

An audit of new HIV diagnoses in an urban setting of extremely high prevalence and missed opportunities for testing



Barts Health
NHS Trust

Dr H Le Voir, Dr C Bergbaum, Dr L Dufaur, Dr L Sarner, Dr N Marin, Dr R Dhairyawan
Royal London Hospital, Barts Health NHS Trust, London, E1 1BB, United Kingdom

Introduction

HIV late diagnosis is associated with increased morbidity and mortality and likelihood of onward transmission. National HIV¹ testing and NICE² guidelines recommend opt out HIV testing in acute medical settings where the prevalence of HIV is greater than 2:1000 as a cost-effective way of reducing late diagnosis. Our Trust is situated in an area with HIV prevalence higher than 5:1000 and does not currently offer routine opt out HIV testing in acute care. To support implementation of testing locally, new HIV diagnoses were audited to explore rates of late diagnosis and missed opportunities for testing.

Aims

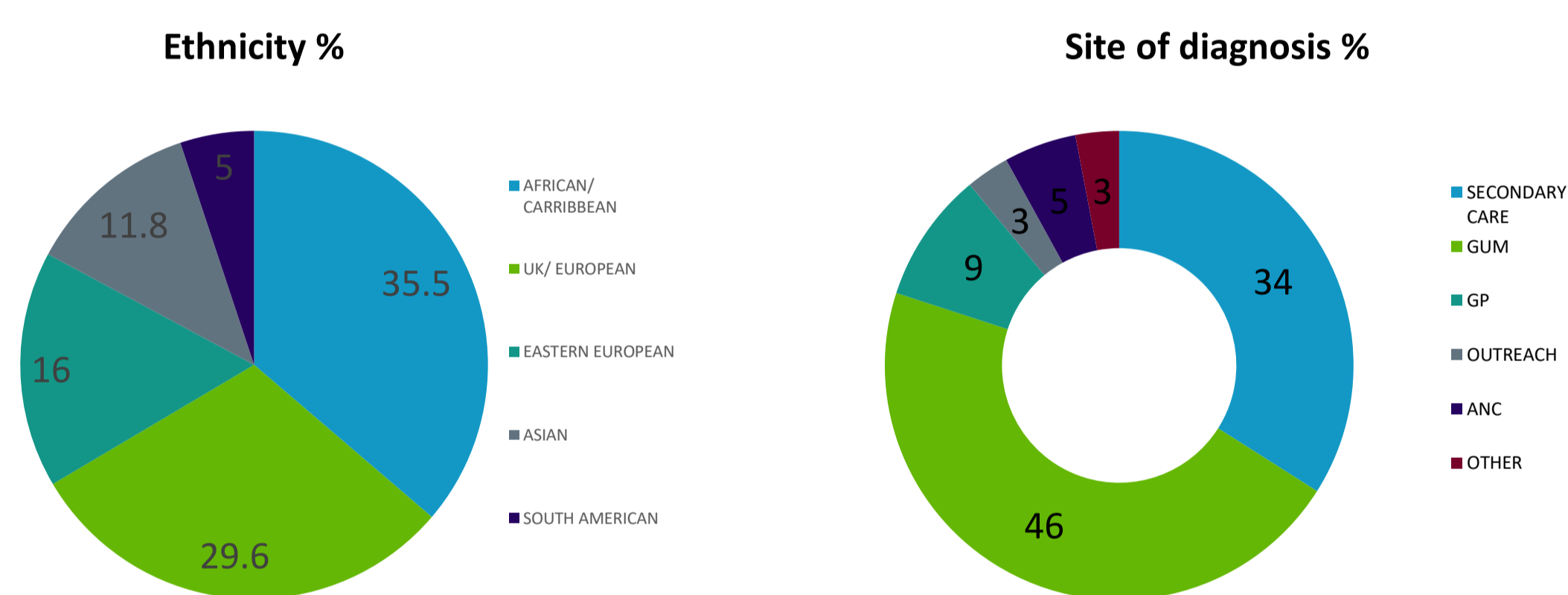
- To look at patients with new HIV diagnoses who attended Royal London Hospital, Newham, Whipps Cross HIV services in 2017.
- To assess HIV stage at diagnosis including late presentations defined by CD4 count at presentation <350 cells/mm³ and missed opportunities for testing.

