

METHODS TO ADDRESS DISPARITIES IN HIV AND MENTAL HEALTH RESEARCH CERTIFICATE

Overview

The newly awarded T32 Training Program - CHANGE: *Culturally-focused HIV Advancements through the Next Generation for Equity* - is an interdisciplinary, innovative, and timely approach to train the next generation of underrepresented (Black and Latinx) HIV behavioral scientists with skills to address persistent health disparities in HIV treatment and prevention in Black and Latinx communities.

The CHANGE program will have up to four post-doctoral trainees during the program. The post-doctoral term will be for 2 years, with the possibility depending on adequate progress and a likely long(er)-term match to South Florida of a 3rd year. Post-docs can hold any PhD or an MD and we anticipate an equal distribution of each. All Programs require successful completion of an undergraduate degree with GPA of 3.5 or higher, research experience and/or strong interest in research, and letters of recommendation. All programs are research-focused and require matching with a research mentor. PhD post-doctoral candidates should have research experience and a defined area of research interest.

To qualify for admission in the CHANGE training program as a post-doctoral trainee, participants should: a) be US citizens or residents, b) having completed their doctoral degree or MD. Prospective candidates must demonstrate a commitment to improving the lives of marginalized groups disproportionately impacted by HIV and Mental Health, and content interest and potential experience, through research or community involvement in HIV and mental health and in the behavioral sciences.

During nomination and selection, the program co-Directors will work closely with the admission committees of each department.

We will actively promote the CHANGE Program through various channels (See Recruitment Plan to Enhance Diversity Below), and encourage applicants to self-nominate, e.g., listing potential mentors whose research is of interest to them in their application letters if they find the program of interest. Prior to on-site (or Zoom) interviews, the co-Directors will meet with Internal Advisory Board and Diversity and Inclusion Committee to review candidates and prioritize a list of CHANGE candidates and form potential mentorship teams for each. Final decisions will be made by the same group after the in-person interviews. Once admitted, post-doctoral trainees can renew for 2 years dependent on adequate progress as determined by their annual review. Post-docs can apply for a 3rd year depending on progress and potential longer-run commitment to the region. Upon admission to the CHANGE training program, post doctoral trainees will be enrolled in the proposed certificate. Only CHANGE post doctoral trainees will be eligible for the proposed certificate.

Curriculum Requirements

Code	Title	Credit Hours
Social Determinants of Health		
EPH 623	Determinants of Health and Health Disparities Across the Life Course	3
or PSY 614	Diversity issues in psychology	
Community-Based Participatory Research and Community Engagement		
EPH 647	Community Based Participatory Research and Social Network Analysis	3
Clinical Basis of HIV/Mental Health Interventions		
Select one of the following:		3
PSY 616	Biobehavioral Processes and Clinical Research Applications in Health Psychology	
PSY 640	Adult Psychopathology	
PSY 656	Introduction to Evidence-Based Psychological Treatments	
PSY 660	Evidence-Based Psychological Intervention with Children and Families	
PSY 662	Health Psychology Interventions	
EPH 717	Integrating Behavior Health Theories and Models	
EPH 731	Developing, Adapting and Evaluating Interventions	
Design and Analysis Methods, Reproducibility of Research		
EPH 732	Introduction to Dissemination and Implementation Science	3
Scientific and Grant Writing		
EPH 604	Clinical Trials	3
Responsible Conduct of Research (RCR)		

EPH 625	Ethics in Public Health	3
Total Credit Hours		18

Mission and Goals

The CHANGE T32 training program is tied to the University of Miami (UM) Center for HIV and Research in Mental Health (CHARM), an NIMH Developmental AIDS Research Center, and is situated in the UM School of Medicine [Public Health Sciences] and the College of Arts and Sciences [Psychology]. As a core component of their training activities, trainees will be involved in mentored research, a community engagement experience, and participation in a robust offering of seminars across a network of departments. In addition, trainees will complete coursework specific to the scope of this T32. *Post-doctoral trainees are required to six 3-credit courses within their training period. Each post-doctoral trainee (up to four during the 5-year T32) will select their credits from a predetermined list of public health and psychology courses covering social determinants of health, community based participatory research, clinical basis of HIV and mental health interventions, and state-of-the-science methodology and reproducibility. These 18 credits will cumulate into the “Methods to Address Disparities in HIV and Mental Health Research” Certificate.*

