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Mobility and power in HIV transmission

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Social scientists are working with epidemiologists to produce evidence that questions traditional epidemiological HIV ‘core group’ models.

Epidemiological analysis and mathematical modelling have demonstrated the significance of commercial sex and high-risk behaviours as factors in the widespread transmission of HIV. This has frequently singled out commercial sex-workers as a focal point of the spread of the epidemic. Research in the social sciences has spotlighted the multifaceted complexities of participants in sex work settings, describing their mobility, particular vulnerabilities and heterogeneities. This variation includes the diversity of the sex industry in high- and low-conflict and post-conflict settings where, for example, women may move to locations where military troops are based to sell sex, or where women in refugee settings may sell or trade sex to survive.

Classic ‘core group theory’ proposes that core groups (those who, when infected, are most likely to spread HIV multiple times) spread infection among a wider ‘bridge’ population of male clients who may in turn pass the virus to their partners. The identified core group is generally the primary population targeted for HIV prevention and, as such, most likely to be stigmatised. Results from our modelling exercise on HIV core groups suggest the potential significance of police and other men in positions of power for HIV transmission and question the long-held assumption that sex workers form a core group of HIV transmitters.

Shortcomings of classic core group theory

When considering HIV prevention, epidemiological theories can help identify priorities within HIV responses. Core group theory has offered considerable guidance in priority-setting, but, in its simplicity, it may miss important elements.

Within classic core group theory, there is an assumption that sex workers are a homogeneous group with equal potential to transmit infection. However, social science research, in particular, highlights the many variables indicating the heterogeneity of this group, including sex worker mobility, age, stage of progression of the disease, access to services and protection, experiences of violence and work environment (e.g. those in regulated brothels compared to individuals in informal settings or transactional and survival sex).

Traditional core group theories predict that the total number of people that an HIV-positive person will infect in a susceptible population is determined, in part, by the rate of partner change. However, there is limited attention given to men who are often central to sex work settings, including non-commercial or non-paying users and those who control or profit from the local sex industry. These are frequently men in positions of power, including pimps, police or soldiers. Importantly, current theories also fail to consider how mobility – the movement of groups in and out of a setting and the length of time in different locations—might influence the risk of transmission and transmission patterns.

We have introduced a new equation to reflect both the number of sexual partners and the average duration that an individual is infectious in a particular setting. This reconfiguration is especially important in commercial sex situations, which often have high levels of both sexual activity and mobility.

In particular, conflict-related sex trafficking may increase the mobility of sex workers while decreasing their ability to control the circumstances of sex. Large and profitable networks of arms, drug and sex traffickers make it possible to traffic women very quickly to avoid detection. Under these circumstances, sex workers are less likely to form a stable reservoir of the virus. Rather, this model points to the role of men – especially regular sex clients and men who control the sex trade, including pimps and those who provide ‘protection’ for brothels and sex workers on the street (a group that often includes police) – in transmitting the virus to newly recruited sex workers. We identify scenarios in which this group may constitute a ‘sustaining population’, because they provide a potentially more stable, long-term reservoir for the virus than do the more transient sex workers whom they infect.

Although there is little quantitative data on key characteristics of sex workers and those who control them to construct verifiable epidemiological models, this theoretical model offers thought-provoking considerations from which to revise current assumptions about the core group. This revised perspective suggests the potentially important, if not central, contribution of the controlling group of men in sustaining HIV transmission in certain settings where there is high sex worker mobility. Indeed, this group’s longer duration in a setting may make their influence more significant than that of sex workers, versus in settings where the sex worker population is more stable and the classic theory may be more robust. This suggests that HIV prevention policies and programmes should aim to reach those who control the sex trade by addressing, for example, their risk-taking behaviours and their economic and coercive power over women and girls.

More broadly, there is still limited debate about the underlying power structures and power differentials behind sex work. Current prevention efforts frequently avoid questioning the status quo and the power
that men may have by virtue of their employment, social or economic status, physical power or ruthlessness. In situations of low- or high-level conflict, international resources may inadvertently even place men in these powerful situations and humanitarian agencies and donors may look the other way when this power is used to the detriment of women. If those men empowered by virtue of their position – such as peacekeepers, camp staff, border control officials and soldiers – are not sufficiently professional, they may create and maintain situations of vulnerability and exploitation and help sustain HIV infection.

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Addressing HIV and sex work

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Sex work is an indisputable reality in humanitarian settings. UNHCR and UNFPA have demonstrated the importance of multisectoral interventions to address HIV in sex work.

There is emerging evidence of how conflicts and disasters may lead to sex being sold or exchanged for accommodation, protection, food, gifts and other items or services. This can be attributed to many factors, including high levels of poverty, lack of livelihood opportunities, separation of families, breakdown in community support mechanisms and an increase in gender-based violence (GBV). Yet programmes addressing HIV and sex work in humanitarian settings are often poorly developed. HIV programmes typically follow generalised approaches, with insufficient attention being paid to those individuals and groups who are most vulnerable and at highest risk of acquiring and transmitting HIV and other sexually-transmitted infections (STIs).

Initial steps have been taken to address HIV and sex work in some refugee programmes in the East and Horn of Africa, Latin America and parts of Asia. Based on these experiences, and under the overall framework of the UNAIDS Guidance Note on HIV and Sex Work1, UNHCR and UNFPA have developed a Technical Note as guidance for field staff and programme managers on addressing HIV and sex work in humanitarian situations. The primary objective is to inform humanitarian actors of steps that can be taken to reduce risk and vulnerability related to sex work.2

Sex work is an important driver of HIV transmission. Unprotected sex between clients and sex workers and between clients and their intimate partners contributes to increased risk of HIV transmission. Thus, sex workers and their clients are critical to an effective HIV response. Frequently, though, sex workers are marginalised and face widespread discrimination, reducing their participation in HIV prevention and their ability to access health, legal and social services. There is evidence that if sex workers are involved in the provision of services, both uptake and access usually improve. A growing number of countries that have scaled up interventions with sex workers have reported stabilisation, and even reversal, of their HIV epidemics.

Recognising these opportunities and challenges, UNAIDS promotes a human rights-based, evidenced-informed approach to HIV and sex work based on three ‘pillars’ which have been adapted to meet needs in humanitarian settings:

**Pillar 1:** assuring universal access to comprehensive HIV prevention, treatment, care and support through planning and preparing to maintain services, implementing basic services in the emergency phase and building more comprehensive services as conditions stabilise.

**Pillar 2:** strengthening partnerships and expanding choices through working with sex workers to ensure supportive environments in which all sex workers can access the services they need.

**Pillar 3:** reducing vulnerability and addressing structural issues by ensuring protection, access to food, shelter and other basic needs together with related measures to prevent GBV and minimise pressure to enter sex work.

These pillars form the foundation for a comprehensive response to HIV and sex work and inform the recommendations presented in the Technical Note on HIV and Sex Work in Humanitarian Settings.

Sex work in humanitarian settings

The characteristics that define humanitarian emergencies, including conflict, social instability, poverty and powerlessness, can also facilitate the transmission of HIV. Power imbalances that make girls and women disproportionately vulnerable to HIV infection become even more pronounced during conflict and displacement. There may be increased pressure to engage in sex work. HIV risk for sex workers and clients may be increased due to lower condom use and increased violence.

The vulnerability of children to sexual exploitation and abuse is also heightened during humanitarian crises. While conditions, contributing factors and programmatic responses may overlap with those for adults, there are fundamental and important