

The **Providence/Boston Center for AIDS Research (CFAR)** is a collaborative effort between two academic institutions, Brown University and Boston University, their affiliated hospitals, Lifespan and Boston Medical Center (BMC), the RI Department of Health, MA Department of Public Health, local community organizations, and international sites. The Providence/Boston CFAR is funded by NIH (P30AI042853) and promotes the NIH HIV priority research agenda. The center is devoted to the pursuit of translational research to reduce the burden of HIV infection worldwide, with special focus on substance users, women, MSM, justice-involved persons, and at-risk youth. The CFAR fosters emerging HIV investigators both domestically and within resource-limited settings by providing services, pilot funding opportunities and faculty development programs. The Providence/Boston CFAR consists of 6 Cores (Administrative, Developmental, BioBehavioral Sciences, Biostatistics, Basic Sciences, Substance Use Research), and one HIV/TB Scientific Working Group. All core services can be accessed by researchers on both the Providence and Boston campuses.

The **Developmental Core** provides funding for domestic and international pilot projects, comprehensive mentoring to CFAR members including pre- and post-award mentoring for award recipients, a formal mentor the mentor training program, a monthly grant writing workshop for researchers planning to submit research grants for external funding, and a focused six-month K award mentoring program where researchers planning to submit a K series award to NIH participate in an intensive milestone driven program with CFAR faculty advisors. The CFAR has access to over 150 HIV researchers at the collaborating institutions with expertise in basic science, biomedical, clinical, epidemiological, cost-effectiveness, biostatistical, and translational research.

The **BioBehavioral Sciences Core (BBSC)** provides access to populations of HIV-infected persons and persons at-risk for HIV-infection within the CFAR's Providence clinic (The Miriam Hospital Immunology Center) and the CFAR's Boston clinic (The BUMC Center for Infectious Diseases – CID). The Providence Clinic has approximately 1,700 patients in care and sees about 108 new patients each year. The demographics of the clinic population is as follows: 62% white, and 34% Black (25% Hispanic, 75% non-Hispanic); 69% males, 29% women, 2% transgender; 63% over the age of 45; 33% foreign born; 51% on public assistance; 43% MSM, 12% IDU, 38% heterosexual sex as risk factors; 50% have CD4 >500 and 83% on patients on antiretroviral therapy have plasma viral load below detectable. This includes access to associated data, support in participant recruitment, enrollment, and retention to advance biobehavioral research. The Boston clinic has approximately 1,600 patients in care, mostly from minority groups (64%); a large proportion are women (41% of patients are women, and 50% of Black patients are women) and foreign-born patients (43% of the BMC patients were born outside the U.S. and Puerto Rico). In addition, approximately 750 refugee patients each year are seen in the Boston refugee intake center (under contract with the Massachusetts Department of Public Health); many are HIV-infected. Substance use is a risk factor in 22% of the CID clinic population; heterosexual transmission is a risk factor in 53% of patients. Forty-one percent of the clinic population has a history of alcohol abuse; approximately 25% live in poverty. Minority subjects with low income and a high prevalence of substance use disorders constitute the majority of patients at BUMC.

The BBSC provides services to support innovative medical and behavioral data collection approaches, including methods, tools, and assessments; provides expertise and services related to regulatory and human subjects' compliance, and the ethical conduct of research for vulnerable populations; provide expertise and services to support the development, implementation, and evaluation of interventions to improve HIV prevention and continuum of care outcomes; and provide specialized services for the conduct of implementation science research and for performing cost-effectiveness research.

The **Substance Use Research Core (SURC)** provides support in the development of basic, clinical, and translational research that addresses the impact of Substance Use (SU) on the HIV epidemic. The SURC specifically provides expertise in developing research projects that address gaps in SU/HIV priority issues both domestically and globally. The SURC ensures that projects appropriately consider and incorporate the impact of SU on study outcomes; connect SU investigators and HIV investigators through formal and informal opportunities to develop collaborative projects; and work with investigators to formulate innovative and scientifically sound SU/HIV research questions. The SURC provides services to help investigators identify the most appropriate tools to assess consumption, severity, consequences and associated stigma of SU as well as provide training on utilization of validated self-report scales, structured interviews, laboratory and ecological momentary assessments, and biological tests of SU. The SURC provides expertise on SU pharmacotherapy, behavioral

interventions, mobile health (mHealth) applications, and chronic disease management. Specific Core services available include SU intervention selection and training, fidelity assessment techniques, intervention manuals, and adaptation to new populations. The SURC also offers review of relevant IRB protocols and provides guidance on ethical issues of particular importance to SU research, such as confidentiality protections and providing compensation to people actively using drugs. The services provided by the SURC ensure that investigators are optimally equipped to pursue research projects that consider and address the major impact of SU on HIV prevention, the HIV Care Continuum, and HIV comorbidities.

The **Biostatistics Core** provides consultation and collaboration in study design and biostatistics; development of study design, sample size calculations, develop statistical analysis plans, implement statistical analyses, preparation of grants, manuscripts and abstracts, facilitate linkages to potential collaborators and facilitate access to HIV databases from other centers. Additionally, the Core develops novel statistical methods for HIV research, provides ongoing training and mentoring to HIV investigators, guidance and support for accessing and analyzing Electronic Health Records data, and promote and facilitate cross-CFAR and other cross-program collaborations, and contribute to grant, manuscript and abstract writing.

The **Basic Sciences Core** promotes collaborative basic and translational HIV research by providing essential laboratory assays and expertise, developing and supporting innovative services and new collaborations, and by providing training and mentorship to local, national and international investigators with a wide range of HIV experience.