

# **Continuous Pulse Oximetry**

**Debbie Burge RN**

**Deborah.Burge@ucsfmedctr.org**

## **Abstract**

### **Background**

Continuous pulse oximetry monitoring was introduced on to the orthopedic/ spine unit in November of 2010. Research has shown that the use of continuous pulse oximetry (CPO) can facilitate the early identification of respiratory depression in patients.

### **Purpose/ aims/ research question**

The aim of this small test of change project was to investigate whether the implementation of an education module increased nurse's knowledge of continuous pulse oximetry, their ability to identify early hypoxemia and to initiate appropriate interventions, as compared to in-service training on use of the monitors alone.

### **Methods**

A survey was developed from best practice literature and validated by the unit nursing leadership group.

The survey was used to obtain baseline data of knowledge from a convenience sample of 52.17% of the unit RN's.

The education module was presented to all the RN staff at the unit's annual review class, at which time, the same respondents who had answered the first survey completed it again.

### **Results**

The post education surveys showed overall increases in understanding. Knowledge of the unit guidelines for actions to deal with a broken CPO machine increased significantly, from 9.4% to 60.2%. The percentage of respondents correctly identifying indicators for CPO was 42.2% pre education rising to 80% afterwards.

Understanding of the factors, which affect the accuracy of CPO readings increased by 28.58%.

Within the scenario responses some of the greatest increases were in the areas of direct patient assessment and communication with the medical team.

### **Conclusions**

Continuous pulse oximetry can prevent adverse events in post operative patients at risk for respiratory depression, however nursing staff need education to enable them to have the clinical knowledge to identify this early deterioration in the patients condition and initiate appropriate interventions.

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