0.49(0.30–0.80), \( p = 0.004 \), respectively), while those with a concurrent STI \([1.69(1.15–2.49)], \( p = 0.007 \), and those presenting with multiple infection sites \([2.54(1.62–4.00)], \( p < 0.001 \) were more likely to be culture-confirmed.

**Conclusion** Not all NAAT-positive attendees were culture-confirmed, but this may be because culture was either unsuccessful or not routinely performed among asymptomatic attendees. All NAAT-positive patients should be cultured before treatment, as routine culture confirmation is essential to ensure representative monitoring of trends in antimicrobial resistance to inform decisions regarding treatment guidelines for gonorrhoea.

**Background** The advent of gene amplification testing methods for Neisseria gonorrhoeae has lead to a higher prevalence of gonorrhoea testing in the population. Various methods for Nucleic Acid Amplification Tests (NAAT) are used, often with high specificity. The sensitivity of culture is substantially lower than NAAT. Before treatment is initiated, antibiotic sensitivity of the isolate should be determined using culture-based methods. A considerable proportion of cases positive with NAAT cannot be verified by culture and hence it is not possible to verify the diagnosis or determine antibiotic sensitivity. Uncertainty in diagnostics and treatment of NAAT positive, culture negative gonorrhoea may lead to psycho-social and physical complications and continued transmission. To improve diagnostic and treatment accuracy for gonorrhoea, the objective of this study was to examine epidemiological risk-factors for NAAT positive but culture negative cases.

**Methods** The study included all men and women in Stockholm having at least one positive gonorrhoea NAAT test with follow-up cultures taken during the period January 1, 2011-June 30, 2012. The total number of eligible cases during this period was 938. Data on sex, age, mode of transmission, symptoms, Chlamydia trachomatis co-infection and NAAT lab method were collected. Outcome was defined as positive NAAT but negative follow-up culture. Descriptive statistics and cross-tabulations with chi-squared tests were performed.

**Results** In total, 19% of NAAT positive cases had no positive cultures \( (N = 174) \). Diagnostic certainty was greater among men than women. Ten-percent of men and 57% of women with positive NAAT had negative cultures. Three laboratory NAAT methods were used with differences in subsequent negative culture proportions found among these methods.

**Conclusion** Women have an increased risk for incorrect diagnosis and/or treatment of gonorrhoea. Improved gonorrhoea testing practices are necessary to avoid systematic misdiagnoses and inappropriate treatments.