For Every Stage of Your Practice

Trust your practice with the firm that has an impeccable reputation for service, experience and results. Call today for a free initial consultation.

Pre-Transition Consulting

Practice Appraisals & Sales

NATIONAL PRACTICE TRANSITIONS™

Associate Placement

Practice Protection Plan

Robert Audet, D.M.D.
Worcester County, MA

Edward Donle, D.M.D.
Middlesex, MA

Michael Bittrich, D.M.D.
Barnstable, MA

Joseph Santelli, D.D.S.
Plymouth County, MA

Richard B. Zafran, D.M.D.
Essex County, MA

Gary Campagna, D.M.D.
Barnstable, MA

Alan Lichtenfeld, D.D.S.
Providence County, RI

John Darby, D.D.S.
Providence County, RI

Congratulations to these doctors whose practices we sold!

Richard Karp, D.M.D.
Drum Hill Dental Care, PC
Middlesex County, MA

Leon G. Danish, D.D.S.
Kent County, RI

Visit our website frequently for new opportunities or register for immediate notifications.

Daniel P. Baccari, Esq.
508-435-7678, x223
d.baccari@NPTdental.com

Scott A. Cabral, Esq.
508-435-7678, x222
s.cabral@NPTdental.com

P: 877.365.6786 info@NPTdental.com www.NPTdental.com
DSG Yankee Laboratory
A REPUTATION FOR EXCELLENCE

YOUR LEADER IN DIGITAL DENTAL TECHNOLOGY

BellaTek® Encode® Empowered Laboratory

DIGITAL IMPRESSION PRICES

$375 Bruxzir™ (modeless)
$430 Bruxzir™
$440 PFM (+ metal)
$450 DsZ (zirconia)
$470 Emax (Pressed)

CONVENTIONAL IMPRESSION PRICES

$455 Bruxzir™
$460 PFM (+ metal)
$482 DsZ (zirconia)
$495 Emax (Pressed)

Contact your local representative
Stacy Semack for more information:
203-988-6686 or ssemack@dentalservices.net

36 Mill Street, Wethersfield, CT 01609 • 860-258-3626
www.dentalservices.net/yankee

We accept scans from all of the major digital dental scanners.
Pricing includes: restoration as indicated, model, Gold Tite® screw, try-in screw, custom abutment and labor.
FEATURES

18 Substance Abuse and Tooth Destruction
Deviprasad Makonahally, BDS, MSc
Stanley A. Alexander, DMD

Drug abuse and the opioid epidemic in Massachusetts continue to make headlines. Although there is strong documentation in the relationship of dental disease and substance abuse, the many associated medical, social, and psychiatric problems affecting substance abusers tend to overshadow their oral health. This article highlights the dental pathology and its impact associated with patients who have abused pain medications, alcohol, cocaine, heroin, marijuana, methadone, and methamphetamines.

22 Dental Practice as the Population Demographics Change in Massachusetts
H. Barry Waldman, DDS, MPH, PhD
Steven P. Perlman, DDS, MScD, DHL (Hon.)

General population demographics in the United States are undergoing dramatic changes. Long-term customary populations, which provided the bulwark for many successful dental practices, are being replaced. In this article, these developments are reviewed for the Commonwealth of Massachusetts and its counties.

26 A New Integrated Oral Health and Primary Care Education Program in the Dental Student Clinic
Sang E. Park, DDS, MMSc
Fidencio Saldana, MD
R. Bruce Donoff, DMD, MD

As patient care involves multidisciplinary and interprofessional environments with a wide array of health care providers, dental education models that incorporate the concepts of primary care medicine are being explored. This article describes the implementation of a new program incorporating primary care education into a predoctoral dental curriculum in the Student Teaching Clinic at Harvard School of Dental Medicine.
Pathology Snapshot: Enlargement of the Inferior Alveolar Canal

This is an unusual finding during the course of a routine radiographic examination, but when identified, such enlargement typically represents a neoplastic process.

**DISCLAIMER**

The appearance of advertising in the JOURNAL is not an MDS guarantee or endorsement of the product or the claims made for the product by the manufacturer. The fact that an advertisement for a product, service, or company has appeared in an MDS publication shall not be referred to in collateral advertising.

Copyright © 2016 Massachusetts Dental Society issn: 0025-4800

The JOURNAL OF THE MASSACHUSETTS DENTAL SOCIETY (usps 284-680) is owned and published quarterly by the Massachusetts Dental Society, Two Willow Street, Suite 200, Southborough, MA 01745. Subscription for nonmembers is $15 per year in the United States.

Periodicals postage paid at Southborough, MA, and additional mailing offices.

POSTMASTER: Send address changes to:
JOURNAL OF THE MASSACHUSETTS DENTAL SOCIETY,
Two Willow Street, Suite 200,
Southborough, MA 01745

CONTRIBUTIONS: Contact Melissa Carman, director of publications, at mcarman@massdental.org or see the author guidelines on page 40.

DISPLAY AD CLOSING DATES:
March 1 (spring)
June 1 (summer)
September 1 (fall)
December 1 (winter)

For more information, contact Melissa Carman, director of publications, at (800) 342-8747, ext. 260, or email mcarman@massdental.org.

HOW TO REACH US

All communication intended for publication should be addressed to Dr. David Becker, Editor, JOURNAL OF THE MASSACHUSETTS DENTAL SOCIETY, Two Willow Street, Suite 200, Southborough, MA 01745. Opinions and statements by contributors indicate personal views of the authors and are not to be construed as expressing an official position of the Society.

FEEDBACK: To contact our Editorial Department, contact Director of Publications Melissa Carman at (800) 342-8747, ext. 260, JOURNAL OF THE MDS, Two Willow Street, Suite 200, Southborough, MA 01745, or email mcarman@massdental.org. We can't reply to every communication, but we will publish as many letters as space permits.

QUESTIONS: Send your questions to JOURNAL OF THE MDS, Two Willow Street, Suite 200, Southborough, MA 01745, or email mcarman@massdental.org. Include your name, address, and office phone number.

ONLINE: Remember to check out the JOURNAL online at www.massdental.org and on the MDS app.

FOLLOW US ON:
Although Journal editorials typically come from both Arthur and me, this one reflects Arthur’s personal perspective. But it focuses on a subject that many of us can certainly relate to.

“A mind that is stretched by new experiences can never go back to its old dimensions”

Oliver Wendell Holmes, Jr.

Your editors have reached the time of life when thoughts of what the future may hold combine with those of what might have been, seasoned by signs that this life is not a dress rehearsal.

One of us (Arthur) recently decided to give up private practice and have transitioned to a full-time academic career. I am going to give my personal thoughts and observations in this editorial.

According to the U.S. Government, I have reached “full retirement age.”

According to the American Dental Association, I am a “Retired Life Member.”

According to the hundreds of dental students and dozens of residents and postdoctoral fellows with whom I interact daily, thus far I am thought of as an active, valuable resource and mentor.

According to myself, I am anything but retired. I have transitioned from a full-time clinician/caregiver to a full-time professor. I have traded the daily responsibility of attempting to provide optimal clinical care to my patients for accepting the charge to impart what I have learned over years of practice and continuing education to the future practitioners and leaders of our profession.

When I was trained, the majority of dental students were male, Caucasian, American-born, and often the first members of their families to have graduated college and/or completed a graduate education.

These demographics have changed dramatically.

Males represent less than half of the dental school and postdoctoral population; at some schools, by an even larger margin. Caucasians comprise approximately 50 percent of enrollees, while nonresident aliens make up 27 percent of dental school populations across all levels.

As a part-time faculty member for the past few years, I found this environment to be exhilarating. The challenges posed by young, better-educated, tech-savvy students awoke ideas and passions in me that had long been dormant. The knowledge explosion is real—some current middle school science was cutting-edge college material when Baby Boomers were in college. I was drawn more to my academic ventures, sometimes to the detriment of practice-related communications and other paperwork. One can only stretch so far.

This editor had also considered pursuing an academic career at the completion of his training. I opted for full-time practice with part-time teaching, which eventually morphed into heavy involvement with the MDS, YDC, ADA, and EDIC. When several friends (and a dental school) recommended I resume an educational role, it was a siren song.

Today’s dental schools are vibrant examples of diversity across all definitions, gender neutrality, and innovative learning environments using teaching techniques and technologies that seemed like science fiction not that long ago, but are still comfortably involved with alginate, waxes, plaster, and stone (at least for now).

Students and residents must be better diagnosticians and clinicians than their predecessors of even a few years ago because we, as a community of responsible dental professionals, have raised the standards that the public, our patients, expect and deserve.

As a wet-gloved dentist, I was fortunate to have a practice, which for four decades served patients as friends, and I had a staff that truly was family. Perfection was our goal, but we are all humans attempting to help other humans; we must satisfy ourselves with knowing that if we gave our maximum effort to do good (as our Code of Ethics demands), then we did all that could reasonably be expected of us.

Why have I transitioned to a full-time academic position?

At a school, there is faculty far more familiar with current basic science, technology, and the academic literature. This educator has done his best to remain current in his field of practice, while learning the lessons one can only absorb based on decades of experience, mistakes, human interactions, and love for a profession that strives to constantly improve itself.

My hope is that I can play a role in passing along that knowledge, the art that combines with the science to produce skilled clinicians, throughout the world, whose current training is our responsibility.

Thus far, the academic environment and I seem to fit together well. Only time will tell if my new experiences can stretch my mind and help grow the minds of my students to new dimensions.
Since the late 1950s, employer-provided health insurance has been the near-universal distribution channel by which the vast majority of Americans receive health insurance. Single-payer or nationalized health care proposals came to light in the early 1970s and again in early 1990s, but failed for a variety of reasons—cost and change among them.

The "Obamacare" experiment, which began in 2010, has not achieved anywhere near the success it had intended—only 11 million insured with a target of 30-plus million, as well as higher costs of care for individuals and business-based insurances, being two of the main issues. So it is not a surprise that health care is a major issue in the 2016 presidential race. Some of the candidates, from Donald Trump to Ted Cruz, would eliminate Obamacare, while others, such as Senator Bernie Sanders, have pledged to not only retain Obamacare, but expand it to include a universal health plan.

So what is in this plan, and is it truly a viable option? The Bernie Sanders plan promises lower costs and increased health care for all Americans. This single-payer system is based on expanding the Medicare-style system to cover people nationwide. To do so, the program would rely on additional taxes on employers and individuals, along with proposed cost savings in prescription drugs and providers via leveraged negotiations. The payroll tax increase for employers would be in the 6–12% range. This tax levy could possibly impact employee pay as a trickle-down effect. Taxes on individuals would start in the 3% range and be upwardly indexed for higher-income earners (in excess of $250,000 annually). This would be a difficult pill to swallow for individuals and businesses alike.

Savings coming from increased negotiations with physicians and hospitals is a critical piece of the Sanders Plan. Physicians would be paid nearly 11% less, while hospitals would see an approximate reduction of 10% from current Medicare rates, according to Gerald Friedman, a University of Massachusetts economics professor. Further reducing reimbursement rates, seen as being below market value already, could prove to be problematic to the Sanders plan. Physicians and hospitals are under price pressure in the private insurance market as well, so counting on these “savings” is no slam dunk.

Finally, the Sanders plan counts on the slowdown of health care spending. In 2014, health care spending rose 5.3%, while projections for final 2015 figures are at 5.5%. These numbers reflect a nation utilizing more health care (as our older population continues to age), with greater prescription drug costs, as well as additional enrollees under Obamacare. Therefore, if anything, adding 30 million or more currently uninsured people onto the rolls will only increase health care spending, not reduce it.

An example of a single-payer effort was the Vermont State single-payer system of 2011–2014. The Vermont objective was thrown out due to the total cost of implementing such a plan. The Vermont state budget would have doubled in the first year alone and would have required large tax increases on individuals (personal tax increasing by an additional 9.5%) and businesses (by an additional 11.5%) alike.

The Sanders plan is thought-provoking and very interesting, but is it truly viable? There are many questions that a single-payer plan would have to address. Would the level of care remain the same, or would it decrease? Would choice and selection that enrollees in private coverage currently enjoy go away in a single-payer system? Should the government really be running a “socialist-style” program? How will we truly pay for this kind of plan and will it involve raising taxes?

Americans will ultimately vote for their next president based on a variety of issues, health care being one of them. Single-payer efforts may just be the issue that either pushes the vote toward one candidate or away from another.
MDSIS-Spring’s decades of experience advising dental practices of all sizes give us the distinct advantage of understanding the unique employee benefit needs of dentists and their employees.

Our brokers are trusted advisors to dentists across the country, guiding them through the complexities and requirements of health care reform and designing benefit products that match their needs best.

**HEALTH | DENTAL | LIFE | DISABILITY | PET | IDENTITY THEFT | TRAVEL | MEDICARE | and more**

CONTACT US today to find out how you can join dentists across the state in saving money on your health insurance costs and enjoying professional employee benefit advice!

call us 1.800.821.6033
or visit: www.SpringCooperative.com

**KNOWING THE RIGHT QUESTIONS TO ASK PRODUCES THE BEST OUTCOMES...**
Instructions and Explanations—Do Your Patients Understand Yours?

DEBRA K. UDEY

Ms. Udey is the risk manager at Eastern Dentists Insurance Company. She has been in the dental and medical malpractice field for more than 30 years in both claims and risk management for dentist- and physician-owned companies, as well as in a hospital setting. She can be reached at EDIC at (800) 898-3342 or at dudey@edic.com.

A recent article in the Wall Street Journal[1] discussed the difficulties patients have retaining information given at a doctor’s appointment or a hospital stay. In situations where news of a serious condition has been conveyed, this is certainly understandable. Trying to process such information can be stressful. Retaining everything that has been said may be nearly impossible. According to the article, some doctors are recording the information for patients so they can listen to it as many times as they need to understand it, and it has helped their comprehension.

The good news is that dentists are not often the bearer of such bad tidings. Nonetheless, it is important that patients understand what you tell them about their conditions, as well as the instructions you give them. Patients are your partners in care, and if they don’t do their part, all your good work can be for naught.

It is not news that patients don’t remember information their clinicians tell them. Though the statistics cited in the Wall Street Journal come from a study conducted in 2003, there are no newer studies suggesting the numbers have improved. That study indicated that 40–80% of medical information provided by health care practitioners is forgotten immediately.[2] Even worse, the study showed that almost half of the information that was remembered was incorrect.

