Background Gonorrhea and chlamydia testing is poor among Chinese MSM with HIV risk. Furthermore, gonorrhea and chlamydia testing programs are poorly funded and unlinked to HIV testing services. Pay-it-forward offers an individual a gift (e.g. an STD test) and then asks whether they would like to give a gift to another person. This study assesses the effectiveness of a pay-it-forward program in increasing gonorrhea/chlamydia testing among MSM compared to standard of care.

Methods We conducted a cluster randomized controlled trial at three HIV testing sites run by MSM community-based organizations in Beijing and Guangzhou (NCT03747253). We included MSM aged 16 or older who had met indications for testing based on US CDC guidelines. Twenty clusters of 10 men each were randomized into pay-it-forward and standard of care arms. In pay-it-forward, men were offered free testing and then given the option to donate money toward future participants, with an average amount of 53.6RMB (US$8).

Results Of 1709 indexes (1221 women): (a) 571 (33.4%) were given a test for a peer; 211 (37.0%) peers tested and peer-positivity was 18.5% (17.9% in women-including 3 cases of gonorrhea and 12.8% rectal chlamydia; 19.5% in men). (b) 1048 (61.3%) accepted to receive a re-test reminder; 417 (39.8%) ordered the re-test and 266 (63.8%) re-tested with 13.9% re-test positivity (15.6% in women –including 10.4% rectal chlamydia–, 8.2% in men –including one gonorrhea case). 155/417 (37.2%) also ordered a peer-test; 62 (40%) peers tested but only 6.5% (n=4) were positive. In (a) and (b), nearly half of positive peers never tested before; rectal infections in women were frequently without a genital infection. Interviews with care-providers revealed problems in implementing logistics which could be solved by an easy-to-use online system.

Conclusion A future implementation using an online system needs to improve test-kit returns by including reminders or provisionalary payment, and strategies to help indexes find and motivate high risk peers. High STI positivity in peers (many first time testers) from clinic-indexes reveals the need to especially target these peers to tap into a hidden (untested) infected population.

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