Abstract S11 Table 1

	Patients w/ADR (≥10%)	Patients w/SADR	All ADR Events	All SADR Events
	n (%)	n (%)	N	N
Any ADR	311 (58.7)	31 (5.8)	820	45
GI	161 (30.4)	8 (1.5)	219	10
Photosensitivity/ Rash	101 (19.1)	5 (0.9)	120	5
Fatigue	98 (18.5)	1 (0.2)	102	1
Weight Loss	56 (10.6)	4 (0.8)	60	4

Method Up to 140 EU sites will enrol 1000 patients. Safety data are recorded at routine clinic visits for 2 years. Adverse drug reactions (ADR: a noxious, unintended drug response at therapeutic doses) and serious ADRs (SADR: ADRs that are life-threatening; cause death, disability, congenital anomaly; require hospitalisation or an intervention to prevent permanent impairment) are collected.

Results Data from 530 patients enrolled by 68 sites in 7 countries are included. Age was 69 ± 8.8 years (mean ± SD); IPF diagnosis duration was 1.8 ± 3.51 years; 81% were men. Median time in study was 5.5 months; total exposure was 284 person-years.

Of 311 patients with ADRs, 85 discontinued due to ADR and 41 discontinued for other reasons. Approximately 1/3 of patients with ADRs had their dose adjusted.

For patients who experienced an ADR:

- 55% of patients without a dose adjustment were able to continue treatment, while 69% of those with a dose adjustment were able to continue treatment.
- 20% discontinued due to the ADR after having a dose adjustment, but 31% discontinued due to the ADR without a dose adjustment.

When ADRs were managed by dose adjustment, dose adjustment was associated with continuing treatment.

Conclusion PASSPORT ADRs are comparable to those in clinical trials of pirfenidone in IPF. No new safety issues emerged. Dose adjustment may influence long-term tolerability of pirfenidone.

S12 EFFECT OF BASELINE FVC ON DECLINE IN LUNG FUNCTION WITH NINTEDANIB: RESULTS FROM THE INPULSIS™ TRIALS

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Background Nintedanib, an intracellular inhibitor of tyrosine kinases, is in development for the treatment of idiopathic pulmonary fibrosis (IPF). The INPULSIS™ trials were two replicate randomised, double-blind, placebo-controlled, 52-week Phase III trials that assessed the efficacy and safety of nintedanib 150 mg twice daily in patients with IPF. The primary endpoint was the annual rate of decline in forced vital capacity (FVC), which was significantly reduced in the nintedanib group compared with placebo in both trials.

Aim To assess the impact of baseline FVC on the effect of nintedanib on rate of decline in FVC.

Methods A pre-specified subgroup analysis of patients with baseline FVC >70% versus ≤70% of predicted value was undertaken using pooled data from both trials.

Results 700 patients (nintedanib 431, placebo 269) had baseline FVC >70% predicted and 361 patients (nintedanib 207, placebo 154) had baseline FVC ≤70% predicted. For patients with a baseline FVC >70% predicted, mean age was 67.4 years, 76.9% were male, 55.7% were White and mean carbon monoxide diffusion capacity (DL_{CO}) was 4.0 mmol/min/kPa. For patients with a baseline FVC ≤70% predicted, mean age was 65.5 years, 83.9% were male, 60.4% were White and mean DL_{CO} was 3.6 mmol/min/kPa. There was no significant treatment by subgroup interaction: the difference in adjusted annual rate of decline in FVC between the nintedanib and placebo groups was comparable in both subgroups.

Conclusion A subgroup analysis of pooled data from the INPULSIS™ trials showed that nintedanib 150 mg twice daily slowed the decline in lung function in patients with IPF, independent of severity of lung function impairment at baseline.

Clinical management of lung infection

S13 INCIDENCE AND RISK FACTORS FOR THE DEVELOPMENT OF HOSPITAL ACQUIRED PNEUMONIA IN OLDER HOSPITALISED PATIENTS

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Introduction and objectives Older people are at risk of hospital-acquired pneumonia (HAP). Few data exist on the incidence or risk factors for HAP in non-intensive care patients. Our aim was to determine the incidence and key risk factors for HAP in a sample of older people.

Methods A prospective survey of people >65 years admitted to Acute Medical, Medicine for the Elderly and Orthopaedic wards in NHS Tayside (Dundee, UK) over a 12 month period. HAP was defined in accordance with the European and Scottish National Prevalence Survey of Healthcare Associated Infection and Antimicrobial Prescribing, June 2011. Key analyses included: incidence of case-defined HAP, risk factors for development using Cox regression analysis and the percentage of clinically diagnosed HAP that met the diagnostic criteria for case-defined HAP.

Results A total of 1302 patients were included in the survey, 539 (41%) male, and mean age 82 years (SD 8). Median length of hospital stay was 14 days (IQR 20). 157 episodes of HAP were suspected clinically in 143 patients (incidence 10.9%), but only 83 episodes (53% of total) in 76 patients met the diagnostic criteria (incidence 5.8%). Case fatality rate was 29% in patients with confirmed HAP, and 19% in patients with suspected but not confirmed HAP. Risk of HAP increased by 0.3% per day spent in hospital. Swallowing problems were the single most important risk factor; HR 3.7 (95% CI 2.2 to 6.1, $p < 0.001$).

Conclusion HAP is common but overdiagnosed in older hospitalised patients. Older patients with swallowing problems have a greater risk of developing HAP. Given the high mortality rate,

knock on effects on antibiotic use and length of hospital stay, ways of preventing HAP would be of potential importance to health services.

