

Combination Biomedical and Behavioral Approaches to Optimize HIV Prevention

RESOLUTION

WHEREAS recent findings from the CAPRISA 004 trials (Karim et al. 2010) (women receiving Tenofovir gel were 39% less likely to contract HIV than those receiving placebo), the Pre-exposure Prophylaxis Initiative (iPrEx) trials (Grant et al. 2010) (HIV-negative gay men given Truvada had 44% lower infection rates than men given placebo), and the HPTN 052 trials (NIAID, 2011) (HIV+ individuals initiating ART decreased transmission rates to sexual partners by 96%) clearly establish the importance of biomedical approaches to HIV prevention, they do not justify decreased focus or funding for behavioral prevention strategies; and,

WHEREAS these recent biomedical studies represent significant breakthroughs, combination approaches to prevention of HIV and other sexually transmitted infections (STIs) that comprise both biomedical and psychosocial components work best for optimizing health outcomes (Coates et al. 2008; Piot et al. 2008); and,

WHEREAS the success of biomedical interventions is dependent on behavioral factors affecting medication adherence and treatment uptake (i.e., treatment acceptability and use) (Weiss et al. 2008); and,

WHEREAS the efficacy of the CAPRISA, iPrEX, and HTPN 052 studies were optimized by behavioral approaches (Karim et al. 2010; Grant et al. 2010; NIAID, 2011); and,

WHEREAS women in the CAPRISA study who accessed the adherence counseling program and used the gel most regularly had an HIV infection rate that was 54% lower than controls, while those with low adherence had an HIV infection rate that was only 28% lower than controls (Karim et al. 2010); and,

WHEREAS treatment adherence played a central role in the iPrEX study as evidenced by the fact that 91 percent of the men assigned to the treatment group who later tested positive for HIV had no detectable levels of Truvada in their bloodstream (Grant et al. 2010); and,

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WHEREAS behavioral approaches played a central role in the HTPN 052 study (NIAID, 2011) in which all participants were given HIV care that included safe sex counseling; and,

WHEREAS biomedical interventions for HIV and other STIs without combined behavioral approaches have shown suboptimal medication adherence and treatment uptake [e.g., 80 percent of women do not receive medication to prevent HIV Parent to Child transmission (Temmerman et al. 2003); 80 percent of uncircumcised Zambian males have expressed no interest in considering circumcision as an HIV risk reduction option (Weiss, 2011); only 27 percent of drug users in need of the Hepatitis B vaccine completed the required three dose regimen (McGregor et al. 2003); and only 28.2% of young women at a clinic who were offered the human papillomavirus vaccine accepted and of those who accepted only 55.7% completed all three required doses (Moor, et al. 2010); and,

WHEREAS medication adherence and treatment uptake of biomedical interventions can be addressed by behavioral interventions that enhance knowledge and build skills while incorporating attention to factors such as age, socioeconomic status, literacy, religious beliefs, chronic or acute health conditions and disability, developmental understanding, cognitive impairment, race immigration history and status, language, gender, gender identity, sexual orientation, family context, culture, stigma, mental health, substance abuse, attitudes, prior knowledge, etc. (Liebowitz et al., 2011; Underhill et al., 2011); and,

WHEREAS policy and recommendations have yet to be established as to whether biomedical interventions for HIV prevention will be viewed as life-long or as short-term solutions for high-risk individuals (Paltiel et al., 2009); and,

WHEREAS successful behavioral engagement in biomedical prevention models may be out of reach for certain populations (e.g., human trafficking victims, sex workers, people living in poverty, children, etc.) necessitating the development of concurrent models that can be accessed by multiple at-risk populations (Bowleg, Neilands & Choi, 2008); and,

WHEREAS there is insufficient behavioral research to assess the potential for unintended consequences and unanticipated ethical issues in everyday clinical use of HIV biomedical interventions (e.g., individuals might engage in more risky behavior; individuals may not use biomedical agents as prescribed; there may be health disparities in access to biomedical interventions; there may be as yet undefined, long-term, negative health implications and side effects from an exclusive reliance on biomedical interventions; etc.);

THEREFORE behavioral research is needed to optimize medication adherence and treatment uptake, to document real-world decision making processes associated with biomedical interventions, and to better understand the possible unintended and/or undesired consequences of biomedical interventions; and,

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THEREFORE HIV/STI prevention research teams of the future must bridge biomedical and behavioral approaches and develop new combination approaches that consider biological, cognitive, attitudinal, affective, behavioral, gender, familial, developmental, cultural, educational, social, racial, linguistic, socioeconomic, religious, and environmental factors (Fisher et al., 2010; National Institutes of Health Research Teams of the Future, 2011); and,

THEREFORE funding should be increased for HIV prevention research that incorporates mental health, substance abuse, behavior change, and adherence strategies to optimize the health outcomes of biomedical strategies with special attention paid to the development of combination prevention interventions that can be accessed by multiple at-risk populations; and,

THEREFORE Congress, the executive branch, state and local governments, and non-governmental organizations should promote public policies that increase support for multidisciplinary, interdisciplinary and transdisciplinary training, practice, and research; and,

THEREFORE psychology should continue to be mobilized to conduct research on strategies for improving health outcomes based on behavioral optimization of biomedical approaches to HIV/STI prevention and to continue basic and applied research to identify and disseminate effective universal and selective prevention strategies.

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