Collecting a blood specimen from a patient consists of much more than merely inserting a needle in a vein and drawing out a sample of blood (venipuncture) or collecting a few drops of blood from a finger or ear lobe (capillary collection). Collecting a blood specimen is only one of the links in a chain of events that is completed when the physician receives the test results requested on his/her patient. Each one of these events or links is just as important as any other. Following is a look at these links that make up the total chain of events that leads to a completed report of test results.

The very first event that must take place before anything else can begin, is the physician’s orders. The physician must convey in writing, verbally or electronically, exactly what laboratory tests he/she wants performed on the patient.

The next event in a long line of events is the transcription of the physician’s orders by the nursing department, either manually on the proper laboratory request form or electronically. One rule that the phlebotomist must always follow: NEVER COLLECT A BLOOD SPECIMEN WITHOUT A FULLY COMPLETED WRITTEN OR ELECTRONICALLY PRODUCED REQUISITION.

Whether you are employed as a phlebotomist and perform phlebotomies as your livelihood or whether you are a technologist, technician or medical assistant that collects blood samples as part of your responsibilities, remember, you are a very critical and crucial part of the health care team. The phlebotomist is just as important as the nursing personnel who generates the laboratory requisition or the technical person who performs the test.

Let us look at this last statement a little more in detail.

The nursing personnel may accurately generate the request form and the laboratory technical personnel performing the tests may be the very best, that is, their technical expertise may be well above average, they may be able to perform any test ordered with the greatest of accuracy and precision, but without a properly collected blood sample, their expertise is wasted.

The phlebotomist can make the difference whether the test results are accurate or not.

Following are some of the “do’s” and “don’ts” as well as some definite “no-no’s.” First, let us answer the questions: “Why is the proper collection of a blood sample so critical? “Why is a phlebotomist’s job so important? After all, with a little training anyone can learn to do a venipuncture or “finger stick.” OR CAN THEY?

To answer these questions, remember, the phlebotomist is collecting a blood sample for laboratory analysis that is necessary for the diagnosis and care of the patient, as well as for the proper treatment of the patient. The physician depends on these results to either aid in making a diagnosis or confirm a diagnosis and help with the proper treatment of the patient by adjusting the dosages of medications according to the test results, for example, the adjusting of the amount of insulin for a diabetic patient or adjusting the amount of a therapeutic drug. Also, the phlebotomist is the only direct contact between the patient and the laboratory.

Listed below are some “do’s” and “don’ts” that must be followed.

1. Be professional at all times in appearance and actions. No patient wants a slouchy, unkempt individual “poking” needles in them. The patient wants to feel confident that you are truly a professional. The first impression that you make on a patient will either put them at ease or will make them very apprehensive, nervous, and yes, even afraid of being “stuck.” You should always knock before entering the room. Always be neatly, conservatively and professionally dressed. Greet the patient with a smile and a “How are you today?” It may help to put the patient at ease.

2. It will help a great deal if you will explain to the patient what you are going to do. There are many patients who have never had a venipuncture or even a finger stick. You can explain what is going to be done without revealing any information about the type of test that is being performed or why it is being performed. However, if the patient wants to know what kind of test that the physician has ordered, it would be best to inform them without going into great detail or why the physician ordered it. For example, if a BUN (Blood Urea Nitrogen) test was ordered and the patient wanted to know what the test was that was ordered, you can simply state that it is a kidney function test and that the physician probably wants to see
how your kidneys are doing. This simple explanation should satisfy the patient. If not, explain to them that it would be best to ask their physician to explain it in more detail and why it was ordered. If you are a phlebotomist and not a technologist or a technician and you do not know what the test is, simply admit that you are not a technologist and that you do not perform the test; therefore, you really do not know. Remember, honesty is always the best policy.

3. When entering the patient’s room, introduce yourself, then check the patient’s arm band if you work in a hospital. If you are employed by an outpatient clinic or physician’s office and arm bands are not used, ask the patient their name. NEVER, NEVER ask “Are you Mr. Smith or are you Mrs. Jones?” You may later discover that they were not Mr. Smith or Mrs. Jones. Patients, especially those in a hospital who are quite ill, lonely, somewhat apprehensive and away from their family, may answer yes to any name that you call out. Also, the patient may have a hearing disability and actually did not hear you clearly.

