

CHAPTER 1

EXPLORING A WORLD OF OPPORTUNITIES

Choosing a dental career will open up a world of opportunities that can lead to success and satisfaction for the rest of your life. Consider these facts about dentists and dentistry:

- Dentistry is a dynamic health profession
- Dentists are financially successful health professionals and highly respected members of their communities
- The demand for dental care will continue to be strong in the future, ensuring the stability and security of the profession

The opportunities that exist for dentists now and in the future make oral health one of the most exciting, challenging, and rewarding professions. Individuals who choose to pursue dental careers are motivated, scientifically curious, intelligent, ambitious, and socially conscious health professionals. They are men and women from diverse backgrounds and cultures, all of whom want to do work that makes a difference.

This chapter provides an overview of the field of dentistry and its many facets. If you are exploring career alternatives and want to know more about dentistry, this information will be useful for you. And if you have already decided to become a dentist, this information will help you summarize the range of specialties and practice options. The first section, **AN INTRODUCTION TO DENTISTRY**, briefly explains what dentistry is and what dentists do; **OPPORTUNITIES IN DENTISTRY** shows that there is a growing demand for dentists; **REWARDS OF PRACTICING DENTISTRY** describes the professional and personal satisfactions of being a dentist; and, finally, **CAREER OPTIONS** surveys the various fields and practice options in dentistry.

AN INTRODUCTION TO DENTISTRY

Dentistry is the branch of the healing arts and sciences devoted to maintaining the health of the teeth, gums, and other hard and soft tissues of the oral cavity and adjacent structures. A dentist is a scientist and clinician dedicated to the highest standards of health through prevention, diagnosis, and treatment of oral diseases and conditions.

The notion of dentists as those who merely “fill teeth” is out-of-date. Today, dentists are highly sophisticated health professionals who provide a wide range of care that contributes enormously to the quality of their patients’ day-to-day lives by preventing tooth decay, periodontal disease, malocclusion, and oral-facial anomalies. These and other oral disorders can cause significant pain, improper chewing or digestion, dry mouth, abnormal speech, and altered facial appearance. Dentists are also instrumental in early detection of oral cancer and systemic conditions of the body that manifest themselves in the mouth. Dentists are also at the forefront of a range of new developments in cosmetic and aesthetic practices.

The dental profession includes not only those who provide direct patient care but also those who teach, conduct research, and work in public and international health. All of

Opportunities for all individuals interested in becoming dentists are growing because of the intense national need to improve access to general and oral health care and because of the continuously increasing demand for dental services.

these individuals are vital links in the health care delivery system, which is necessary to promote social and economic change and individual well-being. Dentists understand the importance of and have made contributions to serving both disadvantaged populations and populations with limited access to dental care. The dental profession is very involved in influencing current health care reform efforts to ensure that the importance of oral health is understood and that oral health care is available to everyone.

Faculty of schools of dental medicine play an especially critical role because they influence an entire field of study and contribute to shaping the profession in the United States and around the world. They are responsible for bringing new discoveries into the classroom, stimulating students' intellect, and helping determine the future of oral health care through dental medicine.

OPPORTUNITIES IN DENTISTRY

The American Dental Association (ADA) reports that, as of 2009, there were 186,084 professionally active dentists in the United States. On average, that is one dentist for every 1,648 people. Current dental workforce projections indicate a decreasing number of dentists. With continuing population growth and the upcoming retirement of a large group of dentists educated during the 1960s and 70s, the need for new dentists is likely to escalate over the next decades.

Dentists tend to be unevenly distributed across the nation. Rural and inner-city communities are often underserved. Consequently, practicing dentist-to-population ratios are significantly different from state to state, including the District of Columbia, and range from roughly one dentist for every 900 people to one for every 2,500. These numbers clearly demonstrate the importance of maintaining an adequate supply of dentists in the years ahead, accompanied by more efficient practice methods, better use of allied personnel, and improved prevention programs that will enable future dentists to extend professional care to more patients.

Opportunities for all individuals interested in becoming dentists are growing because of the intense national need to improve access to general health and oral care and the continuously increasing demand for dental services. Although at this point, women and minorities remain underrepresented in dentistry, the profession is strongly committed to increasing its diversity. Consequently, in response to the clear need for dentists to serve all citizens, dental schools are strengthening their efforts to recruit and retain all highly qualified students, including intensively recruiting women and underrepresented minorities.

