

Use of Cell Phone Diaries to Understand Risk Contexts of Sexual Events Among Female Sex Workers

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Abstract

Background Data collection using mobile technologies, such as cell phones, allows more frequent and real-time data collection and is less prone to recall bias. We describe the feasibility of using twice daily cell phone diaries to capture contextual features of STI/HIV-risk that could impact disease acquisition among female sex workers (FSW).

Methods Women engaging in transactional sex in the prior 90 days were recruited utilising incentivized snowball sampling. Participants completed STI testing and baseline/exit surveys. Over 4-weeks, they completed twice-daily electronic diaries assessing event-level sexual behaviour, condom use, and drug use. Weekly in-person interviews used open-ended questions to explore geographical characteristics of sexual encounter locations as well as acceptability of event-level monitoring.

Results 25/26 participants (median age 43.5 years) completed the 4-week study. At baseline, 27% tested positive for a STI. Participants completed 84.5% of 1,518 expected surveys and 95% of 106 expected interviews. Patterns of diary compliance were stable over time. Partnered sexual activity was captured in 21.4% of diaries. At the participant-level, most reported giving oral sex (84.7%) or vaginal sex (96.1%); fewer (19.2%) reported engaging in anal sex. Among women reporting partnered sexual behaviour with any partner type (i.e., new/regular customers, romantic partners), using condoms was reported 39.2%, 45.5% and 83.3% of the time for giving oral sex, vaginal sex, and anal sex respectively. At the event-level, the frequency of giving oral sex, vaginal sex or anal sex did not significantly change over time.

Conclusions It is feasible to engage and retain FSW in a technologically-advanced study to characterise risk contexts of sexual events. Adherence to study protocol was high indicating event-level monitoring using cell phone based diaries is acceptable. These data can be utilised to improve our understanding of the individual, relational and environmental factors that influence STI/HIV acquisition among FSW.

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