DENTAL HYGIENIST: A DENTAL PROFESSIONAL IN AMERICA

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SUMMARY

The aim of this article is to introduce the role of dental hygienist, curriculum, tasks, responsibilities, training and other aspects of professional life of dental hygienists in America. It is a brief overview on the birth of the dental hygiene profession and then goes into detail on the number and distribution of dental hygienist in America. It gives a description on licensing requirements for both US citizens and international students seeking license and the examination criteria of the National Board Dental Hygiene Exam. The article is an informational tool for the international community on the dental hygiene profession and issues faced by dental hygienist in America including the minority population such as international students. It provides information on the demographics of the profession and the role of international students and minorities and their future in the dental hygiene profession, in the United States of America.

Key words: Dental Hygienist, training and requirements, professional license, USA.

INTRODUCTION

Who is a dental hygienist?

In A Practical Guide to the Management of the Teeth (1819), Levi Spear Parmly emphasized the importance of daily preventive oral health behavior to prevent the teeth and gingiva from oral disease. During that time, a number of dentists were becoming aware of the importance of dental hygiene in the general public. In 1845, The American Journal of Dental Science criticized dentists for neglecting the preventive part of dentistry, opting instead to focus on mechanical dentistry and surgery. Later, many dentists wanted to provide preventive care, but they barely had time to provide the services for which they were trained.

Alfred Fones in 1913, a leader in the oral hygiene movement, recognized the importance of teaching children appropriate oral hygiene procedures to prevent oral disease. Fones developed a program to teach the necessary techniques - prophylactic dental care and instructions in toothbrushing, flossing, nutrition, and general oral hygiene — to public school children in Bridgeport, Connecticut, USA. His concept of training women to deliver the information was the root of today’s dental hygiene profession. Fones used the term dental hygienist rather than the customary dental nurse to emphasize the importance of mouth cleanliness as a therapeutic regimen for the prevention and treatment of some oral disease.

Distribution of Dental Hygienists

As of April 2003, there are 166,000 licensed dentists and 120,000 licensed dental hygienists. It is projected that during the next 10 years, these numbers will be reversed, and hygienists will outnumber dentists for the first time ever. Currently, there are 265 dental hygiene schools in the United States and in 2003 these programs received a total of 27853 applications. With a student capacity in dental hygiene programs of only 7261, the total number of students enrolled for 2003...
was 6729 and in that year 5693 graduated. In comparison to the nursing field, dental hygienists are predominantly females. In 2003, out of the 6729 number of students enrolled 322 of them were males. However, first year male enrolment increased 13% from 284 in 1996 to 322 in 2003. The dental hygiene career is expected to be one of the fastest growing occupations through the year 2012. Dental hygienists held about 148,000 jobs in 2002, with more than half of them working less than 34 hours per week. In 2002 the median hourly earnings of dental hygienists were $26.59. The middle 50 percent earned between $21.96 and $32.48 an hour, and the highest 10 percent earned more than $39.24 an hours Earnings vary by geographic location, employment setting, and years of experience, and may be paid on an hourly, daily salary, or commission basis.

License Requirements

In the United States, the basic requirement for practicing dental hygiene is a license. A dental hygienist is a licensed professional like a physician, a dentist, and a nurse. Licensure is the strongest form of regulation for licensed professionals and in accordance with state law, these individuals are the only persons who meet the minimum qualifications necessary to practice their profession. Licensure is granted on a state-to-state basis and it is a mean of protecting the public from unqualified individuals and unsafe practice.

Licensure requirements do vary from state to state therefore, it is necessary to contact each licensing authority for its specific application procedures. However, in practically every state a license can be granted by:

- Graduation from an American Dental Association accredited dental hygiene program. Most programs are two years for full-time students and three years for part-time students.

