

DIAMOND

Maurice H. Kornberg School of Dentistry Magazine | Summer 2014

BEGINNING A NEW ERA AT TEMPLE DENTAL

Dental Practice and Patient-Centered Care



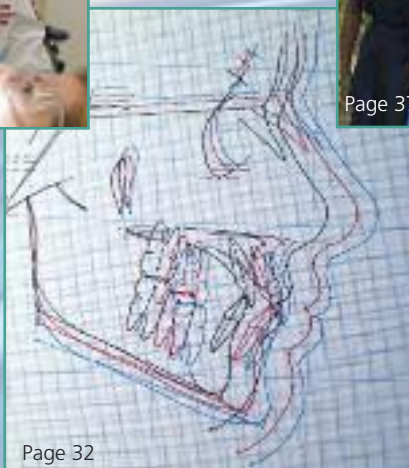
Kornberg School of Dentistry
TEMPLE UNIVERSITY®

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We Are the Future!

Join Us

This issue of the Diamond focuses on a topic that is dear to all Temple Dental alumni, faculty and students. The dental profession has a bright and exciting future ahead. I can assure you that there will also be challenges if we do not accept and manage the predictions that are described very well in this issue by five distinguished leaders in dentistry.

Throughout the 20th century, scientific and technological advances have changed the practice of dentistry for the better. In the 21st century, we face not only technological advances (Dr. Gordon Christensen), but also an emphasis on an integrated model of dental and health care (Dr. Michael Glick, Class of 1990) that focuses on achieving health outcomes for our patients (Dr. Allen Finkelstein, Class of 1969). Integrated health and dental care will be provided by dental offices, which are ideal locations for point-of-care testing and screening for major health conditions and for providing medical care by nurse practitioners or physician assistants or in coordination with primary care physicians.

The 21st century will also see the growth of big data analyses, monitoring of reimbursement, and as Dr. Finkelstein succinctly summarizes, the “accountability era.” Whether the payers are third-party managed care organizations, other insurance companies, cash-paying patients or government-subsidized dental programs, the demand to demonstrate the long-term value of the care we provide will increase. While I hope that dentists will remain reimbursed for dental care per procedure, new financing of care models will also compensate dentists for promoting health and maintaining patients free from dental and oral diseases.

This change in focus in healthcare financing will require developing new dental materials, diagnostic and treatment capabilities (Dr. Joe Roberts, Class of 1983), and will require as well the formation of dental or healthcare teams led by dentists, where specialists, general dentists, hygienists, dental assistants, and outreach educational workers will manage health care for a population of patients — at significantly larger patient-per-dentist ratios than



Dean Amid I. Ismail
Laura H. Carnell Professor

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— Dean Amid I. Ismail

those of the past decades. Promoting health and maintaining a disease-free state will require management of information using electronic health records, dynamic communication and behavioral-change tools that we have so far not fully developed nor adopted. The communication between members of the dental team and patients using “health social media” will be frequent, dynamic and focused on empowering patients to take care of their health. The patient-centered model of care focuses on the welfare and satisfaction of patients who will have their health needs, including their dental health needs, met in one facility, and at their homes, by coordinated teams that will include medical, dental, social and educational providers.

Technologically, the next 20 to 30 years will dawn a major change in developing new diagnostic tools for identifying profiles of bacteria associated with health and disease and altering the ecology on the tooth, saliva, and periodontium, using new natural methods (Professor Svante Twetman). We will see also increased diagnostic imaging, using laser and X-ray technology, a revolutionary change in digital impressions, design and milling of all prostheses, “smart hand pieces” that can detect infected dental tissues and remove only diseased tooth structure according to the level of destruction, and smart biomaterials that will chemically interact with hard tissues forming a unified structure with no potential for microleakage around restorations. Using new laser technology, soft and hard tissue surgical management of dental disease will be precise, fast and less painful. In fact, I predict that the era of “painless” dentistry will actually happen before the end of the century (a concept that was falsely promoted by Dr. “Painless” Parker, a 19th century graduate of the Philadelphia Dental College).

The future of dental practice is in our hands! To move forward, we must work together as faculty, alumni and students to become “the bastion of innovation, research and disruptive new treatments and technology [that are not] hampered by the historical burdens of inadequate funding, dogma, and professional resistance to change” (Joe Roberts, Class of 1983). Please join us in making Temple Dental the home of the future of clinical practice.

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— Dean Amid I. Ismail

**“We don’t need to think more,
we need to think differently”**

Albert Einstein



Allen Finkelstein DDS
Class of '69

With the passage of the Affordable Care Act (ACA), the healthcare system is undergoing profound changes. Accountable Care Organizations (ACOs) attempt to support the development of new models of care delivery and reimbursement that encourage more efficient and higher-quality care.

The ACA will encourage changes and new forms of coverage. Dental health care professionals and all stakeholders must engage in an effort to combine quality outcomes and performance integrity to align with reimbursement.

The theme of Volume to Value in the Era of Accountability is the basis for the shift from the current blind-base reimbursement to value-based reimbursement.

Provider Profiling

In the Era of Accountability, provider profiling tools to assess practice patterns that monitor the quality of care delivered by dental providers will be essential in establishing dental reimbursement. Web-based enterprise healthcare systems provide access to customizable data

A VIEW OF THE CHANGING LANDSCAPE

From...		To...
Provider-Centric	Focus	Patient-Centric
Value-Blind Reimbursement	Value	Value-Based Reimbursement
Episodic & Fragmented	Patient Flow	Continuous & Coordinated
Inpatient-Focused	Delivery Setting	Flexible & Varied
Individuals	Approach	Population-Based
Disease & Treatment	Objective	Wellness & Prevention

Kellogg Foundation Report, Oral Health Quality Improvement in the Era of Accountability, December 2011, pg.7.

analysis reports that identify needed utilization performance profiling. These systems honor contractual guidelines and are built on a series of algorithms that incorporate appropriate dental logic. The data produced compares metrics that measure the quality of care delivered by providers with established practice norms.

Quality of care performance profiling is judged in comparison with the best in practice and is measured by what leads to the best outcomes. Outcome metrics are used to measure the provider's technical performance, knowledge and judgment in arriving at appropriate diagnostic, therapeutic and preventive strategies. Outcomes denote the effects of the clinical process on the identification and treatment of the problems presented, improvement in health and consequential changes to the members' behavior.

Reimbursement and Incentives

In the Era of Accountability, reimbursement will be focused on quality care outcomes with a focus on ensuring that the dental care provided prevents, and assists in the management of, chronic oral diseases. Value-based care will contribute to outcomes that reduce disease and contain costs.

Public and private sector purchasers are actively working to



design value-based reimbursement processes. These designs will be complex undertakings and will determine the likelihood of successful quality healthcare outcomes.

Reimbursement models developed are based on financial incentives that reward improvement in wellness and continuous care. Incentives include assignment of additional members to those providers who have demonstrated these continuous improvements in health and wellness values. Providers will also have reduced administrative responsibilities, including reduced prior authorization requirements, expedited claims payment and credentialing turnaround time.

Conclusion

Interest in reimbursement reform

in the Era of Accountability is likely to intensify as new ACA models of care delivery are tested and defined. Additional demonstrations and evaluations of the various models are needed to fully understand their relative advantages, disadvantages, and operational feasibility. No single payment model or incentive reward is appropriate for all types of care or applicable in all settings, practice types, and geographic locations.

All stakeholders must collaborate in the development of a quality component that insures the establishment of accountable value-based reimbursement.

Allen Finkelstein, DDS

Technology and the Future Dental Office



Joe Roberts, DDS
Class of '83

I have always said that I would give up the last two months of my life, if it meant that I could come back in 100 years to observe how my profession of dentistry will be practiced. Innovation in technology and delivery of care will face challenges posed by what I consider to be some fundamental truths not just here in Philadelphia, but also nationally and globally.

1) Our profession lacks the ability to efficiently, economically, comfortably and affordably treat existing dental disease. In my opinion we are not even close. 2) Current treatments for dental caries that have reached the pulp are expensive, inefficient and too technique sensitive. 3) Dental implants will exist only until tissue banks can reliably grow pulpless teeth from a cheek swab, but until then implant restorative therapy should be a routine and much less expensive process than it is currently to meet the public need for this service.

4) Dental schools that should be the bastion of innovation, research and disruptive new treatments and technology have been hampered by the historical burdens of inadequate funding, dogma and professional resistance to change at many levels. The simple truth is, the emergence of disruptive technology in dentistry currently remains inadequate to match the dental needs of the general population.

The Future of Technology

The goals of technology should generally aim to collapse treatment times and numbers of procedures, increase comfort, lower costs and improve outcomes for patients.

1. Synthesis of an informed and comprehensive treatment plan

In my future office, patient information is securely obtained and analyzed through efficient triage systems that gather as much data as possible. Dental software analyzes the patient's genome, with multi-variant analysis of the risk factors using genetic information, family history, diet, and home care. Consideration of this analysis, along with the clinical exam and cone-beam 3D analysis, allows for the creation of an efficient evidence-based treatment plan for final dental analysis and adjustment by the patient and doctor together. Using this method can also lead to the diagnosis and subsequent treatment of common medical conditions.

The goals of technology should generally aim to collapse treatment times and numbers of procedures, increase comfort, lower costs and improve outcomes for patients.

— Joe Roberts

2. Widespread routine use of next-generation local anesthetics and sedation techniques to improve the patient experience and reduce fear associated with pain and anxiety

Sedation and local anesthesia will be so safe, reliable and economical that they are available for all visits and in all treatments. This will play a significant role in the overall reduction of patient anxiety and fear scores.

3. CAD/CAM technology is affordable, reliable and common practice

Improvement of all tooth and tooth structure replacements with CAD/CAM so that procedures are timely (same day), efficient and cost-effective.

4. Extraction and tooth replacement

When a tooth is extracted, the socket will be cleaned out and some minor reshaping will be done using lasers. The extracted tooth will be placed in a sterile gel container and put into a specialized cone-beam scanner port in the office. A three-dimensional CAD/CAM of the root structure, socket analysis, occlusion and functional form analysis is completed in seconds and a titanium or other osseointegrative material will be machine carved to immediately replace the lost tooth structure. The implant abutment and crown are one piece and can be inserted immediately. The era of customizable, immediate insertion and low-cost implants will be fun. Three-dimensional printers will reduce the number of visits for all dental prostheses and improve aesthetics and designs.

5. Home-based patient diagnosis

Patients will be able to instantly self-examine and monitor progress of dental caries and periodontal infections with HD imaging and analysis on their smartphones. This data can be linked to the patient's dental office for supportive or interceptive treatment.

6. Lasers and other devices will utilize the entire electromagnetic spectrum to improve diagnostics and treatment especially in periodontal disease

In my goals for the future dental office, a patient who walks through the door in pain will have all of the periodontal infections grossly removed, caries removed, root canals treated or extracted and existing teeth rebuilt and restored in very few visits, with patient out of pocket expense not to exceed two months' rent.

To meet the actual need for oral health throughout the world, huge collapses need to occur at every bottleneck between disease and health. The disruptive nature of collapses and change should be expected and embraced. The profession itself will have to be careful to avoid getting in the way because of the natural human fear of change. Our profession is poised to support and challenge all new technologies to evolve more rapidly, eliminate inefficiencies, collapse bottlenecks and allow us to treat the massive dental needs currently under-treated in our communities and around the world.

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— Joe Roberts

Paradigm Shifts in Clinical Dentistry: Will You Be Ready?



Professor Svante Twetman, DDS, PhD
Department of Odontology,
Faculty of Health and
Medical Sciences,
University of Copenhagen,
Denmark

Head the words “new paradigm” before? For decades, researchers and clinicians have agreed on the obvious fact that dentistry must move away from the filling-oriented avenue to a more preventive-oriented and minimal-invasive strategy. The thinking has been supported by a declining caries burden and a generally improved oral health in many populations. Are we close?

