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3 Editor’s Desk
So Much To Share

4 President’s Message
Dare to Be Different!

5 House of Delegates
Second Anniversary – CDHA 2018 House of Delegates

7 Through Another Lens
Diversity...Living My Dream

9 Student Connections
Ueland Award Winners Represent the Future of Community Service
Student Photo Contest – Winners serving their community

11 History of California RDH
Lost in History-Not to be Forgotten

16 LifeLong Learning
Assessing and Treating Patients with Diabetes in Dental Settings

24 Government Relations
Renewed Commitment as a Voice for Positive Change!
Changing the Equation

All House of Delegate group photos throughout this issue by photographer Steve Pate-Newberry

Left photo: Ontario, Canada, Dental Hygiene Association members Sandra McKay, RDH and Gina Vasiliadis, RDH are welcomed by President Lory Laughter

Right Photo: 2017-18 Council Chairs
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Welcome to a new President’s term – 2018/2019! To our New Professional members – we look forward to hearing your views. Welcome Back to our continuing members – we appreciate you and are glad you’re part of CDHA. Welcome to those who are taking advantage of the insurance and investment packages – you’ve joined so many who are increasing their insurance and financial benefits and working for their profession at the same time. Welcome to those, like me, who have retired but still want to make a difference – we value your experience and wisdom.

There’s lots of information for you in this issue of the CDHA Journal: meet your new President, Beth Wilson, find out what your Trustees and Delegates approved at our House of Delegates, take the CE course that spells out new methodologies for identifying patients with Diabetes, see features on California students, and read what your Government Relations Committee is doing to protect and advance our profession.

At the House of Delegates, the Executive Officers hosted a collaborative “thinking” session to bring forward new ideas and concerns CDHA can address. Diversity became a primary topic – what does that truly mean and how can we explore and expand on it. Our new VP of Administration and Public Relations shared his perspective as a male RDH. He made me rethink some of my ideas – read what he said in this issue.

With our House of Delegates in Sacramento, we had an ideal photo opportunity – over 250 students, delegates and officers standing proudly in front of the California state Capitol (our cover photo!). Thanks to photographer Steve Pate-Newberry for making it happen.

A shout out to Sacramento Valley for nominating me for the Outstanding Component Member Award – thanks guys!

Isn’t this young man adorable? Hopefully, this image leaves you with a smile!

Did you know??
The Dental Board of California has approved the Nicolae Testemitanu State University of the Republic of Moldova Dental School.
The Moldova school advertises they require only a high school transcript, biology test, English and Chemistry essay - and a note from the parents if the student is under age 18. To put this in perspective - all California dental schools include at least 164 upper/lower division science and core requirements.

Thanks to Susan Lopez for sharing a letter to/from CA Assemblyman Muller in which she pointed out to him the disparity in standards and the implications for California dental patients.

Liz Moore, RDH, MSEd
Editor
“Dare to Be Different!”

Remember those halcyon days of high school – trying to develop your own style, be your own person and, yet, still be accepted because sitting alone at the football game or not going to Prom was the end of the world!! And your parents never truly understood (after all – they were ancient!) and they told you that you were wonderful, just the way you were.

Those feelings still live in us, despite how many decades we’ve lived – we want to be part of the team, but sometimes we want things to change, to improve, to…whatever defines what we’re trying to describe. And it’s frustrating when we can’t get our point across – is it that people aren’t listening to us or are we not explaining our purpose, reasons or issues effectively?

I understand those frustrations and hope to see us, the members of CDHA, create some changes. Nothing is more exciting than seeing an idea come to fruition – to see it jump from thought to plan to actual change.

Some members and students have shared with me their frustration of having an idea and not knowing how to move it forward within CDHA. My goal is to help you find your voice or to be that voice for you if that’s more comfortable for you. My hope is that, together, we can increase the free flow of ideas and empower every member with an idea to share it. My goal is to encourage you – to dare you to be different! Let those ideas fly!

If you have an idea about a student activity, contact me. If you have a concept for a community outreach project but aren’t sure how to get it started, contact me. If you want to grow into a leadership position within CDHA but don’t know how, where to start – contact me.

