

CAPSTONE FINAL REPORT

UNDERSTANDING PERCEPTIONS OF HIV RISK AND PREVENTION PRACTICES

ABSTRACT

This report summarizes the results of my Capstone Project conducted at Miami-Dade County Health Department's STD Department. My Capstone project was a continuation of my MPH field experience in which I assisted in collecting data for a study being conducted by the STD Department. This field project uses a subset of that data from the participants I personally interviewed to identify relationships between specific client characteristics and their preferences for HIV prevention strategies. The objective of this project was to better understand client needs in order to better design culturally acceptable interventions. The project considered four key independent variables: client gender, client ethnicity, and client sexual orientation. Client sexual orientation was defined as men who have sex with men (MSM), men who have sex with women only (MSW), women who have sex with men and/or women (WSM), and women who have sex with women only (WSW). The key dependent variable was the client's preferred HIV prevention strategies, one of circumcision, female condom, male condom, Microbicides, or pre-exposure prophylaxis. The data collected was analyzed to determine whether client gender, partner gender, or race/ethnicity were related to HIV prevention strategy preferences. Of the four, only client gender showed a notable difference, with males strongly preferring male condoms, while females were approximately equally split among nearly all prevention strategies. The key limitation of the project was the very small sample size which precluded statistical hypothesis testing. Recommendations included both repeating the project with substantially larger sample in which statistically significant results for reasonable effect sizes would be more likely. In the meantime, however, awareness that male and female clients may have significantly different HIV prevention strategy preferences is an important conclusion.

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Summary Statement

The CDC estimates that as many as 50,000 new cases of HIV are diagnosed each year; 16,000 HIV cases died in 2008 alone (CDC, 2011). There are nearly 1.2 million individuals living with HIV in the U.S. at this time, and that number is continually growing each year (CDC 2011). HIV is also often found coincident with other sexually transmitted diseases (STDs). Statistics from 2010 compiled by the State of Florida (2011) found that there were nearly 400 cases of infectious syphilis in Miami Dade County, with nearly half of those also infected with HIV. Another 850 cases of syphilis in the county were identified as being in either early-latent or late-latent stages, again with between 25% and 50% of them co-infected with HIV (State of Florida, 2011).

Several major population groups are at greater risk of HIV including MSM and bisexual men, as well African Americans and Hispanics or Latinos—the major ethnic groups in the Miami-Dade area (CDC, 2011). The Centers for Disease Control and Prevention (CDC) noted in 2011 that while gay and bisexual men (MSM, or Men who have Sex with Men) account for about 2% of the population in the U.S., they account for 61% of all new HIV infections (CDC 2011). Similarly, African Americans are about 14% of the U.S. population, but account for 44% of new HIV infections, with African American women being particularly at risk, with an infection rate 15 times higher than that of white women (CDC 2011). Hispanics are also at greater risk of HIV infections, accounting for 16% of the population, but having 20% of the total new HIV infections—a rate 3 times higher than in the white population (CDC 2011). Other at-risk groups include users of injected drugs, and transgender individuals, with males transitioning to females having approximately a 21% infection rate.

A number of new prevention strategies have been developed to prevent HIV infections, including male circumcision, pre-exposure prophylaxis with antiretroviral (ARV) drugs for high-risk individuals, and Microbicides specifically aimed at HIV prevention. These strategies, discussed in more detail in the Literature Review that follows, are not always well known or understood in the community

This project aimed to assess the level of understanding of the risk of HIV/AIDS and methods of prevention of HIV/AIDS, as well as to identify ways that public health information about HIV/AIDS can best be disseminated among people of different genders, sexual orientations, and ethnicities. This project should aid in better understanding how attitudes toward HIV prevention practices differ among various groups in the community based on gender, ethnicity, and sexual orientation.

Project Objectives

Two key objectives were associated with this project. First, the project had the objective of better understanding the attitudes toward HIV prevention strategies as a function of race/ethnicity gender, and partners' gender. Second, the project was intended to provide a better understanding of how an inner city STD clinic operated, in terms of the its day-to-day operations and its relationship to its clients. These two objectives were intended to better understand how to educate clinic clients on effective means of HIV protection and to identify cultural, racial, gender, or sexual preference differences in how these clients may prefer to receive such education. These objectives are in line with the overall program objectives of understanding the social and behavioral factors that affect individual health choices and to apply that understanding to specific implementations of behavioral interventions. The intention behind the project is to be able to better serve the clients in a good cultural context.

Background Literature

This brief literature review addresses key themes in the research that address issues of HIV prevention strategies, with particular attention to the acceptability of those strategies to various groups differing by gender, sexual orientation, and ethnicity.

New Strategies in HIV Prevention

Several new strategies have been developed recently to address HIV prevention. Key among these are topical ARV-based microbicides, oral pre-exposure prophylaxis using ARV drugs, ARV drugs used in HIV-positive individuals to reduce transmission to non-infected persons.

ARV therapy is demonstrated useful in treating individuals with HIV infections. It is now being used as a prophylactic therapy to prevent HIV in individuals exposed to others who carry the infection (El-Sadr et al., 2010). While mathematical models indicate that this therapy should be successful, evidentiary support is still thin (El-Sadr et al., 2010). Also, in the U.S. there are significant issues with using ARV therapies as prophylaxis. These barriers include the high number of those who most need the therapy who are also uninsured or underinsured; the demonstrated typical delays between HIV diagnosis and the beginning of HIV treatment, and problems with compliance with a long-term ARV therapy; and the potential for ARV therapy to grant “permission” for higher-risk behaviors more likely to spread the infection (El-Sadr et al. 2010). For this type of therapy to be effective, it will require social, policy, and insurance changes (El-Sadr et al. 2010).