A recent report has estimated that 2.5 billion people on this planet have untreated caries in their permanent teeth, and this number has sadly increased over the last 10 years due to increasing population and life expectancy. So there is still a long and winding road to go. The obvious problem is that both dentists and the dental diseases are unevenly distributed over the globe, as is the ability and willingness of patients to pay for dental care. To combat oral health disparities and provide evidence-based dental care on equal terms is a paramount challenge for oral health authorities and politicians, but inevitable also for each “wet-finger” clinician. We all face disparities and must keep in mind that the upstream preventive approach always is “leaner and greener” than traditional restorative care.

Another “new paradigm” is related to plaque. The major oral diseases are biofilm-mediated, and the key factor for maintaining health is microbial balance and diversity. The current concept is therefore biofilm control, that is, modification of the biofilm composition rather than biofilm/plaque eradication. This means a revival of low-tech, bio-ecological methods such as probiotics, antimicrobial proteins and arginine in lieu of broad-spectrum antiseptics and antibiotics. The mode of action of such novel agents includes local and systemic events, boosting the immune response and a bridging domino-effect between oral and general health.

The obvious problem is that both dentists and the dental diseases are unevenly distributed over the globe, as is the ability and willingness of patients to pay for dental care.

— Svante Twetman

It is, however, quite easy to trust that new or improved technologies continuously will appear in dentistry. But are we fully taking advantage of what we already know? Take fluoride toothpaste as a striking example. Several systematic reviews have established strong scientific evidence that this is the best way of preventing and controlling caries at all ages. It is self-applied, affordable, paid by patients and there are clear guidelines for its use. Yet surveys indicate that around 30

percent of all patients brush their teeth on an irregular non-daily basis. Even worse, only 10 percent report that they use fluoride toothpaste in an optimal way according to best available evidence: a) two times a day, b) two minutes, c) apply a full brush, and, d) do not rinse afterward (patient should not rinse after brushing to keep the fluoride concentration high for a longer time).

We have a tendency to blame this poor compliance on our patients, but should we blame ourselves? A survey of patients in various age groups indicated that they actually weren't told how to brush properly, and a qualitative study unveiled that dental professionals "took for granted that patients knew" what to do.

Consequently, a first important step in future practice of disease control to focus not only on what to say, but also on how to say it and make sure that the message is understood by the patient. Of course, this is not only about cleaning teeth; the healthy lifestyle message should be based on the common risk-factor approach for preventing general diseases and conditions within the metabolic syndrome, as well as cancer. In this context, dental professionals play a key role when seeing their patients on a regular basis. In some countries, dentists are screening blood pressure and glucose levels to detect heart problems and Type II diabetes, as well as giving radiographs extra attention for early detection of osteoporosis. Thus, dentistry is eventually moving to an integrated discipline within medicine.

At the end of the day, the next generation of patients will be ready to pay for health rather than for restorations, which means that the preventive and minimal invasive measures will be upgraded as fully integrated parts of future dental practice.

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— Svante Twetman

Oral Health Professionals' Role in the Primary Health Care Team



Michael Glick, DDS
Class of '90

“There is a time when we must firmly choose the course which we will follow or the endless drift of events will make the decision for us.”

— Herbert Prochnow

The traditional dental office with receptionists, dental assistants, dental hygienists and a dentist at the helm is a classic healthcare team that has proven to be effective and successful within an insular procedural-based healthcare delivery system. The future healthcare delivery model, however, promotes a primary care concept where coordinated care — addressing all of a patient’s health needs — will reward health outcomes rather than specialized procedures. How oral health professionals (OHPs) will integrate with a primary health care team is a challenge, but one that needs to be addressed by our profession. The value of oral health and the contribution of oral health professionals need to be defined, recognized and communicated to policymakers, other health professionals and third-party payers who will play an important role in shaping future healthcare delivery models.

Oral disease burden has recently been recognized by the United Nations as an integral part of other non-communicable diseases (NCDs) — principally cardiovascular diseases, stroke, chronic respiratory diseases, diabetes and cancers.¹ The main reason for the inclusion of oral diseases with other NCDs is shared risk factors, such as diet, smoking, alcohol use and even sexual practices. Alignment with other NCDs may enable increased support to prevent and control oral diseases as the consequences of traditional NCDs’ impact on social and economic development has already been acknowledged. Furthermore, this alignment provides justification to advocate for the inclusion of OHPs in the primary healthcare team and an opportunity for interprofessional education and clinical care.

Health expenditures in the United States far exceed those of any other country in the world, yet we have

very poor health outcomes compared with those of similar countries.² One way to reduce cost and improve efficiency is to examine how services are provided and the existing roles of healthcare professionals. Screening for chronic diseases such as cardiovascular disease and diabetes by OHPs in a dental setting has been shown to have the potential to save significant healthcare expenditures.³ Providing preventive health services, such as annual immunizations, in a dental office by OHPs, is another example of the potential impact of OHPs in primary care.⁴

Such an approach will enhance the perceived value of incorporating OHPs into primary care and furthermore, has the potential to decrease overall national health expenditures. A significant body of work has already been published that supports the expanded role of OHPs in overall health and well-being.⁵ Expansion of the oral health care team to include practitioners such as community dental health coordinators⁶ may blur traditional boundaries and roles of healthcare professionals, but such an expansion will provide ample opportunities to use the dental office as a portal into the healthcare system for promoting health, increasing access and enhancing the continuum of quality care. Furthermore, as utilization of dental services is declining,⁷ exploring nontraditional revenue sources may be imperative.

The emerging healthcare model has yet to address how traditional tasks and services need be reorganized, which provides us with an opportunity to influence how our profession will be shaped. The time to do this is now. Any delay and our professional autonomy may be jeopardized.



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The Next 150 Years

Where Are We Going In Dentistry?

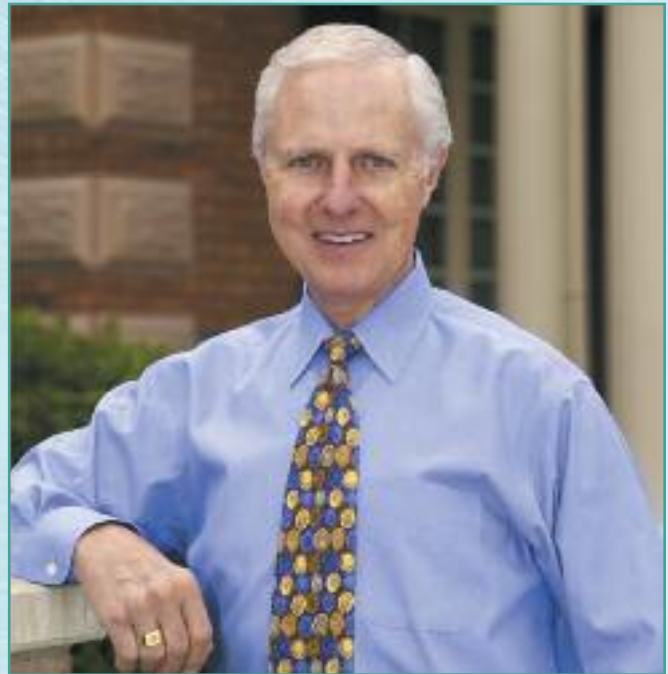
After being a clinical dentist (prosthodontist), teacher and researcher for about one-third of the last 150 years, I may have some ability to predict the next 150 years. The past 150 years have shown unbelievable change and advancement. Dentistry has evolved from barely a recognized trade, to now being very respected, important, highly advanced and the largest specialty of medicine. Those of us privileged to be a part of it fully recognize the service that dentistry provides for humanity and further realize how blessed we are to be a part of it.

What is coming in the next 150 years? Please recognize that nobody really knows! However, I see that at least some of the following statements will be realized. These potential changes are listed in alphabetical order, not prioritized.

Anesthesiology: You may not remember that both local and general anesthetics originated in dentistry, largely because of the intense pain that can be present in the maxillofacial area. A greatly needed small change will be a method to reverse the local anesthetic in a few seconds. General anesthetics that do not provide as much hangover will be present. Better psychological methods to induce anesthesia will be present such as an expansion of the well-known ability of hypnosis to control pain.

Diagnosis and treatment planning: Salivary diagnostic methods have the potential to revolutionize dentistry if dental researchers, administrators and politicians can convince the medical world of the value of these techniques. This point could even cause dentistry to be taken back into the typical medical education realm instead of existing as a separate specialty. Inexpensive caries detection devices will be present, with ability to predict depth and activity or carious lesions. Instructional programs for staff detection of oral hard- and soft-tissue lesions are possible.

Endodontics: Pulp canals in teeth are not going away. Better methods for debridement, disinfection, and obturation of root canals will be found. These



Gordon J. Christensen, DDS, MSD, PhD

advances will make endodontics more predictable and successful. Some of them are coming right now!

Aesthetic/cosmetic dentistry: Better, longer lasting tooth-colored materials that simulate the overall strength, other physical characteristics and aesthetic characteristics of natural tooth structure will be found.

Implant dentistry: Materials other than titanium, titanium alloy or zirconia will be found and made easier and less traumatic to place. Implant dentistry, surgical and prosthodontics will be in the day-to-day realm of general dentists, as well as specialists.

Occlusion: Methods to better control the age-old problem of bruxism will be found, influencing the affected one-third of humanity. Dental schools will recognize the importance of occlusion to every phase of dentistry and emphasize and teach its importance in dental school curricula.

Operative dentistry: Unless there is a moratorium on eating sugar, dental caries will still be present. Researchers have claimed a cure for caries at least five

times in my career, each time recognizing the complexity of this condition and going on to yet again seek a cure. Better direct and indirect restorative materials will be developed that will better bond to tooth structure and last longer. Advanced forms of CAD/CAM will be the primary method to restore teeth.

Oral and maxillofacial radiology: If still used, radiation will be grossly reduced for imaging. Other methods, less controversial and less potentially dangerous, will be developed. Greatly improved flexible, thin, highly sensitive sensors will be available that show both hard and soft tissues accurately in all dimensions — an improved form of current cone-beam radiology.

Oral and maxillofacial surgery: This is another area that may have the potential to again return the autonomous specialty of dentistry back to its roots — medical school. Improved diagnosis, techniques, instruments and preventive techniques will be present. Oral cancer will have far better preventive techniques and treatment.

Oral pathology: Better ways to diagnose oral conditions and diseases will be developed. Better integration with general pathology will be effected.

Pediatric dentistry: Again, sugar is a culprit among children. I predict that dental caries will still be present. Pediatric dentistry and orthodontics will be more closely integrated, since both are dependent on knowledge and expertise in growth and development. Pediatric restorative dentistry will still be needed.

Periodontics: Currently, an elusive disease with complicated etiology and minimal treatment nationally, periodontal disease will still remain. Conservative methods to treat periodontal disease will be practiced instead of the painful and relatively unpredictable surgical techniques. The controversial interrelationship of periodontal disease and systemic disease will be proven to be multifactorial and not a cause-and-effect relationship. Some periodontists will return to their original specialty, instead of doing primarily implants. The general population will still be underserved.

Practice management: It is inevitable that corporate dentistry, group practice and managed-care companies will own the profession. More interaction between these major players in dentistry and the profession at large is mandatory to retain quality care. Auxiliary staff will provide some oral prevention and treatment, but hopefully wise educators, politicians and administrators will demand that these staff persons work under the supervision of fully educated dentists, not as autonomous practitioners. I predict a coming major movement of grass roots practitioners to demand more and better leadership at the highest organizational levels of the profession to meet these changes.

Preventive dentistry: Other chemicals and methods will be found to reduce dental caries, periodontal disease and occlusal disease, the three plagues of the dental profession, but I predict that all three will still be present.

