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Towards Comprehensive Women's Healthcare in Sub-Saharan Africa: Addressing Intersections Between HIV, Reproductive and Maternal Health

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Abstract: This themed supplement to JAIDS: *Journal of Acquired Immune Deficiency Syndromes* focuses on the critical intersections between HIV, reproductive, and maternal health services in the health systems of sub-Saharan Africa. The epidemiology of HIV among women of reproductive age on the sub-continent demands a holistic conceptualization and comprehensive approaches to ensure that HIV, reproductive, and maternal health are optimally addressed. Yet, in many instances, the national and global responses to these health issues remain siloed. Women's health needs and new global and national guidelines for HIV treatment raise important policy, programmatic, and operational questions regarding service integration, scale-up, and health systems functioning. In June 2013, the Maternal Health Task Force at the Harvard School of Public Health, the United States Agency for International Development, and the United States Centers for Disease Control and Prevention convened an international technical meeting of researchers, policymakers, and practitioners to discuss the existing evidence base about the interconnections between HIV, reproductive, and maternal health and identify the most important knowledge gaps and research priorities. The articles in this special issue deepen and expand on those discussions by (1) providing empirical evidence about challenges, (2) identifying how improving clinical care and models of service delivery, strengthening health systems, and addressing social dynamics can contribute to better outcomes, and (3) mapping future research directions. Together, these articles underscore that new policy frameworks and integrated approaches are necessary but not sufficient to address health system challenges. Addressing the multiple needs of women of reproductive age who are living with HIV or are at risk of acquiring HIV is a complex undertaking that requires improved access to, utilization and quality of comprehensive women's healthcare. Continued evaluation and knowledge generation are needed to ensure that potential health gains are actualized.

Key Words: HIV, women's health, reproductive health, maternal health, sub-Saharan Africa, research priorities, integration

(*J Acquir Immune Defic Syndr* 2014;67:S169–S172)

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Funding for this themed supplement was provided by the Maternal Health Task Force, which is supported through Grant #01065000621 from the Bill & Melinda Gates Foundation. T.K. postdoctoral fellowship is supported by the Canadian Institutes of Health Research and the Pierre Elliott Trudeau Foundation.

The authors have no conflicts of interest to disclose.

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INTRODUCTION

The epidemiology of HIV motivates a focus on the intersections between HIV, reproductive, and maternal health in sub-Saharan Africa. Of all pregnancies among women living with HIV worldwide, 90% occur in sub-Saharan Africa.[1] The rate of new HIV infections among young African women continues to be very high in many communities.[2] In high-burden countries, such as South Africa, Botswana, and Swaziland, the most recent antenatal care HIV surveys indicate that around 1 in 3 pregnant women are living with HIV.[3–5] Furthermore, without timely access to antiretroviral therapy (ART), women with HIV are 6–8 times more likely than HIV-negative women to die during pregnancy and the postpartum period.[6–8]

These statistics should serve as a clarion call to deliver on the commitments that national governments and the international community have made to respond to HIV and improve reproductive and maternal health for women in sub-Saharan Africa. We will not turn the tide of the HIV pandemic,[9] achieve universal access to reproductive health services,[9] and eliminate preventable maternal mortality[10,11] without improving the availability, accessibility, acceptability, and quality of maternal, reproductive, and HIV care and treatment for women who are living with HIV. It is unlikely that needed improvements will be possible with the siloed approaches to HIV, reproductive, and maternal health that many countries and international initiatives continue to fund.

Reflecting this understanding, the fields of HIV, reproductive, and maternal health were closely linked in the 2013 WHO *Consolidated Guidelines on the Use of Antiretroviral Drugs for Treating and Preventing HIV Infection,* which recommend initiation on lifelong ART for pregnant and breastfeeding women and for people living with HIV in serodiscordant relationships.[12] The new guidelines and their adoption raise important policy, programmatic, and operational questions regarding service integration, scale-up, and health systems functioning. In a rapidly changing policy and practice environment, there is a need for evidence to inform

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policymaking and programs at the intersections of HIV, reproductive, and maternal health.

In an effort to identify some of the most critical knowledge gaps in this area, in June 2013, the Maternal Health Task Force at the Harvard School of Public Health, the United States Agency for International Development, and the United States Centers for Disease Control and Prevention brought together international researchers, policymakers, and practitioners to discuss the existing evidence base and to identify research priorities for HIV and maternal health (www.mhtf.org). This themed supplement brings together articles that deepen and expand on the discussions during that meeting; they provide new evidence to fill priority knowledge gaps, and map future directions for research and evaluation.