There are several ways that a patient’s failure to remember what you tell him or her can be harmful. Some things can be fairly serious (such as not taking the necessary precautions to stop bleeding that may occur after a tooth extraction, or failing to go to a periodontist when referred), while others are less serious but still important (not flossing or brushing thoroughly).

Patients’ failures to remember information can also “hurt” the office. Telephone calls asking for information that was discussed during the office visit can clog up the phone lines and prevent more important calls from being answered or placed in a timely manner.

What can be done to help patients remember what you tell them? Several things can work. First, think about your instruction sheets for various conditions and follow-up for procedures. Do they give enough information? Do they explain why the instructions you are giving are important, and what will happen if patients don’t follow them? If you make a referral to a patient for a periodontist, have you explained why it is important to see this specialist and what can happen if the patient doesn’t? Perhaps if patients had thorough information sheets that they could read again on their own time, they might better understand the importance of following your instructions.

It is also important that instruction sheets have enough explanation to make them useful. Think about what you are telling the patients. Do you explain why you are giving the instructions and why they are necessary? Since patients forget 40–80% of what you tell them, and half of what they remember is wrong, the more opportunities you give the patient to understand the information, the better the chances they will follow the instructions.

Second, look at the instruction sheets you give patients to assess whether or not they can understand them. The instructions should be in very plain language. Considering that the reading level of the average American adult is somewhere between the fifth- and eighth-grade levels, your forms and information should contain language the average adult can read. There are many resources online that can assess the reading level needed to understand printed language (you can Google “reading level calculator” to find one). If the verbiage on your forms is too complicated, simplify it by using less complicated words and shorter sentences. You might even give the form to your fifth grader at home to read (or borrow your neighbors child) to see if he or she understands the information.

Third, for a period of time, track the questions asked by patients calling the office. If you find that some questions are asked more often, think about how you can improve your explanations at the time of the appointment, or whether a change to your information sheet or instruction form would help. Be willing to alter your forms when necessary to ensure the patients’ best understanding.

You do your best to provide optimal care for your patients. Your patients need to do their part, and they can do that more effectively if they understand what they need to do and why it is necessary. To do this, they need to receive the right information and understand it. Giving them this information in a format they can understand will help. There are many situations where electronics enable easy communication. But sometimes, a piece of paper might be just the ticket.

REFERENCES
At EDIC, the “By Dentists, For Dentists”® insurance company, we understand the financial challenges of dental school and supporting student loans. As partners with Massachusetts Dental Society (MDS), we have built a program that saves you money.

EDIC’s New-Dentist Discount Program was developed to help new practicing dentists get the dental malpractice insurance one needs at competitive prices. Our program allows you to receive a discount on your premium rate to help minimize your expenses. The result is a 5-year discount for all new dentists who practice in Massachusetts and join the MDS.

1st year $50.00 New-Dentist Occurrence Policy
2nd year 70% Premium Discount
3rd year 55% Premium Discount
4th year 40% Premium Discount
5th year 20% Premium Discount

As an MDS member, take advantage of this cost savings. Learn more about the New-Dentist Discount Program by contacting us today.
EATING DISORDERS AND DENTAL HEALTH
Friday, April 1, 2016
Registration: 8:30 am, Seminar: 9:00 - 12:00 am

- 401 $70 MDS Dentist/Auxiliary Member
- 401A $100 Non-MDS Member

Kate Sweeney, RD, LDN, manager, Nutrition and Wellness Center, Brigham and Women’s Hospital, and specializes in nutrition counseling for obstetrics and eating disorders.

AUDIENCE
- Assistant
- Dentist
- Hygienist
- Office Staff

LECTURE • 3 CE Hours

INTRODUCTORY HANDS-ON COMPREHENSIVE CAD/CAM TRAINING
Friday, April 8, 2016
Registration: 8:30 am, Seminar: 9:00 am - 3:00 pm

- 408 $150 MDS Dentist/Auxiliary Member
- 408A $199 MDS Dentist and One Auxiliary Member
- 408B $250 Non-MDS Member

Carl Bosckettii, DMD, basic and advanced certified Patterson trainer and has placed over 12,000 restorations in his office over the past 14 years.

The Patterson Dental grant has been applied to this program.

HANDS-ON • 5 CE Hours

UPDATE ON ORAL CANCER: THE GOOD, THE BAD, AND THE UGLY
Wednesday, April 13, 2016
Registration: 1:30 pm, Seminar: 2:00 - 5:00 pm

- 413 $140 MDS Dentist/Auxiliary Member
- 413A $225 Non-MDS Member

Nathaniel S. Treister, DMD, chief of the divisions of oral medicine and dentistry, Brigham and Women’s Hospital and Dana-Farber Cancer Institute.

HANDS-ON • 3 CE Hours

RADIOLOGY CERTIFICATION PROGRAM
Thursday, April 28, 2016
Registration: 8:00 am, Lecture: 8:30 am - 4:30 pm
Lecture Session: MDS Headquarters
Saturday, April 30, 2016 (Choose a Clinical Session Option from Below)
Clinical Session: Boston University Henry M. Goldman School of Dental Medicine

- 430A $220 Lecture 4/28 Clinic 4/30 7:30 - 11:30 am
- 430B $220 Lecture 4/28 Clinic 4/30 10:30 am - 2:30 pm

Mary Ellen Sholes, AAS, dental radiology technologist, Boston University Goldman School of Dental Medicine.

Lunch is included the day of the lecture session only.

LECTURE + HANDS-ON • 11 CE Hours

ACCOUNTS RECEIVABLE PROGRAM
CREATING A PROACTIVE ACCOUNTS RECEIVABLE SYSTEM THAT WORKS!
Thursdays, April 28, May 5, May 12, and May 19, 2016
Registration: 5:00 pm
Seminars: 5:30 - 8:30 pm

- 430A $220 Lecture 4/28 Clinic 4/30 7:30 - 11:30 am
- 430B $220 Lecture 4/28 Clinic 4/30 10:30 am - 2:30 pm

Nancy Blumenthal-Kagan, RDH, founder, Summit Dental Partners, LLC
Marissa Thompson, RDH, BSDH, practice management consultant, Summit Dental Partners, LLC

LECTURE • 12 CE Hours
4-session package
6 CE Hours 2-session package

APRIL 28 I SESSION 1
CREATING A FINANCIAL POLICY THAT WORKS!

MAY 5 I SESSION 2
UNDERSTANDING PROPER BILLING TECHNIQUES FOR INSURANCE AND PATIENT REIMBURSEMENT

MAY 12 I SESSION 3
CREATING A PROACTIVE ACCOUNTS RECEIVABLE SYSTEM

MAY 19 I SESSION 4
CHECKS AND BALANCES THAT YOU MUST HAVE IN PLACE

Register Early at www.massdental.org
24TH ANNUAL
STEVE STONE
BREAKFAST AND LEARN

DON’T MAKE WALLS, BUILD BRIDGES!
DENTISTRY AND PATIENTS ON THE AUTISM SPECTRUM

Sunday, May 1, 2016
Registration: 8:00 am
Seminar: 9:00 am - 12:00 pm
Location: The Verve Crowne Plaza Hotel
1360 Worcester Street
Natick, MA 01760

501 $47
MDS Dentist/Auxiliary Member
(includes breakfast)

502 $25
Student
(includes breakfast)

AUDIENCE
• Assistant
• Dentist
• Hygienist

Kristi Seibel, DMD, diplomate of the American Board of Pediatric Dentistry and maintains a private practice in Sudbury

LECTURE • 3 CE Hours

PREPARE TO TAKE THE DANB CDA EXAM
Wednesday, May 4, 2016
Registration: 4:30 pm, Seminar: 5:00 - 8:00 pm

504 $70
MDS Dentist/Auxiliary Member

504A $100
Non-MDS Member

Pamela Donovan, CDA, RDH, dental assistant instructor, Blackstone Valley Technical High School

Luann Elssesser, RDH, practicing clinical hygienist and instructor, Quinsigamond Community College

DANB and CDA are registered certification marks of the Dental Assisting National Board, Inc (DANB). This course is not reviewed or endorsed by DANB.

LECTURE • 3 CE Hours

DENTURES AND IMPLANTS: BALANCING THE ART, SCIENCE, AND BUSINESS OF DENTISTRY
Friday, May 6, 2016
Registration: 8:00 am, Seminar: 8:30 am - 3:30 pm

506 $199
MDS Dentist/Auxiliary Member

506A $299
Non-MDS Member

Jeffrey C. Hoos, DMD, maintains a private practice in Stratford, CT, and lectures nationally

The Hiossen Implant Company grant has been applied to this program.

LECTURE • 3 CE Hours

SELLING OR PURCHASING AN EXISTING DENTAL PRACTICE
Friday, May 13, 2016
Registration: 9:30 am, Seminar: 10:00 am - 2:00 pm

513 $30
MDS Dentist/Auxiliary Member

513A $100
Non-MDS Member

Caitlin O’Rourke, development officer, Bank of America Practice Solutions™

Andrew D. Schwartz, CPA, founder and managing partner of Schwartz & Schwartz, PC, in Woburn

Tyler Russell, practice transition consultant, Henry Schein Dental

The Bank of America Practice Solutions™ grant has been applied to this program.

LECTURE • 3 CE Hours

SIGNIFICANT EFFICIENCY GAINS FROM IMPLEMENTING AN ALL-TISSUE LASER INTO YOUR PRACTICE, WITH A SPECIAL FOCUS ON CO2 AT 9.3 μm
Friday, May 20, 2016
Registration: 8:30 am, Seminar: 9:00 am - 4:00 pm

520 $150
MDS Dentist/Auxiliary Member

520A $250
Non-MDS Member

David Fantarella, DMD, maintains private practices in Hamden and North Haven, CT

The Convergent Dental, Inc. grant has been applied to this program.

HANDS-ON • 6 CE Hours
I. ABSTRACT
The first objective of this article is to express an experimental-work-supported opinion of its authors regarding the inadequacy of the present dental mask and regular eyewear combination for protecting dental care practitioners. Its second objective is to suggest amending OSHA Standard 1910.133(a)(1) to mandate effective eye protection for dental care practitioners by requiring the use of effective means for closing the bottom gaps between the lower rims of the lenses of the protective eyewear and the upper edge of the mask worn by the practitioner.

The various types and sources of dental practice eye occupational hazards and the possible entry routes of dental debris toward dental practitioners’ eyes are discussed.

Experimental work, confirming the inadequacy of the present dental mask and eyewear combination for protecting dental care practitioners, is presented.

II. TYPES AND SOURCES OF DENTAL PRACTICE EYE OCCUPATIONAL HAZARDS
By their nature, dental procedures involving drilling at very high speeds (180,000 to 500,000 rpm) generate debris traveling at speeds of up to 50 mph. Such debris includes pieces of amalgam, tooth enamel, calculus, pumice, and broken dental burs, etc. In the absence of protective means, such debris may find its way to the eyes of the practitioner or assistant.

III. POSSIBLE ENTRY ROUTES OF DEBRIS TOWARD DENTAL PRACTITIONERS’ EYES
Normally, dentists wear dental masks and protective eyewear (glasses, both prescription and nonprescription) while performing dental procedures. Dental masks are available in a variety of designs and profiles, including pleated, molded cup, duckbill, and foldable styles. The most commonly used type is the pleated style. All dental mask styles provide protection of covered facial areas (primarily nose, mouth, and portions of the cheeks) against splash.

Most pleated dental masks contain an inner layer of melt-blown filtration material. However, since there is no effective seal between the perimeter of the mask and the wearer’s face, air leakage occurs through the perimeter of the mask, and hence the mask fails to provide effective respiratory system protection.

Pleated dental masks are preferred by dental practitioners because they are easy to wear and have low resistance to breathing. In comparison to NIOSH-approved respirators, most pleated masks lack the seal between their perimeter and the wearer’s face and hence would not meet NIOSH approval requirements.

Infrequently, dentists wear masks fitted with a full-face transparent shield. This is particularly desirable when the dental procedure generates excessive splash of blood and other fluids and particulates. Masks with a full-face shield provide the most effective facial and eye protection against such safety hazards. However, their use by dental practitioners is limited due to their higher cost, reflective glare, fogging, optical distortion caused by the unavoidable curvature of the face shield when the mask is worn, hotness of the air in the zone between the face shield and the wearer’s face, wobbliness of the face shield, and inconvenience and discomfort associated with their use.

Referring to Figures 1 and 2, there are three possible routes dental debris may follow in order to reach the eye of a practitioner not wearing a full-face shield mask:

a. Frontal Entry Route by debris traveling perpendicular to the practitioner’s face.
Glasses provide the necessary protection against such debris. They are required by OSHA Standard 1910.133(a)(1) and must meet ANSI Standard Z87.1. Accordingly, fewer eye injuries are caused by such debris.

b. Sideways (right to left or left to right) Entry Routes by debris traveling tangential to the face. Side shields provide effective protection against such debris and are specifically required by OSHA Standard 1910.133(a)(2), which states: “The employer shall ensure that each affected employee uses eye protection that provides side protection when there is a hazard from flying objects. Detachable side protectors (e.g. clip-on or slide-on side shields) meeting the pertinent requirements of this section are acceptable.”

c. Bottom Gaps Entry Routes by debris traveling vertically and tangential to the face. Such debris may reach a practitioner’s eye through the open gaps (bottom gaps) between the lower rims of the lenses of the protective eyewear and the upper edge of the mask worn by the practitioner.

As discussed above, since Front Entry Route and Sideways Entry Routes are effectively blocked by the use of OSHA-required protective eyewear, based on their respective OSHA Standards, the Bottom Gaps Entry Routes are the most frequent, yet unaddressed, routes of eye-injury-causing debris.

IV. EXPERIMENTAL WORK
A series of spray studies was conducted to evaluate the efficiency and safety of the current, typical personal protective equipment (PPE) used in a typical dental setting.

The objective of the experimental spray studies was to evaluate the entry routes associated with the noted bottom gaps (the spaces between the wearer’s cheek or top edge of the worn mask and the bottom rim of the worn eyewear (see Figures 1 and 2) when a red-dyed spray was directed at the simulated practitioner’s face from different angles.

Experimental Setup and Procedures
An apparatus was constructed to simulate the angles that a dentist or dental hygienist would most likely be relative to the patient and the dental handpiece used during typical dental procedures (see Figures 3, 4, 5, and 6).

