**INTRODUCTION**

- At risk populations for post-surgical opioid-induced respiratory depression include pediatric patients with a history of sleep disordered breathing (SDB) and obstructive sleep apnea (OSA).
- Although monitoring in the inpatient setting allows for early recognition of opioid-related adverse events, children with these comorbidities are presumably at even greater risk when undergoing outpatient procedures where this is far less vigilance.
- Guidelines for proper dosing in these groups have not been established.
- We sought to determine if surgical services at our institution modified prescriptions for certain comorbidities, weight or BMI-for-age percentiles.

**METHODS**

- Baseline opioid prescribing data for all outpatient surgery patients receiving an opioid prescription between 1/2019-6/2020 were retrospectively reviewed.
- Patients with SDB or obesity were identified using ICD-10 codes.
- To obtain more information about prescribing practices, we analyzed patient demographics, size descriptors used for calculations, and prescription characteristics (dose, duration, prescribing surgical service).

**RESULTS**

- 4,674 patients received an opioid prescription after outpatient surgery. Of those, 173 patients had SDB and 128 were obese.
- The surgical subspecialties that issue most opioid prescriptions are otolaryngology and orthopedics.
- Obese patients were more likely to be prescribed (64%) opioids using ideal weight at higher mg/kg doses (>0.05mg/kg, 83.3%, p<.0001).
- When providers used actual body weight, lower doses (mg/kg) were more likely to be use (53.7%, p<.0001).
- No prescriptions used lean body mass.

**CONCLUSIONS**

- Overweight/obese children were more likely to receive opioid doses outside the recommended range.
- Variability in prescribing patterns demonstrate the need for more detailed guidelines to minimize the risk of opioid-induced respiratory complications in vulnerable pediatric populations.

**REFERENCES**


**Table 1. Patient demographics by low-dose vs. standard-dose oxycodone**

<table>
<thead>
<tr>
<th>Age in years</th>
<th>Low dose (n = 86)</th>
<th>Standard dose (n = 180)</th>
<th>P value</th>
<th>Low dose (n = 147)</th>
<th>Standard dose (n = 285)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>4.6%</td>
<td>16.5%</td>
<td>.0385</td>
<td>7.1%</td>
<td>9.5%</td>
<td>.6894</td>
</tr>
<tr>
<td>II</td>
<td>19.8%</td>
<td>24.7%</td>
<td>.1050</td>
<td>18.5%</td>
<td>22.2%</td>
<td>.2200</td>
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<tr>
<td>III</td>
<td>9.5%</td>
<td>11.5%</td>
<td>.0082</td>
<td>0.0%</td>
<td>0.0%</td>
<td>.0001</td>
</tr>
<tr>
<td>IV</td>
<td>4.6%</td>
<td>2.1%</td>
<td>.0001</td>
<td>0.0%</td>
<td>0.0%</td>
<td>.0001</td>
</tr>
<tr>
<td>Surgical Services n (%)</td>
<td>&lt;.0001</td>
<td>&lt;.0001</td>
<td>&lt;.0001</td>
<td>&lt;.0001</td>
<td>&lt;.0001</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>

**Table 2. Oxycodone prescriptions compared by comorbidity status**

<table>
<thead>
<tr>
<th>Groups</th>
<th>Low Dose</th>
<th>Standard Dose</th>
<th>P Value*</th>
<th>P Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>2688 (58.7%)</td>
<td>1805 (41.3%)</td>
<td>&lt;.0001</td>
<td>&lt;.0001</td>
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<tr>
<td>Obese</td>
<td>68 (53.1%)</td>
<td>60 (46.9%)</td>
<td>.0073</td>
<td>&lt;.0001</td>
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</tbody>
</table>

P-value compares low dose and high dose oxycodone prescription by comorbidity status.

*Abbreviations: ABW, actual body weight; IBW, ideal body weight; BMI, body-mass-index, ASA status, ASA Physical Status.*

**Figure 1.**

- **A** Legend: * indicates increased risk of respiratory depression.
- **B** Legend: * indicates increased risk of respiratory depression.
- **C** Legend: * indicates increased risk of respiratory depression.
- **D** Legend: * indicates increased risk of respiratory depression.

**Figure 2.**

- **A** Legend: * indicates increased risk of respiratory depression.
- **B** Legend: * indicates increased risk of respiratory depression.
- **C** Legend: * indicates increased risk of respiratory depression.
- **D** Legend: * indicates increased risk of respiratory depression.