

**Date:** April 19, 2011

**To:** Edmonton Zone, Central Zone (Former East Central) and North Zone (Former Aspen Region)  
All Physicians, Pharmacy Services, Laboratory Directors and Managers

**From:** AHS Laboratory Services  
Dr. Don LeGatt, Clinical Biochemist - Head, Toxicology and Therapeutic Drug Monitoring, University of Alberta Hospital

**Re:** **\*\*ALERT\*\*** Unusual Vancomycin Measurements

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### Key Message:

Undetectable or falsely low vancomycin serum levels may occur when the Beckman Coulter turbidimetric immunoassay method is used.

### Patients affected:

Patients with high serum concentrations of monoclonal immunoglobulins may be affected (e.g. lymphoma, autoimmune hemolytic anemia, systemic lupus erythematosus).

### Why this happens:

High serum concentrations of monoclonal immunoglobulins can promote aggregation via nonspecific mechanisms and cause interference in the assay, producing undetectable or falsely low drug concentrations.

### Where this can happen:

Vancomycin serum levels determined in laboratories at **Edmonton Zone hospitals** including University of Alberta Hospital, Royal Alexandra Hospital, Grey Nun's Hospital, and Misericordia Hospital, are susceptible.

### When to suspect this:

This issue should be suspected when measured vancomycin levels are incompatible with ongoing vancomycin therapy, especially in the patient groups described above.

### What to do:

Contact the Edmonton Zone Laboratory Chemistry Senior Staff through hospital locating at 780-407-8822. They will arrange for alternate testing by a different method.

### Reference:

*Clinical Chemistry*, 55:3, 578-82 (2009)

### For more information contact:

Dr. Don LeGatt at 780-407-8444 or [don.legatt@albertahealthservices.ca](mailto:don.legatt@albertahealthservices.ca)

This bulletin has been reviewed and approved by:

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