



Published in final edited form as:

J Acquir Immune Defic Syndr. 2013 November 1; 64(0 1): . doi:10.1097/QAI.0b013e3182a99bc1.

NIH Support of Centers for AIDS Research (CFAR) and Department of Health Collaborative Public Health Research: Advancing CDC's Enhanced Comprehensive HIV Prevention Planning (ECHPP) Project

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Introduction

In this supplemental issue of JAIDS, results are presented from NIH-supported research projects conducted by Centers for AIDS Research (CFAR) investigators in collaboration with their local Departments of Health (DOH) in support of the Centers for Disease Control and Prevention's (CDC) ECHPP initiative. The goals of this introductory article are to provide an overview of the ECHPP effort as contextual background; to describe the NIH support of research aligned with ECHPP priorities and the evolution of the CFAR ECHPP Working Group (CEWG); and to provide a synthesis of the manuscripts presented in this supplement, with a focus on research intended to inform and enhance outcomes in the HIV care continuum.

Overview of the CDC's ECHPP Project

In July 2010, President Obama unveiled the National HIV/AIDS Strategy (NHAS), which was designed to produce significant programmatic and policy changes to address the HIV epidemic and HIV-related health disparities in the United States¹. The NHAS aims to achieve 3 broad goals by 2015: 1) reduce new HIV infections; 2) increase access to care and optimal health outcomes for people living with HIV (PLWH); and 3) reduce HIV-related health disparities. A fourth overarching goal – achieve a more coordinated response to the

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Conflicts of Interest

The authors have no conflicts of interest to declare.

Portions of this manuscript were presented at the First National CFAR/APC ECHPP Conference, Washington DC, November 19, 2012.

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HIV epidemic – encourages collaborations among federal agencies and between federal agencies, state, territorial, local and tribal governments, and other non-governmental partners including the “medical and scientific community”².

The NHAS recognizes that there is no single solution to addressing HIV in the United States, emphasizing the importance of implementing a combination of approaches to prevention. *Combination Prevention* is defined as the integration of behavioral, biomedical, and structural HIV interventions or strategies³. Recently, new biomedical breakthroughs have increased the number of available prevention tools. These advances include research showing that antiretroviral treatment (ART) reduces HIV transmission⁴⁻⁵ and acquisition⁶, and extends and increases the quality of life of PLWH⁷. Because all combinations of interventions and public health strategies are not equally efficacious, CDC has emphasized the need for high-impact combinations⁸.

In response to NHAS, the CDC initiated a three-year demonstration project in September 2010 called the Enhanced Comprehensive HIV Prevention Planning (ECHPP) project in the 12 Metropolitan Service Areas (MSAs) with the largest numbers of AIDS cases, representing 44% of the epidemic⁹. CDC provides direct HIV prevention program funding to U.S. state and territorial health departments as well as to a small number of local (city or county) health departments¹⁰. ECHPP provided additional funding to support high impact prevention in the following areas; New York City, Los Angeles, Washington DC, Chicago, Atlanta, Miami, Philadelphia, Houston, San Francisco, Baltimore, Dallas and San Juan¹¹. This project was designed to embody the principles of the NHAS and to work with public health officials in the most affected areas in the country to address the ambitious goals of NHAS in health department programs. CDC worked with a variety of federal partners on ECHPP including the Health Resources and Services Administration (HRSA) (both the HIV/AIDS Bureau and Bureau of Primary Health Care), the Substance Abuse and Mental Health Services Administration (SAMHSA), the Indian Health Service (IHS), and National Institutes of Health (NIH). Concurrently, and to support NHAS and ECHPP, the Office of the Assistant Secretary for Health (OASH) and the Office of HIV/AIDS and Infectious Disease Policy (OHAIDP), Department of Health and Human Services (HHS), implemented the 12 Cities Project, an unfunded initiative that seeks to improve coordination, collaboration, and integration of HIV/AIDS services among federal funders to improve local service delivery¹².