OVERVIEW OF THE THEMED SUPPLEMENT

The conceptual framework described by Kendall et al[13] identifies 3 areas that organize this supplement: the "individual level" focuses on clinical management and individual health outcomes; the "health system" level encompasses synergies in service delivery and challenges and constraints at different levels of the health system; and finally the "society" level analyzes dimensions of the social environment within and beyond healthcare institutions that facilitate or impede women's use of essential HIV and reproductive health services.

Individual Level: Health Status and Clinical Interventions to Improve the Health of Women of Reproductive Age Living with HIV

The analysis by Olofin et al[14] of a randomized controlled trial among women living with HIV of reproductive age in a malaria endemic area found that multivitamin supplementation significantly reduced the risk of malaria, reinforcing previous findings on the value of vitamin supplements as a low-cost means of improving both maternal and neonatal outcomes.

An analysis of depression among women living with HIV during pregnancy and the postpartum period compared with nonpregnancy-related periods conducted by Kaida et al found no difference in depression symptom severity. However, very high levels of depression among women at ART initiation (39%) and persistently over the study period indicate the need for simplified depression screening, and provision of support services at primary care level and linkage to mental health services as a key component of HIV treatment and care.[15] Encouragingly, similar to other studies, the authors found that increased time on ART, viral suppression, and better physical health were associated with decreased severity of depressive symptoms.

Health System: Innovations and Challenges in the Delivery of HIV, Reproductive, and Maternal Health Services

Five articles in this special issue provide empirical evidence on synergistic opportunities and health system challenges related to the demand for and provision of HIV, reproductive, and maternal health services in sub-Saharan Africa. The first 2 articles analyze efforts to strengthen prevention of vertical HIV transmission and provision of ART to pregnant and breastfeeding women as a component of maternal healthcare, whereas the latter articles focus on reproductive health services as part of HIV care.

Kieffer et al[16] review early experiences with initiating all pregnant and breastfeeding women on lifelong ART (Option B+) in 11 sub-Saharan African countries. Initiation of ART without requiring CD4 counts resulted in rapid expansion in the proportion of pregnant and breastfeeding women on ART but demanded significant investment in facility readiness, monitoring and evaluation, and expansion of health worker capacity. The authors also identified barriers to acceptance of lifelong treatment and retention after antenatal diagnosis among women living with HIV. In a process evaluation in urban Tanzania, Lema et al[17] found that community health workers performed well at identifying women early during pregnancy—a result that points to the potential of using community health workers to improve timely uptake of antenatal care and prevention of mother-to-child HIV transmission (PMTCT).

The next 3 articles underline the need, as well as opportunities, to address the sexual and reproductive health (SRH) of women living with HIV and their partners as an integral component of HIV care. Among a sample of recently diagnosed inconsistent condom users who were not yet taking antiretroviral treatment, Mantell et al[18] found that 40% intended to become pregnant within the next 6 months with significant differences between men (60%) vs. women (21%). Their analysis highlights the urgency of routinely addressing reproductive health early in the HIV treatment cascade, responding to the reproductive health needs and expectations of men and women, and attending to gender in reproductive health counseling. Unmet need and the complexities of providing high-quality reproductive health information and services are illustrated by Matthews et al[19] finding that HIV healthcare providers do not regularly assess fertility intentions and have only partial knowledge of safer conception strategies for HIV serodiscordant couples, leading to missed opportunities to adequately support reproductive desires and prevent HIV acquisition among HIV-negative partners. Although these findings point toward needed improvements in the delivery of reproductive health services for people living with HIV and their partners, Raifman et al[20] found that condom use (alone and in combination with other contraceptive methods) increased as women living with HIV advanced along the HIV treatment cascade from learning their HIV status to ART initiation and long-term treatment retention. These results indicate the importance of HIV interventions as a platform for providing reproductive and sexual health services and suggest that HIV treatment and care programs can make important contributions to HIV prevention by influencing contraceptive behaviors. These 5 articles identify benefits of and challenges to integrating HIV care and treatment with reproductive and maternal health services, needed actions, and innovative solutions.

Society: Addressing Social Dimensions of Uptake and Retention in HIV and Maternal Health Services

Finally, 3 articles analyze dimensions of the social relationships that may impede or facilitate women's uptake of

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and retention in HIV and maternal health services. A mixed methods study by Sando et al[21] explored disrespect and abuse experienced by women living with HIV and HIV-negative women during childbirth. Although rates of reported and observed disrespect and abuse were high, few significant differences were observed between women living with HIV and HIV-negative women. The narratives of healthcare providers suggested that training and supervision focused on ensuring nondiscrimination toward women living with HIV as part of the PMTCT program, has created an institutional culture where overt discrimination based on HIV status is unacceptable. The authors conclude that similar initiatives could be used to ensure respectful maternity care for all women.