I can be reached by:
- mail at CDHA, 1900 Point West Way, Ste. 222, Sacramento, 95815
- email at president@cdha.org

Let me hear from you. I want to hear your ideas, your concerns, your successes and even the ideas that need a little refining to be a success the next time.

Wishing us all a productive, thoughtful, exciting year because we all dared to be different!

Beth Wilson, RDH, BS
2018-19 CDHA President
The 2018 House of Delegates began the second anniversary of our growing organization with CDHA members from 25 components and 21 schools attending the opening ceremonies at the Hyatt Regency in Sacramento on Friday June 8th. President Laughter was acknowledged by the assembly for guiding CDHA through our second year and challenged the delegates to continue pursuit of her theme Prospering Through Collaboration. President Laughter’s guest speaker, Aaron Read, CEO of Aaron Read & Assoc. expressed his passion for CDHA and for supporting our profession at the Capitol.

Celebrations during the weekend included the Star Trek themed President’s Reception where Trekkies and Klingons mingled and danced together and the President’s Luncheon highlighted by the presentation of the President’s Award to Susan McLearan for her long and important service to our profession and to CDHA.

A spectacular CDHA photo shoot occurred on the West Steps of our state building. Orchestrated by our Journal Editor Liz Moore, with the help of numerous student aides, all attendees were guided from our House to the Capitol Steps for the impressive photo.

**Actions of the House:**

- **By-laws changes that:**
  - Set component’s dues at the same dollar amount for all components
  - Set the composition of the House to be the officially certified Delegates from the component, the Trustees and elected officers of this Association and one student Delegate from each California Dental Hygiene Program as outlined in Scopes, Procedures and Protocol Manual

- **Resolutions were adopted that:**
  - Passed a balanced 2018 - 2019 budget
  - Set all component dues at $30.00
  - Set the total number of delegates to the House of Delegates at 5% of the total membership as of September 30 of the previous year, to remain in effect for two years
  - Supports increased access to dental hygiene care by licensed dental hygienist without supervision and in collaboration with non-dental healthcare

*Continued on Page 6*
professionals in healthcare settings including, but not limited to, medical facilities such as hospitals, clinics and medical offices.

- **Election of the 2018 – 2019 Slate of Officers:**
  - President Elect – Darla Dale, RDHAP, BSDH
  - As a testament to the strength of our organization and the commitment of our members, three highly qualified members stepped forward as candidates for the office of President-Elect resulting in a runoff election.
  - Vice President of Administration and Public Relations – Michael Laflamme RDH, BA

Past President Vickie Kimbrough served as the Installation Officer for the incoming and returning Trustees and Officers. Incoming President Beth Wilson, was joined during the installation by her husband Jeffrey Wilson, who presented her with her President’s Pendant.

**2018 -2019 CDHA Executive Officers**

- **President:** Beth Wilson, RDH, BS
- **President – Elect:** Darla Dale, BSDH, RDHAP
- **Vice President Administration and Public Relations:**
  - Michael Laflamme RDH, BA
- **Vice President Membership and Professional Development:**
  - Jeannette Diaz, RDH, RDHAP, BS
- **Secretary – Treasurer:** Yvette Warren, MA, RDHEF
- **Immediate Past President:** Lory Laughter, RDH, MS
- **Speaker of the House:** Susan Lopez, RDH, BS

**SHOR Officers**

Representing the student voice at the Student House were the two elected **Voting Student Delegates**

- **Caitlin Trusas** – University of Pacific
- **Jennifer Potts** – West Los Angeles College

Elected by the students to lead SHOR as **Student Speaker of Shor, Amanda Gonzalez** – West Coast University

CDHA thrives because of the commitment of our members to our profession and to our professional organization. As out-going President Laughter stated – Strength in Numbers is how CDHA will grow and prosper. Be part of the growing strength - Join us for next year’s House of Delegates.
Diversity... Living my Dream

By: Michael Laflamme, RDH, BA
VP of Administration and Public Relations

As we celebrate the 100th year of Dental Hygiene in California, we can reflect on all that has changed since the inception of the Registered Dental Hygienist (RDH). Along with the major changes in our scope of practice, the profession has also seen the influx of male RDHs. What was once a female dominated profession (and in my opinion, still is), has found male RDHs working as clinicians, sales representatives, researchers, instructors, and program directors, to name a few.

