VENIPUNCTURE: PART 2  
ANATOMY OF THE ARM  
AND VEIN LOCATION

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2 CLIENT APPROACH AND POSITIONING

Course Prerequisites:

- Venipuncture Module 1: Anatomy of the Arm and Vein Location.

Course Goals and Objectives:

Goal

This course will cover safe techniques and principles for assessment and selection of veins suitable for venipuncture.

Course Objectives

At the end of this Module the student will be able to:

1. Describe the correct manner in which to approach clients.
2. Describe the correct manner to position clients for venous access.
3. Describe proper bedside manner, and explain its importance.
4. State the procedure for confirmation of client identification, and correct sample labeling, and the importance of each.
5. Present the concept of consent and its applications to venous access.
6. Discuss the legal implications of failure to obtain consent.
7. Identify the procedure to follow when a client does not have proper identification.
8. Identify the minimum client information necessary on the sample label.
9. Explain the importance of a test request form (requisition) and describe the minimal information necessary on the form.
10. Discuss the phlebotomist’s role in helping to ensure that the rights of the patient are protected.
2 CLIENT APPROACH AND POSITIONING

Collection of the blood sample is actually one of the last steps in the process of the client interaction. A number of steps are required in the venipuncture procedure before you 'stick' the client to collect a blood sample. Client approach, positioning, identification, consent and dietary requirement verification are necessary before you attempt venipuncture.

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2.1 Introduction

A number of steps are involved before you ‘stick’ the client to collect a blood sample. At all times, the dignity, safety, consent and confidentiality of the client must be considered and honoured. Collection of the blood sample is actually one of the last steps in the process of the client interaction.

Consent must be obtained prior to any invasive procedure. In order to obtain consent, you must first introduce yourself to your client, request permission to invade her space, explain the procedure that you are required to perform, and address questions or concerns that your client has. Initial client interaction involves preliminary client identification, which must then be confirmed following consent to proceed.

Once identification has been confirmed, you can proceed to prepare the client for venipuncture, positioning him safely and comfortably so that the risk of harm to either of you is minimal, and to ensure the greatest potential for successful venous access and subsequent collection of quality blood samples.

Once the client has been positioned properly, attempts to locate and select a suitable vein for venipuncture can begin.
2.2 Client Rights

Regardless of the waiver(s) a client has signed on admission to a healthcare facility, he/she has rights that must be respected, according to a code of federal regulations.

Individual facilities often publish brochures that explain the rights of the client in compliance with federal regulations. Healthcare workers should become familiar with, and respect, the clients’ rights.

Generally speaking, patient rights include the following:

1. Patients have the right to be treated with dignity and respect.
2. Patients have the right to obtain from their physician complete information about their diagnosis, treatment, and prognosis in terms familiar to them.
3. Patients have the right to receive information necessary to give informed consent prior to a procedure.
4. Patients have the right to refuse medical treatment and to be informed of the consequences of their action.
5. Patients have the right to share in the decision-making involved in their care and treatment.
6. Patients have the right to privacy. Case discussion, consultation, examination, and treatment should be conducted discreetly.
7. Patients have the right to expect that all communication and records concerning their care be treated as confidential.
8. Patients have the right to expect the hospital to make reasonable responses to their request for services and to provide evaluation, service, and/or referral as indicated by the urgency of the case.
9. Patients have the right to obtain information as to any relationship of their hospital with other healthcare and educational institutions in relation to their care, and to the professional relationships among people treating them—this includes students.
10. Patients have the right to be advised if the hospital proposes to engage in, or perform, human experimentation affecting their care or treatment. Patients have the right to refuse to participate in research projects.
11. Patients have the right to examine and receive an explanation of their bill, regardless of the source of payment.
12. Patients have the right to expect continuity of care, including future appointments and instructions on continuing healthcare requirements after discharge.
13. Patients have the right to know what hospital rules and regulations apply to their conduct as a patient.
2.3 Client Approach

Regardless of the setting (inpatient or outpatient), client approach should begin with preliminary identification. In the outpatient setting, this will involve calling the client’s name in a clearly audible voice and watching to see who responds. When the client responds, usually by beginning to stand, move towards her so that it is clear that it was you who called her name, and to offer assistance, if required. This is especially important in busy outpatient settings where there may be numerous phlebotomists calling client names simultaneously. Try to avoid the ‘cattle approach’ where a string of names are called at one time and clients are herded into stalls for blood collection.

