

# Michigan Journal of Public Health

---

Volume 6 | Issue 1

Article 9

---

2012

## Using Community-Based Participatory Research to Investigate the Effectiveness of HIV/AIDS Risk Reduction Counseling in an Urban African-American Community

Alicia Streater  
*Wayne State University*

Julie Gleason-Comstock  
*Wayne State University, [jgleason@med.wayne.edu](mailto:jgleason@med.wayne.edu)*

Cindy B. Calhoun  
*Community Health Awareness Group, Inc.*

Barbara Jones  
*Community Health Awareness Group, Inc.*

Silas Norman Jr.  
*Wayne State University*

Follow this and additional works at: <http://scholarworks.gvsu.edu/mjph>

 Part of the [Public Health Commons](#)

---

### Recommended Citation

Streater, Alicia; Gleason-Comstock, Julie; Calhoun, Cindy B.; Jones, Barbara; and Norman, Silas Jr. (2012) "Using Community-Based Participatory Research to Investigate the Effectiveness of HIV/AIDS Risk Reduction Counseling in an Urban African-American Community," *Michigan Journal of Public Health*: Vol. 6 : Iss. 1 , Article 9.  
Available at: <http://scholarworks.gvsu.edu/mjph/vol6/iss1/9>

This Article is brought to you for free and open access by ScholarWorks@GVSU. It has been accepted for inclusion in Michigan Journal of Public Health by an authorized editor of ScholarWorks@GVSU. For more information, please contact [scholarworks@gvsu.edu](mailto:scholarworks@gvsu.edu).

## **Using Community-Based Participatory Research to Investigate the Effectiveness of HIV/AIDS Risk Reduction Counseling in an Urban African-American Community**

Alicia Streater, PhD  
Wayne State University  
Detroit, Michigan, USA

Julie Gleason-Comstock, PhD, MCHES  
Wayne State University

Cindy Bolden Calhoun, BS  
Community Health Awareness Group, Inc.  
Detroit, Michigan, USA

Barbara Jones, MSA  
Community Health Awareness Group, Inc.

Silas Norman, Jr, MD  
Community Health Awareness Group, Inc.  
Wayne State University

## ABSTRACT

**Introduction:** Risk reduction counseling is an important component in HIV/AIDS prevention. Community-based participatory research (CBPR) was conducted to determine if a single counseling session was as effective as a two-session intervention in reducing risk behavior.

**Methods:** Community and academic investigators jointly developed the study design. A convenience sample of 242 persons was randomized to receive either a two session intervention with Conventional HIV Testing (CHT) or a one session intervention with HIV Rapid Testing (HRT). Participants completed a risk assessment immediately preceding the test and a risk reduction plan after the test; CHT participants received a second risk reduction session.

**Results:** Of 130 participants completing a one-month follow-up, 86.9% were African American and 72.3% were male. All participants demonstrated a significant decrease in risk behaviors regardless of procedure.

**Conclusions:** Findings suggested that a brief client-centered risk reduction counseling intervention can be equally effective with either CHT or HRT. CBPR allowed the academic partner to answer study questions as the community agency received information to make informed decisions during a transition period from CHT to HRT.

**Keywords:** Brief risk reduction counseling, community-based participatory research, HIV risk reduction, African-American community, HIV Rapid Test

Dr. Streater is with the Center for Urban Studies (CUS) Wayne State University (WSU), Detroit, MI, USA; Dr. Gleason-Comstock is with the WSU School of Medicine (SOM) Department of Family Medicine & Public Health Sciences, and CUS; Ms. Bolden Calhoun and Ms. Jones are with Community Health Awareness Group, Inc. (CHAG), Detroit, MI; Dr. Norman is Board Chair of CHAG, WSU Associate Dean for Admissions, Diversity & Inclusion, and Assistant Professor in the Department of Internal Medicine.

Correspondence: Alicia Streater, PhD, Center for Urban Studies, Wayne State University, 5700 Cass Ave, Detroit, MI, 48202, USA.  
(E-mail: [astreater@wayne.edu](mailto:astreater@wayne.edu))

Funding: The authors declare the following financial support for the research and authorship of this article. The study was funded by Blue Cross Blue Shield of Michigan Foundation as a Community-Academic Partnership Grant (#0351.CAP) “HIV/AIDS OraQuick Special Project on Education and Counseling” with Cindy Bolden Calhoun, Community Research Director, Community Health Awareness Group, Inc., and Julie Gleason-Comstock, PhD, MCHES, WSU Principal Investigator, Wayne State University.

