

Royal Free HIV respiratory disease study

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Non-AIDS comorbidities are becoming increasingly common as People Living with HIV age

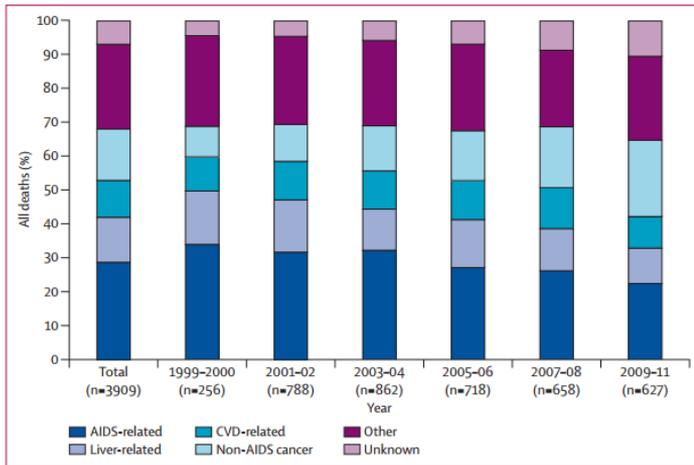
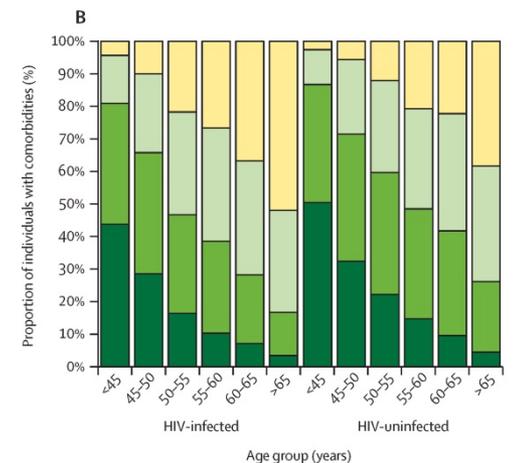
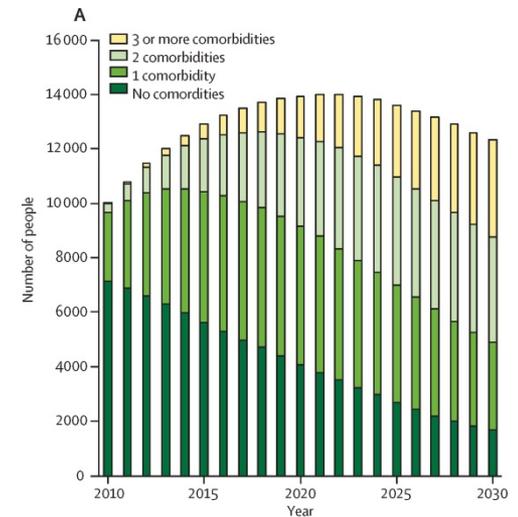


Figure 1: Most common causes of death in people with HIV
CVD=cardiovascular disease.

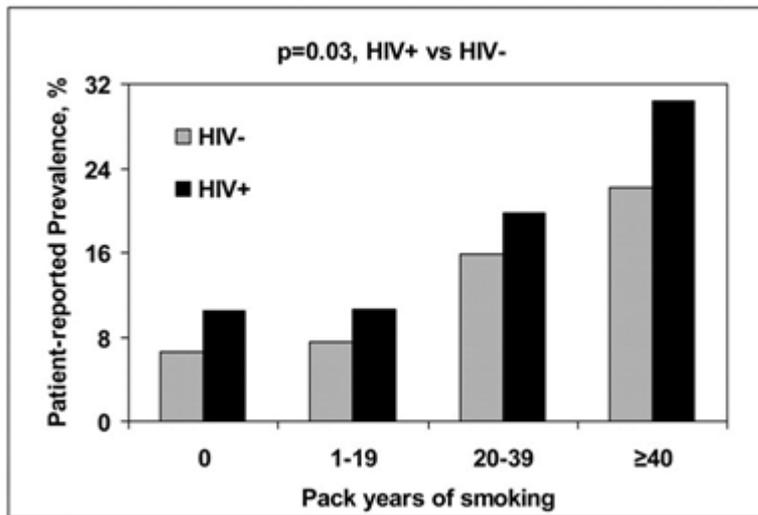
Causes of death in HIV positive people 2009-2011