My own entry into our field was a bumpy one because of my “Y” Chromosome. The year was 1986, and I was attending my first year in college, studying Architectural Engineering Technology at a small college in Concord, New Hampshire. The college had only recently become co-ed in the last decade, with male and female exclusive dormitories. A strict first month of school policy barring male and female students from their counterparts’ dorms, meant only limited interaction and few ways to meet the opposite sex. One of my new friends discovered that there was a dental clinic where female DH students needed patients. He quickly surmised this was a great way to meet the women of our college, so many of us signed up together.

Unlike my friends, my interest quickly turned to this profession. Upon leaving the chair, I quickly inquired with the two floor instructors if I could change majors and enter this program. “No, you won’t be able to change majors,” came the reply. Innocently thinking it was due to missing the first month of instruction, I inquired if I could apply for the next class starting in the fall. “No, that is not the problem. The issue, they stated, is you are a guy, and nobody will hire a male dental hygienist.” I didn’t receive this as discriminatory, and truly felt the instructor was simply relaying some good advice so as to not waste my time on something that would have zero results.

My time in the two year engineering program was a huge struggle, because let’s face it fellow hygienists, we aren’t in our profession because of our exceptional math skills. I moved on, and sought financial assistance by joining the Air Force. Perusing the catalog of jobs, I quickly found “dental technician”, the Air Force equivalent of a Dental Assistant, with the added skills of scaling and polishing teeth. I quickly joined, was lucky enough to secure the dental job, and was intensely trained for three months. I learned every specialty, and was selected to work exclusively in the periodontal department. Seeing my aptitude and enthusiasm, my dentist trained and educated me as a hygienist. My head and neck anatomy classes weren’t textbook pictures, but instead were live patients undergoing oral and periodontal surgery.

As the time arrived to leave my active duty career, I began to look at college programs. I still recall the conversation with the nine dentists with whom I worked in the clinic – could I find work in their office as an RDH back in the states from which they originated? While all respected my work and training, only one said that his surrounding community would accept a male hygienist. Seven years after the comment I heard in New Hampshire, it seemed prejudice against males still existed in the hygiene profession. Interestingly, the sole dentist who said his community would accept me was from California.

I was the only male in my pre-requisite classes pursuing an RDH license. I was the only male in my DH class of 30. And while I found males in my local component and at the state level, there weren’t many of us. In fact, the only benefit enjoyed from this is the vacant restrooms and lack of lines when breaks occurred at CE classes or conventions. Does this affect and deter males from entering our profession? I’ve never posed the question to other males.

What we do share amongst each other is the difficulty in finding work. “Oh, we had a male hygienist once, it didn’t work out.” I’ve heard that one a few times. I also have been to interviews where the office consists of one male DDS, and several single female dental assistants and office staff. In these situations, the male DDS sees the male RDH as a threat, another rooster in the hen house if you will, and an offer of employment is never extended.

Continued on Page 8
“So you’re just doing this until you go to dental school, right?” This one bothers me the most. My profession as an RDH is just that, my profession and I embrace, enjoy, and celebrate my role as an RDH. Am I supposed to just see it as a stepping stone to becoming a DDS because I am male? What does that imply to my female RDH colleagues then? That they are “only good enough” to be an RDH? A terrible assumption and statement all around.

There are also positive, yet erroneous effects as well. “Hey Doc”. I’ve heard that too many times to count. I have even had to correct the front desk staff at my public health clinic on occasions from referring to me as “doctor.” I once had an endodontist representing a dental laser company, pitch his product exclusively to me, while my employer, a female DDS, sat dumbfounded.

At our recent House of Delegates, I was happy to see not only a large student turnout, but one that had more than a half dozen males. At the request of a colleague, I rounded up male RDH’s present and we introduced ourselves and shared our backgrounds, experiences, and difficulties as male hygienists. It was a very positive experience, and we all reached out as mentors to help and guide them into our profession and our professional organization.

