

**Results** Our LCA model estimated the prevalence of treated asthma in Wales in 2011–2012 as 8.9% (95% CI: 8.7%–9.1%), which was higher than estimates from the Quality and Outcome Framework (6.9%), but lower than both the prevalence of self-reported treated asthma estimated by the Welsh Health Surveys in 2011 (11.0%) and 2012 (10.0%) and the prevalence of ‘GP reported and treated asthma’ from the ‘True Costs of Asthma in the UK’ project (13.0%). In our model, prescription of any asthma medication had the highest accuracy among other observed variables (sens. = 99%; spec. = PPV = NPV = 100%), while asthma diagnosis variable had a lower accuracy (sens. = 66%; spec. = 94%; PPV = 51%; NPV = 97%). In the same sample, COPD prevalence was 2.0% (95% CI: 1.9%–2.1%) with only 2.8% of those classified as asthmatics were also classified as having COPD.

**Conclusion** Our LCA model provides a reasonable, data-driven, reference identification of people with treated asthma in Wales. Further work is needed to explore potential reasons for the observed differences in the estimates from other sources.

#### P226 IMPAIRED RESPIRATORY HEALTH STATUS IN THE UK HIV INFECTED POPULATION DESPITE THE USE OF ANTIRETROVIRAL THERAPY

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**Background** The widespread use of antiretroviral therapy (ART) has led to a reduction in HIV related opportunistic infections. An increase in chronic non-HIV related co-morbidities has been observed in stable HIV positive individuals receiving ART. The extent to which HIV infection remains an independent risk factor for respiratory disease despite the use of antiretroviral therapy is uncertain and few studies have systematically evaluated respiratory disease in HIV-infected populations with access to antiretroviral therapy.

**Aims** We sought to evaluate the frequency of (a) smoking and (b) respiratory symptoms and (c) spirometric impairment in the ambulatory UK adult HIV infected population, compared to HIV uninfected controls.

**Methods** HIV-positive participants were recruited from a large HIV care service, HIV uninfected participants were recruited from Sexual Health services (where recruitment was stratified by age to approximate that of the HIV positive subjects). Participants completed a questionnaire which included questions on smoking history and respiratory health status using the St George’s Respiratory Questionnaire (SGRQ), and undertook spirometry without bronchodilation.

**Results** 249 participants were recruited between April and July 2015 (Table 1). 28% of HIV positive and 33% of HIV negative participants were current smokers ( $p = 0.22$ ). 9% of HIV positive and 7% of HIV negative participants had an FEV<sub>1</sub>/FVC of <0.7 ( $p = 0.38$ ). 92% of HIV positive participants were using antiretroviral therapy, 86% had an undetectable plasma HIV viral load and mean CD4 count was 684 cells/ $\mu$ L.

Abstract P226 Table 1

	HIV positive (N = 181)	HIV negative (N = 68)	
Age [years]	50 (43–56)	44 (38–52)	P = 0.006
Using antiretroviral therapy	92%		
CD4 count [cells/ $\mu$ L]	617 (458–839)		
Male	79%	68%	P = 0.065
Current smoker	28%	33%	P = 0.22
FEV <sub>1</sub>	3.43 (0.86)*	3.20 (0.78)*	P = 0.08
FVC	4.24 (1.06)*	3.87 (0.98)*	P = 0.02
FEV <sub>1</sub> /FVC <0.7	9%	7%	P = 0.55
SGRQ			
<b>Total score</b>	<b>12 (6–29)</b>	<b>8 (3–18)</b>	<b>P = 0.032</b>

Values median (IQR) or% unless otherwise stated. \*mean (SD).

Significantly higher SGRQ scores were observed in HIV positive participants than HIV-negative participants with a median total SGRQ score of 12 for those with HIV infection and 8 for the HIV negative participants ( $p = 0.03$ ). In a linear regression (log scale) model, HIV infection was associated with a 62% increase (95% CI 1.19–2.21,  $p < 0.01$ ) in SGRQ in unadjusted analysis and 48% increase (1.08–2.02,  $p = 0.01$ ) in a multivariable analysis adjusting for age, gender and smoking status.

**Conclusions** Despite widespread use of ART, HIV infection is independently associated with impaired respiratory health status. This does not appear to result from current smoking or obstructive lung disease.

#### P227 LUNG CANCER DIAGNOSIS AT EMERGENCY ADMISSION – HOW DOES DORSET COMPARE?

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**Introduction** Survival for lung cancer patients in the UK is worse than in comparable countries, at least partly because they present with more advanced disease.<sup>1</sup> Recent data suggest that rural residence is associated with an increased risk of early death in lung cancer.<sup>2</sup>

As our region encompasses rural areas, we investigated rates of emergency admission at the three major hospitals in our region and factors which may lead to this.

**Methods** We retrospectively identified new presentations of lung cancer as emergencies from August to October 2014. We gathered patient demographics, mortality and GP presentation data and compared them with local lung cancer database data for the same time period.

**Results** We identified 41 new lung cancer diagnoses in this period, from a total of 119 new diagnoses. This gives an emergency diagnosis rate of 34.5%, comparable to national figures of 39%.<sup>1</sup> However, there was significant variation (21–43%) between the three sites.

When analysed by gender, only 30% of male diagnoses were made at emergency presentation, compared with 41% of females. Unfortunately our sample size was not large enough to demonstrate statistical significance ( $p = 0.22$ ).

GP data were available for 28 patients, of whom 17 had reported symptoms to their GP. The median duration between