According to an article written by Walter L. Scott, Ph. D. in MLO January 1978, it states that there are three elements that must be present for malpractice to be proven. “First the patient must have sustained measurable injury, second the defendant must be found negligent, and finally the negligence must be the cause of the injury.” Dr. Scott goes on to state “Misidentification and mislabeling is one area that is commonly recognized as a source of medicolegal problems and that most laboratories stress the need for scrupulous attention to identification and labeling procedures. These procedures cannot be sometime things. They require ongoing effort from everyone to avoid mistakes and to follow sound identification procedures without deviation.” Even though this was written in 1978, it is very relevant even today.

There are current rules and regulations as well as mandatory standards that coincide with what Dr. Scott wrote in 1978. There are federal and state regulations that must be adhered to that pertain to phlebotomies. The Clinical Laboratory Improvement Act of 1988 (CLIA’88), Occupational Safety and Health Administration (OSHA), states with licensure laws, inspecting groups such as the Joint Commission for Accreditation of Healthcare Organizations (JCAHO) and the College of American Pathologists (CAP) enforce regulations relating to phlebotomies.

In 1970, The American Hospital Association developed a set of rules entitled the “Patient Bill of Rights.” Basically, this “Bill of Rights” pertains to the patient’s right to privacy which, in part, deals with the unethical release of patient’s test results, information concerning a patient’s health or even discussing the condition of a patient. A more detailed and complicated extension of the “Patient Bill of Rights” has recently gone into effect which is known as HIPAA rules (Health Insurance Portability and Accountability Act of 1996). Even though it was initiated in 1996, it became effective in 2003.

A news item in the June 30, 2003, Advance publication states that HIPAA requires health care institutions to furnish a notice of privacy to all patients informing them of the institution’s usual uses of information about patients and their rights with regard to their medical records.

This information was printed in the April 10, 2003, issue of the New England Journal of Medicine.

Phlebotomists, as well as all medical personnel, must be aware that they can get involved legally if they have violated the patient’s right of privacy.

In a March 10, 1990, article in Advance entitled “Understanding Medicolegal Issues Key to Avoid Phlebotomy Malpractice Suits” written by Virginia Faber, MLT(ASCP), MT(HEW), I quote, “Any violation in privacy or the unethical release of patient information (even discussing a patient’s condition) is a breach of ethics and can lead to serious consequences (possibly even a law suit).”

HIPAA regulations are far-reaching. As an example, law enforcement agencies and even various types of news media are not permitted to divulge the medical condition of accident victims or victims of violent crimes anymore.

4. It is absolutely essential that the phlebotomist gets proper identification of the patient (arm band or verbally asking, “What is your name?”). After the sample is collected, before you leave the patient’s bed side, or before you move from the patient’s side if it is an outpatient, label the tube or tubes of blood completely. The label should contain the patient’s name, physician’s name, patient ID number, date and time of collection, room number and the phlebotomist’s initials. The minimum amount of information to be put on the label is the patient’s name, ID number, date and time of collection and the phlebotomist’s initials. If an accession numbering system or bar code labels are used, immediately affix the accession number or bar code label to each tube, as well as to the requisition.

CHECK, DOUBLE CHECK AND THEN CHECK AGAIN. I caution all phlebotomists, DO NOT ACCEPT THE INFORMATION ON AN ARM BAND OF A HOSPITAL PATIENT IF IT IS CUT OFF AND TAPED TO THE BED OR END TABLE. Patients are moved from bed to bed and room to room. You cannot be absolutely certain if that cut-off arm band belongs to the patient in that particular bed or room. Check with the nurse on duty and have him/her identify the patient for you. If you do not get proper identification, I recommend that you refuse to collect the sample. Remember Dr. Scott’s warning, “misidentification and mislabeling is one area that is commonly recognized as a source of medicolegal
problems etc.” Make it a part of your routine to never leave the patient’s side without proper and accurate labeling.

If it is an Emergency Room patient who has no known identity and it is a dire emergency situation, follow the same procedure. Give the patient a name, such as, patient A, B, X,Y,Z, whatever. Label your blood tubes and requisitions accordingly. Most Emergency Rooms have some sort of arm band system. Be sure an arm band is attached and contains the patient’s name and ID number. If the patient’s identification is unknown, mark the arm band A, B, or C. If it is a matter of life and death and there isn’t time to place an arm band on the patient, use a felt tip pen or iodine swab and mark the patient’s forehead A, B, or C and label the samples and requisitions accordingly. Regardless of the necessity for speed in these emergency situations, a few seconds of time to put an arm band on or a letter on the patient’s forehead with a felt tip pen may help save a patient’s life and save you, the physician and the hospital from a malpractice suit. Just imagine if the laboratory crossmatched blood for two nameless patients in critical condition, one was blood group A and one was blood group B and the wrong unit was given to the wrong patient because of a lack of proper identification. You know what a tragedy that would be.

