PULSE OXIMETERS IN THE SCHOOL HEALTH OFFICE

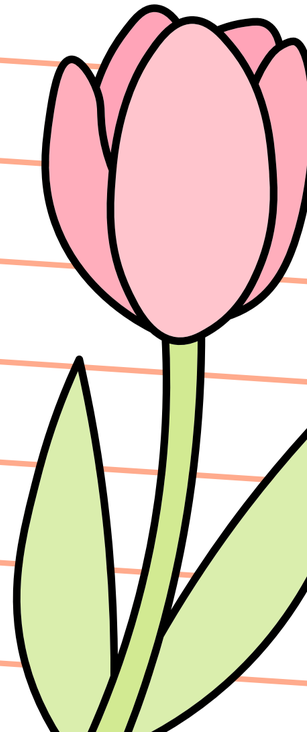
SNAC-S

MARCH 26, 2025

By: Deb Cook, RN, AE-C

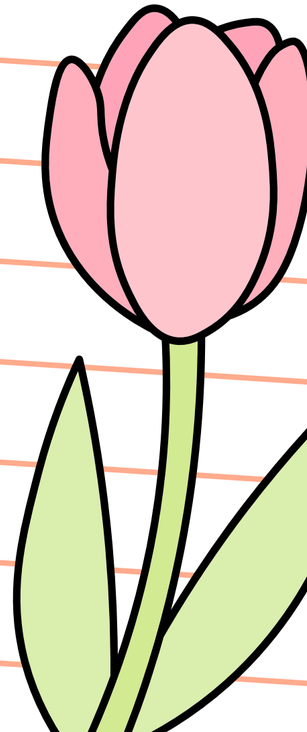
WHY DISCUSS PULSE OXIMETERS?

1) Pulse oximeters are sometimes used as part of the assessment for a child complaining of respiratory difficulty or c/o asthma symptoms.
2) How much should we rely on a pulse ox?
3) Correct application/use?
4) What protocols are needed/written guidance?



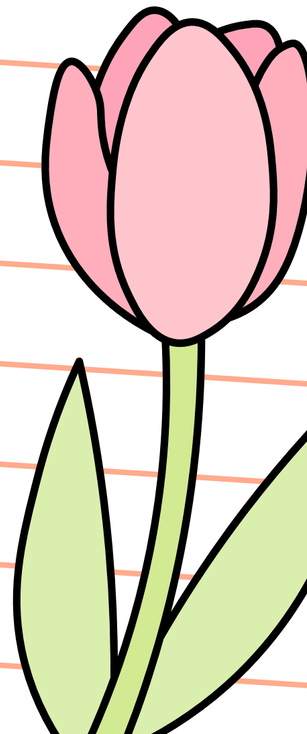
PREPARATION TO USE

- Make sure they don't have nail polish or glitter on their nails.
- Resting for at least 5 minutes before taking the reading.
- If hands are cold, warm them by rubbing together.
- Hand at waist level - try resting their hand on table or arm of chair.



TAKING THE READING

- Switch on
- If using with a clip, squeeze to open and put the child's finger in until their fingertip touches the end. If using one with tape, make sure the two surfaces are on opposite sides of the finger.
- Best to use middle or index finger.
- Wait 1-2 minutes until their pulse is steady and SpO2% has not changed for at least 5 seconds.

