The American Red Cross offers regular educational opportunities as a convenient way for healthcare providers to receive relevant blood banking and transfusion medicine information. The bi-monthly sessions, presented via Webex webinars, are recorded and posted on our SUCCESS® website. To access this content, click on the Webinar Series link on the SUCCESS home page.

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### CURRENT COURSE OFFERINGS

#### ADMINISTRATION OF BLOOD COMPONENTS

**Blood Administration in the Hospital Setting: Adults** *(presented 10/18/2018)*
- Identify the constituents of blood and the indication for use, including specialized component preparations.
- Review nursing and laboratory responsibilities to provide safe administration for blood components, including equipment used, patient preparation, and proper documentation.
- Discuss signs and symptoms of a transfusion reaction and describe initial patient management procedures to follow when a reaction is suspected.

**Blood Administration in the Hospital Setting: Informed Consent** *(presented 7/11/2019)*
- Recognize the regulatory and accreditation agencies that provide oversight for informed consent.
- Identify the elements of an informed consent required by regulatory and accreditation agencies.
- Determine if it is necessary to develop audits for the informed consent process.

**Visual Inspection of Blood Products** *(presented 4/23/2019)*
- Identify steps in performing visual inspection of all blood products.
- Recognize causes of bacterial contamination in blood products, including a review of the AABB bulletin concerning investigation of possible bacterial contamination of platelets.
- Identify common characteristic of a septic transfusion reaction.

#### ADVERSE REACTIONS TO TRANSFUSION

**Adverse Reactions to Transfusion: Laboratory Investigation (Part 1)** *(presented 4/24/2019)*
- Utilize the CDC biovigilance/hemovigilance module’s standard terminology and definitions to manage adverse reaction to transfusion.
- Identify ways to manage a patient suspected of having an adverse reaction to transfusion and immediate steps the laboratory should perform when an adverse reaction to transfusion is suspected.
- List reporting requirements in the event of an adverse transfusion reaction.

**Adverse Reactions to Transfusion: Laboratory Investigation (Part 2)** *(presented 4/25/2019)*
- Utilize the CDC biovigilance/hemovigilance module’s standard terminology and definitions to manage adverse reactions to transfusion.
- Identify ways the laboratory can perform an extended investigation and the pathologist’s involvement in this investigation.
- List reporting requirements in the event of an adverse transfusion reaction.

**Adverse Reactions to Transfusion: Recognition and Management** *(presented 5/16/2019)*
- Explain steps to prevent or limit the severity of adverse reactions to transfusion.
- Recognize the importance of patient safety goals for identification of patients, patient samples and blood products.
- Identify signs and symptoms associated with common and rare adverse events and summarize steps to take in the event of a suspected adverse reaction.

**Common Transfusion Reactions** *(presented 9/5/2019)*
- State the most important intervention when a transfusion reaction is suspected.
- Name the one transfusion reaction where it is acceptable to restart the transfusion if symptoms have resolved after treatment.
- List at least two patient risk factors for transfusion-related circulatory overload.
ADVERSE REACTIONS TO TRANSFUSION (CONT’D)

TACO and TRALI Revisited (presented 11/15/2018)
- Distinguish the features of TACO and TRALI.
- Describe the recent regulatory requirements, pertaining to TRALI, surrounding the collection of blood products.

TRALI vs. TACO vs. TAD (presented 06/04/2020)
- Restate the clinical presentations, research definitions, diagnostic testing and treatments that distinguish TACO, TRALI and TAD.
- Discuss the different mechanisms of action for TRALI & TACO and how research into the pathophysiology and recipient risk factors led to the preventative measures that are currently in place.
- Describe areas of future research into these adverse pulmonary transfusion reactions.

ALL CASE STUDIES

A Case Study: Utilizing Your Resources to Solve a Puzzle (presented 3/7/2019)
- Identify the importance of not ‘jumping to conclusions’ in the blood bank.
- Define utilization of enzymes to narrow down your search.
- Review the importance of looking at the entire picture.

