

Discussion/conclusion By concentrating activity in venues with higher positivity, in line with guidance from the NCSP, it has been possible to achieve the DRI target whilst working within tighter economic constraints. In particular, outreach screening was costly and produced low volumes of tests with low positivity.

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PERFORMANCE OF THE BD MAX™ CT/GC/TV ASSAY FOR DETECTION OF CHLAMYDIA, GONORRHOEA AND TRICHOMONAS

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Background Chlamydia, gonorrhoea and trichomonas infections remain highly prevalent with annual WHO estimates of 106, 107 and 276 million cases respectively. Screening for all 3 infections in a single assay could improve control efforts.

Aim This study assessed the performance of the BD MAX™ CT/GC/TV (BD MAX) for detection of chlamydia, gonorrhoea and trichomonas DNA compared to routine diagnostic methods.

Methods Urine, patient-collected vaginal and endocervical specimens were obtained from 1854 women. BD MAX assay results were compared to TV culture (InPouch), TV wet mount, Aptima AC2 and TV assays and the BD Viper™ CTQ^x/GCQ^x assays.

Results Prevalence for chlamydia, gonorrhoea and trichomonas was 7.3, 2.3 and 14.7%, respectively. Sensitivity estimates ranged from 92.2–99.2, 94.9–95.1 and 92.9–96.1 for chlamydia, gonorrhoea and trichomonas, respectively. Specificity estimates for each test were ≥98.6. Of the 128 out of 1758 (7.3%) women with chlamydia infections, concomitant gonococcal and trichomonal infections were present in 11.7 and 12.5%, respectively. The sensitivity of the assay for chlamydia when co-infections were present ranged from 92.6–96.1%. Similarly the sensitivity of the gonorrhoea and trichomonas detection was not affected by the presence of concomitant chlamydial infections with estimates ranging from 93.8–100% and 89.5–100%, respectively.

Discussion The performance of the BD MAX assay was similar to that of other molecular diagnostic assays. A substantial proportion of women with chlamydia are co-infected with gonorrhoea and/or trichomonas. Trichomonas was more prevalent than chlamydia and gonorrhoea combined. Detection of all three infections in a single assay may improve identification and treatment of these STI.

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PORA PSEUDOGENE DELETION AMONGST NEISSERIA GONORRHOEAE ISOLATES FROM THE GONOCOCCAL RESISTANCE TO ANTIMICROBIALS SURVEILLANCE PROGRAMME (GRASP)

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Background/introduction In the last four years, isolates of *N. gonorrhoeae* have been identified in Australia, Sweden,

Scotland and England which lack the gonococcal *porA* pseudogene and consequently result in negative results in the diagnostic *porA* pseudogene real-time-PCR (RT-PCR) for *N. gonorrhoeae*.

Aim(s)/objectives This study sought to determine the prevalence of *porA* pseudogene negative isolates amongst isolates received at Public Health England (PHE) through the national gonococcal resistance to antimicrobials surveillance programme (GRASP).

Methods DNA lysates were prepared from 533 *N. gonorrhoeae* isolates received from 20 centres via GRASP during 2011. Any isolate with a RT-PCR *porA* pseudogene negative result was repeated from a fresh culture and the *porA* gene was additionally DNA sequenced. Isolates were additionally tested using the gonococcal *opa* gene RT-PCR.

Results Four isolates (4/533, 0.8%) were found to be reproducibly negative with the *porA* pseudogene RT-PCR, but were positive with *opa* gene RT-PCR. DNA sequencing determined that two isolates contained the *Neisseria meningitidis porA* gene. Both isolates were from patients attending a clinic in South London.

Discussion/conclusion Less than one percent of the GRASP isolates from patients attending clinics across England expressed the meningococcal *porA* gene and therefore tested negative on the in-house *porA* assay. The low prevalence indicates that these isolates do not present a major diagnostic or public health problem. However, microbiologists should remain vigilant for any isolates giving anomalous results and when using the *porA* pseudogene RT-PCR consider multiplexing it with the *opa*-gene RT-PCR.

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CONFIRMING GC NAAT RESULTS: IS IT ALWAYS NECESSARY?

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Introduction Current guidance recommends that all specimens testing positive using a *N. gonorrhoeae* Nucleic Acid Amplification Test (GC NAAT) be confirmed using a second test with an alternative target, in order to achieve a positive predictive value above 90%.

Aim To determine rates of GC NAAT confirmations by primary screening test and specimen site.

Methods 994 specimens which were GC NAAT positive at local laboratories were sent for confirmation using an in-house multiplex PCR with *PorA* and *opa* gene targets. A correlation between the confirmatory real-time PCR results, specimen site and GC screening NAAT was undertaken. For the purposes of this analysis equivocal results were regarded as positive and inhibited results were excluded.

Results Overall, 57% of specimens examined could be confirmed as GC positive using the in-house real-time PCR test (Table 1).

Discussion High rates of confirmation can be achieved when examining genital, rectal and urine specimens irrespective of the GC screening NAAT. However >90% confirmatory rates were only achieved when examining male urine specimens which had been screened using the Probetec and Cobas Amplicor tests,