

Insufficient Opioid Prescribing Leads To Return To The Emergency After Traumatic Injury

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Abstract

Inadequate opioid prescribing at the time of discharge after a traumatic injury plays a major, evidence-supported role in the occurrence of pain-related revisits to the emergency department (ED) within 30 days. Research shows that around 25% of trauma patients needing opioids leave without a prescription, and this absence of pain relief is directly linked to higher rates of return visits.

Keyword: Opioid, Emergency (ER), Pain

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I. Introduction

- Effective pain management is vital for patients recovering from traumatic injuries post-discharge.
- Inefficient prescribing manifests in two main ways that lead to Emergency returns: Under-prescribing (Insufficient Pain Control): A "conservative" approach to prescribing, or failure to manage pain in the hospital, leads to uncontrolled pain at home. Patients often return to the Emergency because they are unable to manage their acute pain with the medication provided.
- Over-prescribing (Excessive Exposure): Large quantities of opioids prescribed at discharge contribute to higher rates of persistent use and potential misuse, which can cause complications that lead to return visits.
- Conservative prescribing may lead to inadequate pain control, resulting in poorer patient outcomes and increased ER visits.¹
- Opioids are often prescribed for acute pain but face scrutiny due to misuse and addiction concerns.²
- Trauma patients require adequate opioid prescriptions during and after hospitalization to manage pain effectively.³
- This study investigates the link between insufficient discharge opioid prescriptions and the likelihood of ER visits for pain within 30 days post-injury.⁴

II. Materials & Methods:

- **Study Design:** Retrospective cohort study (2023-2024) on trauma patients prescribed opioids during their hospital stay and at discharge.
- **Study Population:** 60 trauma patients with acute injuries requiring opioids within 24 hours of discharge.

• Inclusion Criteria:

1. Age group (18 -60 years)
2. Admitted for traumatic injuries needing inpatient opioids
3. Discharged within the study period
4. Prescribed opioids at discharge

• Exclusion Criteria:

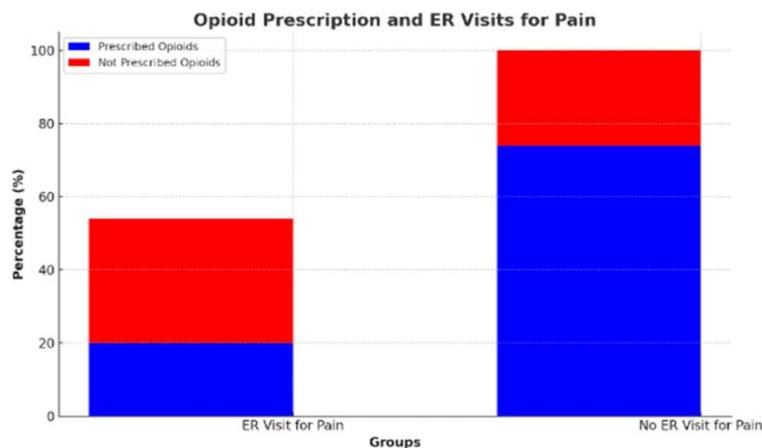
1. Chronic opioid use prior to admission
2. History of opioid abuse or addiction
3. Discharged without opioid prescriptions
4. Known case of liver and kidney disease.

III. Results:

- Among the 60 trauma patients included in the study, 44 (74%) were prescribed opioids at discharge, while 16 (26%) were discharged without opioid prescriptions. Of the total, 14 patients (24%) had an ER visit for pain within 30 days of discharge.
- **Opioid Prescription vs. ER Visits:** Patients who received opioid prescriptions had a lower proportion of ER visits for pain (20%) compared to those who were not prescribed opioids (34%) (OR 0.45, 95% CI 0.30-0.68, $p < 0.001$).

- **Median Days of Pain Control:** The median days of pain control prescribed at discharge was significantly lower for patients who returned to the ER for pain (0.6 days, IQR 0.0-2.2) compared to those who did not (1.4 days, IQR 0.2-3.9).
- **MME at Discharge:** Patients who returned to the ER received a median of 45 mg MME (IQR 0-100), while those who did not return received a median of 60 mg MME (IQR 19-113).
- **Impact of Pain Control Days:** Greater days of pain control at discharge were associated with a lower likelihood of ER visits for pain (OR 0.93, 95% CI 0.88-0.98, p = 0.01).

Variable	ER Visit for Pain (n = 14)	No ER Visit for Pain (n = 46)	p-value
Patients Prescribed Opioids at Discharge	10 (20%)	34 (74%)	< 0.001
Patients Not Prescribed Opioids at Discharge	4 (34%)	12 (26%)	< 0.001
Median Days of Pain Control at Discharge	0.6 (IQR 0.0-2.2)	1.4 (IQR 0.2-3.9)	0.01
Median MME at Discharge (mg)	45 (IQR 0-100)	60 (IQR 19-113)	0.01
Odds Ratio for ER Visit	OR 0.45 (95% CI 0.30-0.68)		< 0.001
Odds Ratio for Days of Pain Control	OR 0.93 (95% CI 0.88-0.98)		0.01



IV. Discussion:

- This study reveals that insufficient opioid prescribing at discharge, relative to inpatient opioid requirements, is associated with a higher likelihood of return ER visits for pain in trauma patients.⁵ Patients who were prescribed opioids that covered fewer days of pain control based on their pre-discharge needs were more likely to experience inadequate pain management, leading to ER visits within 30 days. These findings align with existing concerns that overly cautious opioid prescribing may result in undertreatment of acute pain, especially in trauma patients who have substantial pain needs.⁶
- The results emphasize the importance of individualized opioid prescribing, ensuring that discharge prescriptions meet the patient’s actual pain control needs to minimize post-discharge complications. Balancing the need for effective pain management with opioid stewardship remains a key challenge in trauma care. Future studies should explore alternative pain management strategies and refine opioid prescribing guidelines to better address both safety and patient comfort.⁷

V. Conclusions:

This case report highlights the critical importance of appropriately prescribing opioids at discharge based on inpatient pain management needs, particularly in trauma patients. Insufficient opioid prescriptions can lead to inadequate pain control, resulting in unnecessary emergency room (ER) visits and increased healthcare utilization. Aligning discharge opioid prescriptions with patients' actual requirements prior to discharge may reduce the likelihood of post-discharge complications, including severe pain and ER returns. Careful balancing between opioid stewardship and effective pain management is essential to ensure optimal recovery while minimizing the risk of opioid misuse.

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