## Introduction

Community-based Participatory Research (CBPR) is a collaborative approach to research that equitably involves all partners in the process and recognizes the unique strengths that each brings (Israel, Schulz, Parker and Becker, 1998). CBPR is more process than method (Minkler & Wallestein (2003) and includes the reciprocal transfer of expertise by all research partners, shared decision making power, and mutual ownership of the processes and products (Viswanathan, Ammerman, Eng, Gartlehner, Lohr, Griffith, et.al. 2004). With CPBR, members of the community are full participants in the research process. They are not only a source of information about a particular health issue but also decision-makers and co-learners with academic researchers in all phases of the study from identifying the health concern to planning and seeking funding, to implementing, to interpreting and disseminating findings. When done properly, CPBR can improve the quality of research, produce findings that have immediate and direct use in the community, and ultimately improve health outcomes (Viswanathan, et al., 2004).

### *Application of CBPR to HIV prevention counseling*

Despite advances in screening, detection, and treatment, HIV/AIDS remains a public health problem in the United States. This is particularly evident for African Americans who accounted for more new HIV infections (44% ), more new AIDS diagnoses (46%), and more persons living with HIV (46%) than any other racial group in 2009 (Kaiser Family Foundation, 2012). Testing alone is unlikely to prevent or eliminate HIV/AIDS, particularly if access to health care is limited (Fullilove, 2006). Another strategy is using client-centered Risk Reduction (RR) counseling to

decrease risk behaviors (Kanekar, 2011). Counseling can be done alone; but, when combined with testing, it provides a teachable moment while waiting for results (Reitmeyer, 2007).

One of the first methods with statistical evidence of effectiveness was the Project RESPECT model (Kamb et al., 1998; Zenilman, 2005). Project RESPECT uses Social Learning Theory (Bandura, 1997) and the Stages of Change Model (Prochaska, DiClemente and Norcross, 1992) and motivational interviewing (Miller & Rollnick, 2002) to promote behavior change. During the brief 10-15 minute session the counselor uses a risk assessment to guide the client in identifying behaviors that place him/her at increased risk for sexually transmitted infections. The client selects a specific behavior to change and works with the counselor to develop an achievable action plan to reduce risk. In parallel with conventional HIV testing (CHT), which requires a return visit for results, the model includes a second session one week later. This session is frequently done in conjunction with delivering test results and includes reviewing the client's progress in implementing the plan and helping the client revise the plan to overcome identified obstacles. Project RESPECT was effective in increasing condom use and preventing new sexually transmitted infections six months later among clients in an STD clinic (Kamb et al., 1998).

***Community Adaption of Project RESPECT:*** Using the original Project RESPECT intervention manual (CDC, 1993), a large urban community-based organization (CBO) adapted the RESPECT model for use with HIV counseling and testing in nonclinical settings. For the past 25 years, the CBO has provided outreach and HIV counseling, testing, and referral (CTR) services in a variety of community (e.g., homeless shelters, substance abuse treatment centers)

and outreach settings using mobile units in high need areas. Its target population is primarily African-American adults at high risk for HIV/AIDS due to injection drug use, exchanging sex for drugs or money, and/or having sexual partners who are the same sex. To meet client needs, the organization expanded the RESPECT model to include injecting and non-injecting substance use. The CBO had successfully implemented the two-session risk reduction counseling model for over five years until HIV rapid testing (HRT) was FDA approved for use in a non-clinical outreach setting. With HRT, test results are ready within 20-30 minutes, eliminating the need for a return visit. This change created a need to adjust the counseling procedures to meet the single-session format.

***Development of the Community Based Participatory Research:*** The academic investigators, who had been working with the CBO as evaluators for over five years, began meeting with agency administrators and CTR staff to redesign their procedures to align with the new testing protocols. The staff and the CBO's Consumer Advisory Group, were concerned that cutting the second session would diminish the effectiveness of the RR counseling. They viewed the anxiety experienced while waiting a week for test results to be a necessary component of counseling effectiveness. They reasoned that the interval offered the clients the opportunity for reflection and to put their plan into action. Because the agency anticipated a year-long transition from using CHT to HRT exclusively, there was a window when both testing procedures would be used, allowing the opportunity for a randomized trial to test the staff's hypothesis.

A CBPR strategy was chosen as the best approach developing the study design, given the origin of the questions and the CBO's stake in the findings. CBO administrators and academic

researchers served as co-principal investigators. The investigators worked closely with staff to develop the research questions, design the study, and seek funding. The community partners selected the recruitment locations and provided the staff to conduct the study. Cross-training between CBO staff and investigators enabled the development of research protocols that accommodated both CBO and research objectives. A detailed description of the process and utilization of CBPR critical elements for this study has been published previously (Gleason-Comstock, Streater, Bolden Calhoun, et al., 2006).