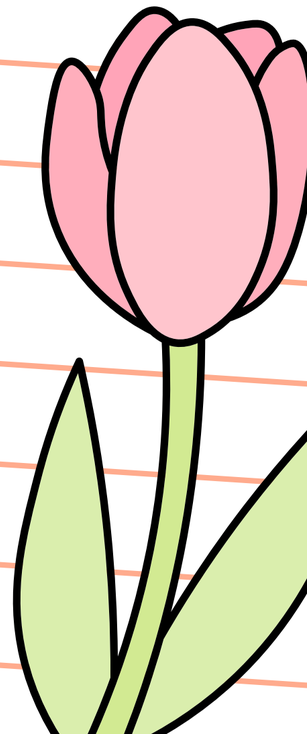


USING THE CORRECT SIZE PULSE OX

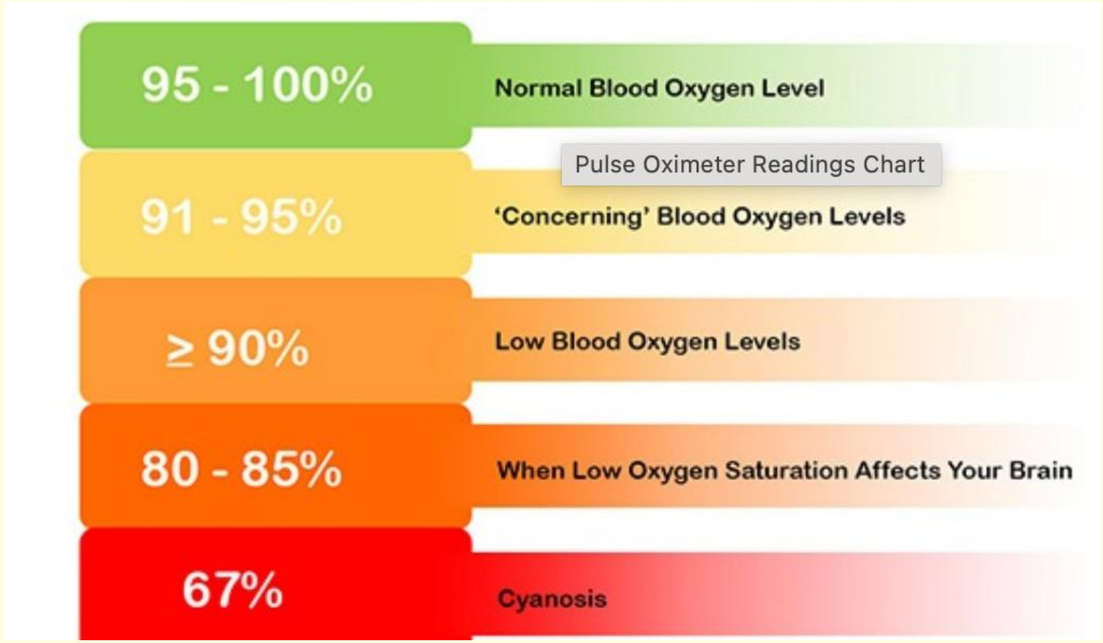
- Children over 30 kg/66# (9 years or older if you don't know child's weight)
  - You can use an adult pulse oximeter for the child, as long as their finger goes all the to the end of the probe. Using an adult oximeter on smaller children may give an inaccurate reading.

USING THE CORRECT SIZE PULSE OX

- Children under 30 kg/66# (younger than 9 years if you don't know child's weight)
  - Need to use a child's pulse oximeter
    - clips onto the finger with a child sized clip
    - wraps around the finger with tape



BLOOD OXYGEN LEVELS PULSE OX CHART



DID YOU KNOW?

“Pigmentation and poor perfusion work together to degrade pulse oximetry performance.” (Philip Bickler, MD, PhD, Hypoxia Research lab at UCSF.)

Devices are three times as likely to miss dangerously low blood oxygen levels in Black patients. (FDA’s Promised Guidance on Pulse Oximeters unlikely to End Decades of Racial Bias; MEDPAGE Today, Oct 2024).

IMPORTANT NOTE

- Always treat the student and not the equipment.
- Ongoing recheck/assessment of the student.
- Don’t rely solely on equipment (pulse ox).

Resources

- Desisto, M.; Implementing Pulse Oximetry in the School Health Office, The Time is Now. (2012) NASN School Nurse, Volume 27, Issue 5.
- Health A-Z; Healthify, How to Use a Pulse Oximeter in Children; https://healthify.nz/health-a-z/p/pulse-oximeter-children

Resources

- Enoch, AJ; Does Pulse Oximeter Use Impact Health Outcome? A Systematic Review. Archives of Disease in Childhood (2016) 101: 694-700; https://adc.bmj.com/content/101/8/694
- MEDPAGE TODAY; FDA's Promised Guidance on Pulse Oximeters Unlikely to End Decades of Racial Bias; 2024; https://www.medpagetoday.com/pulmonology/generalpulmonary/112340?xid=nl_mpt_DHE_2024-10-10&mh=a31c3823cab8a836c7c95d215929841f

THANK YOU