although caution should be applied if extrapolating this data to low prevalence settings. Poor confirmation rates from throat specimens is probably due to cross-reactivity with commensal Neisseria, and highlights confirmation is essential when testing these samples.

Abstract O24 Table 1 Confirmatory rates by Specimen site and GC NAAT screening test

	Genital Swab (Female) [n = 119]	Urine (Male) [n = 84]	Rectal [n = 97]	Throat [n = 694]
Probetec GC Qx (Becton Dickinson)	78.7% (37/47)	94% (47/50)	85.1% (23/27)	44.2% (248/587)
Cobas Amplicor (Roche)	83.3% (50/60)	91.3% (21/23)	79.4% (27/34)	48.2% (27/56)
RealTime CT/NG (Abbott)	83.3% (10/12)	72% (8/11)*	80.5% (29/36)	88.2% (45/51)

*Small numbers – interpret with caution

O25 USE OF CEFTRIAXONE AND DOXYCYCLINE WHEN TREATING GONORRHOEA: IS IT PRESCRIBED APPROPRIATELY?

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Background National gonorrhoea treatment guidelines recommend ceftriaxone with azithromycin as first-line therapy, but doxycycline is recommended instead of azithromycin for patients with gonococcal pelvic inflammatory disease (PID). In 2013, 86.5% of patients in the Gonococcal Resistance to Antimicrobials Surveillance Programme (GRASP) were treated with the recommended therapy, but 3.9% were treated with doxycycline instead of azithromycin.
Objectives The objective of this analysis was to determine whether ceftriaxone plus doxycycline were prescribed for appropriate indications.
Methods Using GRASP 2013 data, patients prescribed the recommended therapy were compared with patients prescribed ceftriaxone and doxycycline, and associations were assessed using univariate and multivariate logistic regression.
Results In 2013, of the 913 patients prescribed ceftriaxone and azithromycin, 45.9% were men who have sex with men (MSM), 20% were women and 34.1% were heterosexual men while, of the 45 patients prescribed ceftriaxone and doxycycline, 64.4% were MSM, 28.9% were women and 6.7% were heterosexual men ($p = 0.001$). Of those prescribed ceftriaxone and doxycycline, 22.2% were MSM with chlamydia co-infection and 17.7% were women with PID. On multivariate analysis, MSM co-infected with chlamydia (aOR 3.4, 95% CI, 2.5–4.6; $p = 0.001$) and women diagnosed with gonococcal PID (OR,144.8, 95% CI, 24.2–864.0; $p < 0.001$) were more likely to be prescribed ceftriaxone and doxycycline.
Conclusion Less than a fifth of prescriptions for ceftriaxone with doxycycline were issued to treat gonococcal PID. Use of ceftriaxone with doxycycline may be preferred to treat MSM co-infected with chlamydia by some clinicians. However, as levels of tetracycline resistance in gonorrhoea are high, this may not provide the dual treatment coverage required.

O26 GONORRHOEA TEST-OF-CURE BY POST MAINTAINS RETURN RATE

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Background/introduction BASHH guidelines recommend test-of-cure (TOC) in all cases of *N. gonorrhoeae* (NG) 2 weeks after treatment. Previously patients re-attended our clinic in person for TOC. To create capacity in the clinic, we introduced NG TOC postal packs for MSM following treatment.
Aim(s)/objectives To evaluate TOC return rate and patient satisfaction with the service development.
Methods MSM with proven NG were given postal TOC packs at treatment. Each pack contains appropriate NAAT sampling kits for site of diagnosed infection (rectal, throat, urine) and written instructions, patient satisfaction survey and partner notification questionnaire. Patients are instructed to return TOC samples by post in a provided Royal Mail Safebox. We processed samples using our in-house GeneXpert system; results are sent by SMS.
Results During November 2014, 136 NG TOC packs were dispensed. 76 (55.9%) patients returned postal packs; 28 (20.6%) attended for TOC in person, giving overall TOC rate, 76.5%. NG TOC rate in October 2014 was 75.8%. The median time from treatment to sending TOC results was 19 d (IQR:16–24d). NG TOC positivity rate was 12.5% (13/104). 65 patient satisfaction surveys were returned. Most responders found postal TOC easy to use (81.5%; 53/65). 24.6% (16/65) responders would have preferred to attend in person for TOC.
Discussion/conclusion Postal testing is an acceptable NG TOC method which, when combined with the option to return in person, reduced unnecessary follow-up visits while maintaining TOC return rate. The high TOC positivity rate reinforces the importance of continuing to retest patients with NG after treatment.

O27 HIGH RATES OF MACROLIDE RESISTANCE IN *MYCOPLASMA GENITALIUM*

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Background/introduction Macrolide resistance has been previously reported in *Mycoplasma genitalium* (MG), however due to limited diagnostics, studies have been mainly restricted to specific geographical areas and small numbers of positive samples.
Aim(s)/objectives To determine the rate of macrolide resistance in MG specimens.
Methods Eighty-five MG positive specimens (72 from males, 13 from females) that had been referred for MG centralised testing (between 2010–2014), from 17 centres across England and Wales were blinded and anonymised. Specimens were then examined using a *23S rRNA* PCR followed by full DNA sequence analysis. The Chi Square test was used to compare data sets.
Results *23S rRNA* PCR was successful in 86% (73/85) of specimens. Of the specimens examined, 84% (61/73) harboured single nucleotide polymorphisms (SNP) associated with macrolide resistance (Table 1). Significant differences were observed between the rates of macrolide resistance in male [95% (58/61)] and female [25% (3/12)] patients [P = <0.001]. Twelve

specimens 17% (12/73) [male (3/61 (5%) and female 9/12 (75%)] were wild-type and therefore assumed to be sensitive to macrolides.

