CCLS Connection

"Your partner in health care ... together we make a difference"

December 2013
Volume 9, Issue 6

Inside this issue:

Faith makes all things possible,

Hope makes all things work,

Love makes all things beautiful,

May you have all three of these for this Christmas.

Merry Christmas!

Mission Statement

As part of **CentraCARE Health,** we are a team of dedicated health care professionals whose mission is to provide quality service, expert consultation and comprehensive medical laboratory information to Central Minnesota.

CENTRACARE Laboratory Services

'Why Transfuse 2 When 1 Will Do?' and Other Blood Utilization Initiatives

Submitted by: Rachelle Hoeft, Transfusion Services Technical Specialist

Effective Jan.7, 2014, the critical hemoglobin value will change from <8gm/dl to <7gm/dl throughout all CentraCare Health sites. With the "Why Transfuse 2 When 1 Will Do?" campaign, we are also asking providers to order red cell transfusions one unit at a time and reevaluate a patient's needs before ordering additional red cell transfusions.

Every two seconds someone in the U.S. needs blood (American Red Cross). That is 15,789,000 transfusions per year. With only 16,000,000 donations per year (ARC) we are cutting the blood supply close. Blood utilization initiatives are a very important aspect of providing extraordinary patient care.

Patient-centered blood management contains three objectives:

- Reduce risks;
- Improve patient outcomes; and
- Lower costs.

These in turn promote the quality, safety and efficiency of blood-component therapy. The principles of blood management include optimizing patient baseline condition, avoiding allogeneic transfusions and harnessing the physiological anemia tolerance. By better understanding this we can better serve our patients. The blood supply in the United States is very safe, but there are increased risks and complications when transfusions are ordered. The most common adverse effects of red cell transfusion include TACO (Transfusion-Associated Circulatory Overload) and febrile reactions, affecting approximately 1 in 100 patients; TRALI (Transfusion-Related Acute Lung Injury), which occurs in a frequency comparable to motor-vehicle and fall fatalities; and fatal hemolysis, hepatitis, and HIV infections which occur in frequency comparable to airplane and lightning fatalities. Other possible complications currently being researched include TRIM (Transfusion-Related Immunomodulation), an increase in cancer relapse and multiple organ failure. A deeper analysis of adverse effects of red cell transfusions (Marik and Corwin, 2008) indicated a statistical increase of adverse effects with multiple red cell transfusions.

Many studies completed as early as the late 1990s discuss transfusion "triggers" and associated patient outcomes. Most physicians use simple hemoglobin values to guide transfusion decisions. However, patients tolerate low hemoglobin levels with a lot of variation indicating that the entire patient clinical picture should be examined when deciding on transfusion. If they are presenting with a low hemoglobin but are asymptomatic, is a red cell transfusion necessary?

The most well known study comparing restrictive vs. liberal red cell thresholds for transfusion may be the TRICC study. This study looked at critically ill patients in an ICU setting. The restrictive approach for this study used a hemoglobin level trigger of <7gm/dl. These patients had 54 percent fewer red cells transfused and 33 percent of patients in this group were not transfused. The liberal group trigger was <10gm/dl. All patients in this group were transfused. This study concluded that there was no statistical difference in the outcome of patients in terms of survival between a restrictive or liberal approach to red cell thresholds.

In 2012 the AABB (American Association of Blood Banks) posted recommendations regarding transfusion practices. They strongly recommend adhering to a restrictive transfusion strategy (7 to 8gm/dl) in hospitalized, stable patients. A weak recommendation, due to moderate-quality evidence, was given to use a restrictive strategy for hospitalized patients with a preexisting cardiovascular disease.

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Optimizing the patients' baseline condition involves many aspects, the most important of which is addressing preoperative anemia. The most common causes of anemia in preoperative settings that are treatable before surgery include iron deficiency, vitamin B12 deficiency, chronic kidney disease, and other chronic inflammatory diseases. Assessing the patient and correcting anemia before elective procedures can significantly reduce transfusions during or after surgery. Utilizing perioperative cell salvage programs is another tool for avoiding allogeneic transfusions. By avoiding allogeneic transfusions, the risk of adverse reactions and possible extended hospital stays is greatly decreased.

