

Pain Medication Prescription and Use After Oral and Maxillofacial Surgery Procedures

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INTRODUCTION

- Pain management is a critical aspect of patient care. Insufficient pain control can lead to poor outcomes, but there is heightened attention surrounding the alarming rise in pain medication prescription and abuse.
- In this study we evaluated pre-operative risk factors and post-operative pain management. This information may inform perioperative counseling, which can improve post-operative pain control and decrease the risk of analgesic abuse.

OBJECTIVES

The goal of this two-part study was identify risk factors that could help predict:

- Pain medication use
- Patient pain tolerance

after a variety of OMS procedures.

METHODS

A prospective cohort study with recruitment of out-patients at the OMFS Teaching Clinic, Faculty Practice, and in-patients at NewYork-Presbyterian Hospital and the Morgan Stanely Children's Hospital of NewYork-Presbyterian starting from June 2019.

143 patients undergoing common OMS procedures including wisdom teeth extractions, dental implant placement, alveolar grafting, maxillary osteotomies (LeFort 1), mandibular osteotomies (genioplasty, GGA, BSSO, IVRO), maxillary and mandibular distractor placement, cleft lip and cleft palate repair, TMJ arthroscopy, and TMJ arthroplasty were recruited.

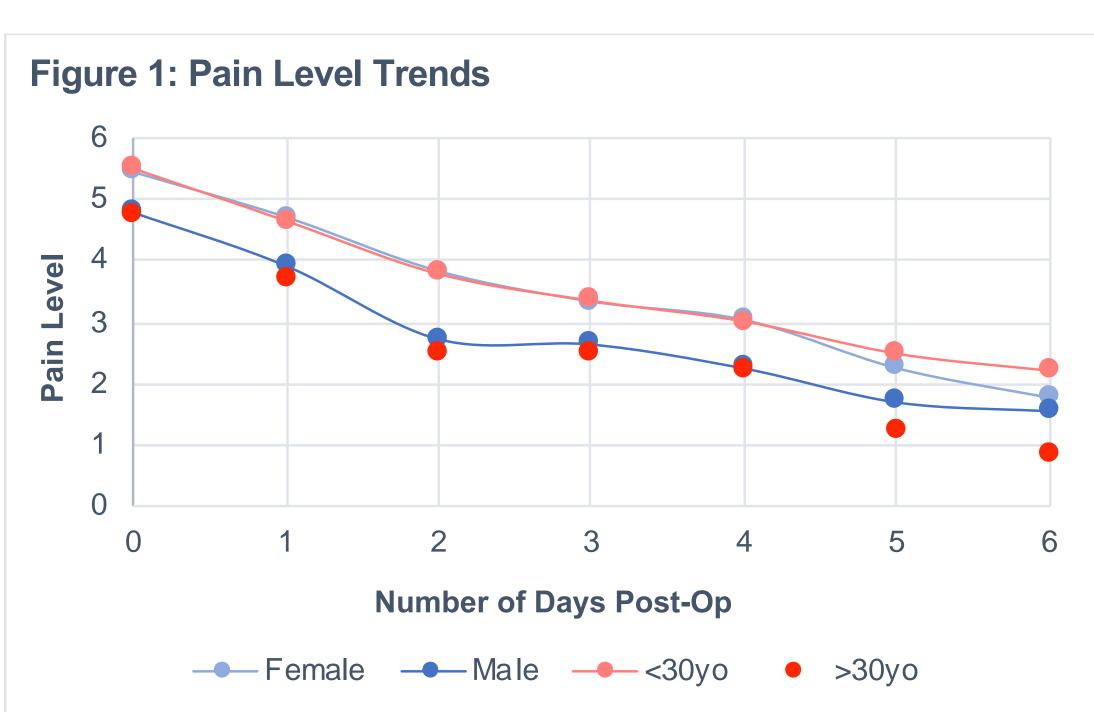
Subjects were given pre-operative surveys, including the Pain Catastrophizing Scale (PCS) and the Hospital Anxiety and Depression Scale (HADS).