The study sought to answer the following research questions:

1. Are clients who learn their results immediately following risk reduction counseling less likely to recall creating a risk reduction plan than those who learn their results a week later?
2. Can a single risk reduction counseling session be as effective in reducing risk behavior as a two-session intervention?



## Methods

**Sample and Recruitment Procedures:** The agency and investigative team jointly identified three outreach HIV testing sites to conduct the study. All sites were located in Detroit, Michigan and served primarily African American adults at-risk for HIV/AIDS due to situational (e.g., homeless, paroled) and/or behavioral factors (e.g., sexual and/or drug). Two sites were agencies serving substance-abusing clients. The third site was a social services agency providing food, temporary and permanent shelter, and medical and/or mental health care to primarily homeless clients with co-occurring disorders. Additionally, walk-in clients at the testing agency's central office were invited to participate. A convenience sample of 242 participants was drawn among all clients seeking HIV testing services from these sites.

Study recruitment was incorporated into the agency's usual procedure for recruiting clients for HIV testing. Counseling and testing staff gave a brief HIV/AIDS educational presentation to a group of about 20-30 clients at each outreach location. The presentation included a description of the two testing procedures, an introduction to the study, and an opportunity for questions. Those interested in participating were asked to see the research staff immediately following the presentation for more information. To accommodate the additional time needed to complete study procedures, those wanting to test but not participate in the study were given the opportunity to test when the agency returned or referred to another testing location, as appropriate. However, CTR staff had the option of testing a high-risk client who did not want to participate in the study and considered not likely to test later.

**Measures:** The investigators, in consultation with CBO staff, made minor modifications to the standard counseling and testing assessment forms to accommodate both CBO and research needs. All tools were printed on carbonless forms to allow both researchers and test counselors to retain copies of completed tools. Of the three instruments used only the follow-up interview was specific to this study.

**Pretest Counseling Assessment Form (PCAF):** The self-report PCAF contained limited demographic information such as race/ethnicity, marital status, age, HIV testing history, drug and sexual HIV risk behaviors in the past month, and a self-rating of perceived HIV risk. Drug-related risk behavior was assessed using a series of close-ended items in which clients checked which substances they used in the past three months (e.g., alcohol, heroin, cocaine). Two “yes/no” items on ever using a needle to inject drugs and/or sharing needles assessed risk from injection drug use. HIV risk from sexual behaviors was assessed through another series of items: the number of sexual partners in the past year, sexual partner gender (males, females, both), if they exchanged sex for drugs or money, and their consistency of condom use. Sexual partner-based risk was assessed by a series of “yes/no” items asking them to indicate whether in the last three months they had a sexual partner(s) who shoots drugs, is bisexual, a man who has sex with another man (MSM), HIV+, has a sexually transmitted disease (STD), and/or exchanged sex for drugs or money. Clients checked if they currently had an STD. Test counselors reviewed the responses with the client as the starting point in the pre-test counseling session.

**Risk Reduction Plan Guide Form (RRP):** The CBO developed the RRP form to guide clients in creating their risk reduction plan through a series of open-ended questions. Clients identify

one or two key behaviors that place them at risk for HIV and specify what they could do to change these behaviors, including alternative behavior strategies. Clients received a copy of the plan to take with them.

The form was modified for this study to standardize responses for analysis. Although the questions were asked open-ended, a checklist of typically discussed behavior changes was provided to reduce error in interpreting handwriting. Examples of listed behavior changes include using condoms more often, having fewer sex partners, changing to non-injection drugs, and reducing drug use. A line for additional activities was provided to record other responses. The form was produced in triplicate to allow the counselors, investigators, and clients to have a copy of the plan. The changes did not affect how the tool was used in the counseling session.

**Follow-up Interviews:** This was the only instrument that was developed and used exclusively for the study. The interview contained questions about the HIV testing experience, creation of a risk reduction plan, their perceived progress in implementing the plan, and engagement in risky behaviors in the past month. Additionally, the instrument included the same checklist of risk reduction actions from the RRP, as well as, the same drug and sexual risk behavior questions as in the pre-counseling form. The same investigative staff conducted all of the 30-minute interviews.

**Procedure:** Prior to study implementation, the investigators, agency administrators, and counseling and testing staff held a series of meetings to discuss adapting counseling and testing forms and procedures to accommodate the study. Counseling staff received training on study

protocols, including randomization procedures. Figure 1 displays the randomization process utilizing the two testing protocols.

Study procedures and instruments were approved by the Wayne State University Institutional Review Board prior to beginning the study. To accommodate anonymous HIV testing, as allowed in Michigan, participants were not asked to provide their names or any contact information. An encrypted unique identifier was generated for each participant to match forms and the consent form was signed with this identifier.

