

NEW TEST

Effective Oct. 1, 2013

NEW Test Codes:

VREP

VRE Screen PCR

Specimens in white cap swab

Peri-anal swab

Rectal swab

Performance

2 hour TAT

1st and 2nd shift

Accuracy 95 – 100%

Limit of Detection

150 colony forming units (CFU)/swab for *vanA* gene

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Vancomycin Resistant Enterococci (VRE) PCR, test code VREP for Active Surveillance

Non-GHS clinicians/providers have the option to order the current VRE Screen Culture (VRESC) or the new VRE Screen PCR (VREP).

New test code/name: VREP, VRE Screen PCR replaces VRESC, VRE Screen Culture

Effective Oct. 1, 2013, Geisinger Medical Laboratories will replace our VRE Screen Culture (VRESC) with VRE PCR (Polymerase Chain Reaction). The VRE PCR (VREP) will become our new standard of care for Geisinger Health System in-patients.

Specimens and Stability

- Perianal swab or rectal swab (white cap swab = molecular testing swab)
- Transport/Stability: 15-30°C (<24 hours), stable 5 days refrigerated (2-8°C)
- *NOTE: The swabs should stay attached to the white cap at all times.*

Testing Criteria

- Limit testing to patients that require active surveillance for VRE.
- Do not submit multiple specimens for testing (No improvement to yield (positive predictive value) is achieved by testing multiple specimens.
- PCR is highly sensitive, only 1 specimen/patient admission is recommended.

Clinical and Diagnostic Utility

- Enterococci cause about 1/8 of hospital infections, with 30% VRE caused by with higher rates in high risk groups (immunocompromised or ICU). Attributable mortality can exceed 10%; extended length of stay, 6.2 days; incremental cost, \$12,800/case.

Cautions/Limitations to Testing

- PCR is the most sensitive method to identify patients colonized with VRE (*vanA* gene).
- The VRE Screen PCR does not detect the *vanB* gene. (*vanB* is not commonly associated with hospital outbreaks. If suspected, please notify Microbiology Laboratory)
- Potentially **interfering substances** include hydrocortisone cream and Pepto-Bismol.
- The detection of VRE is dependent on the number of organisms present in the sample; reliable results are dependent on proper specimen collection, handling, storage.
- A positive PCR test result does not necessarily indicate the presence of viable organisms. Test results might be affected by concurrent antibiotic therapy. Do not use PCR to assess therapeutic success or failure; DNA might persist following therapy.
- Mutations or polymorphisms in primer or probe binding regions may affect detection of new or unknown VRE (*vanA*) variants resulting in a false negative result.

Questions: For newsletter questions, contact Christy Attinger at (570) 271-6338 or me. *Best regards, Donna M. Walk, MHA, Ph.D., D(ABMM), GML System Director of Microbiology.*