Proper identification and labeling are essential even in life and death situations, even if it is nothing more than naming the patient A, B, or C.

Dr. Scott also states in his article “Venipuncture” that, “This everyday routine procedure is fraught with hazards. Phlebotomists must be skilled and able to provide good patient care when they draw specimens, both for in-patients and out-patients. Problems that can arise include hematoma, abscess and cellulitis at the puncture site and a possibility that the patient may faint or fall and be injured after or during the phlebotomy.” This quote of Dr. Scott’s leads to the next rule to follow:

5. Before performing the venipuncture, be sure that the patient is lying down or secured in a phlebotomy chair. Place the tourniquet on the arm, palpate the veins and locate the one best suited for the venipuncture. When the best vein has been located, cleanse the area thoroughly with 70% alcohol sponges, a povidoneiodine wipe or other approved disinfectant, allow it to dry, and perform the venipuncture without touching the cleansed area. If you must re-palpate the area, disinfect the area again before performing the venipuncture. Once the blood begins to flow into the proper vacuum tube or syringe, remove the tourniquet and continue collecting the sample. If you are not successful entering the vein and you have to withdraw the needle, remove the tourniquet, replace the needle and vacuum tube, find another suitable vein, disinfect the area and try again.

If a vacuum tube system is used, you must replace the tube since the vacuum in the tube may have been lost during the attempted venipuncture.

Whenever a phlebotomist has a difficult time with the venipuncture and the puncture site is continuously re-entered using the same needle, the chance of infection is greatly increased. As a general rule, never open the needle and remove it from its original packaging until it is to be used. Remember, the tourniquet should never be left on the patient’s arm for more than two minutes. As soon as blood begins to flow into a vacuum tube or when blood is visible in the tip of the syringe, the tourniquet should be released. If the tourniquet is left on too long, it can affect certain tests. Generally, a phlebotomist should not puncture a patient more than twice before asking for help. If the venipuncture is not successful, probing should be avoided since it is very painful to the patient. Probing could also cause damage to the vein.

The phlebotomist should know what first aid measures to use in case the patient faints during or after collection. It would be advisable for the phlebotomist to be trained in CPR.

A very important fact that all phlebotomists should be knowledgeable about is a patient’s consent. If a physician orders blood tests on a patient, just the fact that the physician ordered these tests is not sufficient enough for the phlebotomist to collect the blood specimen. The patient must be willing to have a venipuncture or a capillary puncture performed. If the patient is comatose, confused or a minor, and a family member is present, the family member has the legal right to make the decision. One rule to follow at all times is if the patient or family refuses to give permission to draw the blood, you cannot, by law, draw the blood specimen. If the phlebotomist uses force to collect the specimen, he/she is liable for legal action, no matter how persistent the physician is that the specimen be drawn.

There was an article published in the Journal of American Medical Technologists, March-April 1974, entitled “The Medical Technologist and the Law” written by Robert Bucklin, M.D., J.D. In this article Dr. Bucklin states “Perhaps the first area to be considered is that of required consent on the part of the patient for any procedure which is performed upon him. For simple procedures, the consent need not be in writing and often in not even expressed in words but solely by submission of the procedure without objection. If the patient rolls up his sleeve and extends his arm to you, even though you have no oral or written consent for the procedure, you would be on safe legal ground to proceed with the venipuncture. For more complicated procedures, it is always well to obtain a written consent from the patient. The fact that a patient has signed a “blanket” consent form at the time of admission to the hospital to cover any and all
procedures performed is insufficient.”

This does not mean that there must be a written consent form from all patients before performing a venipuncture or a capillary puncture. However, I want to caution you, if a patient or family member of a minor or of a patient who cannot speak for himself/herself refuses to allow you to collect the blood, DO NOT FORCE THEM TO DO IT. DO NOT RESTRAIN THEM IN ANY WAY. Report the problem to the attending physician.


