

women without a change in the proportion positive by culture, suggesting that screening for gonorrhoea by nucleic acid amplification test (NAAT) is not recommended in low prevalence populations due to low specificity of detection. This study aimed to identify whether there is a change in the rates of gonorrhoea positivity by culture in heterosexual men in Victoria, consistent with increased notifications.

**Methods** Three data sources from 2007 to 2014 were used: notification data from the Victorian Department of Health, Medicare Item numbers for single and duplex chlamydia NAATs, and the proportion of new patients attending Melbourne Sexual Health Centre (MSHC) with gonorrhoea diagnosed by culture. Multivariate logistic regression analyses were used to examine the association between gonorrhoea positivity and known risk factors.

**Results** Gonorrhoea notifications by NAAT in heterosexual men in Victoria increased from 38 in 2007 to 169 in 2014. There has been a five-fold increase in annual Medicare Items for chlamydia and a second NAAT, whilst only a modest increase in chlamydia only NAAT. A total of 28,014 heterosexual men attended MSHC for first consultation between 2007 and 2014, and the overall gonorrhoea positivity by culture at MSHC was 0.93% ( $n = 260$ ). No significant trend in annual gonorrhoea positivity (aOR 1.04, 95% CI: 0.97–1.10,  $p = 0.270$ ) was observed after adjusting for age, number of female sexual partners and condom use in the last three months, recent arrival in Australia, and previous sex overseas.

**Conclusion** These data suggest gonorrhoea positivity in heterosexual men is stable, despite increasing notification rates. An increase in false positive results due to low specificity of gonorrhoea NAAT may explain the observed trend.

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#### P09.27 EPIDEMIOLOGY OF GONORRHOEA IN CHINA FROM 2000 TO 2014

XD Gong, J Jiang, XL Yue, F Teng, PX Men. *Institute of Dermatology, Chinese Academy of Medical Sciences & Peking Union Medical College, National Center for STD Control*

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**Introduction** Since 1980s, sexually transmitted diseases (STD) reappeared in mainland China and the reported cases increased over years, the Ministry of Public Health set up national STD surveillance system to monitor trends. The results of surveillance showed that gonorrhoea was a prevalent STD and became an important public health issue. However, since 2000, incidence of gonorrhoea had decreased. In order to understand trends and epidemiological features of gonorrhoea recent 14 years in China, we conduct the analysis of data from the national system.

**Methods** Through 2000 to 2014, gonorrhoea case-reporting data collected from 31 provinces, autonomous regions and municipalities in China were analysed with descriptive epidemiological methods.

**Results** During 2000–2014, the trends of reported gonorrhoea incidence appeared declined totally, from 22.92 per 100,000 population in 2000 to 7.25 per 100,000 population in 2014, with the annual average decrease of 7.89%. There was a significant difference in gonorrhoea incidence in different regions. High incidence regions were Yangtze River delta (Zhejiang,

Shanghai, Jiangsu), Zhujiang River delta (Guangdong, Guangxi, Hainan), and then the northwest minority areas (Xinjiang, Ningxia, Inner Mongolia). The gonorrhoea incidences in male were higher than that in female, and the sex ratio of male to female has been increasing, from 1.96[1] in 2000 to 4.52[1] in 2014. The incidence of gonorrhoea in 20–44 aged sex active population was peak among all age groups, maximum in 25–29 age-group for male and female, and it presented decreased in all age groups except 15–19 age-group of male with increase of 4.18%. Among 20 kinds of occupations, the proportion of the reported gonorrhoea cases for peasant workers was highest, accounting for 26.00%, and the gonorrhoea incidences in all occupation groups were downtrend.

**Conclusion** Gonorrhoea remained being a major issue of public health in China, the preventive measures should be effectively tailored in the light of gonorrhoea epidemiological features.

**Disclosure of interest statement** No potential conflicts of interest.

#### P09.28 SURVEY ON THE DATA QUALITY OF SYPHILIS CASES REPORTED IN 5 PROVINCES OF CHINA

XD Gong, XL Yue, N Jiang. *Institute of Dermatology, Chinese Academy of Medical Sciences & Peking Union Medical College, National Center for STD Control*

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**Introduction** The results of syphilis surveillance showed that there were some significant problems in syphilis stage diagnosis and case-reporting in China. In order to assess the data quality of syphilis case reported in the country, and identify the problems for improving the quality, we conducted this sampling survey.

**Methods** According to the national protocol and syphilis diagnostic criteria, checking data with original reporting cards, clinical and laboratory logs of syphilis cases reported, assessment of diagnosis correctness were conducted by related experts at 43 medical hospitals/institutions sampled in 13 counties of 10 prefectures in 5 provinces based on geographic distribution to evaluate the data quality, and Excel 2003 and SPSS18.0 software were employed in data analysis.

**Results** The proportions of the reporting cards timely reported, completely filled, correctly filled, correctly entered by web for syphilis cases were as high as with 99.82% (1691/1694), 97.05% (1644/1694), 96.22% (1630/1694) and 96.22% (1630/1694), respectively, and the one of the reporting cards repeatedly reported was very low with 1.42%(24/1694) in 5 provinces. The proportions of correct diagnosis for syphilis cases was high with 95.40% (2491/2611), however, the ones of correct stage for primary, secondary and latent syphilis were not high with 42.49% (167/393), 77.46% (275/355) and 85.89% (1497/1743), respectively. There was the severe bias of misclassification in primary and secondary syphilis, the reason of which was that some latent syphilis cases were falsely classified into primary and secondary ones by non dermatological/STD and in-patients department doctors.

**Conclusion** The indicators of data quality related to reporting information and correct diagnosis of syphilis cases were high, however proportion of correct stage for primary and secondary syphilis cases was low, which directly affected on analysis of syphilis incidence. It is urged that the training on related doctors in syphilis diagnosis criteria should be strengthened to substantially improve the data quality.