- Successful completion of the written National Board Dental Hygiene (NBDHE) Examination. There are a total of 500 questions, 150 of which are Case-Based. 10 cases are presented with radiographs, dental and medical history, intraextra oral exam and a brief description of the patient, followed by 15 multiple-choice questions on that particular case. The remaining 350 questions are broken up in 12 subject areas. The 2004 NBDHE subject areas and number of questions associated with those areas were:

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Number of Questions</th>
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<tr>
<td>Anatomic Sciences</td>
<td>19</td>
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<td>Nutrition</td>
<td>12</td>
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<td>Microbiology-Immunology</td>
<td>10</td>
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<td>Pathology</td>
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<td>Pharmacology</td>
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<tr>
<td>Patient Assessment</td>
<td>71</td>
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<td>Radiology</td>
<td>46</td>
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<tr>
<td>Management of D.H Care</td>
<td>59</td>
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<tr>
<td>Periodontology</td>
<td>49</td>
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<td>Preventive Agents</td>
<td>19</td>
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<tr>
<td>Supportive Treatment</td>
<td>16</td>
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<tr>
<td>Community Health</td>
<td>20</td>
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- Successful completion of a regional or state clinical board examination. Depending on the state you are going to practice Dental Hygiene, there must be successful completion of that state clinical board or regional examination. There are four main regional testing agencies. The Northeast Regional Boards (NERB), the Central Regional Testing Services (CRDTS), the Southern Regional Testing Agency (SRTA), and the Western Regional Examining Board (WERB). There is a fifth agency, The Independent Testing Agency which only a few states such as Alabama, California, Delaware, Florida, Hawaii, Indiana, Louisiana, Mississippi, Nevada, North Carolina, Puerto Rico, Virgin Islands are part of.

The basic requirement for enrolment in an American Dental Association (ADA) accredited dental hygiene program is a high school diploma or GED; minimum age of 18; high school courses in mathematics, chemistry, biology and english. Some programs require specific entrance test scores and prerequisite college courses in chemistry, english, speech, psychology, sociology and liberal arts. Once in, a dental hygiene program, a student typically acquires 1,000 hours of classroom instructions, including more than 600 hours of preclinical and clinical instructions under the direct supervision of dental hygiene educators. In a two-year, college-based program, a student graduates with an associate's degree in applied sciences in dental hygiene. For a four-year, bachelor's degree program, the student takes hygiene courses in conjunction with or after an associate's degree in applied sciences.
International Students

Today’s global society is becoming increasingly multinational and multicultural. However, for the first time since 1971, American colleges and universities have seen a falloff in the number of foreign students. Based on annual surveys of 2,700 US campuses, the report, “Open Doors 2004,” found the number of undergraduates from other countries fell by almost 5 percent on American campuses for the 2003-2004 school year, while the number of graduate students increased 2.5 percent. Large research institutions were hardest hit, with 15 of the top 25 host universities reporting enrollment declines, some as large as 23 percent.1

Student visa procedures have grown more complex and expensive since the Sept. 11, 2001. But specialists say the trend also reflects increasing competition for foreign students from universities in Britain, Australia, and other English-speaking countries that have more widely recognized the economic benefits of their presence.2 In dental hygiene schools, international students represent a small population. The American Dental Association’s Survey Center reported that in 1994, 96% of dental hygiene graduates were US citizens and the remaining 4% were from other countries.3 A study by Cynthia Howard in 1997 found that the highest international student population came from Canada (42%) followed by Asia (32%) and Europe (10%).4 The study recommended that dental hygiene schools need to actively recruit and retain international students. International students still need to complete a two or a three year dental hygiene program and pass the boards’ exam to become a dental hygienist. In addition, dental hygiene programs usually don’t accept credits or classes taken from other institutions outside of the US. Therefore, even foreign trained dentists have to take all required and prerequisite courses to enter and complete a dental hygiene program.