Prosthodontics (Fixed, removable, implant, and maxillofacial): In the past, prosthodontics was predicted by some unknowledgeable administrators and politicians in the profession to be gone by the year 2000. Currently, prosthodontics not only is still present, it accounts for an estimated 50 percent of the gross revenue of general dentists. I do not see this area of dentistry dying. However, better preventive techniques will undoubtedly reduce the volume of treatment needed.

SUMMARY: I strongly predict, based on my long clinical experience in dentistry, my eclectic background in the profession, and the slowness of change allowed by human psychology, committees, increasing regulations, and politics, that the profession will be different in 150 years, but that **dentistry will still be alive and well!**

Bridging the International Gap Through the Alliance for Oral Health Across Borders



In 2011, 41 dental schools and organizations joined together to sign a charter to form a new organization with an important purpose. With a core mission to “promote peace and well-being through oral health by building bridges among dental and health professionals around the world, especially in areas of conflict,” the Alliance for Oral Health Across Borders was born.

Constantly at the forefront of dental education and practices, Temple University’s Kornberg School of Dentistry played a major role in the development of the Alliance. In fact, Amid I. Ismail, dean of Kornberg Dental, is the chairman of the Alliance.

“The mission of the Alliance is to promote peace through oral health

by engaging dental students, faculty and professionals. We believe that our more than 10 years of experience with the Bridge to Peace program between Hadassah Hebrew University School of Dental Medicine and the Faculty of Dentistry at Al-Quds University, clearly shows that there is hope that people living ‘across borders’ and in conflict can work and understand each other through the common language of health and dental health,” said Dean Ismail.

Organized through a development grant from Henry Schein Cares, the Alliance has five key goals: promoting peace, improving oral health, developing leadership and advocacy programs, providing dental students and faculty with opportunities for exchange, and promoting and facil-

itating international collaborative research.

The Alliance Charter was signed at a meeting at Temple University in Philadelphia, organized in part by Dean Ismail. The Dean said he was elected chairman by the founding board because of his passion for the mission and his organizational skills, and because he himself is an individual who crossed borders.

Dean Ismail has involved several other Temple Dental faculty members with the Alliance.

“I joined the Alliance because I liked the idea and the goals; if the goals can be achieved this world would be a better place,” said Mustafa Badi, DDS, MS, and assistant professor in the

department of Oral Maxillofacial Radiology at Kornberg Dental. “Kornberg School of Dentistry enjoys a great diversity in its students, faculty and staff. We all work together every day at the school toward a common goal. This same concept can be utilized to promote understanding and make roads to peace in areas of conflict.”

In late 2013, Temple Dental sent several members of its staff to New York City for a three-day Alliance Ambassadors Leader Development Training.

Dr. Badi, who attended the training, said that the ambassadors learned about and evaluated a number of different existing oral health-care programs across the globe to see what might be a strong fit for the Alliance. He noted that Temple Dental already has programs in place for dental student exchanges in countries like Israel and Palestine, but through the Alliance, students will have even more opportunities to learn about different cultures and provide community work in their areas of expertise.

In addition to learning about global healthcare programs, Dr. Badi said that in addition to learning about global healthcare programs, the Alliance ambassadors gained a more in-depth understanding of leadership styles, teamwork and had the opportunity to meet other dental

professionals from around the world. Martine Forrester, DDS, at Temple Dental, also attended the training in New York and expressed her deep interest in helping to grow the program and get even more members of the Temple community involved.

“As a global institution, Temple employs and trains oral health professionals from around the world. It is important that as faculty we share our expertise for the betterment of our students and interact with each other cordially despite political or religious or geographical differences,” she said. “The Alliance hopes to demonstrate all that can be accomplished through tolerance, understanding and collaboration.”

In the coming years, Temple Dental students and faculty will have the

opportunity to get involved in several Alliance initiatives, including leadership training with a focus on sustaining the development of programs to benefit humanity and collaboration with counterparts across the world to provide care, prevent disease and better understand one another.

“Temple Dental is now a global organization with connections around the world and a name recognized for its innovation and educational value,” Dean Ismail said. “The mission of the Alliance is noble and fits with our university mission of access to excellence, globally, and any university’s primary focus on building ‘bridges’ among students and faculty from diverse backgrounds.”



Faculty Practice

Providing Dental Care to Temple University Faculty, Staff, and Alumni



“This is one of the best-kept secrets at Temple.”

That’s how Martine Forrester, DDS, and assistant professor in the Department of Restorative Dentistry, describes the Kornberg School of Dentistry’s Faculty Dental Practice. However, Forrester and her colleagues don’t want the practice to be a secret — they want it to be known for its high-quality treatments.

“We’re trying to get the word out about it. We’ve been branching out to a lot more Temple faculty and staff members, who are reporting positive experiences,” Forrester says.

Forrester is one of nine faculty members who are assigned to the practice, located on the first floor of the Dental School on North Broad Street. With 10 operatories, a range of specialists and a paid staff of professional assistants and hygienists, the practice provides all of the treatments and services expected from a top-tier practice.

“We offer all of the dental services you can think of, from emergency care right through to cosmetic dental work,” Forrester says.

“We offer all of the dental services you can think of, from emergency care right through to cosmetic dental work.”

Dr. Martine Forrester

The practice opened in 2011, when a team of faculty members led by Frank Torrissi, DDS, and assistant professor in the Department of Restorative Dentistry, began to provide treatments to the North Philadelphia community. The practice was originally called the Community Dental Clinic and many of its early patients were carryovers from the federally funded Ryan White Clinic, which provided services to low-income patients and was housed in Kornberg until its closing.

However, as the practice grew and sought to take on new patients from within the Temple family, leadership felt that it was time for a rebranding.

“Calling it a community clinic doesn’t always have the most positive connotations,” Forrester says. “It didn’t represent the high quality of care that we provide.”

Indeed, Forrester and her colleagues say that the Faculty Dental Practice is run much like a private practice. Open from 8 a.m. to 5 p.m., Monday to Friday, the practice’s staff splits each day between a morning and an afternoon session. While the general dentists on staff can provide basic services like exams, restorations and extractions, the practice also employs periodontists, prosthodontists, and endodontists.

“On any given day, there are usually three providers, plus a hygienist, and the specialists each

work two sessions a week,” says Candy Yeung, DMD, and member of the practice since its opening.

However, the practice also has a few advantages over its counterparts in the private sector. Chief among them is the ability to provide service at a lower cost, says David Donatelli, DDS, and assistant professor of Restorative Dentistry.

“Because I’m a prosthodontist, many of my patients are by referral. Patients will come to the school because my fees are going to be less than a private practitioner,” Donatelli says. “I don’t have the same overhead as I did when I had a private practice for 30 years, because some of my costs are now absorbed by the school. The quality

of care is the same, but the fees are less.”

Donatelli also says that having so many specialists in close proximity allows for a more efficient referral process.

“If I needed to have input from another specialist in private practice, I’d have to refer the patient somewhere else. Here, we’re all under one roof,” Donatelli says.

Merriam Seyedain, DMD, and assistant professor in the Department of Periodontology & Oral Implantology, echoes those sentiments.

“When I’m doing an implant or surgery, I have the restoring doctor right there, or I’ll have Dr. Donatelli there with me,” Seyedain says.



Dr. Frank Torrissi leads a group of general practitioners and specialists at Kornberg's Faculty Practice.



Dr. Martine Forrester and Dr. Candy Yeung discuss a patient case.

Ultimately, Forrester hopes to see Temple's best-kept secret become one of its most appreciated services.

"Often we can call each other over to see the patient in our chair, and it makes things go a lot faster."

Being members of the Dental Faculty Clinic also has the added benefit of allowing staff to apply their knowledge while maintaining their expertise in the chair. Ultimately, that benefits patients and dentists alike, staff members say.

"I think it helps to work in the faculty practice — it keeps you sharp because you're not just teaching, and it actually supplements your income," Donatelli says.

On the other side of the equation, Forrester says that patients of the practice are treated by a veteran staff that remains knowledgeable of

the latest developments and treatments in the industry.

"You're getting the expertise of people who have been both in academia, and practiced clinically, for a very long time," Forrester says.

Now, it's just a matter of getting the word out. Forrester says the clinic is open to all, particularly to members of the Temple University family. The practice accepts the insurance provided by the university, and offers a convenient location for employees to schedule appointments. While many patients may have previously taken advantage of low-cost treatments from Kornberg students, Forrester says the clinic offers a more time-efficient option.

"We're a good alternative to being treated by dental students, particularly for someone who has a full-time job and has difficulty finding the time they would need," Forrester says. "It's easy for people on the Health Sciences Campus to just walk in for an appointment, or even come up from Main Campus."

Ultimately, Forrester hopes to see Temple's best-kept secret become one of its most appreciated services.

"There are not a lot of options for high-quality, affordable care, and going to the Faculty Practice gets you the best of both worlds," Forrester says. "I definitely see us growing the number of people we treat, both in the Temple family and outside community."

Dr. Sabina Bokhari, Restorative Preclinical Instructor

Her Friendly Teaching Style Helps Students' Reach Potential



Dr. Bokhari oversees students on the clinic floor in Cluster 3.

“Hey, Dr. B,” the students call out as she works her way down the Dental School hallways. Balancing motherhood and teaching three mornings a week in the restorative preclinic, Dr. Sabina Bokhari is pleased with the easy interaction.

“I have a nice camaraderie with them,” she says with a smile. “Midterms and practicals can be so stressful that if somebody is friendly and interested in you, I think it helps.”

That means students don’t hesitate to line up for extra assistance when her lab officially ends at 11:30. “I can be here till noon, and staying longer is really OK, if it helps them out.”

Noting that the course directors put in a lot of time and effort, she is eager to do likewise. The rewards are many, but a student’s excited “aha” moment may be the best. To illustrate, she points to one situation she

remembers well. “This student was struggling, working but still not doing well on practicals. She was often in tears. One day I saw a big smile on her face. I knew she had gotten it.”

Also gratifying is watching a student’s progress, she notes. “I see them when they’re first learning how to hold a hand piece, and then when they’re working with patients. It’s very satisfying.”

Asked about the benefits of the new preclinical lab, she is enthusiastic. “It’s a really beautiful facility,” she says. The equipment is amazing. The mannequins simulate working on a real patient. It’s just a nicer place to learn, brighter with skylights, more lockers and drawers, more space for students and faculty to move around.” Since she’s in her third year of teaching at Kornberg, Dr. Bokhari has seen the “before” and “after” and easily recognizes the value of the difference.

With a dental degree from the University of Pennsylvania, Dr. Bokhari might be expected to teach there. She actually did for a year, but reached out to Temple first when she was ready to get back to her career after starting a family. “My husband and I are really part of the Temple family,” she says. “We’ve gone to a lot of events over the years and have a really good relationship with the university.” Her husband, who has an MBA from the Fox School of Business, maintains close ties with the dean and board of trustees.

Dr. Bokhari also might have been expected to choose medical school as her career path. “I grew up in a medical world,” she says. “My father came from New Delhi when I was one and became a cardiologist here. His friends are physicians. My brothers are physicians.” But she chose dental school because she thought it would be “a better fit for family life.”

As for teaching now at Temple, she says, “From the very first, I’ve felt welcome. The faculty here are very warm. I really enjoy my time at Kornberg.”

Dental eCampus update



Sometimes, keeping things old school can be a good thing. Just think of throwback muscle cars, movies starring Jimmy Stewart or classic rock.

But when your goal is to be a leading institution for dental education, your best option is to embrace the new school. And that's what Amid I. Ismail, dean of the Kornberg School of Dentistry, wants you to think about the school's new Temple Dental eCampus.

"I had been thinking about this idea for a long period of time, since I knew we definitely required some form of electronic or online platform," Ismail says. "If you want to start an international educa-

"If you want to start an international educational program and reach out to dentists all over the world, then the ideal place to do it is online."

tional program and reach out to dentists all over the world, then the ideal place to do it is online."