When avoiding allogeneic transfusions is not feasible, remember the phrase "Why Transfuse 2 When 1 Will Do?" This may keep your patients safe from adverse events. By reassessing the patients' overall condition after an allogeneic transfusion there will be a decreased possibility of over-transfusion. Some patients have been shown to respond very well to 1 unit of blood with more than the typical 1gm/dl increase in hemoglobin, whereas others may not respond as well.

References:
- Carson, et al. Ann Int Med 2012;157:49
- Marik and Corwin. Crit Care 2008;36:2667

New Test Method Provides Greater Confidence

Submitted by: Tammy Schindeldecker, Clinical Laboratory Scientist and Kristi Enerson, Technical Coordinator

Small for its size, the Quidel Sofia bench top analyzer provides rapid, immunofluorescence-based, diagnostic testing for influenza and RSV. This rapid, highly accurate and reliable analyzing system employs enhanced, easy to use, safety features including:

- A fluorescent tag is illuminated by an Ultraviolet (UV) light source to generate specific and consistent results which eliminates variability between operators when interpreting visual test results;
- Patient specimen identification is scanned into the analyzer to eliminate potential manual entry errors; and
- Each trained operator is given their own tech code that needs to be entered each time a test is performed to track who is performing the test. Each result is stored in the analyzer and also on an SD card to easily retrieve if necessary.

Influenza and RSV testing performed on the Quidel Sofia has greatly improved sensitivity and specificity when compared to many other methods.

- The Influenza A+B FIA employs immunofluorescence to detect influenza A and influenza B viral nucleoprotein antigens in nasal and nasopharyngeal swab specimens taken directly from symptomatic patients.

- The RSV FIA employs the same immunofluorescence for detection of respiratory syncytial virus (RSV) nucleoprotein antigen in nasopharyngeal swab and nasopharyngeal aspirate/ wash specimens taken directly from symptomatic patients.

Please reference the CentraCare Laboratory Services online test catalog for more details.

Reference: Quidel Sofia Package Inserts

Sofia Influenza A+B FIA Nasal Swab Results Versus Culture (All Age Groups)

TYPE A

	Culture Pos	Culture Neg
Sofia Pos	124	27
Sofia Neg	14	500

Sens = 124/138 = 90% (95% C.I. 84–94%)
Spec = 500/527 = 95% (95% C.I. 93–96%)

TYPE B

	Culture Pos	Culture Neg
Sofia Pos	100	23
Sofia Neg	12	530

Sens = 100/112 = 89% (95% C.I. 82–94%)
Spec = 530/553 = 96% (95% C.I. 94–97%)

Sofia Influenza A+B FIA Nasopharyngeal Swab Results Versus Culture (All Age Groups)

TYPE A

	Culture Pos	Culture Neg
Sofia Pos	100	34
Sofia Neg	3	596

Sens = 100/103 = 97% (95% C.I. 91–99%)
Spec = 596/630 = 95% (95% C.I. 93–96%)

TYPE B

	Culture Pos	Culture Neg
Sofia Pos	101	19
Sofia Neg	11	602

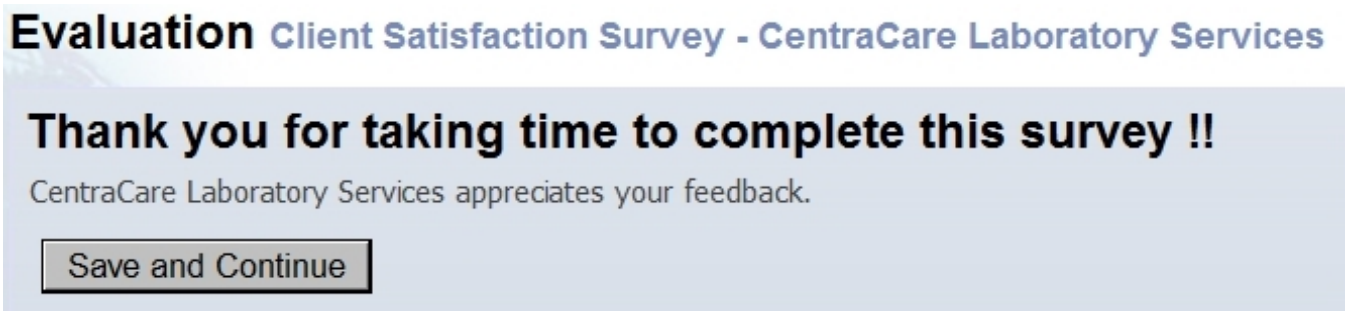
Sens = 101/112 = 90% (95% C.I. 83-95%)
Spec = 602/621 = 97% (95% C.I. 95-98%)

