challenges related to working with multiple partner organizations (Table 2). These cross-cutting themes are discussed in detail below.

Intensity of Client Needs—Across all 12 A2C sub-grantees, the intensity of client needs posed a formidable barrier to program implementation. A2C participants faced complex, interrelated challenges that needed to be addressed before participants' health care could become a priority. Specifically, untreated mental illness and substance use were HIV comorbidities that were universally mentioned as unmet needs that prevented participants from successful engagement in care. All sub-grantees described a lack of stable, affordable housing, which posed the greatest barrier to engagement in HIV care. Sub-grantees also found a dearth of access to resources and services to address the housing, mental health, and substance use needs of their clients. Additional needs that were frequently highlighted by sub-grantees related to employment, which was viewed as intertwined with housing, transportation, and dental care needs.

To address clients' needs, most A2C programs referred their participants to high-quality social services programs with whom their staff had an ongoing relationship. These programs were sometimes housed within the lead A2C agency or a partner agency; other times, these programs were external to the A2C network. A2C staff had a deep knowledge of the programs being referred to and strong relationships with the individuals who provided social services, which led to a smooth referral process. Some A2C sub-grantees referred directly to social services while others worked through existing case management programs. Regardless of the strategy used; however, program staff emphasized shortages of services, especially for housing, mental health, substance use, and dental services.

Recruitment and Retention Challenges—Most A2C sub-grantees faced challenges with participant recruitment, which varied depending on the recruitment strategy. All staff reported difficulties in communication with potential participants and enrolled participants. Many participants were geographically unstable, and sub-grantees found it challenging to locate participants with out-of-date addresses and phone numbers. Contact records, from sources such as medical records and case management records, were often outdated. Locating participants was described as a time intensive and burdensome process with low yield. Successful participant recruitment and retention depended on reliable, ongoing communication between and within partner agencies about participants. Some agencies faced barriers to receiving and sharing participant-level information with health care providers, community-based organizations, health departments, and social organizations because of HIPAA restraints. Other sub-grantees faced challenges with intra-agency communication systems that were not optimal. Sub-grantees working with incarcerated populations faced unique communication challenges as their program participants transitioned out of jail or prison; incarcerated individuals may not know their residence immediately following release and may lack access to a stable phone number.

Staff adopted a range of diverse and creative strategies to reach participants and indicated that it was important that programs had the flexibility to try a variety of approaches. Sub-grantees facing challenges reaching participants on out-of-care lists made course corrections and relied more heavily on recruitment and referrals through partner organizations, and other avenues such as call-in hotlines. Email and social media, such as Facebook, also emerged as a successful way to keep in contact with participants, even those with many basic needs. One

of the most important strategies for retaining participants was the quality of relationships with A2C staff.

Staffing and Administrative Challenges—Sub-grantees reported several challenges related to staffing. Many programs experienced high staff turnover. Turnover among staff who had frequent direct participant contact, such as navigators and community health workers, was viewed as particularly problematic given the importance of their relationships with participants and the community. This cadre also needed intense, ongoing job training. Building necessary skills and relationships took time and commitment. Building relationships, in particular, compounded challenges when transitioning in new staff. A closely related theme was a high level of burnout among staff who worked directly with clients. While a small number of interviewees attributed this to an unsupportive work environment, others explained that staff burnout was a result of the demanding and highly personal nature of the work, particularly for peers. Peers, who were usually PLWH, often had similar background to participants and shared their own stories when relating with and motivating participants to engage in HIV medical care. Staff created opportunities, such as peer meetings and all program staff meetings, for direct service staff to share their experiences, lessons learned, and to problem-solve challenges in program implementation.

While all sub-grantees that used peer models saw peers as vital to engaging participants, several reported challenges around recruiting and training peers. Recruitment challenges included reluctance among potential peers to disclose HIV status and to apply for a position that might result in a loss of disability coverage. Peers handled significant and diverse responsibility and finding individuals with the unique and varied skillset needed was challenging. Respondents reported a need to conduct ongoing training in areas such as program implementation, data collection, professional conduct, role clarity, and boundaries. A close working relationship between direct service staff and their supervisors was critical for addressing some of the challenges faced by peer staff.