ABO Discrepancies (presented 9/19/2019)
- Understand the basic theory of ABO and Rh serology and recognize discrepancies.
- Describe various discrepancy scenarios and resolutions during routine ABO/Rh testing.

Antibodies to High Incidence Antigens – Interesting Cases (presented 03/05/2020)
- Explain the role of the Monocyte Monolayer Assay in the evaluation of a patient with an alloantibody against a high frequency antigen.
- Evaluate transfusion strategies for a patient with an alloantibody against a high frequency antigen.
- Describe potential options for managing hemolytic disease of the fetus and newborn due to a high frequency alloantibody.

Basic Blood Bank Serology Case Studies (presented 7/5/2018)
- Apply blood bank knowledge by utilizing case studies to illustrate problem-solving approaches.
- Apply problem-solving strategies learned during case study review.

Case Studies from the IRL (presented 05/21/2020)
- Show an in-depth look into patient workups at a reference laboratory.
- Analyze various techniques used for antibody identification.
- Solve complex immunohematologic problems.

Case Studies Working with Quality Control and Cell Panels (presented 12/19/2019)
- Recognize, understand and identify AABB and CAP quality control requirements for blood bank reagents.
- Utilize case studies to troubleshoot QC failure and actions to take to resolve the issue.

Extraordinary Case Studies from the Immunohematology Reference Laboratory (presented 11/7/2019)
- Apply both blood bank knowledge and testing results to resolve patient workups.
- Demonstrate, through case studies, various techniques used to identify red cell antibodies in patient samples.
- Recognize unique situations that can arise in the Immunohematology Reference Laboratory and recognize unique methods used to reach a conclusion.

HTLAs: Review and Case Studies (presented 9/5/2019)
- Define the acronym and list the antibodies associated with HTLA-like antibodies.
- Discuss useful techniques for resolving HTLA-like antibodies.

Prenatal Case Studies (presented 6/20/2019)
- Discuss the importance of initial prenatal serological testing and follow-up testing, if indicated.
- Differentiate clinically significant and clinically insignificant antibodies in prenatal patients.
- Describe detection and monitoring techniques for clinically significant antibodies in prenatal patients.

Multiple Antibodies: A case study from the South Carolina IRL (presented 9/6/2018)
- Identify different testing techniques to resolve complex antibody identifications.
- Recognize the significance of molecular testing in resolving complex cases in the IRL.
ALL CASE STUDIES (CONT’D)

Troubleshooting with the IRL (presented 6/6/2019)
- Identify the source and potential resolution of an ABO discrepancy.
- Name three methodologies and their advantages and disadvantages for antibody identification.
- Name three criteria used to identify a warm autoantibody.

What the heck is it? Case studies demonstrating passive antibodies and therapeutic agents. (presented 10/4/2018)
- Explain the common drugs used in the treatment of coagulation issues.
- Define the term ‘passive antibodies’.
- List examples of passive antibodies and describe how they can be identified.

What's Your Type (ABO Discrepancy Case Studies) (presented 11/1/2018)
- Recognize ABO subgroups and the possible causes of an ABO discrepancy
- Understand transfusion recommendations for an ABO typing discrepancy

BLOOD COMPONENTS AND TRANSFUSION THERAPY

Blood Components and Transfusion Therapy (presented 4/22/2019)
- Discuss the testing procedures involved in donor processing, including anticoagulant solution and infectious disease testing performed.
- Identify blood components, their main function, and indications for transfusion for: Red blood cells, platelets, plasma, cryoprecipitate, and granulocytes.
- Classify ‘specialized’ components that may be requested or required for transfusion.

Blood Products for Transfusion versus Further Manufacture (presented 12/5/2019)
- Contrast regulatory requirements between whole blood and source plasma collection.
- Discuss similarities and differences in donor populations and adverse reactions.
- Describe collection, testing and manufacturing practices of the two industries.

