

Lab Focus

July 2001 – periodic insert to 'Scope from Fairview Clinical Laboratories

Sound Bites . . .

Transfusion Guidelines

The revised transfusion guideline booklets have been mailed to Fairview-University Medical Center (F-UMC) and Fairview Southdale Hospital (FSH) physicians.

HCG Tumor Marker

The method for hCG tumor markers has been changed because of the number of false positives reported with existing instrumentation. Please be sure to specify when the result is to be used to monitor oncology patients

FYI: CO₂ or Bicarb?

Fairview-University Medical Center

A recent change in result reporting names has created some confusion. Previously, Electrolyte Panels were reported as sodium, potassium, chloride and bicarbonate. With implementation of the new computer system, this "bicarbonate" is now reported as total CO₂. Before instrumentation facilitated immediate measurement, the inability to maintain a sample anaerobically allowed potential loss of a small amount of carbon dioxide, making the measurement similar to bicarbonate in value. With new instrumentation, that is no longer the case, and total CO₂ is an accurate designation for the measurement.

The "bicarbonate" included in the electrolyte and basic metabolic panels is not the same as the calculated bicarbonate reported with a blood gas. The calculated bicarbonate reported with the blood gas represents the concentration of hydrogen carbonate, which is a portion of the carbon dioxide measured as total CO₂ in the panels, and as such is generally 1-2 mmol/L lower than total CO₂.

Do You Really Need that Platelet Count with the Hemogram?

The medical necessity reimbursement rules for routine hematology testing (i.e., WBC, RBC, hemoglobin, hematocrit, platelet count, etc.) are both complicated and illogical. Although laboratory technology has long advanced to the point where instrumentation is able to report all test parameters on each specimen, the reimbursement rules still separate the platelet count from the rest of the hemogram.

Basically, Medicare has very strict outpatient and clinic reimbursement guidelines related to platelet counts. The justification for the payment of these tests is based on appropriate ICD-9 diagnosis coding. Medicare has Local Medical Review Policies (LMRP) which spell out which ICD-9 codes will justify payment.

Many in the clinical laboratory industry consider the platelet count test to be overused and abused, and Medicare often regards it to be unnecessary. In a recent compliance audit of the Fairview laboratories, all of the audited sites experienced significant reimbursement denial when a platelet count was ordered alone or as part of a hemogram. As we examine the detail, it becomes apparent that the payer would have considered the hemogram *without* platelet count to be medically justified, but not the hemogram *with* platelet count.

As you make your decisions to order routine hematology testing, please make a judgment as to whether you need an individual hematology test (i.e., a WBC or hemoglobin), a hemogram or a platelet count (with or without a hemogram). Also, please remember to completely document all diagnosis

information, signs and symptoms so that coding staff can code as completely and as accurately as possible.

If you would like a copy of the Minnesota Medicare carrier policies for hemograms and platelet counts, please contact Carol Hill at 612-672-7390 (chill2@fairview.org) or Rick Panning at 612-672-2751 (rpannin1@fairview.org).

*Rick Panning, Administrative Director,
Fairview Laboratory Services*

CSF Electrophoresis Canceled if Oligoclonal Bands Also Ordered

Effective immediately, systemwide, the laboratory will cancel cerebral spinal fluid (CSF) protein electrophoresis orders if the patient also has oligoclonal bands ordered. ARUP, the reference laboratory where we send oligoclonal band testing, uses isoelectric focusing and a silver stain which is a more sensitive method for detecting bands than the agarose gel electrophoresis method used at Fairview University Medical Center (F-UMC).

A comment will be added to the canceled test: "Routine spinal fluid electrophoresis is not optimum for detecting oligoclonal bands. Test for oligoclonal bands has been ordered and CSF protein electrophoresis has been canceled." We also include the name and phone number of a pathologist who can be consulted if questions arise about this policy.

This policy has been in effect on the University campus since 1991.

John Eckfeldt, MD, PhD

Outstanding Functional and Technical LIS Issues Being Addressed

More than 500 Laboratory Information System (LIS) and laboratory staff participated in the new LIS implementation on April 22. Although staff have become more comfortable with the change each day, we are dealing with basic stability and functionality issues. These issues have created a number of implications for daily laboratory operations. The vendor is working diligently and we have provided valuable data to help identify and resolve. We hope to resolve these issues quickly so that the LIS team can accomplish needed enhancements and address the next phases of the project.

*Rick Panning, Administrative Director,
Fairview Laboratory Services*

PTS Transport Not Ideal for Blood Gases

Generally, laboratories at all sites enforce a policy not to transport specimens that are not recollectable. There is some variation between sites regarding which samples are accepted when transported via pneumatic tube.

This is generally based on need and in-house correlation studies. Results can also vary by PTS manufacturer.

In response to questions about transporting blood gases via pneumatic tube, we completed a small study on both F-UMC campuses. The only blood gas parameter affected was pO₂. The degree of impact was in the range of 10-20 percent of the value measured, and is most evident in the range of pO₂ 70-150 mm Hg.

These findings reflect those reported in an article written by Duke University faculty citing: "Although there may be minor clinical importance in an error of 50 mm Hg in a sample with a pO₂ of 300 mm Hg, an error of 10-15 mm Hg in a sample with a pO₂ of 70 mm Hg could change a clinical perception from mild hypoxemia to normal oxygenation status. Moreover, these errors are spurious and would likely confuse the interpretation of response to therapy. Because samples sent via PTS are predominantly from acute care areas at most hospitals, many samples from hypoxemic patients are sent via PTS. Although most laboratorians are aware that blood gas samples with bubbles should be rejected, this is not always

easy to do in emergency situations if the bubbles are small."

Based on our study results and the literature, we recommend not using the PTS to transport blood gases. However, realizing the PTS has been used for a long time and is the practice in many institutions, the laboratory will continue to accept samples transported via the PTS.

As recommended in the literature, use the following protocol to ensure removal of all bubbles prior to transport in the PTS:

- Tap syringe to bring bubbles to the outlet
- Express a drop or two of blood into gauze or tissue
- Cap syringe, then invert to check for bubbles
- Repeat above if bubbles are noted.

*JR Asles, D Lubarsky, B Loun, F Sedor, JG Toffaletti,
Pneumatic Transport Exacerbates Interference of Room
Air Contamination in Blood Gas Samples. Arch Pathol
Lab Med, 120: July 1996:642-647.*