Methods

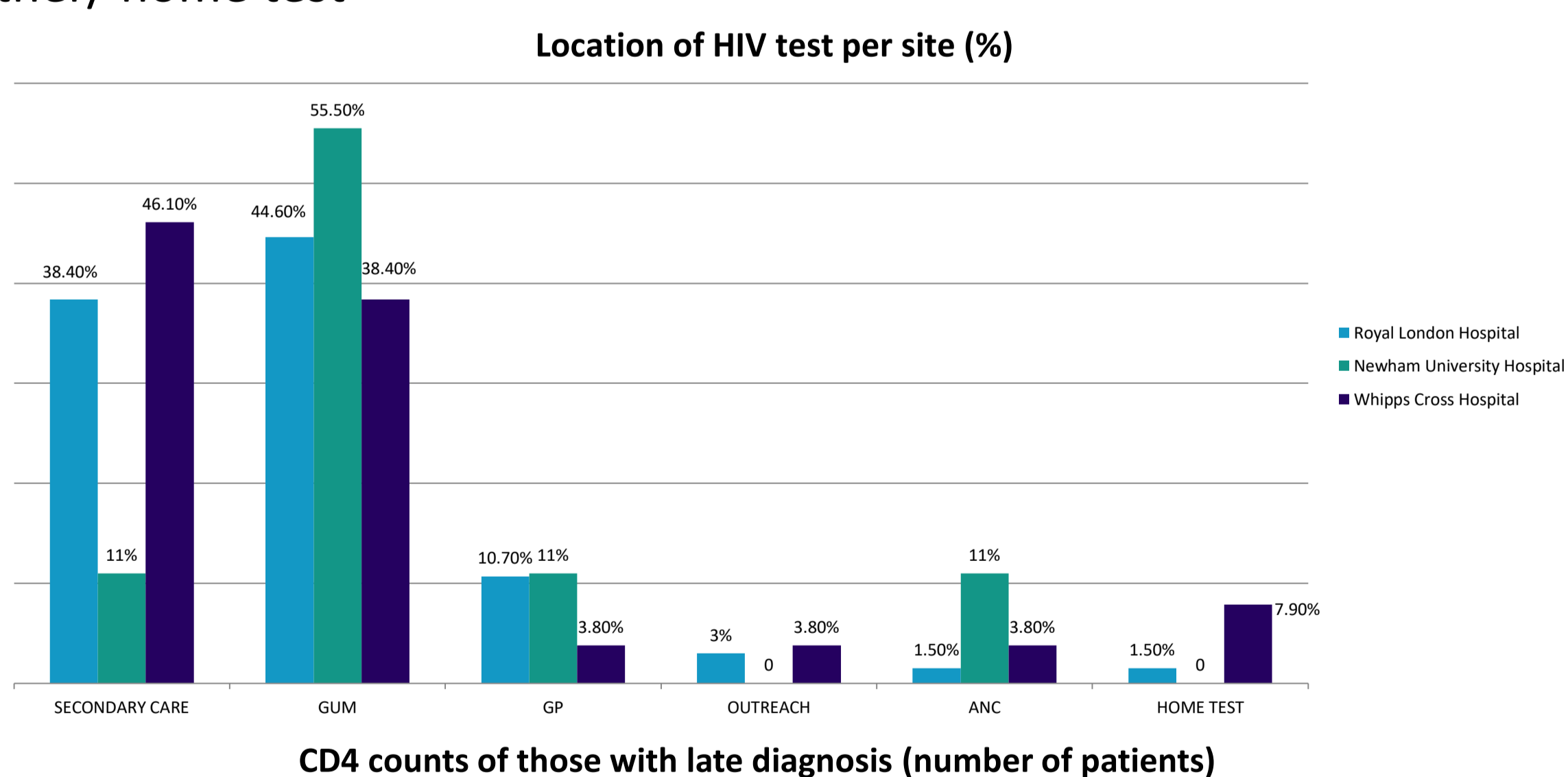
Clinical data of patients newly diagnosed with HIV between 1 January and 31 December 2017 were collected from electronic patient records. Those who were transferring care or diagnosed prior to 2017 were excluded. Missed opportunities were considered to be those who had been seen by a Doctor in the 2 years before diagnosis but not tested.

Results:

