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subject: pulse oximetry

Philips nasal alar SpO_2 sensor by curaplex®

introduction

Pulse Oximetry is a non-invasive method that enables rapid measurement of the oxygen saturation of hemoglobin in arterial blood. Pulse Oximetry can rapidly detect changes in oxygen saturation, thus providing an early warning of hypoxemia (insufficient oxygen content in the blood) and hypoxia.

purpose

This policy will provide clinical staff with appropriate guidelines and the procedure to be used when obtaining pulse oximetry measurements with the Nasal Alar SpO_2 sensor.

indications

- Pulse detection: Low perfusion state which reduces peripheral blood flow (cold digits)
- Hypotension
- Hypovolemic shock
- Cold weather/house
- Movement: rigors or shivering, poor circulation, atrial fibrillation, vasoconstriction, arterial constriction, shock, cardiac arrest hypothermia

policy

Continuous pulse oximetry use with Nasal Alar sensor for patients with challenging and compromised peripheral pulse oximetry values.

competency/training

The Unit Supervisor/designee shall ensure each of their nursing service staff receive pertinent orientation to all equipment used on the unit. All staff are required to comply with mandatory training as specified in the Institution's Mandatory Training Matrix. Clinical Staff are also required to comply with service specific mandatory training as specified within their service training matrix.

general information

Pulse Oximetry is the noninvasive measurement of oxygen saturation (SpO_2). All Clinical Staff may assist in obtaining pulse oximetry readings for the care and monitoring of the patient. Indications for use of the pulse oximetry may be any of the following:

- Evaluate oxygen therapy on an intermittent basis
- Evaluate or monitor oxygen saturation in individuals who are hemodynamically unstable
- Evaluate oxygen saturation in individuals with sleep apnea or upper airway obstructions
- Monitor oxygen saturation in individuals where arterial puncture is difficult or contraindicated
- Use during a medical emergency

There are no contraindications to the use of Pulse Oximetry. Pulse Oximetry only reflects Saturated percent of oxygen (SpO_2) in the arterial system. It does not indicate changes in either ventilation or metabolic conditions. For this reason, Pulse Oximetry should not be an alternative to an Arterial Blood Gas. A Pulse Oximeter is available on all Individual occupied units.

equipment

- Pulse oximeter / monitor
- Nasal Alar Sensor
- Approved cleaning wipes and prep

care/cleaning and handling of the oximeter

Follow manufactures instructions/ guidelines on care and handling of the oximeter. Central Supply serves as the resource for all questions regarding medical equipment used on the units.

procedure

staff action and key points

A. Review chart for appropriate orders

B. Collect appropriate equipment and ensure all equipment is in working order.

C. Identify individual. (Always use two forms of identification.)

D. Explain procedure to individual. Explaining the procedure will help to elicit cooperation and allay apprehension.

E. Place the sensor as directed by the manufacturer's instructions, assessing any barriers. Proper function of the pulse oximeter will only be possible if the sensor is placed as intended by the manufacturer. While using peripheral sensors to monitor the patient's arterial saturation be aware that dirt, nicotine staining, intravenous dyes, poor perfusion, skin pigmentation or nail polish may interfere with the transmission of the light signals, causing inaccurate results. These do not affect the Ala Sensor.

F. Application begins with good site prep to ensure a clean connection and a strong signal. Wiping the outside of the ala, nose, and if necessary, swabbing the inside to insure clean contact is important.

G. Once the site is prepped, use the provided applicator to apply the sensor to the ala on the back part of the nostril toward the cheek. Once in place remove the applicator. Note that the sensor has been designed specifically to fit on the ala with the larger rectangular curved pad and cable on the outside.

H. Secure the sensor by running the cable under and around the ear, leaving some slack over the cheek. Should the ear be unavailable, you can secure the sensor over the cheek using skin-safe tape. The goal is to make sure the cable has slack and does not hang freely from the nostril.

I. It is recommended to alternate sides of the nose every 8 hours, most often at the beginning of a 12-hour shift, or when the patient arrives from another area of the hospital, and checking the site (skin integrity) every 4 hours.