sequelae and their relationship to increased HIV transmission. CDC
guidelines advocate testing MSM at least annually for these infec-
tions, but surveys of medical providers suggest that adherence to
these guidelines is minimal. Because providers cite limited time and
staff as common reasons for not following the guidelines, we eval-
uated the feasibility and accuracy of performing self-administered
testing for GC and CT.

Methods 286 clients who attended Whitman-Walker Clinic in
Washington, DC for HIV/STI testing participated in the study.
Enrolled clients had a mean age of 36 ± 11, represented a variety of
racial/ethnic backgrounds with 52.8% identifying as Caucasian, and
had an average of two male partners in the last 30 days. Clients
performed screening using the GenProbe APTIMA 2 Combo (AC2)
kit after viewing written and pictorial instructions. A trained
provider also performed the testing with the order of client vs
provider randomised to adjust for any training effect. This provider
remained in the room while the client performed screening to
observe, but did not provide assistance.

Results The overall prevalence of GC and CT in this sample was
8.9% for P-GC, 8.5% for R-GC, 1.77% for P-CT, and 13.3% for R-CT.
McNemar tests were performed stratified by type of infection and
anatomic site to evaluate concordance of the client vs provider
results. Clients were found to be significantly better at identifying P-
GC (91.5% vs 94.4%; 8.5% vs 5.6%; p = 0.01) and R-GC (91.5% vs
94.3%; 8.5% vs 5.7%; p = 0.03) and to have results equivalent to
providers for P-CT (98.3% vs 98.9%; 1.8% vs 1.1%; p = 0.50) and R-
CT (88.7% vs 88.2%; 13.3% vs 11.9%; p = 0.25) detection.

Conclusions The positive predictive value of the AC2 test makes it
unlikely that clients obtained false positives, and observation of
subjects while they performed screening ruled out cross-contami-
nation of samples. Therefore, the higher detection rate among the
clients is most likely attributable to a more rigorous swabbing
 technique that sampled an increased surface area. These results
suggest that individuals are capable of performing their own STI
screening and that allowing them to do so may increase infection
detection rates and treatment.

Background Rectal infection with Chlamydia trachomatis (CT) is increasing in
many settings; however, there are currently no FDA approved
NAAT for use with rectal specimens. Access to reliable diagnostics
using rectal specimens is critical to both surveillance and disease
management and control. This is important as CT culture has been
shown to have lower sensitivity, 54.8%, when compared to NAAT
for use with rectal specimens. Access to reliable diagnostics
offers the opportunity for routine testing using multiple collection
devices and platforms with the data suggesting that the m2000
assay can be used to meet the revised CDC recommendations for
rectal testing for CT.

Methods A total of 59 samples were tested for CT by m2000 and
AC2. AC2 was considered the reference standard for this study with
20 samples identified as positive and 39 as negative for CT. Neat
CTM placed into an empty m2000 tube detected 95% (19/20) and
had a single positive that was not detected by AC2 (38/39 agreed).
The single neat CTM missed by m2000 was positive in the spiked
multi-collect tube. CTM spiked into an m2000 multi-collect tubes
also detected all but one of the infections identified by AC2 (19/20)
and negatives agreed completely (39/39). The m2000 multi-collect
miss was CT positive in the neat sample. Both collection methods
on the m2000 generated results that had very good agreement with
the reference test: ? scores were 0.924 for empty and 0.962 for multi-
collect tubes.

Conclusion The m2000 has excellent performance characteristics
compared to AC2 for the detection of CT. NAATs offer an alter-
native to culture for the detection of CT in rectal samples, and are
less susceptible to transport conditions and sterility that are often a
concern with culture. The collection of rectal specimens in CTM
offers the opportunity for routine testing using multiple collection
devices and platforms with the data suggesting that the m2000
assy can be used to meet the revised CDC recommendations for
rectal testing for CT.
tested positive for chlamydia compared to 8 in the Clinic Group, and the rate of reinfection was 12.9% in the Home Group and 14.6% in the Clinic Group (p=0.8).

Conclusions Use of home-based, self-obtained vaginal swabs resulted in a significant increase in rescreening rates compared to rescreening in the clinic. Our findings indicate a role for home-based specimen collection as an alternative to clinic-based rescreening for chlamydia in women.

