

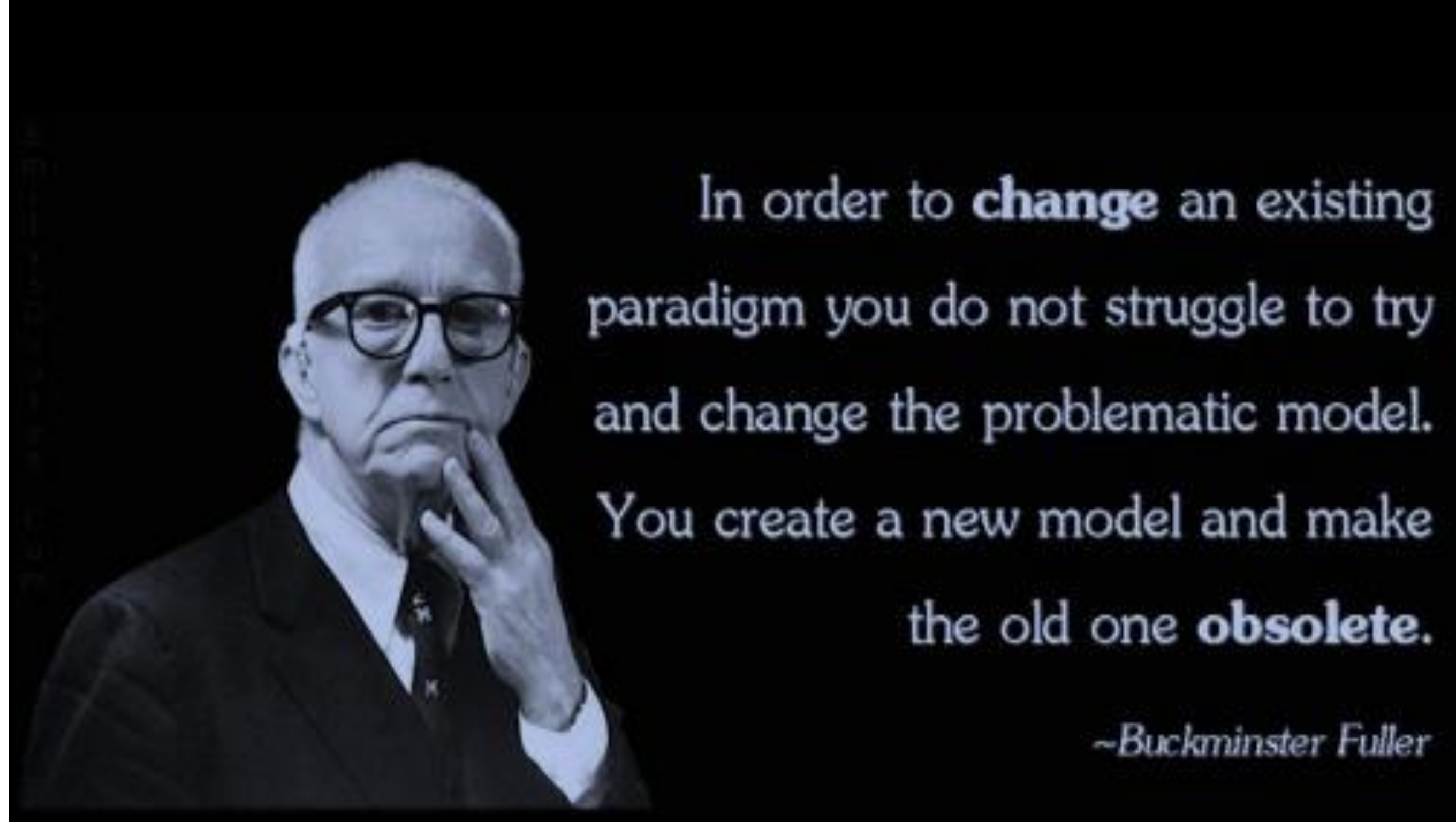


# **Surgical experiences in the undergraduate curriculum**

Jill Bashutski, DDS MS Cert Perio FRCDC(C)



# Adapting our curriculum to a changing environment



In order to **change** an existing paradigm you do not struggle to try and change the problematic model. You create a new model and make the old one **obsolete.**

*~Buckminster Fuller*

# **A** **adapting our curriculum to a changing environment**



Changing referral patterns

The need to balance sharing of knowledge

New generation of students

**R**RATIONALE

# REFERRAL TRENDS

## Periodontal Referral Patterns, 1980 Versus 2000: A Preliminary Study

Charles M. Cobb,\* Alexa Carrara,\* Erica El-Annan,\* Lou Ann Youngblood,<sup>†</sup> Burton E. Becker,<sup>‡</sup> William Becker,<sup>§</sup> Gregory E. Oxford,<sup>§</sup> and Karen B. Williams\*

**Background:** A review of the periodontal literature offers little information concerning trends in referral patterns of patients for periodontal therapy. Over the last 2 decades, there has been a significant increase in the knowledge base concerning inflammatory periodontal disease. It might be assumed that the collective advances in knowledge have impacted periodontal referral patterns. Thus, the purpose of this study was to examine the differences in periodontal referral patterns in the same offices separated by a 20-year interval (i.e., 1980 and 2000).

**Methods:** A retrospective chart analysis was conducted on a total of 782 patient charts from three conveniently selected periodontal practices. Charts were randomly selected from two time periods: 1980-1981 and 2000-2001. The following information was obtained from each patient record: gender, age at time of initial examination, tobacco smoking status at time of initial examination, periodontal case type, number of missing teeth at initial examination (not including third molars), and number of teeth scheduled for extraction per periodontal treatment plan. Descriptive data were analyzed using frequency distributions, measures of central tendency, and measures of dispersion. Non-parametric statistics were used to examine the relationship of disease severity as a function of site, time period, and patient age.

**Results:** The following trends were noted: 1) an increase in the average age of patients at the time of the initial examination; 2) a decrease in the percentage of patients using tobacco at the time of the initial interview; 3) an increase in the percentage of periodontal Case Type IV patients with a concomitant decrease in the number of periodontal Case Type III patients; 4) an increase in the average number of missing teeth per patient at the initial examination; and 5) an increase in the average number of teeth scheduled for extraction per periodontal treatment plan.