Predicted comorbidities in 2030

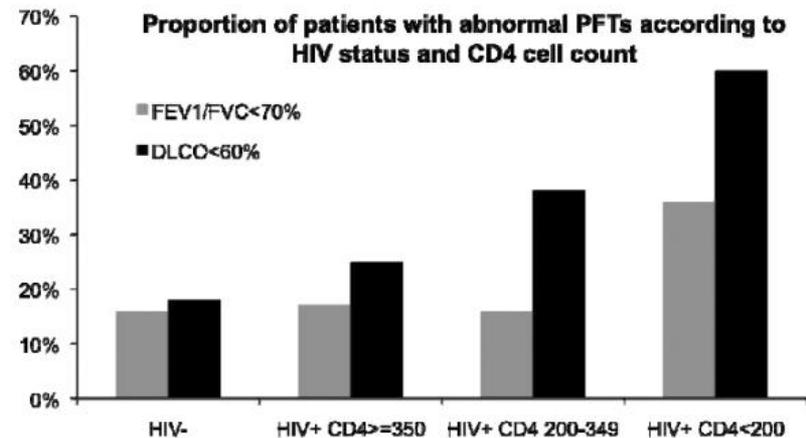


Is respiratory illness more common in ART-treated HIV positive people?

B) Prevalence of COPD by patient self-report

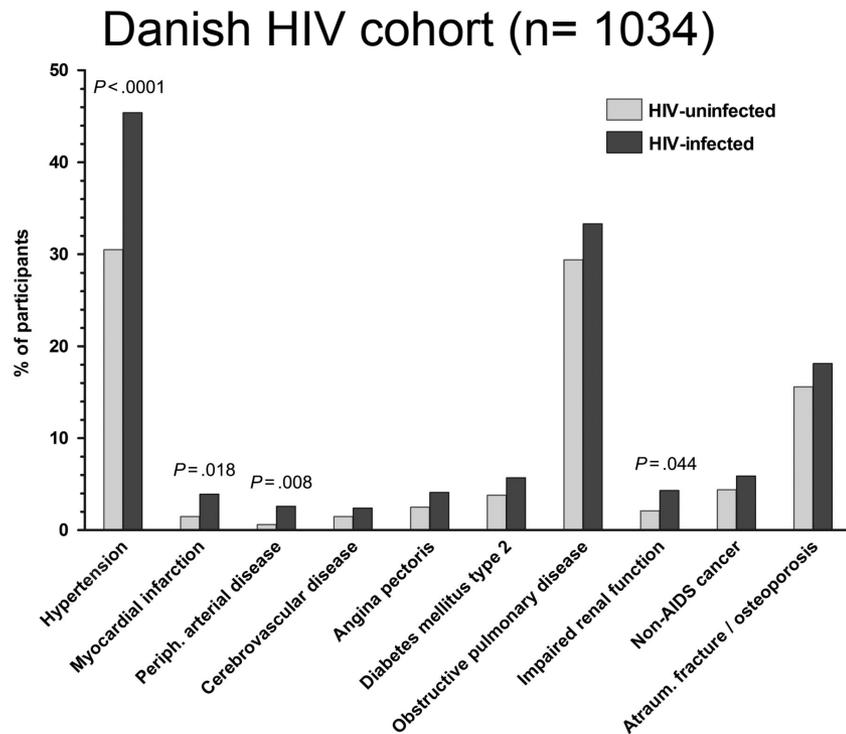


Crothers, Chest, 2006



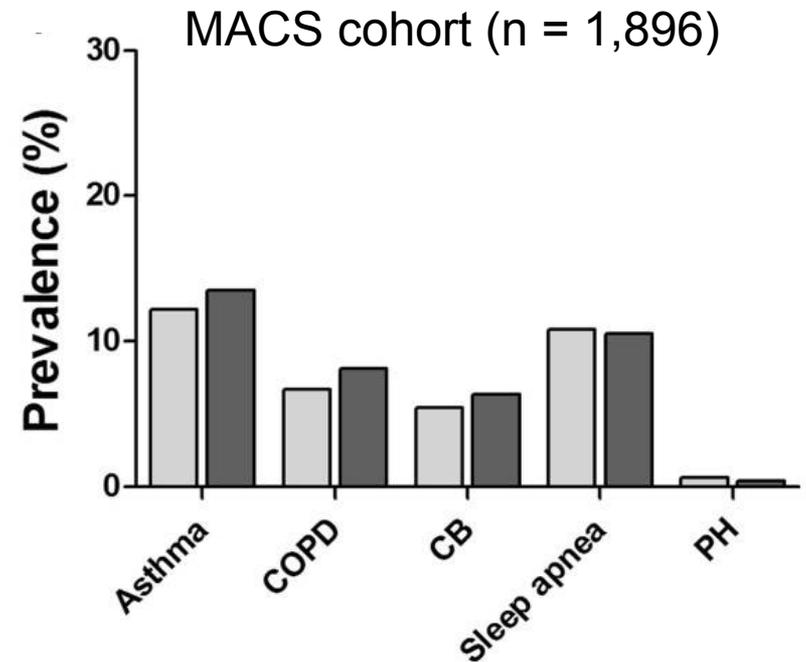
Crothers, JAIDS, 2013

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P values obtained by chi-square test