Student Learning Outcomes

As noted, the proposed “Methods to Address Disparities in HIV and Mental Health Research” Certificate, is embedded within the CHANGE T32 Program, and will be completed as part of this training program. The CHANGE T32 program is interdisciplinary and targets training in multilevel determinants (e.g., biological, medical, social/structural, psychosocial) of HIV and Mental Health and culturally-focused interventions for prevention and treatment that will help address existing health disparities and promote health equity in patient outcomes and community well-being. **The primary goal of the training program is to develop the next generation of researchers with the expertise to successfully address HIV and Mental Health disparities throughout the HIV prevention and treatment cascades using community-engaged research, implementation, and dissemination.** This program will ensure the necessary skills and preparation for a research career for pre-doctoral trainees and a pathway to research independence for the post-doctoral trainees. The CHANGE program requires multiple courses devoted to theories of behavior, basis for health prevention, promotion and intervention. We have chosen a sequence of 6 of these courses to highlight that will be required for post-doctoral trainees to complete as a requirement for their “Methods to Address Disparities in HIV and Mental Health Research” Certificate. The trainees will need to select a combination of 6 courses which meet each of the following competencies.

Program Core Competencies. All post-doctoral trainees will gain **eight core competencies** via participation in the training activities and coursework of the CHANGE certificate. These competencies reflect those widely recognized as necessary for the next generation of scientists to successfully reduce HIV/Mental Health disparities and promote health equity across the prevention and treatment continua. The program’s core competencies are:

- 1. Social Determinants of HIV and Mental Health Outcomes.** In this essential area of training, trainees will gain an understanding of higher order determinants of disparities in HIV and Mental Health risk, onset, and outcomes. Such determinants encompass factors that operate on a community- and/or population-level and influence disease risk and outcome above and beyond biological factors and individual socioeconomic condition; they include, though are not limited to, racism, homophobia, transphobia, discrimination and stigma, poverty, and culture (e.g. values, beliefs, practices, family roles/systems). While this area of concentration in training is achieved by multiple components of the CHANGE program, including participation in case-based seminars, mentored activities, and final projects, there is also required coursework to achieve this competency. Trainees will be required to enroll in either EPH 623 Determinants of Health and Health Disparities Across the Life Course or PSY 614 Diversity Issues in Psychology. EPH 623 focuses on risk and protective processes related to health outcomes across the life course from the prenatal period to older adulthood. Class readings and discussions examine common risk pathways contributing to various diseases, including pathways hypothesized to be related to health inequities and disparities, such as racism, homophobia, transphobia, economic and educational disadvantage, stress, sedentary behavior and poor behavioral regulation, and social isolation.
- 2. Community-Based Participatory Research / Community Engaged Research (CBPR/CER).** It is critical that the next generation of scientists have competent training in community-based and participatory research methods that fully partner with and engage the community during all steps of the research process. Further, because many observed disparities in HIV and mental health are driven by societal oppression and marginalization experienced by specific communities and subgroups (e.g. Black and LGBTQ communities) fellows will acquire the necessary skills to effectively engage, and work with, these communities on collaborative science that accomplishes mutually beneficial ends in building capacity and health equity to reduce health disparities. Our competency in community engagement extends to being *Patient-Centered* and *Stakeholder-Engaged* which are essential skills to create effective, sustainable community partnerships. Therefore, participating fellows will be trained in stakeholder engagement, with emphasis on capturing research participant and/or patient experiences to ensure that relevant research questions are asked in a community and culturally informed manner. A clear demonstration of competencies in CBPR will be through the candidates’ participation in community activities and through their stakeholder engagement plans and presentations, particularly their final research project in the community. In addition, trainees will enroll in EPH 647 Community Based Participatory Research, a course on community-based participatory research (CBPR) methodologies, which are a core component of the CHANGE training program. The course focuses on community collaborations throughout the research process from conceptualization of study focus to dissemination of findings. This course provides fellows an opportunity to better understand the processes through which community members and academic researchers address health disparities and influence social change.
- 3. Biological and Clinical Foundations of HIV and Mental Health Prevention, Care and Treatment.** It is critical that investigators conducting HIV, mental health, and health equity research are familiar with the fundamental biology of both HIV and mental health risk and prevention, and with HIV and mental health clinical care and health consequences (e.g., HIV & aging). This will aid in understanding the complex interactions between biological processes and multilevel social determinants of HIV and mental health outcomes. Candidates will demonstrate understanding of these knowledge

