

# Promising Opioid Prescribing Patterns at UConn Outpatient Dental Clinics

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## Introduction

- Dentists have been reported to be the second most frequent opioid prescribers.<sup>1</sup>
- It is possible that non-judicious opioid prescribing and lack of opioid curricula in dental schools have contributed to the U.S. opioid crisis.
- The combination of NSAIDs and acetaminophen is supported by the literature as an effective alternative for managing oro-facial pain.<sup>2</sup>
- Limited research is available related to opioid prescribing trends in an academic setting.
- This study analyzes opioid prescribing patterns and pain management practices by dental clinicians at the UConn School of Dental Medicine (SDM) outpatient clinics.

## Methods & Materials

- Retrospective axiUm chart review of opioid prescribing at SDM from 2015 to 2019.
- Prescription data review included:
  - Patient demographics, ASA classification, pregnancy status, patient comorbidities, reason for visit, diagnosis, treatment rendered, opioid name, dose & frequency, Morphine Milligram Equivalent (MME), quantity and refills, co-prescriptions and school division.
- Descriptive statistics and statistical testing performed with Microsoft Excel.

## Morphine Milligram Equivalent (MME)

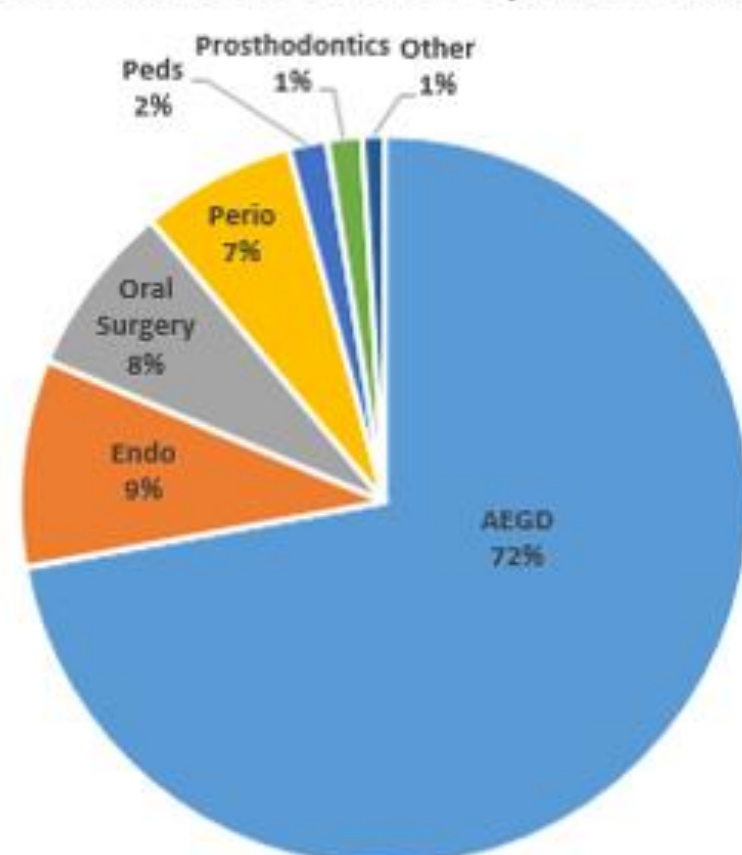
- $$\frac{MME}{Day} = \frac{Strength}{Unit} * \left( \frac{Number\ Units}{Supply\ (days)} \right) * Equivalency\ Factor$$
- Standardizes opioid potency relative to morphine
- Unique equivalency factor for each drug

Opioid (1mg/day)	MME Equivalency Factor
morphine	1
tramadol	0.1
codeine	0.15
hydrocodone	1
oxycodone	1.5