Once the consent form was signed, participants completed the PCAF and selected a sealed opaque envelope containing their testing group assignment. This procedure produced nearly equal groups: 132 (54.7%) were randomized to receive HRT and 110 (45.3%) were randomized into CHT. All participants completed the PCAF before meeting with the counselor. In the CHT group, the RRP was completed after testing was done and reviewed when participants received their results one week later, resulting in two-session risk reduction counseling. Those in the HRT group completed the RRP while waiting for test results, resulting in single-session risk reduction counseling.

Participants were given an appointment card with a specific date, time and location and the phone number of the research assistant for the one-month follow-up interview. They were instructed to call the research staff to reschedule the interview if necessary. Interviews were done at the same location as the HIV counseling and testing procedure. All participants received a

hygiene kit at the time of study entry and a \$15 cash incentive upon completion of the follow-up interview.

After the preliminary analyses were completed a debriefing session was held with the academic and community investigators, CTR staff, and staff and community advisory members. The resulting discussions provided valuable insight into study results and helped guide further exploration of the data.

**Statistical Analysis:** Univariate analyses were used to describe the characteristics of the study sample. Chi-square tests were used to test for significant differences between groups for categorical data. ANOVA and t-tests were used to test differences between the two testing groups for interval level data. A two-sided p value  $\leq 0.05$  was considered statistically significant. Data were entered into a SPSS database and all analyses were completed using SPSS Statistics Version 18 (IBM SPSS, Somers, NY).

## Results

Of the 242 persons who agreed to participate, 157 (64.9%) were recruited from the two substance abuse treatment agencies, 71 (29.3%) were from the social service agency and 14 (5.8%) were walk-ins at the CBO office. Four participants were excluded from the study because they had previously tested positive. Twelve participants were dropped from the analyses because there were too many missing responses on their pretest forms. Out of the 226 remaining persons, 130 participants (57%) completed the one-month follow-up interview: 70 (53.8%) in the HRT group and 60 (46.2%) in the CHT group. There were no statistically significant differences found between those who completed the follow-up interview and those who did not, with respect to testing site, gender, age, HIV risk behaviors, and test assignment. Additionally, except for the four who had previously tested positive, none of study participants tested positive for HIV/AIDS. These results suggested that there was no systematic bias operating that would impact study findings.

Table 1 displays the distribution of demographic characteristics by group. The majority of the 130 study participants were male ( $n=94$ ; 72%) and most self-identified as African American/Black ( $n=113$ ; 87%). Only a few were currently married or in a committed relationship; 87 (67%) were never married, and 31 (24%) were widowed, divorced or separated. Ages ranged from 18- 61 with an average age of 43.1 ( $s.d. = 7.8$ ). Three fourths of the sample had taken an HIV test previously, with 24 (24.7%) testing in the past six months. The majority of participants were at risk for HIV because of illicit substance use and/or having sex with a high-risk sexual partner. Only a fifth of the participants had ever injected drugs. Differences between

the two groups were not statistically significant for any of the demographic characteristics or for HIV risk behaviors at the pretest assessment.

**Risk Reduction Plan Recall:** Most of the participants recalled creating a risk reduction plan and receiving a copy to take home when they were tested. Although it was not statistically significant ( $\chi^2(1, N=128) = 1.622, p=0.16$ ), participants in the CHT group were more likely to recall making the plan (84% versus 92% for HRT and CHT, respectively).

Accuracy of plan recall was measured by comparing the risk reduction behaviors selected on the original RRP with the recalled list of behaviors during the interview. The degree of matching was categorized into three groups: “none correct”, “partially correct”, and “all correct”.

Table 2 displays the recall accuracy of the plan by group. Only about a third of the participants in either group correctly recalled all elements of the plan they created at testing. Twenty-five percent ( $n=30$ ) did not recall any of the original risk plan correctly at follow-up and 41% ( $n=50$ ) correctly recalled only part of the plan. Additionally, the majority of participants ( $n=101$ ; 84%) added other behaviors which were not on the original plan. Recall accuracy did not vary significantly by type of test ( $\chi^2(1, N=125) = 1.849, p=0.12$ ) or by testing location ( $\chi^2(1, N=125) = 2.734, p=0.07$ ).

**Changes in Risk Behavior:** A composite risk behavior score was calculated to investigate if a single risk-reduction counseling session was as effective as a two-session in reducing risky behavior. The total number of self-reported risk behaviors was summed to create a total

behavioral risk score. Scores ranged from 0 to 10 with an average score of 3.50 (s.d. = 2.3) at the time of the HIV test. At the one month follow-up, scores ranged from 0 to 4, with an average score of 0.31 (s.d. =0.7). Table 3 shows the pre and follow-up risk behavior scores for the two groups by testing location.