When approaching the client, you should identify yourself, explain that you are from the laboratory, and require a blood specimen. In the outpatient setting, in most cases, the client has come to you and knows what is about to occur; however, hospitalized clients will not necessarily relate your presence to the procedure that is to take place. In addition, hospitalized clients may be sedated or confused and may not be aware of their surroundings, in which case more detailed explanation may be required.

In the case of inpatients, respect the client’s privacy! Regardless of whether the client is in a private room or a wardroom, the bed and surrounding area is her private space. Prior to entering the room, knock lightly on the door, regardless of whether it is open or closed, and call the client’s name. Wait for a response. If there is no response, repeat the process using a louder voice, in case the client is hard of hearing or is asleep. If there is still no response, locate the client’s direct caregiver for assistance.

When the client responds, introduce yourself and explain why you are there. Wait for the client to invite you inside. If the curtain is drawn around the bed, speak to the client first through the curtain, and wait until you are invited inside. Respecting the client’s privacy will improve his sense of control and avoid embarrassment if he happens to be bathing, using the bedpan, or otherwise engaged.

It should be emphasized that this initial interaction is not sufficient to comply with client identification policies. There is no guarantee that the client who has responded to your call actually belongs to the requisition from which you called her name. The client may simply have misheard you (especially if hard of hearing or anxious), have a similar or same name to the client you called for, or even knowingly responded to the wrong name to jump the queue hoping that once inside you would obtain the correct requisition rather than send him back to the waiting area.

The client may be asleep when you arrive, and should be gently awakened and given time to become oriented prior to performing the venipuncture. Do not attempt to collect a blood specimen from a sleeping patient. Generally, knocking on the door and calling the client’s name will be sufficient to awaken her. But, in the event that the client is in a ward where there are other sleeping clients whom you do not wish to awaken, attempt to awaken her prior to moving into his personal space and/or touching her body. This is not only to protect the
client’s privacy and dignity; it is also to protect you. A confused client may awaken and spontaneously react violently or aggressively to an unknown presence in her personal space.

Gently shake the foot of the bed and call the client’s name to attempt to awaken her. Avoid turning on direct overhead lighting – in addition to being rude, this can also be alarming.

Unconscious clients should be greeted in the same manner as conscious clients, because they may be capable of hearing and understanding even though they cannot respond. Speak to him as you would to any other client, introducing yourself and explaining what is about to occur. The difference is that the client may not respond in an obvious manner.

Unconscious clients may also be able to feel pain and may move spontaneously when the needle is inserted. It is advisable to have someone assist in supporting the arm of an unconscious client in the event of involuntary movements.

If the client’s physician or a member of the clergy is present when you enter the room, it is preferable to return at another time. The client’s time with the doctor and clergy is private and limited, and should be respected. Proceed to the next client and come back later. If the request is for an urgent or timed specimen, excuse yourself, explain the situation, and request permission to perform the procedure at that time.

Visitors should be greeted in the same manner as the client and given the option to wait outside the room until the procedure is completed. If visitors choose to stay, and the client is agreeable, assess the situation. A decision can be made to pull the curtain around the bed, if appropriate. Visitors may also be helpful with to assist with pediatric or apprehensive patients.

If the patient is not in the room when you arrive, attempt to locate her by checking with the nursing station—the patient may simply be in the lounge or walking in the hall, or may have been taken to another department for testing.

2.4 Reassurance

Reassurance of the client is important to reduce anxiety and apprehension. Reassurance begins with the initial greeting and continues throughout the procedure. One of, if not the, greatest communication skill that a healthcare worker can possess is that of being a non-anxious presence.

