

B-150 R Pulse Oximetry

Purpose

Perform a cost-effective and non-invasive measurement of arterial oxygen saturation.

Explain an immediate and ongoing method to assess client response to treatment.

Applies To

Registered Nurses

Licensed Practical/Vocational Nurses

Other (*Identify*): _____

Equipment/Supplies

- Pulse oximeter.
- Sensor (clip on or disposable adhesive sensor).
- Cutaneous sensor probe.

Assessment Considerations

- Inaccurate oximetry readings can be associated with fever, hypothermia.
- Low blood pressure or low perfusion status, carbon monoxide poisoning or recent dye injection studies.
- Cold fingers give inaccurate readings.
- Blood pressure readings of less than 90 systolic may provide inaccurate results.
- Inadequate blood flow results in erroneous readings.
- Saturation on pulse oximeter is usually 2-4% higher than measured arterial oxygen saturation.
- Nail polish or artificial nails can distort readings.
- Use appropriate sensor probes - they are designated for fingers, toes, or earlobes (*recent studies have shown finger probes are more accurate*).

Procedure

1. Wash hands. Refer to the Hand Washing procedure.
2. Identify monitoring site. The oximeter probe may be applied to the ear, finger, toe or bridge of the nose in adults and to the foot, wrist or hand in infants.
3. Explain the procedure and Purpose to the client.
4. Use acetone to remove nail polish.
5. Turn machine on and attach sensor to the monitoring site. Make sure the sensor probes are aligned directly opposite each other. (*Oximeter sensors*

contain both red and infrared light emitting diodes and a photodetector. The photodetector registers light passing through vascular bed, the basis for microprocessor determination of oxygen saturation).

6. Assess for proper sensing of pulse. Clients with peripheral vascular disease, *Reynaud's Syndrome, or cold hands may have difficulty obtaining readings.*
7. Read saturation level on the digital readout monitor; evaluate findings with previous levels and oxygen changes.
8. Remove probe and turn off oximeter.
9. Wash hands. Refer to the Hand Washing procedure.

Documentation Guidelines

Document in the clinical record:

1. Oxygen saturation results.
2. Oxygen administration rate.
3. Any other pertinent findings.

Related Procedures

None

Policy History

| | |
|---------------|---|
| Approval Date | 11/1/2009 |
| Approved By | Anne Tyson, Herman Pippin, Sandra Hill |
| Revision Date | 12/31/2009 |
| Approved by | Anne Tyson, Herman Pippin, Sandra Hill |
| Revision Date | 8/24/2011 Gail Harris, Lynne Carpenter, |
| Approved by | Mike Carpenter |
| Revision Date | |
| Approved by | |