PO4/08

HIV Testing in an Acute Assessment Unit is Feasible, Effective and Affordable

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Introduction

- **National UK Guidelines recommend expanding routine HIV testing to all general medical admissions in areas where the local diagnosed HIV prevalence exceeds 2 in 1000.**
- However, there is little UK evidence to underpin these recommendations.

Objectives

- Our aim was to implement this guidance in an Acute Assessment Unit (AAU) in London in an area with a local HIV prevalence of 9 per 1000.
- Our secondary objectives were to (i) evaluate the cost of a routine HIV testing programme and (ii) evaluate the effectiveness of Quality Improvement (QI) methodology on HIV testing coverage of patients aged 16 to 65 years in this setting.

Methods

- Following the introduction of a routine HIV testing policy for admissions to the AAU, we collected data (April 2013 to July 2014) on AAU activity, HIV testing uptake and results and transfer to care information (CD4 count and RITA (Recent Infection Testing Algorithm) results)) for patients of unknown status aged 16 to 65 years.
- From January 2014, QI methodology was applied to increase HIV testing coverage of eligible patients, which included;
    - Delivery of education and training to medical staff
    - Electronic and paper HIV testing prompts
    - Introduction of oral fluid HIV testing kits
- Testing costs included equipment and laboratory expenditure.

Summary of AAU HIV testing results April 2013 to July 2014	
Total AAU Admissions (Patients aged 16 to 65 years)	**6415 admissions**
No. of HIV tests performed on AAU	**786 HIV tests**
No. of new HIV diagnoses	**6 new diagnoses**
Positivity rate (per 1000)	**7.6 per 1000**

Fig1: Overall statistics of HIV testing on AAU between April 2013 to July 14

References

British HIV Association. UK National Guidelines for HIV Testing 2008

M Rayment. Establishing a service of sustainable HIV testing in an Emergency Department. Third Joint Conference of British HIV Association with the British Association for Sexual Health and HIV. 2014.

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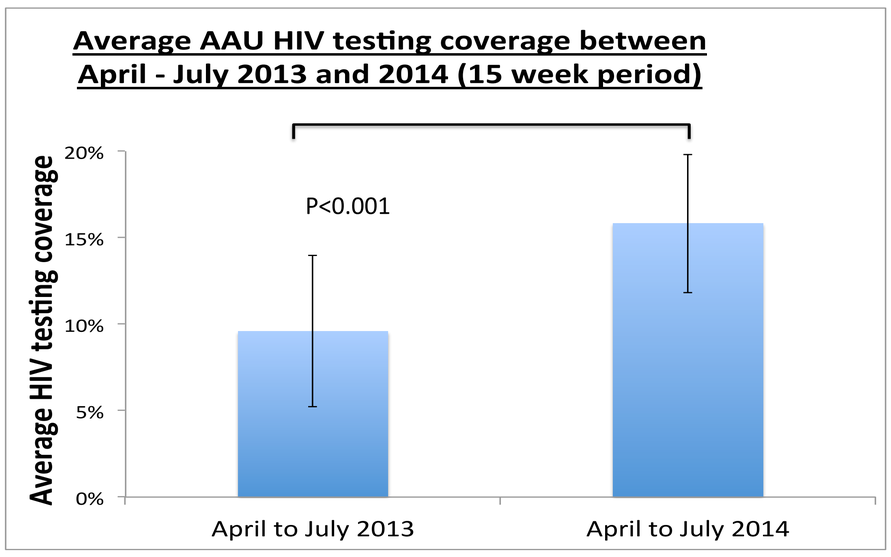
Results

- **During this period 786 HIV tests were performed with an average coverage of 12.3% of all eligible admissions** ranging from a weekly coverage rate of 3.7% in July 2013 to 23.0% in June 2014.
- **Six confirmed new diagnoses of HIV** *(positivity rate of 7.6 per 1000)* with two RITA tests indicating recent infection; all patients successfully transferred to care.
- Three were late presentations with CD4 cell counts below 200 cells/uL (range 17-747 cells/uL).
- All patients with new HIV diagnoses presented with symptoms that would separately indicate the clinical need for HIV testing suggesting a *degree of targeted testing*.
- **The estimated cost per new diagnosis was £656.31 (laboratory and equipment costs).** *(Data from the Emergency Department at the same trust estimated additional staff time costs of £372 per new diagnosis including staff testing time and allied sexual health service staff time (results governance and arranging transfer to care).*



HIV TESTING RATES	Mean (%)	STDEV	Range (%)
April - July 2013	9.6	0.044	4.2- 21.1
April - July 2014	15.8	0.040	10.5-23.0

Fig 2: Statistical analysis of testing rates in April to July 2013 and 2014

- **There was a statistically significant increase in HIV testing rates between April – July 2013 and April – July 2014** ($p < 0.001$) following the introduction of QI methodology from beginning of 2014.
- However, week to week variability of HIV testing coverage remains high throughout the study period likely reflecting the frequently changing junior and senior AAU workforce.