S14 TIME TRENDS AND RISK FACTORS FOR HOSPITALISATION AFTER COMMUNITY-ACQUIRED PNEUMONIA IN OLDER ADULTS IN ENGLAND

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Introduction and objectives Hospitalisation rates for community-acquired pneumonia (CAP) among older individuals have increased in Europe, but the reasons for this remain unclear. It may be due to increasing incidence of CAP in older adults, or an increasing tendency to hospitalise – either due to worsening co-morbidities, and/or changes in service provision. We used English linked electronic health records to investigate trends in hospitalisation after a CAP diagnosis independent of CAP incidence, and determinants of any increasing trend.

Methods General practice records from the Clinical Practice Research Datalink (1998–2011) were linked to hospital admission records and mortality data, and CAP episodes among patients aged ≥65 years were identified. Episodes resulting in hospitalisation within 28 days of CAP diagnosis were compared to non-hospitalised CAP episodes, and multilevel logistic regression models built to estimate odds ratios for co-morbidities, frailty, and other factors, and to predict the probability of hospitalisation over time. Indicators of CAP severity (including mortality in the 28 days post-CAP) and pathways of care were also examined as explanations for hospitalisation trends.

Results Hospitalisation after CAP increased markedly over the time period; after controlling for a wide range of comorbidities and other factors, the predicted probability of hospitalisation rose from 57% (1998–2000) to 86% (2009–2010). Factors associated with hospitalisation included 14 co-morbidities, five frailty factors, and four medications/vaccinations. In the fully adjusted model most of these factors were associated with increased odds of hospitalisation, but some (including dementia and terminal illness) lowered the odds of hospitalisation. Over the study period, a growing proportion of CAP patients were admitted to hospital via A and E and the proportion referred by general practitioners decreased. 28-day mortality decreased over time.

Conclusions Hospitalisation after CAP among those aged ≥65 years has increased in England, independent of co-morbidity and frailty factors, while mortality has decreased. Changes in service provision, patient and physician behaviours may play a role in increasing CAP hospitalisations. If the incidence of CAP in this age group also continues to increase, these combined trends will place an expanding burden on the health service.

S15 CLINICAL CHARACTERISTICS OF HOSPITALISED PATIENTS MISDIAGNOSED WITH COMMUNITY-ACQUIRED PNEUMONIA

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Background The diagnosis and treatment of patients hospitalised with community-acquired pneumonia (CAP) is predicated on an acutely abnormal chest radiograph.[1] Little is known about patients who present with infective respiratory symptoms with no consolidation, who have clinically significant non-pneumonic lower respiratory tract infection (LRTI).

Methods A prospective observational cohort study of consecutive patients admitted to hospital with infective respiratory symptoms and treated for suspected CAP over winter 2013/14. Management was at the discretion of the admitting team.

Results Of 628 patients admitted to hospital during the study, 304 (48.4%) did not have acute consolidation on chest radiograph; 166 were reported as clear, and 138 as either longstanding abnormality or not acute infection. Patients with LRTI had lower admission C-reactive protein levels (median 49 mg/l vs. 85 mg/l; $p < 0.01$), were older (median 80.0 years vs. 76.3 years; $p = 0.005$), and were more likely to be managed on a non-respiratory ward (174/304 (57.2%) vs. 127/324 (39.1%); $p < 0.001$). A higher proportion of patients with LRTI were care home residents, although this did not reach statistical significance (56/304 (18.4%) vs. 45/324 (13.9%); $p = 0.12$). A microbiological diagnosis was made in only 9/304 (3.0%) patients with LRTI compared with 45/324 (13.9%) with CAP ($p < 0.0001$). CAP patients had a discharge clinical code of CAP (J12–18) in 247/324 (76.2%) cases; 121/304 (39.8%) patients with LRTI were miscoded as CAP. Thirty-day mortality was similar in both groups (48/324 (14.8%) vs. 43/304 (14.1%) $p = 0.82$), but median length of hospital stay was longer for patients with CAP (7.0 days vs. 5.6 days; $p = 0.002$).

Conclusion Almost half patients treated for CAP were misdiagnosed and over-treated with broad spectrum antibiotics. Patients with non-pneumonic LRTI were older, with lower C-reactive protein levels, but similar 30-day mortality. Acute respiratory illness in this group may therefore be driven by decompensated comorbidity rather than an underlying inflammatory condition; broad spectrum antibiotics may not be useful. No national guidance currently exists on the optimal management of this group, and further study is required.

REFERENCE

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S16 A RANDOMISED CONTROLLED TRIAL OF ATORVASTATIN AS A STABLE TREATMENT IN BRONCHIECTASIS

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Background Bronchiectasis is characterised by chronic cough, sputum production, and recurrent chest infections. Pathogenesis is poorly understood, but excess neutrophilic airway inflammation is seen. Evidence suggests that statins have pleiotropic effects; therefore these drugs could be a potential anti-inflammatory treatment for patients with bronchiectasis. We did a proof-of-concept randomised controlled trial to establish if atorvastatin could reduce cough in patients with bronchiectasis. In addition, we wanted to establish the anti-inflammatory mechanisms of statins contributing to this.

Methods Patients aged 18–79 years were recruited from the Royal Infirmary of Edinburgh. Participants had clinically significant bronchiectasis confirmed by chest CT and two or more chest infections in the preceding year. Individuals were randomly