**Conclusions:** Characteristics of patients referred in 1980 compared to those referred in the year 2000 indicate that, although fewer patients used tobacco, there were several noteworthy trends. At referral, patients exhibited a greater loss of teeth, had more severe disease, and required extraction of a greater number of teeth in 2000 compared to 1980. Possible reasons for these trends are discussed. *J Periodontol* 2003;74:1470-1474.

### KEY WORDS

Comparison studies; dental offices; office management; periodontal diseases/trends; referral and consultation.

\* University of Missouri-Kansas City, School of Dentistry, Kansas City, MO.

<sup>†</sup> Private practice, Kansas City, MO.

<sup>‡</sup> Private practice, Tucson, AZ.

<sup>§</sup> Flagler Hospital, St. Augustine, FL.

A review of the periodontal literature offers little information concerning trends in referral patterns of patients for periodontal therapy. For the periodontist to achieve optimal therapeutic results and patient outcomes, an accurate diagnosis and timely referral by the general dentist is required.

Numerous factors have coincided to blur the role delineation between general dentists and periodontists in the treatment of periodontal diseases, e.g., elevated awareness of periodontal diseases, advancements in and dissemination of periodontal knowledge, and the increased availability of systemic antimicrobials and controlled-release local drug delivery systems.<sup>1</sup> Various authors have addressed such issues as the ethics of referral<sup>2</sup> and general clinical guidelines for referral of periodontal patients.<sup>3-5</sup> However, specific guidelines for referral are difficult to establish due to the variety of periodontal diseases, variations in severity of individual diseases, differing levels of practitioner competency as regards treatment of periodontal diseases, and patient-based issues such as financial status and willingness to accept referral and treatment.

Betof et al.,<sup>5</sup> in a survey of general dentists located in four large urban areas ranging from the east to west coast of the United States, found that 80% reported treating periodontal diseases. The authors noted that increased knowledge of

an increase in the average age of patients at the time of the initial examination

a decrease in the percentage of patients using tobacco at the time of the initial interview

an increase in the percentage of periodontal Case Type IV patients with a concomitant decrease in the number of periodontal Case Type III patients

an increase in the average number of missing teeth per patient at the initial examination

an increase in the average number of teeth scheduled for extraction per periodontal treatment plan

# REFERRAL TRENDS

## Periodontal Referral Patterns, 1980 Versus 2000: A Preliminary Study

Charles M. Cobb,\* Alexa Carrara,\* Erica El-Annan,\* Lou Ann Youngblood,<sup>†</sup> Burton E. Becker,<sup>‡</sup> William Becker,<sup>§</sup> Gregory E. Oxford,<sup>§</sup> and Karen B. Williams\*

**Background:** A review of the periodontal literature offers little information concerning trends in referral patterns of patients for periodontal therapy. Over the last 2 decades, there has been a significant increase in the knowledge base concerning inflammatory periodontal disease. It might be assumed that the collective advances in knowledge have impacted periodontal referral patterns. Thus, the purpose of this study was to examine the differences in periodontal referral patterns in the same offices separated by a 20-year interval (i.e., 1980 and 2000).

**Methods:** A retrospective chart analysis was conducted on a total of 782 patient charts from three conveniently selected periodontal practices. Charts were randomly selected from two time periods: 1980-1981 and 2000-2001. The following information was obtained from each patient record: gender, age at time of initial examination, tobacco smoking status at time of initial examination, periodontal case type, number of missing teeth at initial examination (not including third molars), and number of teeth scheduled for extraction per periodontal treatment plan. Descriptive data were analyzed using frequency distributions, measures of central tendency, and measures of dispersion. Non-parametric statistics were used to examine the relationship of disease severity as a function of site, time period, and patient age.

**Results:** The following trends were noted: 1) an increase in the average age of patients at the time of the initial examination; 2) a decrease in the percentage of patients using tobacco at the time of the initial interview; 3) an increase in the percentage of periodontal Case Type IV patients with a concomitant decrease in the number of periodontal Case Type III patients; 4) an increase in the average number of missing teeth per patient at the initial examination; and 5) an increase in the average number of teeth scheduled for extraction per periodontal treatment plan.

**Conclusions:** Characteristics of patients referred in 1980 compared to those referred in the year 2000 indicate that, although fewer patients used tobacco, there were several noteworthy trends. At referral, patients exhibited a greater loss of teeth, had more severe disease, and required extraction of a greater number of teeth in 2000 compared to 1980. Possible reasons for these trends are discussed. *J Periodontol* 2003;74: 1470-1474.

### KEY WORDS

Comparison studies; dental offices; office management; periodontal diseases/trends; referral and consultation.

\* University of Missouri-Kansas City, School of Dentistry, Kansas City, MO.

<sup>†</sup> Private practice, Kansas City, MO.

<sup>‡</sup> Private practice, Tucson, AZ.

<sup>§</sup> Flagler Hospital, St. Augustine, FL.

A review of the periodontal literature offers little information concerning trends in referral patterns of patients for periodontal therapy. For the periodontist to achieve optimal therapeutic results and patient outcomes, an accurate diagnosis and timely referral by the general dentist is required.

Numerous factors have coincided to blur the role delineation between general dentists and periodontists in the treatment of periodontal diseases, e.g., elevated awareness of periodontal diseases, advancements in and dissemination of periodontal knowledge, and the increased availability of systemic antimicrobials and controlled-release local drug delivery systems.<sup>1</sup> Various authors have addressed such issues as the ethics of referral<sup>2</sup> and general clinical guidelines for referral of periodontal patients.<sup>3-5</sup> However, specific guidelines for referral are difficult to establish due to the variety of periodontal diseases, variations in severity of individual diseases, differing levels of practitioner competency as regards treatment of periodontal diseases, and patient-based issues such as financial status and willingness to accept referral and treatment.

