

CAN WE POOL THROAT, ANAL AND URINE SAMPLES WHEN SCREENING MEN WHO HAVE SEX WITH MEN (MSM) FOR CHLAMYDIA TRACHOMATIS AND NEISSERIA GONORRHOEAE USING THE APTIMA COMBO 2 ASSAY?

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Introduction:

Screening asymptomatic MSM for *C. trachomatis* (CT) and *N. gonorrhoeae* (NG) by transcription mediated amplification (TMA) has high sensitivity, however testing multiple individual sites is costly compared to testing a single pooled specimen. We compared the sensitivity of testing pooled pharyngeal, rectal and urine samples, to the sensitivity of testing individual sites, for CT and NG, at a sexual health clinic in Melbourne, Australia.

Methods:

We invited MSM to participate if they tested positive for CT/NG in the pharynx, rectum or in first pass urine (FPU) during asymptomatic screening by TMA. MSM were recalled for collection of paired pharyngeal and rectal swabs and FPU. Individual sites and a pool (one pharyngeal swab in urine in which the rectal swab had been agitated then discarded) were tested by TMA. Sensitivity of each method was assessed using a reference standard of any positive test by either method.

Results: After recall, 158 MSM were positive for CT or NG. Multiple men were infected at more than one site. 105 men had CT (11 pharyngeal, 21 FPU, 81 rectal) and 77 men had NG (37 pharynx, 5 FPU, 52 rectal). 24 men had both CT and NG. Pooled testing for CT detected 92/107 infections and sensitivity was less than the reference standard (86% [95%CI, 78-91%]) ($p=0.02$). Pooled testing for NG detected 71/78 infections and the sensitivity was not significantly different to the reference standard (91%, [95%CI, 83-96%]) ($p=0.07$). Pooling detected 3 infections that were missed by individual site testing (2 CT, 1 NG) and missed 22 infections (15 CT, 7 NG).

Conclusion:

The use of pooled specimens for asymptomatic screening for CT/NG in MSM shows promise in reducing the costs of NAAT testing at multiple sites.