## Results

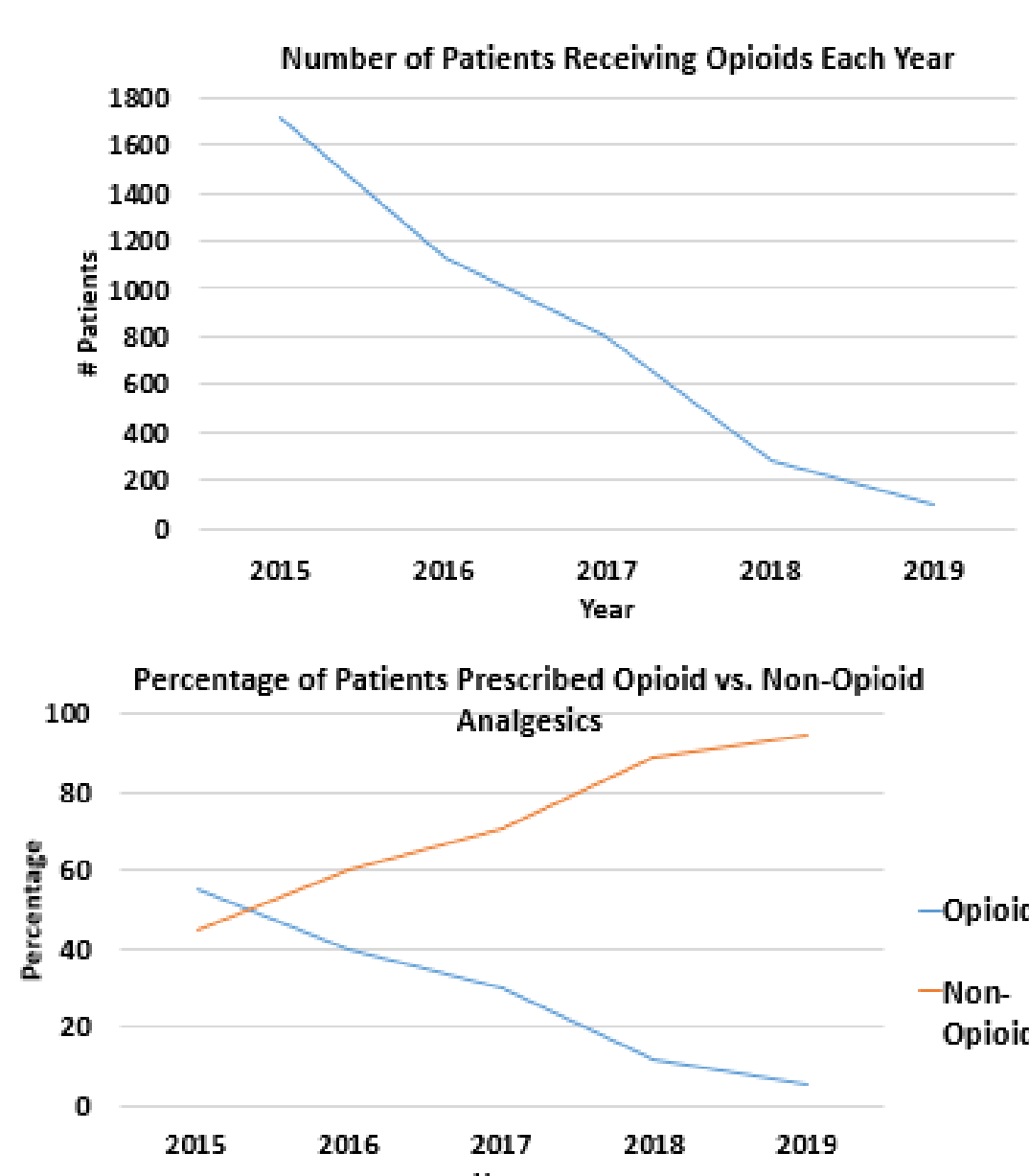
- From 2015-2019, 3,996 patients received opioid prescriptions

Departmental Distribution of Opioid Prescriptions



Department	% of Total Patients Seen by Each Department
AEGD	66%
Endodontics	11%
Pediatrics	9%
Oral Surgery	8%
Periodontics	4%
Prosthodontics	3%

- The most frequently prescribed opioid-containing drugs were acetaminophen-codeine (57%), hydrocodone-acetaminophen (15%) and oxycodone-acetaminophen (15%).
- There was a 94% decrease in the number of patients who received opioids ((year=2015, n=1704), (year=2019, n=98)).
- Among patients receiving analgesic prescriptions (opioids and/or non-opioid analgesics), the proportion of patients who received opioids decreased from 55% to 5%.
- The percentage of patients who received both a non-opioid and opioid analgesic increased from 18% to 34%
- Average opioid prescription duration decreased from 4 to 3 days ( $p < .0001$ ) consistent with current CDC guidelines.
- Average MME decreased from 20.2 to 17.9 from 2015 to 2019 ( $p < .05$ )



## Discussion

- Steep decline in opioid prescribing at the SDM from 2015 to 2019.
- Non-opioid analgesics have become the first-line drugs for oro-facial pain management.
- These trends coincide with increased opioid education at UConn, increased prescriber awareness, and more judicious opioid prescribing.
- While it's important to educate prescribers and encourage judicious practices, it is also important for prescribers to know when opioids are indicated and to feel confident prescribing them in such situations.

## Limitations

- Emergency department records documented in a separate EMR were not included in this study.
- Potential underestimate of OMFS/AEGD after-hours prescribing.
- Inactive patient records were inaccessible.
- Non-detailed visit notes on file.
- Non-detailed prescription instructions prevented MME calculation in certain cases.

## Ongoing Opioid Related Efforts at UConn

- SDM faculty serve on the UCHC Opioid Task force.
- axiUm tab additions: the school is in the process of adding opioid-related questions to the medical history which will enhance opioid prescribing practices. Tabs for the following functions will be added following SABA training:
  - Opioid Risk Tool (ORT): to assess patients' risk of opioid misuse prior to prescribing opioids
  - Morphine Milligram Equivalent (MME) calculator
  - Screening, Brief Intervention and Referral to Treatment (SBIRT)
  - Voluntary Non-Opioid Directive: to alert clinicians of patient's directive not to receive opioids for pain
  - Pain Medication Agreements: to alert clinicians when patients have a sole prescriber for pain management
- SDM Guidelines for Acute Pain Management: approved by the Clinical Affairs Committee - to be shared with clinicians shortly.

## Conclusion

- Our results display a promising trend in opioid prescribing at UConn.
- Dental providers at UConn are exercising more caution and prudence in prescribing opioids.
- Practices could be further improved with better documentation of opioid prescriptions.
- Retrospective chart reviews that evaluate past opioid prescribing are important and should be an ongoing effort.

## Future Directions

- Identify opportunities to maintain opioid prescribing practices that comply with state and federal guidelines and support such practices with provider education.

## References

1. Guy, G.P. (2017). Vital Signs: Changes in Opioid Prescribing in the United States, 2006-2015. Morbidity and Mortality Weekly Report (MMWR), 66, 697-704.
2. Moore, P.A., Hersh, E.V. Combining ibuprofen and acetaminophen for acute pain management after third-molar extractions: translating clinical research to dental practice. J Am Dent Assoc. 2013 Aug;144(8):898-908. doi: 10.14219/jada.archive.2013.0207. PMID: 23904576.

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