Occupational barriers to HIV care in female sex workers living with HIV: structural or community solutions?

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The UNAIDS 90-90-90 targets defined as: 90% of people living with HIV (PLHIV) aware of their status; among which 90% are on antiretroviral treatment (ART) and among which 90% have HIV viral suppression have galvanized efforts worldwide to reduce HIV transmission with the goal of ending the HIV epidemic by 2030. Sex workers, who are particularly vulnerable to HIV, and their sexual partners account for more than half (54%) of new HIV infections globally [1]. Available data suggest that the relative risk of HIV acquisition among sex workers globally was 21 times higher than it was among all adults aged 15–49 years in 2018 [1]. Still, ART utilization is poor among female sex workers (FSWs) globally- with an estimated 38% and 57% pooled prevalence for current ART use and viral suppression respectively [2]. With the goal of ending the AIDS epidemic by 2030, the critical question is how to increase the 90-90-90 targets, including awareness of HIV status, initiation and adherence to ART among sex workers.

Addressing the HIV epidemic among sex workers requires a profound understanding of context-specific barriers and facilitators of HIV outcomes: HIV testing, access to ART and adherence to treatment among different subpopulations of sex workers. Iterative approaches allow acquisition of a coherent understanding of social structures and their observation 'in vivo' through the eyes of communities. The number of mixed-methods or qualitative studies addressing these issues is growing, yet most studies focus on the individual-level factors (eg, age, education and substance use), and/or community-level factors (eg, norms, stigma, social cohesion and support), while structural factors (eg, policies, financial, time constraints) are rarely addressed, as there is a scarcity of data examining interplay of multi-layered factors [3].

The recent study by Parmley et al. published in *Occupational and Environmental Medicine*, demonstrates how different aspects of the work environment may influence ART access and

47 adherence for FSWs in Durban, South Africa [4]. The paper takes an important step towards
48 bringing to light how the role of the work environment, including client requested drug use, affects
49 FSWs' HIV care. Additionally, the authors describe mechanisms of social support and social
50 cohesion, which might facilitate both access to treatment and better adherence among sex workers
51 in South Africa. Substance abuse, often considered an individual barrier, is also contextualized as
52 an occupational hazard. Results shown in Parmley et al contribute important information to the
53 literature and invite additional exploration of the occupational pressures of FSWs in adhering to
54 HIV care across different contexts.

55 A noteworthy theme which emerged in Parmley et al., is that of social cohesion as a facilitator of ART
56 use. This supports previous work showing that sex workers' social and sexual networks play an
57 important role in HIV-transmission dynamics as these networks could be used to provide social
58 support and might be seen as an important element of a broader HIV response [5-7]. Empowerment
59 of the networks might be seen as a broader process of mobilization and advocacy for improved
60 health, work and legal rights, violence prevention, and better access to services, including testing [5,
61 9, 10]. Community- empowerment interventions in generalized and concentrated epidemics have
62 demonstrated positive impact on the estimated number of averted infections among sex workers and
63 the adult population, and expanded coverage of ART [11]. Indeed, the authors refer to an ongoing,
64 NINR/NIH-funded study (Siyaphambili), which will provide much needed information on the impact
65 of social cohesion strategies on HIV care among cisgender female sex workers living with HIV in
66 South Africa [8].

67 Stigma, as acknowledged by Parmley et al., is a well-described key barrier hindering utilization of
68 HIV services among sex workers. However, stigma associated with both sex work and HIV cannot
69 be seen solely as a matter of individual processes or perceptions, but rather as a social process
70 linked to power, inequality and exclusion [12]. Structural factors, such as prohibitive laws regarding
71 sex work, including those in place in South Africa, might diminish promising health-promoting
72 interventions. It has been described that the fear of being recognized as a sex worker and/or being
73 diagnosed HIV positive and/or disclosing drug use, may lead FSWs to avoid health facilities [3].
74 Future studies would benefit from investigation of intersections between occupational barriers,
75 health and sex work policies and laws, as well as individual, community and structural factors.

76 Parmley et al. included FSWs who sold sex at venues and the authors indicate that inclusion of FSWs
77 working via online websites or apps is needed to give a full picture. Indeed, sex work incorporates
78 different lived experiences. The borders between different groups of sex workers are blurred and
79 subjective; individuals can be involved concurrently in different types of sex work, working through
80 a manager and/or individually with or without use of Internet, and with a different frequency.
81 Social experiences and identities are fluid products, changing with time, and require being
82 'unpacked' through careful examination of multiple cause–effect engagements. Online-based sex
83 work has not often been addressed in the peer-reviewed literature and would benefit from
84 inclusion in future studies.

85 In conclusion, to achieve the UNAIDS 90-90-90 targets by 2030, approaches towards HIV care among
86 sex workers should acknowledge context-specific multilayered barriers and facilitators to HIV care,
87 building on studies such as that conducted by Parmley et al. Community empowerment and
88 engagement should be considered not only as central for improving access and utilization of HIV
89 services among sex workers, but also as essential for deeper understanding of processes of social
90 support and social cohesion among different types of sex workers.

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