We are a small percentage of the overall Registered Dental Hygienists nationally, but we are growing, and we are accepted by our RDH colleagues without question. And while some offices dismiss or avoid us, many never notice the difference, nor does it even register on their radar. We are adding to our profession, and I hope to see our numbers, and more importantly, our acceptance, grow. To the men considering or just entering a Dental Hygiene program, I’d like to say welcome, and you’re going to love your new profession and living your dream.

**About the Author**

Michael Laflamme is a Registered Dental Hygienist who works clinically at a large public health clinic and an orthodontics centered private practice in San Francisco. He is also a clinical instructor at the University of the Pacific dental hygiene program.

Michael began his dental career in 1989 as a dental assistant with the United States Air Force. Following his Air Force career, he obtained a degree in Broadcasting and Electronic Engineering, working at the Discovery Channel and NBC, before life circumstances intervened returning him to school to obtain his California RDH license. He has been practicing in California since 2009.

Michael is very active in his local component and at the state level. His passion is public health, and he regularly organizes and attends local and state outreach dental clinics to treat the underserved. When he is not working, you can find him cycling with local groups of friends or in organized races.

You can reach Michael at mslaflamme@gmail.com.

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**Special Recognition for Susan Lopez**

The UCSF School of Dentistry Alumni Association awarded its 2018 Medal of Honor to CDHA’s Susan Lopez at their Alumni Meeting/Scientific Session, June 2nd. The only recipient of this prestigious award in 2018 and only the 7th RDH so honored, Susan becomes the 88th recipient in the award’s history. Susan’s accomplishments were recognized as she joined the august company of previous recipients Katie Dawson, Peggy Walsh, Norma Francisco and Jean Poupard. As her husband Michael received the award two years ago, they are also unique as the only husband/wife honorees. Congratulations to CDHA Speaker of the House, Susan Lopez.
Ueland Award Winners Represent the Future of Community Service

Four dental hygiene students received awards of $1000 as DHAI announced the winners of the annual Cora Ueland Scholarship Award program, created to honor the founder of the USC Dental Hygiene Program. In their submitted essay, these four students – two 1st year students and two 2nd year students – focused on how aspects of their education have shaped their aspirations for their future dental hygiene careers. With emphasis on how they will use the skills they’re learning to improve dental health in their communities, they each have interesting stories to tell.

Second Year Winners:

**Jonas Nguyen**, a student at the University of the Pacific, feels a responsibility to narrow the gap between oral health and overall health and urges moving dentistry into medical healthcare settings, advocating for the modernization of professional integration. One of Jonas’s professors introduced him to the concept of “upstreamists” – recognizing the patient in a behavioral, economical, humanistic and practical approach. Living in the Bay Area, Jonas has had meaningful experiences in the many unique areas of the city and wants to put the upstreamist principles to work actively volunteering in those communities.

**Ashley Reuser**, studying at Santa Rosa Junior College, came to her studies having graduated from a dental assisting program. During the past year, in this community affected by a natural disaster, Ashley volunteered to assemble thousands of bags of dental items that were distributed to affected residents. Attending the Student House of Delegates, Ashley learned more about CDHA and shaped her personal and professional future. She plans to become a member and strong advocate.

First Year Winners:

**Morgan Robinson** prior to entering San Joaquin Valley College, Ontario, worked abroad with dental professionals in an office and orphanage in a socio-economically challenged area. This experience taught her how to communicate with patients, especially children, in a variety of cultures and how significantly one person can affect a community. Morgan plans to become a CDHA member and wants to focus on continuing the patient education she learned in other countries, working with adolescents and joining a travel-volunteer group that works with people in lower income areas.

**Nakisa Golabi**, while working as an undergraduate towards a Bachelor Degree in Health Sciences with an emphasis in Health Education, participated in a 300 hour internship that strengthened her skills to the benefit of patients throughout her career. A Diablo Valley College student, she feels strongly called to become an active CDHA member and officer. Focusing on labor laws and infection control, Nakisa wants to advocate for dental hygienists being able to obtain fair and safe careers in dental hygiene.

*Continued on Page 10*
Clearly all of these winners will be productive, influential members of their professional communities. We hope they’ll bring their skills, talents and enthusiasm to CDHA as we advocate for our profession and the communities we serve.