If the phlebotomist encounters a patient who refuses to cooperate, then in a very professional manner, the phlebotomist should explain the importance of the test ordered. The patient or family should be made aware that the physician is relying on the test results in order to help treat them adequately and expeditiously. This can be explained without having to discuss what the test is for or what the diagnosis is or even what the condition of the patient’s health is. Many times refusal is because of fear or not knowing what is going to take place. Often, once the procedure and the need is explained, consent is given. As Dr. Bucklin stated, all that is necessary for patient consent is for the patient to roll up his sleeve or put out his arm or finger and allow the phlebotomist to put the tourniquet around his arm or disinfect his finger.

The patient has been properly identified. You have introduced yourself and explained what you were going to do. You have properly disinfected the puncture site adequately and are now ready to collect the blood sample by venipuncture. The next very critical step in this very important procedure is to know exactly what to do in order to collect an acceptable sample.

What is/are the proper kind of tube or tubes should the blood be placed in for the type of tests ordered? What is the proper order of draw for multiple samples? Should a heparinized tube be used (green top)? If so, should it be sodium heparin or lithium heparin? Should a plain tube be used so that the sample can clot (a red top tube-no anticoagulant added)? There are many types of color coded tubes indicating no anticoagulant or various tubes with different anticoagulants used for a variety of tests.

The phlebotomist must know what tube or tubes to use for each test ordered. The phlebotomist must know what anticoagulants interfere with what tests. As an example, an anticoagulant containing ammonia interferes with a Blood Urea Nitrogen test; sodium or potassium anticoagulant interferes with electrolyte studies; or an EDTA (a violet top tube) cannot be used for a Prothrombin Time Test (PTT). It is the responsibility of the phlebotomist to always use the correct tube or tubes. If an incorrect tube is used, when it reaches the technologist who is to perform the test, it will be detected and discarded causing the patient to undergo another venipuncture which means added trauma and pain for the patient. If the patient had difficult veins, getting another sample may be a problem. What if the patient were an outpatient and is no longer available? The error will also cause a delay in the patient’s test results.

Proper Order of Draw When Collecting Multiple Blood Samples

Order of Draw when using vacuum tubes:

Guidelines for the proper order of draw using vacuum tubes can be obtained from the National Committee for Clinical Laboratory Standards (NCCLS) in their Approved Standard H3-A4 as well as from Becton, Dickinson and Company, the makers of the BD Vacutainer blood collection system (BD Vacutainer is a register trademark of Becton, Dickinson).

Order of Draw for Vacuum Tubes According to NCCLS and/or BD
1. Yellow stopper, blood cultures (NCCLS & BD)
2. Red stopper, no additives, serum tube (glass) (NCCLS & BD)
3. Blue stopper, citrate (NCCLS & BD)
4. Gel separator tube for serum (NCCLS & BD)
5. Red stopper, serum (plastic tube) (BD only)
6. Green stopper, heparin (NCCLS & BD)
7. Light green, gel separator with heparin (BD only)
8. Purple (violet) stopper, EDTA (NCCLS & BD)
9. Gray stopper, fluoride (NCCLS & BD)
10. Other additive tubes

Order of Draw for Syringe Collection
1. Yellow stopper (sterile) or blood culture bottles
2. Blue stopper, tubes for coagulation studies
3. Purple (violet) stopper, EDTA
4. Other anticoagulated tubes
5. Red stopper, no additives, serum tube

It is advisable to check with the manufacturer of the brand of vacuum tubes used in your laboratory for their suggested order of draw. Also purchase the latest NCCLS standard. These standards may change from year to year. However, it is always best to follow the order of draw policy in your place of employment.

Always keep in mind that red blood cells are quite fragile. Treat the specimen very gently. When mixing tubes containing an anticoagulant, do not shake vigorously. Mix by gentle inversion. Harsh mixing of...
anticoagulated blood samples can hemolyze the red blood cells. Hemolysis will interfere with several blood tests such as potassium, lactic dehydrogenase, iron, total protein, phosphorus and magnesium, to name a few. Hemolysis causes falsely elevated results for these analytes.

Some rules to follow to prevent hemolysis:
1. Do not mix the sample as if you were trying to see how much foam that you can produce.
2. Do not allow the blood to “bounce” off the bottom of the tube. Direct the stream of blood down the side of the tube whether you are using a vacuum tube or a syringe.
3. Do your best to get a successful venipuncture without probing and causing a hematoma. A difficult “stick” may cause hemolysis.