areas through research papers and projects. This topic will be further covered by taking one of seven required courses, depending on the trainees research interests: PSY616 (Biobehavioral Processes and Clinical Research Application), PSY640 (Adult Psychopathology), PSY656 (Introduction to Evidence-based Psychological Treatments), PSY660 (Evidence-Based Psychological Intervention with Children), PSY662 (Health Psychology Interventions), EPH717 (Integrating Behavior Health Theories and Models) or EPH731 (Developing, Adapting and Evaluating Interventions). Each of these courses are designed to provide an opportunity for synthesis and integration of knowledge regarding the phenomenon of health behavior. They focus on critical examination of theoretical and empirical work in the area of health behavior from a public health and/or psychological perspective.

4. State of the Science Methods for Design and Analysis and Reproducibility. Reproducible research is required to successfully disseminate and implement evidence-based interventions in the communities that need it most. Further, strong methodological training in state of the science design and analysis methods will help to ensure the long-run success of CHANGE trainees. The required course work in statistics and methods of the constituent PhD programs will be supplemented with workshops and seminars. Competence will be displayed in presentations, papers and the final project. There are also two courses which will be required for this topic, EPH 732 (Implementation and Dissemination Science) and EPH 604 (Clinical Trials). The clinical trials course is taught by a Co-Director, Dr. Horigian, with Dr. Feaster providing statistical content, and the Director of Quality Assurance from the Florida Node Alliance providing regulatory guidance. The course will be offered in the first summer for post-doctoral and the 2nd or 3rd summer for pre-doctoral trainees. This course reviews all of the required elements of a clinical trial, e.g., defining the research question, the population to be addressed, and controls for bias to ensure replicable results. As a part of this course, participants will prepare their own protocol based on their research interests. This will become the basis for all trainees' final project for the CHANGE program.

5. Innovations in Assessment, Intervention, and Implementation Science in Specific Populations. Fellows in the program will gain knowledge on measurement, intervention and implementation science methodologies that targets specific populations such as the elderly, LGBTQ, racial/ethnic minorities, including, but not limited to, validated assessment tools in specific groups and languages and interventions that have been culturally adapted and informed to meet the unique needs of a specific population. Competence will be demonstrated through presentations, papers and final project.

6. Professional and Career Development. As the CHANGE program prepares the next generation of HIV and Mental Health scientists involved in disparities research, trainees will gain the necessary professional skills (e.g., presentation skills, conference attendance, networking, conflict negotiation/resolution, mentoring) to develop their careers through hands on experiences.

7. Training in the Reproducibility of Results and Responsible Conduct of Research. These are critical components of any research training program, and fellows will participate in multiple training modalities to achieve competency in the responsible conduct of research, cultural considerations in ethical decision making, and to gain the tools and procedures to ensure the reproducibility of results. To meet this competency, trainees will take EPH 625, Responsible Conduct of Research.

8. Scientific and Grant Writing. To become independent investigators, trainees must acquire the necessary skills to write scientific papers and develop competitive research applications to fund their work. Fellows will participate in established grant writing workshops offered by the CTSI and will complement their training through applied experiences with their mentors and consultations with the CHARM Development, Methods and Mental Health Disparities cores. Candidates will also demonstrate their gained scientific writing skills through development of a scientific portfolio as part of their culminating product of training. This portfolio will be composed of at least 4 publications, 2 presentations at conferences, and their final project. Furthermore, EPH 604, the Clinical Trials course, will require the writing of a protocol in the form of a proposal.