The Dental eCampus aims to be a place where dental students and professionals from across the globe can access educational materials and share real-world experiences. The site currently provides three main services: online continuing education courses, live webinars and a system called ePortfolios.

Following two years of development and tweaking, the user-friendly Dental eCampus website launched in January, kicking off with a live webinar from Dr. Robert Levine, a professor of periodontics and implantology at Kornberg. Levine, who says he has been involved with the eCampus development process through his role as president of the school's alumni association, presented a lecture titled "Immediate Loading/ SameDay Smile: 20 Year Retrospective," before a live international audience.

"It was a very interesting experience and seemed to be very successful," Levine says. "As I was speaking, I could see [attendees'] questions coming up, and was able to answer them at the end during a question and answer session."

He delivered the lecture from a Kornberg conference room and had support from a Healthcare Learning technician in London.

"It was a bit like a newsroom studio experience, where he was the one controlling all of the [technical aspects] from overseas," Levine says.

After Levine delivered the live lecture, a video replay was then stored on the Dental eCampus website for future use. A number of other materials have also been uploaded to the site's continuing education courses section, including lessons on preventive and restorative dentistry, prosthodontics, implantology, and even communication in dentistry.

Ismail hopes that Kornberg alumni will think of the eCampus as a place where their lectures or lessons can reach a worldwide audience.

"We have an open call to alumni who want to record lectures and share them with dentists all over the world," Ismail says, adding that technical knowledge is not required. "We have a videographer and professional team that will help produce all of the lectures." Ultimately, Ismail sees the Dental eCampus helping three kinds of individuals: current Kornberg students, the school's alumni and independent professionals around the globe. While the site is currently free for anyone to use, Ismail says it will eventually institute tiered costs, with prices depending on the individual.

In addition to the learning and lecture component, the Dental eCampus will also offer an innovative ePortfolio system. This section will provide a place for students and faculty alike to store and share documents and experiences with one another, for the purposes of furthering knowledge for all. While websites already exist that offer similar services in a forum-like format, Ismail says the ePortfolio will offer a much more structured experience, categorized by patient location, symptoms, exam results, diagnosis and treatment.

"All of this can be entered into the ePortfolio, as well as photographs and radiographs, to be made available for people all over the field, including our community and faculty here," Ismail says. "The experience of one practice shouldn't be kept from the whole community, because we can all benefit. And currently we only get that shared experience through lecturing.

Students will also be able to utilize the ePortfolio section to further enrich their educational experience. Ismail says they'll be able to upload the information from their patient cases, in order to receive faculty input and build a portfolio.

...the creation of the Temple Dental eCampus is a big step in continuing efforts to transform Kornberg and position the school as a leader in higher education.

While the Dental eCampus is currently being populated with initial content and its processes streamlined by Healthcare Learning, any user can register with the site at www.templedentalecampus.org and access its available courses for free by using the code "PROMO2014" at checkout. Once registered, users simply click the name of lecture they wish to view, and a video presentation will begin to play.

Many of the lectures are segmented by individual topics, allowing the user to skip around to pertinent sections, and also pause to take notes or answer review questions posed by the lecturer.

"It really can be a tremendous avenue for education," Levine says. "This can be as big as we want to make it, and really is limitless because of all the topics that will be made available and tools that can be created."

For his part, Ismail says that the creation of the Temple Dental eCampus is a big step in continuing efforts to transform Kornberg and position the school as a leader in higher education.

"To my knowledge, there's no dental school, at least in our state, that has an eCampus like this one," Ismail says. "As an institution, we have to be at the forefront of education, rather than just followers."

Visit the eCampus by going online at www.templedentalecampus.org.

The Kornberg School of Dentistry has many faculty members currently working on research that will significantly impact the future of the field of dentistry. As we look to see how the next 150 years of dentistry come to life, there is no doubt that our researchers will play a role. In this section, we take a look at two of our researchers and find out what motivated them in their fields, what projects they are working on, and what their future plans are.

Marisol Tellez-Merchán, BDS, MPH, PhD

**A Passion for Public Health
Advancing Innovation through Investigation**

It was a little over three years ago that Dr. Marisol Tellez, associate professor of Pediatric Dentistry and Community Oral Health Sciences, was contacted by the dean of the Kornberg School of Dentistry, Amid Ismail. Ismail had served as a mentor to Tellez while she pursued her PhD in Epidemiological Sciences at the University of Michigan, and the two had kept in touch after she returned to her home country of Colombia.

Now, he needed someone to beef up the research being conducted at what was then the department of Dental Public Health at Kornberg. And Tellez was just the person for the job.

"I've always been interested in research, and all my graduate education was in public health," Tellez says. "Temple is a great environment to do a lot of public-health research. We are surrounded by a community that has a lot of needs, so it was a very attractive place to conduct research."

Tellez agreed to take the position and relocated to Philadelphia to begin a new chapter in her career. She says that upon her arrival, the department was mainly focused on providing outreach and service activities, and that she set about developing new research lines. It didn't take long before innovative projects began appearing.

One such area of research was in dental anxiety.



"Temple is a great environment to do a lot of public-health research. We are surrounded by a community that has a lot of needs, so it was a very attractive place to conduct research."

"We know that about 20 percent of the patients who come to Kornberg experience high dental anxiety," Tellez says. "So we partnered with the Psychology Department and Dr. Rick Heimberg, who is an expert in anxiety disorders, and started collecting pilot information about different psychological constructs related to anxiety."

After securing a grant from the Pennsylvania Department of Health, Tellez and Heimberg and their team began developing a computer-based tool to help patients cope with dental anxiety. Through the program, Tellez says patients are exposed to dental procedures and given coping strategies to deal with different clinical scenarios.

"They would select their three most-feared procedures. So for example, an extraction, or an injection or a root canal," Tellez says. "Then the patient would spend about an hour and a half on the computer watching a patient going through those clinical procedures and understanding what fearful thoughts the person may have at the moment, and how to develop coping strategies."

While research into the long-term efficacy of the program is ongoing, Tellez says early pilot results were positive and resulted in anxiety-score improvements in just a month's time.

As an oral epidemiologist, Tellez also brought a passion for dental caries research to Temple. Shortly after she arrived, the school developed a relationship with the Colgate-Palmolive company to conduct systematic reviews of existing literature on caries research. Of primary interest were three topics: detection of early carious lesions, the accuracy of current systems of risk assessment and the management of early lesions.

"[Dentistry] used to only focus on the detection of cavitated lesions," Tellez says. "And now, we are trying to add greater emphasis to prevention and early detection, when you might see a white or brown spot that is an indication of early disease."

After conducting the review, Tellez and her colleagues hosted a conference in 2012 to present their findings.

"We brought in a lot of international researchers and some of the most important people in the field of cariology," she says. "That was almost two years ago, and from there a lot of activities have developed, so it was an important effort."

More recently, Tellez has been looking to tie her research efforts into the North Philadelphia communities surrounding the dental school, after her department merged with Pediatric Dentistry under the banner of Pediatric Dentistry and Community Oral Health Sciences.

Much of the research will be conducted as an ancillary effort of Project ENGAGE, a \$1.75 million, grant-funded effort to improve child access to dental care. Through the project, community workers and dental professionals will visit residents in their own homes to provide services such as motivational interviews and fluoride varnishes.

"At the end, we want to track and see if all the investment actually results in these patients getting a dental home, becoming regular patients and accessing more preventive services," Tellez says.

In addition, Tellez will also be supervising smaller projects administered by pre-doctoral students, including research into the relationship between obesity and dental caries in children, and the creation of a GIS mapping system to look at how proximity of community resources such as health clinics and churches affects access to dental services.

Tellez says that ultimately Kornberg has proven to be a place where her research can flourish, and directly impact the lives of those in surrounding communities.

"I think we've done a lot of good things in three years, but there is much more that we still need to do," Tellez says.

Steven Jefferies, MS, DDS, PhD

A Master of Material Things Jefferies IADR Research Award

The entire career of Steven Jefferies, MS, DDS, PhD, and professor of Restorative Dentistry at Kornberg, has been an exercise in unconventional-ity. Not only by the measure of the dozens of patented dental products that he has been named inventor or co-inventor of, or by the innovative research he currently oversees as director of Kornberg's Biomaterials Research Laboratory, but also by the professional path he has followed.

Dentistry was not Jefferies' first love, and in fact, he happened onto the field by chance. After graduating with a bachelor's of science in biology from Johns Hopkins University, Jefferies began his career in environmental engineering and held a job in the industry for two years. However, he sensed that he had more to learn and returned to school at Rutgers University to pursue a master's in chemical and biochemical engineering.

It was there that he was introduced to dentistry while working on a research project and realized the potential to apply his skillset to the field.

"Some of the people I worked with on the project encouraged me to look at dentistry," Jefferies says. "I found there were some researchers who had combined clinical experience and materials backgrounds, and on that basis I decided to give it a whirl."

Following his graduation from Rutgers in 1977, Jefferies entered an accelerated three-year program at the University of Maryland School of Dentistry, followed by a one-year General Practice Residency from 1980-81 in the U.S. Public Health Service and a two-year service commitment in the private-practice option of the National Health Service Corps in Baltimore. He moved his private practice in 1983,



and had enough success that he began to plot a move to a bigger office about two years later.

However, the move never occurred. Instead, an opportunity to blaze a new career path came knocking once again.

"About a year and a half earlier, I had seen an ad in a journal that almost exactly matched my background," Jefferies says. "It was one of those things that serendipitously hits your eye, and I thought, 'Well, it might be interesting to know more about a company hiring a dentist with an unusual background like mine.'"

The company was Milford, Del.,-based Dentsply International, a dental equipment and consumables producer that was searching for researchers with both dentistry and material-science backgrounds. Although Jefferies hadn't planned on leaving private practice, the offer to return to a research setting and apply his unique background was too much to pass up.

"After 20 years in the industry, it was time to look at the next phase of my life," Jefferies says. "I had always been very involved with academics and enjoyed teaching. I also enjoyed research, and this was a unique opportunity in that it was an endowed professorship."

"I had a lot of encouragement from people close to me, saying that I could always go back to private practice," Jefferies says.

So Jefferies went to work for Dentsply as an entry-level clinical research dentist in the company's caulk division. For the next nine years, he helped to develop innovative new products, particularly dentin bonding agents and composite resins. But of the 29 U.S. issued patents that Jefferies would eventually be awarded as inventor or co-inventor of, one in particular stands out.

"I think the [product] I'm sort of known for is a finishing and polishing system called Enhance, specifically the actual finishing disk in the system," Jefferies says.

Jefferies' success as a researcher eventually led to his movement up the corporate ladder with Dentsply. After being named director of clinical research in the company's caulk division, Jefferies was promoted to vice president of worldwide corporate product development. His leadership was instrumental as Dentsply underwent rapid growth, expanding from four divisions to more than 20 in less than a decade.

While advancing through his successful career with Dentsply, Jefferies remained active in dentistry and academia by serving as a part-time clinical associate at the University of Maryland.

"I felt it was important to stay in touch with patient care and education," Jefferies says.

Little did he know, a full-time opportunity in academia was on the horizon. In the mid-2000s, Jefferies was contacted by Kornberg professor and personal

friend Dr. Jon Suzuki, who told him about an open professorship at the school. The conversation eventually led to Jefferies once again changing careers, this time to assume the Donald and Cecelia Platnick Professorship in Restorative Dentistry at Kornberg.

"After 20 years in the industry, it was time to look at the next phase of my life," Jefferies says. "I had always been very involved with academics and enjoyed teaching. I also enjoyed research, and this was a unique opportunity in that it was an endowed professorship."