A related administrative challenge was the burden of data collection, data management, and meeting reporting requirements. Several sub-grantees indicated that their program faced challenges meeting the reporting requirements of various funders. Respondents reported frustration over data collection systems and processes were time intensive, duplicative, and incompatible across partner agencies. To address these challenges, grantees adapted their data collection systems (for example by switching from paper to electronic systems), provided additional training and supervision of staff, and developed creative ways to provide time for data related activities (such as designated meetings for data entry and management).

HARMONIZING PARTNERSHIPS

Although partnerships between implementing partners were seen as critical to successfully linking, re-engaging, and retaining clients in care, significant time and effort was needed to harmonize these relationships. Through Access to Care, very different organizations had the opportunity to work together towards a common goal and at times these differences were challenging. Respondents indicated that they needed to overcome cultural differences between organizations. Initially some HIV medical providers were reluctant to work with

direct service staff. There were also differences in the administrative cultures of organizations. While some partners were quite nimble, others faced considerable bureaucracy. Several sub-grantees reported challenges in obtaining buy-in from other local agencies that focused on PLWH. This barrier was explained as a result of a scarcity of resources, which fueled competition for clients and heightened concern over duplication of services. The primary strategy used to address these challenges was open communication to quell concerns and to build mutual understanding in an effort to develop even stronger working relationships across organizations.

CROSS-CUTTING FACILITATORS TO IMPLEMENTING LINKAGE AND RETENTION IN CARE PROGRAMS

Three cross-cutting themes emerged from the data as factors that facilitated A2C program implementation: strong relationships with partner organizations; the flexible nature of the A2C programs; and the expertise, dedication, and passion of staff (Table 3).

Strong Partnerships With Social Service Organizations and HIV Primary Care Providers—

Respondents indicated the importance of having strong relationships with organizations providing social services and HIV primary care. For programs where the lead agency did not provide wraparound services, it was necessary to partner with organizations providing these services to meet the needs of participants. In particular, housing, mental health, and substance use treatment was needed. Having strong partnerships with medical providers was also critically important and many sub-grantees recommended basing staff at medical providers' offices as a way to strengthen these relationships. For example, one sub-grantee co-located case management, peer navigation, HIV primary care, and pharmacy services. Another sub-grantee lauded working with small HIV primary care providers because small HIV primary care providers were viewed as having a keen grasp of community needs. A related theme was the importance of partnering with organizations that had expertise working with specific populations, including LGBTQ individuals and racial minorities who faced unique challenges related to immigration or multiple forms of stigma.

Strong relationships with organizations providing social services and with HIV primary care providers were useful for identifying potential participants and provided the benefit of a warm handoff (an in-person personalized referral; Horevitz, Organista, & Arian, 2015). Because of these partnerships, A2C sub-grantees were able to better serve their A2C clients—care was provided more quickly, a greater variety of services were provided to participants, and follow-up with clients who missed appointments was more achievable. In addition, strong relationships with HIV medical providers facilitated timely data collection and reporting for tracking participant health status and for meeting evaluation requirements.

Respondents reported that having strong relationships at the onset of the project, having staff dedicated to building and maintaining relationships, and frequent communication between partners facilitated the building of strong partnerships. Respondents recommended open communication from the onset of the program (as early as the proposal writing stage) and maintaining strong communication through regular (e.g., monthly) partner meetings. During these meetings, sub-grantees reported focusing on topics such as strategizing to address

challenges, sharing lessons learned, handling issues related to caseloads (such as size, complexity, and specific cases), trainings, supporting staff, and building new relationships with organizations. Several respondents also reported that a lead agency that was established and well respected within the community was particularly helpful for building partnerships.

Flexible Program Models—Trial and error are inherent to the iterative processes of program innovation. Respondents described the flexible nature of the A2C programs as being important for quick programmatic course corrections. Respondents indicated the utility of being able to adapt program strategies. This flexible approach facilitated the acknowledgment of implementation challenges and provided sub-grantees with the opportunity to adapt program strategies accordingly.

Characteristics of Staff—Across all respondents, the passion and dedication of staff were universally recognized as being instrumental to program success. In particular, respondents lauded the connections between direct service staff and the individuals served by the program. Respondents noted the importance of hiring staff with whom the A2C program participants could relate. Peers were recognized for their unique ability to build trust and rapport with clients and to serve as role models in ways that other cadre of staff (such as nurses and case managers) were not. Supervisors of direct service staff played an important role by providing support, guidance, and supervision to direct service staff. Having clearly defined roles and responsibilities (e.g., between case management and direct services staff) helped to ensure fluid, seamless, and team-oriented relationships among staff.

