

178

USING AN INFUSION PUMP SYSTEM AND A CAPNOGRAPHY MONITOR WITH OPIOID PATIENT CONTROLLED ANALGESIA IN ACUTE CARE SETTING (B4), Leola Hau, John Engelbert. Sharp Chula Vista Medical Center, Chula Vista, CA. (leola.hau@sharp.com) IRB approval pending.

The purpose of this study is to evaluate the feasibility of using continuous respiratory monitoring in the acute care setting, and determine if capnography can identify a more precise dose and time relationship between opioid dose and respiratory effects. Continuous capnography data may be helpful in determining the pharmacodynamic of opioids, using initial decline in respiratory rate as an indication of pain relief, and maximum respiratory depression and end tidal CO₂ (EtCO₂) rise to correlate time to peak respiratory depression. This study will be limited to 30 post-operative patients receiving patient-controlled analgesia (PCA) in acute care. The trial will begin in February 2009. The capnography device will be placed on arrival to acute care nursing unit from PACU and continued until the next morning for a maximum 24 hours. The capnography device will continuously monitor the EtCO₂, respiratory rate (RR), and respiratory pauses of patients. Limits will be set for the alarm as per those published in the literature and determined by the institution evaluation committee. Nursing satisfaction data will also be collected. In addition, patients will have a complete profile recorded correlating

change in RR and EtCO₂ to PCA opioid use. This data will also be presented.