As he continued to lead research into new materials like bioactive cements at his new home in Kornberg, Jefferies' career as an innovator was recognized this spring when the International Association for Dental Research (IADR) named him the 2014 recipient of the Ryge-Mahler Science award. Recognizing scientists who have made "outstanding contributions to clinical research in dental materials," the award is one of the two highest honors bestowed by the IADR's Dental Materials Group.

"Quite frankly I was surprised, and of course, pleased," Jefferies says. "Whenever your colleagues recognize you with an award like this, you're honored. But you're more enamored by the fact that your colleagues hold your work and contributions as being valuable."

With no sign that his curiosity and passion for research is slowing, Jefferies says he is happy with his decision to come to Kornberg and looks forward to overseeing exciting new innovations.

"The faculty here has been fantastic and incredibly supportive of me, and it's been a very nice experience," Jefferies says.

Deepak Mehta & Hiren Patel

Getting to the Root of the Issue: Root Canal Research Receives World Audience

When the British Endodontic Society held its annual scientific meeting in London this past March, it brought together some of the most highly regarded endodontists from throughout the United Kingdom, as well as a contingent of presenters from foreign countries. But there were only two representatives from the United States who had been invited to attend: Deepak Mehta and Hiren Patel, both students of the Kornberg School of Dentistry's Advanced DMD Program for Foreign Trained Dentists.

Representing Temple University on an international stage, Mehta and Patel presented the results of a 10-month long research project, in which they compared the effects of three NiTi rotary systems, using a micro-computed tomography machine (micro-CT scanner). In simplest terms, the research used the scanner to get a comprehensive, close-up look of how precisely each system prepared teeth for root canals.

"We got a lot of constructive feedback about our research, and some of the endodontists were impressed that we used the [micro-CT scanner]," Mehta said. "We also compared file systems that they do not have in the U.K. So they were inquisitive to know more about these files, how they work and what effect they have."

Mehta said that ever since his arrival on Temple's campus in 2011, he had been searching for ways to perform innovative research in addition to his educational studies. A native of Mumbai, India, Mehta earned his doctorate from a dental school in his native country and spent two and a half years in private practice before applying to programs in the U.S.

"I had a mind for endodontic research when I was in India. I wanted to pursue it there, but we didn't have the right instruments," Mehta said. "When I came to Temple, I found out there was a research committee that provides funding for potential projects, so we decided to look further into it."

The "we" that Mehta is referring to is his partnership with Patel. A native of Gujarat, India, Patel also earned his doctorate in his home country before coming to the U.S. in 2009 to pursue a degree in public administration from Fairleigh Dickinson University.

"Meanwhile, I took my National Dental Board examination, and applied to Kornberg," Patel said. "I was accepted and started school here in 2011."

Looking for research ideas, the two discovered that Kornberg had an underutilized micro-CT scanner and decided to center their research around its use. Under the advisement of Wanda Gordon, DMD, and associate professor in the Department of Endodontology, who also helped conduct research on the project, Mehta and Patel presented their proposal to Kornberg's research committee and were allowed to use the scanner.

Mehta says the instrument proved integral to their research.

"Traditionally, if you wanted to do the research we did, you would have had to section extracted teeth to get the information, which would have had damaging results and jeopardized the findings," Mehta said. "Using the machine, all you need to do is put the tooth in and it scans the entire tooth, giving us close to 3,500 'slices' in all dimensions. It's basically a three-dimensional picture of the tooth."

What Mehta and Patel were looking for were minute differences in the preparation of the tooth using three different rotary systems: Hyflex CM, ProFile Vortex and Revo-S. Mehta said the research was designed with patient health in mind.

"Even with so much recent innovation in rotary endodontics, preparations for root canals are quite large," Mehta said. "A lot of teeth are now fracturing at the gum level, and we were trying to find out if more and more of these root canals are fracturing because they're being aggressively prepared."

With limited research existing, particularly on the three rotary systems they selected, Mehta and Patel put them to the test. Using the scanner, they looked to see how the files performed and whether they stayed straight in the root canal, or pushed into areas they weren't supposed to be.

"Ultimately, we concluded that the Hyflex CM system is more conservative than the other two, and Revo-S is more aggressive on the root canal overall," Patel said.

Mehta and Patel submitted the abstract of their research to the British Endodontic Society and were accepted to present at the spring scientific meeting. After they received additional funding from the Temple Alumni Association, the Temple Endodontic Alumni Association, the Dean's Office, and the Kappa Kappa chapter of Omicron Kappa Upsilon, they were off for a five-day trip to London, where they presented at the Institution of Civil Engineers in the heart of Westminster.

"It was an all-day event and poster presentation," Mehta said.

"Members of the society's council acted as judges and came around to ask questions."

The meeting also gave the two a chance to interact with more than 150 members of the society and attend a keystone presentation titled "The Biomechanics of Root Canal Treatment," from renowned lecturer Dr. Anil Kishen, head of endodontics at the University of Toronto.

"Overall, it was a really good experience," Patel said.

With Mehta and Patel graduating this spring, both say they were happy to be able to conduct research at Kornberg and help grow the school's reputation in the field.

"I learned a lot at Temple; the program is very good clinically, and you see a lot of patients," Mehta said, adding that he plans to go into private practice in New Jersey and is considering pursuing orthodontics. "[Kornberg] has a little more work to do for research, but the school is definitely helping students pursue their research."

Patel, who plans to pursue private practice in Chicago, where his family resides, echoes those sentiments.

"My three-year journey at Temple has been really exciting," Patel said "Overall the experience was very good."

Mark Padilla

Ortho Student



"The research looked at postural changes following the expansion of the dental arch using just wires," Padilla says. "The Damon philosophy is to resolve crowding by expanding their wires, to give you a broader smile."

Anyone who has ever taken the time to meticulously set up a chain of dominoes, only to accidentally knock it down just before completion, knows the terrible feeling that comes from watching one's work go to waste. This is precisely the feeling that Mark Padilla, DDS, and master's student in Kornberg's Orthodontics Residency Program, hopes to help orthodontists and their patients avoid when using an industry-leading braces brand.

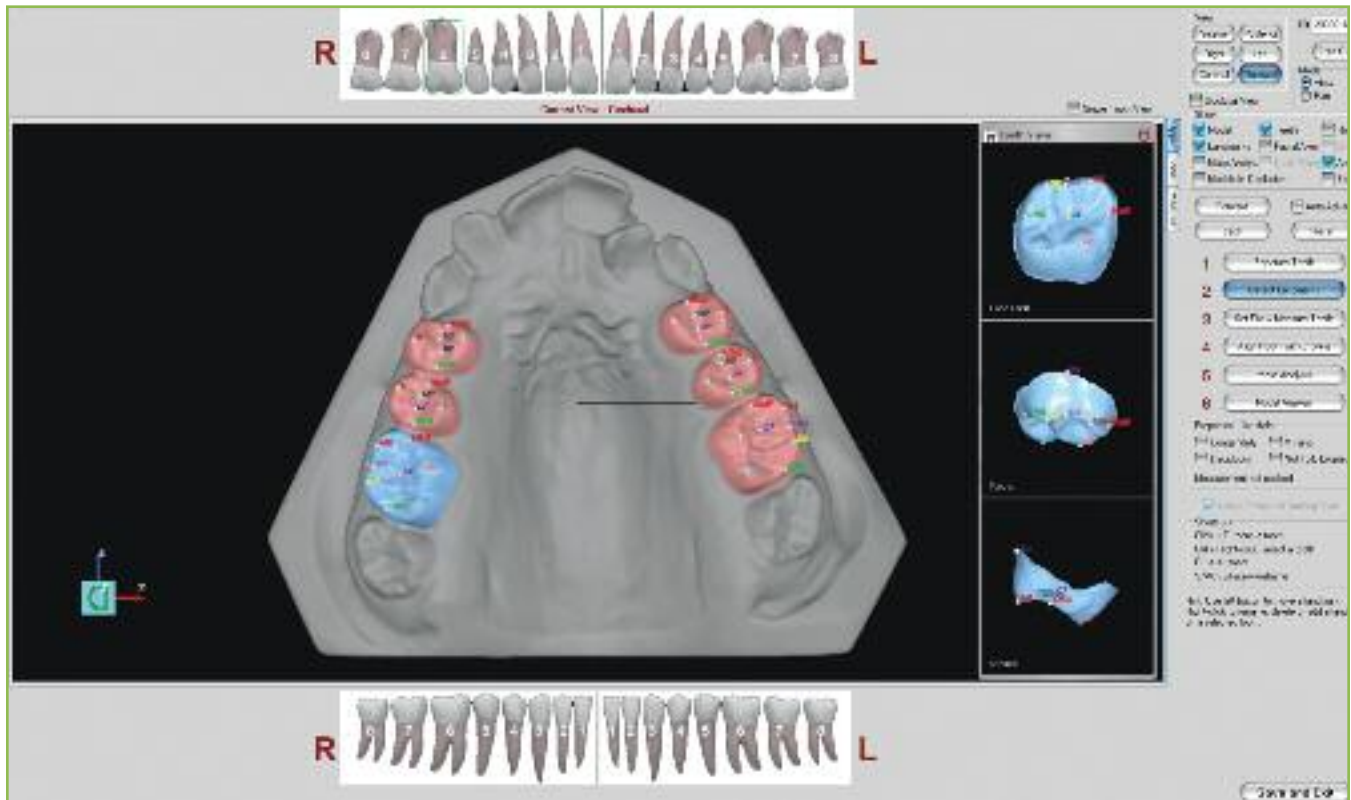
Over the past year, Padilla and a team of fellow Kornberg students have analyzed patient samples from across the country to determine what postural changes occur after using a Damon brand self-ligating fixed appliance system, particularly whether or not local musculature adapts to help maintain post-treatment benefits. The resulting research has gained international attention, including acceptance into the International Association for Dental Research's (IADR) General Session in South Africa this summer.

"The research looked at postural changes following the expansion of the dental arch using just wires," Padilla said. "The Damon philosophy is to resolve crowding by expanding their wires, to give you a broader smile. We wanted to specifically look at changes to the tongue, because it's very dynamic in size and shape, and the hyoid bone, because it has no other bony attachments, so muscles could potentially move it."

According to Padilla, while similar studies have been made on other systems, particularly those using expanders to prevent crowding, there was not a great deal of literature on the Damon system. And although the Damon system creates more modest spacing than expanders, Padilla was curious to see if the difference actually affected post-treatment posture differently.

"With spacers, you can see up to 10 millimeters of expansion," Padilla said. "[With Damon], we were seeing 2 to 5 millimeters of expansion, and it had never been done with just arch wires. We didn't know if there was a break point where you need to get a certain amount of expansion before the tongue would rise in posture."

If the tongue and other musculature did not adjust following treatment with the Damon system, the patient faced the risk



Ortho Insight 3D Scanner Software that Padilla used when digitizing one of the models.

of having his or her arch revert to its pre-treatment alignment.

“If you expand the dental arches and nothing happens to compensate and help keep those changes, over time you would lose the benefits,” Padilla explained. “The cheeks exert pressure on the teeth, and the tongue exerting pressure from the inside is going to help stabilize their position.”

Fortunately for patients who have used the Damon system, that's precisely what Padilla discovered. After collecting and analyzing 70 samples from both local clinics and offices as far away as Florida, Padilla and his team found that the tongue's posture did change to compensate for the expansion.

“What we found was that as the arch forms were broadened, the tongue got longer and rose higher

up in the mouth. So if you widened the arch, the tongue basically filled the space on the inside,” Padilla said.

The group also found that the hyoid, a horseshoe-shaped bone between the chin and thyroid cartilage, did not change position. Padilla hypothesized that this could have been for a number of reasons.

“Other muscles could help keep it in place to maintain the airway,” Padilla said. “That's one of many possible reasons that are going to need to be looked into further.”