DISCUSSION

Goal two of the 2015 National HIV AIDS Strategy (NHAS) focuses on increasing the number of PLWH who are linked to and retained in HIV care. AIDS United's A2C program was a national effort to increase linkage and retention in care among the most vulnerable populations of PLWH. Implementation science aims to understand barriers and facilitators that influence implementation of evidence-based interventions. This manuscript presents common themes from across the 12 A2C programs on barriers and facilitators of program implementation.

Cross-cutting implementation barriers included challenges meeting the severity of need among program participants. Staff reported a dearth of services to address participants' needs, in particular participants' housing, substance abuse, and mental health needs. The contribution of structural and psychosocial factors to suboptimal engagement in HIV care is well documented (Aidala et al., 2016; Buchberg et al., 2015; Dombrowski, Simoni, Katz, & Golden, 2015). While A2C programs helped participants to prioritize their needs and to navigate existing social services, the demand for social services exceeded the supply. This was particularly true for participants with unmet housing needs. This underscores the importance of including reimbursement for support services (such as case management, housing services, psychosocial support, substance abuse services, and referrals to support services) through programs such as Ryan White but suggests that further action is needed to ensure that support services meet the demand. Current efforts to revise the formula and requirements for distributing funds under the Housing Opportunities for Persons with AIDS

(HOPWA) program provide an example of policy-level approaches that could increase access to stable housing for PLWH.

Respondents reported administrative challenges with recruiting and retaining staff, high rates of burnout among direct service staff, and the need for continuous training. The literature corroborates administrative challenges with recruiting and retaining staff, in particular peer staff (Espino et al., 2015; Garcia, Blank, Eastwood, & Karasz, 2015). All A2C programs had a least one implementing partner, and respondents indicated that it took time and effort to harmonize relationships between implementing partner organizations who brought a diversity of strengths, expertise, cultures, and systems to the programs. However, these efforts paid off and were seen as a critical component of successful program implementation at all stages, including identifying the needs of the community, strategic intervention design and development, recruitment and retention, implementation, program monitoring, and outcome evaluation. Similar to other research in this area, we also found that a history of prior collaboration, strong leadership to promote buy-in and formalized relationships through MOUs or similar agreements, open communication, frequent meetings, and clearly defined roles fostered productive partnerships between organizations (Garcia et al., 2015). Similar characteristics—open communication, clear role definition, supportive leadership from supervisors, and weekly meetings—were used to describe positive working relationships among staff implementing A2C as well as other linkage to care programs (Espino et al., 2015).

Other facilitating factors included flexible program models which allowed for mid-course corrections. The Consolidated Framework for Implementation Research (CFIR) recognizes adaptability (the degree to which an intervention can be adapted, tailored, or refined to meet local needs) as an important intervention characteristic for effective implementation (Damschroder et al., 2009). Recent efforts to identify and document core components of linkage and retention in care programs (such as Health Resources and Services Administration's Special Projects of National Significance Dissemination of Evidence-Informed Interventions to Improve Health Outcomes along the HIV Continuum of Care Initiative, 2015–2020 and Improving Access to Care: Using Community Health Workers to Improve Linkage and Retention in Care) should aid program implementers in their efforts to balance adaptability with program fidelity as they implement evidence-based programs.

This study faces several limitations. While we aimed to interview two individuals at each organization involved in the A2C program, we were not always able to do this because of staff turnover, scheduling conflicts, and program structure. Interviewing additional people involved with program implementation might have offered new perspectives. In addition, each individual was interviewed only one time. Follow-up interviews would have allowed us to ask additional questions for clarification and to further explore emerging themes. Finally, data was gathered at one point in time and represents a snapshot of perspectives at one time point. Conducting the study at a different point in time (for example, at the end of the program) or at multiple points in time might have yielded additional insights.