REWARDS OF PRACTICING DENTISTRY

The rewards of being a dentist are many, starting with the personal satisfaction dentists obtain from their daily professional accomplishments. Highly regarded by the community for their contributions to the well-being of citizens, dentists are often called upon to provide community consultation and services.

In addition, dentists are well compensated. Though incomes vary across the country and depend on the type of practice, the American Dental Association (ADA) reports that in 2009 the average net income for an independent private general practitioner who owned all or part of his or her practice was \$192,680; it was \$305,820 for dental specialists.

The public's need and respect for dentists continues to grow with the increasing popular recognition of the importance of health in general and oral health in particular. The national health care reform legislation signed into law on March 23, 2010, is expected to increase the demand for dental practitioners. Increases in preventive dental care, geriatric dental care, and cosmetic treatments also have contributed to growth in the demand for dental care.

CAREER OPTIONS

A career in dentistry has two key components: what the dentist does and how he or she does it. The “what” refers to the specific field of dentistry in which he or she practices; the “how” refers to the type of practice itself. These components offer many options for fulfilling professional and personal goals. If you choose to become a dentist, making decisions about these components will allow you to develop a career that suits your professional interests and fits your lifestyle. This section’s overviews of both clinical fields and professional and research opportunities should help your decision process.

Dentistry has many clinical fields. While most dentists in private practice are general practitioners (79%), others choose to specialize in one particular field. The overviews below provide a brief description of the procedures dentists perform in each field. The descriptions indicate whether education beyond dental school (advanced dental or specialty education) is required, along with information about the current number of advanced dental programs available, their duration, and the number of residents enrolled therein. Table 1-1 provides a summary of the available advanced dental programs.

As a potential dental student, you are not ready at this time to apply for a position in an advanced dental education program. However, you should know that the ADEA Postdoctoral Application Support Service (ADEA PASS) simplifies the process of applying to many advanced dental programs, such as general practice residencies, oral and maxillofacial surgery, and pediatric dentistry. You will learn more about PASS once you are in dental school and begin to consider dental career options that require additional education and training.

■ Clinical Fields

General Dentistry

General dentists use their oral diagnostic, preventive, surgical, and rehabilitative skills to restore damaged or missing tooth structures and to treat diseases of the bone and soft tissue in the mouth and in adjacent structures. General dentists also provide patients with programs of preventive oral health care. Currently, the United States has 61 dental schools, including one in Puerto Rico. These schools enroll approximately 5,000 students in their first-year classes. Advanced dental education is not required to practice as a general dentist. However, General Practice Residencies (GPR) and Advanced Education in General Dentistry (AEGD) residencies are available and can expand the general dentist’s career options and scope of practice. The length of these general dentistry advanced dental programs varies, but most are 13 months long. In the United States, there are currently 189 GPR programs with 1,002 residents, and 88 AEGD programs with 607 residents.

Dental Public Health

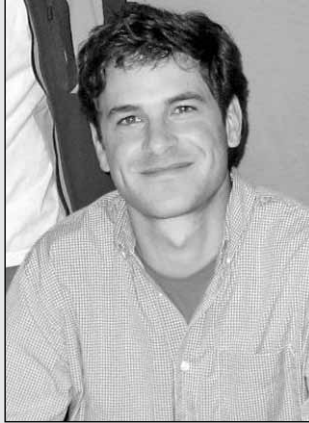
Individuals who enter the dental public health field are involved in developing policies and programs, such as health care reform, that affect the community at large. Advanced dental education is required. The types of programs available vary widely from certificate

Why consider a dental career?

Not only are dentists part of a dynamic, stimulating field that offers a variety of professional opportunities, but

- Dentistry is not generally subject to the effects of managed care and reductions in federal funding that have affected other health care professions.
- Employment of general dentists and specialists is projected to grow 16% through 2018, according to the U.S. Bureau of Labor Statistics.
- Dentists are generally able to enter practice directly upon completion of their four years of dental school.
- The lifestyle of a private practice dentist is typically predictable and self-determined.
- Dentists enjoy unusual loyalty among their patients.
- The entire dental profession is at the forefront of important new research substantiating the relationship between oral health and systemic health.
- While most graduates of dental schools eventually choose to set up private practices, the profession offers a wide range of clinical, research, and academic opportunities to both new graduates and dentists at any stage of their career.