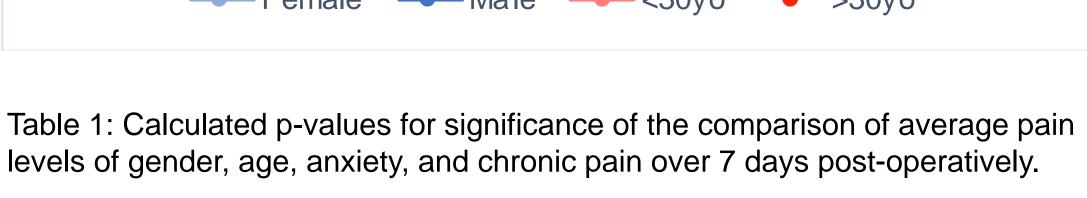
Subjects then completed a postoperative survey, rating their maximum daily pain using a visual analog scale and recorded the quantity and frequency of medication used for seven days post-operatively.

Age, gender, history of chronic pain, surgical procedure, and prescribed medication were extracted from patient charts.

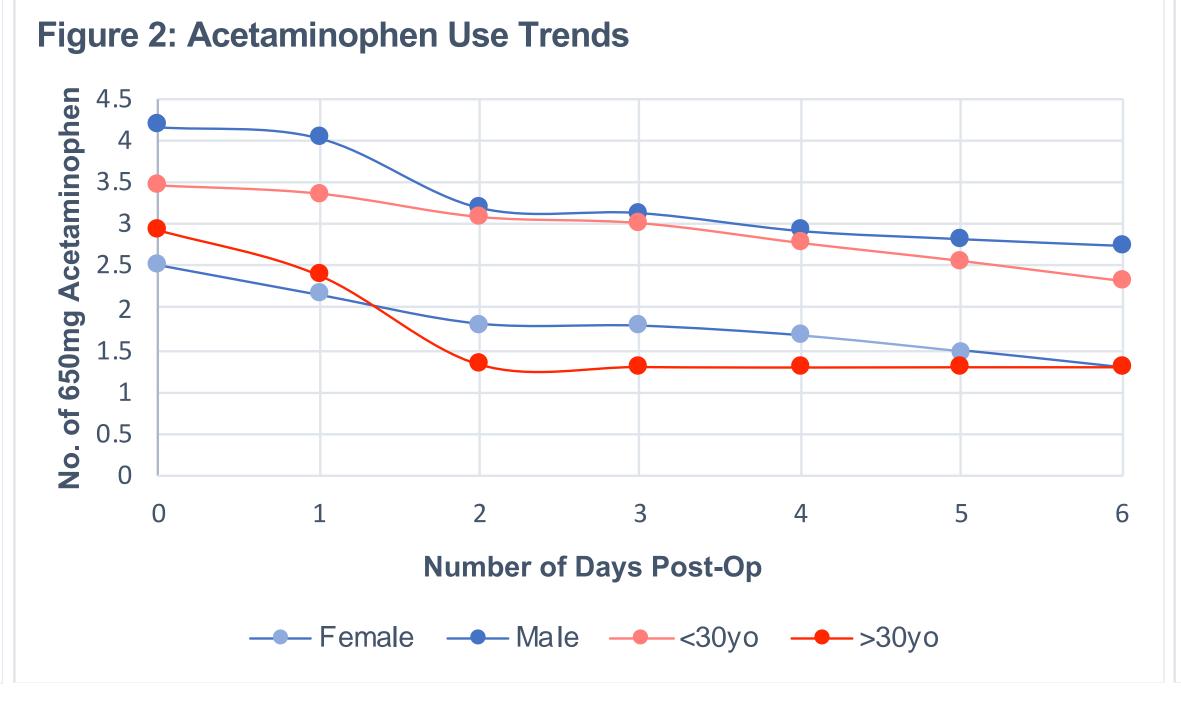
Two sample independent t-tests were used to compare predictors with study outcomes for each POD

RESULTS





Average Pain Level Comparison	POD0	POD1	POD2	POD3	POD4	POD5	POD6
Male vs. Female	0.316	0.203	0.048	0.207	0.153	0.225	0.627
Under vs. Over 30 years old	0.257	0.162	0.022	0.131	0.147	0.009	0.001
Anxiety vs. No anxiety	0.084	0.042	0.640	0.158	0.063	0.614	0.266
Chronic pain vs. No chronic pain	0.540	0.458	0.474	0.421	0.894	0.595	0.312



