S.04 - Scaling up of HIV treatment programmes among the most at-risk populations in low- and middle-income countries

S04.1 SCALING UP OF HIV TREATMENT PROGRAMMES AMONG THE MOST AT-RISK POPULATIONS IN LOW- AND MIDDLE-INCOME COUNTRIES - INTRODUCTION


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Although access to antiretroviral therapy (ART) for HIV infection in low- and middle-income countries has tremendously improved over the last decade, it remains far from optimal in most settings when it comes to the treatment of marginalised populations, such as sex workers, injection drug users and men who have sex with men. Small-scale demonstration projects indicate that ART can be successfully implemented among sex workers, with satisfactory immunological and virological responses, good treatment compliance levels, and maintenance or even improvement of safe sex behaviour. Some of the studies carried out so far underline the importance of strongly linking prevention with care through the integration of HIV/STI care services and community-based prevention packages. Scaling-up treatment programmes for marginalised, hard-to-reach populations, will undoubtedly be challenging. Nevertheless, in addition to the health equity issues related to access to ART for such populations, the application of targeted “test and treat” strategies could substantially impact HIV prevention at the general population level, given recent trial data showing that the implementation of this strategy among sero-discordant couples led to a 96% reduction in HIV transmission. Such a strategy should however be carefully evaluated in the target population before implementation and scale-up, and would require specific adherence support and community involvement.

It is in this context that this symposium will present practical experiences in implementing ART programmes among female sex workers in the context of generalised, concentrated and mixed epidemics. Modelling studies of the preventive impact of such programmes across different epidemic contexts, and with different criteria for ART initiation (including “test and treat”), will also be presented. A similar study about injection drug users in the context of a concentrated epidemic will complete the presentations in this symposium that should stimulate a fruitful discussion period between the participants and the speakers.

S04.2 MODELLING THE IMPACT OF EARLY ANTI-RetroVIRAL TREATMENT AMONGST PEOPLE WHO INJECT DRUGS IN A HIGH PREVALENCE SETTING


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Background HIV transmission in many settings is concentrated amongst people who inject drugs (PWID), and can reach high HIV prevalence. Early anti-retroviral treatment (ART) for PWID could be important for reducing HIV transmission in these settings. This modelling analysis projects the impact of such a strategy in a high HIV prevalence (50%) setting, and explores how behavioural and epidemiological factors affect the projections.

Methods A deterministic model of HIV transmission amongst PWID is calibrated to HIV prevalence data from Manipur, India.
The model is used to assess the 20 year impact (on HIV incidence/prevalence) of scaling up early ART to PWID, compared to a baseline of current ART access (20% of HIV+ individuals with CD4 < 350 cells/µL are recruited onto ART annually). An uncertainty analysis was undertaken using posterior model fits to consider which PWID behavioural/epidemiological factors affect impact.

**Results** Only small reductions in PWID HIV incidence/prevalence (<10% over 20 years) will occur with current ART provision in Manipur. If current ART recruitment rates are maintained, but all HIV+ PWID become eligible for ART, then a median 12%/11% relative decrease in HIV incidence/prevalence occurs over 20 years compared to baseline. This increases to 22%/20% or 35%/28% if 40% or 80% of HIV+ PWID are recruited per year, respectively. If the ART LTFU amongst PWID is halved to 7.5% per year then impact increases by half. Uncertainty analyses suggest the impact achieved through scaling-up ART is highly dependent on baseline HIV prevalence and the cofactor increase in HIV infectivity during early infection, with less impact occurring for higher HIV prevalences and cofactors. The injecting cessation rate and level of mixing between risk groups are also important.

**Discussion** HIV treatment could result in large reductions in PWID HIV incidence, but is unlikely to result in local elimination except in low HIV prevalence settings.

**ART AMONG FSW IN SOUTH AFRICA**

Until recently South Africa has targeted its HIV interventions towards the general population, but the National Strategic Plan of 2012–2106 has expanded this focus to include key populations with high HIV prevalence and incidence. Foremost in this group are sex workers who are identified in the 2011 South African Know Your Epidemic (KYE), as contributing as much as 20% of the HIV transmission burden in the country. A model of health care delivery through an inner city sex worker programme has steadily expanded over a decade from special services delivered in a clinic, to clinical outreach services delivered within brothels and a mobile clinic, that now includes ART. The intervention includes behaviour change communication delivered through peer educators and outreach staff, programme-supported free clinical services to detect and treat STIs, HIV counselling and testing (HCT), TB detection, contraceptive provision, male and female condom provision. Referral linkages to relevant state services including HIV and TB treatment services and reproductive health services are in place with outreach workers tracing defaulting patients. We will discuss the outcomes of community-based ART for sex workers, the challenges of provision, and present outcomes including virological suppression and loss to follow up data.

**ANTIRETROVIRAL THERAPY AMONG FEMALE SEX WORKERS IN BURKINA FASO: CURRENT SITUATION**

In Burkina Faso, female sex workers (FSW) are a core group in HIV transmission with 16.3% cases of HIV-infection, vs. 1.0% in the general population. Provision of ART to this core group may be key to controlling the HIV epidemic. We aimed at documenting the current situation regarding ART provision to FSW in Burkina Faso.

**Methods** We reviewed the interventions of the national HIV/AIDS control programme (NACP) regarding ART provision to FSW, using grey literature and interviews of stakeholders. In addition, we reviewed the findings of the local research on this topic.

**Results** Before 2010, programmes targeting FSW in Burkina Faso focused only on prevention, mainly through local NGOs. From 2010, in each of the 13 regions, the NACP designated one primary health centre to care for FSW. No statistics are available yet from the local ART programmes. In this talk, we present findings from a comprehensive review of available data exploring trends in the ART ‘care-cascade’ among FSWs in India, with a focus on routine HIV testing, linkage to pre-ART care, ART uptake, and retention on ART. We then examine the association between local condom-based targeted HIV prevention programmes and HIV testing among FSWs, and identify key data gaps in the ‘care cascade’ among FSWs. We conclude by exploring the interaction between turn-over in sex work and ART eligibility among FSWs, and discuss the potential implications for local ART programmes.

**EXAMINING THE POPULATION-LEVEL IMPACT OF SCALING-UP ART FOR FSWS ACROSS EPIDEMIC CONTEXT**

In this presentation, we will summarise the results of a recent systematic review of the published literature on the key parameters of the treatment cascade among female sex workers. Using different examples from transmission dynamics modelling studies of HIV transmission and ART use, we will discuss the potential impact of scaling-up ART for FSWs in contrasting epidemiological settings. We will present results of the impact of ART programmes in settings with different HIV prevalence levels in the general population (very low, low/medium, high) and different history of condom use interventions and level of ART scale-up already achieved. For example, we will compare the impact of different ART scale-up scenarios and eligibility criteria in districts of India (low prevalence settings) where there has been and there has not been a large-scale condom use intervention implemented in recent years. Other settings with

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**ART AMONG FSW IN INDIA**

In India, the provision of antiretroviral treatment (ART) began in 2004. Around the same time, a large-scale, condom-based HIV prevention programme targeted to FSWs was implemented in several districts. In this talk, we present findings from a comprehensive review of available data exploring trends in the ART ‘care-cascade’ among FSWs in India, with a focus on routine HIV testing, linkage to pre-ART care, ART uptake, and retention on ART. We then examine the association between local condom-based targeted HIV prevention programmes and HIV testing among FSWs, and identify key data gaps in the ‘care cascade’ among FSWs. We conclude by exploring the interaction between turn-over in sex work and ART eligibility among FSWs, and discuss the potential implications for local ART programmes.