Show concern for the client’s comfort, and confidence in your ability to perform the procedure. Provide the client with a brief explanation of the procedure, including any non-routine techniques that will be used, such as the additional site preparation required when collecting blood cultures. Most adults have had a blood test before and not much explanation is necessary; however, do not make this assumption. A more detailed explanation may be necessary to a client who has never had a blood test (see Consent).
Clients should not be told that the procedure would be painless. Explain to the client that they may feel slight discomfort when the needle penetrates the skin. Encourage them to take a deep breath or prepare them in another appropriate manner before inserting the needle.

Verbal and non-verbal cues or body language play an important role in communication. Watch the client for signs of anxiety or fear so that you can reassure them and anticipate voluntary and involuntary movement and reactions.

In addition, listening skills are an important part of client communication. Make your client the most important person in your life at that moment. Try to project positive body language. A sincere smile can ease anxiety, reduce fear and encourage open communication.

Face the client and maintain eye contact when speaking with her; this promotes trust. If you are not facing the client, she may fear that something is being hidden from her, feel neglected or objectified. If, however, the client turns away, it may be an indication that he is either frightened or angry. Do not take negative comments, actions or reactions personally. Instead attempt to make the client more at ease. It is important to present a calm and confident image for maximum patient comfort and trust.

Be patient with hearing impaired and elderly clients; make sure that they understand what you are about to do.

Project an empathetic, confident, professional manner. Talk naturally to the client; do not bully or patronize; be reassuring but firm.

The client may not return a phlebotomist’s cheerful, pleasant manner. Hospitalization is often very stressful. Clients may be lonely, scared, confused, angry, or just plain disagreeable, and may react negatively toward you. You may be able to sense uncooperative clients by the deep moan or sigh you hear at the mere sight of your blood collection tray. Remain calm, take a little extra time, and ease into the procedure—always treat the client in a caring manner, under any and all circumstances.

Clients will often ask what tests are being performed, or why blood is being collected so frequently. Follow your institutional policy with respect to answering questions. If institutional policy requires that the client’s physician or someone other than you answer questions, politely suggest that the patient ask their physician these questions. Be helpful, but do not attempt to answer questions or perform tasks outside the scope of your practice! Many tests have multiple uses, and without detailed information of the client’s medical condition and the physician’s intent in ordering, you risk misleading the client.

2.5 Consent

It is essential to obtain consent prior to initiating an invasive procedure, and it is important to realize that consent, once conferred can be withdrawn at any point during the procedure. If
you are attempting to access the vein and the client asks you to discontinue the procedure you must comply.

Informed consent originates from the patient’s legal and ethical right to make decisions concerning her health and health-care. Failing to obtain consent prior to proceeding with a procedure or treatment may result in charges of battery – a form of assault that involves the unlawful touching of another person.

As part of “informed consent” you must inform the client of the procedure and determine that he/she understands what is about to take place before proceeding. In the case of children and individuals who are not capable of understanding the procedure, a legal guardian must provide consent on the client’s behalf.

There are two forms of consent – express and implied. Express consent is that given by the client for a specific medical procedure or treatment and often involves signing a consent form, although depending on the procedure; consent may also be given verbally. Implied consent is shown by a patient’s conduct indicating that he/she is agreeable to the procedure. For venous access, implied consent would involve the client extending her arm or rolling up a shirtsleeve in preparation for the procedure.

Informed consent involves:

- A description of the procedure
- Alternative(s) to the proposed procedure or intervention, if applicable
- Risks, benefits and uncertainties associated with alternatives
- Assessment of patient understanding
- Acceptance of the procedure or intervention by the patient

Once given, a patient can withdraw her consent, and the health-care professional must comply by discontinuing the procedure or treatment. In the case of venous access, the patient can request that the needle be removed and blood collection or IV insertion discontinued.

The emergency doctrine is an exception to the consent rule prior to treatment, and allows for treatment without consent in emergency situations where treatment is urgent and necessary to protect the patient’s life or health. The emergency doctrine does not allow for procedures for which the patient already refused treatment.