A repeated measure ANOVA was used to test if there were statistically significant differences in risk scores by RR counseling sessions received over time. The results indicated that both groups significantly decreased their risky behavior at the one month follow-up ( $F(1,128) = 208.09, p < .001$ ). However, differences between groups were not statistically significant ( $F(1,128) = 0.405, p = .52$ ).



## Discussion

This study began in response to a community suggestion that a single risk reduction counseling session would be less effective than a two-session counseling approach. Anxiety and time for reflection were hypothesized to be important for preparing to change behaviors. The results, however, did not support this hypothesis. Although only a third of either group could accurately recall their risk reduction plan, both groups engaged in significantly fewer high risk behaviors one month after testing. These results were similar to a RESPECT-2 study comparison of RHT and CHT (CDC, 2001) in which counseling with either test had similar effects on STD incidence. Both of these studies suggest that the number and timing of risk reduction counseling sessions may be less important than the cognitive process involved in constructing the risk reduction plan.

**Study Limitations:** In this study, investigative procedures needed to be integrated with the CBO's regular outreach counseling and testing activities. Testing locations had to be carefully selected so that they would not overlap with sites covered by the agency's regular funding sources. Moreover the monetary incentives offered for completing the follow-up interview may have attracted some clients who may not have tested otherwise to participate in the study. Both constraints created the potential for respondent and selection bias. Although study participant characteristics were similar to others tested by the agency, the sample may not be representative of the general at-risk population.

The inclusion of clients while in restricted environments also may have impacted study results. Clients who voluntarily entered substance abuse treatment may have been more ready to change their risk behaviors before receiving risk reduction counseling than those in the general

population. Additionally the one-month interval for follow-up may have been too short to allow time for those recently out of treatment to freely resume their life in a less restrictive environment. Although no statistical difference was found in changes in risk behavior scores between participants recruited from treatment centers and multi-service agencies, the higher percentage of participants who entered through treatment centers may have influenced the results.

Another limitation was the reliance on recall of drug use and sexual risk behaviors as an outcome measure. Recall accuracy depends on the type and frequency of the behavior (Napper, Fisher, Reynolds, & Johnson, 2010). Generally, recall of drug related behaviors are reliable across any time interval, although one month is somewhat more reliable. In contrast, longer recall periods are more reliable for sexual behaviors: three months for most sexual behaviors and six months for the number of sexual partners. Therefore, the one-month follow-up period may have affected the reliability of self-reported sexual behaviors. Future studies should include a three and six month follow-up period.

***Study Strengths:*** The strength of this study rests in the successful integration of community and investigative procedures to answer a question relevant to both the CBO and to the researchers. To achieve this level of successful integration, both academic and community entities had been working together for at least five years, building trust and mutual respect. The study further solidified this relationship and has led to continued partnerships in presentations and publications to multiple public health audiences (Gleason-Comstock, Simpson, & Bolden-Calhoun, 2005;

Gleason-Comstock, Streater, Rolack, Bolden-Calhoun, & Simpson, 2005; Gleason-Comstock, Streater, Bolden-Calhoun, Simpson, Rolack, & Norman, 2006).

The study was also strengthened by the randomization of participants into the two testing and counseling groups. Randomization produces comparable groups, minimizing the role of extraneous factors that can confound results. Unfortunately randomization in CBPR studies is rare. In their review, Viswanathan, et al., (2004) found only a third of the CBPR studies used a control group. Although randomization may be perceived as unethical because not everyone receives the new treatment, there are acceptable alternatives such as wait-listed control groups in which those in the control group receive the new treatment once the study is complete. In this study, randomization was readily acceptable to the community partners because the two testing procedures were proven to be equally effective and all clients would receive RR counseling.

Additionally monthly meetings encouraged free discussion and transparency between community outreach staff and academic researchers. Given their extensive knowledge of the community, staff articulated the potential problems in recruitment and implementation of the study, including the need to accommodate participants who tested anonymously. These discussions lead to a study protocol which was well integrated into the CBO's usual procedures, decreasing staff burden and increasing ownership of the study findings.

The investigators presented preliminary findings to the CBO administrators, staff, and the community advisory group to solicit their comments and interpretation of the data. Testing counselors reported that participation in the randomization process challenged them to better

articulate similarities and differences between conventional testing and rapid testing when responding to questions from clients. They noted that clients did not care which test was used as long as both were equally accurate. One unanticipated benefit in using CBPR was that the agency was able to use the study to pilot test their new procedures for transitioning to rapid testing.