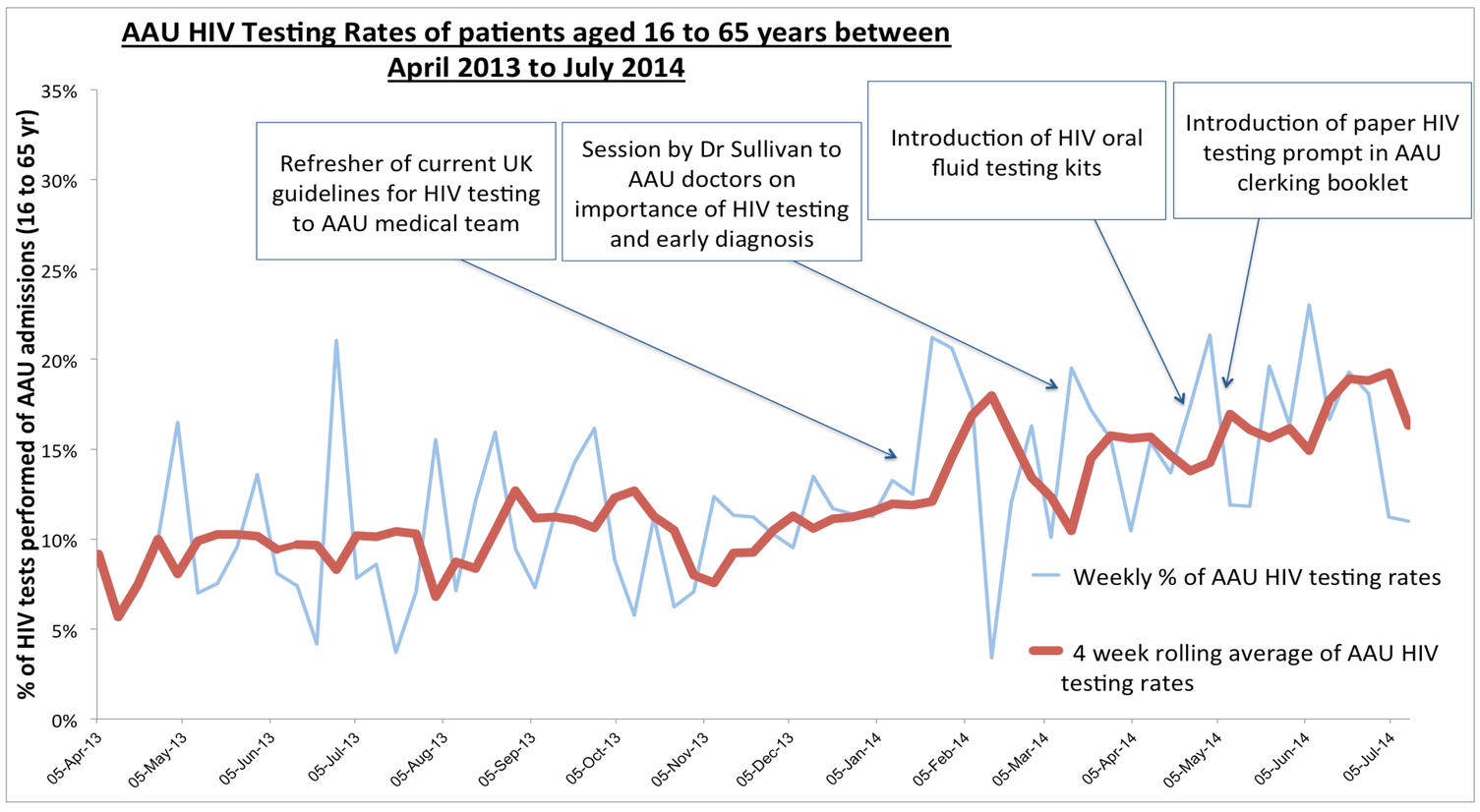


Fig3; Coverage rates of HIV testing throughout the 15 month study period and time frame of implementation of QI methodology

Conclusion

HIV testing in an AAU setting is both effective, feasible and affordable. However, current testing rates are low and in practice there appears to be a targeted approach. In line with UK guidelines, it is imperative to increase HIV testing rates to capture greater number of new diagnoses and at an earlier stage of infection. Despite interventions, obstacles remain to achieving universal testing including changing work force and time pressures; however the low cost for a new HIV diagnosis suggests this is a highly cost effective intervention.