Cold-Stored Platelets (presented 05/07/2020)
- Discuss the history of cold-stored platelets.
- Describe the physiological and functional features unique to cold-stored platelets.
- Understand how differences in storage and processing affect the function of cold-stored platelets.

Platelet Refractoriness (presented 6/6/2019)
- List criteria for platelet refractoriness.
- Describe causes of platelet refractoriness.
- Discuss treatments for platelet refractoriness.

Review of Cold-Stored Platelet Physiology (presented 9/6/2018)
- Review platelet physiology and pathophysiology.
- Review cold-stored platelet in-vitro, in-vivo, and clinical data.
- Describe cold-stored platelets in Platelet Additive Solution (PAS).

BLOOD GROUPS

Not Just Antibody Targets: An Overview of Antigen Function and Structure (presented 12/5/2019)
- Describe the function of the carrier protein for at least three blood group systems.
- List the four types of red blood cell membrane components which carry blood group antigens.

BLOOD UTILIZATION OR PBM

Massive Transfusion and the Role of Plasma Components: Thawed vs. Liquid Plasma (presented 8/16/2018)
- Discuss the definition and purpose of a massive transfusion protocol (MTP).
- Discuss damage control resuscitation and the role of plasma components.
- Describe plasma components and current evidence-based guidelines on plasma use.

- Discuss the 2015 FDA guidance related to transgender donors.
- Identify the infectious disease risks associated with the transgender population.
- Describe the different approaches to transgender and non-binary donor management.
COAGULATION FACTORS

Practical Coagulation for the Blood Banker (presented 10/4/2018)
- Outline the parts of general coagulation and describe a blood banker’s role as a coagulation consultant.
- Summarize the common coagulation tests and explain thrombin’s role in clot formation.
- Explain the common drugs used in the treatment of coagulation issues.

INFECTIOUS DISEASES

Bacteria, Babesia & (Other) Bugs: Recent regulatory Changes and an update on Select Infectious Agents (presented 9/20/2018)
- Discuss the spread of certain insect-borne, transfusion-transmitted infectious agents across the USA in 2018.
- Describe the regulatory guidances released in the past year for Babesia and Zika Virus, and what’s being considered to lessen the risks of transfusion-transmitted sepsis from platelets.

INFECTIOUS DISEASES (CONT’D)

- Define what the FDA means by a relevant Transfusion Transmitted Disease.
- Review the FDA recommendations for Babesia testing for blood products.
- Describe the FDA recommendations for donor and product management.

OBSTETRICS, PRENATAL, AND NEONATAL TRANSFUSION

Pediatric Transfusions and Molecular Testing (presented 1/31/2019)
- Review how molecular techniques and interpretations are applied to pediatric transfusion needs.
- Describe how molecular testing is used for management of hemolytic disease of the fetus and newborn.

REGULATORY AND ACCREDITATION

AABB Standards and Accreditation in Plain English (presented 01/30/2020)
- Explain what a standard is and is not and define the standard setting process.
- Explain the Accreditation Philosophy.
- Clarify how standards and accreditation interact.

CAP Checklist Changes and Challenges (presented 2/21/2019)
- Identify common checklist deficiencies from the Laboratory General, All Common and Transfusion Medicine Checklist that impact transfusion services.
- Better understand the intent of the CAP checklist challenges identified as they pertain to transfusion medicine and apply “win-win” solutions for compliance.

Compendium Review for Laboratory and Nursing (presented 11/21/2019)
- Review general information and utilization guidelines regarding red blood cells, platelets, plasma, and cryoprecipitate.
- Recognize common modifications to blood components and when these modifications are indicated.

Do You Have Safety Eyes? (presented 02/06/2020)
- Identify potential safety risks.
- Apply knowledge of safety to reduce the risk of staff and patient injury.
- Identify resources for safety questions.

Equipment Validation: The I's, the O's and the P's (presented 8/15/2019)
- Define IQ, OQ, PQ.
- List the elements of a validation plan.
- Review a validation plan like a person in the quality department.

