Highlights from this issue

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Welcome to this special issue of sexually transmitted infection (STI) on reinfection and retesting. This collection was inspired by a number of presentations at ISSTDR in Quebec City, 2011 discussing reinfection and retesting, well, repeatedly. We are grateful to the authors who have submitted their work to this issue.

One of the most consistent observations in clinical epidemiology is that the strongest risk factor for most repeatable diseases or adverse outcomes is a history of that same disease or outcome. People with STI get STIs. This has been a central tenant of STI epidemiology for decades, and at least intermittently studied and discussed as a basis for public health intervention.[1] Retesting people with STIs capitalises on the well-described persistence of risk.

Frequent repeat testing can identify individuals soon after infection; aiding partner notification, minimising unwitting infection transmission, enabling prompt treatment and targeted prevention efforts. Internationally, national guidelines vary: some countries recommend routinely retesting positives at 3 months,[2 3] 6 months[4 5] or 3–12 months[6] and others do not. Although there is some uncertainty about when to retest persons following STI treatment, the larger issue is how to operationalise retesting. The articles in this issue of STI provide new information demonstrating the consistent high risk of STI observed in persons with recent STIs, the current state of retesting and how retesting might be increased.

Several papers demonstrate that, despite easily accessible testing, reinfection with bacterial STI remains common. Woodhall *et al*[7] examined repeat testing within the English chlamydia screening programme and found that the risk of infection at retest was approximately twice as high in persons who initially tested positive compared to those negative. Turner *et al* similarly found a doubling of risk in a study of retesting in Cornwall (Turner *et al*[8]). Despite the high risk of reinfection observed, the overall rate of repeat testing was relatively low, with 75% of individuals in Cornwall only testing once between 2003–2009[8] and 85% only tested once in England within 2010 only.[7] Heijne *et al*[9] address the question of when retesting should occur, using data from the USA and a mathematical model. As in other studies, they observed high rates of reinfection in those who initially tested positive compared with those who tested negative. Their model estimated the optimal retesting interval for chlamydial infection to be between 2 and 5 months following an initial test, a period that accords with current US, Australian and Scottish Guidelines.[2 3 6]

New technologies offer low-cost, automated methods for active recall of patients for retesting. Here, two studies (Guy *et al*[10] and Downing *et al*[11]) explore the use of SMS technologies to remind patients to retest. Both studies were based in Australia, where guidelines recommend a retest at 3 months.[3] Downing *et al*[11] showed that SMS reminders increased retesting; obtaining retest rates of 27%–28% in the intervention arms compared with 6% in the standard care arm. They found that the addition of an incentive payment to the SMS reminder did not increase the uptake of retesting, a finding also previously observed in the USA.[12] A limitation of the technology was a high rate of undeliverable messages. Downing's findings are corroborated by Guy and colleagues[10] in Melbourne, who found that SMS reminders increased retesting from 21% to 30%. A large-scale register based intervention in The Netherlands involved automatically sending test-kits by post to all persons identified with chlamydial infection through annual screening. Although initial screening through this mailed effort did not result in high rates of testing, among those who accepted initial testing, the uptake of retesting was high, with two thirds of persons returning test kits.[13] Together, these findings provide promising evidence for a low-cost approach to increasing rescreening, but also demonstrate that SMS and mailed test kits alone are unlikely to result in very high levels of rescreening. We will need to do more.

Frequent HIV testing is important in high risk groups such as MSM, though little data exist to define the optimal frequency of testing. Katz *et al*[14] calculated the frequency of retesting in MSM in Seattle. Overall, they observed high rates of retesting in this population. At the same time, half of all newly HIV diagnosed MSM had not tested in the preceding year, and one third had not tested in the prior 2 years, highlighting the need to increase testing frequency.[14] At least among MSM, the occurrence of gonorrhoea, syphilis and, to a lesser extent, chlamydial infection, identify a population at high risk for HIV acquisition.[15] Future work should address how to combine HIV and STI retesting efforts in critical populations.

We hope you enjoy this special issue and that next time we will be able to bring you a special issue on effective interventions to prevent reinfection.

Provenance and peer review Commissioned; internally peer reviewed.

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