



Clinical Impact of the BIOFIRE® SPOTFIRE® RESPIRATORY/ SORE THROAT (R/ST) PANELS

UP TO **15**
TARGETS
~15^{min}

What's the Problem?

Upper respiratory tract infections (URTIs) are the most frequent human illnesses. While usually mild, they drive frequent healthcare visits and can lead to serious complications, representing a significant global health burden.¹



Up to 17.2 billion URTI cases per year²

(~42% of all disease)



≈ 2 to 4 episodes
per year for adult³



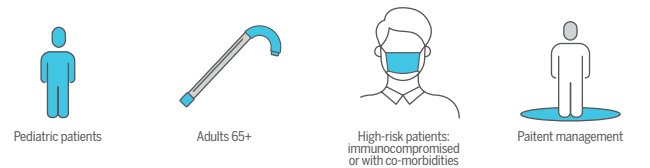
≈ 6 to 8 episodes
per year for children³

What are the Associated Challenges?

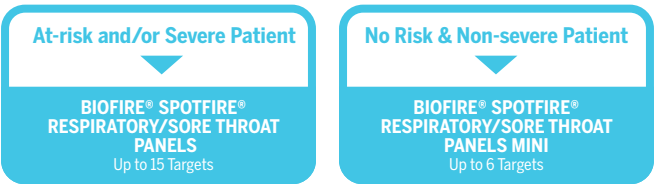
- Major global economic burden, driving billions in direct and indirect costs and resource utilization.^{2,4}
- Symptom-based diagnosis is challenging due to overlapping clinical signs among multiple pathogens.
- Major public health and societal burden affecting well-being and daily life, driving absenteeism and significant productivity losses.⁴
- Almost half of antibiotic prescriptions for acute respiratory tract infections may be unnecessary.^{1,5}
- Antiviral treatments are underprescribed in high-risk groups (age-vulnerable individuals, patients with comorbidities).⁶

The Right Test, the First Time, for the Right Patient

Multiplex PCR testing is recommended for high-risk patients, or when it might directly impact care and treatment.*



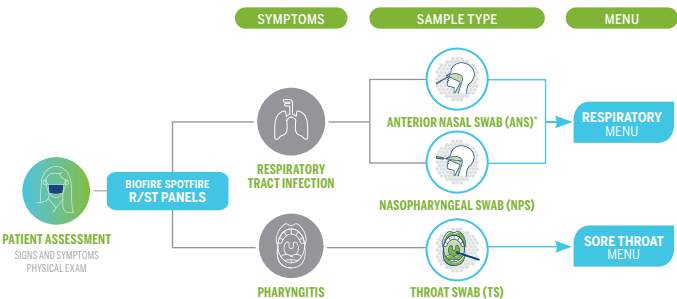
The BIOFIRE® SPOTFIRE® Respiratory solution supports clinical decision-making through tailored expanded or targeted panels, enabling personalized diagnostic strategies based on patient assessment, infection severity, and clinical context.



*Please refer to the Guidelines section

Tailored Respiratory/Sore Throat Multiplex PCR Panels

The BIOFIRE SPOTFIRE Respiratory solution is designed for symptom-driven testing, allowing clinicians to select the appropriate panel menu and sample type based on patient assessment.



*Available on BIOFIRE SPOTFIRE R/ST Panels Mini only

Comprehensive, Relevant Results Onsite

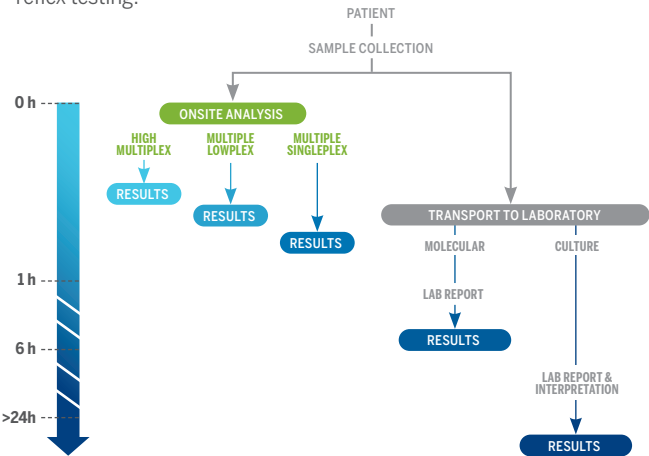
The BIOFIRE SPOTFIRE R/ST Panels can test for all common respiratory pathogens that may be important to detect at the Point of Care (POC).

Recommended list from The Clinical and Laboratory Standards Institute (CLSI)⁷

VIRUSES	BACTERIA
Influenza A Influenza A H1 Influenza A H1-2009 Influenza A H3 Influenza B Adenovirus Coronaviruses (HKU1, OC43, NL63, 229E) Human rhinovirus/enterovirus Human metapneumovirus Parainfluenza virus 1,2,3,4 Respiratory syncytial virus (subtypes A and B)	<i>Bordetella pertussis</i> <i>Chlamydophila pneumoniae</i> <i>Mycoplasma pneumoniae</i> <i>Streptococcus pyogenes</i>

Faster Answers for Better Treatments

High multiplex point-of-care testing (POCT) enables faster, better treatment decisions by reducing diagnostic cycles and the need for reflex testing.⁸



Adapted from Kim H et al. Fig1. BioChip (2021) doi: 10.1007/s13206-021-00004-5

Superior Clinical and Economic Outcomes



Earlier clinical decision-making

Rapid syndromic point-of-care PCR testing was associated with a significant reduction in outpatient appointment duration and median length of stay (LOS) in emergency department (4.3 h vs. 6.5 h).^{9,10}



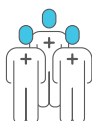
Reduce total cost of care and resource utilization

In high-risk patients, rapid syndromic PCR approach for point-of-care testing may offer greater clinical and economic advantages over low-plex and laboratory-based PCR approaches.¹¹



Identify what traditional testing is missing

The BIOFIRE SPOTFIRE R/ST Panel showed the advantage of detecting 43% more respiratory pathogens than conventional 4-plex POC assays.¹²



Improve clinician and patient confidence

Implementation of rapid multiplex PCR testing at the Point of Care enhances confidence and satisfaction in decision-making by providing timely results that may support a quicker return to daily activities.^{9,10}

Aid Antimicrobial Stewardship



Improved diagnostic-driven prescribing

The BIOFIRE® SPOTFIRE® Respiratory (R) Panel used at the Point of Care was associated with significant reduction of antibiotic use from 20.2% to 6.5%* in patients with confirmed viral respiratory infections.⁹



Increased targeted therapy

Combining an Antibiotic Stewardship Program with the BIOFIRE SPOTFIRE R Panel at the Point of Care significantly reduced inappropriate antibiotic use* and prevented avoidable adverse outcomes.¹³

*Data generated using previous versions of this product

“Our antibiotic use in our office has gone way down since we bought this device.”

Dr. Daniel Bruckner, MD
Pediatrician, Encino CA

Guidelines

- ADLM Guidance Document on Laboratory Diagnosis of Respiratory Viruses
 - Infectious Disease Society of America. Molecular Testing for Acute Respiratory Tract Infections: Clinical and Diagnostic Recommendations From the IDSA's Diagnostics Committee
 - Recommendations for the use of quadriplex tests (influenza A/B, RSV and SARS-CoV-2) and extended multiplex tests for the diagnosis of respiratory viruses in hospitals and care facilities (Société Française de Microbiologie)
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References

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Product availability varies by country. Consult your bioMérieux representative.

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