### **Implications for Practice**

Although HIV screening tests do not require risk-reduction counseling, findings from the present and other studies suggest that brief counseling at the time of the test may be a worthwhile HIV prevention strategy. RR counseling using motivational interviewing also has been shown to be effective in enhancing behavior change in other public health arenas such as increasing leisure exercise time among hypertensive patients (Sjöling, Lundberg, Englund, Westman, & Jong, 2011) and in increasing self-efficacy and motivation for physical activity among older patients with chronic heart failure (Brodie, Inoue and Shwa, 2008). Although the effects were limited, a single motivational interviewing intervention changed some oral health behaviors (Ismail, Ondersma, Jedele Little, & Lepkowski, 2011).

## Conclusions

This research was conducted within the context of community outreach for HIV counseling and testing in an urban, mostly African-American, population at risk for HIV/AIDS. Study results suggest that a brief risk reduction intervention, using motivational interviewing techniques with either CHT or RHT can be equally effective in reducing high risk behaviors, at least in the short-term. The findings also suggest that while it is important to offer HIV testing, it is equally important for public health efforts to include brief risk reduction counseling to decrease the likelihood that someone will test HIV positive in the future. A longer follow-up period is suggested to determine if observed reductions in self-reported risk behavior is sustained over time. CBPR can be challenging and may require compromises between competing demands of scientific rigor and practical constraints in real world settings (Kamb et al., 1998; Blumenthal, 2011). However, the benefits of real world applications and building community capacity as co-investigators make this process worthwhile in public health research.

### **Acknowledgements**

The authors gratefully acknowledge research project outreach staff, including Ms. Rosalind Rolack, and guidance provided by the Community Advisory Group at Community Health Awareness Group, Inc.

### **Declaration of Conflicting Interests**

The authors declared no conflicts of interests with respect to the authorship and/or publication of this article

