

units but this is not felt to account for the high *Pseudomonas* rates. Ongoing surveillance of individual and geographically local microbiological profiles is important in managing patients with nCF-Br.

Abstract P240 Table 1 Longitudinal study of sputum microbiology in adult non-CF bronchiectasis

	Isolated*	Colonising†
Organism	n (%)	n (%)
<i>Haemophilus influenzae</i>	75 (52)	47 (33)
<i>Pseudomonas aeruginosa</i>	62 (43)	50 (35)
<i>Streptococcus pneumoniae</i>	42 (30)	13 (9)
Coliforms (including <i>Klebsiella</i> sp, <i>Serratia</i> sp, <i>Proteus</i> sp, <i>E. Coli</i> and <i>Enterobacter cloacae</i>)	42 (30)	13 (9)
<i>Moraxella catarrhalis</i>	39 (27)	9 (6)
<i>Staphylococcus aureus</i>	34 (24)	12 (8)
<i>Aspergillus</i> sp.	13 (9)	3 (2)
<i>Stenotrophomonas maltophilia</i>	12 (8)	2 (1)
MRSA	5 (3)	3 (2)
<i>Acinetobacter</i> sp.	5 (3)	3 (2)
<i>Achromobacter xylosoxidans</i>	4 (3)	2 (1)
Non-tuberculous mycobacteria	4 (3)	1 (0.7)
<i>Comamonas testosteroni</i>	2 (1)	1 (0.7)
Others	9 (6)	1 (0.7)
No organism isolated	28 (20)	

*Organism isolated from a patient one or more times within a 1-year period.

†Organism cultured on at least two occasions, 3 months apart within a 1-year period.

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P241 FUNCTIONAL IMPAIRMENT IN PATIENTS WITH BRONCHIECTASIS

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Background Patients with bronchiectasis have impaired quality of life and exercise capacity¹; however, other functional impairments have not been fully evaluated. We hypothesised that patients with bronchiectasis would have impaired functional activities; reduced grip strength, increased timed up and go test (TUG) and increased fatigue which would be associated with reduced quality of life (QoL).

Methods We studied 20 (4 male) clinically stable patients with bronchiectasis and 20 age, sex and smoking matched controls. In all subjects FEV₁%, BMI, TUG, grip strength and 6 minute walk distance (6MWD) were measured. The TUG is a measure of functional mobility which records the time for a person to stand up from a chair, walk 3 m, turn around and sit down again. All subjects completed the multidimensional fatigue inventory which includes five domains of fatigue (each scored out of 20, higher scores indicate greater fatigue), and a self-reported physical activity score. Quality of life was measured in patients using the validated Saint Georges Respiratory Questionnaire (SGRQ).²

Results Patients and controls had similar demographics (Abstract P241 Table 1). However, patients had increased TUG and reduced grip strength and 6MWD compared to controls. They also reported greater

fatigue and reduced physical activity. In patients, the TUG was inversely related to grip strength ($r=-0.528$, and 6MWD ($r=-0.478$), (both $p<0.05$) but not fatigue, QoL or FEV₁%. The 6MWD related directly to all domains of fatigue (except mental) and the SGRQ (all $p<0.05$). All domains of fatigue (except mental) related to total SGRQ.

Abstract P241 Table 1

	Controls (n=20)	Patients (n=20)
Age (years)	62 (36–69)	65 (42–80)
FEV ₁ (% predicted)	105.1 (9.1)	67.8 (25.8)**
BMI (kg/m ²)	25.1 (4.6)	25.8 (4.3)
6MWD (m)	498.8 (86.4)	352.5 (115.8)**
Time up and go (s)	7.0 (5.3–8.0)	8.5 (7.0–17.8)**
Handgrip (kg)	27.3 (14.0–44.5)	23.5 (15.0–41.0)*
Physical activity score (METs)	39 (29–75)	33 (26–47)*
General fatigue	10 (4–13)	16 (5–20)**
Physical fatigue	6.5 (4–11)	13.5 (5–20)**
Reduced activity	6 (4–9)	10 (4–20)**
Reduced motivation	5.5 (4–8)	9 (4–16)**
Mental fatigue	8 (4–15)	8 (4–19)

* $p<0.05$, ** $p<0.001$.