The apparatus consisted of a medium-size human head mannequin that was mounted and positioned to simulate the typical angular position and distance of the face of a dentist or a dental hygienist relative to the patient and operating dental handpiece during a dental procedure.

A spray bottle containing water-based red dye was used for spraying the dye solution at the mannequin head from the six o’clock position (middle position), and the four o’clock and eight o’clock positions (left and right positions) to simulate the average typical angles that would be consistent with the dentist-patient operating setup.

The first spray study conducted consisted of the mannequin head wearing OSHA-compliant safety glasses with side shields along with a standard flat ear loop mask (see Figure 7). The second spray study consisted
of the mannequin head wearing a mask with a full-face shield without eyewear under the shield/mask combination (see Figure 8).

With the mannequin head in both studies mounted at the exact same position and angles with relation to the nozzle of the spray bottle, the nozzle was aimed at the mannequin head from the above-mentioned positions. Two complete spray shots from the spray bottle were generated from each of the three positions to evaluate possible entry routes for debris projectiles and associated procedural fluids. This was repeated for both mask set ups.

Results and Discussion
The first spray study was conducted with the mannequin head wearing a mask with full-face shield (see Figure 8). With the head mounted as outlined (see Figures 3, 4, 5, and 6), two spray shots were directed at the mannequin head from the above-mentioned three positions. The results showed that a worn mask, with a full-face shield, provided complete and adequate (appropriate) facial protection from the typical spray and debris that a dental provider would encounter during a dental procedure (see Figures 9, 10, and 11). Note that the mannequin’s eyes are clear from the spray dye (see Figure 11), indicating that the bottom gaps were adequately blocked while wearing the full-face shield/mask combination during the spray study.

The second spray study was conducted with the mannequin head wearing OSHA-compliant safety glasses with side shields and a flat, ear loop mask (see Figure 7). With the head mounted as outlined (see Figures 3, 4, 5, and 6), two spray shots were directed at the mannequin head from the same three positions. The results showed that the glasses with side shields blocked the frontal and side entry routes from debris, while not adequately closing the bottom gaps as the mask with full-face shield demonstrated (see Figures 12, 13, 14, 15, and 16).

As shown in Figures 12 and 13, it is clear that the spray dye covered the bottom rim of the safety glasses and the top edge of the mask, while penetrating through the open bottom gaps and proceeding to the mannequin’s eyes by traveling vertically and tangential to the face (see Figures 14, 15, and 16).

These findings demonstrate clearly that there is a major inadequacy and breach by the present dental mask and standard/typical eyewear combination in protecting the eyes of a dental care provider and that closing the bottom gaps is essential and should be mandated by OSHA when defining adequate/appropriate personal protective equipment standards.

The evidence suggests updating OSHA Standard 1910.133(a)(1) to mandate effective eye protection for dental care practitioners by requiring the use of an effective means for closing the bottom gaps between the lower rims of the lenses of the protective eyewear and the upper edge of the mask worn by the practitioner.
V. LEGAL ANALYSIS OF EMPLOYER’S LIABILITY

OSHA Standard 1910.133(a)(1) states:

“The employer shall ensure that each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.”

It places the burden of providing “appropriate” eye protection, and hence the liability for failure to provide the “appropriate” eye protection, on the employer. And, considering the fact that it is inherent and unavoidable in the process of wearing a non-full-face shield dental mask and deforming its nose clip to fit over the wearer’s nose that bottom gaps are generated, it follows that OSHA Standard 1910.133(a)(1) is inevitably not met in dental medicine practice and that the currently used combination of protective eyewear and dental mask does not provide the “appropriate” eye protection required by OSHA. Also, the unavoidable generation of the bottom gaps renders the combination of regular protective eyewear and non-full-face shield dental mask an unreasonably dangerous combination, since it is reasonably foreseeable that dental debris may reach the eyes of the dental practitioner through such open bottom gaps. As such, a dental practice employer who fails to provide some “appropriate” means for closing the bottom gaps may be held negligent since, in the absence of using a means for closing the bottom gaps, the dental practitioner is not effectively protected.

In some situations, employer’s negligence may be found reckless or intentional. For example, intentional negligence may be found when an employer is aware of a potential safety hazard but intentionally disregards it in favor of a cost-saving, though ineffective, alternative. Reckless negligence is often marked by an employer’s lack of concern for employee safety. Regardless of its type, a reckless or intentional negligence finding can entitle the injured employee to compensatory damages (for loss of wages, medical expenses, etc.), as well as to punitive damages (often larger sums intended to punish or make an example of the offender). In the event of reckless or intentional negligence by the employer, an injured employee who elects to take a separate legal action against the employer forfeits his or her rights for coverage under workers’ compensation.

VI. RECOMMENDATIONS

Based on the above experimental work and legal analysis, the authors recommend that OSHA Standard 1910.133(a)(1) be amended to include specific language that addresses the safety of dental practitioners as follows:

“The employer shall ensure that each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation. For employees engag-
ing in performing dental procedures, the employer shall ensure that each affected employee uses eye protection that provides protection from flying particles that may enter through the gaps between the lower rims of the lenses of the protective eyewear and the upper edge of the mask worn by the employee. Full-face shields, full goggles, bottom-gap-closing skirts attached to the lower rims of the lenses of the protective eyewear, and other commercially-available means for closing said gaps meeting the pertinent requirements of this section are acceptable.”

VII. SUGGESTED READING

1. Eye Injuries and the Dentist
   Australian Dental Journal, Dec. 1978
   John Colvin, MB, FS, DO, FRCS, FRACS, FRACO

2. Eye Safety in Operative Dentistry: a study in general dental practice
   British Dental Journal, Feb. 2006
   S.L. Farrier, J.N. Farrier, A.S.M. Gilmour

3. Prevalence of Ocular Injury and the Use of Protective Eye Wear Among the Dental Personnel in a Teaching Hospital
   Y.O. Ajayi, E.O. Ajayi

4. Ocular Injury and Infection in Dental Practice: a survey and a review of the literature
   British Dental Journal, Jan. 5, 1991
   T.J. Roberts-Harry, FRCS, FCOpth
   A.E. Cass, BDS
   J.D. Jagger, FRCS, FCOpth

5. The Incidence and Prevention of Ocular Injuries in Orthodontic Practice
   British Journal of Orthodontics, Nov. 1993
   A.P.T. Sims, M.Sc., FDS, M.Orth., RCS
   T.J. Roberts-Harry, FRCS, FCOpth
   D.P. Roberts-Harry, M.Sc., FDSRCPs, M.Orth., RCS

6. Eye and Facial Injuries Resulting from Dental Procedures
   Jack L. Hartley, DDS, MS

7. Eye Protection and Ocular Complications in the Dental Office
   General Dentistry, January – February 1989
   Michael D. Wesson, OD, MS
   John B. Thornton, DMD, MA

8. Prevalence of Ocular Injuries, Conjunctivitis and Use of Eye Protection Among Dental Personnel in Riyadh, Saudi Arabia
   International Dental Journal, Vol. 51, No. 2 2001
   Khalid A. Al Wazzan, Khalid Almas, Mohammed Q. Al Qahatani, Salah E. Al Shethri, Nazeer Khan

9. Ocular Injuries Sustained in the Dental Office: methods of detection, treatment, and prevention
   JADA, Vol. 97, Dec. 1978
   Robert L. Cooley, DMD, MS
   Andrew J. Cottingham Jr., MD
   Herbert Abrams, DDS, MS
   Wayne W. Barkmeier, DDS, MS

10. Eye Hazards Among a Dental School Population
    Journal of Dental Education, Vol. 41
    No. 9, Sept. 1977
    M.S. Needleman, BA
    D.K. McLaughlin, BA
    G. Orner, DDS, MPH, ScD
    R.D. Mumma, Jr., DDS, MPH

11. Eye Injuries: A Hazard in the Dental Office
    Jerome Miller, DDS, MS

12. Eye Protection in Dental Practice
    New Zealand Dental Journal, Vol. 86, 1990
    Alastair N. Stokes, John F. Burton, Richard R. Beale

13. Protecting Eyes “What ?
    RDH Magazine, August 2012
    Noel Brandon Kelsch, RDHAP

14. Protecting Your Eyes
    Dentistry IQ, May 2014
    Ginny Jorgensen

Need to find a colleague’s address, office phone, or email address?
Use the Find a Member function on the MDS website at massdental.org/find-a-dentist.

You can locate members by last name, specialty, or city/town, and the listings are updated daily so you are sure to have the most recent information.

Log in to the members-only section and access members’ email addresses.
Visit the website today at massdental.org/login.
Do you struggle with tracking your continuing education credits for licensure?
What will you do if the Board of Registration in Dentistry asks you to verify your CE credits?

Are you ready to go paperless?
Are you ready to make tracking CE credits easy?
Are you ready to utilize the MDS CE Registry at NO CHARGE?

How difficult is it for you to figure out when you last took an infection control course?

The MDS CE Registry is now included in your membership and allows you to:

✓ Stay in compliance with Board of Registration in Dentistry CE requirements
✓ Have an easy and accurate record-keeping service for your CE credits
✓ Enter your own credits easily with no wait
✓ Track your CE credits and print transcripts on-demand
✓ Access your CE information 24/7

MDS members who used the CE Pavilion at Yankee Dental Congress 2016 or the Yankee website to enter their course credits will have the information available on their registry by April 15, 2016.
Future courses taken through the MDS Yankee Institute are entered automatically.

Visit www.massdental.org/ce and log in to your account to start using the CE Registry.
The issue of drug abuse and the statewide opioid epidemic has been repeatedly present in the local tabloids with the presidential elections looming in 2016,1,2 and most recently, indications of opioid deaths have been reported to be on the increase in Massachusetts as recently as October 2015.3 In 2014, the illicit and nonmedical use of marijuana and pain relievers in people aged 12 or older in the United States involved 27 million people, or about 1 in 10 Americans.4 The impact of drug addiction and dental caries is not new to dentistry and has been reported in the literature since the middle of the 20th century.5-6 The prevalence of dental disease and its association with drug abuse seems again to be on the rise and raises concerns of a public health crisis. The relationship between caries and drug abuse is not solely limited to the abusive use of narcotics, but of alcohol as well,5,7,8 with 60.9 million people aged 12 or older who were binge alcohol users and 16.3 million who were heavy alcohol users.

Drug abusers display an almost pathognomonic form of dental caries that is associated with cervical decay, whose etiology is derived from decreased salivary flow due to drug side effects that patients attempt to alleviate with flavored water and soda or sugary candy, a diet that is highly composed of carbohydrates, poor personal hygiene habits, and infrequent or absent professional dental care. Although there is strong documentation in the relationship of dental disease and substance abuse, the many associated medical, social, and psychiatric problems affecting these individuals tend to overshadow their oral health.

These case reports describe the dental pathology and its impact associated with patients who abused pain medications, alcohol, cocaine, heroin, marijuana, methadone, and methamphetamines.

CASE 1: COCAINE, ALCOHOL, AND MARIJUANA ABUSE
A 36-year-old male began marijuana use at age 12, followed by alcohol abuse at age 15, and cocaine use at age 16 until age 26. He had been homeless between the ages of 15 and 18, spending his time in a parked car and no toothbrushing at all. For the past 23 years, he has been a heavy soda drinker, averaging four cans of soda per day. His cocaine abuse consisted of two to three balls at a time with an average of three grams per day at a street cost of $650 daily. The habit was supported by the illegal sale of the drug. According to his medical and social history, he has been off the addiction to cocaine since 2005, but has received professional care for his oral condition. Intrarally, the remaining maxillary dentition displayed severe dental caries with gross debris and generalized severe gingivitis and periodontitis (see Figure 1). The mandibular arch was edentulous.

His treatment consisted of extraction of all remaining teeth and the fabrication of full maxillary and mandibular dentures (see Figure 2). After denture delivery, he noted that he had not smiled for the past 15 years, but now does so. On a social note, he has four children—ages 6, 7, 9, and 12—who have not received dental care, and who were in need of a dental and medical home that they have currently found.
CASE 2: MULTIPLE PAIN MEDICATIONS
This case describes a 39-year-old female who has been addicted to pain medications since age 32 due to a car accident in 2008. As a result of the car accident, she was prescribed oxycodone 20 mg followed by oxycodone 15 mg three times daily. For two years, she was undergoing physical therapy for neck and shoulder pain, while concurrently taking an assortment of pain medications, during which time she was consuming two Red Bulls a day, three 12-ounce cans of Coca-Cola daily, and two cups of coffee, each with three teaspoons of sugar. In 2010, her inability to sleep and general restlessness led to a “friend’s” diagnosis of withdrawal symptoms from oxycodone. For the next two years, she acquired oxycodone, 80 mg daily at a cost of $60 per day, which eliminated her restlessness and alleviated her sleeplessness. During her oxycodone habit, she was introduced to heroin at a reduced cost of $20 per day when compared to oxycodone. During this time, in her own words, she appeared to function normally on a daily basis, following a routine of going to the gym, working various jobs, driving, and socializing. She reports having brushed her teeth once daily in the morning during this period. In 2011, she reached out to a methadone program for rehabilitation, but used cocaine twice a week for a few months, as well. The cocaine served as a daily stimulant for her, and she reports that she required little sleep and drank Coca-Cola and ginger ale continuously throughout the day. Her oral hygiene remained the same as discussed. In 2013, she left the methadone program with a dose of 85 mg daily due to sickness from the withdrawal. She enrolled in a suboxone program at 12 mg daily for drug rehabilitation and is currently on suboxone 4 mg daily.

Intraorally, there is moderate-to-severe gingivitis. Her maxillary incisors and maxillary left canine displayed severe cervical and labial caries. No other maxillary teeth were present. Her mandibular incisors were decalcified without cavitation, while the mandibular canines showed severe cervical and labial caries present. No other mandibular teeth remained (see Figure 3). Her treatment plan consisted of the extraction of the remaining maxillary dentition and restoration of the mandibular incisors and canines. She received a full maxillary denture and a mandibular partial denture, and was placed on a high-potency fluoride toothpaste for caries control and prevention. Her diet was discussed as a method to prevent further disease in the future, and her current care improved her self-esteem, function, and esthetics (see Figure 4).

