

# No IV, No Problem: A Cross Sectional Analysis of Antiemetic Therapies in Statewide EMS Protocols

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POSTER PRESENTATION ABSTRACT | ORIGINAL RESEARCH CATEGORY

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**Introduction:** Nausea is a common reason for ED presentation and may represent up to 10% of chief complaints in the prehospital setting. In the collegiate setting, EMS providers often encounter nausea secondary to consumption of alcohol or other drugs. The prehospital management of nausea varies with local protocol and scope of practice. We hypothesized that CBEMS agencies operating at the BLS level may have limited options for antiemetic therapy.

**Methods:** A cross-sectional analysis of publicly available statewide EMS protocols published within the last ten years was completed in October 2018. The presence of a BLS nausea protocol was defined as the primary outcome of interest; secondary outcomes including the availability of oral (ODT) ondansetron or alternative antiemetic agents were defined a priori. Data were collected independently by two trained reviewers using standardized abstraction forms; inter-rater reliability was assessed using Cohen's kappa ( $\kappa$ ) and discrepancies were resolved by the senior author. Descriptive statistics were generated using R v3.3.2. This study was exempt from IRB review.

**Results:** 30 model or mandatory statewide EMS protocols were identified using aggregate databases and internet searches; data were abstracted with  $\kappa = 1$ . Of the thirty states, 13.3% (4/30) have adopted BLS nausea protocols: two allow ODT ondansetron, one allows isopropyl alcohol aromatherapy, and one allows P6 acupressure. No protocols were identified that include intramuscular antiemetics for BLS providers. In addition, 70% (21/30) of state protocols include ODT ondansetron, but 90.4% (19/21) of these restrict administration to ALS providers. 46.7% (14/30) of states include alternative antiemetics for ALS providers such as promethazine and metoclopramide, often as second-line therapies.

**Discussion/Conclusions:** CBEMS agencies operating at the BLS level are unable to administer ondansetron intravenously or intramuscularly. Though ODT ondansetron and isopropyl alcohol aromatherapy are safe and effective for treatment of nausea in the ED, prehospital adoption remains low. Further research should assess the feasibility, safety, and efficacy of introducing these therapies at the BLS level.

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