50% of antibiotics prescribed for acute respiratory conditions are unnecessary

34.3 Million
Antibiotic prescriptions unnecessary

34.6 Million
Antibiotic prescriptions appropriate
Procalcitonin is a host response to bacterial insult\textsuperscript{4-6}

Viral infections inhibit PCT expression, enhancing the ability to distinguish bacterial infections from non-bacterial infections.*

- Bacterial infection stimulates PCT
- Viral infection blocks PCT

*PCT is not specifically indicated as a viral marker

Procalcitonin (PCT) provides critical biomarker information

PCT is produced by numerous organs at a cellular level after bacterial pro-inflammatory stimulation\textsuperscript{2,3}

- PCT rises in 3-6 hours
- Half-life of 20-24 hours
- Early identification & risk assessment

In the past, this ambiguity was met with almost-automatic antibiotic therapy. Today, we have better information and better ways to decide if antibiotics are warranted.
VIDAS B•R•A•H•M•S PCT has been cleared by the FDA to aid in decision-making on antibiotic therapy — specifically for inpatients or emergency department patients with suspected or confirmed lower respiratory tract infections (LRTI), defined as community-acquired pneumonia (CAP), acute bronchitis, and acute exacerbation of chronic obstructive pulmonary disease (AECOPD).

This new indication is important because antibiotic overuse is a serious problem.

For each patient
Inappropriate use of antibiotics exposes patients to the risk of antibiotic-associated infections such as *Clostridium difficile*, and other adverse effects.\(^{11,12}\)

For the healthcare system
There is an overall safety risk due to the rise of antibiotic resistance, with 2 million illnesses and roughly 23,000 deaths per year in the U.S.\(^{13}\)
A new way to think about antibiotic use — based on extensive study.

11 Randomized Control Trials
4090 Patients

To evaluate the safety and effectiveness of PCT-guided therapy, 11 randomized, control trials were evaluated in a meta-analysis in accordance with the recognized standards for conduct and reporting, as outlined by the Cochrane Collaboration.14

• The highest form of clinical evidence
• Greater statistical power
• More robust findings than an individual study

PCT-guided antibiotic therapy is safe and effective for patients.

Significant reduction in antibiotic initiation
• 19% reduction in relative antibiotic initiation in all patients
• 39% reduction in initiation of antibiotics in ED patients

Significant reduction in exposure to antibiotics
• 38% reduction in overall antibiotic exposure for inpatients
• 51% reduction in overall antibiotic exposure for patients in ED

No adverse safety signals associated with PCT guidance for LRTI
• No signal for increase in 30-day mortality, complications or length of stay

PCT plays a key role in antibiotic stewardship efforts.

Use of PCT can promote antibiotic stewardship and support CMS guidelines for antibiotic stewardship and infection prevention.

Outcomes for patients receiving PCT-guided therapy versus those receiving standard care showed16:
• Reduced antibiotic exposure
• Lower incidence of complications

Achieve the goal of giving antibiotics to the right patients, at the right time, for the right duration.
REFERENCES
16. Reference data on file at bioMérieux.

Learn more about VIDAS B•R•A•H•M•S PCT – a proven, sensitive, specific STAT biomarker that can produce results in just 20 minutes. And find out how you can put it to the test.

For more information, please visit our website: www.biomerieux-usa.com/vidas-pct

To place an order, visit www.BioMerieuxDIRECT.com

bioMérieux, Inc. • 100 Rodolphe Street • Durham, NC 27712 • U.S.A.  
Tel: (800) 682 2666 • Fax: (800) 968 9494  
www.biomerieux-usa.com

Important Information

The evaluation of VIDAS B•R•A•H•M•S PCT assay results must always be performed taking into consideration the patient’s history and the results of any other tests performed.

In certain situations (newborns, polytrauma, burns, major surgery, prolonged or severe cardiac shock, etc.), PCT elevation may occur in the absence of infection. The return to normal values is usually rapid. Viral infections, allergies, autoimmune diseases and graft rejection do not lead to a significant increase in PCT. A localized bacterial infection can lead to a moderate increase in PCT levels.

Some patient characteristics, such as severity of renal failure or insufficiency, may influence PCT values and should be considered when interpreting test results. PCT levels tend to be lower in patients infected with certain atypical pathogens, such as Chlamydia pneumoniae and Mycoplasma pneumoniae, compared to those with typical bacterial infections.

PCT levels are elevated in both severe and uncomplicated Plasmodium falciparum malaria.

The safety of PCT-guided therapy for individuals younger than 17 years of age, pregnant women, immunocompromised individuals or those on immunomodulatory agents, including anti-inflammatory agents (e.g., NSAIDs), was not analyzed separately in the supportive clinical trials.

Discrepancies between the laboratory and clinical findings should prompt additional evaluations, including repeat PCT testing.

Please see full package insert for VIDAS B•R•A•H•M•S PCT (13975) for additional important information.