The primary aim of ECHPP was to improve local program planning and implementation to have the highest impact possible in each jurisdiction. Each grantee was asked to develop a prevention plan that utilized a specific local mix of 14 required and 10 “recommended to consider” interventions to maximize the impact of HIV combination prevention in its jurisdiction⁹. The 14 required interventions included 2 HIV testing strategies (for clinical and non-clinical settings), 9 strategies for prevention with PLWH (including linkage to care, retention and re-engagement in care, provision of ART, and promotion of ART adherence, STD screening, prevention of perinatal transmission, partner services, behavioral risk screening and interventions, and linkage to other medical and social services), condom distribution for HIV-positive persons and for high risk persons, provision of post-exposure prophylaxis (PEP), and efforts to change existing structures, policies, and regulations that pose barriers to optimal HIV prevention, care and treatment. In addition to the 10 “recommended to consider” interventions or public health strategies, innovative local interventions, defined as interventions that could have significant impact on NHAS goals, could be proposed by jurisdictions for inclusion in their prevention plans⁹. To increase the ability of grantees to meet NHAS goals, the development of ECHPP jurisdictional prevention plans was guided by the following principles: 1) examine all local HIV prevention, care, and treatment resources, regardless of funding stream (federal, state,

private, local); 2) direct resources to achieve maximum impact on HIV incidence; 3) implement a combined core set of behavioral, biomedical, and structural interventions that were targeted and scaled to maximize appropriate coverage and impact; and 4) integrate local epidemiologic, cost-effectiveness, and efficacy data to improve data-driven decision making⁹.

Because of the importance of the NHAS, and the scale of the 12 Cities Project and ECHPP efforts, there was substantial interest in both evaluating and conducting research related to the planning, implementation, and impact of ECHPP. CDC is leading a systems-level evaluation of ECHPP. The evaluation is complex given the large number of interventions implemented by each jurisdiction (many of which were implemented at some level prior to ECHPP), the differences in local implementation across the 12 MSAs, and the lack of a rigorous study design. Key evaluation questions will address the programmatic processes associated with local implementation, client outcomes for priority populations, and the overall impact of ECHPP in these communities using epidemiologic and surveillance data. Except for some programmatic data, all evaluation data are being gathered through pre-existing data systems used routinely by CDC and other federal partners. CDC's ECHPP evaluation goals are to: 1) assess the extent to which ECHPP had an effect in the 12 MSAs and 2) monitor jurisdictional progress toward achieving 2015 NHAS objectives.⁹

NIH Collaborative Support of Research Aligned with ECHPP Priorities

As cited above, the fourth goal of NHAS is “Achieving a More Coordinated National Response to the HIV Epidemic.” The ECHPP project embodied this goal, and NIH leadership saw an opportunity to encourage grantees to work more closely with the CDC and the local health departments, with the goal of bolstering the research agenda associated with the ECHPP efforts. Because ECHPP was already underway, the NIH needed to move quickly to capitalize on this unique opportunity. Due to the programmatic nature of ECHPP, there was not an existing research infrastructure from which to call for NIH research, but the 9 ECHPP jurisdictions with the highest number of AIDS cases were also home to NIH-funded Centers for AIDS Research (CFAR) which are located at academic research institutions throughout the United States. Thus, supplemental funding to existing CFAR sites was identified as an ideal mechanism to rapidly integrate the NIH-supported research agenda with ECHPP activities and provide research and technical support to local DOHs. Supplement applications were solicited, internally reviewed, and awarded to CFAR sites where ECHPP activities were underway.