CASE 3: MARIJUANA AND COCAINE ABUSE
This patient began smoking cigarettes at age 15, followed by marijuana at age 17. She states that during her childhood, she brushed twice daily and had regularly scheduled dental visits, but always had decay. Cocaine abuse was initiated at age 25, and was further perpetuated for two years as her husband was a dealer and therefore the drug was readily available. She reports that, while in the habit, she still worked full-time, as well as raising children. She did not require much sleep and was awake most of the time drinking soft drinks. The habit was extinguished 12 years ago, at age 27, when her husband was arrested for selling drugs and she realized her responsibilities to her children. She experienced no withdrawal symptoms and, in her own words, “had lots of things now to take life seriously.”

At the initial dental visit, a moderate gingivitis was present, while the only substantial remaining enamel remnant was present on the facial of the maxillary right central incisor. The maxillary dentition was not restorable (see Figure 5). The mandibular dentition displayed buccal caries on the right and left canines and premolars, but the molars were missing. Treatment consisted of extraction of the maxillary teeth followed by a complete denture, restoration of the mandibular dentition, and a partial denture for the missing molar teeth (see Figure 6).

CASE 4: METHAMPHETAMINE ABUSE
This patient is a 45-year-old male who has had a methamphetamine habit for four years, with the frequency of smoking two bags a day at $40 per bag. During the time of the habit, he was living in a community of 25–30 methamphetamine abusers on the beach in Hawaii. The patient subsisted on the drug and beer and has reported to having been high for a week while remaining awake without any other form of nutrition. Weight loss was extreme during this period, and the patient went from 175 pounds to 120 pounds by the time he quit the habit. Often, teeth were extracted with pliers by fellow addicts on the beach. He eventually got tired of this lifestyle and quit the habit on his own. He has been clean of the habit for the past three years without any professional intervention.
During the drug abuse period, she had an unusual obsession for cleanliness and did not like the dry mouth or bad taste in her mouth as a side effect of the drug. As a result, she brushed her teeth five to six times daily and chewed sugarless gum, while drinking flavored water and tea throughout the day. This routine most likely prevented her from developing the destructive effects that most methamphetamine users develop (see Figure 9). She was prompted to seek professional dental care as the result of pain in the mandibular left molar area. Upon clinical examination, occlusal caries were present on the maxillary right and left second molars, and the mandibular left and right second molars and left second premolar. The mandibular left and right third molars were partially impacted and required extraction. Her gingival and periodontal health was excellent, exclusive of the partially impacted mandibular third molars. All occlusal caries were restored and she is on a periodic dental recall program.

DISCUSSION
When an entire issue of the Journal of the Massachusetts Dental Society, starting with its front cover, is devoted to a special report of prescribing and dentistry, it becomes evident that the dental profession and the public are faced with a significant health problem. These five clinical cases demonstrate the destructive effects of drug abuse on the dentition and lifestyle for these individuals. Although the effects seen here were not the result of legal prescription writing, prescribing habits, or the pharmacologic management of dental pain, they underscore both to the public and to the profession the need for...
education within this sociological problem of the 21st century, a problem that has plagued civilization for centuries arising from the opium dens of the past.

Very recently, an editorial appeared in *The Boston Sunday Globe* that indicated that the new opioid plan proposed by Governor Charlie Baker needs careful review.13 This proposal by the Massachusetts governor adds to the civil commitment law, which would allow doctors to hospitalize without a court order, for 72 hours, substance abuse patients who would be deemed a threat to themselves. What it does not address is how, after the 72-hour period, these patients change their lifestyles that so severely affect their own medical and dental conditions, as well as those of their respective families. As in dentistry, a long-term disease preventive plan is required for drug abusers. JMDS

REFERENCES

Dental Practice as the Population Demographics Change in Massachusetts

H. BARRY WALDMAN, DDS, MPH, PhD
STEVEN P. PERLMAN, DDS, MScD, DHL (HON.)

Dr. Waldman is a distinguished teaching professor in the department of general dentistry at the School of Dental Medicine, Stony Brook University, NY.

Dr. Perlman is global clinical director of Special Olympics, Special Smiles, and clinical professor of pediatric dentistry at the Boston University Goldman School of Dental Medicine.

ABSTRACT
General population demographics in the United States, individual states, and counties are undergoing dramatic changes. Long-term customary populations, which provided the bulwark for many successful dental practices, are being replaced by the many minority populations, in particular, the Hispanic population. Decades of studies and reports, based on race/ethnicity, income, residency locations, and insurance, have emphasized the disparities in the delivery of dental care to the general public. For example, half of youngsters and teenagers (ages 5–17 years) were reported to have had no expenditures for dental services in 2010, followed by two-thirds of younger adults (18–44 years), and more than half of the population 45 years and older.3

Despite these general population developments, the demographic profile of the dental profession has experienced (and apparently—based on dental student population)—will continue to experience limited changes. Specifically, compared to the general population, Asian students are overrepresented among dental school graduates, and other minorities continue to be underrepresented among dental school graduates during the past decade.4

The economic strength of the profession may well be predicated upon the responses to these developments and other events.5 Most importantly, in mid-April 2013, the lead headline in the ADA News announced: “Baby boomers boost utilization: older patients show raise in dental expenditures.”6 However, the following paragraphs of the column emphasized a different story.

• Americans aren’t spending any more on dental care than they were five years ago.
• After decades of steady growth, national dental expenditures...
began to slow in the 2000s, years before the economy soured.

- Once the Great Recession hit in 2008, national dental expenditures leveled off and have remained flat ever since.
- The rising proportion of those over 65 years old (projected to increase from 48 million in 2015 to 92 million in 2060) could significantly increase dental expenditures, “buoying up the dental economy for years to come.”

Unfortunately, waiting decades for the number of seniors to almost double and boost the economics of dentistry is not a viable option for current practitioners. Similarly, reliance solely on emphasizing efforts to increase the use of services by the traditional consumers of oral health care may have its limitations.

Consider another aspect of these developments.

“Young adults today, often called the Millennial Generation, are more likely to be foreign born (has more than doubled since 1980) and speak a language other than English at home, compared with adults in 1980, according to the U.S. Census Bureau’s latest statistics from the American Community Survey . . .”

“The increase was larger in the West and Northeast, where 21 percent and 18 percent, respectively, are now foreign born, compared with 12 percent and 8 percent 30 years ago . . . and unlike prior generations, the majority of millennials . . . have never married, reflecting continued delay in getting married.”

LANGUAGE AND ORIGINS

The language of news media consumption is changing for Hispanics. A growing share of Latino adults is consuming news in English from television, print, radio, and Internet outlets, and a declining share is doing so in Spanish. These changes reflect several ongoing demographic trends within the Hispanic community—slowing immigration, a growing number of U.S.-born Latinos entering adulthood, and growth in the number of English-speaking Latino adults. Two-thirds of Mexican-origin Hispanics ages 5 and older speak English proficiently. This compares to about one-in-three (29%) among Mexican immigrants.

In 2010, people of Mexican origin comprised the largest Hispanic group, representing 63% of the total Hispanic population in the United States. This estimate includes 11.4 million immigrants born in Mexico and 22.3 million born in the United States among Mexican immigrants, half (51%) are in the United States illegally, while about a third are legal permanent residents (32%) and 16% are naturalized U.S. citizens. Overall, naturalization rates among Mexican immigrants, who are in the country legally, are just half that of legal immigrants from all other countries combined.

The second-largest group was Puerto Rican, which comprised 9% of the Hispanic population in 2010. The Salvadorans and Cuban population each represented approximately 4% of the total Hispanic population in 2010 census. These four groups accounted for about 80% of the Hispanic population in the United States.

| Table 1. United States, Massachusetts, and Counties by Population and Race/Ethnic Distribution: 2013, 2014 |
|--------------------------------------------------|--------------------------------|------------------|-----------------|------------------|----------------|
| Massachusetts                                   | 6,746                          | 83%               | 8%               | 6%               | 11%              |
| Counties                                         |                                |                   |                  |                  |                  |
| Barnstable                                      | 215                            | 94%               | 2%               | 1%               | 3%               |
| Berkshire                                       | 129                            | 93%               | 3%               | 1%               | 4%               |
| Bristol                                         | 554                            | 91%               | 4%               | 2%               | 7%               |
| Dukes                                           | 17                             | 91%               | 4%               | 1%               | 3%               |
| Essex                                           | 789                            | 87%               | 6%               | 4%               | 18%              |
| Franklin                                        | 71                             | 95%               | 1%               | 2%               | 4%               |
| Hampden                                         | 468                            | 84%               | 11%              | 2%               | 23%              |
| Hampshire                                       | 161                            | 89%               | 3%               | 5%               | 5%               |
| Middlesex                                       | 1,570                          | 82%               | 5%               | 11%              | 7%               |
| Nantucket                                       | 11                             | 89%               | 8%               | 1%               | 4%               |
| Norfolk                                         | 692                            | 82%               | 7%               | 10%              | 4%               |
| Plymouth                                        | 507                            | 87%               | 10%              | 1%               | 4%               |
| Suffolk                                         | 767                            | 63%               | 25%              | 9%               | 21%              |
| Worcester                                       | 813                            | 88%               | 5%               | 5%               | 10%              |

* Census Bureau designation is reported by the racial category “alone,” i.e., no combination with other racial group(s).
Note: Numbers and percentages are rounded.

Specifically, Massachusetts

Demographic developments at the national level are mirrored by variations in the Commonwealth of Massachusetts and its counties, but with differences.

State level – Compared to the national resident population:
- A greater proportion of Massachusetts residents are reported as white (83% vs. 78%). A smaller portion of Massachusetts residents are reported as black and Hispanic. (Table 1)
- Almost the same proportion of Massachusetts residents are foreign born and speak a language other than English at home.
- A greater percentage of Massachusetts residents have a bachelor’s degree or higher (39% vs. 29%).
- A smaller percentage of Massachusetts residents live below the poverty level (11% vs. 15%). (see footnote to Table 2)

At the national level, “more millennials are living in poverty today and have lower rates of employment, compared to their
counterparts in 1980.7,8

• The median household income of Massachusetts residents is greater ($67,000 vs. $53,000). (Table 2)

County level – There are marked differences in the demographic proportions in the 14 state counties, ranging as follows:

• White population – 63% in Suffolk County to 95% in Franklin County
• Black population – 1% in Franklin County to 25% in Suffolk County
• Asian population – 1% in Barnstable, Berkshire, Dukes, Nantucket and Plymouth counties to 11% in Middlesex County
• Hispanic population – 3% in Barnstable and Dukes counties to 23% in Hampden County (Table 1)
• Foreign-born population – 4% in Franklin County to 27% in Suffolk County

INDIVIDUALS WITH DISABILITIES
No review of population changes would be complete without reference to individuals with disabilities. Approximately 56.7 million people living in the United States in 2010 (18.7% of the population) had some kind of disability. About 12.6%, or 38.3 million people had a severe disability. The overall number has continued to increase and will continue to do so much further as the expanding aging population reaches into the 70s, 80s, 90s, and beyond.14 In 2010, almost 29% of individuals with disabilities (many of whom are dependent on the Medicaid program for care) did not obtain dental services because of cost.15 Also, Medicaid dentists are “so hard to find.”16

Specifically, in Massachusetts in 2011, 737,750 residents (11.3% of the population) were reported to have one or more severe disabilities, ranging from 5.8% of children 5–17, 8.8% of adults aged 18–64 and 34.1% of senior adults aged 65 and older. In addition, the proportion of residents with severe disabilities ranged significantly from 9.4% (61,500 residents) in the 7th Massachusetts U.S. Congressional District to 14.5% (92,900 residents) in the 1st Massachusetts U.S. Congressional District.17

OVERVIEW
The recitation of “just” numbers and percentages by geographic regions and areas describes only part of the story. The reality is that the ad infinitum variations of individuals and families by race, cultures, experiences, attitudes, economic resources, and education levels do impact the awareness of oral health issues and the use of needed services. In the past (before advertisements changed the world of health services), practitioners waited for the door to their offices to open to meet new patients, complacent with the knowledge that the new patients would most likely be members of the “usual” families living in their communities for generations.

The “just” numbers and percentages vary considerably from county to county and even from community to community. For example:

“A wave of immigration from the Caribbean, Africa and Latin America is reshaping the USA’s black population, new findings show, with no sign of ending soon. About one in 11 blacks in America are foreign-born. The figure is likely to rise to one in six by 2060. . . . In a few places, black immigrant population (already) equal or exceed the 2060 projections, including:

Table 2. United States, Massachusetts, and Counties by Percent Distribution of Selected Demographic Characteristics: 2009–201312

<table>
<thead>
<tr>
<th></th>
<th>Foreign born</th>
<th>Language other than English spoken at home</th>
<th>Bachelor’s degree or higher of person 25 yrs +</th>
<th>Persons below poverty level</th>
<th>Median household income (in 000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>13%</td>
<td>21%</td>
<td>29%</td>
<td>15%</td>
<td>$53</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>15%</td>
<td>22%</td>
<td>39%</td>
<td>11%</td>
<td>67</td>
</tr>
</tbody>
</table>

Counties

<table>
<thead>
<tr>
<th>County</th>
<th>Foreign born</th>
<th>Language other than English spoken at home</th>
<th>Bachelor’s degree or higher of person 25 yrs +</th>
<th>Persons below poverty level</th>
<th>Median household income (in 000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barnstable</td>
<td>7%</td>
<td>8%</td>
<td>39%</td>
<td>9%</td>
<td>61</td>
</tr>
<tr>
<td>Berkshire</td>
<td>5%</td>
<td>8%</td>
<td>30%</td>
<td>13%</td>
<td>48</td>
</tr>
<tr>
<td>Bristol</td>
<td>12%</td>
<td>21%</td>
<td>25%</td>
<td>12%</td>
<td>55</td>
</tr>
<tr>
<td>Dukes</td>
<td>8%</td>
<td>8%</td>
<td>41%</td>
<td>10%</td>
<td>66</td>
</tr>
<tr>
<td>Essex</td>
<td>15%</td>
<td>24%</td>
<td>39%</td>
<td>11%</td>
<td>67</td>
</tr>
<tr>
<td>Franklin</td>
<td>4%</td>
<td>6%</td>
<td>34%</td>
<td>12%</td>
<td>54</td>
</tr>
<tr>
<td>Hampden</td>
<td>10%</td>
<td>25%</td>
<td>25%</td>
<td>18%</td>
<td>49</td>
</tr>
<tr>
<td>Hampshire</td>
<td>8%</td>
<td>10%</td>
<td>42%</td>
<td>13%</td>
<td>61</td>
</tr>
<tr>
<td>Middlesex</td>
<td>19%</td>
<td>25%</td>
<td>51%</td>
<td>8%</td>
<td>82</td>
</tr>
<tr>
<td>Nantucket</td>
<td>17%</td>
<td>13%</td>
<td>44%</td>
<td>10%</td>
<td>85</td>
</tr>
<tr>
<td>Norfolk</td>
<td>16%</td>
<td>19%</td>
<td>49%</td>
<td>7%</td>
<td>85</td>
</tr>
<tr>
<td>Plymouth</td>
<td>8%</td>
<td>12%</td>
<td>34%</td>
<td>8%</td>
<td>75</td>
</tr>
<tr>
<td>Suffolk</td>
<td>27%</td>
<td>37%</td>
<td>40%</td>
<td>21%</td>
<td>54</td>
</tr>
<tr>
<td>Worcester</td>
<td>11%</td>
<td>18%</td>
<td>34%</td>
<td>11%</td>
<td>65</td>
</tr>
</tbody>
</table>

Note: Percentages are rounded.

