

## Laboratory Evaluation of Biofire® FilmArray® Pneumonia Plus Panel Compared To Standard of Care Testing

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### Problem Statement

The BioFire® FilmArray® Pneumonia plus panel is a multiplex nucleic acid test designed for simultaneous detection and identification of various pathogens common in lower respiratory tract infections (LRTI).

Evaluation of the panel allows our laboratory to offer the test in-house, reducing turnaround times and potentially improving patient outcomes for patients in our hospital.

### Project Aim

To evaluate results from the BioFire® FilmArray® Pneumonia plus panel and check for concordance with culture results and Respiratory virus multiplex PCR using endo-tracheal tube aspirate (ETTA) and bronchoalveolar lavage (BAL) specimens.

### Lessons Learnt

Although the BioFire® FilmArray® Pneumonia plus panel provides a fast and reliable method of identifying pathogens, it cannot fully replace the traditional methods of culturing the samples.

However, it can act as an effective complement to current methods that can provide an early diagnosis for patients suspected of having pneumonia.

### Potential Solutions

**27 ETTA and 11 BAL**  
collected from patients with diagnosis of pneumonia

Standard methods of Gram stain and culture

Established methods like Respiratory virus multiplex PCR

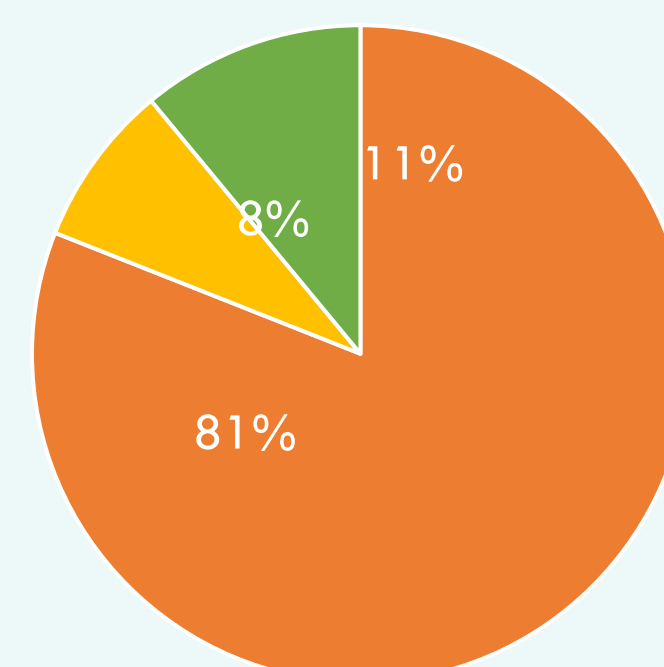
BioFire® FilmArray® Pneumonia plus panel

### Comparison of Results from Different Testing Methods

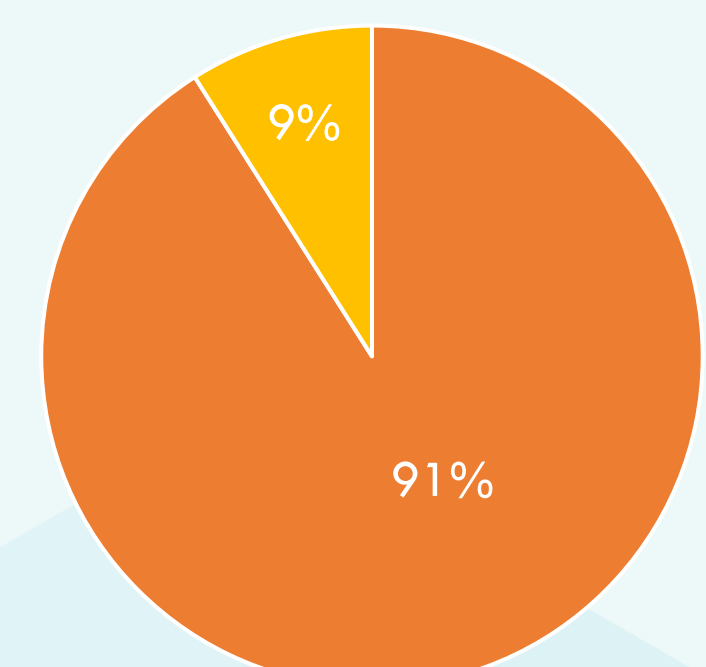
### Outcomes & Impacts

Concordance for all samples met the targeted requirements, with BAL samples having the highest concordance rate.

ETTA Concordance



BAL Concordance



■ Concordant ■ Partially Concordant ■ Discordant

Implementation of the test in our laboratory will improve turnaround times of results for clinicians and assist in early targeted clinical interventions to improve patient outcomes.