

HIV-Prevention: Hindrances, Obstacles and Constraints

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Editorial

Although the incidence of global HIV-linked mortality has been shown to be reduced markedly during the recent past years, as associated with the developed efficacy of antiretroviral therapy, the prevalence of HIV-debut infection has seen only modest/limited decreases while maintaining an astounding level of new infections (in excess of two millions) year [1]. Nevertheless, the reality exists that there remain a multitudes of obstacles to the reliability of preventional strategies, including (i) chemotherapeutic pre-exposure prophylaxis (PrEP) with the anti-HIV drugs, tenofovir and emtricitabine, administered on an intermittent schedule, as a preventative measure against HIV infections among 'men who have sex with men' is limited through financial constraints. Nevertheless, a major constraint to the utility of tenofovir and emtricitabine PrEPs remains the failure to financially reimburse users among most countries in Europe with administrative 'decision-makers' lacking adequate cost-benefit and cost-efficacy estimations. Against this background, it should be noted that, in the Netherlands, the application of PrEP for HIV prevention among 'men who have sex with men' has been shown to be cost-beneficial and cost-efficacious [2,3]. (ii) Whether or not there exist toxic hindrances to the newborn infant may be a significant hindrance to the tenofovir and emtricitabine PrEPs usage in mothers at risk for exposure [4]. However, it has been observed that daily directly presented oral PrEPs to HIV-uninfected breastfeeding mothers induced estimated infant doses from mother's breast milk and associated resulting child plasma concentrations for tenofovir and emtricitabine were 12,500 units an indication that was a factor less than 200-fold lower than those respective proposed infant therapeutic doses for emtricitabine, whereas tenofovir failed to be detected in 94% of the infant plasma samples that were taken. It was concluded by the authors that PrEPs may be applied with a degree of safety used during the breastfeeding period with the risk of minimal drug exposure to the child. (iii) Financial insecurity and racial discrimination among African and Caribbean Black women in Canada, who currently present rates of new HIV infection that are seven times higher than their White counterparts among the population, provides a 'distal-driver' for HIV vulnerability by causing reduced access to HIV testing, prevention and care, compliance, etc. A cross-sectional survey among these women living with HIV in five cities indicated that of participants reported housing insecurity. Experienced racial discrimination exerted marked direct effects upon several factors, including HIV-related stigma, depression and social support, and an indirect effect on self-rated health through HIV-related stigma. The HIV-related stigma and housing insecurity produced direct effects upon depressiveness, apathy and social support avenues, and HIV-related stigma caused a direct effect on self-rated health [5]. (iv) In a group of homeless and formerly imprisoned low-income level Afro-American women, aged from 18 to 55 years, residing in Atlanta, Georgia, USA, it was observed that following a thirteen session intervention program, there were marked elevations in hepatitis B and C knowledge-over-time, concurrent with reductions in unprotected sexual incursions in exchange for money, drugs and/or shelter, sex under the influence of drugs or alcohol [6]. The impressive findings from this and similar studies underline the paucity and insufficiency of preventional efforts under pre-existing conditions with particular regard to the emphasis placed here on 'enlightenment' and 'awareness'. (v) It seems quite imperative that the greater prevention of pediatric disease states of infants is to be achieved with greater prevention of maternal to child transmission of the HIV-

infection although the numbers of HIV exposed but uninfected infants is elevated with associated risks upon infant respiratory health status via an increase in such observed risk factors that include the increased pre-term birth and low birth weight, suboptimal/insufficient breastfeeding, increased psychosocial stressors accompanied by decreased well-being and the elevated exposure to infective pathogens. Thus, the infants' exposure to the HIV virus together with an alteration of the maternal immune environment, with neuroimmune complications, may induce immunologic, and brain and CNS deviations in the infant health dynamics that may contribute to an increase risk for respiratory disease and other pathophysiologies resulting in the HIV-exposed infants' elevated risk for severe pneumonia accompanied by deteriorated outcomes in comparison to those infants who are non-exposed. The necessity of maternal health status and optimal nutrition for the infant, which includes breastfeeding among highly infective disease burden scenarios may reduce morbidity and multi-mortality in the HIV circumstance [7].

It appears an unfortunate, and unnecessary circumstance of this age, that the preventative measures, not least including prior knowledge, security, aid to mothers and drug therapies, have been allowed to be denied by the administrative and political leadership to the extent that is all too evident in the prevailing efforts to combat HIV.

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