Invasive pneumococcal disease in people living with HIV
England, 1999 - 2017

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Overview

• Background

• Data linkage and estimation of HIV seroconversion date

• Results:
  - Population demographics
  - Incidence rate
  - Reduction in missed diagnoses

• Conclusions
Background

• Invasive pneumococcal disease (IPD) is a major cause of morbidity and mortality

• At-risk adults, including those with HIV, are recommended to receive an IPD vaccine
Data linkage and estimation of HIV seroconversion date

- Data from two surveillance systems in England were linked, between 1999-2017

- We used a CD4 slope decline algorithm to estimate probable date of HIV seroconversion for each individual

Yin et al. (in press)
Population demographics

Between 1999-2017:

1,450 Adults with HIV developed IPD

60% Men 40% Women

Number of IPD episodes:

1 94%
2 5%
3+ 1%

Age at IPD diagnosis:

67% 15-44
30% 45-64
3% 65+

Ethnicity:

- White: 38%
- Black: 38%
- Black African: 44%
- Black Caribbean: 6%
- Other: 4%
Annual IPD incidence rate, 1999-2017

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89 missed opportunities for earlier HIV diagnosis

54% were of black African ethnicity

People outside of London were twice as likely to be missed diagnoses
Time between IPD and HIV diagnosis

Invasive pneumococcal disease in people living with HIV
HIV-IPD co-diagnoses, by CD4 count

Late (CD4<350) and very late (CD4<200) HIV diagnosis associated with higher rates of IPD
Strengths & limitations

- Comprehensive national datasets

- Seroconversion date algorithm was only able to be calculated for 67% of HIV cohort

- Pseudo-anonymosed data matching

- No service-specific data on vaccine uptake
Conclusions

• IPD incidence among people with HIV reduced after the introduction of PCV7 and PCV13

• Adults presenting with IPD should continue to be routinely tested for underlying HIV

• Adults with HIV and other adults at risk should continue to be offered an IPD vaccine
Thank you

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Questions?