The CFAR program, led by the Division of AIDS at the National Institute of Allergy and Infectious Diseases (NIAID) and co-managed by the Fogarty International Center (FIC) and the Office of AIDS Research, is co-funded by NIAID and a trans-NIH Steering Committee that includes co-sponsorship from the National Cancer Institute (NCI), the National Institute of Child Health and Human Development (NICHD), the National Heart, Lung, and Blood Institute (NHLBI), the National Institute on Drug Abuse (NIDA), the National Institute of Mental Health (NIMH), and the National Institute on Aging (NIA). The program emphasizes the importance of interdisciplinary collaboration, especially between basic and clinical investigators and behavioral scientists to support translational research. The mission is to provide administrative and research support to synergistically enhance and coordinate high quality AIDS research projects. CFARs accomplish this through core facilities that provide expertise, resources, and services to their institutional investigators. Thus, the CFARs were well-positioned to advance the coordination and scientific agenda associated with the ECHPP project.

In January 2011, the NIH CFAR Program requested that the District of Columbia Developmental CFAR (DC D-CFAR) and its Director, Alan E. Greenberg, coordinate the submission of a supplement on behalf of the nine eligible CFARs in support of the ECHPP initiative, thereby establishing the CFAR ECHPP Working Group (CEWG). This initial NIH contribution was intended to provide a modest level of support to enable the CFARs to determine a research agenda that could be integrated into the ECHPP initiatives in their local jurisdictions and strengthen research and community collaborations to respond to the NHAS goals. These activities, referred to as “ECHPP-1”, included developing collaborations with their Departments of Health (DOH), providing technical assistance for a variety of ECHPP activities, and where feasible, initiating pilot research efforts. The central CFAR principle of local control was emphasized -- the types of technical assistance and research-related activities proposed should vary and be determined locally based on the needs and priorities of the local DOHs and the capacity and expertise of the CFARs. Consonant with the ECHPP aims and CFAR expertise, suggested technical areas included statistical support, outcomes evaluation, behavioral and prevention expertise, clinical expertise, laboratory support, cost-effectiveness and modeling. The Aims of the ECHPP-1 projects are shown in Table 1, and the initial results of these projects, many of which are ongoing, are presented in this supplement of JAIDS.

In 2012, the NIH CFAR program, along with the NIMH, observed the successful progress of the ECHPP-1 projects, and provided additional research support with more focal guidance to conduct projects targeting specific steps in the treatment continuum¹³⁻²⁰ for persons living with HIV/AIDS. NIMH supports a range of research projects devoted to understanding and mitigating the factors associated with drop offs along the HIV care continuum. However, the areas of linkage to care, retention and re-engagement in care are relatively less studied. With the increased emphasis on expanding HIV testing in many of the jurisdictions, it seemed timely to focus the next iteration of the supplement applications to: (a) expand the scope of work to include a greater understanding of the clinic-level and patient-level factors associated with drop-off in care engagement, (b) conduct formative research on current practices for re-engagement of patients at the clinic level, (c) provide descriptive data of changes in clinic demographics as a result of the ECHPP initiative's activities to increase HIV testing and enhanced linkage to care as they relate to drop-off in care for specific sub-groups, or (d) identify mutable targets at the clinic and individual level for future intervention development to enhance care engagement and re-engagement. Results from these projects, referred to as “ECHPP-2”, should be reported in late 2013 and 2014.

These research topics were solicited both because they were important and relevant to the needs of the DOHs and ECHPP activities, and because these topics are high priority research directions outlined in the NIH Office of AIDS Research Plan for HIV/AIDS Research and the missions of the NIMH, NIAID, NIDA and other participating Institutes. Therefore, in addition to providing immediate support to ECHPP activities, the projects were also intended to yield feasibility and pilot data that would enable the investigative teams to subsequently pursue larger-scale research proposals that would be responsive to Requests for Applications (RFAs) issued by NIH in 2011, 2012 and 2013 such as: “Promoting Engagement in Care and Timely ART Initiation Following Diagnosis” (RFA-MH-12-060), “Advancing Community-level Approaches to Reduce HIV Infection in Highly Impacted Communities” (RFA-MH-13-090), and “Methodological and Formative Work for Combination HIV Prevention Approaches” (RFA-MH-14-180).