Betof et al.,<sup>5</sup> in a survey of general dentists located in four large urban areas ranging from the east to west coast of the United States, found that 80% reported treating periodontal diseases. The authors noted that increased knowledge of

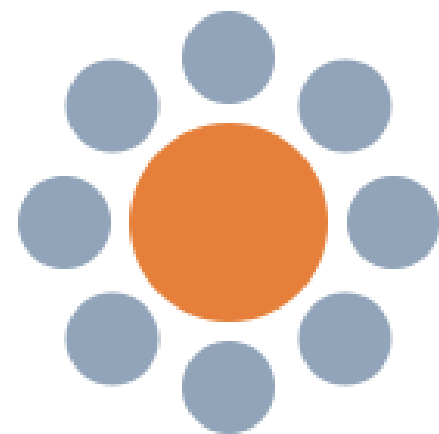
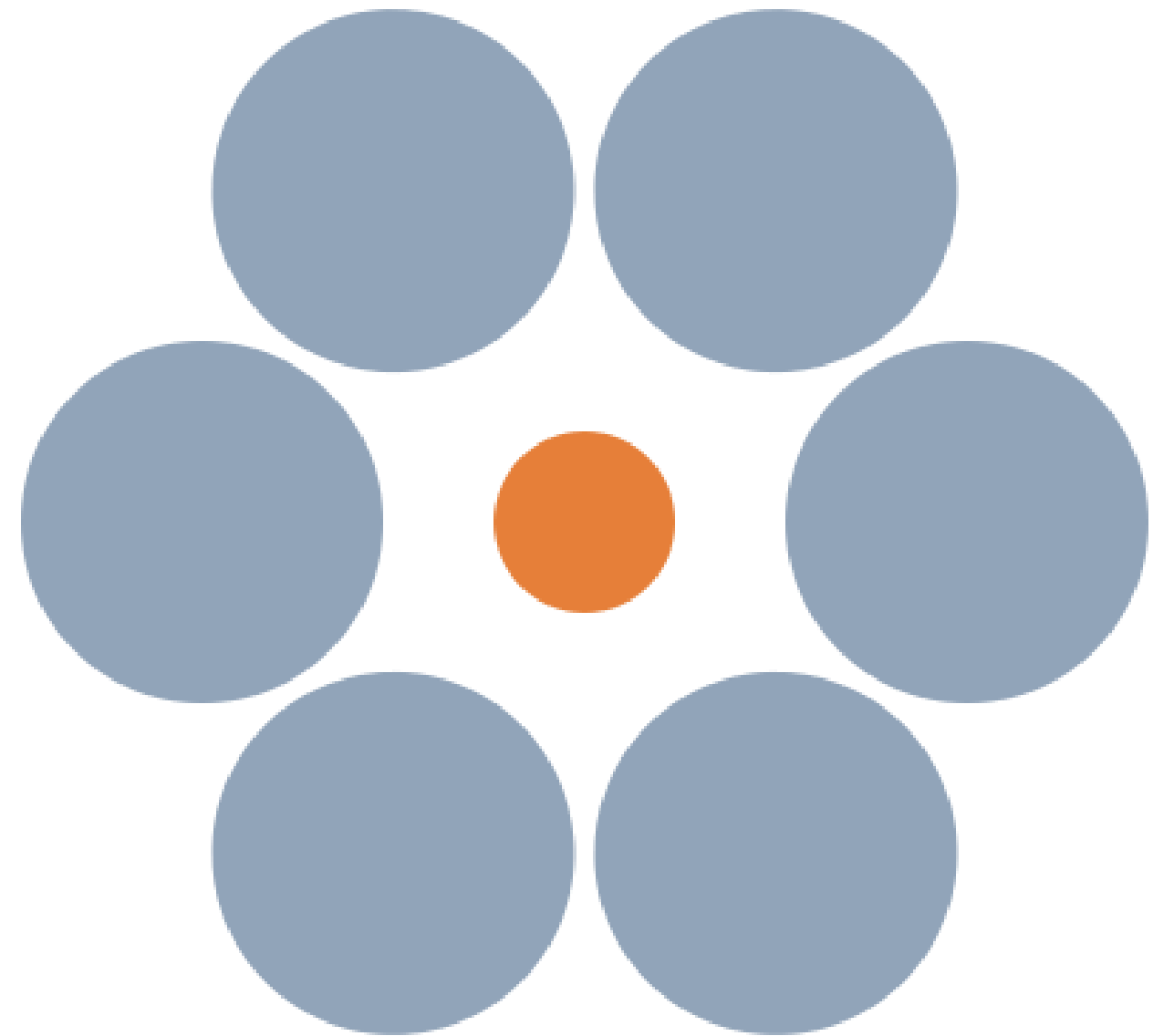
an increase in the average age of patients at the time of the initial examination

a decrease in the percentage of patients using tobacco at the time of the initial interview

an increase in the percentage of periodontal Case Type IV patients with a concomitant decrease in the number of periodontal Case Type III patients

an increase in the average number of missing teeth per patient at the initial examination

an increase in the average number of teeth scheduled for extraction per periodontal treatment plan



Trend towards deferring referral in favor of treating the patient in the general practice

Controversy over treatment of the periodontal patient and appropriateness of referral to a periodontist

**What is best for the patient?**



# WHY DO GENERAL DENTISTS HESITATE TO REFER TO US?



Post-surgical root exposure and sensitivity

Good results with in-house treatment programs

Financially advantageous

Loss of patient

Lack of proximity

Lack of communication

Disparaging remarks about care or quality of dentistry received in the referring doctor's office

**L**LACK OF  
**KNOWLEDGE vs.**  
**TOO MUCH**  
**KNOWLEDGE**



**GENERAL DENTIST  
PERIODONTICS  
TRAINING IS LESS  
THAN A HYGIENE OR  
PERIODONTICS  
STUDENT**

CODA accreditation standards  
for hours studying periodontics:

