

infection is unknown, experts estimate that 30% of community-acquired pneumonia (CAP) cases in Southern Arizona are due to *Coccidioides*. We were interested in determining how often patients admitted for CAP are tested for coccidioidomycosis. **Methods:** We identified patients who were admitted to Banner University Medical Center – Phoenix with community-acquired pneumonia from 1/1/2019-6/30/2024 by the ICD-10 code J18.9. Among this patient population, we determined the percentage tested for coccidioidomycosis (via serological test) and the percentage that tested positive. Regarding management, we elicited whether an infectious diseases consultation occurred during the hospitalization and if treatment included the antifungal fluconazole versus ceftriaxone and Azithromycin. **Results:** We identified 9,677 patients admitted with an ICD-10 code J18.9 between 1/1/2019 and 06/30/2024. The mean age (SD) was 60.3 (17.2) years and 56.3% were males. 3,536 (36.5%) patients were tested for coccidioidomycosis, and 389/3,536 (11%) had a positive serology. 14.2% of CAP patients were seen by an ID specialist. Among those with coccidioidomycosis, 56.3% (n=219) were seen by an ID specialist. Only a small fraction (n=974, 10.1%) of all CAP patients received fluconazole. Among the 389 with Valley Fever, 52.2% received fluconazole, while almost 70% were given ceftriaxone and/or azithromycin at any point during the admission. Transfer to the ICU, length of stay and hospital mortality were not significantly different in those with detected coccidioidomycosis versus others. **Conclusions:** In this large observational study in an area endemic for coccidioidomycosis, only 36.5% of those admitted for community-acquired pneumonia were tested for coccidioidomycosis 11% of those who got tested were found to have Valley Fever. Positing a similar coccidioidomycosis prevalence in the remaining 63.5% of CAP patients who were not tested for it, one could extrapolate a total of 676 missed cases based on 11% positive serology rate. To determine the true prevalence of coccidioidomycosis in our region, broader testing should be implemented. Our data also indicate that antifungals are rarely offered for coccidioidal CAP, while unnecessary use of antibacterials for this endemic mycosis is a target for antimicrobial stewardship.

Antimicrobial Stewardship & Healthcare Epidemiology 2025;5(Suppl. S2):s88–s89
doi:10.1017/ash.2025.314

Presentation Type:

Poster Presentation

Subject Category: Diagnostic Stewardship

Is It Worth It? Assessing the Clinical Impact of the *S. pneumoniae* Urine Antigen Test

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Background: It is challenging to identify a pathogen in most cases of community acquired pneumonia (CAP) as most available diagnostic tests either lack sensitivity or require an invasive specimen. *S. pneumoniae* urine antigen test (SPUAT), which detects the most common cause of bacterial CAP, has been used due to its higher sensitivity, non-invasive specimen collection, and more rapid turnaround time. However, the most recent IDSA/ATS guidelines only weakly recommend obtaining SPUAT as results have limited effects on clinical management given current CAP treatment guidelines. Our study aimed to determine whether use of the SPUAT resulted in meaningful changes in clinical management within the Emory Healthcare system. **Method:** We studied all patients within our 6-hospital healthcare system who had a SPUAT performed between 12/1/2023 and 11/30/2024 (n = 1258). Chart review for each positive SPUAT case was performed by two separate reviewers to identify change in management based on SPUAT, alternative diagnostic tests that identified *S. pneumoniae*, and time to positivity of alternative diagnostic tests. Disagreements were adjudicated by discussion between the two reviewers. Proportions and 95% confidence intervals were calculated using prop.test in R version 4.3.1. **Result:** There were a total of 66 positive SPUAT out of 1258 total tests resulted (5.3%, 95%CI 4.1% – 6.6%) over 12 months. In 18 of the 66 positive SPUAT cases, an alternative diagnostic test was also

positive for *S. pneumoniae*. In these cases, blood cultures were the most common alternative positive test (14/18) while the second most common alternative test was the pneumonia pathogen panel (11/18). In the majority (13/18) of cases with positive alternative tests, the alternative test resulted prior to the SPUAT. The median time to result for the first alternative test was 9.5 hours sooner than the SPUAT (IQR -0.2 hours - 37.9 hours). In 15 cases, a positive SPUAT resulted in a change in antibiotic management (1.2%, 95%CI 0.7%-2.0%). In cases where there was a change in management, de-escalation of antibiotics was the most common change in management identified (Table). The number of tests required for one management change was 84 tests at an estimated cumulative cost of \$2100. **Conclusion:** In our healthcare system, SPUAT had a low test-positivity rate and an even lower rate of management changes per test ordered at a high cumulative cost per management change.

Antimicrobial Stewardship & Healthcare Epidemiology 2025;5(Suppl. S2):s89
doi:10.1017/ash.2025.315

Table: Characteristics of cases with positive *S. pneumoniae* urine antigen tests

| Case Characteristics | # | % (95% CI) |
|--|----|---------------------------|
| Positive tests (n=1258) | 66 | 5.3 (4.1-6.6) |
| Management change (n = 1258) | 15 | 1.2 (0.7-2.0) |
| Type of management change (n=15) | | |
| De-escalate/Keep antibiotics off | 7 | 46.6 (22.3 – 72.6) |
| Change antibiotics | 4 | 26.7 (8.9 – 55.2) |
| Escalate/Start antibiotics | 4 | 26.7 (8.9 – 55.2) |
| Alternative positive test (n = 66) | 18 | 27.3 (17.4 – 39.8) |
| Time advantage of alternative test (median, IQR, n=18) | | 9.51 h (-0.23h – 41.45 h) |
| Alternative tests (n=18) | | |
| Blood culture | 14 | 77.8 (51.9 – 92.6) |
| Respiratory culture | 3 | 16.7 (4.4 – 42.3) |
| Pneumonia pathogen panel | 11 | 61.1 (36.1 – 81.7) |
| CSF culture | 1 | 5.6 (0.3 – 29.4) |

Presentation Type:

Poster Presentation

Subject Category: Diagnostic Stewardship

The Power of Suggestion: Irrelevant Test Options in Order Panels, an Interrupted Time Series with Cost Analysis

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Introduction: Grouping of medical tests in an order panel or set may facilitate standardized care but could have the unintended consequence of increasing unnecessary testing. At our institution, one such panel includes studies performed on stool for the purposes of diagnosing infectious diarrhea (Figure 1). We removed stool enterovirus polymerase chain reaction (PCR) from this order panel given limited data supporting its use in the diagnosis of the etiology of diarrhea. **Objectives:** We aimed to evaluate the impact of removing the stool enterovirus PCR from this panel and whether there were associated decreased costs from this intervention. **Methods:** We conducted an interrupted time series to estimate the initial impact of implementing this order panel, followed by the later removal of the enterovirus order from the panel, using gastrointestinal (GI) bacterial PCR orders as a control. Additionally, we conducted a cost-savings analysis by multiplying the cost per test by the decrease in tests/month after removing the order from this panel averaged over a year. **Results:** After the panel's creation, there was an immediate significant increase in enterovirus stool PCR ordering from a predicted mean of 28 tests/month to 43 tests/month (difference of 15 tests/month, p < 0 .0001) (Figure 2, blue). Similarly, the bacterial stool PCR ordering increased from a predicted mean of 98 tests/month to 136 tests/month (increased by 37 in the month following panel creation, p < 0 .0001). Conversely, after the removal of