

Non-Pharmacologic Interventions for Pain and Sedation

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NON-PHARMACOLOGIC INTERVENTIONS FOR PAIN AND SEDATION

TNICU/NSICU

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BACKGROUND

- With the rise of reliance on opioid medication worldwide, and in both TNICU/NICU, there is an impending need to find other forms of pain relief for this patient population.
- We selected this project to focus on after noticing a lack of titration with sedation medication in intubated patients with a heavy reliance on using PRN pain/sedation first, rather than trying other non-pharmacological interventions.

PICO

In trauma and neurologically impaired patients, does the implementation of non-pharmacologic interventions reduce the use of pharmacologic pain/sedation medications?

- **P:** Trauma and neurologically impaired patients
- **I:** Non-pharmacologic interventions
- **C:** Pharmacologic interventions alone
- **O:** Impact pain and sedation scores

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EVIDENCE

The evidence showed the following interventions to be effective in reducing pain scores across multiple studies when used independently, or in combination with pharmacologic pain interventions: location specific massage to soothe pain in common areas, such as shoulders, neck, etc.); changing patient's position when need to promote comfort improved perception of pain/generalized aches; using music to help achieve a specific change in behavior, feeling or physiology, and facilitation of regular sleep/wake cycles can improve pain perception of pain. In addition, the manipulation and management of the environment (i.e. implementation of eye masks, reducing lighting/alarms, and the usage of ear plugs were shown to improve patient comfort, and reduce pain scores both alone and in combination with pharmacologic interventions.

IMPLEMENTATION

From June 28th, 2020 to July 12th, 2020, we provided our staff with worksheets, defining implementation steps of our non-pharmacological interventions. Staff were asked to provide the following information

- intubation, sedation, and orientation status
- PRN/drip medications the patient was on
- pre and post-intervention scores
- Add non-pharmacological equipment to unit PAR: earplugs, eye masks, and headphones
- Exclusion criteria: patients experiencing a neurological change due to disease process and patients experiencing a form of ICU psychosis. All other patients were considered viable for our interventions
- Identify appropriate patient inclusion criteria for non-pharm interventions
- Educate unit RNs and TPs of inclusion criteria
- Encourage the use of non-pharm interventions to decrease medication use
- Monitor effects of project on Quality Metrics
 - Decreased restraint use
 - Decreased 1:1 use
 - Improved CPOT and RASS scores in conjunction with lower medication titrations

OUTCOMES

Even with a limited sample size due to COVID-19, our non-pharmacological interventions had an impact on Quality Metrics. Based off our project we found that in three out of our four tested patients, pain scores were impacted to yield a lower result when non-pharmacological interventions were used.

NEXT STEPS

- *Due to COVID-19, we were unable to implement our project to its fullest extent.
- Collaborate with next cohort for continuation of implementation

Table 1. In each critical care patient, after the addition of non-pharmacological interventions during implementation, pain scores were compared to pharmacological medication doses.

Unit	Date	Medication
ICU	6/28/20	PRN Morphine 2mg
ICU	6/29/20	PRN Morphine 2mg
ICU	6/30/20	PRN Morphine 2mg
ICU	7/1/20	PRN Morphine 2mg
ICU	7/2/20	PRN Morphine 2mg
ICU	7/3/20	PRN Morphine 2mg
ICU	7/4/20	PRN Morphine 2mg
ICU	7/5/20	PRN Morphine 2mg
ICU	7/6/20	PRN Morphine 2mg
ICU	7/7/20	PRN Morphine 2mg
ICU	7/8/20	PRN Morphine 2mg
ICU	7/9/20	PRN Morphine 2mg
ICU	7/10/20	PRN Morphine 2mg
ICU	7/11/20	PRN Morphine 2mg
ICU	7/12/20	PRN Morphine 2mg