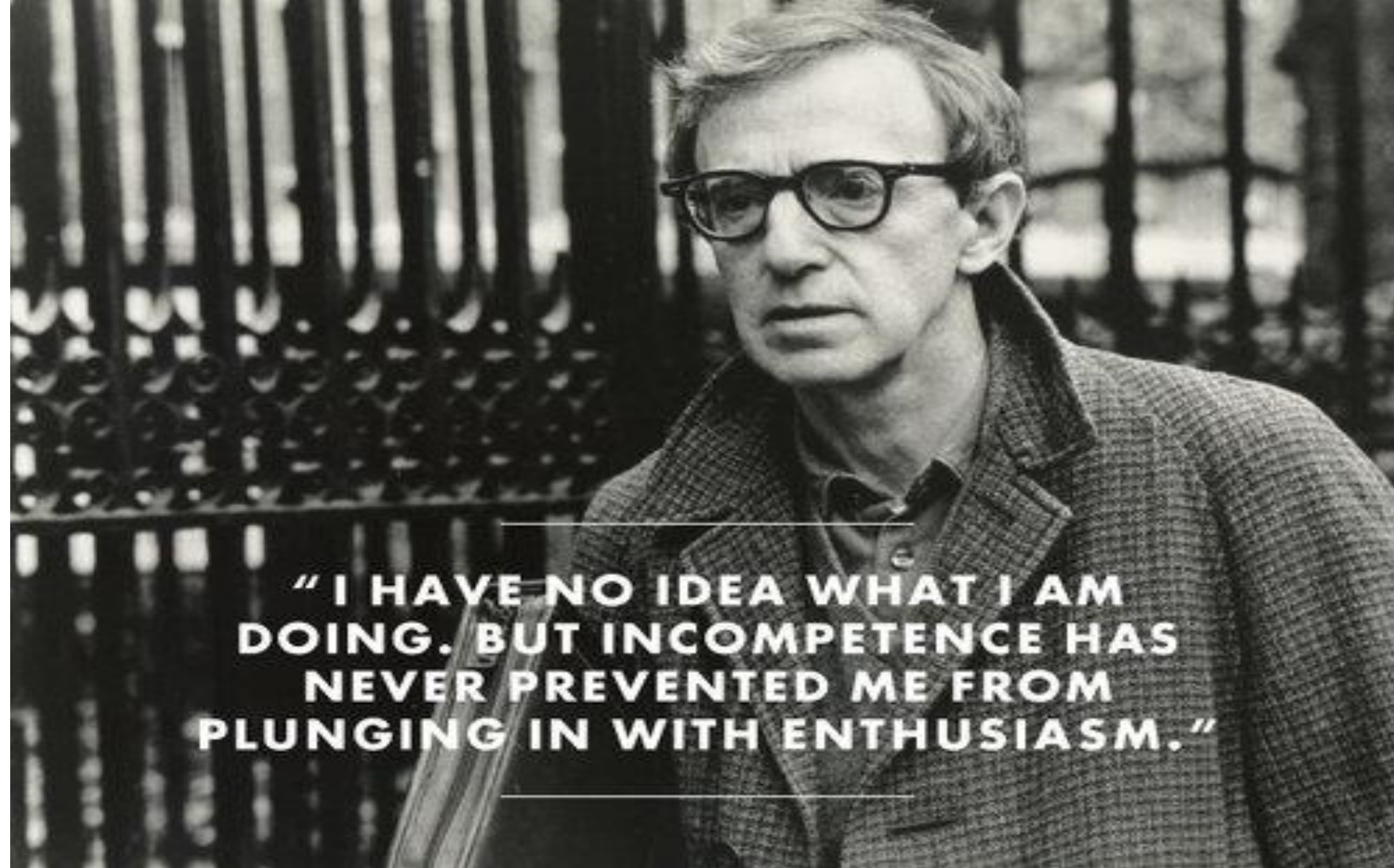
General Dentistry: 295

Hygiene: 2,700

Periodontal Specialist: 5,560

# THE MILLENNIUM GENERATION

“Participate first. Ask questions later.”



“I HAVE NO IDEA WHAT I AM DOING. BUT INCOMPETENCE HAS NEVER PREVENTED ME FROM PLUNGING IN WITH ENTHUSIASM.”

**GOALS**

**To enhance the learning experiences of the undergrad students**

In a way that embraces how students learn today



To teach students  
and to promote  
appropriate referrals  
to periodontal  
specialists by

familiarizing students  
with periodontal  
procedures





To teach students and to promote appropriate referrals to periodontal specialists by

showing by example that these procedures are complicated and require extensive training for success







To provide a service to patients who otherwise couldn't afford optimal treatment

To formalize a process  
that was already  
occurring

Provide ability to institute  
guidelines, control and  
follow up



# The Surgical Experience

# Pig Jaw Surgery Training



Requirement for  
participating in  
patient surgical  
experiences



# **Pig Jaw Surgery Course**

Full and partial thickness flap

Degranulation, debridement

Basic suturing techniques

**Undergraduate  
Periodontics  
Surgical  
Experience**



1 dental chair  
available per clinic  
session

Booked on a first-  
come, first-served  
basis by the patient  
care coordinators  
in each clinic

# Equipment



Surgical cassettes specifically designated for undergraduate periodontics use



# Pre-surgical Preparation

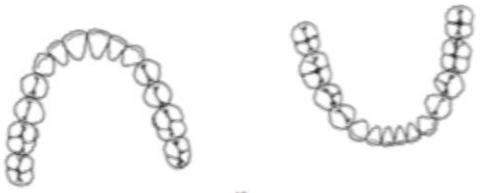
Example of the pre-surgical synopsis form

The University of Michigan  
School of Dentistry  
Graduate Periodontics  
Presurgery Synopsis Sheet

Date: \_\_\_\_\_  
Patient Name: \_\_\_\_\_  
Student Name: \_\_\_\_\_

Surgery Site (s): _____	Surgery Type: _____
-------------------------	---------------------

I. Relevant Medical History:  
II. Brief Periodontal History on the Surgery Site(s):  
III. Purpose(s) of Surgery:  
IV. Surgical Plan: (Draw on this sheet or on the patient's model)



53

>1 week prior to surgery, the dental student must:

complete required reading on the surgical procedure (available online)

fill out a pre-surgical synopsis form

provide diagnostic models and draw the incision design on the cast for discussion with the supervising faculty.

