

CONSIDERATIONS:

1. Point-of-Care (POC) PT/INR meters are a convenient and quick way to determine if a patient's warfarin (Coumadin) dose is keeping the patient's clotting time within the desirable range.
2. PT/INR meters cannot be used to determine PT/INR for patients who:
 - a. Are on heparin therapy, including low molecular weight heparin
 - b. Are affected by other substances as per manufacturer
3. Physician orders are needed to perform a PT/INR with a POC device. The clinician cannot substitute the POC device for a venipuncture order.
4. Each PT/INR device may have special requirements depending on the manufacturer. Read the device's directions carefully. Some requirements of many devices include:
 - a. Monitor and test strips must be at room temperature prior to the test (between 50 °F and 95 °F)
 - b. Monitor must be kept on a firm flat surface during testing. The drop of blood must be brought to the test strip/device, instead of bringing the device to the drop of blood
 - c. Check test strip packet. Strips will not be accurate if exposed to humidity or expired
 - d. Assure codes on test strips match code in monitor
 - e. If a patient has a hematocrit <30 or > 50 a QCI error will appear and patient will require a venipuncture.
 - f. A large drop of hanging blood is required
Milking the finger will produce false results
5. Usually, the target PT/INR is 2.0 to 3.0. The target for mechanical heart valves is usually 2.5 to 3.5. Individualized parameters for the patient should be obtained.
6. The PT/INR device must be adequately cleaned between patients, following manufacturer's directions. Generally, the whole machine should be wiped down with a damp, not wet/disinfectant wipe, while paying special attention to the test strip area.

EQUIPMENT:

PT/INR Point-of-Care device
Non-sterile gloves
2 x 2 gauze or cotton ball
Lancet
Test strip
Alcohol swab
Sharps container
Pipette or syringe, if indicated

PROCEDURE:

1. Adhere to Standard Precautions, explain procedure to patient/caregiver and assemble supplies.
2. Ask patient to warm hands (wash in warm water, rub hands briskly) to increase circulation.
3. Position patient next to a flat hard surface.
4. Place machine on a stable, flat surface. DO NOT move machine until test completed.
5. Turn on meter. Verify strip code with machine code or follow manufacturer's recommended guidelines for calibrating machine.
6. Gently massage finger from hand to finger tips several times to increase blood flow. Avoid excessive squeezing or "milking" which will cause tissue fluid to be expressed, compromising specimen integrity.
7. Clean site with alcohol pad. Allow to air dry.
8. Prepare the lancet in the finger puncture device according to the instruction of specific device, or if using a lancet, hold the lancet between the thumb and forefinger.
9. Grasp the patient's finger firmly with other hand.
10. Firmly place the finger puncture device or lancet to the finger and prick finger.
11. Drop lancet in sharps container.
12. Wipe off the first droplet of blood with a gauze or cotton ball.
13. Allow drop of blood to form. If blood flow is inadequate, gently massage the proximal portion of the finger and then press firmly on the distal joint of the finger.
14. A well-beaded drop of blood should form at the puncture site.
15. Absorb the blood drop with the test strip or capillary tube. Ensure that there is adequate blood sample.
16. Ask patient to hold firm pressure of puncture site with 2 x 2 gauze until bleeding stops.
17. Record PT/INR result.
18. If meter indicates error, repeat the test.
19. If meter indicates error again, alert physician, obtaining order for venipuncture.

AFTER CARE:

1. If result is outside parameters, before calling physician, review with the patient/caregiver:
 - a. Adherence to warfarin regime
 - b. Dietary changes that could cause PT/INR to be outside parameters
 - c. Any signs/symptoms associated with abnormal PT/INR level
2. Document in patient record:
 - a. PT/INR reading
 - b. Presence or absence of signs and symptoms if reading was abnormal
 - c. Any instructions given to patient/caregiver

- d. Any communication with physician
- 3. Communicate with physician about:
 - a. Individualized patient parameters
 - b. Readings that are outside parameters
 - c. Orders to adjust warfarin dose, if given
- 4. Assure meter is cleaned and maintained according to manufacturer's instructions.
- 5. Return supplies to designated area.

REFERENCE:

FDA (2010). Use of Fingertick Devices on More than One Person Poses Risk for Transmitting Bloodborne Pathogens. Retrieved on May 31, 2012 from <http://www.fda.gov/MedicalDevices/Safety/%20AlertsandNotices/ucm224025.htm>.

Adopted VNAA; Approved Policy Committee 01/14/14