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VIEWPOINT

Addressing the unique needs of adolescent mothers in the fight against HIV

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1 | INTRODUCTION

Despite increased awareness of and investment in the reduction of HIV among adolescent girls and young women (AGYW) in sub-Saharan Africa, the unique needs of adolescent mothers remain unaddressed. Teenage birth rates in the region are higher than anywhere else in the world (with a range from 20% to >50%) [1]. Furthermore, teenage pregnancy rates over the past decade have risen, not fallen [2], indicating continued unmet reproductive health needs of AGYW in the region.

The perinatal period is a time of increased risk of HIV infection. A recent study found that compared to non-pregnant women, pregnant women were more than two times more likely to be infected with HIV in pregnancy. The risk continues after childbirth, when postpartum women were found to be four times more likely to be infected with HIV than non-pregnant women [3]. Furthermore, in a study of HIV incidence postpartum, younger women were at higher risk of HIV than older women: incidence declined with each additional year of age [4].

In addition, adolescent mothers are at higher risk of HIV than their non-parenting counterparts**.** In a longitudinal study, early adolescent pregnancy was associated with a three-fold HIV risk [5]. In another study, adolescents who had ever been pregnant were more likely to report unprotected sex in the last 3 months when compared to nulliparous adolescents (39.8% vs. 30.5%). Furthermore, adolescents who had ever been pregnant were also more likely to report physical partner violence (47.2% vs. 16.8%) and transactional sex (21.9% vs. 16.9%) [6], known relational and structural risk factors for HIV infection [7,8]. Research is needed to understand how the psychological, relational and structural changes that accompany the transition to adolescent motherhood influence unprotected sex.

A recent commentary, published in this journal, highlights how existing PMTCT interventions do not sufficiently address the needs of HIV-positive adolescent mothers [9]. Numerous studies have reported poor retention rates in PMTCT programmes for younger HIV-positive mothers as compared to older mothers [10-12], and higher rates of MTCT have been observed among HIV-exposed infants of younger mothers than among adult mothers [13].

While there is more work to be done to develop appropriate care and treatment models for HIV-positive adolescent mothers, we cannot overlook the needs of HIV-negative adolescent mothers to address their very high risk for infection. Global initiatives to address the vulnerability of AGYW have given limited attention to the needs of adolescent mothers. For example, the DREAMS partnership has provided $385 million dollars to deliver interventions that address the structural drivers of HIV infection among AGYW in 10 sub-Saharan African countries [14], however, few interventions within DREAMS explicitly target adolescent mothers [14]. Furthermore, a search of the UNAIDS, WHO, CDC and PEPFAR websites, performed in May 2018, found limited content on HIV prevention needs of adolescent mothers. The four sites were examined for content containing the terms "HIV", "risk" and at least one of the following: "AGYW," "adolescent," "youth," "young people," "children," and "teen". A total of 61,038 items (not necessarily independent) were retrieved and then reviewed using the terms "adolescent mother," "young mother," "teen mother," or "teenage mother" to identify items describing original research or interventions. A total of four items were found that discussed the rights of teen mothers to go to school (n = 1), the need to reduce risk in teen mothers' sexual relationships (n = 1), the importance of adolescent-friendly clinical services (n = 1) and the need for employment opportunities (n = 1) [15-18]. Finally, a review of NIH RePORT in May 2018 using the same approach yielded

17,830 funded studies. Only one included a focus on adolescent mothers: an intervention designed to increase the capacity of community health workers to provide HIV prevention and care through home visits in the postpartum period. Similarly, in this study, adolescent mothers were only one sub-population of interest in the larger study population [19].

Pregnant adolescents initiate antenatal care later and are less likely to test for HIV than adult women, and pregnancy-related stigma and poor quality of care contribute to these behaviours [20]. However, there is no research on HIV-negative adolescent girls' experiences with or receptivity to post-test counselling within the context of PMTCT programmes. Furthermore, we know nothing about adolescent mothers' trajectories of sexual behaviour, even though many young women's relationships with their partners change substantially during the perinatal period [21,22].

Our gap in understanding the needs of HIV-negative adolescent mothers extends postpartum. Adolescent mothers are susceptible to postpartum depression [23], yet there is a paucity of data on how poor mental health postpartum impacts HIV risk for this sub-population and what the best avenues for intervention may be. Furthermore, adolescent mothers face significant challenges to returning to school [24] and school dropout is associated with increased risk of HIV infection [25].

In sum, to develop effective HIV prevention interventions for adolescent mothers, we need a cohesive research agenda to understand the multilevel mechanisms that increase their risk of HIV following childbirth. First, research should determine whether there are biological differences between adult and adolescent women that increase younger women's risk of HIV acquisition during the perinatal period. Second, research is needed to understand how the psychological, relational and structural changes that accompany the transition to motherhood influence adolescent mothers' likelihood of engaging in unprotected sex after birth. A comprehensive understanding of the mechanisms that foster biological and psychosocial well-being, healthy relationships and positive school outcomes will inform development of tailored interventions for adolescent mothers.

There is a growing list of evidence-based behavioural and biomedical HIV prevention modalities including the use of pre-exposure prophylaxis. It is also evident that no single intervention on its own can produce the desired effects of HIV prevention, and that combination intervention strategies should be tailored to address the unique needs of target groups [26,27]. Interventions that have targeted individual and structural determinants of HIV risk in other populations might be adapted and evaluated for HIV-negative adolescent mothers. For example, psychosocial interventions could target adolescent mother's interpersonal and behavioural skills [28] and in so doing, may reduce postnatal depression [29]. Furthermore, structural interventions, like cash transfers [30], may decrease the economic costs of childbearing and subsequently facilitate adolescent mother's return to school. Finally, increasing the accessibility of adolescent-friendly health clinics [31] for prenatal and postnatal care may increase uptake of services and engagement in care for adolescent mothers.

Adolescent motherhood is more common in sub-Saharan Africa than anywhere else in the world and occurs against a backdrop of the world's highest HIV rates. Despite this, young mothers, and especially HIV-negative adolescent mothers, have garnered limited attention as a distinctly vulnerable group. Research and interventions that seek to understand and account for the experience of adolescent motherhood are critical for the health of adolescent mothers, the health of their children, and the health of the continent.

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COMPETING INTERESTS

There are no conflicts of interest to report.

AUTHORS' CONTRIBUTIONS

AKG conceptualized and drafted the commentary. SM, PHS, JJA and DM provided substantial feedback on the draft and subsequent revisions. LTG led the content analysis and also provided feedback on the draft and subsequent revisions.

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