# Staffing and Supervision



Designated  
periodontal surgical  
faculty

Students arrange for  
their own assistant

# Accepted Case Types



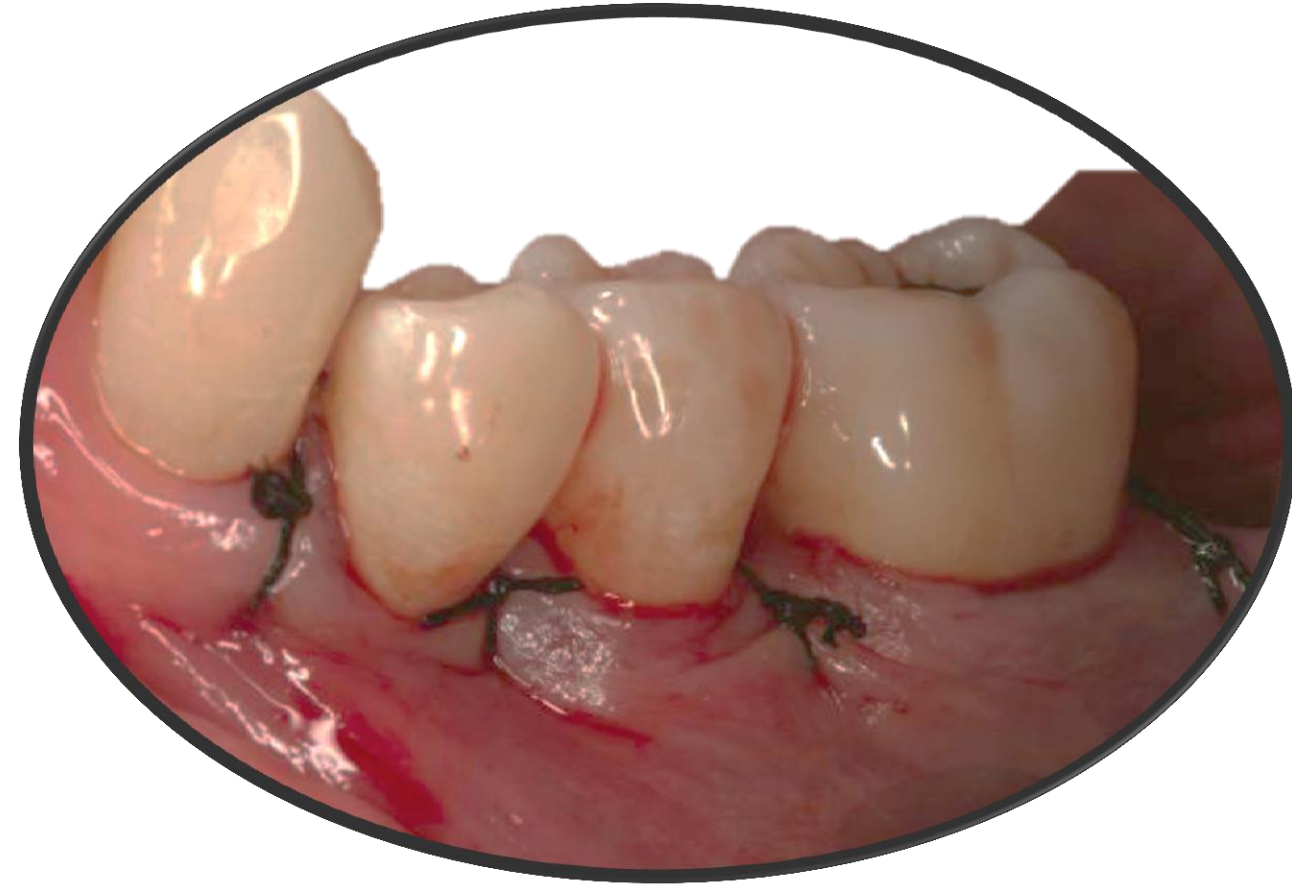
Any minor periodontal procedure  
without hard tissue involvement

- Soft tissue crown lengthening
- Gingivectomy
- Flap surgery
- Distal wedge
- Fibrotomy
- Tissue removal around dental implants
  
- No extractions

# Fee Schedule

<b>Procedure</b>	<b>Code</b>	<b>Fee</b>
Simple crown lengthening (soft tissue only)	Use D4241 (if indicated, can use 4211 with permission)	\$150
Gingivectomy	D4210 (4 or more teeth) D4211 (1-3 teeth)	\$150 \$75
Localized flap surgery	D4241	\$150
Distal wedge	D4274	\$150
Fibrotomy	D7291	\$75
Tissue removal around dental implants	D4999	\$0

