Carter BloodCare
SPECIALTY SERVICES

Blood Matters

November/December 2021

News for Blood Bank Medical Directors, Physicians and the Lab

Blood Matters is a quarterly news *outlet with important medical information for you, our customers and colleagues, from Carter BloodCare. We hope you will share it with others interested in the work we do together.*

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HOT TOPICS

How can our community deal with the chronic blood shortage?

Frances Compton, MD

Carter BloodCare is working tirelessly to overcome the chronic, national blood shortage that has resulted from the pandemic. Despite this, blood donations continue to fall short of blood transfusion needs. This has clearly become a national problem. Blood is a rare, valuable resource that must be preserved, especially in a climate of increasing need.

What can hospitals do in response to the chronic blood shortage? There are a few key things that may help support the community blood supply. We know that your hospital may be doing some (or even all) of these things, but they are good points to discuss to help preserve our blood supply.

Decreasing wastage

Decreasing blood wastage is an important part of preserving the community blood supply. This not only helps your hospital but can benefit the whole community. What are some ways to decrease wastage? First, track it! It is important to know where and why blood is being wasted in your hospital. Blood wastage can usually be avoided through education, either of certain individuals or departments. Regular lessons on proper packing of blood coolers and review of blood administration SOPs can be very helpful. Nobody wants to waste this valuable resource; having a discussion with key hospital partners could go a long way to decreasing unnecessary wastage.

Transfusing only when necessary

Unnecessary blood transfusion is harmful to the blood supply and potentially harmful to the patient receiving the unnecessary transfusion. Blood transfusion is not without risks, and all transfusions should be appropriately assessed for medical need. Does your hospital review blood transfusion appropriateness, either prospectively or retrospectively? It is important to be vigilant about discussing transfusion thresholds with your hospital transfusion utilization review committee. This benefits our community blood supply and protects patients from unnecessary transfusions.

Using the right blood types in the right situations

Make sure you have considered use of Rh positive blood for appropriate patients when Rh negative blood is in short supply and have procedures in place to allow. Similarly, make sure you are not using group O RBCs, group AB plasma, or Rh negative units inappropriately.

HOT TOPICS Continued

Assessing your blood inventory stock needs

Given the chronic shortage, can you decrease the goal inventory level for your hospital blood bank? Rather than stocking 5 days' worth of blood on your shelves, are you comfortable with less? This task is obviously dependent on each hospitals' patient population needs. But if each hospital can decrease their regular stock inventory by several units, it can help the community by supplying blood for more immediate patient needs.

Donate blood, or be a blood donation champion

If you can, come to a Carter BloodCare donor center and donate blood. If you cannot, then do your part to spread the word about the blood shortage. Be an advocate for blood donation. We share in your concern for the stability of our future blood supply and we are dedicating countless hours to overcoming this challenge for our community.

As our hospital partner, join us in our mission to *save lives by making transfusion possible.*

MEDICAL MINDS

What topics would you like to see in a future issue of Blood Matters?

Click **here** to submit your choice.

PHYSICIAN RESOURCES

Download updates

- Blood Bulletin Vol. 21, No. 2: The Return of Whole Blood — A Blast from the Past

HOT TOPICS Continued

The Importance of Increasing the Diversity of Blood Donors
William Crews, MD

In 2019, nearly 11.6 million units of red blood cells were collected in the United States. A little over 2 million, or 19.5%, of those units were collected from donors who self-identified as an ethnic or racial minority (including African American, Pacific Islander, American Indian and Hispanic). Locally, African American and Hispanic donors represented 9.6% and 18%, respectively, of the whole blood units collected at Carter BloodCare in 2019.

According to 2020 U.S. Census Bureau data, the diversity index for Dallas County increased to 70.7% from 69.3% in 2010, while the diversity index for Tarrant County increased to 69.6% from 63.7% during the same time period. To meet the needs of an increasing diverse population in our service area, it is important for the donor population to reflect the patient population.

This is very important for patients with sickle cell disease, of which the majority are African American. Sickle cell patients who require blood transfusions typically require periodic transfusions every six to eight weeks for their entire life. Due to this fact, additional efforts are implemented to maximize the viability of the red blood cells after they are transfused into the patient. These additional efforts usually include replacing approximately 70% of the sickle cells at one time through a special procedure called red blood cell exchange transfusion. This procedure utilizes blood that was donated within 7 to 10 days, negative for the sickle trait, R0 phenotype red blood cells, and extended phenotype matching when indicated.

In addition to the ABO and Rh type of the donor, many sickle cell transfusion protocols match the patient for C, c, E, e, and K antigens to mitigate alloimmunization and transfusion reactions. These protocols ensure sickle cell patients will be transfused blood from the best matched donor, allowing patients to easily receive continued transfusions for decades. While these three additional blood groups can be found in a donor from any racial group, population studies have shown 44% of African American donors will be R0 and Kell negative compared to 4% of Caucasian donors and 3% of Asian donors.