In order to conduct the research, Padilla and his team also took a novel approach. While the basis of the research was actually already in place when Padilla started the project, early results were not dependable.

"There was an initial study before me, but it didn't have as many patients and didn't use a strict inclusion criteria. In a lot of the cases, the patients didn't have all their permanent teeth," Padilla said.

To produce more thorough results, Padilla first tightened the criteria for samples, such as the requirement that expanders could not have been used at any point, and that patients had to have undergone an expansion of at least 2 mm. Next, Padilla utilized a 3D scanner at Kornberg to make digital renderings of the physical models his team collected.

"The scanner uses lasers to digitize the models and measure between the two premolars and molars to determine what the pre- and post-treatment spacing was," Padilla explained. "This allowed us to reduce the error of hand tracing."

To determine changes in posture, Padilla's team also collected patient X-rays, which showed the position of the hyoid and the outline of the tongue in the oral cavity.

Padilla will present a poster on the study, titled "Tongue Postural Adaptions Occur with Damon Appliance Dental Arch Expansion," before the IADR at the organization's General Session in Cape Town, South Africa, at the end of June. In addition to the honor of being selected for the prestigious conference, the study was also named as one of 10 finalists for the Sarnat Craniofacial Biology Research Award.

"It's quite an honor, since there are only ten people selected worldwide for all of craniofacial biology, and since orthodontics can't really compete in too many other [categories]," Padilla said.

The trip to Cape Town will serve as a crowning highlight of Padilla's time at Temple, as he's scheduled to complete the 26-month residency program in

August. With plans to pursue a career in private practice in the Dallas area, Padilla said he's valued his time in North Philadelphia.

"The school has a really sound clinical program, with a lot of part-time faculty and access to a lot of technology and techniques," Padilla said. "Of all of the programs I looked at for residency, I felt [Kornberg] gave you the broadest base of experience."

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Dr. S. Eugene Coben, 1926–2007

CORNERSTONE OF TEMPLE ORTHODONTICS

The Road to World Renown

Alaska was a turning point, or more accurately a harbinger, of the life he didn't want. Illinois was a period of innovation, fully realized in his Jenkin-town practice that produced the ubiquitous Coben Smile. Paris delightfully signaled the breadth of his international reputation. One morning in March, Rhoda Coben remembered it all as she sat in her sunlit apartment overlooking the Philadelphia Art Museum and talked about her husband, Dr. S. Eugene Coben.



"In the evenings when he came home, he would take off his tie, turn on TV and make the retainers," she recalled. "They had to be perfect. He wouldn't let anybody else make them because they had to be his way."

Perfectionism marked this man, whom Dean Timmons predicted "would do some unusual things," according to Rhoda. It started with a grad-

uate research project under Dr. Allan G. Brodie at the University of Illinois. Then considered to have the most prestigious orthodontics school, it was where Coben studied after graduating first in his class at Temple Dental School.

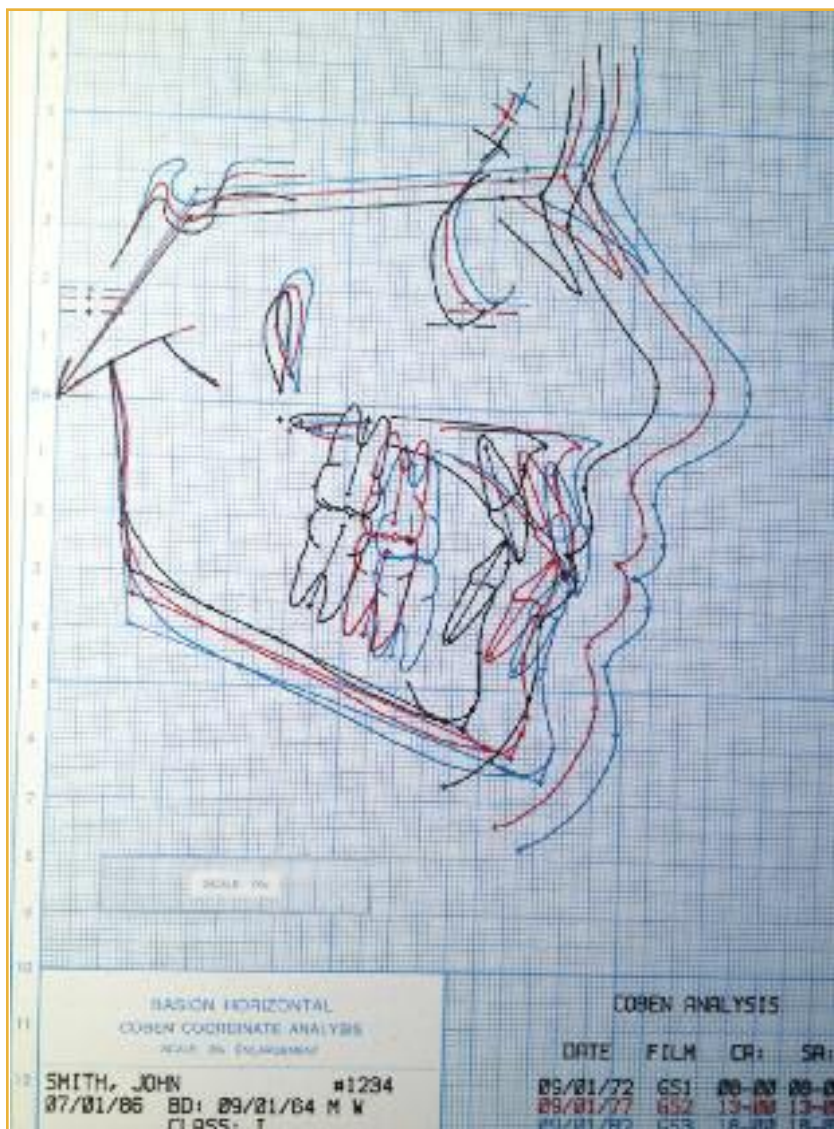
Working with the idea that measuring a child's face as it was growing could determine which appliances should be used, and when, Coben delved into craniofacial growth and basion horizontal coordinate analysis. The concept was not only startling to colleagues, it was little understood. "People kept saying this can't be, you can't measure this way," smiled Rhoda, thinking

back. Dr. Brodie agreed, saying, "I don't know what you're doing." Yet he supported the study with, "Go do it."

Today, it's called the Coben Analysis. But in the early '50s, it was a treatment method barely recognized as viable. So Coben was shocked when he got a phone call of congratulations from the president of the American Association of Orthodontics. Stationed in Alaska as a dental corps captain for the U.S. Air Force, Coben heard what he could not have imagined. He had won the Milo Hellman Award. "We were not married yet, but I know all the stories," said Rhoda, "and it was amazing." Flown to Chicago to receive the honor, he eventually saw his work embraced in Japan, Germany and throughout the world.

An Enticing Idea

While in Chicago attending the ceremony, he said to Dean Timmons, also there, "I don't want to end my life in Alaska." He had come to that realization while flying over northern-tier mountains and considering the military's offer to open a practice for him. It was certain to be a lucrative arrangement since he was the only — and first board-certified — orthodontist in the



Precise measurements often graphed a patient's craniofacial growth at different ages. This computerized one shows the differences at ages 3, 13, and 18. From "Basion Horizontal," by S. Eugene Coben, DDS, MS, 1986.

far-flung territory. Because "he had always been very poor and wasn't making much money," the idea was enticing, explained Rhoda, but not compelling.

Dean Timmons saw an opportunity and seized it. Come to Philadelphia, he suggested, and co-found a graduate orthodontic program with other Illinois men. Timmons knew them all well because for several years he had sent one or two dental school graduates from Temple to

the University of Illinois for orthodontic study under Dr Brodie.

Started in 1958, the program did well. "They would get top students from all over the country because these men were trained in Chicago, the best at that time," said Rhoda.

"This is how he felt about Temple," she continued. "Three universities later asked him to be department head: Penn, the University of Illinois after Brodie retired, and the

University of San Francisco. He turned them all down because he felt that Temple had given him an opportunity he wouldn't have gotten elsewhere, and he was indebted. He didn't need titles. He just wanted to give back to Temple what it had given him."

He loved teaching, first three days a week then two days as his practice got larger. Advisor to more than 30 students and professor to more than 500, Coben often invited them home for extra help. "That's why I feel such a part of it," commented Rhoda. "I would put the children to sleep and give them coffee. They would be there till two in the morning, working with him." One who was doing programming for the Coben Analysis would arrive on a motorcycle. "I'll never forget it," she said. "It was so funny. He would come in and say, 'Do you have my coffee and schnecken ready for me?'"

When her husband won the Ada Jarabak Memorial International Orthodontic Teacher's Award in 1996, Rhoda said he just broke down and cried. "This was the jewel, and I still get chills when I talk about it. He danced around the house saying to me, 'Can you believe it, Rhoda?'" A year later, he also won the 32nd Revolutionary Orthodontist Award from the Edward H. Angle Society of Orthodontists.

The Coben Smile

Meanwhile, his practice was booming. “He was the orthodontist in Jenkintown. Everybody knew it was Gene Coben’s treatment when his patients smiled. There was a look,” she said. “My kids have it. He used to do their orthodonture in his office on Sunday morning. They didn’t like that. They wanted regular appointments like everyone else. They didn’t want to be different.”

Thrilled with his work, especially when he took off the braces, Coben said it was all worthwhile when “the mothers came in and hugged him and kissed him,” Rhoda recalled. “He would sometimes be hard on the kids if they didn’t do what he told them, but at the end of the day the kids really understood.”

Preparation was everything to Coben. Invited to Paris to give a lecture to the French Orthodontic Society, he went to a Berlitz school so he could use French for part of his presentation. “It was remarkable,” said Rhoda. “After he spoke, there was a standing ovation.” Knowing the importance of the occasion, she took time from her job as director of career counseling at Career Alternatives, then sat there with her husband, both “in awe of who was there from all over the world, about 1,000 people, in a big lecture hall at the Sorbonne.”

He retired at age 72 because he was starting to get arthritis in his hands. “It’s time,” he told Rhoda. He was a perfectionist who wanted to be at his best for students and patients.

He lectured for four more years and continued traveling around the world, taking her to places they had never been — China, Russia and more. Earlier, they had taken time to fish in Maine, fly fish in Colorado and sail off Long Beach Island. “He really loved the outdoors, he just didn’t have the time for it when working so hard,” Rhoda said.

Describing her husband as, “most unusual,” Rhoda elaborated. “He was sometimes very funny, sometimes very serious, always very dedicated.” His certainty about the effectiveness of his procedures was so sure, so well known and appreciated that Frank Sinatra’s “My Way” played throughout his retirement party. Reminiscing, she recalled one student’s comment. “If I don’t do something right or I know that it’s a shortcut, I feel Gene Coben’s hand on my shoulder as he says, ‘Don’t do it that way, do it the right way.’”

Although orthodontics was his love, he cherished his family. When he was extremely ill and couldn’t be treated with any more chemotherapy, he called a family meeting. Taking each family member aside,

he emphasized how much he loved each of them and how proud he was of them. “He didn’t want to write it,” remembered Rhoda. “He wanted to personally tell us while he knew he was of sound mind. I wish we had recorded it. It’s one of those things you just keep in your head.” Her voice was strong as she remembered what else he said to them that day: “Your mother was the force in the family. You wouldn’t be the people you are today if it weren’t for her.”

That devotion to Rhoda is evident in his handwritten dedication prefacing his bound study, “Basion Horizontal.” “To my wife, whose love and understanding made this all possible.”



For many Temple Dental students, alumni and faculty members, the connection to the university expands much farther than the Philadelphia campus. Some of those connections extend around the globe to far-reaching corners of the world where dental care and education is sorely needed.

In countries like Haiti, Rwanda and Jamaica, Temple students and alumni are making a difference, volunteering their time and expertise, to make the world a better and healthier place.

