HIV testing in Primary Care in Newcastle: Are we doing enough?

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Introduction

The proportion new HIV diagnoses which are classed as 'late' has improved in recent years, but Northeast England remains the region with the highest proportion of late presenters. Ten years ago (2008) National (DH) guidance recommended increases in HIV testing in high prevalence settings (>2 per 1000 population (0.2%) aged 15-59), including in primary care[1]. In the Northeast region, Newcastle-upon-Tyne is the only local authority classified as having a high HIV prevalence.

Our aims were to determine if primary care HIV testing has increased over the last decade and whether testing behaviours are influenced by local HIV prevalence.

Methods

We performed a search of our laboratory records for all HIV tests on persons aged 15-59 years, originating from GPs in the Newcastle-upon-Tyne area (30 practices, c.200,000 patients). We compared data from 2007 (prior to DH guidance) and 2017 (Figure 1). We combined these data with practice list size data (from NHSBSA), and with diagnosed HIV prevalence data (from PHE, by MSOA). Antenatal HIV screens were excluded. All testing rates are stated per 10,000 population

Results

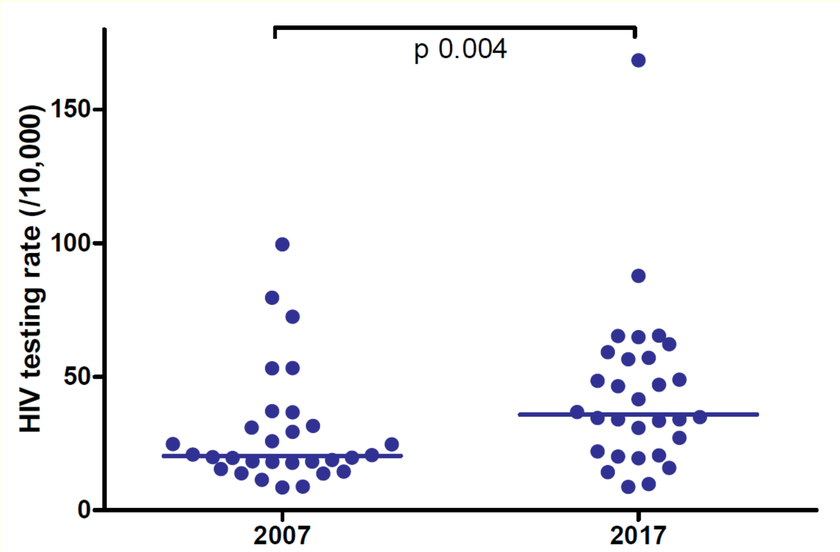
HIV testing trend

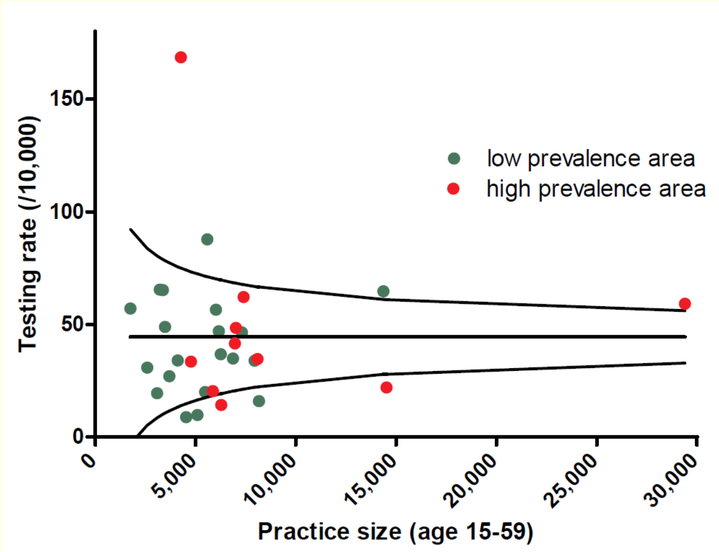
The overall rate of testing increased from 26.0 in 2007 to 44.5 in 2017 (p <0.01). 24 of 30 individual practices (80%) showed an increase in testing rate over this period. Overall test positivity in 2017 was 0.22%.