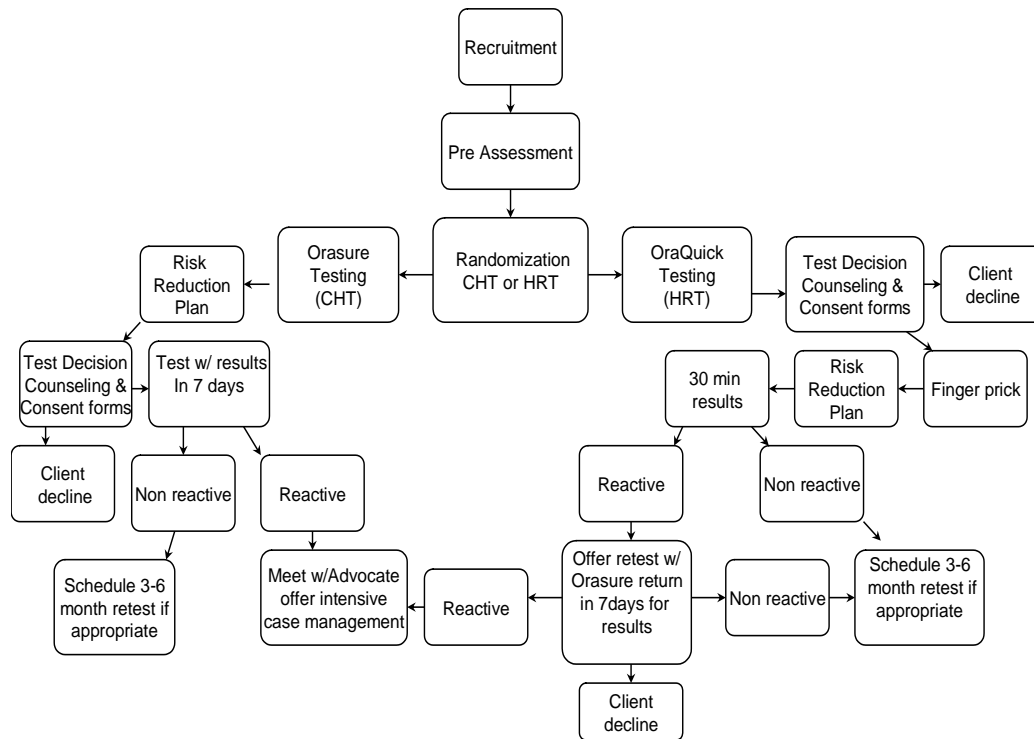
## References

- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.
- Blumenthal, D. (2011). Is community-based participatory research possible? *American Journal of Preventive Medicine* 40(3), 386-389.
- Branson, B., Handsfield, H., Lampe, M., Janssen, R., Taylor, R., Lyss, S. and Clark, J. (2006) Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings. *MMRW Recommendations and Reports* September 22, 2006 / 55(RR14);1-17
- Brodie DA, Inoue A, Shaw DG. (2008) Motivational interviewing to change quality of life for people with chronic heart failure: a randomized controlled trial. *International Journal of Nursing Studies* Apr (4): 489-500.
- Centers for Disease Control and Prevention (1993). Project RESPECT enhanced counseling intervention manual. Retrieved April 6, 2011, from <http://www.cdc.gov/hiv/topics/research/respect/pdf/projrim.pdf>
- Centers for Disease Control and Prevention (2001). RESPECT-2 Study Overview. Retrieved April 6, 2011, from <http://www.cdc.gov/hiv/topics/research/respect-2/overview.htm>
- Centers for Disease Control and Prevention (2012) Fact sheet on HIV Retrieved April 4, 2012 from [http://www.cdc.gov/hiv/resources/factsheets/PDF/HIV\\_at\\_a\\_glance.pdf](http://www.cdc.gov/hiv/resources/factsheets/PDF/HIV_at_a_glance.pdf)
- Chariyeva, Z., Golin, C.E., Earp, J.A., & Suchindran, C. (2011). Does motivational interviewing counseling time influence HIV-positive persons' self-efficacy to practice safer sex? *Patient Education and Counseling*. Epub ahead of print retrieved October 20, 2011 from <http://www.ncbi.nlm.nih.gov/pubmed/21890300>
- Fullilove, R.E. (2006) African Americans, Health Disparities and HIV/AIDS: Recommendations for confronting the epidemic in Black America. December 2006. [http://www.thenightministry.org/070\\_facts\\_figures/030\\_research\\_links/050\\_hiv\\_aids/NMACAdvocacyReport\\_December2006.pdf](http://www.thenightministry.org/070_facts_figures/030_research_links/050_hiv_aids/NMACAdvocacyReport_December2006.pdf)
- Gleason-Comstock, J, Simpson, H., & Bolden-Calhoun, C. (2005). HIV Rapid Testing: Detroit Community-Based Participatory Research. *Centers for Disease Control National Center for HIV/AIDS, STD and TB Prevention: Turning Research into Prevention (TRIP)*. Atlanta, GA.
- Gleason-Comstock, J., Streater, A., Rolack, R., Bolden-Calhoun, C., & Simpson, H. (2005). Challenges to client participation in a Detroit community-academic research partnership HIV rapid testing. *Wayne State University School of Medicine/Center for Urban and African-American Health: President's Conference on Health Disparities*. Detroit, MI.
- Gleason-Comstock, J., Streater, A., Bolden Calhoun, C., Simpson, H.L, Rolack, R., & Norman, J.R., S (2006). Development of a community-based participatory research effort to evaluate conventional HIV Testing and HIV Rapid Testing. *Journal of HIV/AIDS & Social Services*, 5(3/4), 201-219.
- Ismail, A.I., Ondersma, S., Willem Jedele, J.M., Little, R.J., & Lepkowski, J.M. (2011). Evaluation of a brief tailored motivational intervention to prevent early childhood caries. *Community Dentistry and Oral Epidemiology*. 39(5), 433-48. doi: 10.1111/j.1600-0528.2011.00613.x
- Kaiser Family Foundation (2012). The HIV/AIDS Epidemic in the United States. Fact Sheet Retrieved May 9, 2012 from <http://www.kff.org/hivaids/upload/3029-13.pdf>



- Kamb, M.L., Fishbein, M., Douglas, J.R., J.M., Rhodes, F., Rogers, J., Bolan, G., Zenilman, J., Hoxworth, T., Malotte, C.K., Iatesta, M., Kent, C., Lentz, A., Graziano, S., Byers, R.H., Peterman, T.A. (1998). Efficacy of risk reduction counseling to prevent HIV and STD: a randomized controlled trial. Project RESPECT Study Group. *Journal of the American Medical Association*, 280(13), 1161-1167.
- Kanekar, A. (2011). HIV/AIDS counseling skills and strategies: can testing and counseling curb the epidemic? *International Journal of Preventive Medicine*, 2(1): Jan-Mar. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3063469>.
- Miller, W. R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people for change* (2nd ed.). New York: Guilford Press
- Minkler, M. & Wallerstein, N. (2003). Introduction to community based participatory research. In M. Minkler & N. Wallerstein (Eds.), *Community-based Participatory Research for Health* (pp. 3-26). San Francisco, Jossey-Bass.
- Napper, L.E., Fisher, D.G., Reynolds, G.L., & Johnson, M.E. (2010). HIV risk behavior self-report reliability at different recall periods. *AIDS Behavior*, 14(1), 152-161.
- Prochaska JO, DiClemente CC, Norcross JC (1992). In search of how people change. Applications to addictive behaviors. *American Psychologist* 47:1102.
- Reitmeyer, C. (2007). Risk reduction counseling for prevention of sexually transmitted infections: how it works and how to make it work. *Sexually Transmitted Infections*. 83: 2-9. doi 10.1136/sti.2006.017319.
- Rubak S, Sandbæk A, Lauritzen T, Christensen B. (2005) Motivational interviewing: a systematic review and meta-analysis. *British Journal of General Practice* 55:305.
- Sjöling, M., Lundberg, K., Englund, E., Westman, A., & Jong, M.C. (2011). Effectiveness of motivational interviewing and physical activity on prescription on leisure exercise time in subjects suffering from mild to moderate hypertension. *BMC Research Notes*, 4, 352.
- Spector, A. (2011). CBPR with service providers: Arguing a case for engaging practitioners in all phases of research. *Health Promotion Practice*. Published online 15 June 2011. DOI: 10.1177/1524839910382081.
- Viswanathan M, Ammerman A, Eng E, Gartlehner G, Lohr KN, Griffith D, Rhodes S, Samuel-Hodge C, Maty S, Lux L, Webb L, Sutton SF, Swinson T, Jackman A, Whitener L. (2004) Community-based Participatory Research: Assessing the Evidence. Summary, Evidence Report/Technology Assessment No. 99 (Prepared by RTI–University of North Carolina Evidence-based Practice Center under Contract No. 290-02-0016). AHRQ Publication 04-E022-1. Rockville, MD: Agency for Healthcare Research and Quality.
- Zenilman, J. (2005). Behavioral interventions—*rationale, behavior and effectiveness*. *Infectious Disease Clinical North America*.19. 541-562. doi 10.1016/j.idc.2005.04.002.