(1) The data presented for this review (in particular, county information) were drawn from the Census Bureau report for the period 2009-2013.7,8 Additional information compiled by the Annie E. Casey Foundation from Census Bureau sources provides data regarding the number of children living in poverty. In 2012, statewide, 213,600 children (15.4% of all children) were living below the poverty level, ranging from 8.0% (11,860 children) in Norfolk County to 30.5% (32,260 children) in Hampden County. (Note: information for Nantucket County is not available.)13

(2) The data presented in Table 2 were drawn from the Census Bureau report for the period 2009-2013.7,8
• 15% of the black population in the Washington metro area.
• 28% in the New York metro area.
• 34% in Miami . . .

A RECORD 3.8 MILLION BLACK IMMIGRANTS LIVE IN THE USA, MORE THAN FOUR TIMES AS MANY AS IN 1980. [sic] . . . That’s a big change, particularly when you take a look at Asian and Hispanic populations in the U.S. . . . Their foreign-born shares are actually declining.18

The reality is that numbers and percentages do foretell the changes that are coming. The question remains, “Is your practice ready for them?”

REFERENCES
1. Roberts S. For whites, more deaths than births, data show. NY Times. 2013 Jun 6:A16.
A New Integrated Oral Health and Primary Care Education Program in the Dental Student Clinic

SANG E. PARK, DDS, MMSc  ▲  FIDENCIO SALDANA, MD  ▲  R. BRUCE DONOFF, DMD, MD

Dr. Park is associate dean for dental education in the Office of Dental Education at Harvard School of Dental Medicine. Dr. Saldana is assistant professor of medicine at Harvard Medical School. Dr. Donoff is dean of Harvard School of Dental Medicine.

ABSTRACT

Objectives: The purpose of the study was to describe the implementation of a new program incorporating primary care education into a predoctoral dental curriculum in the Student Teaching Clinic at Harvard School of Dental Medicine (HSDM) using the primary care rotations for students in a dental setting as a platform for change in our approach to patient care.

Methods: A survey of perspectives on the need for primary care medicine in dental education was distributed to all the deans of Commission on Dental Accreditation (CODA)–accredited dental schools in the continental United States for a total of 65 eligible schools.

Results: Of the 27 responses from the dental school deans, a majority of dental schools already had interprofessional collaborative practices at their schools, with collaborations with physicians and nurse practitioners being most common. Ninety-six percent of responders were supportive of integrating oral health and primary care to improve patient care and regarded primary care training for dental students as a potential method of improving patient care in dental education.

Conclusion: As patient care involves multidisciplinary and interprofessional environments with a wide array of health care providers, curricular directions for dental school should explore an education model that incorporates the concepts of primary care medicine.

INTRODUCTION

A need to create an innovative and catalytic mechanism for integrating oral health and primary care exists. The goals for greater integration of dental and medical education and practice recommended by the 1995 IOM Report *Dental Education at the Crossroads*¹ and the 2000 Surgeon General Report on oral health² remain elusive. Three major factors now push the agenda for change: advances in science and oral science, the demographic increase in the older population, and the crisis in primary care.³ As patient care involves a multidisciplinary and interprofessional environment with a team of health care providers, it is critical in early medical and dental education to introduce students to an interprofessional education program.⁴

The Commission on Dental Accreditation has a new standard that has been shaping efforts of dental schools in the direction of showing “evidence of interaction with other components of the higher
education, health care education and/or health care delivery systems. Opportunities for close collaboration and interaction have emerged, and improved patient care standards can be met by improved integration of dental and medical education. More specifically, incorporating greater medical exposure in training through educational preparation and supervised clinical experience will promote a convergence of knowledge base and practice of the profession.

Separation of medical and dental education has serious negative implications in terms of delivery of care. Oral health education has been lacking in medical school curricula historically. Conversely, primary care clinical competencies in dental education have not been established. It is important to expose students to patients with oral and systemic medical conditions throughout the entire curriculum. The educational experience could help provide the tools for our future health care professionals to serve the comprehensive health needs of our patient population and, furthermore, the general public.

In the newly redesigned curriculum implemented in 2015 at Harvard Medical School (HMS) and Harvard School of Dental Medicine (HSDM), the first-year dental and medical students jointly take the foundational basic medical science courses at HMS. As a new initiative to teach foundational clinical skills and primary care medicine with a focus on oral health, a new experience for the dental students was designed at the student teaching clinic at HSDM. In this effort, a primary care clinical rotation was implemented at the dental student clinic to develop an oral health and primary care intervention training program taught by dentists and physicians. The new program sought to incorporate primary care clinical experience by introducing the dental students to the clinical approach as performed by dental and medical professionals, and raising the students’ awareness of the increasingly evident links between oral health and systemic health.

The HSDM Office for Dental Education conducted a survey of U.S. dental school deans on the need for primary care medicine in dental education, and (2) describe the development and implementation process of a new integrated oral health and primary care education model in the dental student clinic as part of the redesigned curriculum at HSDM.

**METHODS**

**Integrated Oral Health and Primary Care Education Model**

The new clinical experience exposes the incoming students to dentists and outpatient primary care physicians in an oral health setting at HSDM. The clinical rotation is part of the redesigned HMS curriculum and serves to provide a real clinical experience for the first-year students to practice skills in history taking and physical examination, and also to provide an early introduction into the principles of primary care medicine and oral health.

First-year dental students are assigned to an interdisciplinary team including dentists, outpatient primary care physicians, and fourth-year dental students in the Student Teaching Practice at HSDM. The new primary care clinic rotation for the first-year dental students involves clinical sessions in the student teaching clinic at the dental school. The students are engaged in the process of: (1) taking medical, dental, and social history, (2) performing appropriate physical examination and medical consultation, (3) observing and assisting dental patient treatment.

**LEADERSHIP IN ORAL HEALTH AND PRIMARY CARE PROGRAM (LOHPC)**

Each fourth-year student is assigned to a first-year dental student during the integrated sessions in a new Leadership in Oral Health and Primary Care Program designed for the fourth-year dental students. The composition of the integrated oral health and primary care team is described in Figure 1. The interprofessional teams consist of the fourth-year dental students as the leaders in oral health care delivery, working with medical and dental professionals to provide various forms of treatment to the patients of the dental clinic and serve as senior student mentors to the first-year students.

The schematic diagram of the structure of the integrated oral health and primary care teaching clinic is shown in Figure 2. The supervising faculty for the clinic includes
dental faculty for the fourth-year students overseeing the treatment procedures as routinely performed in the teaching clinic. Primary care physicians are available for consultation to assist in the learning process, as illustrated in Table 1, to meet the proposed primary care competencies as part of the predoctoral dental curriculum.

SURVEY DESIGN
The survey protocol was reviewed by the Harvard Medical School and Harvard School of Dental Medicine Institutional Review Board. Prior to implementing the program at HSDM, a survey was distributed to all the deans of Commission on Dental Accreditation–accredited dental schools in the continental United States, for a total of 65 eligible U.S. dental schools. All responses were weighted equally. No one was allowed to fill out the survey more than once, and no responses were excluded for any reason. Subjects who elected to participate in the study were presented six to eight multiple-choice questions. Survey questions focused on determining respondents’ perspective on primary care medicine in dental education.

Following the initial email requesting participation in the voluntary survey, two subsequent reminder emails were distributed to all the deans.

RESULTS
Twenty-seven of a possible 65 survey responses were received, for a response rate of 41.5%. Twenty respondents (74%) already have an interprofessional collaborative practice at their school, and of those, 14 (70%) said that the practice was located at the school. Six (30%) said that the practice was located at affiliated institutions. Common interprofessional collaborations included physicians (80%), nurse practitioners (65%), dental hygienists (50%), nurses (45%), and pharmacists (40%). Social workers (35%), dental assistants (30%), physician/medical assistants (25%), and Other (5%) were the remaining categories. Only one response selected “Other” and specified physical therapist (see Figure 3).

When asked if the integration of oral health and primary care can improve patient care, 26 responders (96%) strongly or somewhat agreed, while one response (4%) was neutral. Twenty-six responders (96%) also strongly or somewhat agreed with the belief that dentists should engage more fully in primary care; one response (4%) somewhat disagreed. When asked whether expanding the oral health competencies of primary care clinicians would lead to improved overall patient care, 25 responders (92%) strongly or somewhat agreed, with one response (4%) neutral and one (4%) somewhat disagreeing. Twenty-six responders (96%) strongly or somewhat agreed that integration of primary care was appropriate in dental training; one responder (4%) was neutral. Twenty-five of the 27 responders (92%) were strongly or somewhat interested in programs to develop or implement primary care competencies into dental student teaching practices (see Table 2).

The survey also included a free-response question that asked for “other comments.” Ten comments were received. Points of interest included four comments in favor of the inclusion of primary care in student dental clinics, including one opinion that “medical students should be better trained in dental diagnosis.” One commenter expressed wariness that “we seem to be training our colleagues much better than they are training our students,” one mentioned a wellness clinic being established in the dental school for risk assessment and overall health screening, and one clarified that their Neutral or Disagreeing responses reflected current conditions, but could be more on the Strongly or Somewhat Agree side if more primary care collaboration programs existed.

DISCUSSION
An education process should engage a learning environment that encourages students to learn collaboratively by applying basic biomedical foundations to solving patient cases. Oral health is integral to systemic health, and our educational curriculum should reflect the need for collaboration among health care professionals for optimum patient care. Not only do dental and medical education share a foundation in basic biomedical science, but also the literature is replete with evidence that dental and oral diseases have associated systemic health problems, and oral health is inextricably connected to physical health, quality of life, and disease prevention.9–13

It is widely understood that primary care medical professionals—which include

Figure 2. Structure of the integrated oral health and primary care teaching clinic

Figure 3. Survey responses: Professions involved in interprofessional collaborations
primary care physicians, nurse practitioners, behavioral care providers, pharmacists, physician assistants, and registered nurses—need to receive more training in the treatment of oral health problems or the maintenance of good oral health.10-13 The integration of oral health into medical coverage will reduce health care costs, as well as improve the quality of life for many, especially for patients with chronic diseases.3 Lack of oral health has been shown to be associated with negative health outcomes, including respiratory disease, cardiovascular disease, diabetes, stroke, and adverse pregnancy outcomes.16-17 Clinicians across the entire medical and dental profession are invaluable assets in the prevention and detection of oral disease.

HMS and HSDM are currently redesigning their curricula to meet new standards and explore new pedagogical methods and opportunities. We are investigating ways not only for oral health education to become more integrated into the new medical school curriculum, but also for primary care clinical education to be present in the dental school curriculum through the introduction of interprofessional educational opportunities.

The interprofessional oral health and primary care clinic sessions for the first-year students can help expose the dental students to important foundational concepts by primary care physicians. Fourth-year dental students could also benefit from this clinic model and be asked to consider the medical implications of a patient undergoing extensive dental treatment. This would reinforce the link between oral and systemic health through a team-based learning environment in a comprehensive health care team approach. It would also provide opportunities for peer-to-peer teaching to support interprofessional education in the health care professions and to promote a collaborative learning environment in dental school.18

In addition, the interaction between first-year and fourth-year dental students in the integrated oral health and primary care clinic model provides an opportunity for longitudinal continuity patient care, as the patients can be assigned to the first-year peer students upon their graduation. The newly assigned student providers will have had exposure to the medical and dental aspect of the treatment for the patients and would be able to provide continuous patient care as they move into their clinical training of the curriculum.

The future direction for this program involves further developing the oral health and primary care topics throughout the curriculum and an increase in the collaborative learning experience. Expanding the integrated teaching clinic to include social workers, nurses, and other health professionals is in the works. This project could have a significant effect on overall patient care outcomes, and appropriate assessment measures will be incorporated as a follow-up study. A dental professional who is aware of the link between oral and systemic health and mindful of the societal and biological consequences of poor oral health can provide a higher level of care to patients. Outcome assessment data, including student evaluation and patient satisfaction, will be collected in the coming years as part of a future study.

CONCLUSION

An integrated oral health and primary care education program is an important initiative to further develop educational collaboration between health professions, and to incorporate curricular content on the interaction of oral and systemic conditions. Programs that integrate primary care medicine into the dental curricula will most likely expand as the dental educators more widely accept a need to link the oral health and overall health in dental education. Mjds

REFERENCES

9. Migliorati CA, Madrid C. The interface between
14. Formicola AJ. Dentistry and medicine, then and now. J Am Coli Dent. 2002;69:30-34.

<table>
<thead>
<tr>
<th>Table 2. Results of dental school deans survey in the United States</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Do you believe that the integration of oral health and primary care can improve the quality of patient care?</td>
</tr>
<tr>
<td>Do you believe that dentists should engage more fully in primary care?</td>
</tr>
<tr>
<td>Do you believe that expanding the oral health competencies of primary care clinicians leads to improved overall patient care?</td>
</tr>
<tr>
<td>Do you believe that integrating primary care competencies (monitoring health risks, expanding preventive services, screening for specific conditions, etc.) is appropriate in dental training?</td>
</tr>
<tr>
<td>Are you interested in programs to develop and implement primary care competencies into the dental student teaching practice?</td>
</tr>
</tbody>
</table>

No matter where you are in your dental career, the path to partner is clear at Great Expressions. Here, you can work and earn from day one as a clinical leader in your office, where the patient’s disease dictates the treatment, and a trained staff handles HR, IT, insurance, payroll and other administrative duties. Contact Molly McVay at molly.mcvay@greatexpressions.com.
Introducing the MDS Member Assistance Center

The Massachusetts Dental Society’s mission is to help all members succeed. We are pleased to introduce the MDS Member Assistance Center (MAC), a new member-only service designed to help MDS members get the most out of their membership. The MDS’s brand-new state-of-the-art call center allows members to speak directly with a MAC advisor.