# Follow-up



Post-operative appointments done in the surgical chairs

Booked at the time the surgery to ensure proper follow up

Emergency care initially through the undergraduate student

On-call graduate periodontics resident available for consultation if needed

**OUTCOMES**











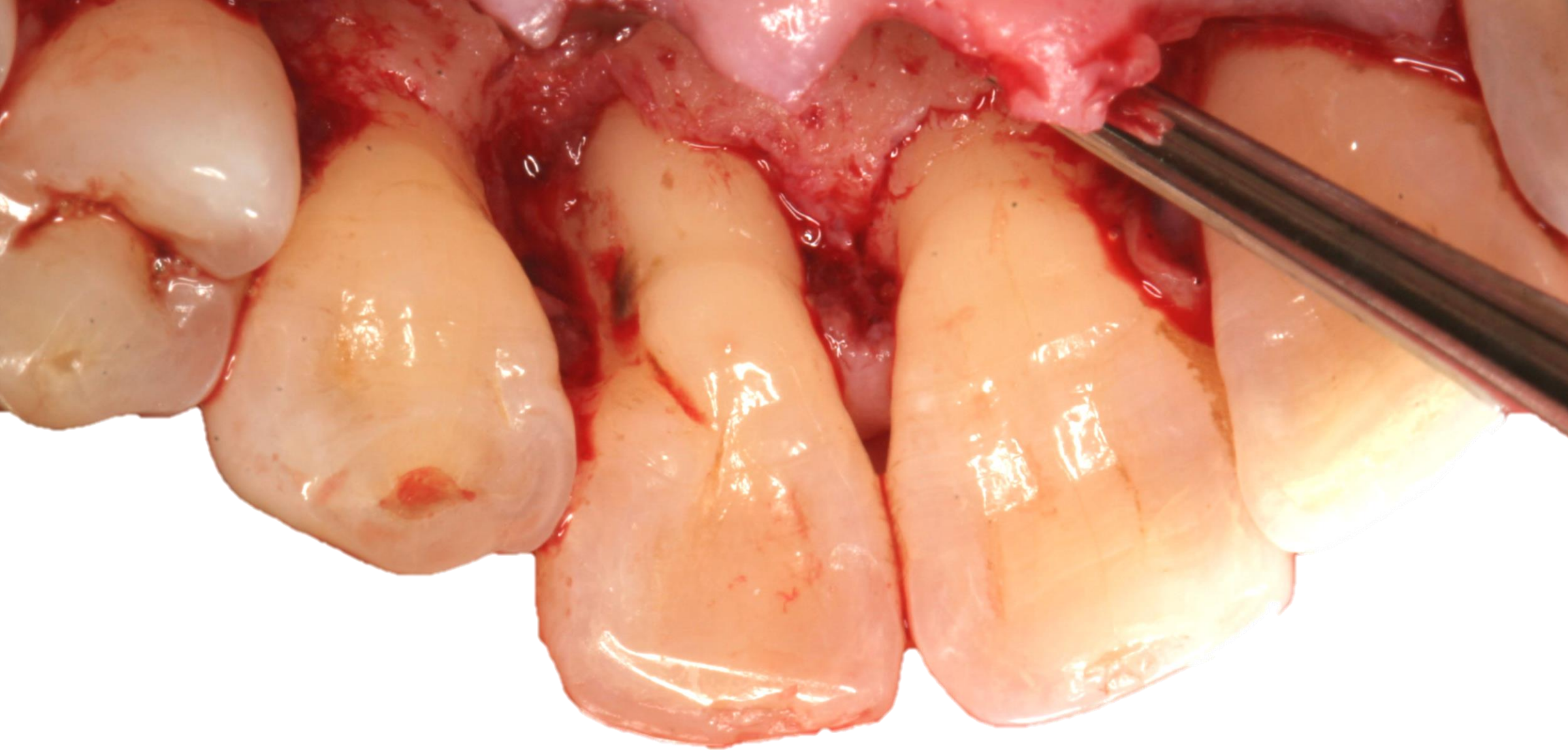
49 surgeries performed in  
calendar year

