CAT ABSTRACT

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HIV affects more than 35 million individuals worldwide with 2.1 million new diagnoses and 1.5 million AIDS-related deaths per year worldwide. Populations at increased risk for HIV seroconversion include those living in low- and middle-income countries, commercial sex workers, IV drug users (IVDU), men who have sex with men (MSM), individuals in serodiscordant relationships, and sexually-active young adults. Despite advances in the medical management of HIV/AIDS, access to preventive care and appropriate antiretroviral therapy (ART) remains limited. Fewer than 40% of HIV-infected individuals in low- and middle-income countries receive ART. Given HIV prevalence, multiple prevention strategies aimed at decreasing transmission (i.e. male circumcision, STI treatment, and attempted development of an HIV vaccine) have been trialed in high-risk populations with some risk reduction noted. HIV PrEP (Pre-Exposure Prophylaxis), the use of ART by individuals at increased risk for HIV acquisition, has proven successful in reducing the risk of HIV seroconversion in some populations. With the increasing promise of PrEP, discussion in public forums has risen. As such, providers should be prepared to answer questions regarding its use.

A literature review was performed to assess the role of HIV pre-exposure chemoprophylaxis for decreasing the risk of HIV infection in high risk adolescent youth. The Cochrane and PubMed Databases were each searched using the keywords “PrEP” and “HIV.” PubMed search results were limited to randomized controlled trials. The Cochrane Database search yielded 1 result, a systematic review included in this literature review. The PubMed Database search yielded 38 results. Three notable randomized controlled trials were selected for review: the CAPRISA 004 Trial, the Bangkok Tenofovir Study, and the VOICE Study. Demographics of chosen studies included high risk individuals, age range 18-69 years old. Selected trials assessed efficacy of Tenofovir vaginal gel, oral Tenofovir, and oral Tenofovir-Emtricitabine.

The CAPRISA 004 Trial, Bangkok Tenofovir Study, and Cochrane Systematic Review demonstrated 36-67% risk reduction of HIV seroconversion in patients receiving HIV pre-exposure chemoprophylaxis. Risk reduction increased in the setting of greater subject adherence to PrEP regimens and accessibility of subjects to multiple additional HIV prevention measures. PrEP use was not associated with increase in high risk behaviors, decrease in preventive behaviors, or development of anti-retroviral drug resistance. Adverse effects to PrEP use included most commonly abdominal pain and diarrhea. In contrast to the results of the above-mentioned studies, the VOICE study demonstrated no benefit to increased risk of HIV seroconversion associated with PrEP use. However, study data was biased by exclusion of data, poor adherence of subjects to PrEP regimens, and suboptimal study design.

Current literature supports the use of PrEP for reducing the risk of HIV infection in high risk adolescents greater than or equal to 18 years old in conjunction with additional HIV prevention measures. In 2012, the CDC published provider recommendations for PrEP use in adults. However, there are no current recommendations regarding PrEP use in high risk adolescents younger than 18 years old. Given the adherence-dependent benefit of PrEP and potential for medication non-adherence in adolescence, further studies are necessary to assess the efficacy of PrEP in this population. Additionally, further recommendations are needed from the AAP and SAHM regarding this controversial topic as legal limitations of adolescent medical decision-making capacity may prevent distribution of PrEP to individuals who might benefit from its use.

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