Call if you:
- Need practice management advice
- Have a question on dental billing or coding
- Require information on regulations
- Wonder if a marketing mailer is legitimate
- Want guidance on Peer Review
- Have questions on an MDS Affinity Partner
- Face a situation in your office you are not sure how to handle

MAC advisors will also be reaching out to members to be sure members are informed about:
- Required registration deadlines
- Important regulatory advisories
- Information on how to get involved in MDS programs and activities
- Volunteer opportunities

Call (800) 342-8747 to be connected to an MDS MAC advisor.

The MDS Assistance Center will be available Monday–Friday from 8 a.m. to 4 p.m.
HISTORY
A 43-year-old African American female presented to Tufts University School of Dental Medicine initially in 2008 for emergency dental care for lower right molar pain. A panorex was obtained that showed an ill-defined radiolucent/radiopaque lesion on the right mandible (see Figure 1). She did not have any evidence of extraoral swelling. The buccal mucosa, gingival, floor of mouth, tongue, and palate were free of any lesions. On clinical exam, teeth #30, 31, and 32 tested vital. The patient was referred to the oral surgery clinic and a full evaluation was completed. The patient was advised to follow up in three months to have a repeat panorex.

Subsequently, the patient was lost to follow-up until 2015, when she presented to the oral surgery clinic with a chief complaint of pain and swelling in the lower right jaw. The patient reported she had tooth #30 extracted by an outside dentist. A new panorex showed missing tooth #30, root canal–treated #31, and an ill-defined radiolucent lesion on the right mandible (see Figure 2). A periapical radiograph was taken with gutta-percha tracing a fistulous tract to the site of missing #30 (see Figure 3). A CBCT was taken (see Figure 4). It showed a mixed radiopaque-radiolucent lesion in the mandibular right body, extending from the distal aspect of root #29 to the mesial of #32. There was also a radiopacity noted in the apical areas of teeth #22, 23, 24, and 25.

Her past medical history was noncontributory. She did not take any medications and reported no allergies to medications. She denied any past surgical history. She reported no use of tobacco, alcohol, or illicit drugs.

EXAMINATION
On exam she appeared in no acute distress. There was no asymmetry noticed, no tenderness to palpation extraorally. There was no evidence of palpable lymphadenopathy. Upon palpation of her right mandible and compared to the left, there was mild although noticeable expansion of the area of #30 firm to palpation. Intraorally, the gingiva appeared intact in the area of missing tooth #30. A parulis was present on the buccal gingiva of missing #30. Her floor of mouth was soft. Otherwise, no other lesions were seen on the gingiva, palate, tongue, floor of mouth, or soft palate. Cranial nerve V was intact bilaterally.

DIFFERENTIAL DIAGNOSIS
Florid cemento-osseous dysplasia
Fibrous dysplasia
Ossifying fibroma
Osteomyelitis
BIOPSY

Although there was a high suspicion for florid cemento-osseous dysplasia, there was a concern for overlying osteomyelitis. An incisional biopsy was performed in the area of #30.

The histology showed multiple fragments of interconnecting woven bone trabecula with osteoid and cementum-like material. Also, the specimen contained intermixed fragments of granulation tissue, fibrous connective tissue, and acute and chronic cells (see Figure 5a and 5b).

DIAGNOSIS

Florid cemento-osseous dysplasia

DISCUSSION

Fibro-osseous lesions are the process in which normal bone is replaced by fibrous tissue that contains mineralized products. These lesions include cemento-osseous dysplasia, fibrous dysplasia, and ossifying fibroma.1

Cemento-osseous dysplasia has three forms: focal, periapical, and florid. Histopathologically, all three lesions have similar patterns, consisting of fragments of cellular mesenchymal tissue composed of spindle-shaped fibroblasts and collagen fibers with numerous blood vessels. There is also woven bone, lamellar bone, and cementum-like particles. As the lesions mature and become more sclerotic, the bone trabeculae become thick curvilinear structures. Diagnosis is clinical and by radiographic evidence; biopsy is generally not necessary.1 Teeth should test vital. There is unlikely displacement of teeth or other structures in and around the lesion. The treatment for cemento-osseous dysplasia is conservative, and removal is not required in most cases. During the maturation of the disease, the diseased area becomes more hypovascular. Avoiding biopsy and extractions helps prevent secondary complications in the area. After an insulting event such as extraction or biopsy, the bone may fail to heal normally; thus patients become prone to infections and possible osteomyelitis. These patients require frequent monitoring. Generally, the lesions are managed with conservative treatment such as antibiotics, and resection is reserved for patients who become symptomatic.1

Focal cemento-osseous dysplasia has a different pattern than the other two variants. The lesion is found in white females in their third to sixth decades of life. Radiographically, focal cemento-osseous dysplasia varies from completely radiolucent lesions to radiopaque. The most common site is the posterior mandible.

Periapical cemento-osseous dysplasia involves black females in most cases, from ages 30 to 50. Radiographically, it is found on the periapical region of the anterior mandible. The lesions are asymptomatic. Early lesions are well-circumscribed, and as they mature they become mixed radiolucent and radiopaque.

Fibrous dysplasia is the formation of fibrous tissue in the marrow spaces. There are two variants: monostotic and polyostotic. The monostotic form is usually found in patients 5–70 years old. The disease process occurs from abnormal differentiation of osteoblast. In the craniofacial skeleton, it may be found in the maxilla, mandible, zygoma, and sphenoid, but most commonly in the maxilla. The lesions are asymptomatic; however, patients may present with asymptomatic facial asymmetry. Radiographically, it presents with trabecular changes from radiolucent, “ground-glass” appearance, and ground glass with sclerotic areas.1 The polyostotic form is associated with syndromes such as McCune-Albright syndrome and presents in females, appearing in multiple areas of the facial skeleton and long bones. There is no definitive treatment available for fibrous dysplasia.3 Surgical management can be controversial (late vs. early and minimal excision vs. radical resection).
Ossifying fibroma is a true neoplasm of the bone. It has the potential for uncontrolled and unlimited benign growth. The lesion is found in young adults, slightly higher in females, and occurs more in the mandible than in the maxilla. Histologically, there is no cementum, but acellular amorphous mineralized structures identified in the lesion are variations of amorphous bone. Clinically, ossifying fibroma is asymptomatic until esthetics, compression on adjacent structures, or functions are affected. The juvenile variant can be very aggressive and shows rapid growth and disfigurement. Radiographically, well-defined periphery with a sclerotic border or a well-demarcated outline is seen. Lesions can present with variations in mineralization patterns. The longer they mature, the greater the degree of internal mineralization that is present. Despite the size ossifying fibromas can achieve, they generally respond well to surgical treatment in the form of enucleation or resection, with a low recurrence rate as long as adequate surgical margins are obtained. Management of the juvenile variant also requires surgical removal with wider resection.

Osteomyelitis is an acute or chronic inflammatory process of the medullary or cortical portion of the bone. The vast majority is bacterial in nature. Osteomyelitis is often seen in the mandible. In the maxillary, the vascularity and thin cortical plates make it less frequent. Generally, osteomyelitis can appear clinically as acute supplicative, but after one month it is considered chronic supplicative. It can also be in non-suppurative form. Radiographically, osteomyelitis appears as an ill-defined area of radiolucency with radiopaque areas of sequestrum. Periosteal bone formation can also be seen on radiograph. Chronic osteomyelitis can present with areas of sclerosis. Other forms of osteomyelitis are Garrè's osteomyelitis, chronic recurrent osteomyelitis of children, and chronic sclerosing osteomyelitis.

Garrè's osteomyelitis describes an osteomyelitic condition secondary to a proliferative periostitis. The result is a hard swelling of bone often noted in the mandibular first molar region in response to a carious first molar. Radiographs reveal a focal area of cortical-layered thickening, which has been termed an "onionskin" appearance. The disease is usually seen in patients younger than 25 years, and the treatment consists of removal of the offending tooth.

Chronic recurrent multifocal osteomyelitis of children refers to a condition characterized by an inflammatory process that presents with findings similar to infectious osteomyelitis; however, no infectious source is identifiable. The condition affects individuals in their preteen and teenage years. The disease is polyostotic and may affect the mandible. The treatment is controversial, and the disease may resolve spontaneously without intervention.

Chronic diffuse sclerosing osteomyelitis is a condition characterized by an intermedullary osseous infection, which induces sclerosis. It predominantly arises in adulthood and does not exhibit sex predominance. Radiographically, there is an increased radiodensity around the site of chronic infection. Marx et al. were able to identify Actinomyces species and Eikenella corrodens as bacterial causes of the disease. The disease is often painful, and treatment therapy includes antibiotic administration and surgical debridement.

Florid cemento-osseous dysplasia appears as a multifocal mixed radiolucent/radiopaque lesion found more often in the posterior mandible. It commonly occurs in middle-aged African American women. The disease is generally asymptomatic and found only radiographically. Symptomatic patients can present with purulent drainage from a fistulous tract or exposure of the alveolar bone. It rarely causes cortical expansion.

Radiographically, the lesion is seen in the mandible and can be bilateral or even in all four posterior quadrants. In the early stages, it is predominately radiolucent, and as the lesion matures it becomes almost entirely radiopaque.

CONCLUSION
The patient presented for follow-up a week after the biopsy; the area had full mucosal coverage showing adequate healing. She did not complain of any pain or discharge. In most cases of florid cemento-osseous dysplasia, diagnosis can be made with clinical and radiographic examination. In this particular case, a biopsy was performed because the patient presented with symptoms consistent with an acute infectious process. Close monitoring is recommended, and treatment will be provided based on symptoms.

REFERENCES
YANKEE®
DENTAL CONGRESS

Save the Date
2017

Boston Convention & Exhibition Center


Presented by the MASSACHUSETTS DENTAL SOCIETY in cooperation with the Dental Societies of Connecticut, Maine, New Hampshire, Rhode Island, and Vermont

yankeedental.com | 877.515.9071

CONNECT WITH US

Connect on Facebook

Connect on Twitter
Shapiro Law Group, PC

A full-service Law Firm with a focused Health Law Division

- Legal, Corporate, Billing, & Insurance Compliance
- Information Security & EMR
- Risk Management
- Contracts, Policies, & Procedures
- Patient Relations, Rights & Quality Standards
- Licensure
- Defense Litigation
- Fraud Abuse Defense
- Mergers & Acquisitions

Visit us at: www.shapirolegal.com
or
For a FREE Phone Consultation: 339.298.2300
Locations in Woburn, Boston, Needham & West Roxbury

You can change a life.

Smile Train is a progressive cleft charity that empowers local doctors to perform cleft surgery and comprehensive cleft care in their own communities. With your help, we give children new smiles and new lives.

Join us in changing the world one smile at a time, visit smiletrain.org/join today.
Enlargement of the Inferior Alveolar Canal

PATHOLOGY SNAPSHOT

VIKKI NOONAN, DMD, DMSc ▲ DEVAKI SUNDARARAJAN, BDS ▲ GEORGE GALLAGHER, DMD, DMSc

Drs. Noonan, Sundararajan, and Gallagher are oral and maxillofacial pathologists at the Boston University Henry M. Goldman School of Dental Medicine.

Enlargement of the inferior alveolar canal is an unusual finding during the course of routine radiographic examination. When identified, such enlargement typically represents a neoplastic process. One of the most common causes of inferior alveolar canal enlargement is a neurofibroma presenting either as a solitary lesion or in association with other stigmata of neurofibromatosis.1-3 Although central neurofibromas may be asymptomatic and noted incidentally during the course of routine radiographic examination, cortical expansion, pain, and paresthesia with or without hyperesthesia of the lip have also been described. As localized enlargement of the inferior alveolar canal may arise secondary to a myriad of inflammatory, reactive, neoplastic, and infectious processes, and the clinical presentation of paresthesia of the lip is shared with malignant neoplasia, a biopsy is requisite for definitive diagnosis.1-3

REFERENCES

Enlargement of the inferior alveolar canal is appreciated in this case, which represented neurofibroma at biopsy (biopsy site indicated by black arrow). Image courtesy of Xue Yu Shen, DMD.

At Your Service

Based on the combined buying power of its membership, the MDS has secured a variety of business discounts for its members.

A full list of MDS business services is available at massdental.org/atyourservice.
Help Prevent the Misuse of Prescription Drugs

Support efforts to prevent the abuse and misuse of prescription medications.

You can help save a life by encouraging patients to protect prescription medications and to make sure they’re properly disposed of when no longer needed.

For more information, visit http://helpline-online.com

Tips for Keeping Prescription Medications Safe

- Monitor how many pills are in each of your prescription bottles and keep track of your refills.
- Secure your prescriptions in the same way you would other valuable items. Keep medications in a safe place that only you know about.
- Do not allow children to manage their own medications. Make sure to either oversee them taking their medicine or give it to them directly.
- Discard expired unused medications. Unless otherwise instructed, do not flush medicines down the toilet. Instead, mix them with things such as used coffee grounds or kitty litter and discard them in an empty can or bag in your household trash.
- To prevent your privacy and prevent unauthorized refills, scratch out all personal information on prescription labels from empty pill bottles before discarding them.
- Check with your local police or fire department for medicine take-back programs.

Sterling Architectural Millwork

Your Dental Cabinet Experts

*Comparable to industry leaders at a fraction of the cost
*One source for all your dental office cabinets
*We manufacture to your office layout
*Family owned and operated
*20 years in the business
*Local

Contact us: info@sterlingarc.com or 413.732.2131
Visit us: www.sterlingarc.com
**Oral & Maxillofacial Surgery Review – A Study Guide**

DIN LAM, DMD, AND DANIEL M. LASKIN, DDS
Quintessence Publishing (2015)

This is the kind of book that is really fun. The review contains more than 400 pages of bulleted text, tables, charts, and photos. That’s it. No paragraphs, no long explanations—just facts, one after the other. And those facts are interestingly laid out and consistently arranged. The stamp on the cover says, “Perfect for Board Review.” I can’t imagine how it could not be so. But it does not have to be that limited. In fact, it is perfect for anyone who wants an overall review of oral surgery and its many components.