Discussion/conclusion Eighty-four percent of MG specimens examined had SNPs associated with macrolide resistance. These levels of resistance are higher than previously documented in other studies and highlight the need for (i) greater access to MG diagnostic testing and (ii) a requirement for more effective antimicrobials if MG infection is to remain a treatable in the future.

Abstract O27 Table 1 Characteristics of point mutations in the *23S rRNA* gene from 73 MG specimens

Sequence identified	Phenotype	No. specimens (73)	No. by sex (M – 61, F – 12)
Wild-type	Sensitive	12/73 (17%)	M – 3/61 (5%)
			F – 9/12 (75%)
A2058G	Resistant	22/73 (31%)	M – 21/61 (34%)
			F – 1/12 (8%)
A2058T	Resistant	1/73 (1%)	M – 0/61 (0%)
			F – 1/12 (8%)
A2059G	Resistant	34/73 (47%)	M – 32/61 (53%)
			F – 2/12 (17%)
A2059C	Resistant	4/73 (6%)	M – 4/61 (7%)
			F – 0/12 (0%)

O28 TREATMENT OF *MYCOPLASMA GENITALIUM* WITH AZITHROMYCIN 1 G IS LESS EFFICACIOUS AND ASSOCIATED WITH INDUCTION OF MACROLIDE RESISTANCE COMPARED TO A 5 DAY REGIMEN

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Background *Mycoplasma genitalium* (MG) is an emerging important STI. Failure rates with azithromycin 1 g appear to be increasing. This may be due to the emergence of macrolide antimicrobial resistance as a consequence of extensive use of azithromycin 1 g. An extended regimen of azithromycin 500 mgs on day one then 250 mgs daily for 4 days (5 day regimen) was introduced in the 1990s for treatment of MG and has high efficacy rates (if no pre-existing macrolide resistance) and is less associated with induction of macrolide resistance. There are no comparative trials of the two regimens.

Aim To undertake a meta-analysis of MG treatment studies using the two azithromycin regimens to determine which is more effective.

Methods MG treatment studies were included if: patients were initially assessed for macrolide resistance genetic mutations, were treated with azithromycin 1 g or 5 days, and those who failed were again resistance genotyped. Sensitivity analyses included only patients without prior treatment.

Results Five studies were identified. Compared to the 5 day regimen, azithromycin 1 g had higher failure risk (difference: 11.8%, 95% CI: 7.3%, 16.2%) and more developed macrolide resistance (risk difference: 11.8% (8.3%, 15.3%)). The 5 day regimen included 52 patients with prior doxycycline treatment. Sensitivity analysis showed a failure risk difference of 9.2% (0.9%, 17.5%). Resistance risk did not change.

Conclusion Azithromycin 1 g is more likely to result in treatment failure and the development of macrolide antimicrobial resistance than 500 mgs on day one then 250 mgs daily for 4 days.

O29 TV IN PRIMARY CARE – IS THERE MORE OUT THERE THAN WE THINK?

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Background Tests for *Trichomonas vaginalis* (TV) are often not performed on samples submitted from primary care because the prevalence is assumed to be too low for testing to be cost effective. Current microbiological testing involves wet mount microscopy (sensitivity 50%) or culture (sensitivity 75%). In practice, sensitivity rates may often be lower than this, due to deterioration of specimens during transport to the laboratory. The Aptima TV NAAT test has recently been approved for use (sensitivity ~100%).

Aim To determine the positivity of TV in symptomatic and asymptomatic women at risk of an STI, seen in primary care using Aptima TV NAAT.

Methods The Aptima TV NAAT test was performed on 6716 remnant samples from women undergoing chlamydia and gonorrhoea NAAT testing in primary care.

Results The positivity of TV in symptomatic and asymptomatic patients from primary care was **2.6%** (86/3271) and **1.2%** (40/3445) respectively compared with an expected positivity of 0.3% and 0.1%, based on existing methods. TV positivity rates varied between GP practices from 0% to 4.8%. Higher positivity rates were observed in practices serving areas of deprivation, as well as those with higher black and minority ethnic populations.

Conclusions This is the first study to report TV positivity, using a TV NAAT, in unselected women presenting for STI testing in

Abstract O28 Table 1 Treatment of *Mycoplasma genitalium*

		Treated with 5 day regimen			Number treated with 1 g regimen		
Study	Sample size	Total	Failure	Resistance	Total	Failure	Resistance
Anagrius *et al*. 2013	195	78	1 (1.3%)	0	117	10 (8.5%)	7 (6.0%)
Twin *et al*. 2012	66	0			66	14 (21.2%)	14 (21.2%)
Couldwell *et al*. 2013	12	0			12	4 (33.3%)	3 (25%)
Walker *et al*. 2013	28	0			28	3 (10.7%)	3 (10.7%)
Bissessor *et al*. 2014	99	0			99	11 (11.1%)	11 (11.1%)
Total	400	78	1 (1.3%)	0	322	42 (13.0%)	38 (11.8%)