Cooperative Re-Engagement Controlled Trial (CoRECT)

OMB No. 0920-New

Supporting Statement B

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Robyn Neblett Fanfair, MD, MPH, Project Officer
Centers of Disease Control and Prevention
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Division of HIV/ AIDS Prevention- Surveillance and Epidemiology
1600 Clifton Rd., MS E-45
Atlanta, GA 30333
Phone: 404-639-6044
Fax: 404-639-6127
Email: iyo5@cdc.gov

B. Collections of Information employing statistical methods

1. Respondent Universe and Sampling Methods

The respondent population will be individuals who have failed to link to care after initial diagnosis and individuals who haven't received care within 6 months of their last documented HIV indicative lab. Three participating departments of health (DPH), Connecticut, Massachusetts, and Philadelphia, will aim to enroll 600 participants each, for a total of 1,800 persons. These participants will be randomized into either an intervention arm, or a standard of care arm. Each site will contribute 300 participants into the intervention arm and 300 from each site into the standard of care arm, for a total of approximately 900 participants in each arm. The main outcome measures will be analyzed using an "intent-to-treat" approach; all participants randomized in the study will be included in the analysis regardless of disposition or acceptance of the intervention. If a CD4 or viral load result is missing, it will not be counted in the numerator (i.e., it will be presumed "failure"). A per protocol analysis may be considered, as a secondary analysis, beyond the intent-to-treat analysis to determine whether the intervention appears to be more efficacious when participants who were misclassified at randomization are censored.

Regression analysis, using an appropriate model based on the structure of the data, will be used to evaluate multivariate models. Any baseline characteristics (e.g., Table 1) that are found to be statistically different between intervention and control group *and* that are felt to be potentially confounding the association between the intervention and the outcome will be considered in the multivariate model. The most parsimonious model is desired — only those variables that substantially confound the relationship between

the intervention and the outcome and remain statistically significant
will remain in the final model.

Secondary Outcomes

1. *Measurement of time-dependent variables* (e.g., association
   between intervention and time to (re)-engagement or time to
   viral load suppression) using Cox proportional hazard models

2. *Measurement of viral load as a continuous outcome variable*:
   Changes in viral load (e.g., geometric mean) over time will be
   compared between the intervention group and SOC group.

3. *Stratified analysis*: Although the study was powered to detect a
   10% absolute increase in the main outcomes among those in the
   intervention group compared to the SOC group, exploratory data
   analysis may suggest that the intervention worked differently
   among certain subgroups of (patient, clinical, and clinic-level
   variables). Secondary stratified analyses may be considered on
   a case-by-case basis if driven by the data; however, these
   analyses cannot be planned *a priori.*

Connecticut

Connecticut will assess patients who are identified as out of care
(OOC) and will be randomize participants to the DPH intervention vs
clinic SOC. Given the number of anticipated CoRECT sites in CT, the
tentative plan will be to stratify patients within each of 3
metropolitan areas where a Disease Intervention Specialist (DIS) field
worker will be assigned:

--New Haven

--Bridgeport/Danbury/Norwalk

--Hartford

A study coordinator from the DPH will be responsible for the
randomization, which will be blinded through the REDCap data
management system. Randomization will be stratified 1:1 to DIS
intervention vs SOC, but stratified within each metropolitan area

Massachusetts and Philadelphia

Massachusetts will begin the randomization process after the routine
case conference sessions are completed. All patients who are
determined to be "out-of-care" after the monthly case conference will
be randomized to either the standard of care (SOC) arm or intervention

arm. The Philadelphia CoRECT data manager will use computerized randomizing software to assign patients to either the intervention arm or the control arm within ten days of the case conference. Once patients have been randomized, the data manager will transmit the list of patients randomized to the intervention arm to the STD Control program in the Division of Disease Control for assignment to the PDPH outreach staff. A block randomization approach will be conducted:

- *Linkage vs. Re-engagement*: All patients who have not successfully linked to care (i.e., patients with newly diagnosed HIV infection who have not linked to medical care within 90 days) will be randomized separately from patients who have disengaged from care, as per the above definitions. This will ensure an equal number of intervention and SOC participants in each group.

- *Randomization by clinic*: Because baseline (re)-engagement practices may vary between clinics, a substantial imbalance between assignment of intervention and SOC participants among clinics could compromise the findings of the study. Given this, patients will be randomized by clinic to ensure there are an equal number of participants in each arm, from each collaborating clinic.

2. Procedures for the Collection of Information

Data Collection methods

All three participating health departments HIV surveillance data managers will electronically submit clinical and surveillance variables routinely collected by clinics and health departments in de-identified data files. Variables include sex, race/ethnicity, HIV exposure risk category, CD4 and viral load test results, date of first clinic visit, insurance status. Data will be reviewed monthly and sent to CDC quarterly. The CoRECT clinic's data managers will electronically submit clinical data to the health department staff to provide a list of potential "out of care" patients for comparison with the surveillance "out of care" list. Variables include sex, race/ethnicity, CD4 and viral load test results, date of first clinic visit. Data will be reviewed monthly by the three health departments monthly. After this information exchange is completed monthly case conference sessions will be conducted to determine eligibility for randomization. Each health department will send this information to CDC quarterly. In addition to the identification of out of care populations, a survey will be administered to individuals who agree to enroll in the CoRECT study. The survey will assess what possible

barriers the study participants encountered that prevented them from engaging in care. The survey will also provide information to the health departments by identifying challenges for those who are "out of care" which need to be overcome to ensure that retention in HIV care is achieved.