Essential elements of consent:

- Consent must be voluntary.
- The patient must be capable of understanding the treatment or procedure, and the risks related.
- The patient must be capable of understanding the consequences associated with refusing the treatment or procedure.
The patient must have the ability to make the decision for the treatment or procedure proposed.

What if the client is incapable of providing informed consent, or is incapable of understanding the information presented prior to giving consent?

If the patient is not considered competent to give informed consent to the treatment or procedure, a family member or court-appointed guardian may make the decision on behalf of the patient.

What is the decision concerning competency based on?

Competency requires understanding the options and their implications, and being able to make a rational decision based on that information. When it is not clear whether the patient is competent to make decisions related to her care, a psychiatric consultation may be helpful or required.

2.6 Client Identification

The single most important step in phlebotomy is correct identification of the client. Serious and possibly fatal consequences may result from collecting blood from the wrong patient, as in the case of specimens for type and cross-match prior to blood transfusion. Misidentification of a patient may result in dismissal and could lead to a malpractice suit against the person responsible.

Client information on the requisition must be confirmed with the client to ensure that it is correct. Failing to confirm client information greatly increases the risk of patient identification errors. Do not assume that the paper work you are holding belongs to the client that you are about to poke! Ideally, identification is made by comparing information obtained verbally with the information on the client's wrist identification band (ID band) and the requisition form. When identifying a client, ask him to state his name and date of birth. Do not confirm identification with a leading question such as "Are you John Jones?" The client may be hard of hearing, too ill to hear properly, sedated, confused, or acutely anxious, and may answer "yes" inappropriately.

If performing venous access in an inpatient setting, ensure that client is wearing an identification band, confirm the information on the requisition and sample labels with verbal information obtained from the client. If the client is not able to confirm her identification, have this information provided by caregiver, or attending family member or friend.

In an outpatient setting, comparison of verbal information with the requisition form may be the only means of verifying identification. Asking the client to spell their names and to give their dates of birth is necessary to meet identification confirmation requirements.
Verbal identification is confirmed by examining the information on the client wrist ID band. All hospitalized clients (exceptions may be found in long-term care facilities and mental health facilities) are required to wear an ID band, usually on the wrist. Information on the wristband should at least include the client’s name, hospital identification number/medical record number, and date of birth. The client’s room number, bed number, and physician's name may also be included.

If there are any discrepancies between the information on the ID and the information on the requisition or the information that the client verbally provides, the specimen should not be obtained until the discrepancy is addressed and the client’s identity is verified.

Identification must be made from an ID band attached to the client. Wristbands are sometimes removed when IV fluids are being administered in the wrist or when fluids have infiltrated the area, causing swelling. Often they are reattached to the client’s ankle. Ankles are frequently used with pediatric clients and newborns.

Sometimes the ID band is removed and placed on the night table by the patient’s bed. This is not acceptable and use of an ID band lying on the bedside table, placed on the wall over the client’s bed, or attached to the door of the room to confirm the identification of the patient is not permitted. The client could be in the wrong bed.

In cases where the patient does not have an ID band attached to their body, the phlebotomist must contact the nursing station and request that the patient have an ID band attached before collection of the specimen. In an emergency situation where there is no time to wait for attachment of the ID band, the name of the nurse confirming the patient’s identification should be written on the requisition.

Unconscious patients are sometimes brought into the emergency room – trauma patients, drug overdose, etc. Specimens should not be collected without some way to positively connect the specimen with the patient. Some hospitals generate identification bands with an identification number and a temporary name, such as Patient X or John Doe, for example, until positive identification is made.

Commercial identification systems are also available which come with an identification band and matching stickers which can be placed on the specimen tubes, requisition form, and any units of blood designated for the patient. Many hospitals use this type of system in addition to the routine identification system for all transfusion patients.