CONCLUSIONS

Capturing the voices and perspectives of program staff, this article describes barriers and facilitators to implementing a national HIV linkage, re-engagement and retention in care program which aimed to reach the most vulnerable populations. Barriers included challenges with recruiting and retaining participants, staffing and administration, harmonizing partnerships, and addressing the basic and psychosocial needs of participants. Facilitators included strong relationships with partner organizations, flexible program models, and the passion and dedication of staff. To achieve the NHAS's goals of 90% of diagnosed PLWH retained in care, national efforts that address needs and barriers are needed to re-engage the most vulnerable populations into HIV care.

Acknowledgments

This work was funded by AIDS United in partnership with the Social Innovations Fund, a program of the Corporation for National and Community Service (Grant No. 10SIHDC001). The authors would like to express their gratitude to the A2C intervention staff for their dedication and for the individuals who participated in the A2C intervention. This document is based upon work under Grant No. 10SIHDC001 and supported by the Social Innovation Fund (SIF), a program of the Corporation for National and Community Service (CNCS). Opinions or points of view expressed in this document are those of the authors and do not necessarily reflect the official position of, or a position that is endorsed by, CNCS or the Social Innovation Fund program. The Social Innovation Fund is a program of the Corporation for National and Community Service, a federal agency that engages millions of Americans in service through its AmeriCorps, Senior Corps, Social Innovation Fund, and Volunteer Generation Fund programs, and leads the President's national call to service initiative, United We Serve. For more information, visit NationalService.gov. Opinions or points of view expressed in this document are those of the authors and do not necessarily reflect the official position of, or a position that is endorsed by, the Corporation or the Social Innovation Fund, AIDS United, Johns Hopkins Bloomberg School of Public Health, or the grantees of the A2C initiative. We would also like to acknowledge those who took time to review the manuscript.

References

- Aidala AA, Wilson MG, Shubert V, Gogolishvili D, Globberman J, Rueda S, ... Rourke SB. Housing status, medical care, and health outcomes among people living with HIV/AIDS: A systematic review. *American Journal of Public Health*. 2016; 106:e1–e23. <https://doi.org/10.2105/AJPH.2015.302905>.
- ATLAS.ti. Version 7. [Computer software]. Berlin: Scientific Software Development; 1999.
- Bradford JB, Coleman S, Cunningham W. HIV System Navigation: An emerging model to improve HIV care access. *AIDS Patient Care and STDs*. 2007; 21:S49–S58. <https://doi.org/10.1089/apc.2007.9987>. [PubMed: 17563290]
- Buchberg MK, Fletcher FE, Vidrine DJ, Levison J, Peters MY, Hardwicke R, ... Bell TK. A mixed-methods approach to understanding barriers to postpartum retention in care among low-income, HIV-infected women. *AIDS Patient Care and STDs*. 2015; 29:126–132. <https://doi.org/10.1089/apc.2014.0227>. [PubMed: 25612217]
- Cabral HJ, Tobias C, Rajabiun S, Sohler N, Cunningham C, Wong M, Cunningham W. Outreach program contacts: Do they increase the likelihood of engagement and retention in HIV primary care for hard-to-reach patients? *AIDS Patient Care and STDs*. 2007; 21:S59–S67. <https://doi.org/10.1089/apc.2007.9986>. [PubMed: 17563291]
- Craw J, Gardner L, Rossman A, Gruber D, Noreen O, Jordan D, ... Phillips K. Structural factors and best practices in implementing a linkage to HIV care program using the ARTAS model. *BMC Health Services Research*. 2010; 10:246. <https://doi.org/10.1186/1472-6963-10-246>. [PubMed: 20727189]
- Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implementation Science*. 2009; 4:50. <https://doi.org/10.1186/1748-5908-4-50>. [PubMed: 19664226]