Be inspired by the stories of four Temple alumni who use their Temple Dental education to passionately serve the underserved around the globe.

TEMPLE DENTAL GIVES BACK:

Global Outreach Around The Globe



(from left) Drs. Jason, Rachel, and Josh Bresler getting instruments ready for patients.

Haiti

For nearly 20 years, members of Temple's Kornberg School of Dentistry have traveled to Haiti each March to perform dental care in a country that desperately needs it.

One of the poorest countries in the Western Hemisphere, Temple began sending interested students and faculty to Haiti through the Haitian Health Foundation in the '90s. The Foundation provides health care, development and hope to more than 225,000 people in over 100 rural mountain villages.

Josh Bresler, a 2003 graduate of Temple Dental and pediatric dentist at his family's practice, Doc Bresler's Cavity Busters, has gone on the trip every year since 2002. His father David Bresler '79, brother Jason Bresler '06, and sister Rachel Bresler '14, have all also participated as group leaders.

"There's nothing quite like it," said Bresler. "People have waited six to seven months and walked eight to nine hours to be seen by our dental professionals."

Bresler described the work in Haiti as "getting back to primitive dentistry and science." With no electricity, amenities of home, charts or paperwork, Bresler said the the experience in Haiti brings volunteers back to fundamental dentistry skills using instruments like a chisel and a mallet, since modern tools like drills are not available in the countryside.

“The people are very grateful,” he said. “It’s a fun trip. We’re on a beautiful island, music playing in the background, going from village to village helping people under the shade of a palm tree.”

“It’s my favorite week of the year,” said Bresler.

Each March, four faculty members and approximately 10 students from the Temple Dental Haiti Club go on the annual trip to Haiti. One individual who never misses the trip is Tyler Reed Twiss, a 2005 graduate of Temple’s Kornberg School of Dentistry, who now runs a successful dental practice in Highlands Ranch, Colo.

“Tyler has been an amazing asset to our group,” noted Bresler. “A lifelong learner and incredible teacher, he travels from Colorado to Philadelphia to travel with Temple students to Haiti.”

Twiss started his journey with the Haiti program as a Temple Dental student in 2004. His initial trip that year was cancelled due to a government coup in the country, but with a passion and drive to make the trip happen the following year, Twiss became heavily involved in fundraising efforts and traveled to Haiti for the first time in 2005. He was a fourth-year dental student.

“I fell in love with the people there and the opportunity to help people in a way I hadn’t been able to before,” Twiss said of the formative experience.

In 2007, Twiss returned as a faculty mentor and hasn’t missed a year since.

Twiss travels to Haiti each year in a teaching and training role. He noted that he particularly enjoys teaching this group of students because they are able to learn in an environment that is entirely different from what they experience in dental school back in the United States.

“The students and the faculty are more co-workers in accomplishing a common goal of helping these wonderful people,” he said. “The students who go on the trip are incredible at learning and pick up techniques that will stay with them the rest of their careers.”

When asked why he volunteers in this way in Haiti each year, Twiss said he feels it is important to help and give back to the students the gift of skills he has developed throughout the years. He enjoys passing along the knowledge he gained from his time at Temple and in his career.

Twiss noted that the people of Haiti have no access to care where they live and even the simplest of problems can turn life threatening. Any education the Temple



Dr. Tyler Twiss with some happy pediatric patients.



Dr. Tyler Twiss working with student Katie Peck on a difficult extraction.

Dental volunteers can pass along in regards to oral hygiene can help prevent major problems later.

In one particular experience, Twiss described a case where the Temple Dental team was able to treat a 26-year-old man suffering from a severe infection. His cheek was swollen to the size of a baseball, and he was not able to open his mouth to eat. Twiss and the team of volunteers were able to drain the infection, remove the infected tooth and get the man much-needed antibiotics. Twiss said that without this treatment, the young man had a very high chance of that infection becoming life-threatening.

“Even though it is a very long distance to travel, I am still drawn to the rewarding experience of giving and helping those in need. Every year, I look forward to this trip, basically from the moment I return from the last one,” said Twiss. “There is nothing else like it!”

Rwanda

With a population of 11 million people and only 11 recognized dentists, Rwanda desperately needs the dentists that Health Volunteers Overseas, an NGO based in Washington, D.C., sends each year to train the best and brightest young people there to become dental therapists at the Kigali Health Institute.

A resident of Longmont, Colo., Jack Belchinsky, DDS, and a 1966 graduate of Temple Dental traveled to Rwanda for the first time in March 2012. After a long career in dentistry with the U.S. Army, Mt. Sinai Hospital, U.S. Public Health Services and private practices in New York and Pennsylvania, after retiring, Dr. Belchinsky turned his sights to volunteering and giving back.

Belchinsky got his first taste of volunteer work when he traveled to Santerem, Brazil, in 2003 through what is known as the Gateway to the Amazon to provide clinical care.

After attending a session at an American Dental Association meeting, he learned about Health Volunteers Overseas in Rwanda and immediately wanted to get involved.

“I enjoy the knowledge and training I received at



Dr. Jack Belchinsky treats several pediatric patients in Rwanda through his volunteer work done in the Health Volunteers Overseas program.

Temple and love sharing it with others,” said Belchinsky. “We have no idea how fortunate we are in this country. Being able to help others is truly a blessing.”

At the Kigali Health Institute in Rwanda, Belchinsky spent his days lecturing second-year dental therapy students about topics ranging from oral pathology to medical emergencies to nutrition and diet. He taught the students both in the classroom, as well as in the clinic performing simple dental procedures.

But Belchinsky’s role goes far beyond that of just teacher. He is truly an advocate for the people of Rwanda and cares about the future of dental care and education in the country.

Before he left for the trip in 2012, he went to dental manufacturers while attending the ADA meeting and filled two suitcases with \$4,000 worth of supplies and equipment to bring to Rwanda to drop off at the dental clinic.

Next, Belchinsky has plans to travel to Cambodia or Nicaragua to continue lecturing and doing clinical work to educate the future dentists of the world.

A passionate and kindhearted man, Belchinsky recounts a story of blowing a rubber medical glove into the shape of an animal and handing it to a little girl with her name on it, making her laugh and smile.

“Helping others makes me happy,” said Belchinsky.

Jamaica

A 1970 graduate of Temple, Dr. Jack M. Levine began his dental career at the U.S. Army Headquarters Hospital in Europe in a clinic where he got his start in prevention, outreach and public health.

When he returned to Connecticut, where he resides today, he worked for a few different practices and served as a part-time faculty member at the University of Connecticut School of Dental Medicine before setting up a solo practice in New Haven, where his name has been on the door for the last 38 years.

Levine's latest outreach efforts involve traveling to Jamaica to participate in Great Shape! Inc.'s 1,000 Smiles Dental Project, which is touted on its website as, "the world's largest international humanitarian dental project."

The organization provides free access to dental care for Jamaican families including fillings, cleanings, extractions, sealants and education in temporary dental clinics and schools. The organization boasts more than 350 volunteers per year who come to Jamaica for either one or two weeks to help more than 20,000 people in need.

Levine became involved with the organization as a result of his relationship with Dr. Sherwin Shinn, the 2013 ADA Humanitarian Award recipient and co-founder of Great Shape! Inc.'s 1000 Smiles Dental Project. The two have worked together in remote mountain areas of Nepal, Everest Base Camp and Uganda.

"Jamaica and Great Shape! have touched my heart," said Levine. "There is so much need in a country with so little capacity for dental care."

Over the past four years, Levine has been on the leadership team to develop a school-based oral health preventive program, which includes community involvement, parents, teachers, education and the delivering of sealant and fluoride treatments. They also have an ongoing research study now in its fourth year.

Levine has been instrumental in recruiting other members of the Temple community to get involved with the organization and Jamaica outreach, as well. Each year, two Temple colleagues join him on the trip to Jamaica, and Great Shape! is currently working with Temple faculty and students to strengthen that relationship even further.



Pictured above (center) Dr. Levine, surrounded by volunteers and patients of Jamaica.

Pictured right: a pediatric patient is taught preventive care from an early stage.

"Giving back is my personal way of saying thank you to my family and profession. I am very grateful to have been able to go to college and dental school. This is my gift to humankind. I hope to contribute to the relief of suffering in the world," said Levine.

Levine looks forward to his next trip to Jamaica this November.





FROM MUSIC TO DENTISTRY DR. VINCENT STUCCIO, '61, HAS LED A FULFILLING LIFE

Dr. Vincent Stuccio

comes from a family of scholars in north-eastern Pennsylvania. His two brothers had set their goals to be physicians, while Stuccio wanted to pursue his love of

music. "I had been studying the guitar since I was 9 years old," Dr. Stuccio explains. "I was 16 when I graduated high school, so college was the furthest from my mind."

Dr. Stuccio went off to New York to try to make it big, but after struggling there for three years, and after much encouragement from his parents and brothers, he returned home to enter college. "I was still undecided as to what career path to follow. I liked being with people, liked working with my hands and possessed the dexterity necessary for the dental profession. I researched various college catalogues to determine the requirements necessary to attain the DDS degree."

Life then became a whirlwind for Dr. Stuccio. He completed college, met his sweetheart and got married, and was accepted into the 1956 class of Temple Dental School. "When I entered the dental school to officially begin my dental education, I was filled with anticipation. I was in awe as I walked the halls of such a fine institution. I thought of the thousands of other students who had passed that way before me. Our class was made up of 89 students, two of whom were women."

After a severe auto accident in November of 1956, which took the life of his young daughter, Dr. Stuccio was confined at home in a full body cast for four months. He began his freshman year again in 1957 with his wife at his side.

"Every day was a new adventure in dental school," explains Dr. Stuccio. "As days progressed, and as one gained more knowledge, one could feel the confidence begin to settle in, thanks to the excellent faculty members who were truly professional at all times. The greatest and most memorable moment that I can recall has to be in my junior year, when I met my first 'live' patient and completed a medical history, and then seated him in the dental chair in the huge clinic. Wow—I had arrived!"

Following his graduation, Dr. Stuccio held many positions with the Army. He joined the Army Dental Corps and was ordered to Fort Dix, N.J., where he and his family spent two years while he completed his military obligation. "It was a wonderful experience. It provided me an opportunity to gain knowledge and experience in mass-casualty management, the use of operating facilities in a hospital environment, and all phases of dentistry."

After discharge from the Army in July 1963, they returned to Pennsylvania where Dr. Stuccio established a dental practice. "With the excellent education and instruction that I received at Temple University Dental School, coupled with my additional training and experience in the Army, I entered into private practice feeling confident that I would achieve my goals."

But in 1969, the military came calling again. Dr. Stuccio accepted a position as staff dentist at the Department of Veterans Affairs in his area. Eight years later, he re-enlisted in the Army Reserves and was assigned to a dental unit close to home. He retired as a colonel after 18 years of duty.

Military experience gave Dr. Stuccio a tremendous opportunity to view life as it exists all across the world — wealth and poverty. In 1988, he traveled to Honduras to provide dental support to an army engineering unit that was building roads in the jungles there. "These roads were meant to help their

economy by connecting villages and making travel easier for them. It was here that we found tremendous poverty. Shacks with sticks for walls and a piece of corrugated metal for a roof. One-room schoolhouses with dirt floors and simple wooden benches for seats and a blackboard on the wall."

In 1993, he traveled to the Middle East after "Desert Storm" and saw the other side of the economic spectrum. "Kuwait, Abu Dhabi (United Arab Emirates) and Oman were wealthy places. A walk through any market place and one could see 24-karat gold bracelets, necklaces and rings strung up on racks like meat in a butcher shop. Autos on the streets were of the most luxurious brand names. Labor was imported from poor third-world countries. These two contrasting experiences really opened my eyes to the rest of the world."

