# Postoperative Opioid-Prescribing Practices in Otolaryngology: Evidence-Based Guideline Outcomes

T. Rana, BS¹, K. Daniels, MD¹, S. Dang, MD¹,², J. Li, MD¹, C. Freeman, BS¹, A. Duffy MD²,³, J. Curry, MD³, A. Luginbuhl, MD³, E. Cottrill, MD³, D. Cognetti, MD³

¹Sidney Kimmel Medical College at Thomas Jefferson University, Philadelphia, PA ²Department of Otolaryngology—Head and Neck Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA ³Department of Otolaryngology—Head and Neck Surgery, Thomas Jefferson University, Philadelphia, PA

## Introduction
- Otolaryngology is one of the highest opioid-prescribing surgical subspecialties¹.
- Diversion of excess opioids → exacerbates opioid crisis¹,².
- Goal of our multiphasic study: to develop and evaluate evidence-based postoperative pain management guidelines.
- Phase I:
  - Found that >50% of postoperative opioids prescribed at our institution after 4 head and neck procedures went unused³.
  - Developed and instituted multimodal, evidence-based pain management guidelines for these procedures.
- Phase II:
  - Evaluated effects of guidelines on:
    1) quantity of unused opioids
    2) patient satisfaction

## Methods
- Prospective survey study.
- Setting: single large academic hospital.
- Procedures studied:
  1) Sialendoscopy
  2) Parotidectomy
  3) Parathyroidectomy/Thyroidectomy
  4) Transoral robotic surgery (TORS)
- Study population: adult patients (≥18 years) who underwent one of these procedures from May 2019 to May 2020.
- Exclusion criteria: chronic opioid use disorder, hospitalization > 7 days.
- Data analysis: patients surveys at first postoperative appointment → data compared between phase I and II.

## Results

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Average MME prescribed per patient</th>
<th>Phase I</th>
<th>Phase II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sialendoscopy</td>
<td>88.7</td>
<td>46.1</td>
<td>*</td>
</tr>
<tr>
<td>Parotidectomy</td>
<td>118.1</td>
<td>43.8</td>
<td>*</td>
</tr>
<tr>
<td>Parathyroidectomy/Thyroidectomy</td>
<td>105.8</td>
<td>42.1</td>
<td>*</td>
</tr>
<tr>
<td>TORS</td>
<td>352.5</td>
<td>201.8</td>
<td>*</td>
</tr>
</tbody>
</table>

- **Average used MME per patient for parotidectomy was significantly reduced (64%)**
- **The proportion of unused MME per patient did not significantly change after guidelines were implemented.**
- **No significant difference in satisfaction, however small but significant increase in dissatisfaction**

## Discussion
- Phenomenon described in literature⁴: patients will use a set percentage of their opioid prescription regardless of total number of pills prescribed.
- In phase II, despite significantly reducing the number of prescribed opioids, the proportion of unused pills was not significantly different → our data supports this phenomenon.
- Satisfaction rates were unchanged, unclear what led to small increase in dissatisfaction (results collected anonymously).
- Overall, our data supports continued use of guidelines.
- Limitations: guideline non-adherence and inadequate use of non-opioid analgesia.

## Conclusion
- Evidence-based multimodal postoperative pain management guidelines substantially reduced the amount of opioids prescribed across all procedures without significantly impacting patient satisfaction.
- Providers should continue to follow the guideline and educate patients on the importance of scheduled non-opioid analgesia.
- Institutions should consider adopting similar evidence-based guidelines to minimize the amount of postoperative opioids prescribed.

## References