Preceptorship-trained hygienist

Preceptorship comes from the preceptor, which means teacher or instructor. In the case of dental hygiene it means a practicing dentist trains a person “on the job” to perform dental hygiene duties instead of requiring a two or four year formal, ADA accredited education program and national/regional examinations to obtain a license. Preceptorship-trained hygienists are also known as preventive dental assistants (PDAs). Alabama, Kansas and Texas are the only three states that have alternative training programs.

Dental Hygiene Services (Tasks and care provided)

Axelsson5 conducted a survey and found that the legal scope and clinical practice of most of the world’s hygienists is astonishingly similar. (Countries included in the survey were Australia, Canada, Denmark, Italy, Japan, Korea, the Netherlands, Nigeria, Norway, Sweden, Switzerland, Great Britain, and the United States.) Dental hygiene clinical practices are characterized by a common set of procedures, including treatment planning, health history, provision of self-care, scaling, root planning, debridement and professional mechanical tooth cleaning, topical application of fluoride gels and varnishes, sealants, finishing of restorations and overhang removal, dietary evaluations and counseling, and administration of salivary and oral microbiology tests. In the United States each state has its own specific regulations and the range of services performed by a dental hygienists vary from one state to another.6

Responsibilities include, to:

- Perform oral health care assessments that include reviewing patients’ health history, dental charting, oral cancer screening, and taking and recording blood pressure.
- Expose, process, and interpret dental radiographs.
- Remove biofilm and calculus (tartar-soft and hard deposits-from above and below the gum line
- Apply cavity-preventive agents such as fluorides and sealants to the teeth.
- Teach patients proper oral hygiene techniques to maintain healthy teeth and gums.
- Counsel patients about plaque control and developing individualized at-home oral hygiene programs.
- Counsel patients on the importance of good nutrition for maintaining optimal oral health.
- Administration of local anesthesia (infiltration) and nitrous oxide.
The dental hygiene profession for the past decade has been moving to a more evidence-based practice and a holistic approach in treating their client needs. The dental hygienist role has been expanded to be a resource center on nutritional information for their clients and consumers by initiating healthy lifestyles, promoting good general health and oral health along with giving the necessary tobacco cessation resources. In addition, dental hygienists are raising awareness on the seriousness of cardiovascular disease and act as a center for heart and stroke issues including health promotion and disease prevention.

Where does a dental hygienist work?

Dental hygienists can work as clinicians, educators, researchers, administrators, managers, preventive program developers, consumer advocates, sales and marketing managers, editors, and consultants. Clinical dental hygienists may work in a variety of health care settings such as private dental offices, schools, public health clinics, hospitals, managed care organizations, correctional institutions, or nursing homes. In November 2003 Professional Savvy, LLC, and RDH magazine surveyed 421 dental hygienists in 46 states on their job positions. They found that the majority of dental hygienists (366 respondents) work in a private practice with one or more dentist or in a specialty practice. Three percent work as an instructor/professor and in public health and 2 percent in a corporate environment.\(^1\)

Issues Faced by Dental Hygienist

Salary and Benefits

The salary and benefits dilemma has been an ongoing issue faced by many hygienists in the past and present. Many have been disappointed in the level of salary they currently receive, especially those practicing for several years in the same dental office. Dental hygiene graduates are being paid the same salary as experienced dental hygienist working in the same practice. In any other business an individual would be compensated for their years of service at one company. Many practicing dental hygienists who have worked extremely hard to become respected and recognized as an important part of the dental professional team through years of hard work, are not shown that same respect. Additionally, salary increases are another obstacle when the dentists are not annually increasing the salary to compensate the dental hygienist for doing a thorough and professional job throughout the year.

Benefits are only given to dental hygienists that work full-time, and some benefits do not even include a 401K or retirement plan. Part-time dental hygienists have a real challenge in obtaining benefits if they work in two or three dental offices during the year.