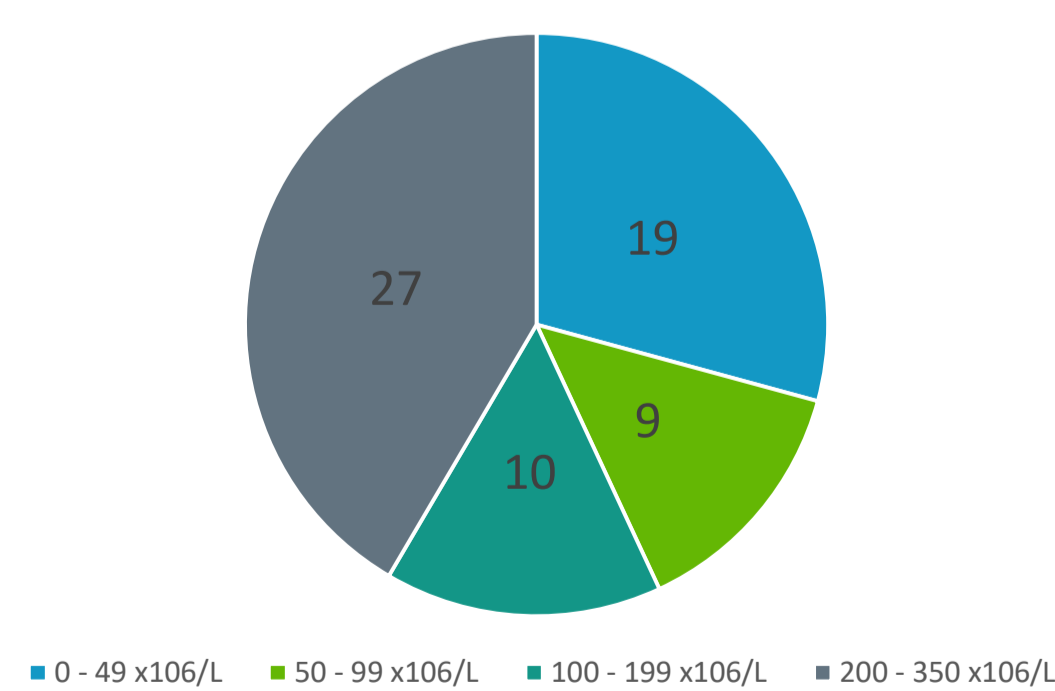
- 118 patients identified, mean age 39.2 years (16-58 years).
- 81 men, 37 women. No trans gender patients reported.
- 41% MSM, 54% heterosexual, 6% IVDU.



- Secondary care sites: ENT, Emergency department (ED), Dermatology, Ophthalmology, Oncology, Acute Medicine, ITU, Colposcopy, Gastroenterology and Respiratory.
- Outreach: immigration, HIV charity, drug/alcohol services
- Other/ home test

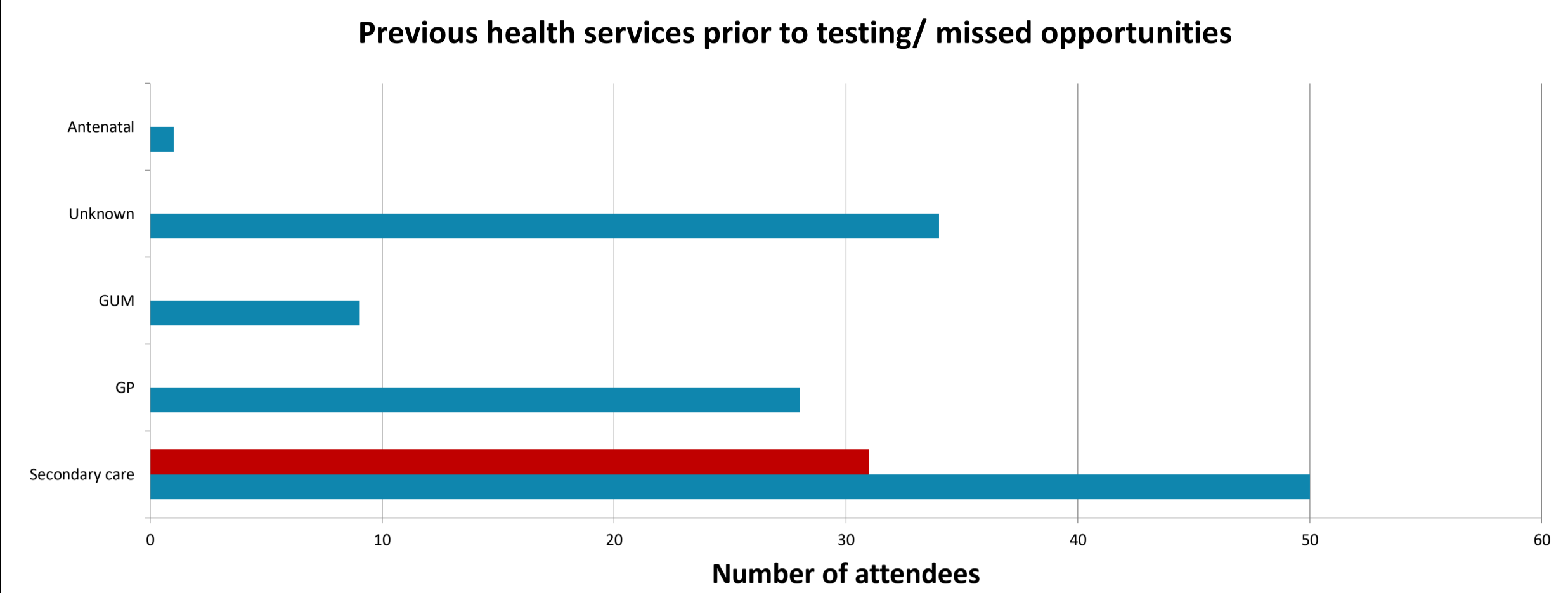


CD4 counts of those with late diagnosis (number of patients)



CD4	% total	ADI	I/P stay	Mean days
2 - 997	ALL	21%	30.5%	18.3
<350	55%	38%	44.6%	18.6
<200	31%	54%	67.5%	19.9

Table: CD4 count at diagnosis, presence of AIDS defining illness and inpatient length of stay



- 24% accessed primary care, 42% seen in secondary care at Barts Health NHS Trust, 7.6% in GUM, 26% seen in ED in 24 months prior to diagnosis.
- 1 year after diagnosis 89% were engaged in HIV care, 5% transferred care, 3% lost to follow up, and 2 patients deceased.

