

they would not give antibiotics to their children without taking them to a physician first. Subjects in group B were more than twice as likely to give antibiotics to their children without seeking the advice of a physician (21% vs. 9%  $p=0.04$ ).

**Interpretation:** Lifetime patterns and perceptions of self-prescribed antibiotic use were generally the same between groups, but when looking at recent behavior, subjects who had seen a physician in the last two years were more likely to get a prescription and take the full course as prescribed. Further studies should be conducted to determine whether improving healthcare access and/or enforcing regulations on antibiotic sales could reduce antibiotic misuse in the region.

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### Epidemiological Burden and Health Outcomes of Tuberculosis in the Philippines from 2000-2015

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**Background:** Despite meeting all three Millennium Development Goals on tuberculosis (TB) prior to the 2015 end date, the Philippines remains to be one of the 22 high-burden TB countries. In 2013, TB was the seventh leading cause of death and attributed to 4.4% of total death. The objective of the current study is to summarize the epidemiological burden and health outcomes of TB from 2000-2015.

**Methods:** TB surveillance information on case finding and case holding activities reported by rural health units and health centers were validated by the National TB Programme (NTP). Measures of TB epidemiological burden were calculated over time and by region. Hierarchical regression models were used to estimate time- and regional-trends and to compare treatment outcomes between population subgroups. All statistical analyses were carried out in Stata and Microsoft Excel.

**Findings:** Case notification has steadily increased over time, reaching 276.8 cases per 100,000 persons in 2015. The number of clinically diagnosed cases exceeded bacteriologically confirmed cases since 2011. Extrapulmonary TB contributed to <2% of all new cases since 2005. The proportion of cases in children aged 0-14 years was <3% from 2003-2014 but reached 12% in 2015. Case notification for drug-resistant TB also increased over time, with 6581 cases reported in 2015. Treatment success rate (TSR) for drug-sensitive TB has been above 87% since 2000 and reached 93% in 2015. For drug-resistant TB, however, TSR was consistently low and only 50% of the 2013 cohort successfully completed treatment. Compared to adults, children <15 years were 43% (95% CI: 20-71%) more likely to not initiate treatment after diagnosis. But of those on treatment, children had 11% (95% CI: 9-14%) higher odds of treatment success and 88% (95% CI: 85-90%) lower odds of death than adults. Regional differences in case notification and treatment outcome were also noted.

**Interpretation:** Increased case notification of clinically diagnosed, extrapulmonary and children cases reflected the shift in priorities of the NTP. Moving forward, the programme should focus on regions with limited clinical and laboratory capacity to diagnose extrapulmonary TB and TB in children. Moreover, emphasis on monitoring cases lost to follow-up, particularly for drug-resistant TB, is necessary to ensure cases are successfully treated over time.

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### Delayed HIV Testing among Men Who Have Sex with Men in Australia Has Improved but Remains an Issue

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**Background:** Guidelines in Australia and other countries recommend regular HIV testing for men who have sex with men (MSM) and up to 3-monthly for MSM at higher risk of HIV transmission. We determined trends and factors associated with delayed HIV testing in among MSM attending Australian sexual health clinics.

**Methods:** Longitudinal data from MSM attending 42 sexual health clinics in the Australian Collaboration for Coordinated Enhanced Sentinel Surveillance (ACCESS) from 2007-2014 were analysed. Patients were assigned "high-risk" status if they had >5 partners in the past 3 months or >20 partners in 12 months or a sexually transmissible infection in the past 2 years. Delayed testing status was defined as having no retest or re-testing outside of the guideline time intervals (6 months for high-risk men, 12 months for non-high-risk men). Mixed effects logistic regression models were used to determine factors associated with delayed testing status.

**Findings:** A total of 54,139 MSM had 102,317 HIV tests during 2007-2014. At first visit, 35.9% (19,416) of men were categorized as high-risk. The proportion of high-risk MSM assigned delayed HIV testing status decreased from 73.3% in 2007 to 63.2% in 2013 ( $p$  for trend<0.001). The proportion of non-high-risk MSM with delayed HIV testing also decreased year-on-year ( $p$ -trend<0.001). Delayed HIV testing was more likely in men who lived in regional and remote areas (OR=2.00, 95% CI: 1.76-2.28); were Indigenous (1.44, 1.04-2.00); and older (>29 years vs <29 vs: 1.98, 1.82-2.15). Delayed test was less likely in men born overseas (0.72, 0.65-0.79); and categorised as high-risk (0.39, 0.36-0.42).

**Interpretation:** Delayed HIV testing is common among MSM in Australia, although declining over the past 8 years. Efforts are needed to further decrease delayed HIV-testing among MSM, particularly men who are Indigenous and those living outside of urban areas.

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