- Dombrowski JC, Simoni JM, Katz DA, Golden MR. Barriers to HIV care and treatment among participants in a public health HIV care relinkage program. *AIDS Patient Care and STDs*. 2015; 29:279–287. <https://doi.org/10.1089/apc.2014.0346>. [PubMed: 25826007]
- Espino SLR, Precht A, Gonzalez M, Garcia I, Eastwood EA, Henderson T, Blank AE, Karasz A. Implementing peer-based HIV interventions in linkage and retention programs: Successes and challenges. *Journal of HIV/AIDS and Social Services*. 2015; 14:417–431.
- Garcia IA, Blank AE, Eastwood EA, Karasz A. Barriers and facilitators to the implementation of SPNS interventions designed to engage and retain HIV positive women of color in medical care. *AIDS and Behavior*. 2015; 19:655–665. <https://doi.org/10.1007/s10461-014-0837-5>. [PubMed: 25107362]
- Gardner EM, McLees MP, Steiner JF, Del Rio C, Burman WJ. The spectrum of engagement in HIV care and its relevance to test-and-treat strategies for prevention of HIV infection. *Clinical Infectious Diseases*. 2011; 52:793–800. <https://doi.org/10.1093/cid/ciq243>. [PubMed: 21367734]
- Hall HI, Gray KM, Tang T, Li J, Shouse L, Mermin J. Retention in care of adults and adolescents living with HIV in 13 U.S. areas. *Journal of Acquired Immune Deficiency Syndromes*. 2012; 60:77–82. <https://doi.org/10.1097/QAI.0b013e318249fe90>. [PubMed: 22267016]
- Higa DH, Marks G, Crepaz N, Liao A, Lyles CM. Interventions to improve retention in HIV primary care: A systematic review of U.S. studies. *Current HIV/AIDS Reports*. 2012; 9:313–325. <https://doi.org/10.1007/s11904-012-0136-6>. [PubMed: 22996171]
- Horevitz E, Organista KC, Areal PA. Depression treatment uptake in integrated primary care: How a “warm handoff” and other factors affect decision making by Latinos. *Psychiatric Services*. 2015; 66:824–830. <https://doi.org/10.1176/appi.ps.201400085>. [PubMed: 25873022]
- Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. *Qualitative Health Research*. 2005; 15:1277–1288. [PubMed: 16204405]
- Kay ES, Batey DS, Mugavero MJ. The HIV treatment cascade and care continuum: Updates, goals, and recommendations for the future. *AIDS Research and Therapy*. 2016; 13:35. <https://doi.org/10.1186/s12981-016-0120-0>. [PubMed: 27826353]
- Kim JJ, Maulsby C, Kinsky S, Riordan M, Charles V, Jain K, Holtgrave DR. The development and implementation of the national evaluation strategy of Access to Care, a multi-site linkage to care initiative in the United States. *AIDS Education and Prevention*. 2014; 26:429–444. <https://doi.org/10.1521/aeap.2014.26.5.429>. [PubMed: 25299807]
- Kinsky S, Maulsby CH, Jain KM, Charles V, Riordan M, Holtgrave DR. Barriers and facilitators to implementing access to HIV care interventions: A qualitative analysis of the positive charge initiative. *AIDS Education and Prevention*. 2015; 27:391–404. <https://doi.org/10.1521/aeap.2015.27.5.391>. [PubMed: 26485230]
- Knowlton AR, Hoover DR, Chung SE, Celentano DD, Vlahov D, Latkin CA. Access to medical care and service utilization among injection drug users with HIV/AIDS. *Drug and Alcohol Dependence*. 2001; 64:55–62. [https://doi.org/10.1016/s0376-8716\(00\)00228-3](https://doi.org/10.1016/s0376-8716(00)00228-3). [PubMed: 11470341]
- Konkle-Parker DJ, Amico KR, McKinney VE. Effects of an intervention addressing information, motivation, and behavioral skills on HIV care adherence in a southern clinic cohort. *AIDS Care*. 2014; 26:674–683. <https://doi.org/10.1080/09540121.2013.845283>. [PubMed: 24116922]
- Kwait J, Valente TW, Celentano DD. Interorganizational relationships among HIV/AIDS service organizations in Baltimore: A network analysis. *Journal of Urban Health*. 2001; 78:468–487. [PubMed: 11564850]
- Lincoln, YS., Guba, EG. *Naturalistic inquiry*. Newbury Park, CA: Sage Publications; 1985.
- Naar-King S, Outlaw A, Green-Jones M, Wright K, Parsons JT. Motivational interviewing by peer outreach workers: a pilot randomized clinical trial to retain adolescents and young adults in HIV care. *AIDS Care*. 2009; 21:868–873. <https://doi.org/10.1080/09540120802612824>. [PubMed: 20024744]
- Odeny TA, Padian N, Doherty MC, Baral S, Beyrer C, Ford N, Geng EH. Definitions of implementation science in HIV/AIDS. *Lancet HIV*. 2015; 2:e178–e180. [https://doi.org/10.1016/S2352-3018\(15\)00061-2](https://doi.org/10.1016/S2352-3018(15)00061-2). [PubMed: 26423000]

