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Editorial

Addressing the structural drivers of HIV: a luxury or necessity for programmes?

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Abstract

The social, economic, political and environmental structural factors that increase susceptibility to HIV infection and undermine prevention and treatment efforts continue to pose a challenge. The papers in this series highlight the importance of sustaining those efforts to address the structural drivers of the HIV epidemic, and that initiatives to achieve HIV elimination will only come about through a comprehensive HIV response, that includes meaningful responses to the social, political, economic and environmental factors that affect HIV risk and vulnerability. In the context of declining resources for HIV/AIDS, the papers speak to the need to integrate responses to the structural drivers of HIV/AIDS into future HIV investments, with both initiatives to integrate HIV into broader gender and development initiatives, as well as adaptations of current service models, to ensure that they are sensitive to and able to respond to the broader economic and social responsibilities that their clients face.

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There has been growing recognition of the importance of interventions that seek to address the social and economic forces that underpin much HIV vulnerability. These forces, often referred to as social or structural drivers, have been defined as ''core social processes and arrangements, reflective of social and cultural norms, values, networks, structures and institutions, that operate in concert with individuals behaviours and practices to influence HIV epidemics in particular settings'' [1]. As has been demonstrated these structural forces undermine the effectiveness of proven HIV interventions [2]. A recent trial in Malawi, for example, showed that a programme that provided a stipend to girls and their households had a significant impact on HIV and HSV-2 prevalence among young girls who stayed in school, even through the intervention did not directly target sexual behaviour change [3,4]. The reductions in prevalence were likely to be the result of reductions in the levels of transactional sex, with girls reporting fewer sexual partners, and less sex with much older men. This finding underscores the importance of structural interventions that explicitly address the social and economic forces that shape much HIV vulnerability [5], in the case of the cash transfer intervention, the issue of economic inequality and the lack of social and economic incentives to keep girls in school [6]. Such interventions build community ''competence'' and ''resilience'' by facilitating ''programmes and processes that serve to buffer or ameliorate the impacts of social inequalities on people's health'' [7] thus enabling individuals to manage the risks that are present in their environment [8].

Despite growing recognition or renewed interest in structural forces, there is no room for complacency. Especially given the enthusiastic response to the preventative potential of early ART treatment (''Treatment as Prevention'') and other ARV-based biomedical interventions, there is the danger that structural interventions will be seen as a luxury, rather than a core part of HIV programming. The very factors that increase susceptibility to HIV-infection and undermine prevention can also affect the efficacy of ARV-based interventions. For example, investigators from the FEM-PrEP trial (which used pre-exposure prophylaxis in mixed status heterosexual couples) found no difference in infection rates between those using daily PrEP and those using a placebo. It was concluded that poor adherence was the cause of the failure to demonstrate an effect of PrEP. The investigators recommended that future trials need to focus on the ''determinants of PrEP adherence'', including perception of risk among young women [9]. Evidence from the rollout of ART throughout the world would suggest that those determinants are likely to include structural factors such as stigma, alcohol use and lack of easy access to functioning health systems [10].

The papers in this series highlight the importance of sustaining efforts to address the structural drivers of the epidemic, and that initiatives to achieve HIV elimination will only come about through a comprehensive HIV response, that includes meaningful responses to the social, political, economic and environmental factors that affect HIV risk and vulnerability.

But what should such a structural intervention agenda look like, and how does this relate to current HIV programmes? In the first paper, Parkhurst [11] argues that a structural intervention agenda cannot be pursued without making

value judgements, as the issue is inherently political, because structural HIV interventions will often involve alteration of social arrangements, including changes to gender and power relationships. He proposes the use of Sen's capability approach as a potential framework to help overcome seeming contradictions or value trade-offs and highlights the importance of making normative values explicit, both to ensure transparency, as well as to ensure that structural HIV prevention aligns with broader social development goals.

Hargreaves *et al*. [12] then present a quantitative analysis of changes in sexual behaviour among young people in Tanzania. Previous analyses, linked to national reductions in HIV prevalence in Tanzania, have shown that although HIV prevalence was initially higher among those with higher levels of educational attainment, it has fallen fastest among those with secondary education (from 8% to just over 2%), whilst infection among those with no education has been stable or risen (at about 4%). Their paper explores the behavioural dynamics underlying these trends, focusing on young people since this is where HIV prevalence trends are most likely to represent HIV incidence. Since 2000 they find almost no evidence of more risky characteristics in the more educated groups, supporting evidence that new infections are increasingly concentrating among the least educated. Looking at changes in different measures of reported HIV risk behaviour over time, their analysis suggests continuing inequalities in behaviour between more and less educated sections of the Tanzanian population. The authors link these findings to the ''inverse equity hypothesis'', which suggests that health interventions will tend to benefit those of the highest socio-economic position first, only later benefiting those in lower socio-economic groups. This speaks both to the achievements of prevention programmes, and also that alongside successes in HIV prevention, there will be a need to increasingly focus investment towards addressing the prevention needs of the most disadvantaged.