In 2012, the NIMH also separately provided supplements to each of 3 NIMH-funded AIDS Prevention Centers (APC) that are located in the ECHPP cities where CFARs are situated. This was an opportunity to bring in additional expertise in behavioral and social sciences from these Centers, and to take advantage of their strong ties with their DOHs. The NIMH

investigators at each Center were required to propose high-priority science that complemented and synergized with the ongoing research activities that the CFARs were conducting. In each case, working in partnership with the CFARs was facilitated by the fact that at least one NIMH Center investigator was central to the previous CFAR ECHPP activities.

Findings from these efforts are also expected in 2013-2014. Currently supported ongoing projects, referred to as “APC-1”, are addressing the following issues: 1) improving ongoing preventive/treatment services among methamphetamine-using, HIV-positive men-who-have-sex-with-men (MSM) to better link these men to care and to understand the interaction among risk behaviors, substance use, emotional distress, adherence to antiretrovirals (ARVs) and viral load (UCLA), 2) identifying strategies to improve loss to follow up, including the role of surveillance in re-engagement (UCSF), 3) barriers to and facilitators of engagement in HIV care of HIV+ individuals from two vulnerable and underserved populations: young men who have sex with men (MSM), and transgender women (Columbia).

In November 2012, the DC D-CFAR hosted the first National CFAR/APC ECHPP Conference in Washington DC. The goals of this two-day meeting were to present the results of the CFAR ECHPP-1 projects and the Aims of the ECHPP-2 and APC-1 projects. There were approximately 100 participants including the Site PIs from the 9 CFARs and 3 APCs, representatives from the 9 collaborating DOHs, HIV prevention scientists from an additional 11 CFARs and 2 APCs, representatives from the National Alliance of State and Territorial AIDS Directors (NASTAD) and the Urban Coalition for HIV/AIDS Prevention Services (UCHAPS), and US Government scientists from the White House Office of National AIDS Policy (ONAP), HHS, NIAID, NIMH, NIDA, NICHD and CDC. The CEWG was thus expanded to include investigators from any of the 21 CFARs and 5 APCs who work on HIV prevention research in collaboration with their local DOHs, and was established as a formal inter-CFAR collaboration²¹.

In May 2013, the CFAR Program released a supplemental funding announcement open to all eligible CFARs to submit research proposals related to the “HIV Treatment Cascade that build on existing collaborations with their local health departments ... to propose pilot interventions at one or more important junctures in the treatment cascade”, referred to as “ECHPP-3”. Concurrently, the NIMH will provide support to the APCs to conduct complementary cascade-related research (referred to as “APC-2”). Support for a second National CFAR/APC ECHPP Conference has been secured to facilitate the presentation of the scientific results of the ECHPP-2 and APC-1 projects, and the aims and progress of the ECHPP-3 and APC-2 projects.

In summary, there has been rapid scale up of CFAR and APC ECHPP related research activities during the past two years. Moreover, there has been a clear strategic evolution in the focus of research conducted by the CEWG: from establishing connectivity and conducting formative research with the DOHs in ECHPP-1; to conducting exploratory research on the HIV treatment cascade in ECHPP-2 and APC-1; and to developing cascade-related pilot interventions in ECHPP-3 and APC-2.

Synthesis of ECHPP-1 Manuscripts: Research Focus on the HIV Care Continuum

For this supplemental issue of JAIDS, each Site PI was asked to develop a manuscript based on initial results from their ECHPP-1 projects. As many of the ECHPP-1 and ECHPP-2 projects are still ongoing, CEWG sites were given considerable latitude to select the specific

aspect of their work to include in this supplement. Of note, almost all of these manuscripts are co-authored by collaborating academic and Department of Health investigators.

