



State of Minnesota
The Office of Ombudsman for
Mental Health and Developmental Disabilities
Medical Alert - Pulse Oximetry



This Medical Alert is based on the work of the Office of Ombudsman for Mental Health and Developmental Disabilities Medical Review Subcommittee and should be posted prominently. The Office of Ombudsman for Mental Health and Developmental Disabilities works to improve the services provided to people with disabilities by communicating important information found in the Medical Review Subcommittee's reviews of deaths and serious injuries. Thank you for promptly reporting deaths and serious injuries. You are helping us to meet our mission.

For those of you who use a device (pulse oximeter) to approximate a client's oxygen saturation or O₂sat levels, please note the following from the American Thoracic Society:

Pulse oximetry is a way to measure how much oxygen your blood is carrying. By using a small device called a *pulse oximeter*, your blood oxygen level can be checked without needing to be stuck with a needle. The blood oxygen level measured with an oximeter is called your *oxygen saturation* level (abbreviated O₂sat or SaO₂). This is a percentage of how much oxygen your blood is carrying compared to the maximum it is *capable* of carrying. Normally, more than 89% of your red blood should be carrying oxygen.

Most people need an oxygen saturation level of at least 89% to keep their cells healthy. Having an oxygen level lower than this for a short time is not believed to cause damage. However, your cells can be strained or damaged if low oxygen levels happen many times. If your oxygen level is low on room air, you may be asked to use supplemental (extra) oxygen. The oximeter can be used to help see how much oxygen you need and when you may need it. For example, some people need more oxygen when asleep than when awake. Some need more oxygen with activity than when at rest.

From: <http://www.thoracic.org/patients/patient-resources/resources/pulse-oximetry.pdf>

Case Study: A 50-year-old man, with profound developmental disabilities, cerebral palsy, severe cervical stenosis, hypoxia secondary to pneumonia, hypothyroidism, low hemoglobin, and a hospitalization in June 2016 for pneumonia, died in November 2016 in the home and community based services residence in which he had lived. He was under public guardianship and had a DNR/DNI order in place at the time of his death. Two days before his unexpected death, the client had been kept home from his day program after having an emesis. He was reported to be resting and to have had a good day. Later that evening his oxygen saturation (O₂sat) was measured at 89 and staff were instructed by a program lead to increase his supplemental oxygen. He reportedly had a good night. The next day, his staff thought he appeared to be feeling better with his PRN nebulizer treatments given every 4 hours. The program lead was notified by staff at 11:32 pm that his oxygen saturation (O₂sat) was 74. The staff person was told to further increase the client's supplemental oxygen. At 2:14 am, the client was found ashen in color and nonresponsive. 911 was called and the client was transported to his community hospital where he was pronounced dead.

Bottom line: Be sure you know what the client's health care provider has said about when to turn up or turn down the client's supplemental oxygen and **when to call the health care provider with low readings.**