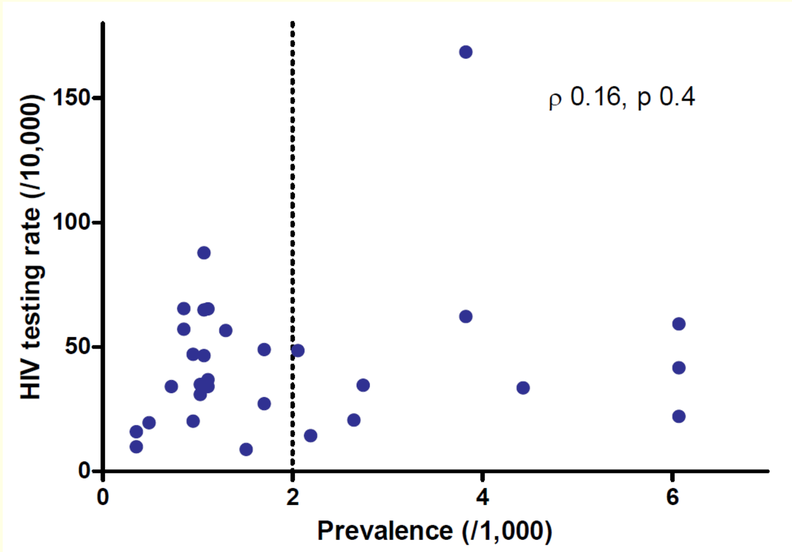
Testing rates among individual practices (low vs. high HIV prevalence areas)

10 of 30 practices (comprising 46.4% of the patient population) are in high-prevalence MSOA. Current testing rates are slightly higher in high-prevalence than low-prevalence practices (47.8 vs. 41.6, p 0.04). However, rates varied widely (almost 20-fold) between individual practices (median 35.8, IQR 21.6-57.6, range 8.8-168.5) and there was no significant correlation between local HIV prevalence and testing rates (Spearman ρ 0.16, p 0.4).

Figure 1. Annual HIV testing rates in GP practices in Newcastle-upon-Tyne. Each dot represents an individual GP practice. Testing rates are for adults aged 15-59. *Left panel.* Comparison of testing rates in 2007 and 2017. Lines are medians. *Centre panel.* Funnel plot of testing rates in 2017 by practice list size showing high and low testing outliers, stratified by local diagnosed HIV prevalence in MSOA (high >2/1000, low <2/1000). *Right panel.* HIV testing rate by local diagnosed HIV prevalence in MSOA.







Discussion

HIV Testing rate (in comparison with national data)

Nationally, the proportion of HIV diagnoses made in a GP setting has increased significantly between 2005 (3.9%) and 2014 (8.1%)[2]. Currently (2016), the national GP HIV testing rate is 44 per 10,000 population for high prevalence areas. This is in keeping with our local data. However, we see wide inter-practice variation in testing rates (which is not captured in national data), and this is largely not explained by differences in known local HIV prevalence.

Opportunities for early diagnosis via 'optimal' testing rate

Missed opportunities for early detection of HIV are reported in 33% of newly diagnosed cases (BHIVA audit 2016), and many of these are in primary care. It is however a challenge to accurately define an 'optimal' HIV testing rate for primary care. Here, our positivity rate exceeded 0.2%, suggesting that the current overall rate of HIV testing in our city is likely to be cost-effective.

Conclusions

- At the time of 2008 DH guidance, a local *diagnosed* HIV prevalence of 0.2% was considered as a surrogate for an *undiagnosed* prevalence of ~0.1%. Therefore we suggest that an 'optimal' rate of testing in primary care should yield a positivity rate ~0.1%.
- Based on this assumption, we suggest that testing rates needs to increase further. Our next steps will be to work with GP and public health colleagues and commissioners to better understand: a) how these data may be best fed back to GP practices to influence testing practices; and b) reasons for high inter-practice variations in testing rates.
- We suggest that other regions may find it helpful to conduct similar analyses.

References

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2. Croxford, S., Yin, Z., Kall, M., Burns, F., Simmons, R., Copas, A., Ireland, G., Kirwan, P., Chau, C. and Delpech, V., 2018. Where do we diagnose HIV infection? Monitoring new diagnoses made in nontraditional settings in England, Wales and Northern Ireland. *HIV medicine.*