The “12 major areas of oral and maxillofacial surgery” are reviewed, including topics such as anesthesia, pathology, maxillofacial reconstruction, and cosmetic surgery. In the preface, the editors explain that each of the twelve chapters was developed by two authors/surgeons: one who has recently taken the boards and has a fresh perspective on taking the test, and one who is more senior and has been a board examiner and/or has been involved in the recertification process.

The layout of the book is effective. Each chapter is divided into subsections (for example, in the trauma chapter these sections include soft-tissue injuries and orbital fractures). If you flip through the pages, you can see the topic written vertically on the edge of each page. It’s a nice feature, as it allows the reader to quickly skim for a focus of study.

I like the clarity of presentation. In addition to tables and charts listing and explaining information from topic to topic, there are diagrams, photos, slides, and radiographs. There are also some very nice touches that relay information very well. For example, in the section on impacted 3rd molars, the authors use photos of plastic teeth placed in what could be described as colorful Play-Doh. They could not have found a better way to show the definitions and orientations of each type of impaction.

This is not a clinical “how-to” manual, but rather a true study guide, encyclopaedic in nature. As mentioned above, it would be very useful for board review, but it is also great for anyone seeking to edify, enhance, or refresh his or her knowledge of oral and maxillofacial surgery. Again, this is a really fun book.

---

**Best Practices in Endodontics – A Desk Reference**

RICHARD S. SCHWARTZ, DDS, AND VENKAT CANAKAPALLI, BDS
Quintessence Publishing (2015)

In their introduction, the editors write that they think of endodontics as a “branch of restorative dentistry whose primary purpose is the preservation of natural dentition over the length of a patient’s life.” That is a nice philosophy. Having learned from their own “long-term successes and failures,” the editors have compiled a textbook that they believe will help practitioners, and especially endodontists, with their day-to-day practices.

According to the editors, the book is “microscope centric” and “CBCT [cone beam computed tomography] centric.” In other words, the book is clearly geared toward specialists. The editors write that this is “a book written by clinicians for clinicians, at a specialist level.”

The first five chapters focus exclusively on the microscope itself, from photography to ergonomics to setting up an operatory. Subsequent chapters delve into everything from nonsurgical endodontic procedures, retreatment, resorption, and trauma, among other topics. I personally found the chapter on injectable gutta-percha to be interesting, particularly the cases showing its use when treating curved roots. I also think the discussion of “Russian Red,” a material I have never encountered before, was also worth reading.

While I am not an endodontist, and despite the fact that the editors pointedly say this publication was written at a “specialist level,” I disagree that this book should only appeal to specialists. Surely, specialists can benefit most, based on some of the topics. However, the book’s breadth and clarity relating to each aspect of endo, along with nice photography and very illustrative radiographs, make it informative, useful, and interesting for anyone. If you don’t have a microscope, for example, simply skip that area of discussion. In other words, different readers with different goals can take from this book what they wish.
AUTHOR GUIDELINES

The JOURNAL OF THE MASSACHUSETTS DENTAL SOCIETY accepts manuscripts for publication that are clinical and original research in nature. The JOURNAL also publishes articles on non-clinical topics relevant to dentistry, such as practice management, regulations, technology, and perspectives. Articles are considered and accepted for publication with the understanding that they have not been previously published and are being submitted solely to the JOURNAL.

MANUSCRIPT

▲ Manuscripts should be no longer than 2,500 words.
▲ Manuscript should be submitted as a Word document.
▲ Article titles should be concise and descriptive; titles that are deemed too long are subject to editing at the Editors’ discretion.
▲ Legends for all figures should be included in the Word document.

REFERENCES

▲ References may not exceed 30 in number. They should be recent and from respected sources, and keyed to the text and numbered consecutively in order of appearance.
▲ Journal references must include, in the following order: authors’ names, article title, abbreviated journal name, year of publication, volume number, issue number in parentheses, and inclusive page numbers of the article.
▲ Book references must give the authors’ names, book title, location and name of publisher, and year of publication.
▲ Personal communications (oral or written) should be incorporated into the text.

ADVERTISING

The JOURNAL OF THE MASSACHUSETTS DENTAL SOCIETY is published four times a year: spring, summer, fall, and winter. It is circulated to all 4,800 members of the MDS as well as to paid subscribers and news media.

INFORMATION

For display advertising rates, closing dates, and information, contact Melissa Carman, director of publications, at (800) 342-8747, ext. 260, or email mcarman@massdental.org. For classified advertising rates and information, contact Jennifer Hanlin, advertising sales coordinator, at (800) 342-8747, ext. 276, or email jhanlin@massdental.org. For questions about ad design or mechanical requirements, contact Jeanne Burdette, manager of graphic design, at (800) 342-8747, ext. 254, or email jburdette@massdental.org.

PREFERRED POSITIONS & OTHER ADDITIONAL FEES

- Inside front cover 15%
- Inside back cover 15%
- Back cover 20%
- Specific inside page 10%
- Bleeds 10%
- Inserts (contact Melissa Carman for details)
- Ad design $75/hour

GRAPHICS

▲ Images and figures must be digital files in either .jpeg or .tiff format and with a minimum resolution of 300 dpi.
▲ Do not embed images, figures, charts, graphs, or tables directly into the manuscript.
▲ Charts and graphs should be properly labeled and attached as separate Illustrator or Photoshop files. They may be reformatted to adhere to the JOURNAL’s design.
▲ Tables should be organized and supplement the information provided in the text. They should be numbered in the order of their mention in the text, and each typed on a separate page with the table title and footnotes.

PERMISSIONS AND WAIVERS

Permission of author and publisher must be obtained for the direct use of previously published material (text, photographs, drawings). Waivers must be obtained for the publication of photographs showing persons, unless faces are masked to prevent identification.

SUBMISSION

Please send your article submission via email to Melissa Carman, MDS director of publications, at mcarman@massdental.org. A transmittal letter, naming one author as correspondent with his/her address, phone number, and email address, must accompany the manuscript. Author affiliations must be provided. The Editor reserves the right to edit manuscripts, fit articles within available space, and ensure conciseness, clarity, and stylistic consistency.

ADVERTISING

MDS CONTACTS
(800) 342-8747

COMMUNICATIONS

MDS Publications .................................................. x260
Classified Ad Placement ........................................ x276
Oral Health Resources/Brochure Requests ................. x233 or x276
Public Awareness Campaigns ................................ x239

CONTINUING EDUCATION

Continuing Education Registry & Yankee Institute ........... x250

ADVOCACY

Legislative Issues .................................................. x253
Grassroots Initiatives ............................................. x242

MEMBERSHIP

Member Questions/Comments .................................. x243
Member Profile Changes & Website Log-in Issues ........ x223
Membership Dues Billing ........................................ x238

YANKEE DENTAL CONGRESS

Registration & Questions ........................................(877) 515-9071

MEMBER ASSISTANCE CENTER .................................... x351
Questions on:
Practice Management Peer Review
Insurance and Billing Issues Laws & Regulations
(including BORID compliance)
GENERIC DENTIST—We are looking for a long-term, experienced prosthodontist or a strong general dentist to join our multispecialty practice located in Sharon, MA. This is a state-of-the-art practice where our established patient base. Applicants must have the desire to be successful, both clinically and financially. Our team is committed to delivering great care along with great service, and we are looking for someone who shares those beliefs. Please email your resume to bostondmd3@gmail.com.

BRAINTREE GENERAL DENTIST/PROSTHODONTIST—We are looking for an experienced general dentist to join our practice located in Braintree, on Monday-Thursday. Please send your resume and availability by email to bostondmd3@gmail.com.

SHARON GENERAL DENTIST—We are looking for an experienced general dentist to join our practice in Sharon on Mondays and Wednesdays. Applicants must be comfortable with providing comprehensive care to a wide range of patients. Applicants must have exceptional clinical and communication skills and feel comfortable providing comprehensive care to a wide range of patients. Applicants must have exceptional clinical and communication skills and feel comfortable providing comprehensive care to a wide range of patients. Please email your resume to bostondmd3@gmail.com.

GENERAL DENTIST office in the Berkshires is looking for a full-time/part-time associate. Work in a state-of-the-art digital paperless office with 100% of the time with a very supportive staff and enjoy all that this beautiful area has to offer. We provide a variety of services, including digital impressions, implant placement, Invisalign, and facial esthetics. Email your resume to pitfielddentist@hotmail.com.

PROVINCETOWN—Full-time and part-time positions available for a general dentist at a state-of-the-art. Team approach to customer service practice. Offering CEREC Omnamic, CT imaging, digital paperless, implant placement, Invisalign, facial esthetics, endo, and perio. Great opportunity to enjoy a beautiful resort town, utilize amazing technology, and work with an amazing team. Email resume to Allegretti700@gmail.com. Visit our website at www.PtownDentalArts.com.


GREAT EXPRESSION DENTAL CENTERS has a current opening for a General Dentist to join our Wilbraham, MA practice (3-5 days/week). Our dentists have the clinical freedom and autonomy enjoyed in a traditional private practice without the additional financial or administrative burdens associated with practice management. When considering a career with GEDC, dentists can expect unlimited production-based earnings, full benefits, malpractice coverage, a stable patient base, and long-term practice or regional career growth. Relegation or sign-on bonus possible as well! We do it all for you. You became a dentist to help people. It’s your profession and your passion. The highest standards. Our National Doctor Panel has set standards for clinical excellence, including clinical protocols, state-of-the-art technology, extensive training, and patient care of the highest standards. We are seeking individuals that are committed to achieving excellent, healthy smiles. There is a possibility and expectation of ownership in the future. Please send cover letter and CV to drshahid@agapedentist.com.

ORTHODONTIST—Part-Time. Please consider our highly respected two-location pedo/ortho practice. The pediatric dental practice opened over 40 years ago and the orthodontic component (serviced exclusively by trained orthodontists) has been established for 17 years. We are seeking a skilled and compassionate individual to join us two days per week in our Westford location. We currently treat approximately 150 active full-banded cases as well as multiple interceptive cases. Candidate must be eligible to obtain and actively maintain Massachusetts Dental Board license. Apply Here: http://www.Clik2 Apply.net/su93tv6v70

ORTHODONTIST SOUTHEASTERN MASSA.- A busy, modern practice on the NorthShore of Boston. The orthodontic office orthodontic practice is seeking to hire an Orthodontist. The current need is for part-time two days per week and is expected to grow. The right candidate will have solid credentials, excellent communication skills, a warm and comforting chairside manner, and be willing to learn and adopt the practice’s established treatment protocols. This opportunity has the possibility to expand to full-time with practice growth. Interested candidates should contact lagriev@southeastortho.com or call Lorri Dower at (508) 880-5891.

LOCUM TENENS/FLEXIBLE OPPORTUNITY — Passionate for patient care and want a flexible schedule? We seek experienced dentists to fill daily/weekly/monthly locum tenens needs to cover leaves and extended vacations. Perfect for dentists wanting to pick up extra hours. May involve travel with overnight stays. Typically includes 32-36 hours/week when needed. Competitive pay. You have complete freedom to work as many or as few locum sessions as you’d like! Opportunities available with Midwest Dental (WI, MI, IL, KS, MO), Mountain Dental (CO, NM), and Merit Dental (PA, OH, MI). Contact Carly Rufleff, 715-225-9126, crufleff@midwest-dental.com. Learn more about us: www.midwest-dental.com, www.mountain-dental.com, or www.mymeridental.com.

GENERAL DENTIST NEEDED part-time for busy Worcester group practice. Please contact MDS Box #1374.

PART-TIME—Dentist with DMD or DDS licensed to work in private practice located in Brockton, MA. Please email rjs@drshahidshah.com.

A GROWING, QUALITY DENTAL PRACTICE NORTH OF BOSTON IS SEEKING an associate to work 2-3 days per week including Saturday. We have served the community for 20 years, and offer excellent, high-quality care to our patients. We are committed to achieving everlasting, healthy smiles. There is a possibility and expectation of ownership in the future. Please send cover letter and CV to drhghada@agapedentist.com.

PRACTICE OPPORTUNITIES IN EAST HARWICH AND STURBRIDGE, MA—Mondovi Dental is seeking experienced candidates for practice opportunities in East Harwich and Sturbridge. Our philosophy of preserving and supporting the traditional private practice setting provides great work-life balance, excellent compensation and benefits, and unlimited opportunity for professional development. Our comprehensive support team takes care of the administrative details, providing you the freedom to lead your team while focusing on your patients and skills. If you possess a passion for providing quality care and are looking for a rewarding practice opportunity, please contact Brad Smith at (715) 590-2467 or bradsmith@mondovidental.com.

OSTEOGENESIS—We are seeking a strong, motivated, team-oriented associate to join our well-established family practice. We are looking for someone with a positive attitude, great work ethic, and strong clinical skills. Beautiful practice and in a great location. Please contact MDS Box #1372.

GET OUT OF THE COLD!—Flagstaff, AZ practice for sale. Established, Profitable, Tech Savvy, and generating new patients every day. New air/water equipment, updated CAT6 network/server/stations. Won’t last long! Email sheffieldday2@gmail.com.

PRACTICE OPPORTUNITIES IN EAST HARWICH AND STURBRIDGE, MA—Mondovi Dental is seeking experienced candidates for practice opportunities in East Harwich and Sturbridge. Our philosophy of preserving and supporting the traditional private practice setting provides great work-life balance, excellent compensation and benefits, and unlimited opportunity for professional development. Our comprehensive support team takes care of the administrative details, providing you the freedom to lead your team while focusing on your patients and skills. If you possess a passion for providing quality care and are looking for a rewarding practice opportunity, please contact Brad Smith at (715) 590-2467 or bradsmith@mondovidental.com.

GENERAL DENTIST NEEDED for a well-established, multi-doctor family practice in Methuen, full- or part-time, flexible hours. Good opportunity. If interested, please respond to MDS Box #1371.

