Oxygen Saturation Limits

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Published In/Presented At

Leatherman, M. Mcgroarty, E. Pipan, K. Sottolano, E. (2019, November 7). *Oxygen Saturation Limits*. Poster Presented at: VHN Vizient/AACN Nurse Residency Program Graduation, Lehigh Valley Health Network, Allentown, PA.

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BACKGROUND

- ROP = Retinopathy of Prematurity
- An abnormal growth of blood vessels throughout the retina; blood vessels scar and pull the retina out of position, which causes retinal detachment leading to permanent vision damage or blindness
- ROP affects premature infants who are less than 32 weeks gestation and is increased with supplemental oxygen use in the neonate
- Compared to VON (Vermont Oxford Network), LVHN's severe ROP rate has been rising

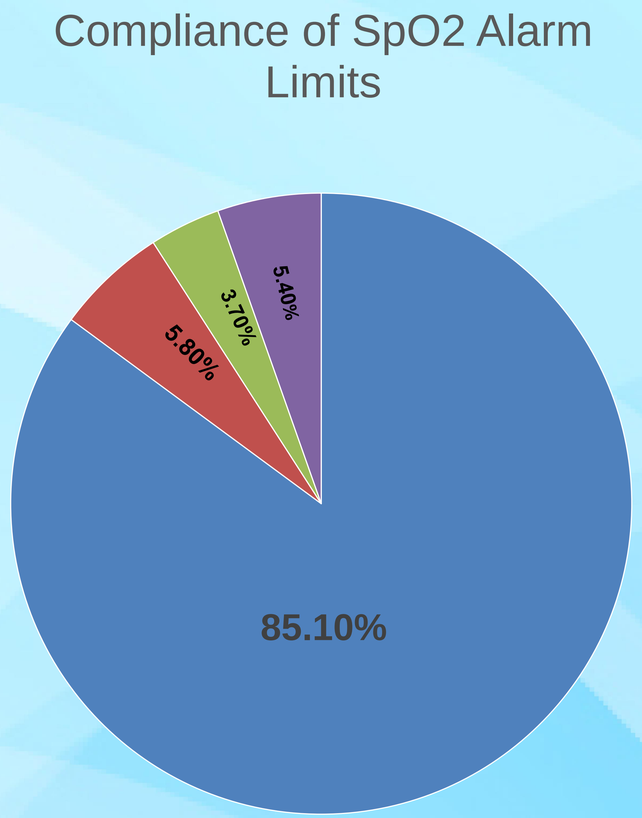
P I C O

- **P – NICU nurses**
- **I – Verification of oxygen saturation alarm limits on monitor with provider ordered saturation range during shift report**
- **C – Not verifying with on-coming RN**
- **O – Compliance of accurate monitor alarm limits for oxygen saturation that follows the given provider order**

EVIDENCE

- A similar study found – in infants weighing <1500g the SpO2 lower alarm was set correctly 91% of the time
- In the same infants, the SpO2 upper limit was only set correctly 23% of the time
  - Reasons upper limits were set incorrectly:
    - Belief that hypoxemia is more detrimental than hyperoxemia
    - The default monitor setting for upper limit is 100%
    - Alarm fatigue
- Implementation of a standardization in SpO2 target ranges, along with a bedside reminder led to:
  - SpO2 values being higher than target range 20-50% of the time

OUTCOMES



IMPLEMENTATON

- Sample size
  - 247 patients
- Data collection
  - FiO2 sat orders
  - FiO2 monitor set limits
  - Type of support
  - Hourly saturation documentation

NEXT STEPS

- Continued education on importance of O2 ordered saturation compliance

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