3.0% (1.1%–7.8%) and 8.7% (6.1%–12.3%), respectively (p=0.01). None of the 12 maternal and 51 infant deaths (including two second-born infants) were attributed to antiretrovirals. The cumulative HIV-transmission or death rate at 24 mo was 15.7% (95% CI 12.7%–19.4%).

Conclusion This trial shows that a maternal triple-antiretroviral regimen from late pregnancy through 6 months of breastfeeding for PMTCT is safe and feasible in a resource-limited setting. These findings are consistent with those from other trials using maternal triple-antiretroviral regimens during breastfeeding in comparable settings.

#### P3.174

# PREVENTION OF HUMAN IMMUNODEFICIENCY VIRUS BREASTMILK TRANSMISSION WITH COPPER OXIDE: PROOF-OF-CONCEPT STUDY

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Introduction Human immunodeficiency virus type 1 (HIV-1) transmission through breastmilk is the chief modality through which HIV-1 is transmitted from HIV-1-infected mothers to their babies in developing countries, where alternative feeding options lack practical feasibility. The development of an approach to inactivate the HIV-1 virions ingested by an infant on a daily basis through breastmilk is thus of critical importance.

Methods Copper has potent virucidal properties. Stoichiometric concentrations of copper ions inactivate the HIV-1 protease, which is essential for viral replication. Cell-free and cell-associated HIV-1 infectivity is inhibited when the virus is exposed to copper oxide in a dose-dependent manner. Passage of high titers of a wide range of HIV-1 isolates, spiked in culture medium, through filters containing copper oxide powder resulted in their deactivation.

Results In the current study, we demonstrate that the infectivity of three different HIV-1 isolates, spiked in breastmilk obtained from HIV-1-seronegative donors, or of wild-type isolates found in breastmilk obtained from HIV-1-seropositive donors, is drastically reduced (>98%) when exposed to copper oxide.

Conclusion This study is proof of concept that copper oxide is efficacious against HIV-1 found in breastmilk and serves as the basis for further research aimed at determining the possible effects that copper may have on the nutritional and anti-infective properties of breastmilk. Furthermore, this supports the continuing study of the feasibility of developing a filtering device, such as an "at-the-breast" disposable shield that can be used discreetly and safely by HIV-1-infected mothers during breastfeeding.

#### P3.175

## EARLY DEVELOPMENT OF BROADLY NEUTRALISING ANTIBODIES IN HIV-1-INFECTED INFANTS

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Introduction We evaluated predictors of consistent condom use among female sex workers (FSWs), a core group for controlling the spread of HIV.

Methods In an analysis of data collected in 2004–2005 from 140 Kenyan FSWs who completed questionnaires administered during a baseline study visit and three bimonthly follow-up visits, we used a case-crossover design to identify predictors of consistent condom use during all coital acts in the preceding 2 weeks, overall and by partner type.

Results Participants (n=140) completed the baseline visit and 390 bimonthly follow-up visits. Alcohol use during sex was negatively associated with consistent condom use with helping partners (defined as regular sex partners to whom the woman could go for help or support if needed) (adjusted odds ratio [AOR], 2.6, 95% confidence interval [CI] 1.0–6.5) but not associated with condom use with other partners. Coital frequency was associated with condom use with other partners only. Women who reported 1–5 (AOR 11.0, 95% CI 4.3–28.3) or 6–9 recent coital acts (AOR 3.8, 95% CI 1.7–8.8) with other partners were more likely to report consistent condom use with those partners than were women who reported ≥10 acts. Having a recent partner delay payment was inversely associated with consistent condom use with helping, other, or all partners.

Conclusion Correlates of consistent condom use differed by partner type. By using a case-crossover design, we were able to identify potentially modifiable factors associated with consistent condom use by FSWs who used condoms consistently with a given partner type during some periods but not others.

### P3.176

## SERO-PREVALENCE OF SYPHILIS AMONG FEMALE SEX WORKERS IN MOROCCO

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Introduction Syphilis is a common but curable sexually transmitted infection (STI). Nevertheless the limited access to medical care among Female Sex Workers (FSWs) can reduce individual treatment, thereby indirectly facilitating transmission within the population. There is increased risk of HIV acquisition and transmission of HIV because of ulcerative syphilis. This study aimed to provide, for the first time using response driven sampling (RDS), baseline information on the prevalence and treatment rate of syphilis among FSWs in Morocco.

Methods This study was conducted from December 2011 to January 2012 in four Moroccan regions: Agadir, Rabat, Fes and Tangier. A total of 1447 FSWs participants were recruited using RDS. All participants completed an anonymous questionnaire on sex behavioural information and were tested for syphilis by using a combination of two tests; a non treponemal test (venereal diseases research laboratory VDRL) and treponemal test (treponema pallidum haemmaglutination assay: TPHA).

Results Among1447 FSWs (17.68%) were reactive for syphilis with 21.4% in Agadir, 18.8% in Fes, 13.9% in Rabat and 13.3% in Tangier. Only 25.54% of FSWs reported being