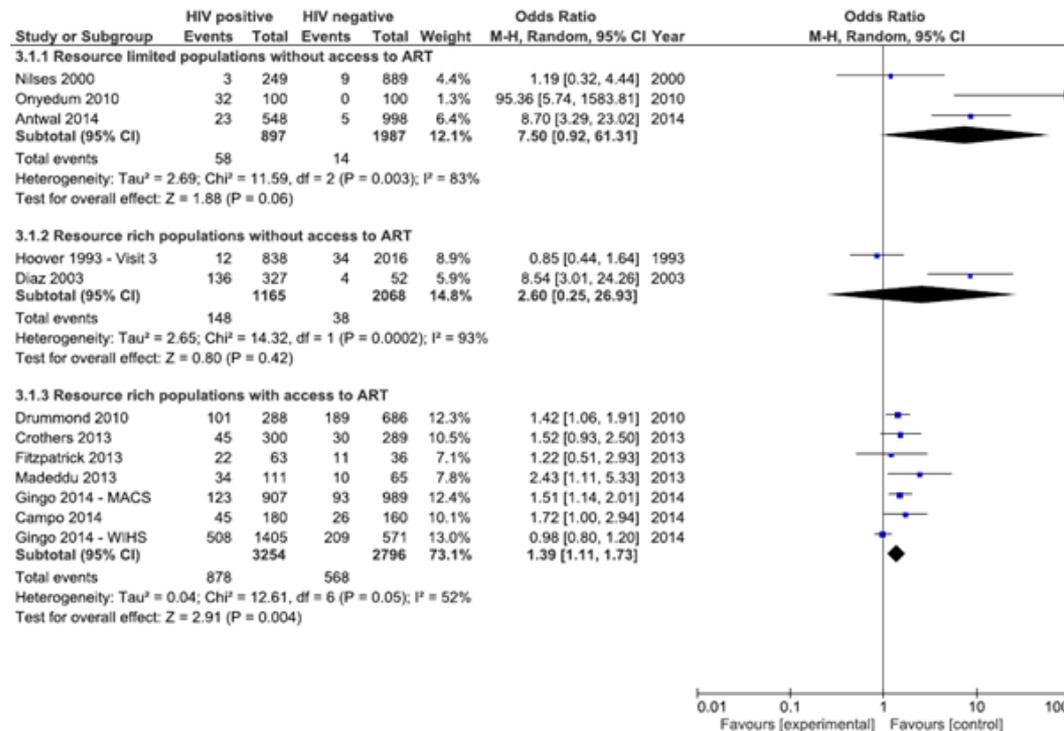
Schouten, Clin Infect Dis. 2014



Gingo, BMC pulmonary medicine 2014

Respiratory symptoms are common in HIV positive people

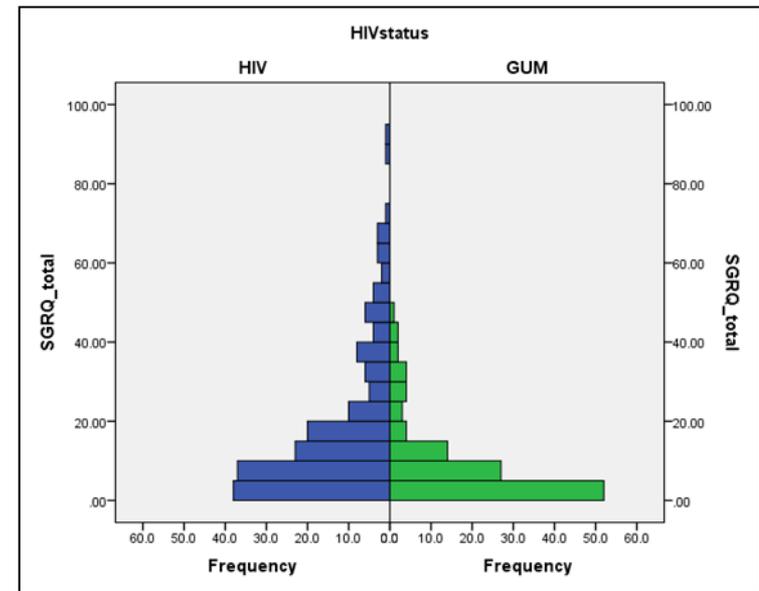
Do people with HIV have more respiratory symptoms?
 Systematic review and meta-analysis of existing studies
 Data on breathlessness:



Brown & Lipman, unpublished data

Respiratory symptoms are common in HIV positive people

	HIV positive (n = 201)	HIV negative (n = 90)	
FEV ₁ Mean (SD)	3.43 (0.86)	3.20 (0.78)	P= 0.08
FVC mean (SD)	4.24 (1.06)	3.87 (0.98)	P=0.02
FEV1/FVC <0.7	9%	7%	P=0.55
SGRQ_total Median (IQR)	12.30 (5.70-25.16)	6.01 (1.92-13.92)	P <0.001
MRC dyspnoea score mean (SD)	1.71 (0.99)	1.26 (0.47)	P <0.001
MRC dyspnoea score ≥2	89/191 (47%)	20/81 (25%)	P=0.001



Possible reasons for respiratory problems in people living with HIV

More smoking: ~30% current smokers compared to 20% general population

Damage to lungs from previous respiratory infections (e.g. pneumonia, PCP) before HIV treatment

Other comorbidities – more heart disease etc.

Direct effects of the HIV virus

Disordered immune responses to respiratory viruses and bacteria?

Why study *acute* respiratory illnesses?