Clinical sciences oral session 4: Treatment: Chlamydia, Gonorrhoea and related syndromes

03-S4.01 THE NEW SUPERBUG NEISSERIA GONORRHOEA MAKES GONORRHOEA UNTREATABLE?—FIRST HIGH-LEVEL CEFTRIAXONE RESISTANCE WORLDWIDE AND PUBLIC HEALTH IMPORTANCE
doi:10.1136/sextrans-2011-050109.121

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Background The first Neisseria gonorrhoeae strain (H041) worldwide that is highly resistant to the extended-spectrum cephalosporin (ESC) ceftriaxone, which is the last remaining option for empirical treatment of gonorrhoea, has now been identified! This is a large public health problem and the era of untreatable gonorrhoea may now have been initiated. The present study completely characterised H041, phenotypically and genetically, to confirm the finding, comprehensively examine its antimicrobial resistance (AMR) and in detail elucidate the resistance mechanisms. Finally, public health actions for preventing and/or detaining global spread of ceftriaxone-resistant and untreatable gonorrhoea will be discussed.

Methods H041 was examined using seven species-confirmatory tests, antibiograms (50 antimicrobials) with Etest and agar dilution (only for ESCs), porB sequencing, N. gonorrhoeae multi-antigen sequence typing (NG-MAST), multilocus sequence typing (MLST) and sequencing of ESC resistance determinants (penA, mtrR, penB, ponA and pilQ). Transformation, using appropriate recipient strains, was performed to confirm the ESC resistance determinants.

Results H041 was assigned serovar Bpyrust, MLST ST17565 and the new NG-MAST ST4220. H041 proved highly resistant to ceftriaxone (2–4 mg/l, which is 4–8-fold higher than any previously described isolate) and all other cephalosporins, as well as most other antimicrobials tested. A new penA mosaic allele, containing only four not previously described amino acid alterations, caused the ceftriaxone resistance, which was all proven using several transformation experiments.

Conclusions The new superbug N. gonorrhoeae has now developed also ceftriaxone resistance and an era of untreatable gonorrhoea may have been initiated. A reduction in global gonorrhoea burden by enhanced disease control activities combined with wider strategies for general AMR control and enhanced understanding of mechanisms of emergence and spread of AMR, which need to be monitored globally, is crucial. Furthermore, a public health response plan (including sustainable clinical, microbiological and epidemiological components) for a global perspective is essential. Ultimately, new drugs are essential to develop for efficacious gonorrhoea treatment.

03-S4.02 IS SINGLE DOSE AZITHROMYCIN ADEQUATE FOR ASYMPTOMATIC RECTAL CHLAMYDIA?
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Background Azithromycin is the recommended first-line therapy for asymptomatic rectal chlamydia. However a recent European study reported significant numbers of treatment failures, with higher failure rates in HIV positive men. In 2009, the Sydney Sexual Health Centre instituted a 6 week re-test policy for all cases of asymptomatic rectal chlamydia to assess the extent of azithromycin treatment failures.

Methods We conducted a retrospective audit of all men who have sex with men (MSM) diagnosed with asymptomatic rectal chlamydia in 2009. MSM with anal symptoms were excluded from this analysis, due to the possibility of lymphogranuloma venereum. We then categorised the infections present at re-testing as probable re-infections (men reported ongoing sexual activity with an untreated partner) or probable treatment failures (men did not have any obvious ongoing exposure, either because they did not report any further anal sex with any existing partners or because condoms were used consistently with all partners).

Results In the 12-month period there were 116 asymptomatic MSM treated for rectal chlamydia with 1 gram azithromycin as a single dose. Fourteen (12%) of the men were HIV positive. The median age was 33 years (range 20–64 years). Of the 116 men, 85 (78%) returned at varying times; median time of 10 weeks (78 days, range 21–572 days). Of the 85 men who returned, 11 (13%) were persistently positive and the median time to re-test was 11 weeks (78 days, range 47–209 days). Six of the 11 men were classified as probable re-infection and five as probable treatment failures, equating to an efficacy of 94%. None of the men classified as probable treatment failures were HIV positive.

Conclusions Interpreted conservatively, the azithromycin treatment failure rate could have been as high as 13% in our study. However most of these cases could be explained by re-infection suggesting an actual treatment failure rate of 6%. There was no evidence azithromycin is an ineffective first-line therapy for asymptomatic rectal chlamydia in MSM, but prospective studies would be welcome.

03-S4.03 SAFETY AND EFFICACY OF WC2031 VS VIBRAMYCIN FOR THE TREATMENT OF UNCOMPLICATED UROGENITAL CHLAMYDIA TRACHOMATIS INFECTION
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Background Recent studies report that treatment failure rates for single-dose azithromycin for urogenital chlamydia in females may be as high as 8%. There has been sparse research investigating new antibiotics for chlamydia, especially those that may reduce adherence difficulties with the CDC recommended doxycycline regimen (100 mg orally twice daily for 7 days).

Methods The safety and efficacy of WC2031 (doxycycline hyclate delayed-release 200 mg tablet) orally once daily for 7 days vs