

Background

To measure the impact of HIV prevention and care programs, it is crucial looking at both HIV incidence and prevalence estimates and trend over time. We estimated the HIV incidence and prevalence and assessed the trend using data from three cross-sectional surveys of men who have sex with men (MSM) in Georgia.

Methods

Using respondent-driven sampling strategy, eligible MSM (a 18 years or older man with oral or anal sex with another man in past 12 months) were recruited in Tbilisi and Batumi in 2010, 2012 and 2015 into a behavioral survey and HIV testing. To estimate the HIV incidence, we divided the number MSM tested positive for HIV to the time at risk. We calculated the time at risk as years since age at first anal intercourse to the age at last HIV-negative test or the age at first HIV-positive test, accounted for the interval censorship. We assessed the trend in HIV prevalence by Chi2 test for trend. For HIV incidence rate, we used Kaplan Meier method and compared the rates in three survey rounds by log-rank test.

Results

The HIV prevalence significantly increased (p-value for trend < 0.001) from 7.0% in 2010 to 13.0% in 2012 and 20.7% in 2015. Likewise, the HIV incidence rate (**Figure 1**) significantly increased from 0.45 per 100 person-years in 2010 to 0.98 per 100 person-years in 2012 (p-value for trend =0.01) and 1.56 per 100 person-years in 2015 (p-value for trend < 0.001). In survey 2015, young MSM (4.48 per 100 person-years, p-value< 0.001), single MSM (1.79, p-value 0.003) and less educated MSM (1.90, p-value 0.009) had a higher HIV incidence.

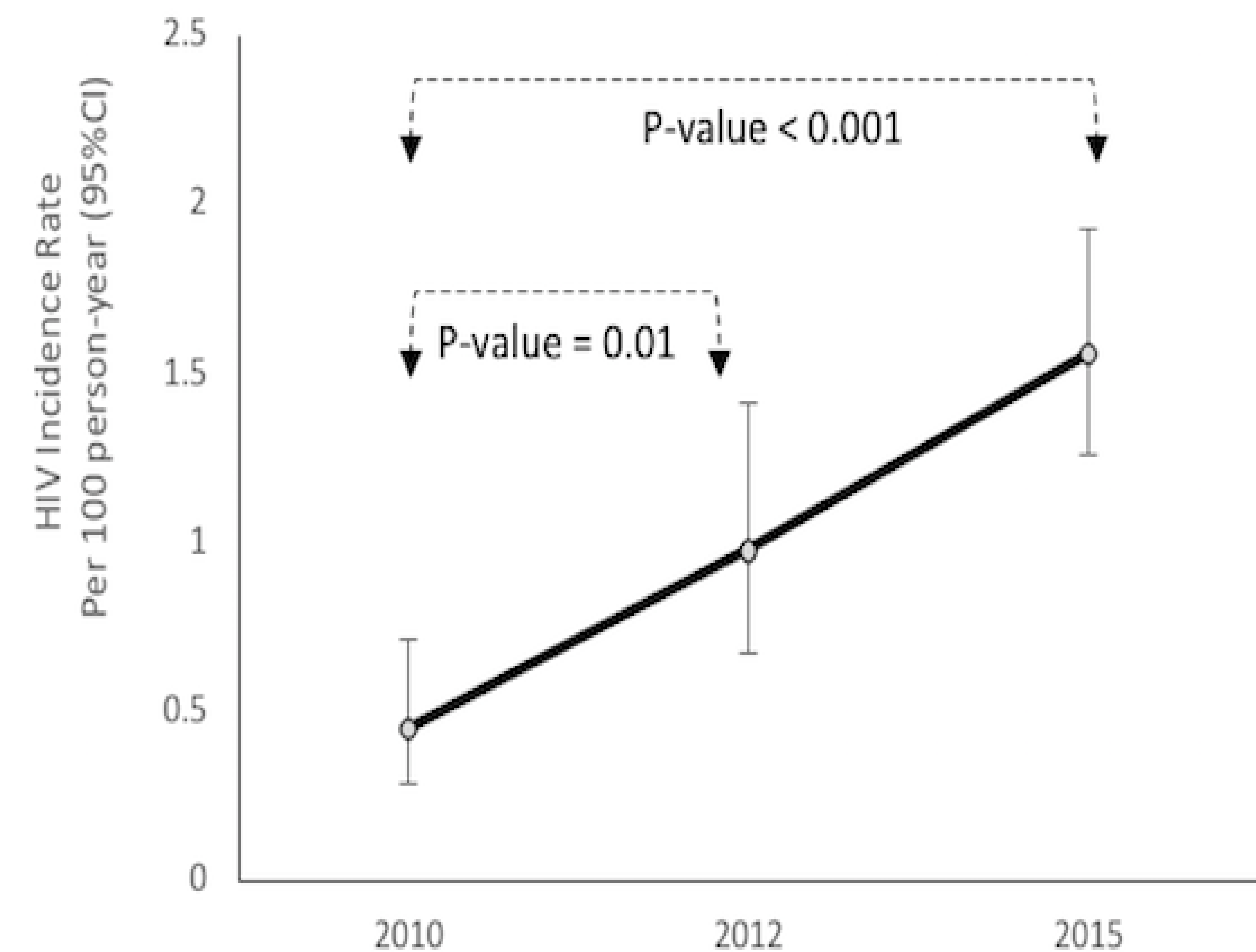


Figure 1 - Trend in HIV incidence rate per 100 person-years among men who have sex with men in Georgia, 2010 to 2015

Conclusion

Our findings suggest the continuous transmission of HIV among men who have sex in two major cities in Georgia and the need for scaling up the coverage and accessibility of combination prevention packages including rapid HIV diagnosis and response.