Mbonye *et al*.'s [13] work clearly illustrates how inequities in gender and power relations reduce economic and social opportunities for better lives among women, and increase risky sexual behavior. Using in-depth life history data from women engaged in sex work, they describe key events that led to women entering and staying in sex work. This includes experiences of violence while growing up, and early unwanted pregnancy, which for many led to them leaving school. Needing to earn money for childcare was often the main reason for starting and persisting with sex work. Violence perpetrated by clients and the police was commonly reported, as was alcohol and drug use, as a coping response to the realities of sex work. Many felt powerless to bargain for and maintain condom use, due in part to women's dependence upon sex work as a livelihood strategy. As a result, leaving sex work was considered but rarely implemented.

Following on from this, MacPherson *et al*.'s [14] qualitative research with fishing communities in southern Malawi describes the highly gendered nature of the fishing industry, with men carrying out the fishing and women processing, drying and selling the fish. In this setting one of the key HIV drivers is transactional sex, which takes the form of ''fish-for-sex'' networks, where female fish traders exchange sex with fishermen for better access to fish or more favourable prices, and gift giving within relationships. By controlling the means of production, the power dynamics in these exchanges favour men, and can make it difficult for women to negotiate condom use. The context and motivations for transactional sex varied and were mediated by economic need and social position both of men and women. Thus, although knowledge and understanding of the HIV risk associated with transactional sex was common, this did not appear to result in the adoption of risk reduction strategies. Their findings strongly suggest that strategies to increase women's economic empowerment and tackle the gender norms underlying women's HIV risk are urgently needed.

So what can be done? As limited livelihood opportunities and gender inequality are such core barriers to effective HIV prevention, are there effective interventions that can be used to address these factors? To inform new intervention work with adolescents in southern Africa, Gibbs *et al*. [15] review evidence from southern and eastern Africa on the effectiveness of combined structural interventions for gender equality and livelihood security, and discuss the implications for interventions for young people. They summarize the findings from nine studies that cover three broad groupings of interventions: microfinance and gender empowerment interventions; interventions to support the greater participation of women and girls in primary and secondary education; and interventions to empower women and improve financial literacy. They report on mixed successes, and conclude that currently, research comes from more stable African contexts, from interventions with a relatively narrow conceptualisation of livelihoods, and where there has been a limited involvement of men and boys. They stress the nascent nature of this form of HIV programming, and the need for more evaluation research, covering a greater range of intervention models and settings.

Structural interventions are not relevant to prevention alone. Siu *et al*.'s [16] paper speaks to the gender-related challenges of ensuring that men access HIV treatment. In Uganda far fewer men than women access HIV treatment and men have a higher mortality while on ART. Drawing upon participant observation and in-depth interviews with men from an artisanal gold mining community in rural Uganda, they highlight the central role of a work ethic in expressing masculinity, and how this can both encourage and discourage men's treatment seeking and adherence. They describe how HIV testing and treatment may be sought in order to improve health and get back to work, enabling men to regain their masculine reputation as a hard worker and family provider. However, they also describe how disclosure can affect opportunities for work, whilst drug side effects may disrupt men's ability to work, with both undermining men's sense of masculinity. The authors conclude by highlighting the need for HIV support organisations to recognize the ways in which economic and gender concerns impact on treatment decisions, and help men deal with work-related fears.

Musheke *et al*. [17] also explore factors influencing patient attrition from antiretroviral therapy in urban Lusaka, Zambia. They explore why, despite the relatively effective rollout of free ART therapy in public sector clinics and the proven efficacy of ART, some people living with HIV (PLHIV) stop treatment. Their findings illustrate how personal, social, health system and structural-level factors contribute to patient attrition. As found in other studies, they show that improved health, drug side effects and the need for normalcy can diminish motivation to continue with treatment. In addition, they describe how individuals weigh up the social and economic costs of continuing treatment, with respondents describing how long waiting times for medical care, and strategies of placing ''defaulters'' on intensive adherence counseling may threaten their employment and livelihood opportunities, and impose opportunity costs which they are not able to forego. In this situation, they had to weigh up the physical health benefits of treatment with their social integrity, and for some, led them to stop treatment, and turn to more flexible alternatives of faith healing and traditional medicine. In such contexts of insecure labour and fragile livelihoods, the authors argue that improvements in ART retention could be made by extending and establishing flexible ART clinic hours, improving patient-provider dialogue about treatment experiences, and being mindful of the way intensive adherence counselling is being enforced.

In combination, this series brings together insights from social research, both qualitative and quantitative, from a range of populations and settings, spanning both HIV prevention and treatment. Although the focus of the papers is largely from east and southern Africa, the findings are unlikely to be unique to these regions, as issues of marginalization (and associated stigma) and economic and gender inequality are all too common globally, and apply also to other at risk populations, such as men who have sex with men and persons who inject drugs. Despite the common themes of economic and gender inequality, the papers also caution against over-simplification or labelling. For example, although the papers highlight that increased livelihood opportunities for women could reduce their dependence upon transactional and commercial sex as a means to provide for themselves and their children, prevailing gender norms may also raise different challenges to men, with societal expectations of men as the main provider potentially impacting on their ability to access or continue ART treatment. Thus, even in the context of declining resources for HIV/AIDS, the papers speak to the need to integrate responses to the structural drivers of HIV/AIDS into future HIV investments, with both initiatives to integrate HIV into broader gender and development initiatives, as well as adaptations of current service models, to ensure that they are sensitive to and able to respond to the broader economic and social responsibilities that their clients face [18]. Further research, to continue to inform policy and practice is also urgently needed, as, although the influence of different structural barriers is becoming increasingly well understood, there has been insufficient investment in the development and evaluation of innovative interventions.

