May 30, 2012

MRSA PCR Testing Now Available in Addition to Surveillance Cultures

WHAT’S NEW?
Effective Wednesday, June 6, 2012, PeaceHealth Laboratories will offer a new molecular screening test to directly detect nasal colonization with methicillin-resistant Staphylococcus aureus (MRSA) using real-time PCR.

PCR IS MORE SENSITIVE THAN CULTURE
Real-time PCR testing is performed using the Roche LightCycler MRSA Advanced Test. The use of PCR for MRSA surveillance is more sensitive than conventional or chromogenic agar testing and can provide a more rapid turnaround time.

<table>
<thead>
<tr>
<th>Comparison Factor</th>
<th>MRSA PCR</th>
<th>MRSA CULTURE</th>
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<tbody>
<tr>
<td>Sensitivity</td>
<td>92.2</td>
<td>80.4</td>
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<tr>
<td>Specificity</td>
<td>98.9</td>
<td>99.9</td>
</tr>
<tr>
<td>Positive Predictive Value</td>
<td>94.0</td>
<td>99.4</td>
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<tr>
<td>Negative Predictive Value</td>
<td>98.5</td>
<td>96.4</td>
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CHROMagar culture vs. LightCycler MRSA Advanced Test [Peterson LR. JCM 2010 48:1661]

BACKGROUND
S. aureus is the most common cause of skin and soft tissue infections, with MRSA often representing more than half of these infections in the U.S. Infections caused by MRSA result in higher rates of illness, longer hospital stays and death when compared with infections caused by methicillin-susceptible S. aureus (MSSA).

Nasal colonization with S. aureus occurs in 20-40% of the normal population. Transmission of MRSA from the health care environment via hands and equipment and subsequent nasal colonization is common. Colonization with MRSA often precedes infection, where it can be transferred to the skin and other body areas. MRSA colonization is well characterized as a source for bloodstream infections.

MRSA transmission can be prevented with rapid surveillance screening from the laboratory in addition to hand hygiene, patient isolation and other transmission prevention activities.

CONVENTIONAL SCREENING
Surveillance cultures for MRSA (Unit Code 60845) and MRSA/MSSA (Unit Code 60870) are still available. However, surveillance cultures for MRSA are not intended to monitor treatment for MRSA infection.

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## ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tr>
<td>58493</td>
<td>MRSA Nasal Screen By PCR</td>
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### Methodology:
Real-Time Polymerase Chain Reaction (PCR)

### Performed:
Daily

### Released:
Same day as tested

### CPT Code:
87641

## SPECIMEN REQUIREMENTS

### Collect:
Anterior nares (nasal) swab using a routine culture transport swab. Gently insert the swab inside the nostril approximately 0.5 inch and rotate against the mucosa five times. Apply light pressure on the outside of the nose to help insure contact of the swab head with the inside of the nose. Insert the same swab into the other nostril and repeat the procedure.

### Stability:
Ambient: 4 days

### Transport:
Ambient

### Rejection Criteria:
Delayed transport; swab not in transport media; refrigerated or frozen swabs.

## QUESTIONS?

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