linked with disease, there is a lack of data examining their association with non-SARS-CoV-2 respiratory infection.

**Methods** We analysed data from a prospective cohort study of adults (≥18y) hospitalised with acute lower respiratory tract disease, from 1st August 2020 to 31st July 2022. We included patients with acute respiratory infection, a negative SARS-CoV-2 test, and known blood group status. Univariate and multivariate logistic regression was used to assess ABO and Rhesu (RhD) influence on the likelihood of cardiovascular complications, and Cox proportional hazards for survival and hospital length of stay.

**Results** 3,118 adults with known blood group status were hospitalised with SARS-CoV-2 negative respiratory infection. Compared to the national donor population, blood group A and RhD-positive were over-represented in adults hospitalised with respiratory infection and in contrast blood group O were under-represented (both P<0.05).

Overall, morbidity was high: 61.1% (n=1906) patients had a cardiovascular complication, median hospitalisation was 6 days (IQR:3–12) and 30-day mortality was 14.0% (n=437). Univariate analysis revealed that, following hospitalisation, cardiovascular complications did not differ between A vs O (χ² P=0.818) or Rhesus (χ² P=0.575) blood groups: although, this population remained over-represented by group A (χ² P<0.001) and RhD-positive patients (χ² P<0.001) compared to the donor population.

Multivariate analysis found that pneumonia had the strongest effect on cardiovascular complication (OR:1.36, 95%CI 1.17–1.59, P<0.001), increased the hazard of 30-day mortality (HR:3.08, 95%CI 2.39–4.0, P<0.001), and decreased 60-day discharge (HR:0.65, 95%CI 0.60–0.71, P<0.001). Neither ABO blood group nor RhD-status influenced the risk of cardiovascular complications, ICU admission, or 30-day mortality in respiratory infection. However, group A patients were more likely to be discharged in 60 days (HR=1.10, 95% CI 1.01–1.19, P=0.029).

**Conclusions** We found was some evidence that blood group A has a protective effect in SARS-CoV-2 negative respiratory infection, including against longer hospital admission. Further investigation by pathogen may be warranted in the future, and may allow more targeted approaches through stratifying treatment intervention benchmarks based on this varied risk.

Please refer to page A291 for declarations of interest related to this abstract.

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**REFERENCE**

1. UKHSA Advisory Board; Chief Executive’s report – GOV.UK (www.gov.uk)

2. NHS England + Respiratory disease

3. CBP-7281.pdf (parliament.uk)
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 CAR, 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.

<table>
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<tr>
<th>Abstract P155 Table 1</th>
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<tr>
<td><strong>mortality after COVID-19</strong></td>
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<tr>
<td>4C score</td>
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<td>low (0–3)</td>
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<td>intermediate (4–8)</td>
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<td>very high (&gt;15)</td>
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**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 comorbidities with measures of acute physiology and inflammation is an internationally validated prognostic tool for inhospital 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 pneumonitis 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, 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 (89%) 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.

**P156** 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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**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...