

“TRANSITIONS” AROUND SEX WORK AND THEIR SIGNIFICANCE IN STI/HIV EPIDEMICS

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on behalf of the *Transitions* Research Team



Challenges with Targeted Prevention Intervention (TI) Programs

- Sufficient scale of TI Programs with adequate coverage of FSWs is often not achieved
 - Women engaging in formal sex work **don't necessarily identify** as FSW
 - Programs don't often know the **size** and **location** of the FSW population
- Specific challenges in providing services to **new and young** FSWs

Program Data

Program Data supports this:

- In south India, despite 8 years of intensive TIs, up to 21% of FSWs were infected with HIV before their second year in practice¹
- In Kenya, HIV prevalence was 75% among FSWs formally engaged in sex work for a median duration of 1 year²
- HIV prevalence among FSWs < 19 years of age was 12.8% and median duration in sex work was 2 years³

¹ICMR/FH# IBBA Round 2 2011, ²Morison et al AIDS 2001, ³Kimani personal communication 2013

Preliminary Data – Operations Research

- *Payana*: research study in south India found that up to 2.6% of FSWs died of AIDS before their second year in practice¹
- New FSW study: A quarter of FSWs experienced a commercial first sex, but didn't identify as formal sex worker until 4.9 years later²
- High risk behaviour reported following sexual debut but before self-identification as FSW

¹Becker Int J STD AIDS 2012, ²Mishra BMC Public Health 2012

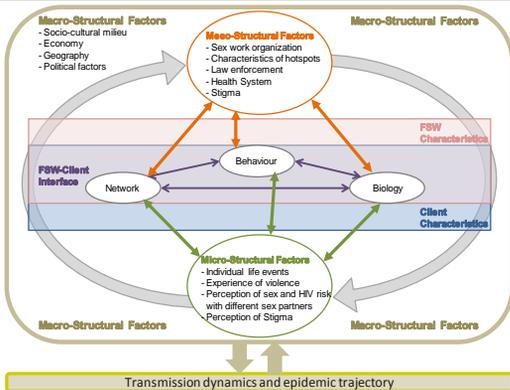
Risk and Vulnerabilities of Young Women

- Socio-behavioural associations:
 - Intergenerational relationships
 - Early sexual debut
 - Gender-based violence
 - Lower level of schooling
- Biological mechanisms:
 - Immature cervix
 - High levels of genital inflammation
 - High rates of STIs

Dellar JIAS 2015, Pettifor AIDS 2004 and 2005, Rottingen STD 2001, Ghanem JID 2005

Other contributing factors to HIV risk...

- Network
- Structural factors:
 - **Proximal** environment – personal views and experience that have a direct effect on an individual's behaviour, biology and social/sexual networks
 - **Intermediate** environment – conceptual, social and physical constructs that exist within an individual's routine environment where one lives and works
 - **Distal** environment – the broader context in which proximal and intermediate structural factors are embedded and operate



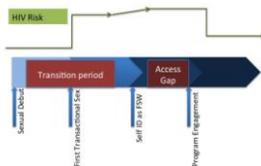
Estimating female sex workers' early HIV risk and the implications for HIV epidemic control: a multi-country observational and mathematical modelling study: *TRANSITIONS*

The **TRANSITIONS STUDY** explores early HIV risk of young women as they progress through their sexual life course from

- first sex
- potentially casual sex and transactional sex
- some into formal sex work.

Goals

- To characterize the factors that influence HIV risk among young FSWs during :
 - **Transition period:** First sex until self-declared entry into sex work
 - **Access gap:** After entry into formal sex work but prior to HIV prevention program engagement



- TRANSITIONS examines the importance of early HIV risk for epidemic control.

