

Continuous Capnography Monitoring Policy and Implementation for Patients on Continuous Narcotics

Leslie Farrington RN, MSN, AGACNP-BC CCRN, Cecille Lamorena RN, DNP, SCRNP, CCRN-K, Sheta Chan Pharm.D., BCCCP, BCPS, HACCP, Richard Urgel RN, BSN, CMSRN, Elizabeth Winokur RN, PhD, CEN

Background

- Opioid use can cause opioid-induced respiratory depression (OIRD) and opioid-induced unintended advancing sedation (OIUAS).
- Respiratory failure due to OIRD may have a subtle onset with vital sign changes 6-8 hours before respiratory or cardiac decompensation.
- Continuous capnography or end-tidal carbon dioxide (EtCO2) monitoring detects hypercarbia and respiratory compromise earlier than pulse oximetry or visual respiratory assessment.

Purpose

To develop an evidence-based protocol to guide the monitoring of EtCO2 in non-critical care areas including establishing patient criteria, monitoring parameters, and interventions to be performed by the RN to address opioid-related adverse events.

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Methods

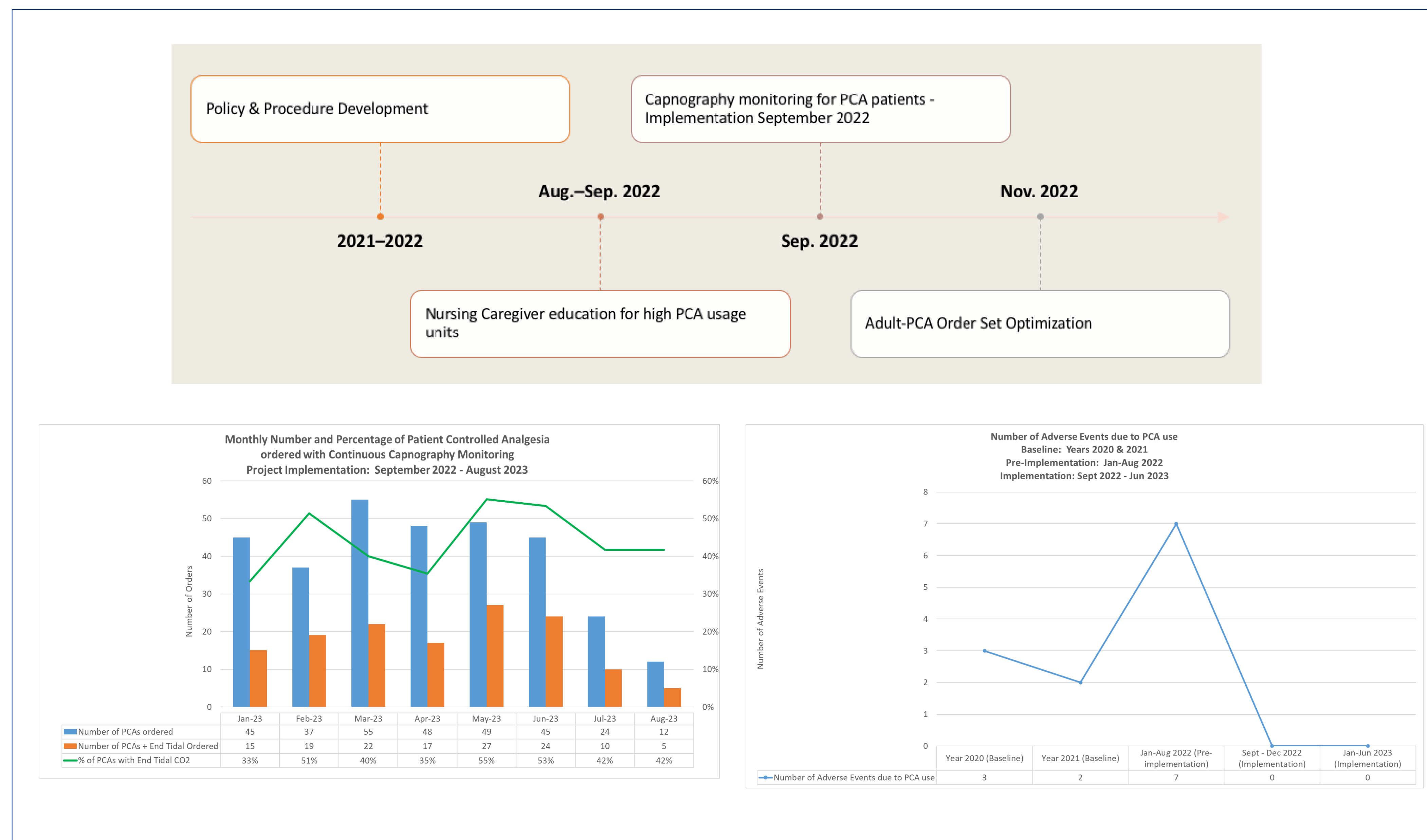
- Design: EBP
Sample: Patients with PCA or continuous opioids
Procedure:
- Policy development
 - RN education
 - Monitor for use of capnography with PCA usage, opioid related adverse events, and PCA related events.

Results

- Adverse Reaction Opioid Events / CY 2020: 21 reported incidents. 82% occurred in a med-surg/tele unit (3 PCA related).
- Adverse Reaction Opioid Events / CY 2021: 41 reported incidents, 61% in med-surg/tele (2 PCA related).
- Adverse Reaction Opioid Events / CY 2022: 53 reported, 60% in med-surg/tele (6 PCA related).
- Oct 2022-June 2023 no PCA related events.

Discussion

- There is an opportunity to reduce opioid-related events.
- Current state:
 - Policy and procedure approved.
 - Nursing & provider education completed.
 - Continuous capnography implemented on Sept. 1, 2022.
 - Capnography added to PCA order sets November 2022.
 - Made aware of separate palliative care PCA order set that could be improved with capnography option.
 - Data gathered on capnography usage and opioid related adverse events/PCA events.
 - No PCA related events after capnography monitoring implemented.



References available upon request.

Implications for Practice

- Ongoing monitoring for reduction of opioid-related events and capnography use.
- Identify other high risk populations receiving opioids who could benefit from continuous capnography monitoring to further reduce the number of opioid related adverse events.