

Web Reference 1: Details of sample size calculation and the sampling method

Vietnamese and Thai FEWs were sampled from all the EEs of the two geographical sites. To detect a relative percentage increase of 50% in the proportion of consistent condom use for vaginal sex with paid partner using a baseline prevalence of 40%¹ to 60% at follow-up for this trial, the estimated minimum sample size was 97 each in the intervention and comparison group to give a power of 80% and a level of significance (α) of 0.05 (two-sided). After further adjustment for cluster design with 40 clusters (total number of EE venues in the two geographical sites), intra-cluster correlation coefficient (ICC) of 0.01 as well as assuming a participation rate of 80% and 70% follow-up rate, 183 FEWs was required in each of the intervention and comparison groups. We accounted for clustering, given the potential for each EE venue to influence norms and sexual risk behaviours among FEWs working at the same site. The ICC for condom use ranged from 0.01-0.08 in studies involving FSWs.² Since it is difficult to obtain a large sample of foreign FEWs as they are hard-to-reach, we estimated the ICC to be 0.01, similar to two previous studies involving FEWs in China² and Singapore.³ The population size of the Thai and Vietnamese FEWs was first estimated using the enumeration method recommended by the World Health Organisation for hard-to-reach populations.⁴ Subsequently, we recruited the Thai and Vietnamese FEWs using proportional sampling in the ratio of 1:1:1 from the total estimated 330 Thai and 376 Vietnamese FEWs, respectively. These workers were selected using time-location sampling at different times of the day at different EEs during the venues' operating hours from 16:00 to 12 midnight on weekdays and weekends.

References

1. Wong ML, Chan R, Tan HH, et al. Sex work and risky sexual behaviors among foreign entertainment workers in urban Singapore: findings from Mystery Client Survey. *J Urban Health*. 2012; 89:1031-44.
2. Cai Y, Shi R, Shen T, et al. A study of HIV/AIDS related knowledge, attitude and behaviors among female sex workers in Shanghai China. *BMC Public Health*. 2010; 10:377.
3. Wong ML, Chan R, Tan HH, et al. HIV risks, condom use and health-seeking behaviour among indirect sex workers (IDSW) based in non-brothel entertainment establishments in Singapore. Technical Report Prepared for the Department of STI Control and Ministry of Health, Singapore, 28 February 2010.
4. Estimating the size of populations at risk for HIV. Issues and methods. Joint United Nations Programme on HIV/AIDS and World Health Organisation, 2003. Available at: <http://www.who.int/hiv/pub/surveillance/en/EstimatingSizePop.pdf>. Accessed 20 Sep, 2017.