Your Emergency Room Alternative CentraCare Urgency Center Coming January 20, 2014!

CentraCare Health and Central Minnesota Emergency Physicians have teamed up to provide a new way of delivering care in St. Cloud — CentraCare Urgency Center. The first of its kind in Central Minnesota, the Urgency Center delivers the high-quality urgent medical care you expect without the ER wait or cost. We have a team of board-certified emergency physicians to meet your urgent care needs, 365 days a year. CentraCare patients and employees will benefit from access to all of their electronic medical records to provide a seamless continuum of care.

The Urgency Center can treat an extensive range of injuries and illnesses. Unlike an urgent care clinic, the Urgency Center has a high-complexity laboratory, x-ray, CT scanner and ultrasound onsite to allow us to treat acute injuries that surpass the abilities of a standard urgent care clinic. Having these capabilities onsite allows us to treat acute injuries and illnesses all while creating a comforting and more desirable experience for our patients.

The laboratory at CentraCare Health Plaza is proud to be a partner in this endeavor as the Health Plaza provides the location for these services. Hours of operation are Monday – Friday: 5 – 10 p.m., Saturday, Sunday and holidays: noon – 8 p.m.



Customer Satisfaction Survey

CentraCare Laboratory Services released its first electronic Outreach Program customer survey in November. The survey covered such topics as quality, safety, service and value. A number of valuable insights were received through both the responses and comments you provided. While not all submissions were actionable, we are excited about building plans around those suggestions over which we have control. Thank you to those of you that participated in the survey! We look forward to releasing it again as a component of our strategic initiatives to continually improve our clinical and service quality.

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If you know someone who would like to be added to our distribution list, or if you would like to be removed from the list, please let us know.
E-mail us at:
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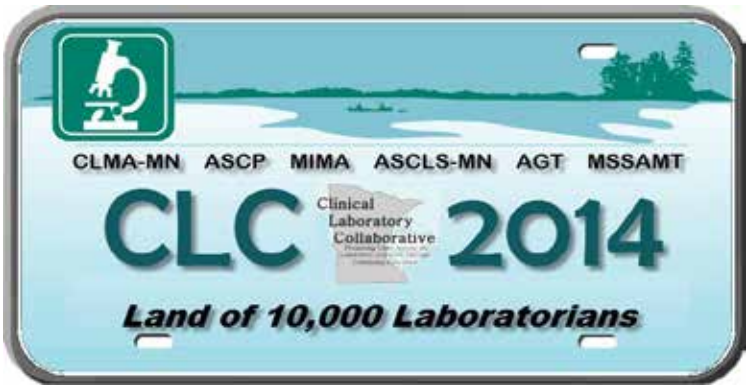
Save the Date:

Clinical Laboratory Collaborative 2014

April 30 – May 2, 2014

Marriott Northwest
(formerly the Northland Inn)
7025 Northland Drive North
Brooklyn Park, MN 55428



For additional CLC meeting and registration information visit www.asclsmn.org

The holiday season provides us all with that perfect opportunity to express gratitude for all that we have. In that spirit, CCLS would like to extend our appreciation for your business partnerships. Our expanding collaborations have allowed us to assure quality care throughout the expanding region within central Minnesota. It has been a pleasure working with you to serve our communities.

From the staff of CentraCare Laboratory Services we wish you health, peace and happiness this joyous holiday season and the New Year ahead.

Happy Holidays!