When disinfecting the venipuncture site, the phlebotomist must also be aware of what type of disinfectant to use. As an example, if a blood alcohol level is to be drawn, alcohol should not be used to prepare the puncture site. If a blood culture is to be drawn, it is recommended that the site is cleansed with more than 70% alcohol. For blood cultures it is recommended that the puncture site be disinfected with a series of 70% alcohol and povidone iodine, allowing each to dry before performing the venipuncture.

Proper disposal of used needles, vacuum tube holders and syringes is very important to your health. The only acceptable means of disposal of these contaminated items is to place them into a biohazard container especially designed for holding needles, syringes, vacuum tube holders and anything considered to be classified as “sharps.” The container must have a permanently sealed opening that can be secured when full. DO NOT OVERFILL THESE CONTAINERS. OVERFILLED CONTAINERS CAN CAUSE ACCIDENTAL NEEDLE STICKS. NEVER PUT YOUR HAND DOWN INTO A “SHARPS” CONTAINER, YOU MAY GET A NEEDLE STICK WITH A CONTAMINATED NEEDLE OR SHARP OBJECT. The container must be constructed with a material that cannot be penetrated by sharp objects. There must also be a biohazard label on the container. NEVER, NEVER manually attempt to replace a used needle into its needle shield. Do not attempt to re-cap a used needle. The majority of accidental needle punctures among health care workers is caused by trying to re-cap used needles and missing the opening causing the workers to be punctured with a contaminated needle.

There is also a high risk of being infected with HIV (Human Immunodeficiency Virus) which could possibly develop to AIDS (Acquired Immunodeficiency Syndrome) and/or Hepatitis B virus when being punctured with a contaminated needle. There are three known ways for contracting AIDS: sexual contact, transfusion of blood and blood products contaminated with HIV, and from needle punctures from a needle used on an AIDS patient.

There are many types of safety devices available that can prevent injury to the health care worker. Some of the devices have retractable needles, needles that are automatically shielded after use, retractable blades on capillary puncture devices and disposable safety vacuum tube holders, to name a few. CLIA and OSHA require that safety blood collecting devises be used by all health care workers.

In order to help prevent accidents, one other very important rule concerning used needles, syringes and vacuum tube holders, especially if non-safety devices are used, is NEVER drop used blood collecting devices in a phlebotomy tray for disposal when you return to the laboratory. Whenever the phlebotomy collecting tray is cleaned, accidental puncture from the contaminated needles is almost a certainty. You are playing a game of “Russian Roulette” with these contaminated needles. Whose needle was it? Was it Mrs. A’s, Mr. B’s? Was it the jaundiced patient in room 10, or was it the AIDS patient in room 55? You will never know. Always dispose of all “sharps” and syringes in a biohazard container IMMEDIATELY after use.

What happens when a tube or tubes of blood gets lost? Dr. Bucklin in his article states, “What happens when a specimen gets lost and as a result, the attending physician is unable to render a diagnosis in time to treat the patient satisfactorily? It takes only slight insight on the part of the technologist to foresee the serious complications which may arise from such a situation. As in many events in life, the best cure is in prevention, and it is obvious that care must be taken of all specimens in such a way as to prevent their being misplaced or mishandled.” I would like to add another word here: mislabeled.

Remember, the test results are only as good as the specimen. If the specimen is mislabeled, it is totally worthless to the patient and the physician. It could lead to very serious complications for the patient since the laboratory procedures for Patient A will be performed on Patient B’s blood. Patient A will be treated according to the results of Patient B’s blood levels. This could be detrimental to Patient A and could also open the door to a malpractice suit.

Before ending this article, I would like to leave you with an additional list of “do’s” and “don’ts” that I feel are very important for the patient’s well being.

1. Besides not leaving the tourniquet on the patient’s arm for more than two minutes, do not have the patient vigorously open and close their hand (pump their hand) for prolonged periods of time. Both of these can cause hemoconcentration which does interfere with some tests.

2. Be sure to follow all the rules listed in Universal Precautions in order to protect yourself from blood-borne pathogens.

3. Always wear gloves when collecting or han-
dling blood samples. Be sure to replace the gloves after each patient. Do not wash your gloves and continue to wear them.

4. Follow the rules for isolation when entering an isolation room.

5. When performing a “heel stick” on an infant or newborn, NEVER use the posterior curvature of the heel. The puncture should be made on the lateral portion of the heel.