Discussion and conclusion:

- The audit identified that the late HIV diagnosis rate across Barts Health in 2017 was above the London and National average (Barts 55% vs London 38% vs National 43%)³. Newham Hospital had the highest late diagnosis rate of 62.9% which may reflect the high levels of transient populations and socioeconomic inequality.
- National opt out testing in antenatal and sexual health, and recommended within GP services in areas of high prevalence, has shown to be acceptable to patients and provides opportunistic diagnosis. The highest rate of diagnosis of 45.7% was made in sexual health services in this audit.
- As Barts Health hospitals reside in areas of extremely high prevalence of HIV, opt out testing in the Emergency Department or secondary care services would meet NICE and BHIVA recommendations for HIV testing. This would provide opportunistic testing for those not attending sexual health services or a GP practice not offering opt out HIV testing.
- In our cohort, 35.5% of diagnoses were made in secondary care; however 42% were seen in Barts secondary care services prior to their diagnosis with 26% seen in the Emergency Department.
- 51.6% of those presenting to Barts ED services prior to their diagnosis were subsequently diagnosed with a CD4 <350 i.e. late diagnosis. This provides an opportunity for preventing late diagnosis with the use of opt-out testing.
- Reducing late diagnosis prevents morbidity for the patient and potentially hospital admissions (45% of those previously seen in ED resulted in an inpatient admission at diagnosis).
- The data available suggests 9% had previous contact with sexual health services but this is likely under-represented as sexual health attendances are not available via the Trust electronic patient record.

Recommendations

- NICE guidelines show that opt out testing in areas of high prevalence is cost-effective with the costs of implementation offset by reduced hospital admissions from fewer late diagnosis with complex management required.
- Opt out testing within ED has been shown to be acceptable to patients and staff in previous studies⁴⁻⁸.
- We therefore recommend that the Emergency department is an appropriate place to implement opt-out HIV testing at Barts Health.
- With identification of undiagnosed individuals living with HIV, treatment can be given thereby reducing risk of onward transmission of HIV⁹, which would ultimately further reduce HIV diagnosis.
- Since this audit, funding has been sourced to start testing at one Barts Health site (Royal London Hospital) and this will start in April 2019 with the aim of finding funding to expand to all 3 EDs.

References: 1. HIV testing: increasing uptake among people who may have undiagnosed HIV (NG60). <https://www.nice.org.uk/guidance/ng60>. 2. UK National Guidelines for HIV Testing, 2008. British HIV Association. www.bhiva.org. 3. Trends in new HIV diagnoses and people receiving HIV-related care in the United Kingdom: data to the end of December 2017. Public Health England. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/681444/4_TestMetEst_a_campaign_to_increase_HIV_testing_in_hospitals_and_to_reduce_late_diagnosis_Bath_R_O'Connell_R_Lascar_M_et_al_AIDS_Care_20162815608-11.pdf. doi: 10.1080/09540121.2015.1120855. 5. Routine HIV testing within the emergency department of a major trauma centre: a pilot study. Bath B, Ahmad B, Orkin C. *HIV Med*. 2015 May;16(5):326-8. doi: 10.1111/hiv.12216. 6. Incorporating HIV/hepatitis B virus/hepatitis C virus combined testing into routine blood tests in nine UK Emergency Departments: the "Going Viral" campaign. Orkin C, Flanagan S, Wallis E et al. *HIV Med*. 2016 Mar;17(3):222-30. doi: 10.1111/hiv.12364. 7. <https://www.standart.com/news/health/11-things-science-becomes-frustrating-for-patients-but-ultimately-beneficial-for-them>. 8. <https://www.kcl.ac.uk/news/health/2016/05/09/sexual-activity-without-condoms-and-risk-of-hiv-transmission-in-serodifferent-couples-when-the-hiv-positive-partner-is-using-suppressive-antiretroviral-therapy>. 9. Sexual Activity Without Condoms and Risk of HIV Transmission in Serodifferent Couples When the HIV-Positive Partner Is Using Suppressive Antiretroviral Therapy. Rodger AJ et al. *JAMA*. 2016 Jul;316(2):171-81. DOI: 10.1001/jama.2016.5148