Data are mean (SD), or median (range).

6MWD, 6 min walk distance; METs, metabolic equivalents.

Conclusions Patients with bronchiectasis have impaired functional activities and increased fatigue. Fatigue may result in reduced physical activity and reduced endurance (measured by 6MWD) which affect QoL more than short-lived functional activities.

P242 THE TREATMENT OF PSEUDOMONAS AERUGINOSA (PA) IN NON-CF BRONCHIECTASIS

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Introduction *Pseudomonas aeruginosa* (PA) is a common bacteria in bronchiectasis, and infection with PA is associated with worsening symptoms that may lead to an accelerated decline in FEV₁.

Aims To review the current treatment of infection with PA, at the Regional Respiratory Centre, City Hospital Belfast to determine the success rate of eradication treatment and to assess if PA had any impact on lung function following 3 months of treatment.

Methods Medical notes of patients that had positive culture for PA requiring nebulised antibiotic treatment from August 2007 to October 2008 were reviewed. Where available, data relating to antibiotic therapy prescribed, presence of PA and lung function was recorded at the start of treatment, following 1 month of treatment and following 3 months of treatment.

Results Data from 91 patients, mean age (SD) 65 (11) years, baseline FEV₁ 1.5 (0.7) %, FVC 58 (21.4) % were analysed. 58/91 (64%) patients had a first ever recorded isolate of PA and 29/91 (32%) had previous sputum cultures with PA. First line treatment included oral ciproxin (n= 49/91; 54%) and IV anti pseudomonal antibiotics (n=27/91; 30%). 10/91 (11%) did not have a complete treatment due to side effects. Mean (SD) treatment duration of oral ciproxin was 3.67 (2.1) weeks; range 2–12 weeks. Patients were also prescribed nebulised antibiotic treatment: colomycin (n=84/91; 92%) and tobramycin (n=7/91; 8%). After 1 month of nebulised treatment (n=76) 55/76 (72%) had eradicated PA. Following 3 months of treatment (n=83), treatment of new isolates of PA in sputum was successful in eradication in 57/83 (69%) of patients. No improvements in lung function were noted.

Conclusions The success of treatment for PA eradication is similar to those reported in cystic fibrosis and current treatment does not adversely impact on lung function.

P243 DURATION AND CHOICE OF ANTIBIOTICS IN HOSPITAL ADMITTED COMMUNITY ACQUIRED PNEUMONIA PATIENTS OVER A PERIOD OF 5 YEARS IN NHS SOUTH EAST OF SCOTLAND

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Introduction *Clostridium difficile* infection is associated with class of antibiotics as well as the duration of treatment. The aim of this study was to ascertain if the rate of hospital related *Clostridium difficile* varied with the duration and choice of antibiotics in those admitted to hospital with Community Acquired Pneumonia (CAP) over a period of 5 years (2005–2009).

Methods As a part of a prospective observational study of CAP in NHS Lothian, we investigated the duration and choice of antibiotics in hospital admitted CAP and the rate of *Clostridium difficile* infection in these patients over a period of 5 years (2005–2009). For multiple comparisons, we used the Kruskal–Wallis test for numerical data and Chi squared test for the categorical data.

Results The duration and choice of antibiotics are tabulated in the Abstract P243 Table 1. The length of antibiotics used for severe CAP was therefore, longer than mild CAP. The duration of antibiotics for all severity of CAP, has not changed between 2005 and 2009. There has been a reducing usage of cephalosporins and macrolides with rising use of co-amoxiclav. The contribution of CAP as a cause for *Clostridium difficile*, however, remains unchanged.

Conclusion In conclusion our study shows that the proportion of *Clostridium difficile* cases due to CAP has not changed in NHS Lothian between 2005 and 2009, despite significant reduction of cephalosporins and macrolide use. Randomised controlled trials are needed to assess whether reducing the length of treatment will influence *Clostridium difficile* rates.

