

Glossary of Terms related to Patient Blood Management

Patient Blood Management (PBM) is defined by SABM as “*the timely application of evidence-based medical and surgical concepts designed to maintain hemoglobin concentration, optimize hemostasis and minimize blood loss in an effort to improve patient outcome.*” - SABM.org. PBM incorporates evidence-based practice, research initiatives, administrative and clinical standards, guidelines and quality performance measures.

This Glossary includes terms that are used in our SABM resources and these are provided here for your convenience. If there are any terms that are not available in this Glossary that should be considered, please send an email to: info@sabm.org with the missing term(s) and its/their definition(s).

Acidosis:

Acidosis is a condition in which there is *excessive acid* in the body fluids. It is the opposite of alkalosis (a condition in which there is *excessive base* in the body fluids).

Advance Directive:

Advance health care directives, also known as living wills, advance directives, or advance decisions, are instructions given by individuals specifying what actions should be taken on their behalf in the event that they are no longer able to make healthcare decisions due to illness or incapacity.

Acute Normovolemic Hemodilution (ANH):

During surgery, blood is diverted to bags and replaced with a nonblood volume expander. Thus, the blood remaining in the patient during surgery is diluted, containing fewer red blood cells. During or at the end of the surgery, the diverted whole blood containing red cell, platelets and clotting factors is returned to the patient.

Antifibrinolytic Drugs:

Antifibrinolytic drugs are used as inhibitors of fibrinolysis. These lysine-like drugs interfere with the formation of the fibrinolytic enzyme plasmin from its precursor plasminogen by plasminogen activators which takes place mainly in lysine rich areas on the surface of fibrin. These drugs block the binding sites of the enzymes or plasminogen respectively and thus stop plasmin formation.

Aseptic Technique:

The absence of microorganisms. By contrast, something that discourages the growth of microorganisms is antiseptic.

Allogeneic:

Taken from different individuals. Two or more individuals are said to be allogeneic to one another when the genes at one or more loci are not identical. In blood transfusion and transplantation, a situation in which the donor and recipient are different individuals.

Autologous:

In blood transfusion and transplantation, a situation in which the donor and recipient are the same person.

Blood Bank / Blood Center:

A place where blood may be collected from donors, typed, separated into components, stored, and prepared for transfusion to recipients. A blood bank may be a separate free-standing facility or part of a larger laboratory in a hospital. The phrase Blood Center may more commonly be used for a free-standing facility that processes and dispenses blood product to local hospitals.

Blood Component:

Blood is made up of many different kinds of constituents and may be separated into its different components for transfusion. Four of the most important components are red cells, platelets, and cryoprecipitate.

Blood Derivative:

Blood derivative means the pharmaceutical product of a certain form or dosage prepared and processed from human blood.

Bloodless Medicine & Surgery Program (aka Transfusion-Free or Bloodless Center): A specialized hospital-based program that provides alternative therapies and approaches to patients for whom blood transfusion is not an option e.g., for religious reasons.

Cell Washer:

Cell processors and salvage devices that wash and save red blood cells.

Coagulopathy:

Coagulopathy (also called clotting disorder and bleeding disorder) is a defect in the body's mechanism for blood clotting, causing bleeding diathesis.

Cryoprecipitate:

Most commonly referred to as "Cryo," it is a frozen blood product prepared from plasma. It is often transfused as a four to six-unit pool instead of as a single product. Many uses of the product have been replaced by factor concentrates, but it is still routinely stocked by many hospital blood banks.

Crystalloid:

A substance that in solution can pass through a semipermeable membrane and be crystallized, as distinguished from a colloid.

Damage Control Resuscitation

This approach includes the use of permissive hypotension while minimizing the use of crystalloid fluid resuscitation; the prevention and aggressive treatment of hypothermia with both passive and active warming measures; the temporization of acidosis with use of exogenous buffer agents; the earlier use of thawed plasma as the primary resuscitation fluid in ratios approaching 1:1 – 1:2 with PRBCs; the early use of platelets, often given well before 10 units of PRBCs have been transfused. This strategy has been called "damage control resuscitation" to emphasize its pairing with damage control surgical techniques.

Discard Volume:

Volume that is withdrawn from a source that is considered not useful and requires disposal.

Embolization:

Embolization is a non-surgical, minimally-invasive procedure performed by an interventional radiologist and interventional neuroradiologists. It involves the selective occlusion of blood vessels by purposely introducing emboli.

Erythropoietic Stimulating Agent (ESA):

Erythropoiesis-stimulating agent, commonly abbreviated ESA, an agent similar to the cytokine (erythropoietin) that stimulates red blood cell production (erythropoiesis). ESAs, structurally and biologically, are similar to the naturally occurring protein erythropoietin.

Extracorporeal Blood:

Blood that is in motion outside of the body.

Factor Concentrates:

Products that are a concentrated quantity of particular plasma clotting factors in a given volume.

Fractions:

In this context, it is used as a portion or small part of a whole, e.g., albumin is a blood fraction.

Functional Iron Deficiency:

Functional iron deficiency occurs where there is an inadequate readily available supply of iron to the bone marrow, yet a measurable presence of storage iron in reticuloendothelial cells.

Growth Factor:

A growth factor is a naturally occurring substance capable of stimulating cellular growth proliferation and cellular differentiation. Usually it is a protein or a steroid hormone. Growth factors are important for regulating a variety of cellular processes. Growth factors typically act as signaling molecules between cells. Examples are cytokines (e.g. erythropoietin) and hormones that bind to specific receptors on the surface of their target cells.

