

Sheffield Infection Group

A retrospective study of HIV testing in intensive care: significant numbers meet testing criteria according to national testing guidelines

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Introduction & Background

- There is currently a drive to increase HIV testing within many health care settings in the UK.
- Opt out screening has been adopted in Acute Medical Receiving Units in 54 regions of the UK with a high local HIV prevalence.
- Hospital based pilots of opt out testing in general areas found that public acceptance was high; new HIV diagnoses were made that would otherwise have been missed and reported a higher diagnostic rate than would be expected from the local general population prevalence¹.
- In other regions testing rates in non HIV specialist settings remain low, despite national guidelines recommending HIV testing on the basis of indicator illnesses².
- In the setting of critical care there is growing evidence that a significant proportion of critically ill HIV patients are first diagnosed in GICU (general intensive care unit)³ and only half will have AIDS associated illness^{3,4}. Early recognition of HIV and institution of HAART reduces mortality⁵.
- Importantly, a majority of GICU patients lack mental capacity to consent to testing, so an HIV test is performed in the best interests of a patient at the time or possibly delayed until later.
- Anecdotally, it appeared that our local HIV testing rates in critical care were low and there were a number of cases of potentially late recognition of HIV.

Aims & Objectives

We set out to compare the actual HIV testing rate in GICU at Sheffield Teaching Hospitals (STH) against that suggested by application of the UK National Guidelines for HIV testing 2008 (UKNG).

Methods

- All GICU admissions from 1st Jan 2010 to 31st Dec 2010 inclusive were identified.
- The electronic record for each patient was retrieved from the Metavision electronic database.
- 2 senior registrars (MD and PC) each independently analysed each record for data on demographics, admission diagnoses, presenting complaint, past medical history and the results of any HIV tests performed.
- Using the UKNG, cases were classed as meeting criteria for HIV testing (labelled 'Y'), not meeting criteria ('N') or not meeting criteria but nevertheless presenting sufficient clinical suspicion to warrant HIV testing ('P').
- Assessments were then compared and a testing classification agreed upon. Where consensus could not be reached the cases were passed to a professor of HIV medicine to adjudicate (DD).

Results

- In 2010, 1053 patients were admitted onto the two GICUs at STH (RHH and NGH)
- 1052 had complete records