The ECHPP-1 research projects published in this supplement largely focus on steps in the HIV treatment continuum. The first step in the HIV treatment continuum is to identify HIV-infected persons through the expansion of **HIV testing**. Accordingly, the Baylor/UT CFAR describes its work with the Houston Department of Health and Human Services²² to conduct a survey of 84 health-related organizations about their HIV testing volume and practices. They report that almost half (49.1%) of the more than 210,565 HIV tests performed at these sites in 2011 did not receive support from public health funding, highlighting the importance of ensuring that testing campaigns and policies reach providers other than those receiving public funds. The Chicago D-CFAR worked in collaboration with the Chicago Department of Public Health²³ to conduct a survey among 3 specialty clinics (Dermatology, Psychiatry and Trauma) at the Cook County public hospital. The goal of that project was to assess provider knowledge, attitudes and barriers to routine HIV testing; results were then used to develop an educational intervention which resulted in significant increases in HIV testing at 2 of the 3 clinics and identified important barriers to implementation of routine testing.

The next step in the HIV treatment continuum is to increase **linkage to care** for persons identified as HIV-infected. As a component of the Baylor/UT CFAR survey²², project investigators also found that 90% of responding organizations had active linkage to care activities, but only 46.5% had written linkage to care protocols; and that staff time, staff resources and funding limitations were the greatest perceived barriers to linkage activities, with important differences noted between hospitals, clinics and community-based organizations. The Einstein/Montefiore CFAR, working in collaboration with the New York City Department of Health and Mental Hygiene²⁴, conducted in-depth qualitative interviews with the directors of 24 HIV testing agencies who participated in “The Bronx Knows” campaign (in which 607,570 HIV tests were conducted and 1,731 newly diagnosed persons were found), and then conducted case studies of 9 programs with best linkage practices. They identified important challenges in linkage programs that included factors related to health systems, social issues including patient stigma, and working with high risk populations; and numerous best linkage practices, including patient navigators, team approaches, case management, monitoring, minimizing stigma, and the importance of linkage champions. Lastly, the University of California San Francisco (UCSF) CFAR worked in collaboration with the San Francisco Department of Health²⁵, community based organizations, and clinical care providers, to assess optimal measures of linkage to care. They examine the linkage to care process, highlight specific challenges to the assessment of linkage to care outcomes, including differing definitions, and the various types of clinical and surveillance databases that are available to assess linkage rates. The authors emphasize the importance of selecting the appropriate data source depending on the primary use of the measure, and highlight the need for integrated data systems to better assess outcomes along the HIV care continuum.

Reports from several CFAR projects address issues related to increasing **linkage to care** as well as the remaining steps in the HIV treatment continuum, namely improving **retention and re-engagement in care**, and maximizing **viral suppression**. The DC D-CFAR worked in collaboration with the District of Columbia Department of Health²⁶ to use HIV surveillance data to assess the impact of medical case management (MCM) on retention and viral suppression rates among 5,631 HIV prevalent cases in FY 2010, and on linkage to care rates among 789 persons newly diagnosed in 2009-2010. Importantly, MCM sites were found to have a significantly higher rate of retention in care during the study period (76.2% vs 59.9%), although no differences were found in the rates of linkage to care or viral suppression. The University of Pennsylvania CFAR worked in collaboration with the

Philadelphia Department of Health²⁷ to use HIV surveillance data to assess the association of various factors with linkage to care, retention in care, and viral suppression among 1,704 persons newly diagnosed with HIV from 2008-2009. Using a highly innovative approach, they used Geographic Information Systems technology (GIS) to identify specific geographical areas in Philadelphia that are associated with failure to achieve these cascade-related steps; and then included these geographic variables in multivariate analyses to assess their independent contribution to each of the selected outcomes. Finally, in a study that addressed issues related both to improving **retention in care** and **antiretroviral adherence**, the Emory CFAR working in collaboration with the Georgia Department of Health²⁸ conducted 5 qualitative focus group discussions with a total of 35 gay and bisexual men who were in same sex relationships. Participants described the importance of dyadic HIV care for couples, comprehensive care that addressed other mental health and social needs, differences in care needs between seroconcordant and serodiscordant couples, and the importance of the interaction between interpersonal relationship dynamics and dyadic care.

