Demographics and Clinical Characteristics of Patients Hospitalized with Prescription Opioid-Related Overdose

Cindy Liu, PharmD1; Vanessa Stevens, PhD1,4; Kelly Patrick Murnin, MD1,3; Brandon Jennings, PharmD, BCACP1,2

1University of Utah Hospitals and Clinics, Salt Lake City, Utah; 2University of Utah College of Pharmacy, Salt Lake City, Utah; 3University of Utah School of Medicine Salt Lake City, Utah; 4University of Utah Pharmacotherapy Outcomes Research Center, Salt Lake City, Utah

Background

- According to the 2007 National Survey on Drug Use and Health, about 12.5 million Americans had used prescriptions analgesics for nonmedical purposes.
- In recent decades, the use of opioid analgesics for treatment of both cancer-related and non-cancer pain has increased.
- Prescription opioid analgesics now accounts for more overdose deaths than heroin and cocaine combined.
- Nationally, Americans consume 80% of the worldwide opioid supply, including 99% of the hydrocodone supply and 66% of illegal drugs.
- Ranked fourth nationally for opioid-related deaths, Utah had an incidence rate 56% higher than the national rate.
- Prevention of the prescription opioid overdose has proven to be difficult due to various reasons, including lack of data on risk factors.
- Currently, a generalized descriptive study examining the demographic and clinical characteristics of patients who do present to the emergency department for opioid poisoning is not available.

Objective

- The objective of this retrospective, case-series study is to determine the demographics and clinical characteristics of patients who presents for emergency department (ED) visit or hospitalization for opioid overdoses with the goal of obtaining hypothesis-generating results that will identify areas for future research and prevention efforts.

Methods

A retrospective, case-series study examining the demographic and clinical characteristics of patients seen at a University of Utah Health System (UUHS) outpatient clinic who have at least one emergency department (ED) visit or hospitalization due to prescription opioid overdose.

A convenience sample of up to 100 unique patients with the most recent emergency department (ED) visit or hospitalization was included in the study with no additional randomization.

Participants were selected using data from the Epic Care Electronic Medical Record and Electronic Data Warehouse utilized by the University of Utah Hospitals and Clinics.

Inclusion Criteria:

- Patients receiving care at any University of Utah outpatient center in the five years prior to beginning of data collection date that have the following:
  - One or more ED visits or hospitalization with the University of Utah Hospital with a primary or secondary ICD-9 diagnosis codes for poisoning by opioid and related narcotics
  - One or more ED visits or hospitalization with the University of Utah Hospital with a primary or secondary ICD-9 diagnosis code of E-codes suggestive of opioid involvement with prescription opioid involvement as confirmed by manual chart review.
  - One or more prescription for any strength or formulations of opioid medications from the outpatient clinic provider.

Exclusion Criteria:

- No exclusion criteria exists for this study.

Results (n = 14)

<table>
<thead>
<tr>
<th>Selected Variables</th>
<th>Mean</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>49.85</td>
<td>29-84</td>
</tr>
<tr>
<td># of Rx</td>
<td>10.64</td>
<td>0-21</td>
</tr>
<tr>
<td># of Concomitant Opioids Rx</td>
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<td>0-4</td>
</tr>
<tr>
<td>Total Daily Dose in Morphine (equiv)</td>
<td>1.57</td>
<td>0-4</td>
</tr>
<tr>
<td>Total Dose in Morphine (equiv)</td>
<td>222.37</td>
<td>60-604</td>
</tr>
</tbody>
</table>

Limitations and Considerations

- Patient inclusion relies heavily on the quality of emergency department documentation and correct diagnosis codes.
- Accuracy of collectible data is limited by the extend and quality of information recorded in the UUHS electronic medical record system.
- Patient inclusion and data determination depended on subjective assessment of the data collector.

Conclusions

- The majority of patients hospitalized to the University of Utah Hospital with prescription opioid-related overdose were 50 year-old Caucasian females, who were likely to be unmarried and unemployed, with a history of substance abuse and chronic pain status, using an average of two prescription opioids and benzodiazepines concurrently.

Correspondence

Please address inquiries to:
Cindy Liu, PharmD
PGY1 Community Pharmacy Practice Resident
University of Utah Hospitals and Clinics
Redwood Health Center
Cindy.Liu@pharm.utah.edu

The authors declare no relevant conflicts of interest.

References