Results 134 CT-positive patients were diagnosed before and 116 were diagnosed after service introduction. Of these, 2 (1.5%) and 8 (6.9%) respectively were treated elsewhere and excluded. Average time to treatment decreased from 6.5 to 4.1 days (p = 0.09). When we excluded patients treated as contacts of CT (before NAAT result was available) the time to treatment decreased from 8.7 to 5.1 days (p<0.001). The reduction in time to treatment decreased significantly more in women; 11.3 to 6.1 days (p<0.001) than men; 6.8 to 4.7 days (p=0.27).

Conclusions Introduction of a rapid STI service significantly reduced time from testing to treatment of CT. Availability of microscopy for symptomatic men allows immediate treatment of urethritis, a common presentation of CT in men. This probably explains why men were treated earlier than women. Earlier treatment is expected to reduce both asymptomatic CT transmission, and risk of CT complications, particularly in women.

Background Three randomised controlled trials have either reported that mouthwash may increase the susceptibility of the oropharynx to Neisseria gonorrhoeae or potentially decrease its transmissibility. We modelled these potential impacts on gonorrhoea incidence.

Methods We calibrated a susceptible-infected-susceptible compartmental model to examine the effectiveness of antibacterial mouthwash on the transmission of Neisseria gonorrhoeae in men who have sex with men (MSM). Four scenarios included: (1) mouthwash had no effect; (2) mouthwash increased the susceptibility of the oropharynx to Neisseria gonorrhoeae; (3) mouthwash reduced the transmissibility of Neisseria gonorrhoeae from the oropharynx; (4) we combined the effect of mouthwash from scenarios 2 and 3.

Results Under scenario 1, the overall incidence of gonorrhoea was 44 (95% CI: 37–50)/100 person-years (PY). Site-specific incidence/100 PY at the oropharynx, anorectum and urethra were 26 (22–31), 9 (8–11) and 8 (5–12). Under scenario 2, with between 20–80% mouthwash coverage in the MSM population, the incidence increased at all three anatomical sites by between 7.4% (5.9–60.8%) and 136.6% (108.1–177.5%). Under scenario 3, with the same coverage, the incidence decreased at all anatomical sites by between 11.6% (10.2–13.5%) and 99.8% (99.2–100%). Under scenario 4, changes in the incidence depended on the efficacy of mouthwash on the transmissibility and susceptibility with both leading to large increases of nearly 130% or large declines of almost 100%.

Conclusions The effect of mouthwash on gonorrhoea incidence is largely predictable depending on whether it increases the susceptibility to or reduces the transmissibility of Neisseria gonorrhoeae, highlighting an urgent need for further empirical investigation.