Data Transmittal

The CoRECT study sites will transmit data via the SAMS secured network quarterly to the CDC. The transmitted data will be automatically encrypted by the SAMS network and a data manager assigned to the study will retrieve the data on a routine basis.

Sample Size Calculation

To achieve adequate power to detect at least an absolute increase of 10 percentage points in the proportion of patients in the intervention arm who achieve a main outcome (e.g., viral load suppression), the trial needs approximately 600 out-of-care HIV-infected individuals (300 per arm; Table 1). A combined collaborating clinic population of 3,000 – 6,000 patients would likely be required to enroll 600 out-of-care persons over a two-year period. A preliminary assessment of the approximate numbers of individuals that are "Out of Care" for the CoRECT clinics and the health departments' study sites using the "Data to Care" analysis was estimated prior this study.

Table 1. Sample Size Calculations for the Main Study Outcomes

		Proportion Achieving Main Outcome in Intervention Arm										
		0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7
Proportion Achieving Main Outcome in SOC Arm	0.1	174	90	57								
	0.2			250	121	74						
	0.3					300	141	83				
	0.4							325	150	87		
	0.5									325	147	83

3. Methods to Maximize Response Rates and Deal with Nonresponse

There are two surveys/assessments included in this study: (1) Barriers to Care assessment given to participants (**Att. 5, 6, & 7**), and (2)

standard of care survey (**Att. 8, 9, & 10**) given to an identified employee at each participating clinic. Both surveys are very brief which should prevent tedium and reduce the likelihood of non-response due to burden.

Barriers to care survey: In order to maximize response rates in Connecticut, an abbreviated barriers to care assessment tool will be administered by the DIS. All disease intervention specialists (DIS) are trained to obtain information from patients, including sensitive information, which may be important in providing them health care. In Massachusetts, a brief survey questionnaire will be administered by clinic staff at the participating clinics during the first primary HIV care provider re-engagement clinic visit. Participating clinics will be provided with tablets pre-loaded with the survey instrument. Questionnaires will be administered via interview, by designated clinic staff (case managers or staff specifically involved in CoRECT study activities, as determined by the clinical site). In Philadelphia, when the DIS engages an OOC patient for the first time either by telephone or in person, they will briefly inquire about the challenges that have prevented the patient from seeking and/or staying engaged in medical care.

Standard of care survey

This survey is brief and only one to two HIV providers will be required to complete this survey per CoRECT site. Each survey will be completed only twice a year to maximize response rate and completeness.

4. **Tests of Procedures or Methods to be undertaken**

The data collection forms have already been reviewed by the investigators and staff participating in the project. Patients randomized to the intervention arm will be asked to consent to an in-depth interview accessing barriers to care. There are minimal risks to participants in the survey. A few questions on the survey ask about alcohol and drug use and may make some participants feel uncomfortable. Also, some participants may have concerns about being identified as a participant in the study and that providers may obtain personal information about them. To minimize these risks, patients may refuse to answer any question in the survey. To maintain privacy, all identifying information including name and other personal identifiers will be maintained with strict privacy protocols. Electronic data will be managed under password protected computer programs on a secured

data network. Filing cabinets are maintained in offices with limited and controlled access and all computers and the electronic health records are accessible only by authorized personnel with proper usernames and access codes. In addition, no identifying information will be sent to CDC.

5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data:

Individuals consulted on statistical aspects of the study design
Charles Rose, PhD, Statistician, Centers for Disease Control and Prevention HIV Epidemiology Branch, Division of HIV/AIDS Prevention 1600 Clifton Rd., MS E-45 Atlanta, GA 30333. Tel: 404-639-3028. Fax: 404-639-6127. Email: crose@cdc.gov
Simone Gray, PhD, Statistician, Centers for Disease Control and Prevention HIV Epidemiology Branch, Division of HIV/AIDS Prevention 1600 Clifton Rd. NE, MS E45 Atlanta, GA 30333 T: 404.639.8642 Email: zqv6@cdc.gov
Robyn Neblett Fanfair, MD, MPH, Medical Epidemiologist, Centers for Disease Control and Prevention HIV Epidemiology Branch, Division of HIV/AIDS Prevention 1600 Clifton Rd. NE, MS E45 Atlanta, GA 30333 T: 404.639.6044 Email: iyo5@cdc.gov
Nasima Camp, MPH, Public Health Analyst, Centers for Disease Control and Prevention HIV Epidemiology Branch, Division of HIV/AIDS Prevention 1600 Clifton Rd. NE, MS E45 Atlanta, GA 30333 T: 404.639.8246 Email: yul9@cdc.gov

CDC personnel responsible for receiving and approving contract deliverables:

Robyn Neblett Fanfair, MD, MPH
Medical Epidemiologist
Epidemiology Branch, Division of HIV/AIDS Prevention
1600 Clifton Rd. NE, MS E45
Atlanta, GA 30333

T: 404.639.6044
Email: iyo5@cdc.gov

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