The University of California Los Angeles (UCLA) CFAR²⁹ describes the implementation and results of a survey administered to agencies responsible for providing services to persons living with HIV/AIDS (PLWHA) in the state of California. This paper examines issues that are being encountered as PLWHA transition from Medi-Cal fee for service and the Ryan White CARE Program to Medi-Cal managed care and the Low Income Health Program (LIHP). Moreover, it provides insights into service provision for PLWHA, and the potential for gaps in care, as the Affordable Care Act is implemented in January 2014.

In an example of collaboration across CFARs, the Miami CFAR and the Miami-Dade County Health Department³⁰ worked collaboratively with the DC D-CFAR and the DC Department of Health to conduct a survey of 142 HIV providers to assess knowledge, attitudes and practices related to the provision of non-occupational post-exposure prophylaxis (nPEP) in these two cities. The investigators report that a significantly higher proportion of HIV providers had prescribed nPEP in DC than in Miami (59.7% vs. 39.5%); that most practices did not have written protocols for nPEP; and that providers were more likely to prescribe nPEP to patients with an HIV positive partner or who were victims of sexual assault.

Summary

The contributions in this supplemental issue highlight the relevance of NIH-funded CEWG research to health department-supported HIV prevention and care activities in the 9 US cities with the highest numbers of AIDS cases. The project findings have the potential to enhance ongoing HIV treatment and care services and to advance the wider scientific agenda. The HIV testing to care continuum, while providing a framework to help track progress on national goals, also can reflect the heterogeneities of local epidemics. The collaborative research that is highlighted in this special issue reflects a locally-driven research agenda, but also demonstrates research methods, data collection tools and collaborative processes that could be encouraged across jurisdictions. Projects such as these, capitalizing on the integrated efforts of NIH, CDC, DOH and academic institutions, have the potential to contribute to improvements in the HIV care continuum in these communities, bringing us closer to realizing the HIV prevention and treatment goals of the NHAS.

Acknowledgments

Source of Funding:

Supported by supplemental funds to the NIH funded DC Developmental Center for AIDS Research grant (5P30AI087714) for the Enhanced Comprehensive HIV Prevention Planning Initiative (CFAR ECHPP Initiative).

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention or the National Institutes of Health.

