antibiotic use to national guidelines. Relevant local service approvals were obtained.

**Results** 320 consecutive patients given a discharge coding for CAP from January 1st 2019 were reviewed and 120 (38%) patients were excluded as they did not meet the definition. Most commonly this was due to the absence of pneumonia on imaging and/or its development during the admission. The remaining 200 patients had the following clinical features: 101 (51%) male, mean age 71 years (range 20–99), presentation with breathlessness (42%), confusion (15%) and cough (13%). Respiratory co-morbidities were apparent in 39% of all patients, including COPD (21%) and lung cancer (8%). CURB65 severity was mild in 44%, moderate in 32%, severe in 23%, with critical care admissions in 12% (HDU/ICU combined), including ICU in 6/200 (3%). Overall 30d mortality was 18.5%, mean length of stay 11.1 days and all-cause 30d readmission rate 22.5%. 60/200 (30%) received guideline-adherent microbiological tests based on their severity. In moderate-to-severe CAP, only 1/200 patients appropriately had both sputum and blood cultures sampled. Antibiotics were clearly documented in 128/200 (64%) patients, with empiric choice adherent to local policy in just 35%. Positive microbiological testing informed antibiotic change in 3/200 patients. 1 year all-cause mortality was 35%.

**Discussion** Managing CAP is challenging without prospective, electronic, and consistent data collection. Diagnostic tests are no longer fit for purpose, infrequently performed and then inconsistent with national guidelines. High 30d and 1 year mortality rates reflect a sick cohort that deserves a greater scrutiny of care and attention. Prospective CAP registries would improve CAP care.

### Abstract P155 Table 1

<table>
<thead>
<tr>
<th><strong>4C score</strong></th>
<th><strong>Number in hospital</strong></th>
<th><strong>Follow up</strong></th>
<th><strong>Total (% died)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>low (0–3)</td>
<td>4</td>
<td>0</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>intermediate (4–8)</td>
<td>17</td>
<td>1</td>
<td>2 (11.8%)</td>
</tr>
<tr>
<td>high (9–14)</td>
<td>40</td>
<td>7</td>
<td>16 (40.0%)</td>
</tr>
<tr>
<td>very high (&gt;15)</td>
<td>1</td>
<td>1</td>
<td>0 (100%)</td>
</tr>
</tbody>
</table>

| **62** | **9 (14.5%)** | **10 (16.1%)** | **19 (30.6%)** |

**P155** ASSESSING CONTINUED BENEFITS OF 4C SCORES FOR MORTALITY AMONG PATIENTS WITH COVID-19 PNEUMONITIS ADMITTED TO A TEACHING DISTRICT GENERAL HOSPITAL

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10.1136/thorax-2023-BTSabstracts.306

**Background and Objectives** The 4C (Coronavirus Clinical Characterisation Consortium) score incorporating patient co-morbidities with measures of acute physiology and inflammation is an internationally validated prognostic tool for in-hospital mortality introduced early during the COVID-19 pandemic. With the subsequent strong uptake of SARS-CoV-2-RNA vaccines, more targeted therapies, changing virulence of the coronavirus (now predominantly omicron), and fewer reported deaths, the goal/objectives of this work were to determine continuing relevance of 4C scores by (1) reporting their distribution categorised with risk profile and (2) further analysing mortality in the immediate in-hospital setting and at 12 months.

**Methods** Retrospective computer-based data including SARS-CoV-2-RNA vaccination status/boosters collected for patients with confirmed infection and COVID-19 pneumonia admitted during 2 months to July 2022; subsequent analysis for mortality was by regression analysis accepting statistically significant findings for standardised beta coefficients at p<.05 adjusting for demographics, vaccination status and targeted COVID-19 directed (Remdesivir/Tocilizumab) therapeutic variables as well as oxygen (O2) and use of medical devices.

**Results** 62 patients (47% males), with mean (SD, range) age 75.8 (15.4, 32–101) years were identified; 19 (30.6%), with mean survival 70 (67, 6–237) days (median 40 days), had died (9 in the initial admission and 10 during follow up). 55 (88.7%) had been vaccinated at least once. Distribution of 4C scores with mortality in-hospital and during follow up are shown in table 1; 8/9 (88.9%) in-hospital and 17/19 (89.5%) overall deaths were from patients with high or very high 4C scores. Independent variables statistically significant on regression analysis for in-hospital mortality included positively with 4C score (p = .018) and high O2/medical ventilatory devices (p = .000), and negatively with age (p = .048), dexamethasone (p = .046), and targeted COVID treatments (p = .036) but not gender, status/number of vaccines, or low dose O2 use. None of the variables were significant at 12 months.

