ASSESSMENT OF PNEUMONIA FILMARRAY USE ON THE IMPACT ON ANTIMICROBIAL DE-ESCALATION WITHIN AN INTEGRATED HEALTH SYSTEM

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BACKGROUND

- BioFire® FilmArray® Pneumonia Panel (PFA) is a highly sensitive and specific diagnostic tool which has been shown to reduce antimicrobial utilization. Inappropriate use of this test can result in high positivity rates, at times with uncertain clinical significance, and ultimately increase antibiotic utilization. [1,2]
- We aimed to evaluate the inpatient utilization of PFA by evaluating early ordering (before or after 24hrs of admission), establish performance and correlation with cultures, and describe common decision pathways by ordering providers based on these results.

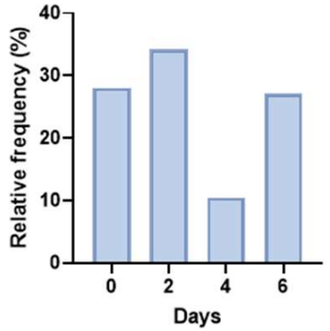
METHODS

- Retrospective study of adult patients who had PFA collected from March 2021 - September 2021 (6 months).
- This included inpatient and outpatient settings across 3 hospitals within an integrated health care system in Des Moines, Iowa.

RESULTS

- **Characteristics**
  - 127 PFAs were collected
  - BAL specimens: 14 (42%) were collected outpatient
  - Standard CAP antibiotics at collection: 39 (31%)
- **Performance**
  - Sensitivity when matched to culture
    - Sputum: 90%
    - BAL: 67%
  - Specificity when matched to culture
    - Sputum: 48%
    - BAL: 82%
- **Clinician decision pathways after PFA**
  - Appropriate change in antibiotics: 27 (21%)
  - No antibiotic change when appropriate: 42 (33%)
  - No antibiotic change with negative PFA: 30/72 (42%)

Figure 1: Days to PFA order in relationship to admission



Source	N (%)	PFA collected within 24H of admit	Accompanied by culture
Sputum	94 (74)	70 (62)	55 (58)
BAL	33 (26)	2 (6)	33 (100)

CONCLUSION

PFA were collected early in hospitalization, most within 2 days from admission. Appropriate changes in antibiotics occurred in 21% of cases, however PFA did not result in significant antibiotic adjustment when appropriate. Within our health system, current utilization of PFA does not result in appropriate antimicrobial de-escalation.

REFERENCES
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