FDA Guidance: Bacterial Risk Control Strategies (presented 12/11/2019)
- Describe the options available for blood centers and transfusion services to comply with the FDA Final Guidance on bacterial risk control strategies to enhance safety and availability of platelets for transfusion.
- Discuss the considerations and trade-offs involved with implementing different options to comply with the FDA Final Guidance.

Quality; it's a never-ending journey (presented 4/22/2020)
- Describe how quality came to be.
- Recognize the key components of a Quality System.
- Identify appropriate strategies for maturing your organization’s Quality Management System (QMS).
REGULATORY AND ACCREDITATION (CONT'D)

Tissues: Regulation, Management and Monitoring (presented 12/6/2018)
- Define conditions when a CA state license or an FDA registration/license is required.
- Discuss the AATB, TJC standards and how are they applied to hospital laboratory or physician office settings.
- Identify several FDA human cells, tissue, and cellular and tissue-based product (HCT/P) categories of regulated tissue.

Validation: Addressing the Problem of Warm RBCs and Cool Platelets (presented 02/20/2020)
- Discuss methods to evaluate blood wastage and problems with blood transport.
- Evaluate options for product transport (cooler options) within the hospital and external transport.
- Review validation processes and validation options for transport coolers.

SEROLOGICAL AND MOLECULAR BIOLOGY

How Molecular Methods Can Resolve Typing Discrepancies (presented 1/3/2019)
- Recognize the different types of discrepancies, involving different samples, methods and reagents.
- Understand how antigen typing discrepancies can be due to antigen density, antigen variants, and limitations of both serologic and molecular methods.
- Understand how molecular methods can be used to resolve discrepancies.

Utilization of Molecular Testing in the Blood Bank (presented 10/17/2019)
- Identify application for molecular testing in donors, transfusion recipients and prenatal patients.
- Recognize pros and cons of molecular testing.

TRANSFUSION SERVICE TESTS & PROCEDURES

HTLAs: Review and Case Studies (presented 9/5/2019)
- Define the acronym and list the antibodies associated with HTLA-like antibodies.
- Discuss useful techniques for resolving HTLA-like antibodies.

Overview and Updates – Therapeutic Apheresis [Updates in Transfusion Medicine] (presented 1/16/2020)
- Describe the most common types of therapeutic apheresis procedures and the clinical utility of these procedures in the United States.
- Summarize anticoagulant, electrolyte, and fluid balance management for therapeutic apheresis patients.
- Recognize differences in pediatric-specific disease states and therapeutic apheresis indications.

Platelet Refractoriness (presented 6/6/2019)
- List criteria for platelet refractoriness.
- Describe causes of platelet refractoriness.
- Discuss treatments for platelet refractoriness.

Platelet Refractoriness and Fetal and Neonatal Alloimmune Thrombocytopenia: Approaches and Related Reference Services (presented 8/1/2019)
- Differentiate between immune and non-immune causes of platelet refractoriness.
- Identify the common causes and symptoms of FNAIT.
- Discuss how serologic and molecular testing can aid in differential diagnosis of FNAIT.

Routine and Complex Rh(D) Testing (presented 3/19/2020)
- Understand the basic theory of Rh(D) serology.
- Describe routine Rh(D) testing.
- Discuss complex Rh(D) testing, including discrepancy resolution.

The Sickle Cell Crisis: Motivators and Barriers of African-American Donors (presented 12/6/2018)
- Define what is Sickle Cell Disease.
- Describe why the need for African-Americans to donate blood is important for treatment of patients with Sickle Cell Disease (SCD).
- Recognize barriers and motivations for blood donations by the African-American population.

Stem Cell Therapy and the American Red Cross (presented 12/20/2018)
- Define stem cells and how stem cell transplantation supports cancer care.
- Review the different stem cell programs within the American Red Cross.
If you have any questions or comments on these postings, please contact our hospital education coordinator via email at hospitaleducationcoordinator@redcross.org.