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None.

Authors' contributions
CHW prepared the first draft with JS. SR, SK, LH commented on the draft. All authors approved the final manuscript.

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References

1. Auerbach JD, Parkhurst JO, Cáceres CF. Addressing social drivers of HIV/AIDS for the long-term response: conceptual and methodological considerations. Global Public Health. 2011;6 Suppl 3:293–309. (p. 2–3).
2. Gupta GR, Parkhurst JO, Ogden JA, Aggleton P, Mahal A. Structural approaches to HIV prevention. Lancet. 2008;372(9640):764–75.
3. Baird SJ, Garfein RS, McIntosh CT, Özler B. Effect of a cash transfer programme for schooling on prevalence of HIV and herpes simplex type 2 in Malawi: a cluster randomised trial. Lancet. 2012;379(9823):1320–9.
4. Pettifor A, McCoy SI, Padian N. Paying to prevent HIV infection in young women? Lancet. 2012;379(9823):1280–2.
5. Parker RG, Easton D, Klein CH. Structural barriers and facilitators in HIV prevention: a review of international research. AIDS. 2000;14:S22–32.
6. Hargreaves JR, Bonell CP, Boler T, Boccia D, Birdthistle I, Fletcher A, et al. Systematic review exploring time trends in the association between educational attainment and risk of HIV infection in sub-Saharan Africa. AIDS. 2008;22(3):403–14.
7. Campbell C. Technologies of 'Participation' and 'Capacity Building' in HIV/management in Africa: four case studies. In: Davis M, Squire C, editors. HIV treatment and prevention technologies in international perspective. Basingstoke, UK: Palgrave Macmillan; 2010. p.21.
8. aids2031-Social Drivers Working Group. Revolutionizing the AIDS response: building AIDS resilient communities. Clark University and International Center for Research on Women (ICRW): International Development, Community and Environment (IDCE); 2010.
9. Van Damme L, Corneli A, Ahmed K, Agot K, Lombaard J, Kapiga S, et al. FEM-PrEP Study Group. The FEM-PrEP trial of Emtricitabine/Tenofovir Disaproxil (Truvada) among African women. Oral abstract 32LB, 19th Conference on Retroviruses and Opportunistic Infections (CROI); 2012; Seattle, USA.
10. Kagee A, Remien R, Berkman A, Hoffman S, Campos L, Swartz L. Structural barriers to ART adherence in Southern Africa: challenges and potential ways forward. Global Public Health. 2011;6(1):83–97.
11. Parkhurst JO. HIV prevention, structural change and social values: the need for an explicit normative approach. JIAS. 2012;15. DOI: 10.7448/IAS.15.3.17367.
12. Hargreaves JR, Slaymaker E, Fearon E, Howe LD. Changes over time in sexual behaviour among young people with different levels of educational attainment in Tanzania. JIAS. 2012;15. DOI: 10.7448/IAS.15.3.17363.

13. Mbonye M, Nalukenge W, Nakamanya S, Nalusiba B, King R, Vandepitte J, et al. Gender inequity in the lives of women involved in sex work in Kampala, Uganda. JIAS. 2012;15. DOI: 10.7448/IAS.15.3.17365.
14. MacPherson EE, Sadalaki J, Njoloma M, Nyongopa V, Nkhwazi L, Mwapasa V, et al. Transactional sex and HIV: understanding the gendered structural drivers of HIV in fishing communities in southern Malawi. JIAS. 2012;15. DOI: 10.7448/IAS.15.3.17364.
15. Gibbs A, Willan S, Misselhorn A, Mangoma J. Combined structural interventions for gender equality and livelihood security: a critical review of the evidence from southern and eastern Africa and the implications for young people. JIAS. 2012;15. DOI: 10.7448/IAS.15.3.17362.
16. Siu GE, Wight D, Seeley J. How a masculine work ethic and economic circumstances affect uptake of HIV treatment: experiences of men from an artisanal gold mining community in rural Eastern Uganda. JIAS. 2012;15. DOI: 10.7448/IAS.15.3.17368.
17. Musheke M, Bond V, Merten S. Individual and contextual factors influencing patient attrition from antiretroviral therapy care in an urban community of Lusaka, Zambia. JIAS. 2012;15. DOI: 10.7448/IAS.15.3.17366.
18. Schwartländer B, Stover J, Hallett T, Atun R, Avila C, Gouws E, et al. Towards an improved investment approach for an effective response to HIV/AIDS. Lancet. 2011;377(9782):2031–41.