

Factors associated with coinfection and reinfection by chlamydia, gonorrhoea and syphilis in Portugal

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In Europe, cases of chlamydia (CT), gonorrhoea (NG) and syphilis (TP) are rising and coinfections and reinfections are common. As there are limited data on factors associated with these events in Portugal, this study may be valuable to inform prevention strategies. We conducted an analytical cross-sectional study with all probable and confirmed cases of CT (including lymphogranuloma venereum), NG and TP notified in Portugal in the national system of epidemiological surveillance (SINAVE[®]) between January 1st, 2015 and December 31st, 2018. Descriptive and multivariable analyses were conducted and adjusted odds ratios (aORs) with 95% confidence intervals (CIs) were calculated.

Among 6506 cases in SINAVE[®], 858 (13.2%) were coinfections and 204 (3.1%) were reinfections. Coinfections were found in 14.0% of males and 10.2% of females, while reinfections were present in 3.8% of males and 0.8% of females. In multivariable analysis, coinfections were positively associated with being younger than 26 (aOR 2.45, 95% CI 1.81-3.30), living in Lisbon area (aOR 1.43, 95% CI 1.13-1.81), being symptomatic (aOR 1.82, 95% CI 1.53-2.18), being men who have sex with men (MSM) (aOR 1.63, 95% CI 1.28-2.07), HIV+ status (aOR 1.46, 95% CI 1.19-1.80) and being diagnosed in an NGO (aOR 1.68, 95% CI 1.29-2.19). Reinfections were positively associated with living in Lisbon area (aOR 2.53, 95% CI 1.43-4.47), being symptomatic (aOR 2.37, 95% CI 1.66-3.37), being MSM (aOR 3.69, 95% CI 2.17-6.30) and HIV+ status (aOR 1.68, 95% CI 1.18-2.39).

This study contributes to identifying risk profiles for coinfection and reinfection by these STIs in Portugal. Younger age, living in Lisbon area, being MSM, HIV+ status and being diagnosed in an NGO are some of the associated factors. Targeted interventions are needed to tackle specific settings and populations to be successful in lowering STI's incidence in Portugal.

Key messages:

- We identified factors associated with coinfection and reinfection by chlamydia, gonorrhoea and syphilis in Portugal, that can be used to target interventions.
- A study to identify the changes and problems in sexual attitudes and sexual behaviour may be useful to help us understand this paradigm.