

Submission Title:

Prescribing Behavior After Emergency Department Transition from Free-text Entry to Default Dosing for Morphine

Author(s)

1. Albert Lee, MD MPH (Role: Presenting Author)
2. Michael Miller, MD (Role: Author)
3. K Tom Xu, MD PhD (Role: Author)
4. Peter Richman, MD MBA (Role: Author)

Abstract

Introduction and purpose

Previously, investigators have evaluated opioid prescribing stewardship by ED practitioners for patients with pain through a broad array of interventions to impact dosing behavior. However, in the era of CPOM, there is a paucity of research that examines how default analgesic doses impact the actual doses patients receive. We investigated emergency department practitioner opioid prescribing behavior after a transition from electronic free-text dose entry to default dosing for morphine.

Methods

This was a retrospective before/after intervention study at an urban ED. We collected clinical data from 250 consecutive patients each within 3-month blocks before and after our institution initiated a change from free-text entry to a default dose of morphine 2 mg. A second blinded study author reviewed 25 records to assess for inter-observer reliability (kappa). Categorical data were analyzed by chi-square; continuous data by t-tests. 95% CIs and ORs were calculated. Using a fixed effect model to control for the potential correlation within each prescriber across multiple patients and time, we performed a multivariate logistic regression. The primary outcome parameter was to assess dosing differences before and after the change to default.

Results

The study group was 500 patients; mean age 54+/-18 years and 53% female. With respect to the before and after subgroups, bivariate analysis revealed that there were no significant differences in age, gender, history of chronic pain, level of training of the provider, and pain score after analgesics. There were significant differences in the distribution of chief complaints ($p=0.002$), initial pain scores (6.4+/-3.3 vs. 7.0+/-2.9;

p=0.02), race (p< 0.001), and reported history of substance use (8.8% vs. 2.8%; p< 0.001). In the multivariate logistic regression, except for the gender variable that showed that females were more likely to receive 2mg (vs 4 mg) initially (OR=4.1, 1.7-9.6; p=0.001), there were no other statistically significant independent variables, including the variable indicating the post (vs pre) period (OR=2.1, 0.6-6.8; p=0.2)

Conclusion

At our hospital, the change from free-text to a default 2 mg morphine dose in CPOM was not associated with significant difference in the initial morphine dose prescribed in the ED.