Most existing studies have only evaluated people at one time-point

Respiratory illnesses are very common, an increase in severity or duration could have a big effect on quality of life

Airway inflammation may contribute to long-term respiratory illness

Royal Free Acute Respiratory Illness cohort study

Cohort study evaluating HIV positive and negative people, followed up for 1 year



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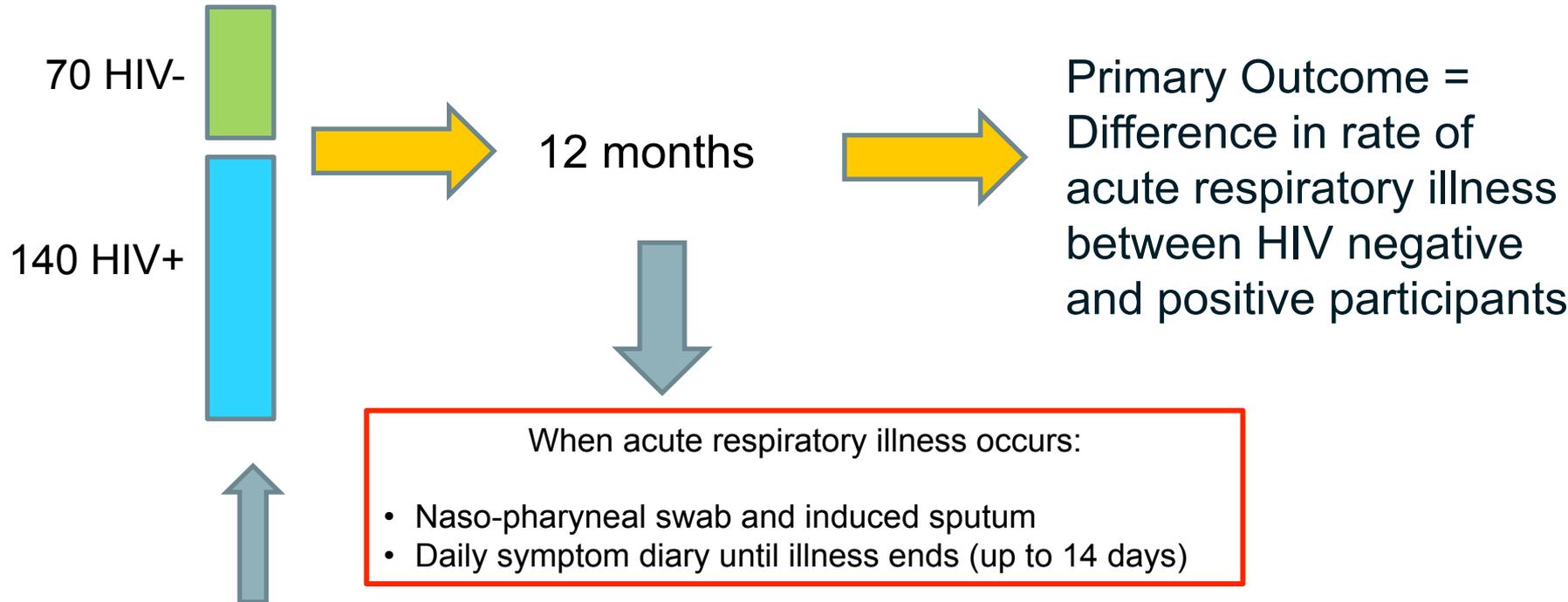
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4. What are the clinical and quality of life implications of any differences we find?

Study plan



Baseline data:

- Risk factors for respiratory disease
- Symptoms
- Lung function
- Carriage of micro-organisms

Study recruitment

- HIV positive participants invited to participate when attending Royal Free clinics
- HIV negative participants recruited from:
 - Sexual health clinics
 - GP practices
 - Peers / partners / friends of HIV positive participants
- Participants seen six-monthly and when unwell. Travel and food expenses paid but no other payment for taking part.

Planned timeline

- Recruitment started January 2016
- Aim to complete recruitment by October 2016
- All participants complete follow-up October 2017
- Analysis of samples and results October 2017-
April 2018

Can you help?

Many thanks!