Hemofiltration

A renal replacement therapy similar to hemodialysis. It is almost always used for acute renal failure. It is a slow continuous therapy in which sessions usually last between 12-24 hours and are usually performed daily. During hemofiltration, a patient's blood is passed through a set of tubing (a filtration circuit) via a machine to a semipermeable membrane (the filter) where waste products and water are removed. Replacement fluid is added and the blood is returned to the patient.

Hemolysis:

Is the rupture, fragmentation or breaking open of red blood cells and the release of hemoglobin into the surrounding fluid

Hemostatic Agents:

An antihemorrhagic (antihaemorrhagic) agent is a substance that promotes hemostasis (stops bleeding). It may also be known as a hemostatic (also spelled haemostatic) agent.

Hypocalcemia

The presence of low serum calcium levels in the blood.

Iatrogenic:

The terms iatrogenesis and iatrogenic artifact refer to inadvertent adverse effects or complications caused by or resulting from medical treatment or advice.

Indwelling Lines:

Intravenous or arterial access that is in a patient.

Informed Consent/Informed Choice:

A process in which a person learns key facts about a clinical issue, including potential risks, benefits, and alternatives before deciding whether or not to accept that given procedure or treatment choice.

(The) Joint Commission:

Is a private sector United States-based not-for-profit organization. The Joint Commission operates voluntary accreditation programs for hospitals and other health care organizations. The Joint Commission accredits health care organizations and programs in the United States. A majority of state governments recognize Joint Commission accreditation as a condition of licensure and receiving Medicaid reimbursement. Surveys (inspections) typically follow a triennial cycle, with findings made available to the public in an accreditation quality report on the Quality Check Web site.

Micro Sampling:

Prefix derived from the Greek "mikros" meaning small. Examples of the many biomedical terms containing "micro-" include the following: microliter and microgram.

Minimum Requisite Test Volume:

The smallest amount of volume that is required to obtain accurate lab values.

Normothermia:

Normal human body temperature, also known as normothermia or euthermia, is a concept that depends upon the place in the body at which the measurement is made, and the time of day and level of activity of the person. There is no single number that represents a normal or healthy temperature for all people under all circumstances using any place of measurement.

Parenteral:

Parenteral is a route of administration of fluid or medicine that involves piercing the skin and accessing a vein.

Patient Blood Management Program:

A hospital-based program that uses a team approach to assess a patient's blood management needs. The goal of the team is to develop a plan of care that uses pharmaceuticals, technology and techniques to decrease blood loss and to enhance blood production. This approach reduces or eliminates the need for a blood transfusion.

Perfusion: The use of a heart-lung machine to move blood during surgery.

Perfusionist:

A perfusionist, also known as a clinical perfusionist, is a trained health professional who operates the heart-lung machine during cardiac surgery and other surgeries that require cardiopulmonary bypass.

Perioperative Autologous Blood Collection:

The procedure or act of collecting a patient's own blood that is being lost or drained from his body during a time around a surgical procedure time period (typically includes the day of surgery and the first day after surgery). This practice can be a part of a blood conservation/bloodless program.

Phlebotomy:

Obtaining blood from a vein. Today phlebotomy is done by puncturing a vein with a needle. Phlebotomy may be done in order to obtain blood for diagnostic tests or to remove blood for treatment purposes (e.g., to relieve the iron overload in hemochromatosis).

Point of Care Testing:

Point-of-care testing (POCT) is defined as diagnostic testing at or near the site of patient care. POCT is accomplished through the use of transportable, portable, and handheld instruments (e.g., blood glucose meter, nerve conduction study device) and test kits (e.g., CRP, HBA1C, Homocystein, HIV salivary assay, etc.). POCT reduces the amount of blood used for typical phlebotomy laboratory sampling.

Recombinant Products:

In genetics, describes DNA, proteins, cells or organisms that are made by combining genetic material from two different sources. Recombinant substances are made in the laboratory and are being studied in the treatment of cancer and for many other uses.

Self Determination:

The free choice of one's own acts without external compulsion. It can also be defined as the ability or power to make decisions for yourself.

Transfusion Service:

Transfusion service may include any or all of the following activities and duties: collect, process, store and provide human blood intended for transfusion, perform pretransfusion testing and, finally, infusion into a patient. Although these processes may take place in a single hospital department, often they are performed in two separate places. The transfusion service in turn is responsible for maintaining an adequate supply of needed blood and blood products, blood-typing and cross-matching patients, and releasing the blood for transfusion.

Transfusion Guidelines:

Transfusion guidelines are usually developed by an individual center of patient care by a multidisciplinary committee and approved through that center's medical staff to guide or direct appropriate clinical transfusion decisions. They are designed and developed to follow best practice and up to date published literature in order to provide the safest and most efficient transfusion care to the patient population they serve.

Ultrafiltration:

Ultrafiltration (UF) is a variety of membrane filtration in which hydrostatic pressure forces a liquid against a semipermeable membrane. Suspended solids and solutes of high molecular weight are retained, while water and low molecular weight solutes pass through the membrane. This separation process is used in industry and research for purifying and concentrating macromolecular solutions, especially protein solutions. Ultrafiltration is not fundamentally different from microfiltration or nanofiltration, except in terms of the size of the molecules it retains. Mostly, ultrafiltration is applied in cross-flow mode and separation in ultrafiltration undergoes concentration polarization. Ultrafiltration may be used to remove free water from blood retained in a cardiopulmonary bypass circuit to reduce volume while preserving platelets and clotting factors.

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