To better meet the needs of sickle cell patients in our service area, in 2014 Carter BloodCare began phenotyping red blood cells for C, E, and K from select donors. Through September 2021, a total of 64,521 donors were tested. 8,471 (13%) donors matched the C, E, and Kell requirements, with African American donors making up 6,776 (80%) of the 8,471 donors.

Other red blood cell groups show similar statistical differences among ethnic/racial groups. Another good example is the high-prevalence antigen group Jk null or Jk3 phenotype Jk(a-b-), which has a 1.4 % of being matched by Pacific Islander donors, while all other groups have a <1% of being a match.

Being aware of RBC phenotypic differences between racial groups is important and provides Carter BloodCare the ability to improve our inventory of specialty and rare units by increasing our collaboration with communities of color and building trust to encourage more donors of racial groups to donate. Ultimately, if we are successful in this effort, it will decrease the turnaround time for distributing antigen negative units, providing hospitals and clinics the ability to treat patients sooner rather than later.

My Experience as a Facility Assessor

Laurie J. Sutor, MD, MBA

Accrediting organizations such as AABB (now the Association for the Advancement of Blood and Biotherapies) or the College of American Pathologists (CAP) often use volunteer peer assessors (preferred term over “inspectors” these days) to visit participating facilities and help determine the level of compliance with standards or other requirements. Such volunteer peer assessors do undergo periodic training to assure a level of thoroughness, yet fairness, occurs. Assessors may be physicians, medical laboratory scientists, or even donor professionals and others (for AABB).

I did my first assessments as a pathology resident in the CAP program. This experience was, of course, very instructive for a novice pathologist, both to learn the assessment process and to see other institutions. But, for the past 17 years, I have been doing largely AABB assessments, although some were CAP coordinated using the Transfusion Medicine checklist. These assessments have taken me to other blood centers, large and small; hospital transfusion services and cell therapy labs; and even large free-standing reference labs. I am deemed qualified by AABB to assess immunohematology reference labs (IRLs), donor centers, transfusion services, and cellular therapy (CT) labs.

HOT TOPICS Continued

Usually I work as part of a team, depending on the size of the facility, with a lead assessor from AABB headquarters. I like being just one of the group, with someone else in charge (I actually just did my very first solo assessment this month). If we assess a large blood center, we may take up to a dozen people. AABB requires onsite assessment of at least 10% of the fixed collection sites, plus the center may be getting accreditation for some or all their specialty labs (e.g. molecular typing, CT, IRL etc). A lead from AABB must go on the assessment if it is a CLIA assessment. Our assessments generally last 2 days, although one of my most memorable ones lasted a whole week and consisted of the entire team flying from one city to another 460 miles away partway through. Nearly all of my assessments have been far enough away from home to entail a plane trip. I think I have only driven to the assessment a couple of times in the 25 or more I have done. We are asked by AABB to do two assessments a year, and I have tried to make that number when possible. At the blood center here where I work, at least 5 of my colleagues are also AABB assessors, and many of them have gotten to go on international assessments (pre-COVID). I was always jealous – I wanted that opportunity but it has not come (yet).

Another of my most memorable assessments came as a group assessment of a large blood center in the southeastern U.S. We happened to arrive the evening that a very destructive tornado tore through a large portion of their collection territory. Some of the assessors were staying in areas where their hotel rooms were usurped for refugees from the storm. The next morning, they got to see the local blood center locations in true disaster mode because they were responding to the influx of donors for the tornado and operating without electricity in some cases. All the locations being assessed were necessarily drawn into the tornado response despite our presence. It made for an interesting two days for all.

COVID-19 changed the AABB assessment process, as you might expect. In-person assessments were suspended for a number of months, virtual assessments were instituted, and many assessments were necessarily delayed. Even now, with in-person assessments resuming, the assessments are scheduled and not unannounced, as they were previously, to allow for approval for the visit from the facility and adequate planning. Our assessor training, which we do yearly, went to a virtual format, as did everything else! I've done two in-person assessments in 2021 that were scheduled with the facility as to the date, and I did none at all in 2020 after March and the pandemic hit. I have not tried a virtual assessment – in-person just seems so much better if it can be done.

It obviously takes a lot of time and preparation to do an assessment (CAP or AABB), so why do it? I get to travel to very interesting places and see facilities I've often heard of but never visited before. I meet people in my field who are great contacts for networking for the future. I see new ways of doing things of which I never imagined. I find the whole process extremely rewarding and definitely worth the effort and time, and encourage you all to look into becoming an assessor for your own accreditation body.