6. Lancets used for infants and pediatric patients should be set at the proper depth. Depth of the incision should be less than 2.4 mm and should range from 1.0 mm to 2.4 mm depending on the patient’s age and size. This is to prevent hitting the heel bone and possibly causing osteomyelitis.

7. Refrain from performing a venipuncture on the foot or ankle, ESPECIALLY IF THE PATIENT IS A DIABETIC.

8. When performing a venipuncture on a women who has had a mastectomy, DO NOT USE THE SIDE THAT THE MASTECTOMY IS ON. A woman who has had a mastectomy may also develop lymphostasis which means a lack of lymph flow due to the removal of lymph nodes adjacent to the involved breast. Lymphostasis makes the patient highly susceptible to infection. The pressure caused by the tourniquet can cause pain and injury to the patient.

9. Never leave empty labeled tubes on a collecting tray because of a failed venipuncture. You may make a mistake and fill the tubes along with the next patient’s blood. It will be best to discard the tubes.

Remember, the technologist can be the very best in the country, but if the sample is not labeled or collected properly, or the sample is mishandled and hemolyzed, or the wrong tube is used to collect the sample, all the expertise and modern equipment will only result in invalid test results.

With this brief review of “Phlebotomy, the Art of Properly Collecting a Blood Sample,” this author sincerely hopes that it makes all phlebotomists aware that they are indeed very special individuals, a true part of the health care team, an important link between the patient and the laboratory and are very valuable professionals. Not just anyone “right off the street” can be a phlebotomist. It does take special training, dedication and a desire to help your fellow man. As a last thought, put yourself in the place of the patient. Would you feel that you were professional in appearance and action? Do you think that you were compassionate? Were you pleased with your performance? Finally, would you want YOU as your phlebotomist again?

References


New England Journal of Medicine, April 10,2003
Advance: June 30, 2003
Order of Draw for Multiple Tube Collections; Publisher: Beckton, Dickinson and Company, 2002
“Understanding Medicolegal Issues Key to Avoid Phlebotomy Malpractice Suits” by Virginia Faber, MLT (ASCP), MT (HEW); Advance March 10, 1990
“Liability in the Laboratory: an Overview” by Walter L. Scott, Ph.D.; MLO, 1978
Questions for STEP Participants

Answer questions only on the official STEP answer sheet. If you do not have the official STEP answer sheet, a year’s supply can be obtained (at no cost), simply by writing to: STEP Program Answer Sheets, American Medical Technologists, 710 Higgins Road, Park Ridge, IL 60068-5765, or by fax: 847/823-0458, or by e-mail: paula.simoncini@amt1.com

In addition to marking your answers, be sure to include all the required information on the answer sheet and a processing fee of $3.00 per article.

In the following, choose the one best answer for each question.

1. The very first event that takes place in the proper collection of a blood sample is:
   A. The phlebotomist choosing the proper tubes
   B. The phlebotomist performing the venipuncture
   C. The patient giving consent
   D. The physician’s order

2. The best time to label a blood sample is:
   A. Anytime before collection
   B. At the patient’s bed side immediately after collection
   C. Before leaving the laboratory
   D. Anytime before you go to the next patient

3. When performing a venipuncture on an outpatient, it is acceptable practice to:
   A. Allow the patient to stand at their request
   B. Have the patient sit in an ordinary chair
   C. Use a phlebotomy chair with a security board
   D. Insist that the patient lie down

4. A patient’s consent to perform a venipuncture:
   A. Must be in writing
   B. Must at least be verbal
   C. Is covered in a blanket statement on admission
   D. Is understood as long as the patient submits to the procedure without objection

5. When using a vacuum system to draw blood, there are no precautions necessary in regards to blood flow into the tube since the vacuum controls the flow. (True or False)

6. Small amounts of hemolysis can interfere with some test results, such as potassium. (True or False)

7. Since the amount of alcohol used to disinfect a venipuncture site is so small, you may use it as a cleansing agent when collecting a blood alcohol level. (True or False)

8. Thorough cleansing with 70% alcohol is all that is necessary to disinfect the venipuncture site for collecting blood cultures. (True or False)

9. If a phlebotomist uses extreme care and develops a safe technique, it is acceptable to re-cap a used needle manually without special devices. (True or False)

10. Because of the necessity for speed during a life and death situation, it is permissible to disregard the rules for proper identification and labeling. All that is necessary is to inform the technologist that the sample is from the patient who was in a car wreck in the ER. (True or False)