**Figure 1: HIV Counseling & Testing and Randomization Flow Chart**



**Table 1**

*Demographic Characteristics, Prior HIV Testing and Risk Behaviors by Testing Method*

Characteristic	Single Session	Two session	Total
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
<b>Gender</b>			
Male	53 (75.7)	41 (68.3)	94 (72.3)
Female	17 (24.3)	19 (31.7)	36 (27.7)
<b>Race</b>			
African American	61 (87.1)	52 (86.7)	113 (86.9)
White	6 (8.6)	4 (6.7)	10 (7.7)
Other	3 (4.3)	4 (6.7)	7 (5.4)
<b>Age (years)</b>			
18-25	1 (1.4)	2 (3.3)	3 (2.3)
26-35	14 (20.0)	5 (8.3)	19 (14.6)
36-45	25 (35.7)	27 (45.0)	52 (40.0)
46+	30 (42.9)	26 (43.3)	56 (43.1)
<b>Marital Status</b>			
Married/living together	7 (10.0)	4 (6.8)	11 (8.5)
Divorced/Separated/Widowed	19 (27.1)	12 (20.3)	31 (24)
Single never married	44 (62.9)	43 (72.9)	87 (67.4)
<b>Tested Previously</b>			
Yes	48 (69.6)	49 (81.7)	97 (75.2)
<b>Recruitment Location</b>			
Drug treatment center	43 (61.4)	37 (61.7)	80 (61.5)
Multi-service agency	27 (38.6)	23 (38.3)	50 (38.5)
<b>HIV Risk Behavior</b>			
Injection drug use ever	14 (20.0)	13 (21.7)	27 (20.8)
Other illicit drug use	66 (94.3)	53 (88.3)	119 (91.5)
Had STD in past 12 months	4 (5.7)	5 (8.3)	9 (6.9)
<b>Number of sex partners in past 12 months</b>			
< 2	36 (56.2)	27 (50.9)	63 (53.8)
2-5	20 (31.5)	19 (35.8)	39 (37.3)
≥ 6	8 (12.5)	7 (13.2)	15 (12.8)
Exchanged sex for drugs or money	19 (27.1)	21 (35.0)	40 (30.8)
Had same sex partner	4 (5.7)	5 (8.3)	9 (6.9)
High risk sex partner in past 12 months	32 (45.7)	29 (48.3)	61 (46.9)
No reported risk behavior in past 90 days.	4 (5.7)	4 (6.7)	8 (6.2)

**Table 2**  
*Accuracy of Risk Plan Recall at Follow-up by Test Group*

Plan recall	RHT <i>n</i> (%)	CHT <i>n</i> (%)	Total <i>n</i> (%)
Recall Accuracy			
None Correct	17 (25.8)	13 (23.6)	30 (24.8)
Partially Correct	26 (39.4)	24 (43.6)	50 (41.3)
All Correct	23 (34.8)	18 (32.7)	41 (33.9)
Added more (% yes)	62 (88.6)	47 (78.3)	101 (84.2)

**Table 3**  
*HIV Risk Behavior Scores at Pre-test and Follow-up by Number of Counseling Sessions*

	Single Session <i>n</i> =70	Two Sessions <i>n</i> =60
Pretest	6.97 (5.1)	7.70 (5.8)
Follow-up	0.46 (1.3)	0.37 (1.0)