**Conclusions** Analysis of this real-life data has shown continued role for 4C scores outside of their original validation; despite no statistical significance among independent variables at 12 months, the continued mortality (30.6% in the cohort) likely reflects on the significant burden of co-morbidity.

### Abstract P156

**Title** AN AUDIT OF EMERGENCY AND RESPIRATORY PHYSICIAN CONCORDANCE TO THE AUSTRALIAN THERAPEUTIC GUIDELINE RECOMMENDATIONS FOR THE MANAGEMENT OF COMMUNITY ACQUIRED PNEUMONIA BEFORE AND DURING THE COVID19 PANDEMIC

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10.1136/thorax-2023-BTSabstracts.307

**Background** In an Australian study of 700 community-acquired pneumonia (CAP) presentations to hospitals, only 18% received antibiotics that were concordant with guidelines. Current guidelines recommend tests for culprit organisms in severe CAP only. Most audits focus on prescribing in emergency departments (EDs).

**Aims** Our aim was to assess if antibiotic prescribing for adults with CAP and requesting tests for culprit organisms was concordant with the Therapeutic Guidelines (TG – the principal reference standard for antibiotic use in Australia) by emergency and respiratory physicians before and during the pandemic. We hypothesised the arrival of COVID19 would increase rates of non-concordance.

**Methods** We retrospectively identified adults admitted under a respiratory physician for CAP between January – May 2019.
and 2020. CAP severity in ED and at the time of respiratory review was assessed using CORB and SMART-COP respectively. Tests for culprit organisms were recorded. Patients with immunosuppression, underlying lung disease or those from nursing homes were excluded.

**Results**

ED non-concordance with TG antibiotic recommendations was 51% (28/55) in 2019 and improved to 37% (23/63) in 2020. Respiratory physician non-concordance was similar at 24% (13/55) and 28% (18/63) in 2019 and 2020 respectively. The most common reason for non-concordance was treating non-severe CAP as severe by both specialties. Documentation of CAP severity by clinicians was less than 30% overall.

Urinary antigens were requested in half of patients and less than one-third of these patients had severe CAP. The positive yield was 10%. Serological tests were requested in 40% of patients and one-quarter of these patients had severe CAP. The positive yield was 8%.

**Conclusion**

Concordance with TG antibiotic recommendations in the ED improved following the arrival of COVID-19. This may have been due to increased collaboration between ED and respiratory teams, and increased awareness of viral pneumonia. Encouraging clinicians to document CAP severity in their notes may help to reduce the rates of treating non-severe as severe CAP, improving concordance further. Culprit organism testing has low yield and should be reserved for patients with severe CAP.

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**P158**

**CHARACTERISTICS AND OUTCOMES OF PATIENTS WITH COVID-19 PRESUMED TO BE TREATED WITH SOTROVIMAB IN NHS HOSPITALS IN ENGLAND**

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**Introduction**

We describe characteristics and acute clinical outcomes in patients with COVID-19 treated with a monoclonal antibody (mAb; presumed to be sotrovimab) across six periods covering the emergence and predominance of Omicron subvariants (BA.1, BA.2 and BA.5) in England.

**Methods**

Retrospective cohort study using Hospital Episode Statistics data from 1st January-31st July 2022. Included patients were aged ≥12 years and received a mAb at a National Health Service (NHS) hospital as a day-case (primary diagnosis: COVID-19). Patients were presumed to have received sotrovimab as NHS data showed that 99.98% of individuals treated with a mAb for COVID-19 during the study period received sotrovimab. COVID-19-attributable and all-cause hospitalisations were reported for the 28 days following treatment, both overall and across six distinct periods of Omicron subvariant predominance. Multivariate Poisson regression modelling was used to estimate incidence rate ratios for each period. Subgroup analyses were conducted among patients with severe renal disease (stage 4/5 chronic kidney disease, receiving peritoneal dialysis/haemodialysis or with a kidney transplant) and active cancer (patients with cancer receiving chemotherapy/radiotherapy within the previous 12 months).

**Results**

We included 10,969 patients (mean age 56.4 years; 42.0% female). Most common high-risk comorbidities were immune-mediated inflammatory disorders (43.0%; n=4,337), severe renal disease (14.1%; n=1,422), rare neurological conditions (10.4%; n=1,053) and active cancer (9.0%; n=910). The overall proportions of patients with 28-day COVID-19-attributable and all-cause hospitalisations were 1.0% (n=96) and 4.6% (n=465), respectively. In the 28 days following treatment, 0.3% (n=27) of patients died due to any cause. COVID-19-attributable hospitalisation rates were consistent across subgroups and no significant differences were observed.