P244 ADHERENCE WITH DEPARTMENT OF HEALTH GUIDELINES FOR THE MANAGEMENT OF PANDEMIC H1N1 INFLUENZA IN SECONDARY CARE

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Background Prior to the 2009 swine flu pandemic, there was uncertainty about the expected incidence, morbidity and mortality

from the disease. The Department of Health (DoH) compiled guidelines for assessment and management of children and adults admitted to hospital with suspected H1N1 infection.

Objectives We evaluated whether adults with suspected H1N1 infection were appropriately diagnosed, investigated and managed within an NHS Foundation Trust during a period of maximal incidence when DoH guidance was accessible, with the aim of improving care for patients during future pandemic flu outbreaks and utilising hospital resources efficiently.

Methods Patient notes of suspected cases of adult H1N1 infection between July and December 2009 were retrospectively reviewed to identify how many met the diagnostic criteria, underwent relevant investigations and were prescribed a neuraminidase inhibitor as compared with DoH guidelines. The relationship between the initial consultant's diagnosis and the final diagnosis was also considered.

Results Seventy cases of suspected swine flu were identified, and full documentation was available for review in 61 of these. All patients were tested for swine flu and overall 26% of patients were H1N1 positive, including 6% of those patients who did not fulfil the diagnostic criteria. Of patients clinically suspected of having swine flu 34 (56%) did not fulfil the diagnostic criteria, although two of those were found to be H1N1 positive. Minimum recommended investigations were performed as follows; routine bloods and chest x-ray in 85%; blood cultures in 33%; sputum cultures in 15%; and urinary pneumococcal antigen testing in 3%. Antiviral medication was not prescribed in 31% of patients suspected of having swine flu. In 74% of the cases, the initial consultant's diagnosis matched the final diagnosis; this was true for 70% of the patients who were H1N1 positive.

Conclusions Increased awareness of the available guidelines is required to optimise diagnosis and management, and minimise the likelihood of potentially unsafe, incorrect diagnoses. This requires education of healthcare staff of available guidance, and further audit following the next outbreak of pandemic flu with the aim of safely and efficiently guiding clinical practice.

P245 ASSESSMENT OF ACUTE ILLNESS SEVERITY AND RADIOLOGICAL EXTENT IDENTIFY PATIENTS AT HEIGHTENED RISK OF DEVELOPING MAJOR PNEUMONIC PROGRESSION IN INFLUENZA A H1N1/2009 INFECTION

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Introduction In 2009, high transmissibility of a novel influenza A H1N1 virus produced a global outbreak of febrile pneumonic illness. Clinical criteria for its' diagnosis suffered from low sensitivity and specificity. We evaluated clinical, laboratory and radiological abnormalities in virologically proven H1N1/2009 infection to identify risk factors associated with severe pulmonary involvement.

Abstract P243 Table 1 Change in components of the NHP and LCQ

Year	Duration of antibiotics (days) Mean \pm SD			p-Value (year wise)	Choice of antibiotics			Proportion of <i>C. difficile</i> cases due to CAP (%)
	Mild CAP	Moderate CAP	Severe CAP		Cephalosprins (%)	Macrolides (%)	Coamoxiclav	
2005	7.89 \pm 3.68	9.61 \pm 4.32	9.71 \pm 2.94	<0.0001	24.8	65.9	50.8	10.4
2006	8.33 \pm 2.37	8.55 \pm 2.06	10.57 \pm 3.36	<0.0001	29.2	75.5	35.9	9.2
2007	8.67 \pm 3.46	9.51 \pm 4.3	9.87 \pm 3.01	<0.0001	19.7	74	61.1	9.9
2008	9.08 \pm 4.05	9.79 \pm 4.43	9.93 \pm 3.00	<0.0001	15.1	61.8	59.2	10.8
2009	8.24 \pm 3.66	10.26 \pm 5.83	9.78 \pm 3.51	<0.0001	7.9	54.6	71.3	8.9
p-Value (in each subgroup of CAP)	0.1	0.06	0.2	p-Value (in each antibiotic subgroup)	<0.0001	<0.0001	<0.0001	