State Regulations

Dental hygienist, whether practicing unsupervised or under direct or general supervision have voiced their concerns of state regulations prohibiting them from practicing their daily job responsibilities. Many dental hygienists would like to administer nitrous oxide and local anesthesia to their patients, or set up an independent practice in any state throughout the United States. Since dental hygiene responsibilities vary from state to state, dental hygienists who go through the same rigorous program and examinations do not share the same opportunities. For example, a dental hygienist graduating from New York State has gone through similar standards as one graduating in California, but in New York, dental hygienists are not allowed to set up an independent practice. In addition, that same dental hygienist in New York, who have endured two to three years of intense training and passed painstaking and meticulous board examinations have the same responsibilities as a dental hygienist in Texas who received their license through "in house" training from a dentist and without a state board examination.

Preceptorship

A preceptorship dental hygienist, also known as, preventive dental assistants (PDA’s) is one who received their license though on the job training from a dentist, without attending an ADA accredited dental hygiene program and passing a national/regional board examination. Many PDA’s have come forward with accounts of a dentist just handing them a book on instruments and telling them to start cleaning teeth. Patients also have an issue with college trained hygienist verses a PDA. Some preceptorship hygienists have used the dental hygiene clinic at University of Alabama for some classes and when patients ask them where they graduated from, they would reply University of Alabama.

Last and most important issue with preceptorship is that PDA’s are not trained to detect and remove
subgingival calculus. Due to the slow progression of periodontal disease any threat or harm to a patient may go undetected or undiscovered. Dental hygienists have pointed out that a 6mm defect with subgingival calculus gets scaled supragingivally by the PDA time after time. Periodontal disease and its bacteria have been linked to many life threatening disease, such as heart disease, diabetes, respiratory disease and stroke. Having an unskilled and inexperienced oral healthcare worker runs a greater risk of jeopardizing a patient's health. An unlicensed individual conducting dental hygiene job responsibilities should not be considered for the ethical treatment of dental and periodontal patients.

Minorities

Despite an increase in the number of men entering the field, dental hygiene is still a profession overwhelmingly dominated by women. The dental hygiene profession offers both a flexible work schedule and the ability to exit and reenter the workforce relatively easily and for this reason females have dominated the dental hygiene field. Pay is also another reason. Dental hygiene pay is good for a family who is supplementing its income, however, it is not always enough to solely support a family which men might be looking to do. The social persistent view that dental hygiene is a female profession also might explain why there are so few male dental hygienists. Though not legitimate, the social perception can be powerful, explains Andy Codding, RDH, who says such stereotypes prevented him from entering dental hygiene school until after his freshman year of college. "I had considered it prior to that, but just didn't really want to do it because it is a women-dominated profession, and I just didn't want to deal with all the stereotyping. Glenna Johns, RDH, adds that "we have had several male dentists say that they would not interview a male student." Another hygienist Kevin Clay" says that he has experienced some resistance typically among older male dentists, however, he has spoken to dentists who say they would prefer to hire a male. Most dental hygienists are not only females but they are overwhelmingly Caucasian. A recent American Dental Hygienists' Association (ADHA) survey of more than 9,000 members found Caucasians accounted for 93.4% of the dental hygiene workforce." Examining ethnic diversity in U.S. dental hygiene programs, Indu Dhir found minorities comprised 10.6% of students despite their comprising 27% of the population and 26% of higher education students. Dhir also noted that "there basically is no recruitment" when it comes to dental hygiene programs attracting minority students. According to Dhir, studies conducted in other health care fields have shown that a lack of minority health care professionals can dissuade minorities from accessing care.

The U.S Census Bureau predicted that by the year 2053 the Caucasian population will shrink to 53% and eventually the ethnicity and minority issue of oral health will become more and more important. Howard concluded that enrolling international students in U.S. dental hygiene programs gives other countries access to much needed oral health services. International students also help increase awareness of diversity among the student body through academic and social interaction. As healthcare providers, dental hygienist must be aware that the client population is diversifying and therefore, requires that providers be knowledgeable of the cross-cultural care setting.

It is hoped that this article would be of some help to dentists, dental students and others to know more about dental hygienist's professional career development in the United States of America.

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