SEEKING ASSOCIATE DENTIST—Locally owned and operated practice. Lucrative/ stable position with paid benefits. Relocation reimbursement. Family practice, mostly adult patients, comprehensive care, good mix of insurance/cash. Professionally rewarding, quality environment. Send your resume to Lindsay Pothos, HR Manager, lpothos@qidental.com.
EXPERIENCED GENERAL DENTIST—P/T AND POTENTIAL TO BUY INTO THE PRACTICE. SOUTHEASTERN MASS. We are a premier multi-doctor restorative and specialty practice in Southeastern Mass. The focus of our practice is comprehensive care dentistry. Our patients, management systems, and standard of care reflect this focus. We are searching for an outstanding general dentist who wants to be successful both clinically and financially. Successful candidate will be experienced and/or will have completed a residency, has solid patient communication skills, and must have a desire to broaden education on an ongoing basis. Financial support will be provided for continuing education (Spear Institute, etc.). Our team is committed to delivering exceptional care and service. For the dentist who feels the same way and who wants a home where they feel respected, appreciated, and part of a team to practice with for years to come, this position is a changing opportunity. Please forward your CV and letter of interest to MDS Box #1370.

GENERAL DENTIST IN WORCESTER COUNTY looking for an Endodontist one day a week. At least 1-2 years’ experience. Prefer endodontist to use a microscope for root canal treatments. Contact beautifulsmilesmd@gmail.com.

WE ARE A WELL-ESTABLISHED TWO-OFFICE PRACTICE located in Wayland and Marlboro, MA. We are looking for an energetic and compassionate orthodontist to join our private practice for 2 plus days per week (to increase as needed). Office is modern, cheerful, all digital, with fantastic clinical assistants and front desk support. Compensation is competitive with negotiable terms for the right individual. Please email CV to woowdentalforkids@gmail.com.

BUSY SOUTH SHORE DENTAL PRACTICE seeking an associate self-motivated with a passion for providing high-quality patient care. Position will be part time 2-3 days per week. Please contact the office at (781) 925-5100 or email CV to Lockedmd@aol.com.

ASSOCIATE POSITION—NORTHAMPTON, MA. Full-time associate position leading to a partnership opportunity in a long-established dental practice. This dental office is fully digital and paperless, owns a CEREC machine, and performs implant surgery. The practice is well managed, profitable, and has a loyal patient base that appreciates comprehensive dentistry. www.dentistsofnorthampton.com. Please send CV to drobertbyorton@comcast.net.

GENERAL DENTIST for a GENERAL DENTISTRY PRACTICE—Seeking an ASSOCIATE leading to a Practice Transition within one year. High-volume, well-established practice 30 miles west of Boston. Requirements: DDS or DMD degree from an accredited U.S. dental school. General Practice Residency or Two Years of relevant work experience required. Current licensure in the State of Massachusetts, valid DEA license, current CPR/AED certification. Good clinical and communication skills. Looking for a professional, caring, patient-oriented individual committed to the total health and wellness of adult, adolescent, and pediatric patients. Please forward resume to MDS Box #1366.

HOLYOKE, MA—Family Dentist and/or Pediatric Dentist. Progressive children and family dental practice looking for a highly motivated and energetic associate to join our practice in Holyoke, MA. Part-time or full-time position with long-term potential. Opportunity is open to new or recent graduates as well as experienced clinicians. Can offer a competitive base salary along with a reconciliation structure and a full benefit package, including health insurance (BCBS), malpractice insurance, professional dues, sponsorship, paid time off, and more. Will sponsor for green card. $20,000 SIGN-ON BONUS. Interested individuals should email a resume to aylabellucci@yahoo.com.

HARTFORD, CT—Family Dentist and/or Pediatric Dentist. Progressive children and family dental practice looking for a highly motivated and energetic associate to join our practice in Hartford, CT. Part-time or full-time position with long-term potential. Opportunity is open to new or recent graduates as well as experienced clinicians. Can offer a competitive base salary along with a reconciliation structure and a full benefit package, including health insurance (BCBS), malpractice insurance, professional dues, sponsorship, paid time off, and more. Will sponsor for green card. $20,000 SIGN-ON BONUS. Interested individuals should email a resume to aylabellucci@yahoo.com.

MANCHESTER, NH—Family Dentist and/or Pediatric Dentist. Progressive children and family ental practice looking for a highly motivated and energetic associate to join our practice in Manchester, NH. Part-time or full-time position with long-term potential. Opportunity is open to new or recent graduates as well as experienced clinicians. Can offer a competitive base salary along with a reconciliation structure and a full benefit package, including health insurance (BCBS), malpractice insurance, professional dues, sponsorship, paid time off, and more. Will sponsor for green card. Interested individuals should email a resume to aylabellucci@yahoo.com.

PEDODONTIST WANTED TO JOIN IN METROWEST—Pediatric dental group looking for a highly motivated and energetic pediatric dentist for a part-time or full-time position with long-term potential. Our practices are located within 20-40 miles west of Boston (Milford, Framingham, Marlborough, Franklin). We are a friendly, quality-oriented dental practice. Our staff is well-trained and long-standing. We have new dental equipment, digital X-rays, and are chartless. Opportunity is open to new or recent graduates as well as experienced clinicians. Compensation is a base salary of $350K (full-time) with a reconciliation 50% of collections. Must be motivated, personable with great bedside skills, and be dedicated to the profession. Interested individuals should email a resume to aylabellucci@yahoo.com.

SPRINGFIELD, MASS—Family Dentist and/or Pediatric Dentist. Progressive children and family dental practice looking for a highly motivated and energetic associate to join our Springfield practice. Part-time or full-time position with long-term potential. Opportunity is open to new or recent graduates as well as experienced clinicians. Can offer a competitive base salary along with a reconciliation structure and a full benefit package, including health insurance (BCBS), malpractice insurance, professional dues, sponsorship, paid time off, and more. Will sponsor for green card. $20,000 SIGN-ON BONUS. Interested individuals should email a resume to aylabellucci@yahoo.com.

ENDODONTIST NEEDED FOR busy general dentistry offices. Part-time and full-time available. Large pool of general dentistry patients for internal referrals. Earn high compensation and work in a fast-paced, friendly environment. Call Alex (617) 823-2111 or email alex@mdytdental.com.

ENDODONTIST NEEDED FOR busy general dentistry offices. Part-time and full-time available. Large pool of general dentistry patients for internal referrals. Earn high compensation and work in a fast-paced, friendly environment. Call Alex (617) 823-2111 or email alex@mdytdental.com.

EXCITING OPPORTUNITY FOR DENTISTS to provide children with quality dental care in schools throughout Massachusetts. No evenings or weekends. Email resumes to jobs@smileprograms.com.

PRACTICES AND OFFICES FOR SALE OR RENT

GENERAL PRACTICE #MA-1251—Franklin County. 5 Operatories. Average collections $565,593. Small, family-oriented community. Many dental specialists in surrounding area. For details, contact Dan Baccari, (508) 435-7678 x223, dbaccari@NPTDental.com, or www.NPTDental.com (National Practice Transitions).

GENERAL PRACTICE #MA-1252—Essex County. 3 Operatories. Average collections $590,868. North Shore practice. Well-established patient base with longevity. High visibility. For details, contact Dan Baccari, (508) 435-7678 x223, dbaccari@NPTDental.com, or www.NPTDental.com (National Practice Transitions).
DENTAL TRANSITIONS—Pro Practice Transitions has developed a reputation for professionalism and obtaining results for those looking to sell or purchase a dental practice in New England. The personalized attention we give to every seller and prospective purchaser, and the professional relationships we have developed, ensure a positive outcome to all involved in the sales process. Visit us at www.dentalbrokerne.com or please call or email us with your questions or needs. Tel: (774) 289-8411 or Email: propractice transitions@gmail.com.

DENTAL OPERATORIES AVAILABLE FOR RENT TO SPECIALISTS—Location: Lexington, MA. Description: Four fully equipped and fully functional dental operatories available for sublease/rent per day or per month for an Endodontist, Oral Surgeon, Periodontist, or Orthodontist. Each operatory is equipped with digital radiography, 2D pan/ceph in office and paperless. You are responsible for your own patient payments and office administration. The office is part of a freestanding building located minutes from Lexington Center and Interstate 95/Route 128 with ample parking. Please email dmd DDS2014@gmail.com for more information.

SERVICES

SELLERS—Don’t fish in only ½ the pond for your buyer!!! National Practice Transitions is only in the business of transitioning dental practices. We do not sell dental supplies or equipment and have been selling dental practices for over 40 years collectively. We market our practices to the entire pool of qualified buyers willing to offer the highest sale price, and care not about limiting your buyer pool to only those willing to purchase supplies or equipment after the sale. By not limiting the buyer pool to those dentists willing to buy their supplies after the sale from the dental supply broker, we have been able to secure some of the highest recorded sale prices in New England. We do this while charging on average 20% less commission. Call us for a free consultation. (877) 365-6786.

HARVARD CE COURSE—Essentials for the Modern Dental Leader, May 2-4, 2016. Bringing dental leaders together to explore clinical leadership and better understand the knowledge, skills, and attributes required for effective leadership in dental organizations of all sizes. Sharpen your skills and watch your practice thrive. Please join us! More information: http://leadingindental.com. Contact: ohpe@hsdm.harvard.edu.

TO ALL MY MA COLLEAGUES—I am pleased to announce that our office is now offering IV sedation for any phobic patients who need or desire sedation for their dental needs. We can be reached at (207) 985-3576 in Arundel, ME. Thank You. Dr. Anthony N. Altieri

You Can Lead by Being a Follower

Connect with the Massachusetts Dental Society 24 hours a day, 7 days a week.

Follow us on Facebook and Twitter. And don’t forget to download our mobile app so you can take the MDS wherever you go.

Still Haven't Found What You're Looking For?

Go online! If you’re looking for an article you read in a past issue of the JOURNAL OF THE MASSACHUSETTS DENTAL SOCIETY, all issues of the JOURNAL from the past several years are archived on the MDS website and available 24/7 to MDS members.

Visit www.massdental.org/publications/journal and click on “Past Issues.” Library cards aren’t necessary, but since the JOURNAL is a member benefit, you will need to log in with your MDS member ID to access the JOURNAL online.
Did you hear the one about the guy who walks into his doctor’s office and . . .

No, I’m not telling a joke; I’m talking about anecdotes—storytelling—which can relay a lot of information about a patient’s condition. Historically, it has been a way in which we can learn about a disease or injury. It can be used as a guide to measure expectation in similar clinical settings or to demonstrate outliers, unanticipated behavior, which can alter treatment. From this informal conversation, much information can be gleaned about history, presentation, treatment, and outcome. The relating of the story of a patient experience, on the phone or at a meeting with other practitioners, can enlighten and enhance our understanding of the pattern and variability of various clinical conditions. Or can it?

Today, proponents of meta-databases, who rely on the predictive value of large statistical samples to direct treatment decisions, question the value of anecdotal references. To date, however, the digitization of health care has proved frustrating in promising its presumptive superiority. Dr. Robert Wachter of the University of California, San Francisco, writing an opinion piece in The New York Times [3/22/15] entitled “Why Health Care Tech Is Still So Bad,” explores the gap between the adoption of technology and the productivity it hopes to gain. He relates this “productivity paradox,” a term coined by MIT professor Erik Brynjolfsson in the 1990s, to health care information technology today and the lag time encountered until its usefulness can be realized. He points to a RAND survey of physicians, which showed widespread dissatisfaction with current electronic health record systems. The complaints included user-unfriendliness, time-consuming data entry, needless and false alerts, poor workflow, and medical errors in software. This last entity is perhaps the most grievous to patient care. After all, the prevention of medical errors was supposed to be the main rationale for computerization. Dr. Wachter cites a study of more than one million prescription errors reported to a national database between 2003 and 2010, of which 6% were directly related to a computerized prescribing system, and many of which were near-fatal. A large part of the overall problem relates to the vast number of “alerts” that pop up on the screen. In one hospital’s five intensive care units, 2.5 million alerts were received each month, many of them false alarms. It’s numbing, and that is part of the problem, because it is too easy to overlook them. That is why the unanticipated consequences of health information technology are of such interest today. Wachter likens the computerization of health care to a car “whose spinning tires have finally gained purchase. We were so accustomed to staying still that health care technology will finally come about when providers have a system “they just can’t live without. Electronic records will transform medicine, eventually.”

That eventuality will require targeted and focused health care technology so that useful knowledge can be more readily extracted. That is the opinion of Dr. H. Gilbert Welch of Dartmouth-Hitchcock Medical Center and Dartmouth’s Geisel School of Medicine. His most recent book, Overdiagnosed: Making People Sick in the Pursuit of Health, explores the productivity paradox as it applies to health care. The fact that we can now access huge amounts of data [i.e., the human genome has over 3 billion data points] does not equate to our making sense of all that clutter.

So, given this promise for the future of data-driven health care, does the anecdote serve any useful purpose, or will it be a quaint relic of the past? Dr. Peter D. Kramer, a professor of psychiatry at Brown University, explores the relative value of metrics and anecdotal evidence. Writing in The New York Times [10/19/14], he concludes that both are needed in clinical practice, with anecdote providing a useful counterbalance to analysis of numerical evidence. As Dr. Kramer puts it, “The vignette, unlike data, retains the texture of the individual life.” In dentistry, clinical evidence-based treatment protocols are driving therapy. Case vignettes provide judgment-based treatment for the individual. The integration of clinical anecdote with formal findings from computer models will help us as practitioners determine what is best for that patient. Dr. Kramer points out, insightfully, that storytelling is needed “to set us in the clinical moment, remind us of the variety of human experience and enrich our judgment.”

We just need to listen.
NEW YEAR + NEW WEBSITE = NEW PATIENTS

Let older websites be forgot.
Upgrade to one they’ll find. Officite’s 2016 packages include:

- *Enhanced online REPUTATION TRACKING*
- *Easy practice VIDEO TOURS*
- *RESPONSIVE WEBSITES that display perfectly on all devices*
- *Comprehensive SEO services*
- *More referrals with SOCIAL MEDIA MARKETING*

Call a Web Presence Advisor to start meeting your goals.
Upgrade with Officite, and watch the new patients roll in.

866.889.4069  Officite.com/MDSJournal  Facebook.com/Officite
EDIC Supports Our Colleagues 100%
Because We Are Dentists Too.
Join EDIC Today!

1-800-898-3342 • www.edic.com
LinkedIn | Twitter@EDICInsurance | www.facebook.com/EDICInsurance