Dentistry and life itself have been good to the Stuccio family. Through hardships and celebrations, Dr. Stuccio's loving wife, children and grandchildren have stood by him. "Here is the wealth that dentistry has provided for me."

**Reprinted from the Winter 2013 Diamond issue due to an editorial mistake with Dr. Stuccio's name. We apologize for this error and for any confusion it may have caused with our readers.*

Gallery of Success Awards

Alumni from each of Temple's schools and colleges are honored every fall and highlighted for one year in the Gallery of Success showcases, located in Mitten Hall's lower level. Previous winners' names are also on permanent display. The Gallery of Success is a collaborative effort between Temple's Career Center and the Office of Alumni Relations.

This year, the Kornberg School of Dentistry recognized Dr. Thomas J. Balshi, '72.



A pioneering clinician and researcher and one of the world's foremost experts on dental implant dentistry, Dr. Thomas J. Balshi is a Diplomate of the American Board of Prosthodontics and founder of Prosthodontics Intermedica in Fort Washington, Pa. He also serves as director of the Institute for Facial Esthetics in Fort Washington, where he established dental training programs for surgical and prosthodontics residents from around the world. He earned his DDS from Temple in 1972.

Dr. Balshi's groundbreaking work led to the development of exclusive implant treatment protocols including Teeth in a Day™ for accelerated rehabilitation and No BoneZ Solution™ to eliminate the need for extensive bone grafting. He has lectured internationally, appeared on both Good Morning America and The Today Show demonstrating advanced dental implant technologies and serves as an adjunct faculty member at the Kornberg School of Dentistry, Nova Southeastern University Dental School and the University of Connecticut. Dr. Balshi has published numerous scientific articles in journals, served as contributing editor on a number of books, serves on the editorial advisory board of New Beauty Magazine and has co-authored a handbook titled "A Patient's Guide to Dental Implants."

A founding member and past president of The Pennsylvania Prosthodontic Association and active member of numerous other professional associations, Dr. Balshi holds a United States Army Medal of Commendation and a Freedoms Foundation George Washington Medal of Honor.

TEMPLE UNIVERSITY Homecoming 2013

This past October, Kornberg faculty, staff, students and alumni got together for a day of eating great barbeque food, watching some downright competitive football, and catching up with old friends at Temple's annual homecoming game.

Temple had the perfect day for tailgating, and with Dr. Jeff Godel, Graduate Program Director in the Department of Orthodontics, serving up the food, there was no way any guests at the dental school's tailgating tent would be able to pass up the pulled pork barbeque, macaroni and cheese, veggie chili, or homemade cornbread that was on the menu.

Tailgating at Lincoln Financial Field, the home of the Philadelphia Eagles football team, is an amazing experience. With so much space, the University

provided tents for each school and college, making a "tailgate row" for alumni to meet up with fellow Owls they went to school with in years past.

After spending time tailgating, the group watched Temple take over the football field for its first win of the season, in beating Army 33-14.

As part of Homecoming, alumni were invited to participate in various other activities throughout the weekend, including a networking reception, a 5k and family fun walk, and concert.

Please remember to mark your calendar for **Homecoming 2014 on Oct. 11**, when our Temple Owls will take on the Tulsa Golden Hurricanes.



Class

NOTES

1960s

Dr. Frank Krause, '63, has retired from dentistry after practicing in Cranford, N.J. for 50 years. He was Cranford's first orthodontist. He was granted a patent in 1986 for his maxillary mandibular custom lingual retainer and was awarded 18 more patent claims and licenses. Dr. Krause is a charter member of the College of Diplomats of the American Board of Orthodontics, the highest honor awarded in the field. In April, the American Association of Orthodontists presented him with a 50-year service pin "to honor individuals whose pioneering efforts have been instrumental in the development of orthodontics as a specialty." In teaching, Dr. Krause received Dean appointments as a guest lecturer in the graduate Orthodontic Departments at Temple University School of Dentistry, University of Maryland Dental School and departmental invitations at the University of Medicine and Dentistry of New Jersey.

Dr. Samuel Cimino, '64, a Concordville, Pa. dentist, has retired after more than 43 years of practice. He joined the Naval Reserve Officers Program while at Temple, and upon graduation, was retained in the Naval Reserve as the dental examining officer at the Naval Reserve Center in Folsom, Pa. He served 30 years in the Naval Reserve and transferred to the retired reserve with the rank of

captain in 1991. During his entire tenure he served with distinction in varied assignments, the most notable included Commanding Officer Naval Reserve Dental Center, Naval Reserve Training Unit, and Commanding Officer Civilian Military Contingency Hospital System, Administrative Unit, all at the Philadelphia Naval Hospital and received several awards for service. His professional awards include fellowships in the Academy of General Dentistry, the International College of Dentists, the Federation of Dentists International and the Pierre Fuchard Academy. Dr. Cimino is a past board member and past president of the Chester and Delaware County Dental Society, and past president of the Southern District Dental Society, Philadelphia. He is a member of the Pennsylvania and American Dental Associations. Dr. Cimino served as an initiator for the Dental Hygiene Program at Harcum College, was a chairman of the Dental Advisory Board for 10 years, and now serves as a member of the College Board of Trustees. He also serves on the Temple University Dental Alumni Board.

Dr. Gordon Kalmanson, '67, and **Dr. Marvin Levine, '67**, have provided for the re-installation of the bust of Dr. Louis Herman, created by **Dr. Martin Segal, '47**, to its well-deserved place of prominence in the Kornberg School of Dentistry. Dr. Herman served on the faculty of the school for 46 years, leaving in 1965. His open door was a respite

for all students, offering genuine assistance whatever their problems may have been. Drs. Kalmanson and Levine have also endowed the Dr. Louis Herman Hardship Fund that will allow for grants to students in temporary, short-term financial difficulty, regardless of scholastic standing.

1980s

Dr. James N. Cooper, '80, has been named president of the New Era Dental Society.



Dr. Robert A. Levine (top row, left) was joined with several other Temple alumni at the ITI event in Geneva, Switzerland.

Dr. Robert A. Levine, '81, and his practice partner, Dr. Philip L. Fava II, shared important findings with colleagues at the International Team of Implantology's (ITI) global event held recently in Geneva, Switzerland. Dr. Levine also was awarded first place for a study co-authored with Dr. Tom Wilson and primary author Dr. Pilar Valderrama titled "Foreign Bodies in Peri-implantitis in Humans." The ITI World Symposium brings together international leaders in implantology to update treatment protocols based on highly studied, predictable and evidence-based research and clinical experience.

2000s

Dr. Richard Gesker, '03, currently serves as chief dental officer and director of operations at Mary's Center for Maternal and Child Care in Washington, D.C. Through Dr. Gesker's role, he has hired several Temple Dental graduates.

Dr. Julia Jackson, '05, married Jason Duffus on July 20, 2013. She received her undergraduate degree from Wesleyan University, a

Dental Medicine degree from Kornberg School of Dentistry and completed an Oral and Maxillofacial Surgery residency at Howard University in 2011. She is currently in private practice with Franklyn Scott, PC, in Philadelphia.

Michael Saba, '14, received the District 3 Delegate of the Year Award at the American Student Dental Association's (ASDA) Annual Session. This award is presented to the individual who demonstrates personal dedication and outstanding achievement on behalf of ASDA and its local chapter members.



Eli Stavisky, DDS, '65, was awarded upon the recommendation of the faculty of St. Tikhon's Orthodox Theological Seminary, South Canaan, Pa., the degree "Doctor of Humane Letters, Honoris Causa" by the seminary's board of trustees.

Dr. Stavisky has been the longest tenured member of the board of trustees for St. Tikhon's Seminary. He has served as the first vice-chair of the Board since the establishment of that office, providing yeoman leadership to his fellow trustees.

He has served on several committees, most notably as chairman of the Academic, Faculty and Student Affairs Committee, where he worked tirelessly as the liaison between the faculty and the Board. Dr. Stavisky's support of St. Tikhon's Seminary is a sterling record of his stewardship and generosity.

The Philadelphia-Delaware Section of the American College of Dentists held its Annual Dinner Meeting this past November. The dinner meeting was held in Center City Philadelphia at Estia Restaurant. Accolades and acknowledgements were given to the outgoing officers of its Section and a slate of new officers were inducted by their Reagent, Dr. Thomas Howley, '81. Many Temple Alumni were present at this lovely and lively event. The Philadelphia-Delaware section of the American College of Dentists encourages all Fellows to please look them up on their Facebook page.



Dr. Gene McGuire, '76, receives a plaque as outgoing Section Chair from Dr. Cary Limberakis, newly inducted Section Chair.



New officers inducted: (from left) Dr. Sally Gray, treasurer, '82; Dr. Tanya Stavisky, secretary, '98; Dr. Anne O'Day, Vice-Chair, '96; and Dr. Cary Limberakis, Chair.

In Memoriam

Dr. Michael Perry ('47) passed away Feb. 6, 2014.

Dr. Joseph Shore ('52) the founder of the Shore-Snyder Dental Center in Norwood, Pa. passed away in December 2013. He practiced dentistry for over 62 years and retired only two years ago. Dr. Shore was joined in practice by his brother, Leon, '59, who passed away in 1983, and eventually by his son, Jeff, '79, his grandson, Andy, '10, and granddaughter Robin, '13.

Dr. Jack Sokoloff ('54) passed away January 2014. A dentist for 40 years, he was a WWII veteran. Dr. Sokoloff, a former Temple Dental Alumni President, was the past Section Chief of Dentistry at the Medical Center of Delaware. He was a member of the American Dental Association, the Delaware Academy of Medicine and the Delaware State Dental Association.

Dr. Walter Kryspin ('55) passed away Jan. 26, 2014. He served as a dentist in the U.S. Army from 1955-57. He practiced dentistry for 48 years in Stamford, Conn. He was a member of the American Dental Association.

Dr. Capt. Andrew Peters, USN ('83) passed away Nov. 25, 2013. Dr. Peters served on active duty as a Navy dental officer from 1983 until his death. He was assigned to various shore, ship, FMF, overseas and executive medicine tours. He served as an administrative fellow in the Office of the Corps Chief at the Bureau of Medicine and Surgery in Washington, D.C. He was a diplomat of the American College of HealthCare Executives and achieved Credentialed Health Service Administrator status in the American Academy of Medical Administrators. His awards included Meritorious Service Medal, Navy Commendation Medal and Presidential Unit Citation.

Please join us throughout the year at the following events!

American Association of Periodontology Annual Meeting, San Francisco, CA
September 19–22, 2014

Dr. Leonard Abrams Distinguished Speaker Series, Kornberg School of Dentistry
September 25, 2014

Mentoring for Life Kickoff Meeting, Kornberg School of Dentistry
October 6, 2014

ADA Annual Session, San Antonio, TX
October 9–14, 2014
*Alumni Reception held on **October 10, 2014**

Homecoming Weekend and Tailgating, Lincoln Financial Field, Philadelphia, PA
October 11, 2014

Greater New York Dental Meeting, New York, NY
November 28–December 3, 2014

Valley Forge Dental Meeting, Valley Forge, PA
March 2015

S. Eugene Coben Orthodontic Research Symposium, Philadelphia, PA
March 6–7, 2015

Temple Dental Reunion/Alumni Weekend, Temple University
April 24–26, 2015

Mentoring for Life End of the Year Meeting, Philadelphia, PA
April 25, 2015

American Association of Endodontists Annual Session, Seattle, WA
May 6–9, 2015

SAVE THE DATE

S. Eugene Coben Orthodontic Research Symposium

March 6–7, 2015
Inaugural Event

Featuring Leading
Orthodontic Research Experts

DO YOU HAVE A STORY TO SHARE?

We are looking for alumni to interview
for the next *Diamond's* Alumni Spotlights
and we would love to hear from you.
Please contact Editor Ashley LaRosa at
alarosa@temple.edu or 215.707.9005.