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Pain Management Trends among Adults Hospitalized with Cellulitis: An Evidence-based Practice Project

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Opioid Administration for Acute Pain Management among Adults Hospitalized with Cellulitis

BACKGROUND

- Acute pain is often treated with opioids in the hospital.
- Extended opioid use increases risk for overdose and dependency.
- Best practice guidelines recommend administering less than 50 oral morphine milligram equivalents (MME) within a 24-hour period for acute pain management to mitigate risks.

PURPOSE

- Evaluate strength of opioid administration over time at two acute care hospitals in the Pacific Northwest.

METHODS

- Retrospective, descriptive, evidence-based practice project.
- Adults hospitalized with cellulitis between 2014 – 2020 who received an opioid included.
- Oral MME conversion factors used to calculate total opioid administered.
- De-identified data extracted.
- Descriptive and frequency statistics conducted in Excel.

REFERENCES

Available upon request

RESULTS

- Total n=3,413 records (Table 1 and Table 2).
- High-dose administration decreased (Figure 1).

Table 1. Sample Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Less than 50 MME n(%) (N=1430)</th>
<th>50 or greater MME n(%) (N=1983)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>811(57%)</td>
<td>1073(54%)</td>
</tr>
<tr>
<td>Female</td>
<td>619(43%)</td>
<td>910(46%)</td>
</tr>
<tr>
<td>Substance Use Disorder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>226(16%)</td>
<td>599(30%)</td>
</tr>
<tr>
<td>No</td>
<td>1204(84%)</td>
<td>1384(70%)</td>
</tr>
<tr>
<td>Prior opioid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1051(73%)</td>
<td>1676(85%)</td>
</tr>
<tr>
<td>No</td>
<td>379(27%)</td>
<td>307(15%)</td>
</tr>
</tbody>
</table>

Table 2. Encounter Characteristics

<table>
<thead>
<tr>
<th>Encounter Characteristic</th>
<th>Less than 50 MME mean ±SD (N=1430)</th>
<th>50 or greater MME mean ±SD (N=1983)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>60.9±17.7</td>
<td>51.8±15.5</td>
</tr>
<tr>
<td>Length of Stay (hours)</td>
<td>3.8±1.6</td>
<td>3.8±1.6</td>
</tr>
<tr>
<td>Average Pain</td>
<td>3.2±3.0</td>
<td>4±3.4</td>
</tr>
</tbody>
</table>

Figure 1. Yearly Proportion High and Low-dose Opioids

IMPLICATIONS FOR PRACTICE

- Safe opioid administration is paramount.
- Nurses can advocate to prescribers to provide non-opioid and non-pharmacological options for pain.
- Nurses can recommend an oral MME calculator to be available in the electronic health record.

CONCLUSIONS/DISCUSSION

- Strength of inpatient opioid administration decreased at two hospitals in this sample.
- Nurses and providers should partner with patients to optimize acute pain management.

LIMITATIONS

- Missing data: inaccuracy of documentation.
- Unknown pre-hospital opioid dose.
- Complexity of MME calculation.