

Position Statements on Practice

Performing Pulse Oximetry by unlicensed providers

Original position issued: April 26, 1996

Reconsidered: October 16, 2006

Position:

A pulse oximeter is a device used to non-invasively determine blood oxygen saturation (SaO₂). Using a pulse oximeter for such a purpose by applying a probe or recording and conveying the results of such a test falls within the legal scope of practice of respiratory care (See R.C. ' 4761.01 (A) (1)). Other licensed health care professionals may also be able to perform pulse oximetry as described above, but since the procedure has not been designated a limited aspect of care (See R.C. ' 4761.10 (A)), unlicensed personnel are not permitted to perform this procedure in an acute care hospital or any where in Ohio.

The board chooses not to identify pulse oximetry use as a limited aspect of care for the following reason(s):

Pulse oximetry involves more than the apparently simple act of placing a monitor on a patient and recording a reading. In order for pulse oximetry to accurately reflect the patient's oxygenation (SaO₂), the board believes the clinician must assess and relate several factors: the reading itself, the patient's clinical appearance and history, and the environment. By itself, a pulse oximeter reading means little. When joined with the other two factors, a clinician is able to more appropriately guarantee the accuracy of the reading and thereby, the resultant action to be appropriate and safe.

Pulse oximetry technology can accurately reflect a patient's SaO₂. However, under certain conditions the SaO₂ is erroneously reported. This is because the device only analyses the saturation of the hemoglobin. It cannot differentiate oxyhemoglobin from dyshemoglobin (i.e. COHb, MetHb). When hemoglobin is fully or partially saturated with dyshemoglobin, the pulse oximeter simply reads the percent hemoglobin saturated; resulting in an erroneously high SaO₂ reading. An improperly working furnace or a fire can increase a patient's level of COHb. Also, heavy smoking has been known increase total hemoglobin saturation by 6% - 8% due to COHb. Some medications containing nitrites can raise the MetHb level, again increasing the overall hemoglobin saturation

level. A pulse oximeter may read an SaO₂ level of 90%, when in fact, the level may be only 82% or lower.

Technology has provided wondrous results; however, the results are only useful if accurate and only as good as the individual obtaining and reporting them. In the case of pulse oximetry, many more variables than just the reading itself influence the accuracy of the results.