Mostly crown lengthening

Some exploratory surgery

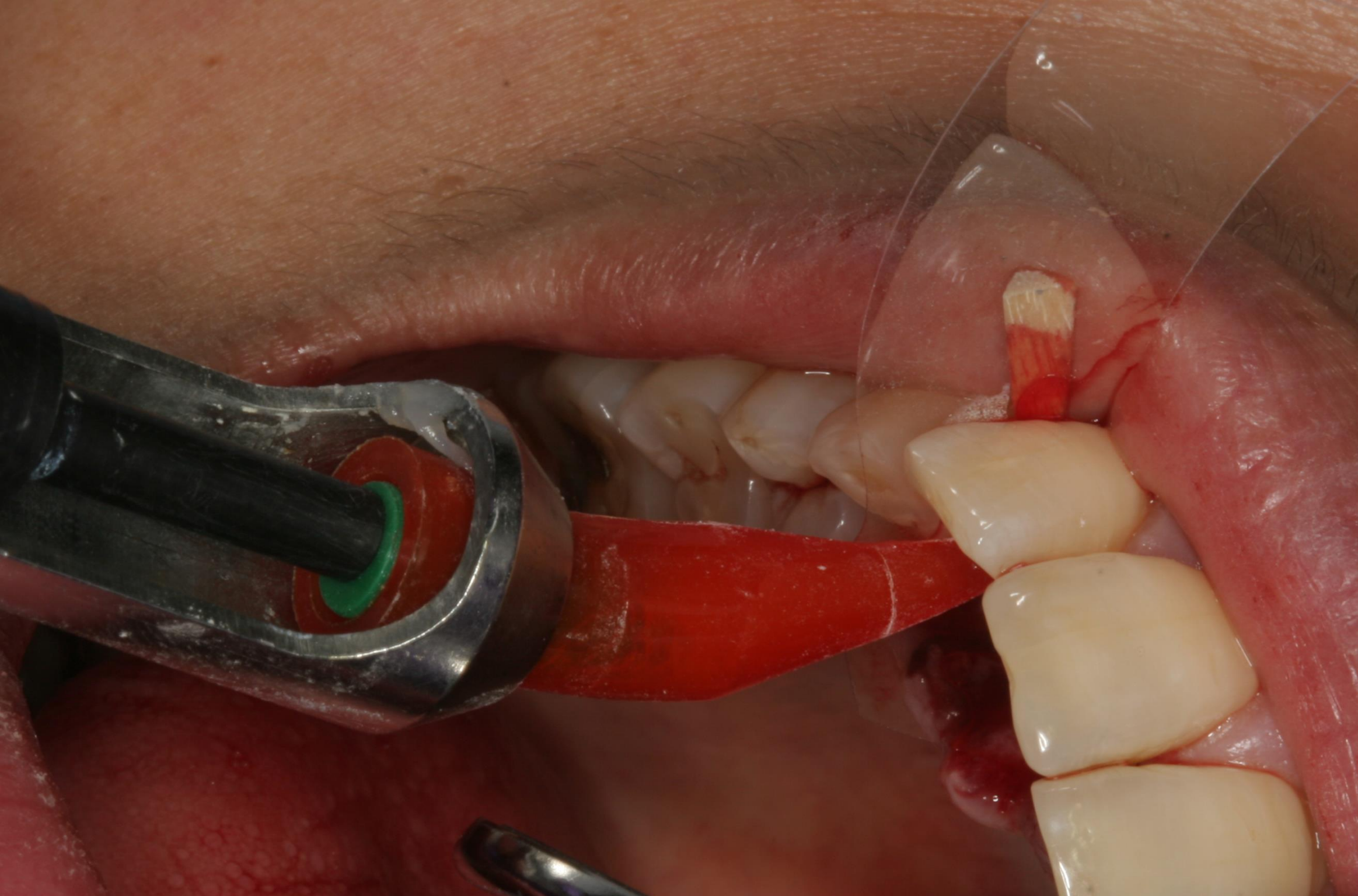


10mm isolated  
probing depth



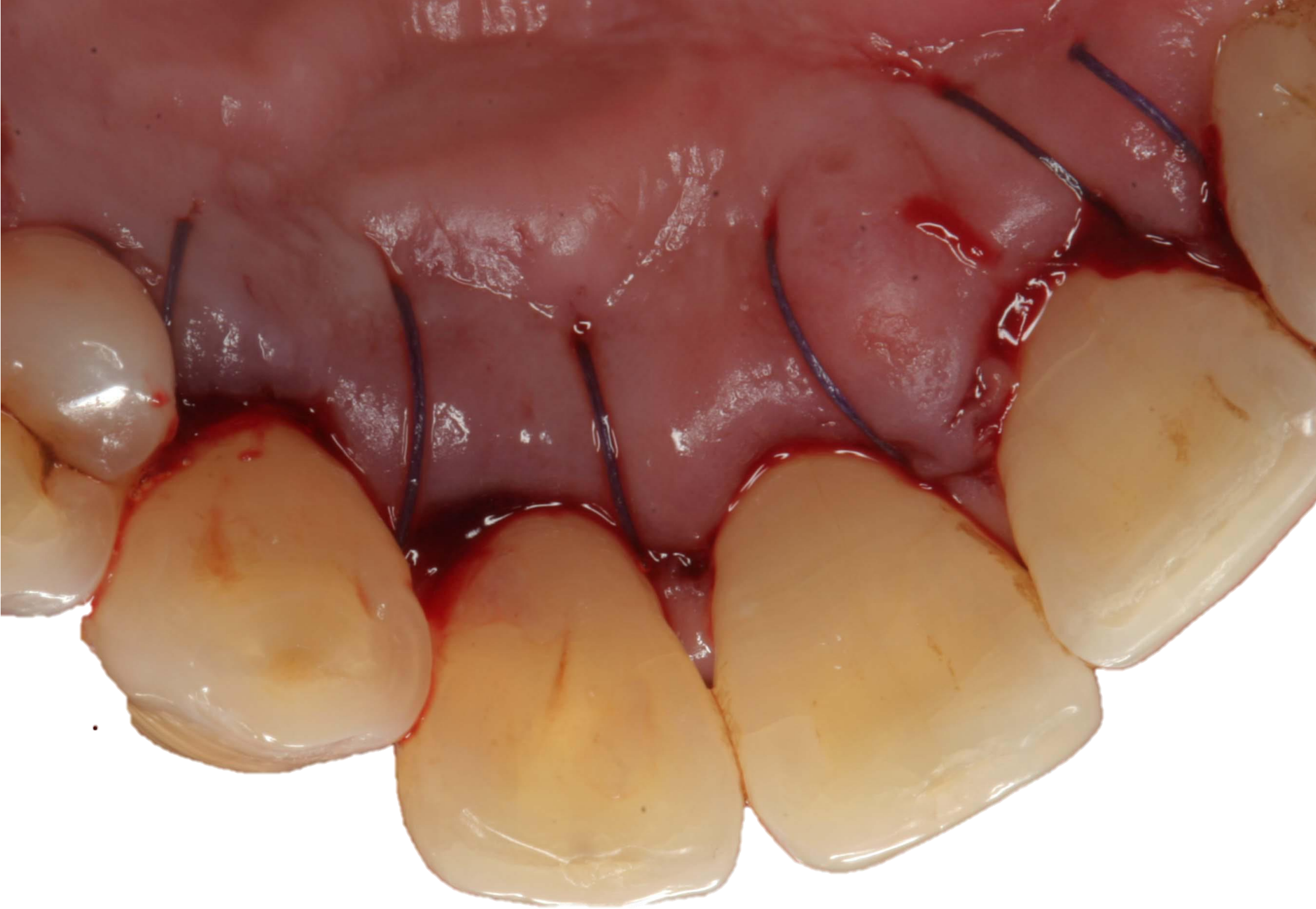
Palatoradicular  
groove







Post-  
restorative



Suturing



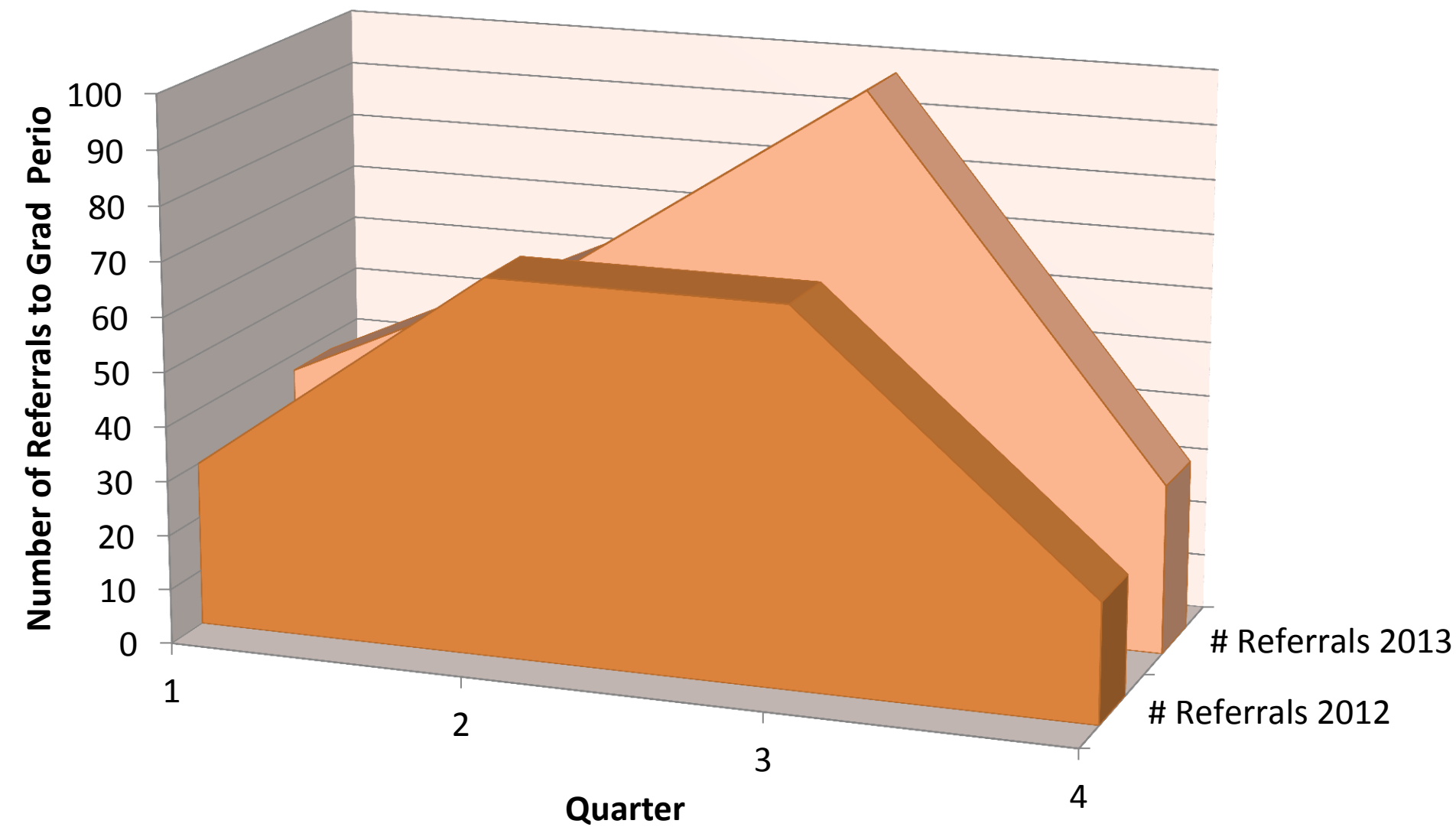


2 week post-  
op

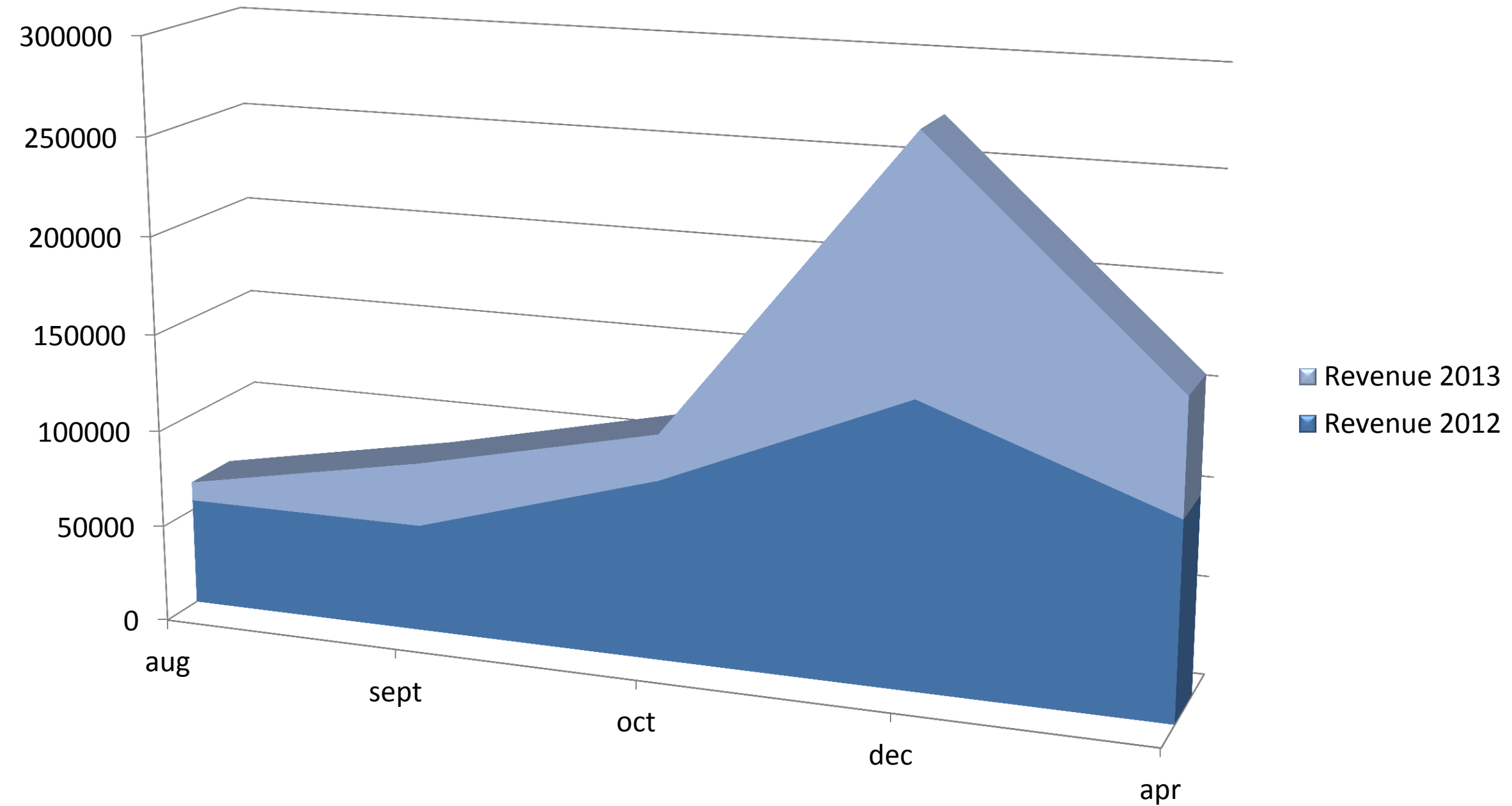


2 week post-  
op

Referrals from  
undergrad to  
graduate periodontics  
increased during the  
predoctoral surgery  
program



Revenue from  
undergraduate  
referrals increased  
during the  
predoctoral surgery  
program



**THINGS WE LEARNED**



Allowing dental students to perform minor surgery has positive effects in multiple ways

Students will try to push the envelope

Great opportunity for interdisciplinary interactions

Increased interest in periodontics training

Enhanced awareness of periodontics that translates to increased referrals and better learning experiences

**T**HANK YOU!

