Transcribed Oxygen Saturation vs Oximeter Recordings in Very Low Birth Weight Infants.
Ruiz T.L., Trzaski J.M., Sink D.W., Hagadorn J. *J Perinatol.* 2013 Dec 19.

Objective
The objective of this study was to compare hand-transcribed oxygen saturation (SpO2) with electronic oximeter data in very low birth weight infants (VLBWI, <1500 g).

Study Design
Oximeter data were downloaded from birth through 36 weeks postmenstrual age (PMA) for VLBWI before and after interventions to improve neonatal intensive care unit oxygen management. Transcribed SpO2 values were obtained by chart review. Proportions of transcribed and oximetry data in target (85 to 93%), hypoxemic (80 to 84%), and hyperoxemic (>98%) ranges before and after intervention were compared.

Result
There were 30 441 oximetry hours before intervention and 54 538 oximetry hours after intervention. Transcribed SpO2 values correlated strongly with oximeter overall. However, during hours on supplemental oxygen, transcribed values significantly over-documented target range and under-documented values 80 to 84 and □98%. This finding varied by respiratory support and PMA, and increased after intervention.

Conclusion
Transcribed SpO2 values overdocumented target range and underdocumented hyperoxemic and hypoxemic ranges compared with electronic oximeter data. These results support incorporating electronic oximeter data into medical records.