ANALYSIS OF ACTUAL HIV TESTS SENT FROM GICU DURING THE STUDY PERIOD

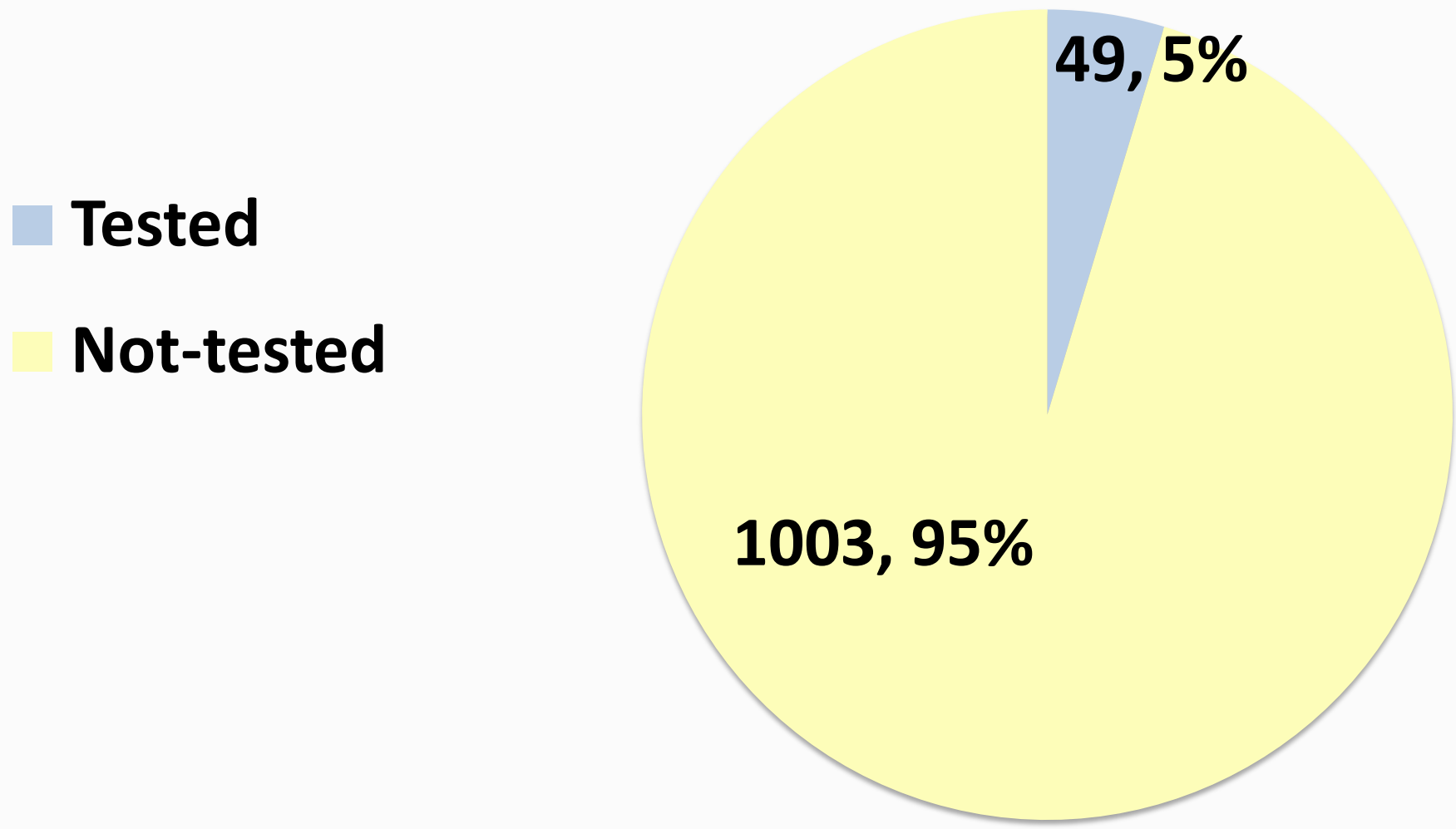


Figure 1: Proportions of all patients admitted to GICU that were tested and not tested for HIV when no HIV testing guidelines were in use and testing was ad hoc.

- 49 (4.7%) HIV tests were performed in 44 (4.2%) patients (5 had 2 tests) (Figure 1).
 - 36 (74%) met UKNG criteria for testing.
 - 6 (12%) did not meet criteria and had no clear justification for testing.
 - 7(14%) were judged to be clinically justified despite not meeting the UKNG testing criteria.
 - The median time from admission to HIV testing was 2.6 days (range 0-34). 25% of tests were performed on or after the 5th day of admission.

ANALYSIS OF ALL GICU ADMISSION RECORDS WHEN EXAMINED FOR TESTING CRITERIA FROM THE NATIONAL HIV TESTING GUIDELINES 2008.

- 392 (37%) cases were considered to warrant testing for HIV (Figure 2). The assessors agreed 320 of these met present national HIV testing guidelines and 72 did not meet guidelines but should be tested on high clinical suspicion of HIV infection.
- Of the 320 'Y' cases, 235 (73.4%) met UKNG criteria on the basis of the presenting diagnosis and 85 (26.6%) on the basis of their past medical history. Details of the specific indicator illness are illustrated in figure 3.