One example of the use of ARV drug therapies in HIV prevention campaigns is a pre-exposure prophylaxis method. This is when the ARV drug is used prior to sexual contact with a non-infected person to prevent transmission of the infection. Depending on how strictly the pre-

exposure protocol is followed, studies have shown that the risk of infection is cut between 44% and 73% with this strategy (Hayden 2011). However, there is some concern that such a prevention approach may ultimately encourage riskier behavior, such as reduced use of condoms. Furthermore, pre-exposure prophylaxis requires ongoing and regular testing and intensive counseling, neither of which is easy to provide at the level of a population (Hayden 2011). Thus, the cost-effectiveness is uncertain for this particular approach to HIV prevention, an important factor for any strategic plan.

Other biomedical approaches to HIV prevention are either in place, or are currently under study. These include a potential HIV vaccine, topical microbicides, male circumcision, and condom usage (Mayer, Skeer & Mimiaga 2010). Of these, topical microbicides are generally gels, sponges or rings applied to vaginal or rectal mucosal areas to prevent HIV infection transmission (Mayer et al. 2010). A large number of such products—at least 80—are either available or under development. Some work by reducing the pH of the mucosal tissues, some are detergents that break microbial membranes, some target the cell or virus receptors to prevent binding of virus to cells; and some inhibit the replication function of the HIV virus (Mayer et al. 2010).

Male circumcision is another approach. Studies have shown that the risk of transmission of HIV is reduced by about half in MSM when the male is circumcised (Mayer et al. 2010). Unfortunately, this did not hold for women in contact with circumcised men; no reduction in infectiousness has been found in male-female interactions (Mayer et al. 2010)...

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References

- Berkley-Patton, J., Goggin, K., Liston, R., Bradley-Ewing, A., Neville, S. (2009). Adapting effective narrative-based HIV –prevention interventions to increase minorities’ engagement In HIV/AIDS services. *Health Communications*, 24(3), 199-209.
- Centers for Disease Control and Prevention (CDC). (2011). High-impact HIV prevention. *Centers for Disease Control and Prevention*. Retrieved from:
http://www.cdc.gov/hiv/strategy/dhap/pdf/nhas_booklet.pdf
- Centers for Disease Control and Prevention (CDC). (2013). Sexually transmitted diseases (STDs). *Centers for Disease Control and Prevention*. Retrieved from:
<http://www.cdc.gov/std/gonorrhea/default.htm>
- Chirenje, Z. M., Marrazzo, J., Parikh, U. M. (2010). Antiretroviral-based HIV prevention strategies for women. *Expert Review of Anti-Infective Therapy*, 8(10), 1177-1186.
- Creative Research (2013). Sample size calculator. *Creative Research Systems* Retrieved from:
<http://www.surveysystem.com/sscalc.htm>
- DuBois, S. N., Johnson, S. E., Mustanski, B. (2011). Examining racial and ethnic minority differences among YMSM during recruitment for an online HIV prevention intervention study. *AIDS and Behavior*, 16(6), 1430-1435.
- El-Sadr, W. M., Affrunti, M., Gambel, T., Zerbe, A. (2010). Antiretroviral therapy: A promising HIV prevention strategy? *Journal of Acquired Immune Deficiency Syndromes*, 55(Supplement 2), S116-S121.
- Gasiorowicz, M., Stodola, J. (2011). HIV prevalence estimates and alignment among recent diagnoses, targeted tests, and prevention services by demographic and racial/ethnic group in Wisconsin. *AIDS Education and Prevention*, 23(3 Supplement), 7-16.

- Harvey, S. M., Bird, S. T. (2001). Power in relationships and influencing strategies for condom use: Exploring cultural beliefs among African American men. *International Quarterly of Community Health Education*, 21, 147-162.
- Hayden, E. C. (2011). HIV drug-prevention strategy carries risks. *Nature*, 476(7360), 260-261.
- Hsu, J., Zinsou, C., Parkhurst, J., N'Dour, M., FOyet, L., Mueller, D. H. (2013). Comparative costs and cost-effectiveness of behavioral interventions as part of HIV prevention strategies. *Health Policy and Planning*, 28(1), 20-29.
- Jarlais, D. C. D., Cooper, H.L. F., Bramson, H., Deren, S., Hatzakis, A., Hagan, H. (2012). Racial and ethnic disparities and implications for the prevention of HIV among persons who inject drugs. *Current Opinion on HIV and AIDS*, 7(4), 354-361.
- Lanier, Y., Sutton, M. Y. (2013). Reframing the context of preventative health care services and prevention of HIV and other sexually transmitted infections for young men: New opportunities to reduce racial/ethnic sexual health disparities. *American Journal of Public Health*, 103(2), 262-
- Mayer, K H., Skeer, M., Mimiaga, M. J. (2010). Biomedical approaches to HIV prevention. *Alcohol Research and Health*, 33(3), 195-
- McIntosh, D. R. (2012). Cultural strategies for teaching HIV/AIDS prevention to American Indians. *Journal of Adult Education*, 41(2), 12-
- Miami-Dade (2013). Miami-Dade sexually transmitted disease (STD) control and prevention. *Miam-Dade County Health Department*. Retrieved from:
<http://www.dadehealth.org/std/STDintro.asp>

State of Florida. (2011). Reported cases of STDs and the number of those cases identified as co-infected with HIV. *Florida Department of Health*. Retrieved from:
http://www.doh.state.fl.us/Disease_ctrl/std/trends/florida/STDs_HIV_10.pdf