

Advantages of New Technology Pulse Oximetry with Adults in Extremis.

Durbin C.G., Rostow S.K. *Anesth Analg.* 2002 Jan;94(1 Suppl):S81-3.

Thirteen critically ill patients in the thoracic and cardiovascular ICU in whom conventional pulse oximetry (CPO) failed were identified and prospectively studied using an oximeter employing Masimo SET technology (MSO). These patients were elderly and ill, having undergone a variety of thoracic and cardiovascular operations. They were often hypothermic and shivering. Several had arterial assist devices, intraaortic balloon pumps or impending or actual cardiac arrest.

In 12 of these patients the MSO was able to determine the actual arterial saturation as calculated from a coincident arterial blood gas. In the one patient, in whom no saturation was obtained with the MSO, no arterial blood could be obtained due to complete cardiac collapse.

This case series demonstrates the value of the new Masimo SET technology for pulse oximetry in the most critically ill and demanding clinical situations in which other techniques have failed. A significant improvement in patient safety resulted from use of this improved oximetry.