

Introduction

There is an increased need and interest for sedation in private practice across the country.

According to the American Dental Association, the increase in the overall number of dentists practicing in the United States between 2001 and 2017 has risen by 20%, with an 84.62% increase in pediatric dentists¹. In addition to the increase in practitioners, there is a rise in complex dental treatment such as full mouth rehabilitations and implant-retained prostheses. With the increase in the number of dentists, placement of implants, and a large aging population, there is a greater need for sedation in private practice. In order to improve the safety and outcome of sedation, there should be a greater emphasis on the various modes of sedation in pre-doctoral dental education.

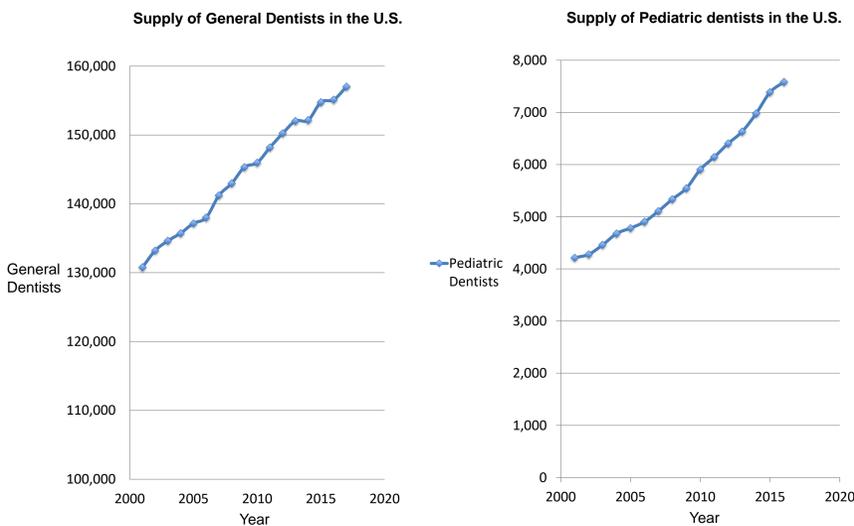


Figure 1. Graph showing the increase in general dentists and pediatric dentists in the last 16 years within the United States.

Methods

A survey was conducted at UMSOD in May of 2018. The pre-doctorate classes comprising of first through fourth-year students received the survey through their school-issued email address. 82 students responded to the survey, which consisted of 13 questions relevant to sedation literacy and experiences.



Figure 2. UMSOD students reporting to hospital block to see orthognathic surgery.

Survey Questions

1. Please select your current year: 1st year, 2nd year, 3rd year, 4th year
2. As a dental student, I am satisfied with my training in Nitrous Oxide sedation.
3. As a dental student, I am satisfied with my training in oral sedation.
4. As a dental student, I received adequate exposure to all modalities of anesthesia (i.e., moderate sedation, deep sedation, general anesthesia).
5. I have gained enough experience in dental school and will be comfortable offering oral sedation in private practice.
6. I have gained enough experience in dental school and will be comfortable offering Nitrous Oxide in private practice.
7. I would like more clinical sedation experiences in dental school.
8. I would give up other courses for more sedation courses.
9. Dental school adequately prepares me to manage the risks of sedation.
10. I plan to apply to dental anesthesia post-graduate residency program.
11. I plan to apply to another dental specialty post-graduate residency program.
12. I plan to bring in another dentist/physician to my office to administer IV sedation or general anesthesia.
13. After graduation, I plan to take additional CE courses in sedation.

Survey Index:

- a. Strongly Agree
- b. Agree
- c. Neither Agree nor Disagree
- d. Disagree
- e. Strong Disagree

Results

- 38% of dental students felt that they did not receive adequate experiences with oral sedation
- 54% of dental students strongly agreed and 42% agreed that they would like more clinical sedation experiences in dental school.
- 40% of students strongly agreed and 37% agreed that they would give up or shorten other courses to accommodate more sedation courses in their curriculum.
- Over 46% of dental students were not satisfied with their training in oral sedation, while 30% of dental students neither agreed nor disagreed concerning their satisfaction towards oral sedation training.
- 33% strongly agreed and 47% of dental students agreed that they were interested in taking additional continuing education courses in sedation following dental school.
- 96% agreed and strongly agreed that they would like more clinical sedation experiences in dental school.



Figure 3. UMSOD Survey Results.

Discussion

Based on the results of the survey it was found that dental students are very interested in receiving more clinical sedation experiences. This survey will be resubmitted at the end of the next academic school year to see if the opinions of students change. It will also be expanded to other dental schools to support the accuracy of our survey results, which has a small sample size. At UMSOD, there are several barriers to increasing clinical sedation experiences. Other institutions may have similar obstacles. For example, the student curriculum is already set, and additional time is needed to incorporate sedation into the program. Furthermore, the infrastructure in pre-doctoral clinic does not readily support sedation. Most operatories are not centrally plumbed for nitrous oxide administration. Also, finding adequate faculty coverage is a challenge. Currently, predoctoral students at UMSOD only observe treating patients under nitrous, oral, or IV sedation in pediatric and oral & maxillofacial surgery departments.

Future Research

As a proposed solution specific to UMSOD, a dental anesthesiology clerkship could be offered to both junior and senior students in the pre-doctoral setting. The clerkship would serve to provide more clinical experiences and as a supplement to oral surgery and dental anesthesiology introductory courses. The goal is to support dental students with the confidence and the means to provide sedation options to their own patients. Students in the dental anesthesiology clerkship would complete a small number of restorative cases under nitrous oxide or oral sedation when supervision is adequate.



Figure 4. A special needs adult receives dental care under General Anesthesia in the UMSOD pediatric clinic.

References

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