References

1. White House Office of National AIDS Policy.. National HIV/AIDS Strategy for the United States. Jul. 2010 Available at: <http://www.whitehouse.gov/sites/default/files/uploads/NHAS.pdf>
2. National HIV/AIDS Strategy. Federal Implementation Plan. Jul. 2010 Available at: <http://www.whitehouse.gov/files/documents/nhas-implementation.pdf>
3. Kurth AE, Celum C, Baeten JM, et al. Combination HIV prevention: significance, challenges, and opportunities. *Current HIV/AIDS Reports*. 2011; 8(1):62–72. [PubMed: 20941553]
4. Cohen J. Breakthrough of the year. HIV treatment as prevention. *Science*. 2011; 334(6063):1628. [PubMed: 22194547]
5. Cohen MS, Muessig KE, Smith MK, et al. Antiviral agents and HIV prevention: controversies, conflicts, and consensus. *AIDS*. 2012; 26(13):1585–1598. [PubMed: 22507927]
6. Grant RM, Lama JR, Anderson PL, et al. Preexposure chemoprophylaxis for HIV prevention in men who have sex with men. *N Eng J Med*. 2010; 363(27):2587–2599.
7. Department of Health and Human Services. Panel on antiretroviral guidelines for adults and adolescents.. Guidelines for the use of antiretroviral agents in HIV-1 infected adults and adolescents. 2012. Available at: <http://aidsinfo.nih.gov/contentfiles/lvguidelines/AdultandAdolescentGL.pdf>
8. Centers for Disease Control and Prevention. High-impact HIV prevention: CDC's approach to reducing HIV infections in the United States. 2011. Available at: http://www.cdc.gov/hiv/strategy/dhap/pdf/nhas_booklet.pdf
9. Centers for Disease Control and Prevention. Enhanced comprehensive HIV prevention planning and implementation for metropolitan statistical areas most affected by HIV/AIDS. 2013. Available at: <http://www.cdc.gov/hiv/prevention/demonstration/echpp/>
10. Centers for Disease Control and Prevention. Funding Opportunity Announcement (FOA) PS12-1201: Comprehensive human immunodeficiency virus (HIV) prevention programs for health departments. 2013. Available at: <http://www.cdc.gov/hiv/policies/funding/announcements/ps12-1201/index.html>
11. Enhanced Comprehensive HIV Prevention Planning and Implementation for Metropolitan Statistical Areas Most Affected by HIV/AIDS. Aug. 2010 Available at: <http://www.grants.gov/search/search.do?oppId=56637&mode=VIEW>
12. John Snow, Inc. Evaluation of the 12 cities project: one strategy to improve coordination, collaboration, and integration, final report. 2012. Available at: <http://www.aids.gov/pdf/12cp-evaluation-final-report.pdf>
13. Health Resources and Services Administration, HIV/AIDS Bureau. Outreach: Engaging people in HIV care.. Summary of a HRSA/HAB 2005 consultation on linking PLWHA into care. Aug. 2006 Available at: <http://hab.hrsa.gov/about/hab/files/hivoutreachaug06.pdf>
14. Greenberg AE, Hader SL, Masur H, et al. Fighting HIV/AIDS in Washington, D.C. *Health Affairs*. 2009; 28(6):1677–1687. [PubMed: 19887408]
15. Gardner EM, McLees MP, Steiner JF, et al. The spectrum of engagement in HIV care and its relevance to test-and-treat strategies for prevention of HIV infection. *Clin Infect Dis*. 2011; 52(6): 793–800. [PubMed: 21367734]
16. Cohen SM, Van Handel MM, Branson BM. Vital signs: HIV prevention through care and treatment — United States. *MMWR*. 2011; 60(47):1618–1623. [PubMed: 22129997]
17. Institute of Medicine. Monitoring HIV care in the United States: indicators and data systems. The National Academies Press; Washington, DC: 2012.
18. Forsyth, A.; Yakovchenko, V. Secretary Sebelius approves indicators for monitoring HHS-funded HIV services. Available at: <http://blog.aids.gov/2012/08/secretary-sebelius-approves-indicators-for-monitoring-hhs-funded-hiv-services.html>
19. Thompson MA, Mugavero MJ, Amico KR, et al. Guidelines for improving entry into and retention in care and antiretroviral adherence for persons with HIV: evidence-based recommendations from