Every year the non-profit foundation of CDHA awards monetary scholarship awards. The focus of the DHAI (Dental Hygiene Associates, Inc.) is to increase quality, preventive dental hygiene services through strengthening health manpower resources and to create alternate employment opportunities for dental hygienists. Interested students should access the CDHA website for more information at www.cdha.org.

Students celebrated being at our Capitol with flags.

**Student Photo Contest – Winners serving their community**

The Dental Hygiene students of Concorde Career College in Garden Grove are the winners of the annual CDHA Membership Council Student Photo contest. The students held a Smile Drive to bring in donations for their Children’s Health Fair, gathering hundreds of donations (toothbrushes, toothpaste, and mouth rinse) from local dental offices, corporate sponsors, and individuals.

Their Children’s Health Fair was held in February with students using the donations to help educate and provide resources to the underserved population of their community. Flyers for their event were distributed throughout Orange County plus they arranged the support of a local radio station which announced the event on their show!

Their excitement about this opportunity to share proper oral care with families in their community shows in their photograph.

Congratulations to the students of Concorde Career College and all those students/faculties throughout California who reach out to serve their communities.
Lost in History-Not to be Forgotten
Charlotte S. “Sadie” Greenhood
1897-1946
By: Susan McLearan, RDHAP

When dealing with historical people and events, it’s safe to say that much will be missing. Information presented here is based on the little that was found after weeks of research. This version, however incomplete, gives a picture of a woman who should not be forgotten.

Charlotte – the Healer

In a previous issue we paid tribute to March Fong Eu, a trailblazer for women and dental hygienists in California. Looking back even further we learn Charlotte Greenhood was a force who enabled the profession of dental hygiene to grow and flourish in our state in the early days of the 20th century.

There are several places where the name Charlotte Greenhood appeared during research into early dental hygiene in California. She was mentioned in Wilma Motley’s account of the American Dental Hygienist Association and in our own account of our history in a 2003 issue of the CDHA Journal. We really began to know Charlotte upon discovering a pamphlet in the archived materials of the Southern California Dental Hygienist’s Association. A twenty-four page booklet was written for the 41st Annual Meeting of the American Dental Hygienists Association held in San Francisco, November 1-12 1964. Authored by early hygienists Anita C. Junck and Elizabeth Barney, it contained many details of the founding of CDHA and ADHA. The preface to that document gave credit for both the California and National association to one person. Anita Junck, Co-Chairman of the Historical Committee stated:

“Credit must be given to Charlotte Greenhood who had vision and the enthusiasm to carry through. The rest of us followed along each having her own special assignment.”

Daring to be Different

Charlotte was one of four children of Rudolph “Ralph” Greenhood, an émigré from Germany, and Fahgilia “Fannie” Gusky Greenhood, originally from Poland. Charlotte was born in Buffalo, New York in 1897 and moved with her family to San Bernardino sometime between the ages of 3 and 9.

At 19 she worked as a dental assistant in San Bernardino for Dr. Fred Doolittle. Perhaps he inspired her, as she was quoted in the local newspaper as “going to study as a dentist because I can become a dentist as well as any other student and it is a profitable profession, too.”

She may have said she was going to study to be a dental hygienist. The profession was so new that it is possible the reporter misunderstood. Or, maybe she dared to have a long-term plan.

Small but Mighty

At age 20, the petite Charlotte (4’11” and 102 pounds) traveled alone to Boston where the Forsyth Dental Infirmary for Children, associated with Harvard, had been founded in 1910 to treat, free of charge, disadvantaged children in the Boston area. The Forsyth Dental Hygiene...
program began in 1916. In 1918, at approximately 21 years of age, Greenhood graduated from the program. She followed another Californian, Elma Platt, who graduated in 1917 and the two began a lifelong friendship.

In 1918 it was not yet legal to practice dental hygiene in California so these young women stayed in the Boston area after graduation. Elma got a job as the first dental hygienist in the Babson Statistical Bureau, Wellesley Hills, Massachusetts and also worked part time as a dental hygienist in Boston. Charlotte worked as a dental hygienist at a mental institution in Boston.