Reading their ID band can identify infants. This is usually located on the ankle. Great care should be taken in identifying as-yet-unnamed infants. They may be called baby girl Rendell or baby girl Arbique, etc. Extra care must also be taken when identifying twins, triplets, quadruplets, and quintuplets. These infants may be identified as Twin A or B. Never rely on the name card on the infant’s bed for identification purposes. Always check the ID band.
A parent or relative should confirm the identification of young children. The patient’s nurse should confirm the identification of children with missing ID bands, and an ID bracelet attached as for adults.

In the case of facilities where clients do not routinely wear ID bands, but may be confused or incapable of accurately confirming identity, follow institutional policy with respect to confirmation of identity.

Outpatients generally do not have ID bands. They do, however, usually have a hospital or clinic ID card. Clients arriving at outpatient clinics may arrive with the physician’s test order form (prescription/order form) rather than the appropriate laboratory request form. The receptionist will verify the identity of the client and complete the proper lab requisition form, although most labs supply physicians with copies of their requisitions and client’s usually arrive with a completed requisition.

Even though the receptionist has identified the client, and the phlebotomist has called the client from the waiting room, identification must be verified again prior to collection of the blood sample(s). Anxious or hard of hearing patients may think that they heard their name called when a similar name has been called—there could also be two or more patients in the waiting area with the same name. The phlebotomist should ask an outpatient to state his name and date of birth.

In the event that a patient cannot respond or is incapable of an accurate response, a nurse, relative, or friend should be asked to identify the patient by name, address, and birth date. This information should be compared with that on the requisition.

2.7 Test Request Form (requisition form)

Request for blood testing must be in compliance with state, provincial and regional healthcare requirements. Currently, in many areas, the cost of blood collection and testing is required to be paid by the individual unless a national or group medical insurance plan is available. Coverage for healthcare costs requires that the request for testing be made by a physician or other approved provider. In most cases, the client’s physician orders testing dependant on a patient’s symptom(s) or complaint, in order to rule out or confirm a disease process. Testing may also be requested to assess health and guide treatment.

In these cases, clients must present with a test request or requisition for testing from the physician. The healthcare facility will be reimbursed for only those tests ordered by the physician; therefore, it is not appropriate or allowed for clients to add test requests to the existing requisition, or complete their own requisition. Some testing laboratories may require that test requests be made on an official form developed and distributed by the facility. Other testing laboratories may accept test requests prepared on a physician prescription pad.

In Canada, each province administers its own medical insurance plan, and numerous group plans are also available to supplement services that are not covered by provincial plans. As a
resident of a particular province, individuals apply for and carry a provincial plan identification card. Healthcare providers must ensure that client cards have not expired – dates of issue and expiry appear on each card. The health-card carries a unique identification number specific to the individual client so that all charges and be accounted for, and investigated, if necessary, to ensure that charges for reimbursement are valid.

Although healthcare is administered provincially in Canada, it is a nationally funded program, and regardless of the client’s province of residence, she can obtain necessary treatment in any province. A health-care charge for a Nova Scotian visiting or living temporarily in British Columbia is reimbursed by the province of N.S. to the province of B.C. Presentation of a valid health-card is necessary to ensure proper charges and reimbursement occur. The one exception to this might be a Quebec resident obtaining laboratory work on another province.

The test requisition must include the client’s full name, health-card number (or other unique identification number in areas where health-cards do not apply), date of birth, mailing address, physician name and/or identification number and address, physician signature, and date of request. This is in order that the report is sent to the correct address of the ordering physician. Some provinces will only accept requests made within a certain length of time (within 3 months of physician’s test request) to ensure that testing is still appropriate.

In facilities with laboratory information systems, the client information and test requests are entered into a computer system, and labels printed from the computer to apply to samples once they have been collected. Depending on the computer system in use, the phlebotomist may actually be working only with sample labels containing all appropriate information. It is even more important to pay close attention to identification information that may be compacted on a small sample label. In large centers, during the night requisition information is often entered by laboratory staff when the collection team assembles in the morning, a stack of labels attached to a printer awaits them. Labels must be detached and separated carefully to ensure that each ‘set’ represents one patient only.

