Results To date, 10 healthy controls (mean age 53 weeks) and 2 infants with CF (mean age 55 weeks) have successfully undergone LCI measurement using this method. Mean LCI in controls was 6.62 (range 5.79–7.91). Mean within-subject CV% was 5.9%. Mean LCI in infants with CF was 7.63 (CV 5%).

Conclusion Preliminary data suggest this is a feasible and reproducible method of performing LCI in infants. Results in both infants with CF and controls fall within ranges predicted by the respiratory mass spectrometer[2] and within accuracy limits set by international guidelines. This could provide a more accessible alternative to current technologies, enabling this test to be offered in more centres.

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P259   **COST ANALYSIS OF IMPLEMENTING A PE PATHWAY INCORPORATING 3-LEVEL WELLS SCORING, PERC RULES AND AGE-ADJUSTED D-DIMERS**

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Background Acute pulmonary embolism (PE) is a common presentation. Currently NICE recommends 2-level Well scoring, which may over-investigate patients leading to unnecessary anticoagulation and contrast-related risks and significant financial costs. We investigated whether further risk stratification using a combination of 3-level Wells scoring, PERC rules and age-adjusted D-dimers could minimise costs and enhance patient safety.

Methods Retrospective analysis of patients who underwent CTPA and had complete data between September 2014 and August 2015 was carried out. Wells scores, PERC scores and age-adjusted D-dimers were calculated and compared against CTPA findings.

Results Out of 1174 patients who underwent CTPA, 1158 had complete data set. Application of PERC rules to low-risk patients (Wells score 0–1; n = 311, 27%) would have avoided 64 CTPAs, but missed 3 PEs, with a 95% sensitivity (95% CI: 0.85–0.97), 24% specificity (95% CI: 0.19–0.30), and avoided 56 D-dimers.

For intermediate-risk patients (Wells score 2–7), age-adjusted D-dimers would have avoided 265 CTPAs but missed 32 PEs, with an 81% sensitivity (95% CI: 0.74–0.86), 50% specificity (95% CI: 0.45–0.55). High-risk patients should proceed directly to CTPA.

The combination of 3-level Wells scoring, PERC rules, and age-adjusted D-dimers would have avoided 450 CTPAs (39%) but missed 39 PEs (8%), with an estimated financial saving of at least £255,150 (local CTPA tariff £567). Non-age adjusted D-dimers would have reduced this avoiding 132 CTPAs (11%), and missing only 7 PEs (5%). Further saving would have resulted from avoiding D-dimer testing in low risk PERC negative patients, and high risk patients.

Conclusion The use of a PE algorithm incorporating multiple clinical assessment tools results in a pathway which can help rationalise the number of CTPAs performed and D-dimers requested, without significantly increasing the proportion of missed PEs.

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Pneumonia and Bronchiectasis: Why Fore and Where to

P260   **THE UTILITY OF ATYPICAL PNEUMONIA SCREENING IN COMMUNITY ACQUIRED PNEUMONIA: THE LEICESTER EXPERIENCE**

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Introduction Microbiological testing for atypical pathogens in patients attending hospital with community acquired pneumonia (CAP) is recommended for moderate or severe disease (NICE CG191 2014) or for patients failing to respond to treatment. Although it is unclear whether testing improves outcome even in severe disease, many patients have such tests performed regardless of severity. Having revised our pathways for assessment, treatment and documentation of patients with community acquired pneumonia we hypothesised that testing for atypical organisms has no impact on treatment decisions for these patients.

Method We retrospectively identified all patients with a diagnosis of CAP who had investigations for atypical microbiology, September 2013 to May 2014, via our pneumonia database. We assessed CURB-65 score, atypical microbiology results and laboratory costings. The notes for all patients with positive atypical microbiological results were reviewed.

Results 343 patients were identified for whom 329 were analysed.

329 patients generated 991 samples in total (825 serum, 165 urine antigen, 1 urine virology) at a laboratory cost of £5,594.29.

Five samples were positive, one for urine legionella antigen.

Greater than 50% of serological samples had no second (paired) sample sent.

There was no correlation between CURB-65 scores and requesting of atypical microbiology requesting.

One patient with positive legionella antigen had prolongation of treatment from 5 days to 14 days.

No other patients had treatment changes as a consequence of atypical microbiological testing.

Conclusion Atypical microbiological testing, in hospital, for CAP patients is commonly performed at significant cost with minimal clinical utility. We recommend that non-selective serological sampling is abandoned. The impact of legionella urinary antigen testing on outcome in moderate and severe cases requires a prospective study.