Creating Change in California

Anticipating a change in California Law, Charlotte and Elma traveled back to San Francisco to accept positions. Charlotte worked for William R. Bacon, DDS, who was then the president of the California State Dental Association. She left in 1920 to become the first ever dental hygienist to be employed by the California Department of Health in the first ever Division of Dental Hygiene. In 1922 Elma joined Charlotte at the Department.

In 1921, Charlotte designed and filed for a patent for dolls with tooth-like faces, possibly designed as teaching aids for school children. She and Elma conducted tooth brushing drills and screenings as well presented programs focusing on prevention. Under the headline “Majority of Local Kiddies Have Defects of Teeth,” the Woodland Daily Democrat of October, 1922, reported that Charlotte and Elma found only 51 of 369 children examined had perfect teeth leaving 318 needing attention. It is said that Charlotte and Elma traveled the length and breadth of the state promoting oral hygiene and hygienists to schools and health departments.

As a possible indication of their success a March 1921 news article, “Dental Hygienists Urged for Contra Costa Schools,” speaks of the intention of the Contra Costa Dental Association “to pioneer the movement (of dental hygienists) into the schools.” The hope was for an intensive educational campaign. Dr. Henderson, a representative of the Contra Costa Dental Association, said “if the plan is carried out the next generation will have little use for dentists.”

After a first false start, the California Dental Practice Act was finally amended to allow the practice of dental hygiene in May 1921. Both Charlotte and Elma took the first state dental hygiene exam given December 10 and became two of the first group of licentiates.

In 1922, Charlotte, Elma, Harriet Prosser and Leticia Wright created the California State Dental Hygienists’ Association and were the influencing factors in the creation of the American Dental Hygienists’ Association in 1923. They were charter members of both associations. Charlotte was also a member of the American Child Health Association.

In mid 1923, unprecedented cuts in the Health Department were announced in order to comply with California Governor Richardson's budget. Charlotte's position and salary of $2,400 per year was eliminated, along with the entire Division of Dental Hygiene. It also stated “in the last two years the department had instructed approximately 37,000 school children and adults in hygienic prevention of disease of the mouth.”

A New Chapter for Charlotte

In a 1923-1924 Directory, we found Charlotte had returned to the East Coast and was listed as a student at Columbia University in New York. The Oakland Tribune reported she also did graduate work at the University of Michigan and was later reported to have done research for the Columbia University Foundation.

Charlotte was the first to be elected as a member of the Tri Sigma national dental hygiene honor sorority and was listed as one of two honorary members of the local chapter formed in 1924. In that year, she enrolled as a first year student in the UCSF School of Dentistry.

By 1925, Charlotte was listed as an appointee at the UCSF Dental School in the position of assistant in dental health service. She graduated as a dentist from that institution in 1929 at 32 years of age and is still listed as a member of the faculty in 1932.

In addition to teaching, then Dr. Greenhood had a private dental practice over the years at several locations in
San Francisco. In 1930 she was the dentist at the Pacific Hebrew Orphan Asylum and Home Society (now San Francisco Campus for Jewish Living). She had an office on Taylor Street and in the iconic 450 Sutter Medical-Dental Building, we believe from 1934-1943.

**Leaving a Legacy**

In April of 1944, UC Dean Willard C. Fleming announced in the Oakland Tribune that Dr. Charlotte Greenhood would direct a program planned to expand training for dental hygienists to “meet the growing demand for workers in dentistry corresponding to public health nurses in the medical profession.” By 1945, Greenhood was Chair of the Dental Hygiene Department replacing Mary N. Boroyles, who had been “Instructor in Nursing and the Superintendent of Dental Hygienists” until she retired in that year.

During her short time as Superintendent of Dental Hygienists, Dr. Greenhood, with the help of hygienist Grace Anderson and the Northern California Dental Hygienists Association, increased hygiene enrollment that had dwindled over the previous years. This was considered a significant accomplishment.

We will probably never know what more she would have accomplished for the hygiene program and hygienists as Charlotte Greenhood was found dead in her San Francisco apartment on January 7, 1946, at the age of 48, along with notes in six sealed, addressed envelopes.

