



# Clinical Impact of the BIOFIRE<sup>®</sup> Respiratory 2.1 *plus* (RP2.1*plus*) Panel

23

TARGETS

~45<sup>min</sup>

# BIOFIRE® Syndromic Testing

## The right test, the first time

BIOFIRE syndromic testing allows rapid identification of infectious agents that produce similar symptoms in patients.

## Traditional testing methods

Traditional methods of pathogen identification can be time consuming and lack sensitivity.



## Fast. Easy. Comprehensive.

Syndromic testing provides a streamlined workflow and fast, comprehensive results.



## Get Test Results Faster

The BIOFIRE RP Panel\* enables clinicians to diagnose patients faster and get them on the road to recovery more quickly.<sup>3</sup>

Turnaround time before BIOFIRE RP Panel adoption



Turnaround time after BIOFIRE RP Panel adoption



89.3%  
drop in  
turnaround  
time

## Who Should Get Tested

All patients with signs/symptoms (syndrome) suggestive of an RTI, especially in hospitalized immune-compromised patients and with not immune-compromised hospitalized patients if it might influence care (e.g., aid in cohorting decisions, reduce testing, or decrease antibiotic use).<sup>1</sup>



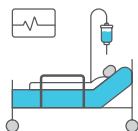
Children  
and adults



Elderly patients



High-risk patients:  
immuno-compromised  
or with co-morbidities



Critically ill  
patients

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## Superior Clinical and Economic Outcomes

It is difficult to deliver the highest quality healthcare at a low cost. Studies show that the BIOFIRE RP Panel\* can deliver excellent clinical and economic outcomes and has been shown to:

- Dramatically reduce time to diagnosis.<sup>4-6,8</sup>
- Improve patient management.<sup>4-8</sup>
- Reduce total cost of care and resource utilization.<sup>8</sup>
- Prevent secondary spread of infection.<sup>7,8</sup>
- Prevent exposure to unnecessary antibiotics.<sup>5-8</sup>
- Detect more positives and co-infections than non-panel assays.<sup>9</sup>
- Provide more timely and effective treatment.<sup>5-8</sup>
- Result in shorter hospital stays.<sup>6,8</sup>
- Reduce unnecessary or ancillary testing.<sup>6,7</sup>

# Aid Antimicrobial Stewardship



## Reduce antibiotic use

The BIOFIRE RP Panel\* resulted in decreased antibiotic use in 23% of pediatric patients tested.<sup>10</sup>



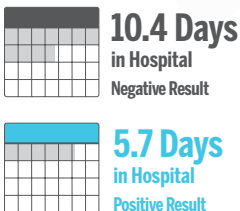
## Antibiotic duration

The BIOFIRE RP Panel decreased the duration of antibiotic use by an average of 2.4 days in infants with positive panel results.<sup>11</sup>



## Hospital length of stay

Decreased hospital length of stay of infants by an average of 4.7 days with a positive BIOFIRE RP Panel result vs a negative result.<sup>11</sup>



*“Getting an answer within an hour is something that’s very powerful to clinicians: it gives us actionable information right away.”*

**Dr. Tufik Assad, MD, MSCI**  
Pulmonary and Critical Care Physician

\*Data generated using previous versions of this product.



## BIOFIRE® RESPIRATORY 2.1 PLUS (RP2.1plus) PANEL

1 Test. 23 Targets. ~45 Minutes.

### VIRUSES

Adenovirus  
Coronavirus 229E  
Coronavirus HKU1  
Coronavirus NL63  
Coronavirus OC43  
Middle East respiratory syndrome coronavirus (MERS-CoV)  
Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)  
Human metapneumovirus  
Human rhinovirus/enterovirus  
Influenza A virus  
Influenza A virus A/H1  
Influenza A virus A/H3  
Influenza A virus A/H1-2009  
Influenza B virus  
Parainfluenza virus 1  
Parainfluenza virus 2  
Parainfluenza virus 3  
Parainfluenza virus 4  
Respiratory syncytial virus

### BACTERIA

*Bordetella parapertussis*  
*Bordetella pertussis*  
*Chlamydia pneumoniae*  
*Mycoplasma pneumoniae*

CE<sub>2797</sub>

Product availability varies by country. Consult your bioMérieux representative.

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Learn more about the BIOFIRE range of commercially-available panels for syndromic infectious disease diagnostics.



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PIONEERING DIAGNOSTICS

# Guidelines

- Infectious Disease Society of America. Guidelines on the Diagnosis of COVID-19 <https://www.idsociety.org/COVID19guidelines/dx>
- Infectious Disease Society of America. Lower and Upper Respiratory Guidelines. [http://www.idsociety.org/Organ\\_System/#Lower/Upper Respiratory](http://www.idsociety.org/Organ_System/#Lower/Upper%20Respiratory).
- CDC Guidelines for preventing Health-Care Associated Pneumonia, 2003: <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5303a1.htm>
- ESCMID Guidelines for the management of adult lower respiratory tract infections, M. Woodhead et al, Clin Microbiol Infect 2011; 17 (Suppl. 6): 1–24.B
- European Respiratory Society – ERS Guidelines for Respiratory Medicine - <https://www.ers-education.org/guidelines/all-ers-guidelines/>
- NICE guidelines on antimicrobial prescribing (APGs): <https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/antimicrobial-prescribing-guidelines>

# References

1. Uyeki, T.M. *et al.* (2019) Clin. Infect. Dis. 68:1.
2. Xu M, *et al.* Am J Clin Pathol. 2013(1);139:118-123.
3. Poelman R, *et al.* Future Microbiol., 2020 June; 15(8):623-632.
4. Pettit N, *et al.* J. Med Microbiol., March 2015 64:312-313.
5. Gelfer G, *et al.* Diag Micro Infect Dis. 2015;83:400-406.
6. Rappo U, *et al.* J. Clin. Microbiol. JCM.00549-16.
7. Subramony A, *et al.* J Pediatr. 2016; doi:10.1016/j.jpeds. 2016.02.050.
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9. Kitano, Taito *et al.* J Infect Chemother. 2020;26(1):82-85. doi:10.1016/j.jiac.2019.07.014
10. Echavarria M, *et al.* (2018) Journal of Clinical Virology. 108:90.
11. McFall, *et al.* Pediatrics. 2017 Feb.;000992281774066.
12. Overall performance based on prospective clinical study for the BIOFIRE® FILMARRAY® Respiratory 2 Panel, Data on file, BioFire Diagnostics.
13. Overall performance based on prospective SARS-COV-2 clinical study for the BIOFIRE® Respiratory 2.1 Panel in comparison to 3 EUA tests, Data on file, BioFire Diagnostics.

# Performance

**Overall Performance: 97.1% sensitivity, 99.3% specificity<sup>12</sup>**  
**SARS-CoV-2 Performance: 98.4% PPA, 98.9% NPA<sup>13</sup>**

# Panel Specifications

**Sample Type:** nasopharyngeal swab in transport media or saline

**Sample Volume:** 0.3 mL