

A CLUSTER TRIAL OF MOLECULAR POINT-OF-CARE TESTS FOR SEXUALLY TRANSMISSIBLE INFECTIONS (STIS): TREATMENT OUTCOMES FROM TTANGO:

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Background: In many remote Aboriginal communities with high rates of STIs, the distance from laboratories and difficulties recalling patients impedes timely and effective treatment. We conducted the world's first trial to determine if molecular point-of-care (POC) tests for chlamydia and gonorrhoea could increase the timeliness of treatment and reduce re-infections. Here we report on the treatment outcomes.

Methods: Twelve primary care services in remote Aboriginal communities participated in a cross-over cluster randomised trial (7 in WA, 3 in FNQ, 2 in SA). Half the services were randomly assigned to using molecular POC tests (Cepheid, GeneXpert) or standard-of-care (no POC tests). POC tests also had standard laboratory testing conducted in parallel, but treatment decisions for asymptomatic patients were based on POC results. After 12 months the services crossed over to the opposite arm for 12 months. We conducted an analysis of audit data from eight health services and calculated the time-to-treatment and proportion treated in 3 and 7 days.

Results: Data were available from 541 people who tested positive to either chlamydia or gonorrhoea, by either test. Among those who had a POC test done, 96% were treated and the mean time-to-treatment was 4 days (median=0), whereas in the standard-care-arm 88% were treated in a mean of 14 days (median=7)($p<0.01$). Among those who had a POC test, 85% were treated in under 7 days compared with 50% in the standard-care arm, for an absolute difference of 25% (3%-51% across 8 services). The comparison for under 3 days was 69% versus 33% for a difference of 36% (11-64%).

Conclusions: In remote areas where STI prevalence is high and access to conventional laboratory diagnosis is problematic, use of molecular STI POC tests by primary care services has led to a very substantial increase in the timeliness of treatment.