STUDENT PROFILE



ZACHARY LEVIN

SECOND-YEAR DENTAL STUDENT
TUFTS UNIVERSITY SCHOOL OF DENTAL MEDICINE
HOMETOWN: ORLANDO, FLORIDA

Why dentistry?

I always enjoyed biology and chemistry in high school, but I began college interested in architecture. When I took a science course in college, I knew it could lead to a challenging health profession. As I considered both my interest in architecture and my passion for the sciences, I found dentistry combined elements from both fields in its demand for a strong scientific knowledgebase, a sense of creativity, and a great degree of manual dexterity.

What did you do as an applicant to prepare for dental school?

After graduating from college, I did a two-year master's program in medical science. I believe the difficulty of dental school is mostly due to the enormity of the course load. Each individual course may not be all that difficult in itself. When you are taking six courses at once—in addition to preclinical classes—it can be stressful. By completing a graduate program in the sciences, I was

able to adapt better to the course load of dental school, while others struggled.

Whether it's working in a college lab or conducting a thesis project, research experience is a key aspect of your application. Either way, I suggest having a strong rapport with the person you will be working under. You will likely encounter some obstacles along the way, and having a solid relationship can allow things to run smoothly and provide an end-product that meets both of your expectations.

What did you look for when choosing a dental school?

My biggest concern when applying to dental school was making sure I didn't limit my opportunity, so I applied to 22 schools. Did I want a large city or smaller community? Should I reach for the very top schools or be more realistic? Ultimately, I decided on Tufts because it is located in an urban environment with exposure to a wide array of clinical cases, it has an incredible facility (hey, if you're going to spend the next four years studying somewhere, why not make it a nice place!), and it has a great academic reputation. However, judge each school you visit on equal terms; I surprised myself by enjoying the visits to a few schools that I didn't initially expect to like.

What advice would you give applicants or those considering dental school?

My single biggest piece of advice when it comes to interviews is to come prepared. Simple questions like "Can you tell me about yourself?" suddenly become difficult to answer in a complete, thoughtful way when an interviewer whose opinion will help decide your future is sitting across from you. Take the time to outline answers to typical questions that you expect to be asked, but don't memorize a script.

What are you doing now?

Throughout my first year, I became interested in public policy and how it relates to dentistry. I was a Legislative Liaison for the Tufts chapter of the American Student Dental Association (ASDA) and was a Student Delegate at the Massachusetts Dental Society House of Delegates Annual Session.

This past summer, I was the ADEA/Tufts Student Legislative Intern at ADEA in Washington, DC. Participat-

ing in congressional meetings on Capitol Hill, coalition meetings with health care partners, and policy discussions among legislative staff, I had the opportunity to learn about dental policy and how to navigate the national political arena within the framework of academic dentistry.

Why is advocacy important to you?

I noticed that oral health often gets left out of the health care conversation. However, there is a clear relationship between oral health and systemic health. After participating in the National Dental Student Lobby Day, cosponsored by ASDA and ADEA, I realized just how little people outside the dental community know about the importance of quality dental care. I also felt I wanted to become involved personally in protecting and improving the dental profession for the patient, educator, and dentist.

How do you suggest other dental students or applicants get involved?

Start a pre-dental society at your current college and get the message out about the importance of oral health, the need to break the barriers to dental care access, and the bright future of the profession of dentistry.

What do you feel is the most important legislative issue surrounding dental education?

As early as the first year, dental schools promote the importance of caring for the underserved or uninsured population. However, with the demand to begin repaying student loans upon graduation, it is often impossible to work in underserved communities due to high overhead costs and low reimbursement rates of federally subsidized insurance programs. Therefore, legislation like H.R. 1666: *Breaking Barriers to Oral Health Act of 2011* is crucial to providing the funds necessary to make outreach initiatives feasible.

Are you married/partnered/single? Any children?