- Office of National AIDS Policy. National HIV/AIDS Strategy Improving Outcomes: Accelerating Progress Along the HIV Care Continuum. 2013. Retrieved from https://www.whitehouse.gov/sites/default/files/nap_nhas_improving_outcomes_dec_2013.pdf
- Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the use of antiretroviral agents in HIV-1-infected adults and adolescents. 2016 p. Retrieved from <https://aidsinfo.nih.gov/guidelines/html/1/adult-and-adolescent-treatment-guidelines/0/>
- Skarbinski J, Rosenberg E, Paz-Bailey G, Hall HI, Rose CE, Viall AH, ... Mermin JH. Human immunodeficiency virus transmission at each step of the care continuum in the United States. JAMA Internal Medicine. 2015; 175:588–596. <https://doi.org/10.1001/jamainternmed.2014.8180>. [PubMed: 25706928]
- Soto TA, Bell J, Pillen MB. HIV/AIDS Treatment Adherence, Health Outcomes & Cost Study Group. Literature on integrated HIV care: A review. AIDS Care. 2004; 16:S43–S55. <https://doi.org/10.1080/09540120412331315295>. [PubMed: 15736821]
- U.S. Department of Health and Human Services. Guide for HIV/AIDS Clinical Care, 2014. 2014. Retrieved from <https://hab.hrsa.gov/sites/default/files/hab/clinical-quality-management/2014guide.pdf>
- White House Office of National AIDS Policy. National HIV/AIDS strategy for the United States. 2010. Retrieved from <http://www.whitehouse.gov/administration/eop/nap/nhas/>
- White House Office of National AIDS Policy. National HIV/AIDS strategy for the United States: Updated to 2020. 2015. Retrieved from <https://www.aids.gov/federal-resources/national-hiv-aids-strategy/overview/>

TABLE 1

Sub-grantee Descriptions and Data Collection Details

Project name	Location	Program model	Organizations interviewed	Number of interviews	Interview dates
Philadelphia Linkage Program	Philadelphia, PA	Pre- and post-release HIV medical and social service case management. Participants also received substance use recovery treatment, behavioral health services, and housing support through ActionAIDS' program partners.	Action Wellness, COMHAR, Gaudenzia, Pathways to Housing	Admin/Service: 3; Admin: 1; Service: 1	April–May 2015
Learning, Engaging, and Advocating with Peers	Boston, MA	An integrated care team (HIV peer advocate, medical case manager, and other staff) model with a focus on coordination and economic stability.	AIDS Action Committee, Fenway, PACT/IRI, BIDMC, ICH	Admin: 6; Service: 6	February–March 2014
Connect2Care	Chicago, IL	Peer navigators and case managers worked through a network of local AIDS service organizations to support clients in early and continuous care engagement.	AIDS Foundation Chicago, MATEC, Chicago House, Mercy Care Program	Admin: 5; Service: 4	July 2012–October 2012
AmidaCONNECT	New York City, NY	Assertive Community Treatment model used Mobile Engagement Teams (Health Educator, Intensive Case Manager, Community Health Outreach Worker, and Licensed Social Worker), which provided outreach and re-engagement services to members of Amida Care's Medicaid special needs plan.	Amida Care, Housing Works, Help/PSI, Harlem United	Admin: 4; Service: 4	June 2013–July 2013
Care and Access Network	Los Angeles, CA	Peer navigators provided strengths-based case management or HIV medical health navigation.	AIDS Project Los Angeles, DHSP, MCA Clinic, THE Clinic, Rand Schrader, Northeast Valley	Admin: 5; Service: 6	December–January 2014
Change for Women Network	San Diego, CA	Trauma-informed wrap-around services model, which included a peer navigation component.	Christie's Place, AVRC, MCAP, NCHS	Admin: 4; Service: 2	May–June 2012
Linkage to Care	Indianapolis, IN	Linkage to Care Specialist provided case management services with a focus on addressing barriers to care.	The Damien Center, Brothers United, Women in Motion, Indiana Latino Institute, Community North Hospital, Bellflower, Life Care	Admin: 2; Service: 7	July–August 2015
Louisiana Re-Entry Initiative	New Orleans and Baton Rouge, LA	Pre-post release case management and reentry services with incarcerated individuals. Community outreach and peer navigation for formerly incarcerated individuals.	Louisiana Public Health Institute, Capitol Area Reentry Program, CrescentCare, Women with a Vision, Louisiana State Health Department	Admin: 6; Service: 2	June–August 2015
Alabama eHealth	Montgomery, AL	Telemedicine services to participants living in remote rural areas.	Medical Advocacy and Outreach (MAO)-Montgomery, MAO-Selma, MAO-	Admin: 4; Service: 5	September–October 2014