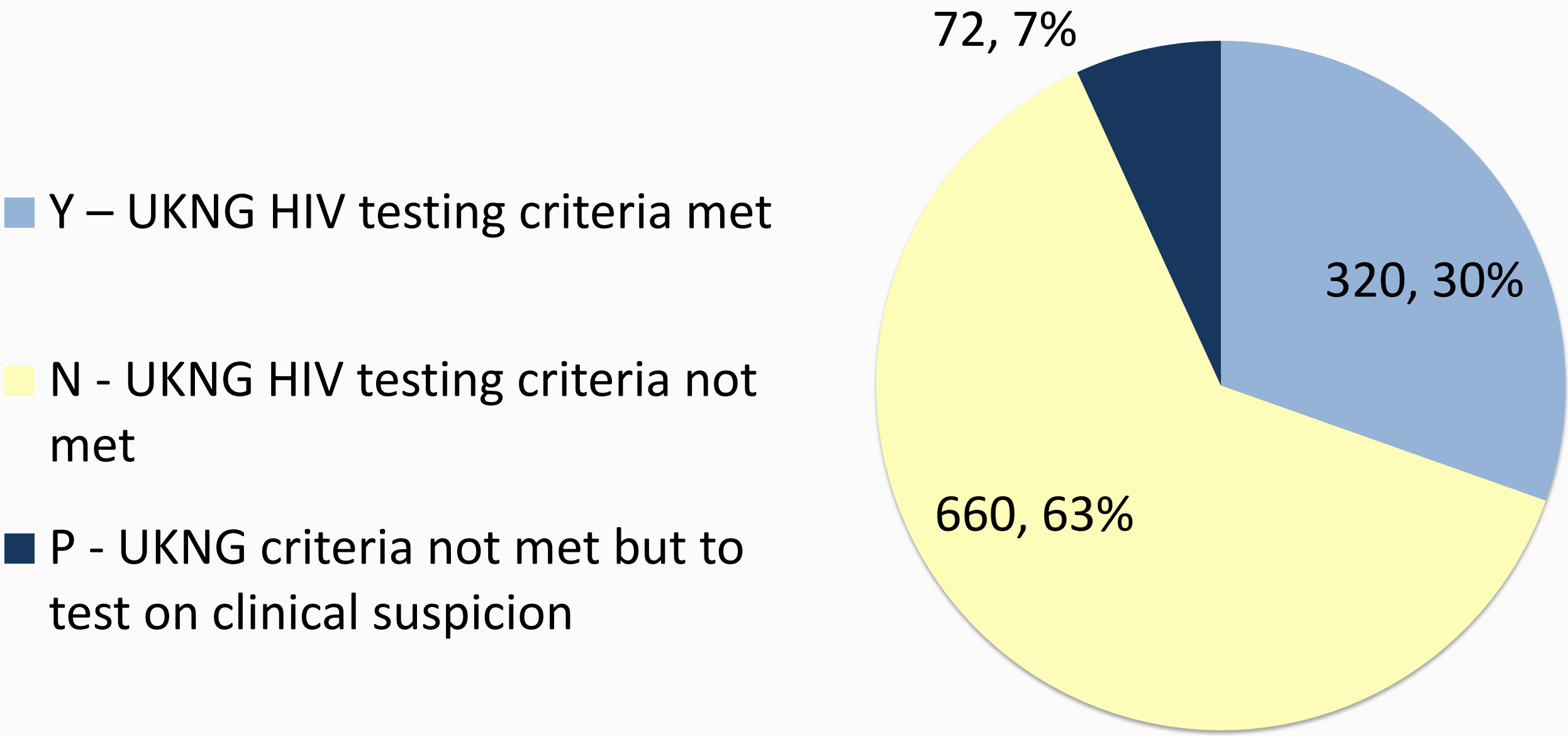


Figure 2: Sizes of the study groups following assessment of 1052 GICU admission records for UKNG HIV testing criteria.

