

# Audit of HIV testing in patients with *Streptococcus pneumoniae* bacteraemia

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## Introduction

- Guys and St Thomas' NHS Trust lies within the London borough of Lambeth.
- Lambeth Primary Care Trust has a rate of 13.28 of diagnosed HIV prevalence per 1,000 population (aged 15-59 years) in 2009 [1]
- Lambeth PCT ranks number one for diagnosed HIV prevalence in all PCTs in England. The British HIV Association guidelines 2008[2] recommends that an HIV test should be considered in all general medical admissions when diagnosed HIV prevalence in the local population exceeds 2 in 1000 population.

HIV infection is associated with an increased risk of invasive pneumococcal disease.[3] HIV testing should therefore be considered in all patients with *Streptococcus pneumoniae* bacteraemia, as this may represent the first manifestation of HIV infection.

## Methods

- All *Streptococcus pneumoniae* blood culture isolates from January 2008 to July 2011 at Guys and St Thomas' NHS Trust were identified retrospectively using the bacteraemia database.
- Electronic hospital records were used to identify those who had been tested for HIV.
- HIV testing was performed using the fourth-generation Abbott Architect Combo Ab/Ag HIV test.

## Results

- 99 patients with *Streptococcus pneumoniae* bacteraemia were identified.
- The mean age was 47.9 years (range 2 months to 88 years).
- 10 patients were HIV positive. 6 were already known positive at the time of their presentation with Strep. pneumoniae bacteraemia. 4 patients were newly diagnosed during their bacteraemia episode. 42 patients had a negative HIV test.

The mean age of those who were new HIV diagnoses was 47 years.

The remaining patients (47%) did not have a HIV test performed. 9 patients died; only two of these had a HIV test performed (both negative).

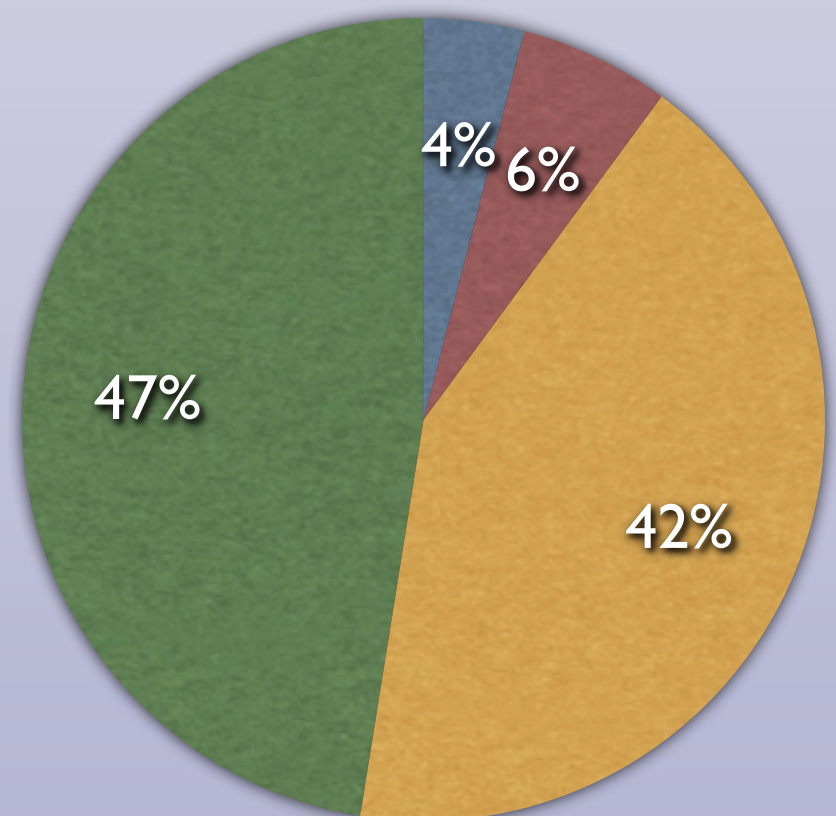
## Discussion & Suggested implementations

Almost half of all patients with *Streptococcus pneumoniae* bacteraemia in our Trust did not have a HIV test performed. With the known association between HIV and invasive pneumococcal disease this represents a missed opportunity for HIV diagnosis.

BHIVA guidelines recommend that all general medical admissions should be offered an HIV test. General medical, post take ward rounds at St Thomas' are documented on a proforma, and this could be amended to include a simple tick box to confirm whether or not the patient has been offered an HIV test. A small free text area could also be added to indicate why it was not offered.

Additionally, all bacteraemias at St Thomas' are communicated to junior medical staff by telephone, and all pneumococcal bacteraemia patients will be reviewed on the ward by the infectious diseases team. These interactions are opportunities to educate, and reiterate the need for HIV testing in this patient group.

All pneumococcal bacteraemias



● Known positive
 ● New positive
 ● Negative
 ● Not tested

[1] HPA SOPHID website. [www.hpa.org.uk](http://www.hpa.org.uk)

[2] UK National Guidelines for HIV Testing, 2008. British HIV Association.

[3] García-Leoni ME, Moreno S, Rodeñó P, Cercenado E, Vicente T, Bouza E. Pneumococcal pneumonia in adult hospitalized patients infected with the human immunodeficiency virus. *Arch Intern Med*. 1992 Sep;152(9):1808-12.