The stress of dental school can easily overlap into other aspects of your life, such as your personal relationships. I am in a relationship with a fantastic woman who gives unlimited support and affection. She is a beacon of stability in the sometimes unpredictability of dental school.

programs to master's (M.P.H.) and doctoral (D.P.H.) programs. The length of programs also varies, but the average program is 14 months long. There are currently 10 programs and 16 residents in the United States.

Endodontics

Endodontists diagnose and treat diseases and injuries that are specific to the dental nerves, pulp (the matter inside the tooth), and tissues that affect the vitality of the teeth. Advanced dental education is required. The length of programs varies, but the average program is 25 months long. There are currently 54 programs and 205 residents in the United States.

Oral and Maxillofacial Pathology

Oral pathologists are dental scientists who study and research the causes, processes, and effects of diseases with oral manifestations. These diseases may be confined to the mouth and oral cavity, or they may affect other parts of the body. Most oral pathologists do not treat patients directly. However, they provide critical diagnostic and consultative biopsy services to dentists and physicians in the treatment of their patients. Advanced dental education is required. The length of programs varies; the average program is 38 months long. There are currently 14 programs and 12 residents in the United States.

Oral and Maxillofacial Radiology

Oral radiologists have advanced education and experience in radiation physics, biology, safety, and hygiene related to the taking and interpretation of conventional and digital images, Computed Tomography (CT) Magnetic Resonance Imaging (MRI) scans, and other related images of oral-facial structures and disease. Programs are 24 to 36 months long, depending on the certificate or degree offered. This specialty currently has five programs with 10 residents in the United States.

Oral and Maxillofacial Surgery

This specialty requires practitioners to provide a broad range of diagnostic services and treatments for diseases, injuries, and defects of the neck, head, jaw, and associated structures. Advanced dental education is required. Programs vary in length from four to six years; some programs offer certificates and others include the awarding of an M.D. degree within the residency program. There are currently 102 programs and 239 residents in the United States.

Orthodontics and Dentofacial Orthopedics

Orthodontists treat problems related to irregular dental development, missing teeth, and other abnormalities. Beyond “straightening teeth,” orthodontists establish normal functioning and appearance for their patients. Advanced dental education is required. The length of programs varies, but most are 24 to 36 months long. There are currently 64 programs and 354 residents in the United States.

Pediatric Dentistry

Pediatric dentists specialize in treating children from birth to adolescence. They also treat disabled patients beyond the age of adolescence. Advanced dental education is required. The length of programs varies, but most are 24 to 36 months long. There are currently 74 programs and 366 residents in the United States.

Periodontics

Periodontists diagnose and treat diseases of the gingival tissue and bone supporting the teeth. Gingival tissue includes the gum, the oral mucous membranes, and other tissue that surrounds and supports the teeth. Advanced dental education is required. The length of programs varies, but most are 35 months long. There are currently 54 programs and 170 residents in the United States.

Prosthodontics

Prosthodontists replace missing natural teeth with fixed or removable appliances, such as dentures, bridges, and implants. Advanced dental education is required. The length of programs varies, with training averaging 32 months. There are currently 45 programs and 151 residents in the United States.

Practice Options and Other Professional Opportunities

Dentistry offers an array of professional opportunities from which individuals can choose to best suit their interests and lifestyle goals. These opportunities include the following:

TABLE 1-1. POSTDOCTORAL AND SPECIALTY EDUCATION PROGRAMS

Program	Programs	Average Length	No. of first-year positions
General Dentistry			
General Practice Residencies (GPR)	189	13 months	1,002
Advanced Education in General Dentistry (AEGD)	88	13 months	607
Specialties			
Dental Public Health	10	14 months	16
Endodontics	54	25 months	205
Oral and Maxillofacial Pathology	14	38 months	12
Oral and Maxillofacial Radiology	5	30 months	10
Oral and Maxillofacial Surgery	102	54 months	239
Orthodontics and Dentofacial Orthopedics	64	30 months	354
Pediatric Dentistry	74	25 months	366
Periodontics	54	35 months	170
Prosthodontics	45	32 months	151

Source: American Dental Association, Survey Center, 2009-10 Survey of Advanced Dental Education

Self-Employed in Private Practice

Traditionally, most dentists engage in private practice either by themselves in solo practice or in partnership with other dentists. In fact, 83% of active private practice dentists own their own practices. Most practitioners use a fee schedule, participate in a preferred provider plan, or accept some combination of both to provide care. According to the American Dental Association (ADA), only 5.4% of independent solo dentists' patients are covered by public assistance.