Objectives

1. To describe how the **characteristics and length of the transition period and access gap** varies across different epidemiological contexts (Kenya and Ukraine)
2. To understand how the **risk of HIV** varies by length and characteristics of the transition period and access gap
3. To assess the extent to which HIV infections acquired during the transition period and access gap could **mitigate the population level impact of TIs** for self-identified FSWs, and to explore the potential marginal benefit of expanding programs to reach women during the transition period and access gap



Study Settings: Mombasa, Kenya

- Port city – major trade centre and centre for coastal tourism
- Population (2009): 939,370
 - Female population: **452,446**



Study Settings: Dnipropetrovsk, Ukraine

- Industrial City – metal mining and smelting
- Approx. 200 km west of Donetsk (Eastern Conflict Zone – Donbass Zone)
- Population (2014): 985,380
 - Female population: 371,957



Primary data collection

Pre-Study:

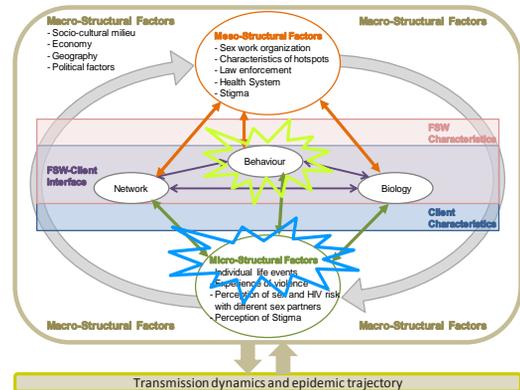
- MAPPING and Enumeration

Study:

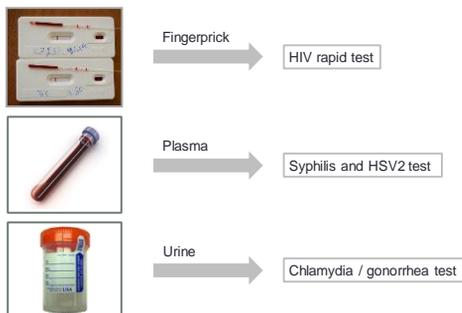
- CROSS-SECTIONAL behavioural and biological survey among young women aged 14-24 years
- 3 study groups:
 - Group 1: First sex but have not engaged in transactional/formal sex work
 - Group 2: Engaged in transactional sex but do not currently identify as formal sex workers
 - Group 3: Women who self identify as female sex workers

Behavioural Survey – Questionnaire

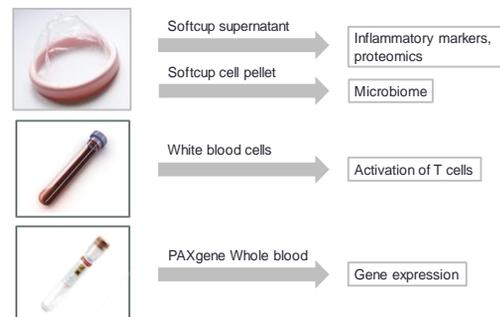
- Types and numbers of different sex partners
- Types and frequency of sex acts, condom use
- Alcohol and injection drug use
- Violence
- Exposure to HIV prevention interventions
- HIV/STI testing and treatment
- Reproductive health and service use