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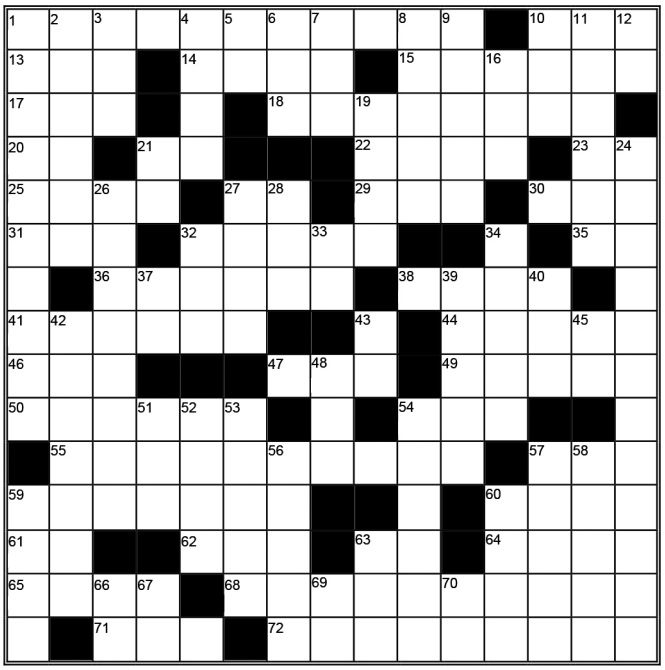
CROSSWORD PUZZLE



- Click **here** to download the answer key.

Across

1. Pioneering African American blood banker born in 1904 (2 wds)
10. What tides do when they recede
13. Type of grain
14. Shelf life of FFP is one ____
15. Type of patient who uses a lot of the platelet inventory
17. Rating seen on new car window sticker (abbr)
18. What RBC molecular testing predicts
20. Test for extrinsic clotting pathway (abbr)
21. Joe Biden's state (abbr)
22. Sir Guinness of Star Wars fame
23. Afterthought to a letter (abbr)
25. Federal agency overseeing workplace discrimination (abbr)
27. It often ends a boxing match (abbr)
29. Type of embolism
30. ___-cyte harvest
31. Common measure for hematopoietic progenitor cell products (abbr)
32. Brand name of arm wrap material
35. __Paul's Drag Race
36. Anti-platelet drug
38. An Acrodose® unit is one of platelets
41. Vitamin B3
44. Blood collection bags have a diversion ____ in the tubing
46. Blood product collected during COVID pandemic (abbr)
47. Hospitals should have an ____ for severe bleeding (abbr)
49. Type of lab test often used for infectious disease screening (abbr)
50. Color of anti-B reagent
54. Lab abbreviation for "not enough"
55. Blood borne infection that can cause aplastic anemia
57. ___ - warming samples to remove cold autoantibody activity
59. Part of the answer to 47 across
60. What some donors experience when they see a needle
61. Citrate is one (abbr)
62. Animal hideaway
63. ___^{a}: low incidence antigen defined in 1972 in Scandinavian donors (ISBT GE7)
64. Low cost grocery chain
65. Where one commonly finds *Staph epidermidis*
68. Description of a healthy RBC
71. An entry in a lab instruction manual (abbr)
72. Country where Gerbich antigen negative individuals might be found

Down

1. Required periodic personnel testing
2. Mechanism of immune hemolysis characterized by penicillin
3. IV immunosuppressive medication made from horses or rabbits (abbr)
4. Disease caused by *Borrelia burgdorferi*
5. Area of study for aspiring designers for power grids (abbr)
6. ___-M: European RBC extended storage fluid (abbr)
7. Dr. ____: rapper born Andre Young and member of N.W.A.
8. Gut bacterium and pathogen of blood (abbr)
9. ____ bath for thawing plasma
10. Apheresis procedure for treating GVHD (abbr)
11. Old fashioned way to reach physicians
12. Chemical element 35 (abbr)
16. Main location of Memorial Sloan Kettering Cancer Center (abbr)
19. Indian flatbread
21. Headquarters location of America's Blood Centers (abbr)
24. Continent where Chagas' disease is most prevalent
26. Pooled, solvent-detergent treated commercial plasma product
27. Local spelling of German cathedral city on the Rhine
28. Donor center 206 miles north of Dallas (abbr)
32. Measure of the success (or not) of a platelet transfusion (abbr)
33. A pesky interruption to your TV show
34. What a unit of whole blood does during transport after collection when packed on ice
37. Lead character in "The Legend of Sleepy Hollow" (inits)
39. What a wound does when it pulls apart and starts bleeding
40. ___ freeze technique for elution of A and B antibodies
42. Treatment for a hematoma in first 24 hours (2 wds)
43. A vital sign measured in blood donors (abbr)
45. Radioisotope in some blood irradiators (abbr)
48. Myeloablative treatment before hematopoietic progenitor cell transplant (abbr)
51. WBC removal chamber in Trima platelet collection kits (abbr)
52. Roman poet known for the Metamorphoses.
53. Interlaced
54. Trendy food grain
56. Snake bite poison
57. Fur skins
58. Arm bones
59. Many facilities had mandates to wear one of these during the COVID pandemic
60. "The Eyes of Tammy ___": 2000 documentary about the Bakkers.
63. Aggressive type of blood cancer (abbr)
66. This department helps you with your password problems (abbr)
67. Poorly water soluble gas produced in endothelium (and elsewhere) that causes vasodilation (abbr)
69. Abbreviation seen in the subject line of memos
70. Deadly poison that smells like almonds (abbr)