- an international association of physicians in AIDS care panel. *Ann Intern Med.* 2012; 156:817–833. [PubMed: 22393036]
20. Branson BM, Handsfield HH, Lampe MA, et al. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. *MMWR.* 2006; 55(RR-14):1–17. [PubMed: 16988643]
 21. Centers for AIDS Research Inter-CFAR Collaborations. [August 16, 2013] CFAR ECHPP Working Group (CEWG). Available at: <http://www.niaid.nih.gov/LabsAndResources/resources/cfar/Pages/collaborations.aspx>
 22. Giordano TP, Hallmark CJ, Davila JA, et al. Assessing HIV Testing and Linkage to Care Activities and Providing Academic Support to Public Health Authorities in Houston, TX. *J. Acquired Immune Defic. Syndr.* 2013
 23. Lubelchek RJ, Hotton AL, Taussig D, et al. Scaling up routine HIV testing at specialty clinics: Assessing the effectiveness of an academic detailing approach. *J. Acquired Immune Defic. Syndr.* 2013
 24. Bauman LJ, Braunstein S, Calderon Y, et al. Barriers and facilitators of linkage to HIV primary care in New York City. *J. Acquired Immune Defic. Syndr.* 2013
 25. Das M, Christopoulos K, Geckeler D, et al. Linkage to HIV Care in San Francisco: Implications of Measure Selection. *J. Acquired Immune Defic. Syndr.* 2013
 26. Willis S, Castel AD, Olemeh C, et al. Linkage, Engagement, and Viral Suppression Rates among HIV-Infected Persons Receiving Care at Medical Case Management Programs in Washington, DC. *J. Acquired Immune Defic. Syndr.* 2013
 27. Eberhart MG, Yehia BR, Hillier A, et al. Behind the cascade: analyzing spatial patterns along the HIV care continuum. *J. Acquired Immune Defic. Syndr.* 2013
 28. Goldenberg T, Clark D, Stephenson R. “Working together to reach a goal”: MSM's perceptions of dyadic HIV care for same-sex male couples. *J. Acquired Immune Defic. Syndr.* 2013
 29. Leibowitz A, Lester R, Curtis P, et al. Early Evidence from California on Transitions to a Reformed Health Insurance System for Persons Living With HIV/AIDS. *J. Acquired Immune Defic. Syndr.* 2013
 30. Rodriguez A, Castel AD, Parish CL, et al. HIV medical providers' perceptions of the use of antiretroviral therapy as non-occupational post-exposure prophylaxis (nPEP) in two major metropolitan areas. *J. Acquired Immune Defic. Syndr.* 2013

Table 1

CFAR ECHPP-1 Project Aims by City, CFAR and Site Principal Investigator (PI)

City	CFAR	Site PI	ECHPP-1 Project Aims
Atlanta	Emory	Stephenson	Provide training of counseling staff for couples HIV voluntary counseling and testing (CVCT)
Chicago	Chicago D-CFAR	Lubelchek	To develop, pilot and implement a survey tool to assess provider knowledge and attitudes regarding routine HIV testing
			To implement a demonstration project of routine testing and linkage to care and prevention services in three high risk clinics
DC	DC D-CFAR	Castel	Evaluate the DC DOH linkage to care portfolio
			Evaluate clinical and non-clinical routine HIV testing implementation strategies
			Assess the feasibility and cost-effectiveness of non-occupational and pre-exposure prophylaxis (nPEP and PrEP)
Houston	Baylor College of Medicine / UT Health	Giordano	Conduct a local resource capacity survey on HIV prevention activities from all testing facilities
			Assess comparative effectiveness and cost effectiveness of local HIV prevention activities
			Establish a Scientific Advisory Council to advise DOH on HIV activities
Los Angeles	UCLA	Rotheram-Borus	Implement interventions promoting adherence to anti-retroviral medications
			Provide technical assistance on linking high risk HIV-negative persons to services for mental health, substance abuse, housing, violence, etc.
			Facilitate adoption and implementation of brief alcohol screening and interventions for HIV-positive and high risk HIV-negative persons
Miami	Miami	Rodriguez and Metsch	Investigate availability, accessibility and acceptability of prescribing and obtaining PEP by providers and high risk persons
			Investigate potential availability, accessibility and acceptability of prescribing and obtaining PrEP by providers and MSM
			Document and evaluate barriers and facilitators to addressing prevention, adherence and retention
New York City	Albert Einstein / Montefiore	Bauman	Use existing data sets to identify populations and communities with delayed linkage to care
			Conduct survey of Bronx testing sites on linkage to care
			Identify model testing sites with timely linkage to care and conduct case studies
Philadelphia	Penn	Metzger	Provide technical assistance in application of Geographic Information Systems
			Assist in design, implementation and analysis of provider and consumer survey of location of prevention and care services
San Francisco	UCSF	Charlebois and Morin	Develop and assess measures of linkage to care
			Estimate and compare rates of linkage to care among four Patient Navigator Intervention (PNI) models
			Determine cost and relative cost effectiveness of Patient Navigator Interventions