Safety and Analgesic Outcomes of Low-Dose Buprenorphine for Acute Pain in the Emergency Department: A Retrospective Case Series

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Why it matters

Acute pain is common in the Emergency Department (ED), and clinicians want alternatives to full mu-agonist opioids.

Low-dose buprenorphine (LDB) may give ceiling-limited analgesia with less respiratory depression risk.

Gap: real-world ED data are limited.

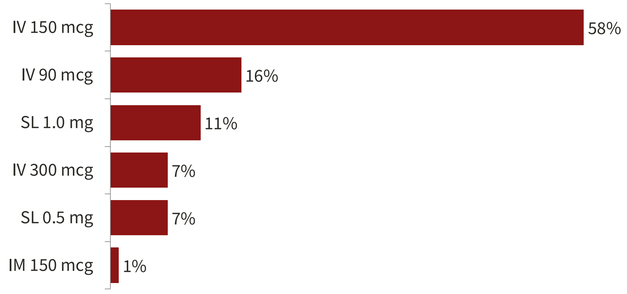
Methods

Design: retrospective consecutive case series, one urban academic ED, Nov 2024–Nov 2025

Patients: adults given 90–150 mcg IV/IM or 0.5–1 mg SL LDB

Outcomes: adverse events; pain (NRS) at triage and 60 min

How LDB was dosed



% of 153 patients; 81% IV/IM, 19% SL

In 153 patients treated in the ED, pain scores fell from **8.5 to 4.1** after low-dose buprenorphine, with **serious adverse events in just 3%.**

8.5 → 4.1
mean pain score (0–10), triage to ≥60 min

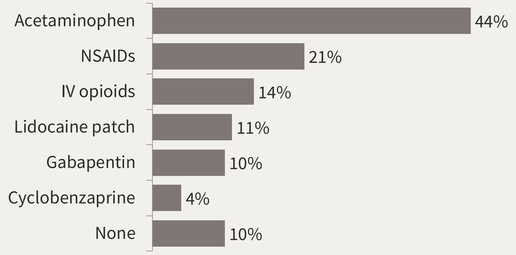
10%
had any adverse event; 3% serious

2
needed naloxone, both with other sedating exposures

Adverse events

Minor, 7%: nausea, dizziness, dysphoria
Serious, 3% (n = 5): somnolence with hypoxia (3), somnolence (1), allergic reaction (1). Mostly older adults on other sedating drugs.

Given alongside LDB



Limitations and Discussion

Single center, no comparator, so no causal claims.
Pain scores were available only for patients with follow-up documentation.

Adverse events following LDB administration were uncommon, but two cases required naloxone. LDB was associated with reduced pain scores, although causality cannot be established.
Further study is needed to define safety, dosing, and appropriate patient selection.

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ASRA Pain Medicine 25th Annual Meeting | Tampa, FL | Abstract 2490988