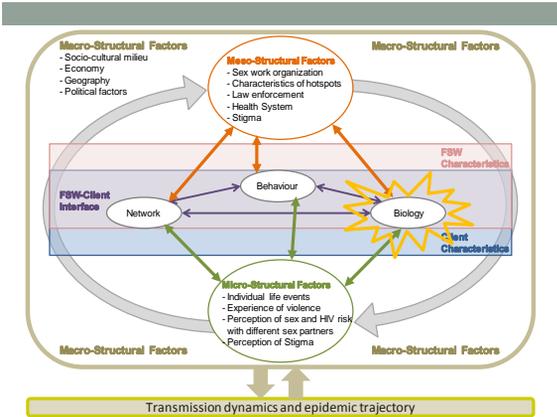


Biological Survey – STI/HIV Status



Biological Survey – Host Biology

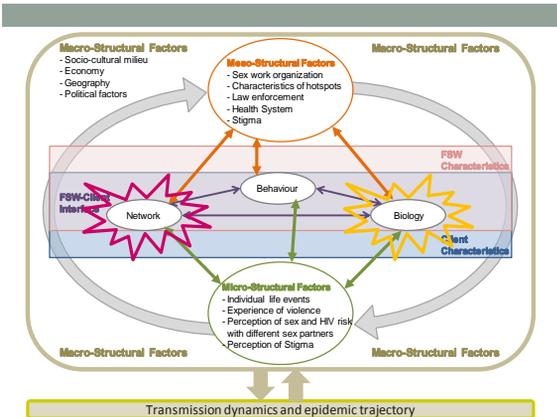




Biological Survey – Viral Biology

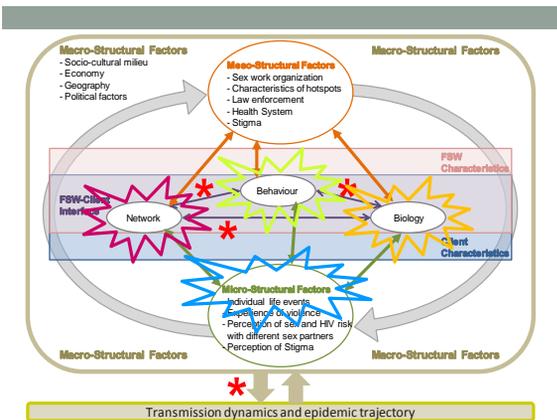


Dried blood spots → HIV phylogenetics



Modelling to tie different domains together

- Age-structured dynamical mathematical model of HIV transmission & calibrate to HIV prevalence by age, sexual network membership (FSW, transactional sex), and duration in self-identified sex work
- Estimate (at a population-level):
 - the extent to which the transition period and access gap undermine impact of TIs on local HIV epidemics
 - the independent contribution of individual biological factors (mucosal immunology) vs. pattern of sexual partnerships and sexual networks, on FSW HIV risk and overall HIV transmission
 - the role of overlapping sexual networks on FSW HIV risk
 - potential impact of venue-based interventions that address overlapping sexual networks, on local HIV epidemics



THANK YOU

Thank you: co-authors, investigators and the study team!

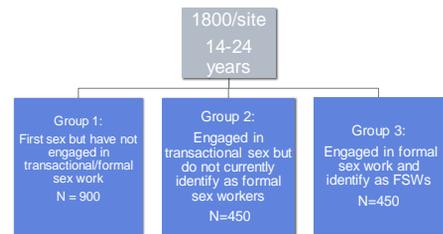
And a special thank you to all the young girls and women who have agreed to participate in this study.



Acknowledgements



Survey Sample Size and Target Population



Definition of sex work, transactional sex and casual sex

- **SEX WORK** is a transaction between a man and a woman that exchanges money (or gifts or other resources) for sex. The price of sex is negotiated and both parties have to agree on the price of sex before the sex event is to take place. Often, money is paid before or immediately after the sex event.
- **TRANSACTIONAL SEX** is when a woman engages with a man sexually, with the expectation that she would receive money, gifts or other resources in return but the price of sex is often not negotiated upfront and is implicitly understood. The length of a transactional sex relationship can vary.
- **CASUAL SEX** is when a man and a woman engage sexually but there is no expectation that money, gifts or other resources would be exchanged.

HIV Prevalence

	Kenya	Mombasa	Ukraine	DNK
Total	5.6 %	11.1%	1.2%	
Adolescent Girls	3.0%		0.5%	0.8%
FSW	29.3%		7.3%	6.7%

Kenya AIDS Indicator Survey 2012
Kenya AIDS Response Progress Report 2014

UNAIDS Ukraine 2014
UNICEF Ukraine 2012
Alliance IBBA 2013