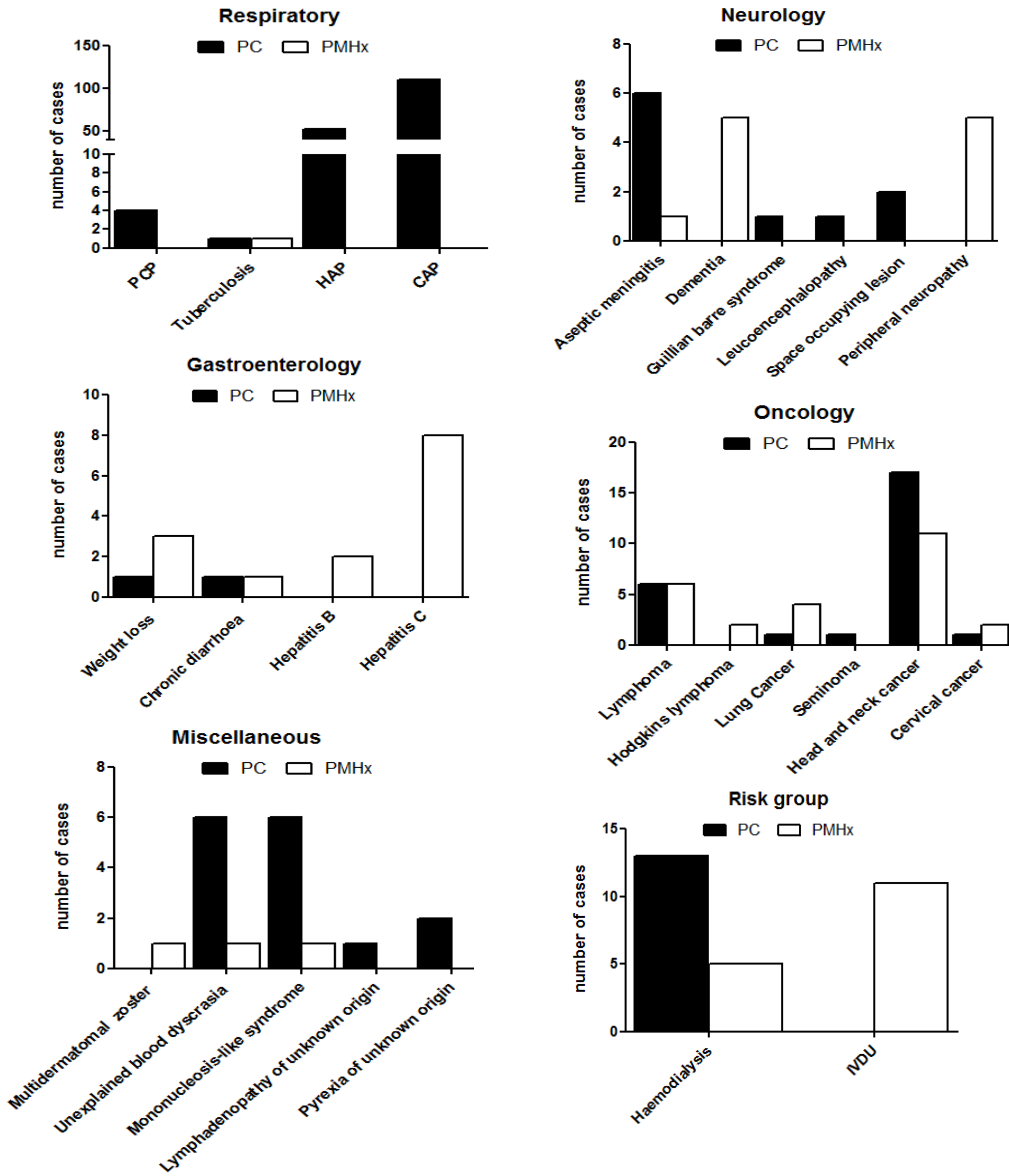


Figure 3: A breakdown of indicator illnesses identified from patient records (forming the “Y” Group). The appearance of the indicator illness in the past medical history or presenting complaint is shown and are exclusive of each other. PC presenting complaint, PMHx past medical history, PCP pneumocystis pneumonia, HAP hospital acquired pneumonia, CAP community acquired pneumonia, IDU intravenous drug user

- It was evident from the records that some patients, while meeting UKNG criteria for HIV testing on admission to the GICU, had a clinical outlook that would not have been altered by an HIV test. Such patients could reasonably await return of mental capacity before being offered a test. The two assessors identified 121 patients (77 on PC and 44 on PMH) to which this reasonably applied. This left a minimum number of 199 (18.9%) where an HIV test was indicated by UKNG.

Conclusions

- Actual testing rates were low at 4.6% across the 2 GICUs at STH.
- A four fold increase in testing could be achieved across the trust by pragmatic use of the existing UKNGs. With strict adherence to the UKNGs a 6.5 fold increase in testing could be achieved.
- Many cases admitted to GICU already had indicator illnesses but had either not been tested for HIV or there was no available result on GICU admission - indicating poor compliance with UKNG elsewhere.
- However, it is clear that the UKNGs do not capture all those cases that might be considered to warrant HIV testing.
- Implementing UKNG would be a useful first step to increase HIV testing rates in critical care
- Consideration should be given to making critical illness itself an indicator illness for HIV testing