Project name	Location	Program model	Organizations interviewed	Number of interviews	Interview dates
			Dothan, AIDS Action Coalition, Selma AIR		
Barrier Elimination and Care Navigation	St. Louis, MO	Care teams (case manager, peer advocate, and community nurse) address barriers to care and provided social and medical support.	St. Louis Effort for AIDS, Washington University Infectious Disease Clinic, Washington University BEACON Team	Admin: 3; Service: 3	April 2014
Birmingham Access to Care	Birmingham, AL	Strengths-based case management, motivational interviewing and enhanced support for addressing barriers to care.	University of Alabama at Birmingham, Birmingham AIDS Outreach	Admin: 2; Service: 2	January–February 2016
Positive Pathways	Washington, DC	Integrated Community Health Worker model	Washington AIDS Partnership, Whitman-Walker Health, Unity Health Care, Chartered Health Plan, Women's Collective, Institute for Public Health Innovation, Family Medical Counseling Services	Admin: 6; Service: 5	October–November 2012

TABLE 2

Cross-Cutting Barriers to Program Implementation

Theme	Illustrative quote
Intensity of client needs	"... they're just trying to maintain life, and so when you get to a point where you don't know where you're staying that night, you don't know if you'll be safe where you're staying wherever you can find, if you'll be eating, that takes precedence over 'Am I going to go to my doctor today? Did I get my script filled on time?' And then also you have other issues coming into play, trauma, maladaptive coping skills like substance abuse that leads to addiction. All of that works as barriers against linkage to care and continuity of care." (The South, Org. D)
Recruitment and retention challenges	"One of the first barriers, I think, has just been trying to locate clients that are considered lost to care. Sometimes locator information at the clinic was poor and we tried out basically every other method available to us and we still were not able to find patients in the field, clients that have been lost to care. So that's been a huge barrier to the program. I think more than 30 percent of the clients that we've been trying to locate we've just not been able to find at all. And so I think that's been a lesson learned for our program." (West Coast, Org. C)
Staffing and administrative challenges	"We don't want them [peers] to do straight up counseling with their supervisor, but they need an outlet and a regular one in order to survive doing the work because it is really demanding. A good supervisor can help a peer with this even though the line's a little more blurry for a peer than for a traditional staff person, we still need them to maintain some boundaries on a professional level and for their own well-being. So being able to develop a really trusting relationship with a clinically trained supervisor I think is important to help anticipate what's going to happen in this relationship." (Midwest, Org. A)
Harmonizing partnerships	"Originally, it was challenging or interesting in terms of getting the peer as a respected member of the team amongst medical providers, and I will say that they have, partially because of who they are, but they have been incredibly successful in establishing themselves as a professional, and that has impacted the way in which the medical providers even see other peer navigators at [organization name] within the community, and I believe that it's positively impacted how well respected they are." (West Coast, Org. B)

TABLE 3

Cross-cutting Facilitators of Program Implementations

Theme	Illustrative quote
Strong partnerships	"I think what has worked best for us ... relationship, relationship, relationship. The old kind of old boys' network that we talked about years ago. Things that happen in the back room. I think that [Organization D colleague] has worked really hard at developing very strong relationships with some of our key referral sources...we've got a few that we can really kind of count on and rely on. And [we've] just really worked hard at developing a trusting relationship with them, being incredibly reliable. They can count on [us], when they call we will return the phone call, we will be there. We get information back to them so there's a nice kind of collaborative process that goes on ..." (Midwest, Org. D)
Characteristics of staff	"You know most times people make that first initial appointment, sometimes they don't, but sometimes they make that first initial appointment and then make a decision not to go back to the doctor 'I'm not going to deal with this right now.' But some form of magic takes place in the comfort that [linkage specialist] is able to offer to these people." (Midwest, Org. A)