Practice as a Salaried Employee or Associate

Dentists who are not self-employed may work as salaried employees or associates for dentists who are in private practice. Other salaried situations include working for a corporation that provides dental care. Additional salaried opportunities are in managed health care organizations, such as HMOs.

Academic Dentistry and Dental Education

Once you are in dental school, you will see firsthand some of the opportunities that are open to dentists who choose a career in dental education and academic dentistry. Many dental academicians say the chief benefit of their career is the stimulation of working with outstanding colleagues and bright young students. Another significant benefit is

STUDENT PROFILE



LINH PHAN

THIRD-YEAR DENTAL STUDENT
NEW YORK UNIVERSITY COLLEGE OF DENTISTRY
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Why dentistry?

Growing up, I knew I wanted to be in the medical field. First I wanted to be an M.D., but the more I explored the lifestyle, the more I didn't like it. I want to be able to be my own boss, run my own business, on my own terms. Most of all, I didn't want my job getting in the way of starting my family. Dentistry offers a lot of what I am looking for. I was plagued by cavities and crooked teeth growing up. After regularly going to the dentist and orthodontist, I had a major boost in my self-esteem. I think it's amazing that something like a smile can change someone's outlook on life. I want to be able to give that feeling to someone else.

What are you doing now?

I am currently a third-year dental student at New York University (NYU) College of Dentistry. Aside from classes and seeing patients, I try to stay involved in extracur-

ricular activities. I'm secretary of NYU's ADEA Chapter and an active member in the American Student Dental Association (ASDA), the Community Service Club, and the Vietnamese Student Dental Association. I am also a Teaching Assistant (TA) for the D1 preclinical lab sessions and an Admissions Ambassador, for which I help with interviewee tours.

I also have a YouTube channel where I blog about my life in dental school, give advice to preclinical students, and make preclinical procedure tutorials for fellow dental students. So, if you are interested in what the life of a dental student entails, visit www.youtube.com/linhphandds.

What are your short-term and long-term goals?

Short-term, I want to enjoy my time in dental school and learn as much as I can. I don't want to be a student that does just the minimum requirements. I want to do everything to the best of my ability, grow as much as I can, and get involved in all of the things that interest me. I eventually want to have my own practice—but whether a general practice or a specialty, I really am not sure yet. I also want to teach part-time in a dental school, either preclinically, clinically, or both.

What did you do as an applicant to prepare for dental school?

I went to San Diego State University (SDSU), which had a preprofessional academic advising office. My academic advisor helped me through the application process. I was part of the SDSU Preclinical Club, which is involved in a lot of dental-related community service and explores the scope of dentistry. I worked as a dental assistant for a short period of time to make sure I understood what dentistry was about.

Academically, I took as many science courses as I could to prepare myself for the heavy load of science classes taught in dental school. I took the required classes but also the recommended classes, such as biochemistry, microbiology, histology, anatomy, and physiology, and added whatever other classes I thought I would benefit from, such as genetics and public speaking.

Why do you want to become a dental educator?

I really do believe that education is very important. It might not be glamorous to some, but I like knowing that I can help someone be great. We wouldn't have great dentists like we do without dental educators!

What advice would you give applicants who are interested in teaching?

Get involved—join ADEA, talk to faculty members, see if there are TA positions available. Whatever your interest, make it a priority to seek out opportunities. No one is going to hand you anything; you must be proactive.

What advice would you give applicants or those considering dental school?

Go shadow a dentist, talk to people in the dental career, and browse the internet to see what opportunities are available. My best advice is to make sure you have a strong application—with strong grades, a competitive DAT score, and hours of experience and community service—and turn it in as early as possible. When you get an interview, just be yourself and don't stress. At that point, the dental school is already interested in you.

What helped make the transition to dental school easier?

I lived in California with my parents all my life. Moving to New York, on the opposite side of the country, terrified me. The first year, I lived with my aunt in New Jersey and commuted to school, but it was still a rough transition. I found that, if you keep yourself busy and focus on what you enjoy about the new city or new school, you'll be fine. Also, make as many friends as possible because they are just as homesick and you can help each other.