Articles from Spangler et al and Myer et al provide novel data about the importance of engaging with family and other community members to support uptake of maternal health interventions and to contribute to retention of women in long-term HIV care and treatment. In rural Kenya, Spangler et al[22] found that women living with HIV who had not yet disclosed their status to anyone had the lowest levels of maternity and PMTCT service utilization. Any disclosure of status increased the probability of facility-based birth and use of ARVs; disclosure to the male partner was found to have a particularly strong effect on increasing ARV use for PMTCT among women living with HIV. Myer et al examined the association of family members' ART co-enrollment with retention. They found that risk of loss to follow-up was highest among women who did not have a co-enrolled family member.[23] Together, these 3 articles provide compelling evidence of the importance of addressing the social environment to improve uptake of and retention in HIV and maternal health services.

STRENGTHENING THE EVIDENCE BASE

The limited information on the intersections between HIV, reproductive, and maternal health—including the paucity of data on cause of maternal morbidity and mortality among women with HIV and lack of evidence on successful models to effectively integrate HIV and reproductive health—are threads that run through this themed supplement. Improvement of vital registration, harmonization of data collection, and inclusion of key indicators by HIV, reproductive, and maternal health programs in monitoring and evaluation are essential to advance the evidence base. One example where substantial improvements in data availability are possible and hold great potential for strengthening the evidence base is the systematic review of the causes and circumstances of maternal deaths in the health systems of sub-Saharan African countries. Kendall et al[13] outline both broad and specific research questions critical for addressing the leading causes of maternal death and improving the clinical management of women living with HIV, as well as for evaluating promising interventions to create an enabling social environment for women to begin and remain in HIV and maternal health services. Kendall et al also identify priorities for research and evaluation on integration of HIV, maternal, and SRH at the "micro level" of health services, whereas Hope et al do the same at the "macro level" of national health systems in sub-Saharan Africa. Despite national and global policies advocating for integration, there is surprisingly little empirical evidence on the outcomes of integrated programs for service users, healthcare providers, or the broader health system. The article by Kendall et al[13] identifies key questions about the integration of HIV and maternal health services, as well as how to provide additional services such as prevention and treatment of malaria and tuberculosis to pregnant women living with HIV. The scoping study conducted by Hope et al summarizes recommendations for integration of HIV with SRH services based on 5 national case studies and identifies priorities for health systems research on governance, policy and planning, financing, the health workforce, service organization, and monitoring and evaluation.[24] Implementing more rigorous intervention studies, building robust evaluation designs into ongoing efforts to integrate HIV and reproductive health services, and focusing on higher level transformation of the health system, for example through integration of financing mechanisms or monitoring and evaluation systems, are some of the key priorities for future research. As international development agencies, donors, and national governments in sub-Saharan Africa increasingly commit to funding integrated SRH and HIV services, it is urgent to generate empirical evidence about whether, when and how such integration can improve health and health systems outcomes.

CONCLUSIONS

This collection of articles highlights the need to conceptualize HIV, reproductive, and maternal health holistically and identifies how improving clinical care and models of service delivery, strengthening health systems, and addressing social dynamics can contribute to better outcomes. Together, these articles underscore that new policy frameworks and integrated approaches are necessary but not sufficient to successfully address health system challenges. Addressing the multiple needs of women of reproductive age in sub-Saharan Africa with regard to HIV, maternal and reproductive health is a complex undertaking. Progress toward the global health goals of reducing the burden of HIV and promoting maternal and reproductive health will require improved access to, utilization and quality of comprehensive women's healthcare, continued knowledge generation, and evaluation to chart progress.

ACKNOWLEDGMENTS

The Maternal Health Task Force collaborated with the United States Agency for International Development (USAID) and the United States Centers for Disease Control and Prevention (CDC) to convene the technical meeting, Maternal Health, HIV and AIDS: Examining Research through a Programmatic Lens*, held in Boston in June 2013. The findings and conclusions in this article are those of the authors and do not necessarily represent the official positions of the Bill & Melinda Gates Foundation, the Canadian Institutes of Health Research, the Pierre Elliott Trudeau Foundation, the United States Agency for International Development or the United States Centers for Disease Control and Prevention.*

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