Population-based Neisseria gonorrhoeae, Chlamydia trachomatis and Trichomonas vaginalis prevalence using discarded, deidentified urine specimens previously collected for drug testing

We used a novel method to test for STIs among a non–healthcare-seeking military population in the San Diego region of California. Active-duty US Navy and Marine Corps personnel were randomly selected to provide urine specimens to Navy Drug Screening Laboratory, San Diego in October and November 2013 for the Department of Defense drug testing programme. If specimens screened negative for drugs (>99% of samples), urine specimens were discarded, deidentified and subsequently tested for Chlamydia trachomatis (CT), Neisseria gonorrhoeae (GC) and Trichomonas vaginalis (TV) using the Aptima Combo 2 and TV assay as specified by the manufacturer (Hologic, San Diego, CA, USA). The Tigris direct tube sampling system was used for high-throughput nucleic acid amplification testing (NAAT). Urine specimens older than 6 days were not tested due to sample degradation concerns.

The overall prevalence of CT was 2.1% (95% CI 1.79 to 2.36, n=205/9953), GC 0.01% (95% CI 0.00 to 0.07, n=1/9953) and TV 0.12% (95% CI 0.03 to 0.38, n=3/2553). Prevalence was not significantly different from civilian estimates. Prior military data show higher prevalence but include higher prevalence groups (recruits, larger proportion of female or African American race/ethnicity) not comparable to the regional military population. In the USA, TV prevalence is higher in women than men (3.2% vs 1.9%, see online supplementary material), African Americans than Whites (6.9% vs 1.2%) and those ≥ 18–20 year olds (4% vs 1.5%) which may partially account for the low TV prevalence (0.12%); the military population is predominantly male (86%), white (69%) and young (51% ≤ 25 years old).

This testing method was effective for obtaining a standardised STI prevalence in a non–healthcare-seeking US military population using specimens previously collected for drug testing. This method could be adjusted for monitoring changes in STI prevalence, or for measuring asymptomatic infections within the active-duty military population.

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