What is your advice on financial aid?

I have student loans. I learned about loans through the internet. Just browsing helped me understand what I was getting myself into. Also, each dental school has a financial aid office that can help you.

Are you married/partnered/single? Any children?

I am in a long-term relationship.

the variety of activities, which can include teaching in didactic, clinical, and laboratory areas; patient care in the clinic or a faculty practice; designing and conducting research; writing for journals; exploring new technologies and materials; and administration. Many dental school faculty members combine their love for teaching and research with private practice. Should you choose to start your career in private practice, don't fear that you have closed the door on academic dentistry. The vast majority of new dental faculty members each year (both full- and part-time) enter academic dentistry after time spent in private practice. ADEA has excellent information on careers in academic dentistry at www.adea.org.

Dental Research

Dentists trained as researchers are scientists who contribute significantly to improving health care nationally and internationally. Many researchers are faculty members at universities; others work in federal facilities, such as the National Institute of Dental and Craniofacial Research (NIDCR), which is part of the National Institutes of Health (NIH); still others work in the private sector. In addition, some dental students and practicing dentists may decide at various points in their careers that they would benefit from participation in a research experience. For those individuals, advanced dental fellowships and research opportunities are available in a variety of areas and are sponsored by public and private organizations. Support is given to individuals who are still dental students, as well as to those who have graduated from dental school.

For more information, contact the American Association for Dental Research (AADR), 1619 Duke Street, Alexandria, VA 22314-3406; 703-548-0066; www.aadronline.org.

Service in the Federal Government

Dentists in the federal government may serve in varied capacities. Research opportunities have been described briefly above. In addition, the military enlists dentists to serve the oral health needs of military personnel and their families. The U.S. Public Health Service (PHS) hires dentists to serve disadvantaged populations that do not have adequate access to proper dental care, and the Indian Health Service (IHS) hires dentists to provide oral health care for American Indians and Alaska Natives.

Public Health Care Policy

Dentists who become experts in public policy may work at universities, or they may be employed in government agencies such as the U.S. Department of Health and Human Services (HHS) or in a state's department of health. Other dentists who are experts in public policy work with associations, such as the American Dental Association (ADA) and ADEA, or are employed by state and federal elected officials to help them develop laws dealing with health care issues.

Life in academia: becoming a faculty member

One of the options you will have after graduation is to become an educator. Dental educators find they have superb opportunities to shape the future of the profession and dental education for generations to come.

Some of the benefits of an academic career include:

- The opportunity to work in an intellectually stimulating environment with engaged colleagues and bright students.
- The chance to participate in a variety of activities, including research, teaching in laboratory and didactic settings, providing care in school clinics, administration, publishing, and exploring new technologies and materials.
- Enhanced opportunities for professional development through travel to national and international meetings.
- Employer-sponsored benefits, including retirement.
- No additional debt from starting and managing a private practice.

And, did you know the following?

- In an ADEA survey on the dental faculty work-life environment, 71% of respondents expressed satisfaction with their overall balance of work and other aspects of life.
- With nearly 400 vacant teaching positions annually, dental educators are in demand.
- Federal and state loan forgiveness programs are available for young faculty.
- You can get started as a dental student by talking with professors about academic life, shadowing instructors, and looking into additional training and research opportunities.

Visit www.adea.org for more information on becoming a faculty member and on the exciting future of academic dentistry.

International Health Care

Dentists engaged in international health care provide services to developing populations abroad. They may work for agencies such as the World Health Organization (WHO) or in other global public health organizations. The International Federation of Dental Educators and Associations (IFDEA) offers numerous resources for those interested in international oral health care. More information can be found at www.ifdea.org.

Final Thoughts

Some of the above options overlap. Dentists who work in private practice, for instance, are often self-employed, but some are salaried employees in group practices. Dental researchers, however, often work in university settings but may be employed by the federal government or private industry. This list of practice options is not exhaustive because the horizons of dentistry are expanding every year, especially at this dynamic time in health care. New areas in dental service are being created with opportunities for dental health care providers in practice, industry, government, dental societies, national scientific organizations, and educational institutions. For additional sources of information on all of these opportunities, see Chapter 5 of this guide.