

ePlex[®] Respiratory Pathogen Panel



Comprehensive Results
to Improve Patient
Outcomes and Reduce
the Cost of Care

The clinical presentation of respiratory pathogens is very similar, complicating diagnosis and appropriate therapy selection. Traditional methods **can be slow** and **miss the cause of infection**.

Respiratory Tract Infections

Cause more doctor visits and absences from school and work than any other illness.¹

1 Billion

colds in the United States per year² and approximately

500 Million

non-influenza infections^{1,3,4}



High-Risk Groups

Are **more likely to die** from complications or be hospitalized with worsening conditions⁵

Children younger than 5

especially children less than 2 years old

Adults 65 years of age and older

Pregnant women

Critically ill patients

especially immunocompromised, e.g. cancer and transplant patients

Traditional Diagnostic Methods

Are **slow** and **do not offer** comprehensive pathogen detection.



Antigen detection, DFA, culture, and batch PCR delay treatment decisions

8

HOURS

TO

72

HOURS

Batch PCR is typically run once per day often excluding weekends

What are you missing?

It's not just flu:

ONLY 16%

of positive results are influenza⁶

¹ Upper Respiratory Infection (URI or Common Cold). Johns Hopkins Medicine. Retrieved from http://www.hopkinsmedicine.org/healthlibrary/conditions/pediatrics/upper_respiratory_infection_uri_or_common_cold_90_P02966/ (Date accessed: May 2017)

² The Common Cold Fact Sheet. National Institute of Allergy and Infectious Diseases, National Institutes of Health. December 2004.

³ Seasonal Influenza. More Information. Centers for Disease Control and Prevention. <https://www.cdc.gov/flu/about/qa/disease.htm> (Date accessed: May 2017)

⁴ Seasonal Influenza. European Centre for Disease Prevention and Control.

⁵ Flu Symptoms & Complications. Centers for Disease Control and Prevention. <https://www.cdc.gov/flu/about/disease/complications.htm> (Date accessed: May 2017)

⁶ Schreckenberger, P. and McAdam, A. (2015). Point-Counterpoint: Large Multiplex PCR Panels Should Be First-Line Tests for Detection of Respiratory and Intestinal Pathogens. J Clin Microbiol. 53(10):3110-5. doi: 10.1128/JCM.00382-15

Sample-to-answer multiplex molecular respiratory tests provide rapid, accurate, and comprehensive results to **improve patient outcomes** and **reduce the cost-of-care.**

Antibiotic Stewardship

Rapid, actionable test results support better antimicrobial stewardship

13%
REDUCTION
in antibiotic therapy duration⁷

FEWER DAYS

0.4 in antibiotic use duration in a children's hospital ED ⁸	1.0 in median antimicrobial duration among adult influenza patients ⁹	1.9 in mean antibiotic duration with rapid, sample-to-answer testing ⁷
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Bed Management

Multiplex respiratory panels can improve bed management

Compared to batch PCR:
Reduced length of stay and time in isolation

7 hours⁸

4x

Increase in patients who had results reported while they were still in the Emergency Department⁸

Patient Outcomes

Rapid tests results can improve outcomes and reduce mortality

ICU patients had a **10%** increase in survival rate compared to batch testing⁷

ICU patients experienced a **30.4 hour** reduction in mean time from sample collection to result compared to batch testing⁷

DECREASED mortality when results returned in

<7 hours

Cost-of-Care

Multiplex respiratory panels reduce the overall cost-of-care

ICU stay reduced by **3 days** in a major IDN⁷

Average cost savings of **\$230** per positive test result due to reduced hospital and antibiotic costs⁸

Overall cost-of-care reduced more than **\$8,000** per patient relative to batch testing⁷

7 Martinez, R.M., et al. Implementation of Non-Batched Respiratory Virus Assay Significantly Impacts Patient Outcomes in the ICU. Clinical Virology Symposium 2016.
8 Rogers, B., et al. (2015). Impact of a Rapid Respiratory Panel Test on Patient Outcomes. Arch Pathol Lab Med. 139(5):636-41. doi: 10.5858/arpa.2014-0257-OA.
9 Rappo, R., et al. (2016). Impact of Early Detection of Respiratory Viruses by Multiplex PCR Assay on Clinical Outcomes in Adult Patients. J Clin Microbiol. 54(8):2096-2103.

Comprehensive Coverage of the Most Common Respiratory Pathogens

Viral Targets

Adenovirus
Coronavirus 229E
Coronavirus HKU1
Coronavirus NL63
Coronavirus OC43
SARS-COV-2
MERS-CoV
Human Bocavirus
Human Metapneumovirus
Human Rhinovirus/Enterovirus
Influenza A
Influenza A H1
Influenza A H1-2009
Influenza A H3
Influenza B
Parainfluenza 1
Parainfluenza 2
Parainfluenza 3
Parainfluenza 4
Respiratory Syncytial Virus A
Respiratory Syncytial Virus B

Bacterial Targets

Bordetella pertussis
Legionella pneumophila
Mycoplasma pneumoniae



For more information on ePlex® and the RP2 Panel, please visit www.genmarkdx.com



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