

Opioid prescribing pre-post implementation of the pain treatment order set

Purpose: Prescription opioids can be effective treatment options for pain management. However, risks are associated with their use. As mindfulness of the opioid crisis grows, more initiatives are being taken to decrease the utilization of prescription opioids. A multidisciplinary pain committee at Wesley Medical Center was formed with the purpose of evaluating institutional processes involving pain management. This committee created and implemented the Pain Treatment order set.

Methods: This single-center, quasi-experimental, pre-post study evaluated total daily morphine milligram equivalents (MMEs) prescribed by intensive care and general floor providers six months pre- and post-order set implementation in January 2020. Patients included were 18 years and older who received at least one dose of intravenous (IV) or oral (PO) opiate. Patients were excluded if they were admitted to the well-baby service. A sample size of 383 patients per arm was needed to achieve 80% power and detect a difference of 1 MME per patient day. Alpha was set at 0.05. Descriptive statistics were used to analyze the primary and secondary outcomes. The primary outcome was further analyzed utilizing the Wilcoxon Signed-Rank test. This study was exempt by the Institutional Review Board.

Results: The median MME per patient day prescribed pre order set was 18.13 [IQR 10 – 30] vs 15 [IQR 9.2 – 26.6] post order set ($p < 0.001$ [95% CI 2.89 – 3.26]). Secondary outcomes assessed include but are not limited to prescribing of opiate adjunctive therapies, IV to PO ratio, and use of opioid reversal agents.

Conclusion: There was a statistically significant difference in the total daily MMEs administered pre- and post- order set implementation. Meaningful reduction in opioid prescribing is attainable through collaborative efforts. Additional tools and educations may be facilitated after positive results with the order set. Further collection of baseline data may be beneficial in determining how minimization of opioid utilization may lead to better patient outcomes.