Average Acetaminophen Use Comparison	POD0	POD1	POD2	POD3	POD4	POD5	POD6
Male vs. Female	0.029	0.011	0.039	0.030	0.044	0.025	0.008
Under vs. Over 30 years old	0.468	0.189	0.001	0.001	0.003	0.009	0.021
Anxiety vs. No anxiety	0.715	0.833	0.670	0.748	0.888	0.948	0.858
Chronic pain vs. No chronic pain	0.413	0.676	0.593	0.562	0.779	0.294	0.426

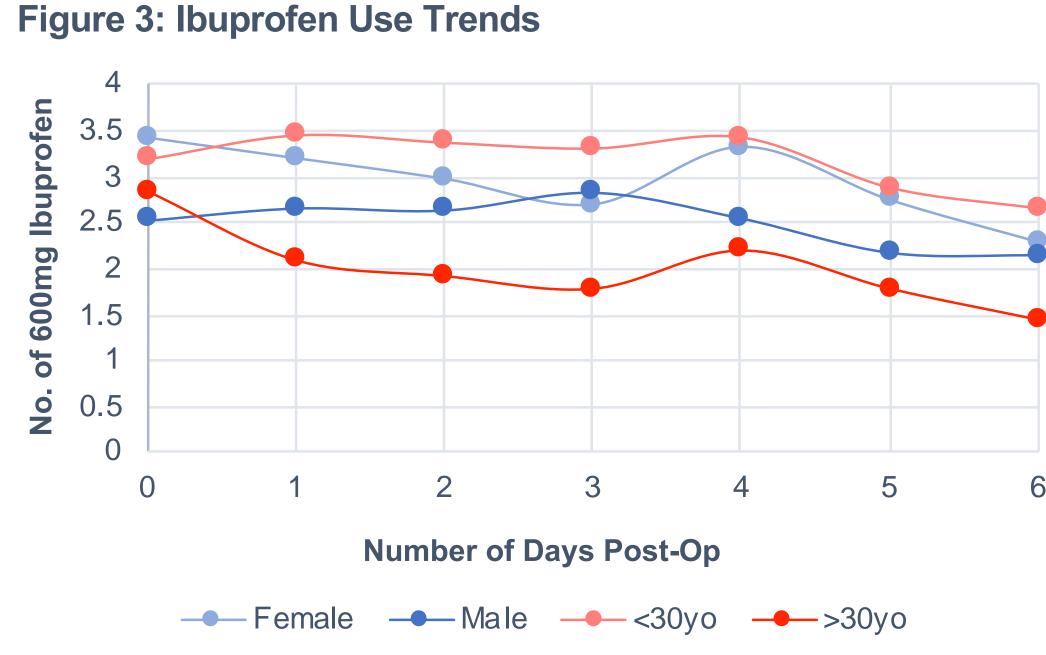


Table 3: Calculated p-values for significance of the comparison of average ibuprofen use in gender, age, anxiety, and chronic pain over 7 days post-operatively.

Average Ibuprofen Use Comparison	POD0	POD1	POD2	POD3	POD4	POD5	POD6
Male vs. Female	0.112	0.326	0.543	0.811	0.224	0.346	0.794
Under vs. Over 30 years old	0.545	0.016	0.005	0.003	0.044	0.088	0.012
Anxiety vs. No anxiety	0.094	0.266	0.517	0.739	0.946	0.516	0.637
Chronic pain vs. No chronic pain	0.684	0.111	0.001	0.001	0.274	0.995	0.790

CONCLUSIONS

Pain Levels

- Overall there was no significant difference in reported pain between genders.
- On 3 out of 7 post-operative days, a significant difference in pain levels between patients younger and older than 30 was seen.
- A significant difference in pain levels was seen on post-operative day 1 between patients with and without anxiety.

Pain Medication Use

- Males, on average, took a significantly greater amount of acetaminophen on each of the 7 days post-op than females did.
- No significant difference was seen in ibuprofen use between genders.
- Patients younger than 30, on average, took a significantly greater amount of acetaminophen and ibuprofen post-operatively.
- Patients with anxiety took a significantly higher amount of ibuprofen than those without anxiety on the day of the procedure.
- No significant difference was seen between patients with and without anxiety in acetaminophen use.

ACKNOWLEDGEMENTS