Some laboratory information systems print a bar code on the label as well, but unless the client identification band also contains the bar code and the phlebotomist is equipped with a portable bar-code reader for client identification, the bar code is only useful when the samples reach the laboratory. Facilities using portable barcode readers for client identification greatly reduce the risk of identification errors. The systems, which use these readers and the barcode readers themselves, are often cost-prohibitive, however.

If dietary or other restrictions or other patient preparation is required prior to collection of blood samples, confirm this information and indicate on the requisition. Once samples have been collected, complete the collection information by signing requisition with name, date and time of collection.

Further information on the test request form is provided in the Module on Blood Collection Equipment and Supplies.
2.8 Verify Dietary Restrictions

The phlebotomist must verify with the client that appropriate dietary restrictions or pre-test preparations have been followed such as fasting or abstaining from medications. If pre-test instructions have not been followed, the phlebotomist should inform the nursing station before collection of the specimen. If the specimen is still required, information such as “non-fasting” should be clearly written on the specimen and requisition. so the physician does not subsequently misinterpret the test result.

The ingestion of food alters the composition of blood, interfering with some test results. Glucose levels greatly increase with the ingestion of foods with sugar in them, but generally return to normal within two hours of eating. Fatty substances such as butter and cheese increase fatty acids and lipid content anywhere from one to ten hours or more. As well as altering test results, these fats can cause the serum or plasma to appear cloudy or lipemic, interfering with test procedures or interpretation of results.

Tests such as glucose, cholesterol and triglycerides require that the client not eat or drink (except water) for 8-12 hours before collection of the specimen. The specifics will depend on the specific test ordered. It is the responsibility of the phlebotomist to confirm that the client was fasting prior to sample collection. If the client ate or drank, anything other than water, within the required fasting period, the phlebotomist should check with the direct caregiver before proceeding to collect samples. If it is decided that the test still be performed, the phlebotomist must indicate “non-fasting” on the requisition.

Be clear when confirming dietary restrictions – not everyone understands that fasting means not eating or drinking. Ask clearly “Have you had anything to eat or drink in the past 12 hours?” to avoid client misinterpretation. Black coffee or tea and even chewing gum can affect metabolic processes and alter results of tests that require fasting.

2.9 Client Positioning

A patient should be either safely seated or lying down while having blood collected. Proper positioning of the patient is necessary for a number of reasons:

1. To allow easy access to veins.
2. To provide phlebotomist with a comfortable position - if you are cramped or otherwise uncomfortable, your chance of success will decrease.
3. To protect the patient against injury from falling if he has a reaction.
4. To make sure the patient does not have anything in his mouth.
5. Results of some tests are affected by the positioning of the patient. Where this is an issue specific the ordering physician will give collection details.

Clients in an outpatient setting are generally seated in chairs specially designed for blood collection. These chairs provide maximum comfort and safety as well as easy accessibility for the patient and phlebotomist. The chair should be equipped with adjustable armrests, which support the arm and prevent bending back the elbow and subsequent flattening of the
veins. The chair should also be equipped with a safety device to prevent the patient from falling.

Outpatients who are weak or have fainted previously during or following blood collection should be lying down when the procedure is performed.

Once seated, the patient’s arm should be supported firmly on a slanting armrest, extended downward in a straight line from shoulder to wrist. The arm should not be bent at the elbow.

Inpatients normally have blood collected while in a supine position. The arm should be extended in a straight line from shoulder to wrist, and not bent at the elbow. The hand should be lower than the elbow. A pillow or towel can be used to support the patient’s arm. If the patient is not in bed, have him sit at a small table or close to the bed so that his arm can be supported across the bed. Patients should be seated so that they will not fall if they faint. Bed-rails may be let down carefully, avoiding intravenous lines, catheter bags, and tubing or other equipment. Bed-rails must be raised when the phlebotomist is finished. Never leave a room without returning bed-rail to the upright position. If the patient falls out of bed because the bed-rail was left down, you are liable.

Clients should not be eating, drinking, chewing gum, or have thermometers, toothpicks or other foreign objects in their mouths during venous access. The client may choke or injure himself (e.g. bite reflex on thermometer).
References

