

011.4 PLACE AND CORE TRANSMITTERS – IMPLICATIONS FOR THE TARGETED CONTROL OF STI TRANSMISSION IN URBAN AREAS

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Introduction Places are an important determinant of risk for STI transmission. We sought to identify places that are critical for targeted STI control activities. The objective of this study was to determine whether sex partner meeting places characterised by drug markets, sex markets and separately, drug and/or sex markets were more likely to have core transmitters as compared to other sex partner meeting places in one urban setting.

Methods In 2008–2009, heterosexual sex partner places or venues were identified in Baltimore, MD using a venue-based study approach. Core transmitters were defined by their sexual network connectivity and disease status, i.e. self-report of sexual concurrency and diagnosis of a current bacterial STI.

Results 1,334 participants aged 18–35 years were enrolled at 85 venues. 39 core transmitters were identified and 31% of venues had at least one core transmitter. In final age- and gender-adjusted models, core transmitters were significantly more likely to be identified at drug markets (OR 1.37; 95% CI 1.23, 1.53), sex markets (OR 1.27; 95% CI 1.14, 1.41) and drug and/or sex markets (OR 1.49; 95% CI 1.32, 1.68).

Conclusions This study identified key characteristics of venues, such as drug and sex market activity, which may be important in identifying places for the targeted control of STI transmission.

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011.5 INCORPORATING SPATIAL VARIABILITY TO GENERATE SUB-NATIONAL ESTIMATES OF HIV PREVALENCE

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Introduction The design and evaluation of national HIV programs often relies on aggregated national level data. However, there is often substantial geographical heterogeneity in the HIV epidemic within countries, which could be used to tailor programmatic responses to the specific local needs. Given this background, the study attempts to answer the question: Could environmental and socio-behavioural factors be used to generate sub-national estimates of HIV prevalence in sub-Saharan Africa?

Methods Data were obtained from Demographic and Health Surveys (DHS) conducted in Tanzania, Malawi, and Kenya. Associations between covariates and HIV prevalence were assessed using non-spatial logistic regression models. Covariates included life time number of sexual partners, percentage of condom use, wealth index, percentage of male circumcision (MC), distance to urban settings, distance to roads, and normalised difference vegetation index (NDVI). The prediction formula generated from the covariate analysis along with kriging interpolation techniques

were used to produce high resolution continuous surface maps of HIV prevalence.

Results Condom use, MC, distance to main roads, NDVI, poverty and wealth index were associated with HIV prevalence in Tanzania and Malawi, and were included to generate HIV prevalence maps in these countries. Conversely, only NDVI, poverty life time number of sexual partners and MC were associated with HIV prevalence in Kenya. All three maps illustrated substantial geographical variation of HIV prevalence within the country, and localised areas where HIV prevalence is concentrated.

Conclusion The HIV prevalence maps generated highlight the stark spatial disparities in the epidemic within a country, and localise areas where both the burden and drivers of the HIV epidemic are concentrated. These maps present an opportunity to apply differential local approaches to maximise impact by informing both planning and delivery of defined packages of services. Additional work is needed for routine incorporation of such strategies into existing national HIV estimation processes.

Disclosure of interest statement Nothing to declare.

012 - Sexual health of sex workers

012.1 TARA BANDU', SOCIAL VALUES AND SEX WORK: THE INTERPLAY OF TRADITIONAL JUSTICE, SOCIETY AND HIV/STI PROGRAMMING FOR SEX WORKERS IN TIMOR-LESTE

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Introduction As in many contexts, sex work in Timor-Leste occupies a delicate social, cultural and legal space which can be an impediment to sound human rights-based public health responses for sex workers. As part of a national size estimation of key populations at risk of HIV/STIs in Timor-Leste, this qualitative study explored the nature of these structural factors and their interplay with the implementation of HIV/STI programs for female sex workers (FSW).

Methods Drawing on ethnographic approaches, semi-structured interviews were undertaken using field notes, including recording of verbatim quotes, with 24 FSW and relevant secondary informants across Timor-Leste. Interviews covered the legal, cultural and social context for sex workers. Data were analysed with involvement of author three (a local researcher well-connected to the populations) using an inductive thematic analysis approach where common themes and discrepant cases were coded with attention to the participants' reported experiences and key events.

Results While experiences varied across participants and districts, many FSW reported family- and community-level stigma, with 'shame' and loss of dignity often associated with sex work. In some districts, tara bandu (lit.: 'to place a ban'), a form of traditional law used to regulate 'undesirable' behaviours, had reportedly turned sex work further underground. One particular tara bandu (originally instated to protect women from discrimination and/or sexual abuse) had reportedly been applied to sex work, with social isolation and heavy financial penalties imposed on FSW. Despite the semi-legal status of sex work in Timor-Leste, informants in urbanised settings reported high levels of persecution from law enforcement.