Charlotte Greenhood was small but a mighty and powerful force, leaving a legacy of “firsts”:

- One of California’s first hygienists
- Founding member of the California Dental Hygienists’ Association
- Founding member of the American Dental Hygienists Association
- First hygienist at the State Department of Health
- First hygienist/dentist to supervise the UCSF Dental Hygiene Program
- One of the few women dentists of the time

We salute Dr. Charlotte Greenhood – pioneer in dental hygiene and dentistry in California.

**Sources:**
- [https://babel.hathitrust.org/cgi/pt?id=uc1.31378007785994;view=1up;seq=338](https://babel.hathitrust.org/cgi/pt?id=uc1.31378007785994;view=1up;seq=338)
- Newspapers.com
- Ancestry.com
- San Bernardino Public Library
- Assistance from Edie Brennan

**About the Author**

Susan McIearan, RDHAP, MS, has served CDHA as President and Government Relations Committee member. A CDHA Journal Advisory Committee member, she has dedicated many days to insuring we don’t lose our history of dental hygiene in California.
2017-18 Executive Officers and Board of Trustees

Foothill College students Ruth Gardner and Sarah Taylor share ideas with CDHA Past President Ellen Standley at the "Mega Idea" Symposium at the HOD.

Jeannette Diaz, VP of Membership & Professional Development, eager to vote for officers.

Past President's Table
Sponsors – Calvin Lee of Proctor & Gamble, Kyle Zak of DentalPost, President-elect Beth Wilson and husband Jeffrey

Susan McLearan is honored with the President’s Recognitions Award by President Lory Laughter.

2018-19 President Beth Wilson receives her gavel from Immediate Past President Lory Laughter

CDHA volunteers compare notes following a day of lobbying at the Capitol for dental hygiene issues.
CE Course: Assessing and Treating Patients with Diabetes in Dental Settings

By: Mihaela Popa, RDH, MBA & Tracy Ross, RDH, M.Ed.

Educational Objectives

By the end of this course the learner will be able to:

- Describe diabetes mellitus and its prevalence in the United States.
- Differentiate between the pathophysiology of type 1, 1.5, 2 and gestational diabetes.
- Explain the links between (uncontrolled) diabetes and periodontal diseases.
- Identify the steps for prediabetes and diabetes risk assessment.
- Determine the appropriate protocols to prevent and address a medical emergency during dental treatment for a patient with diabetes mellitus.

INTRODUCTION

For years, assessing the risk for caries, oral pathology and periodontal diseases has been recommended and is viewed by many as the standard of care in dentistry. With the emerging interprofessional relationship between dentistry and medicine, coupled with the strong possibility of a bidirectional relationship between diabetes and periodontal disease, it is appropriate for dental professionals to consider performing a simple glucose screening for all new patients and those who are periodontally involved.

Diabetes Mellitus

Diabetes mellitus (DM) is the seventh leading cause of death in the United States. The 2017 National Center for Chronic Disease Prevention and Health Promotion National Diabetes Statistics Report estimated that 30.3 million (9.4%) people have diabetes, 23.1 million have been diagnosed and 7.2 million are undiagnosed in the United States. Diabetes affects some racial/ethnic groups more than others; a high predilection for American Indian/Alaska Native, Black (non-Hispanic), Hispanic and Asian more so than for non-Hispanic whites. Diabetes incidence among adults in the USA has been decreasing since 2008, however, diabetes prevalence continues to rise. This can be explained by the fact that adults with diabetes live longer due to better disease management practices. More than 4,100 diabetes self-management education and support programs were offered in the United States in 2016. These staggering numbers suggest that every dental office has patients with some form of diabetes either diagnosed or undiagnosed.

Diabetes Pathophysiology and Classification

Diabetes Mellitus, a group of pancreatic metabolic diseases, is defined by hyperglycemia due to a defect in insulin production by the pancreatic β-cells, limitations in the ability for the body to use insulin effectively, or complications that include both processes.

In a healthy individual, ingested carbohydrates are broken down into simple sugars such as glucose. The glucose passes from the digestive system into the bloodstream; when the blood glucose levels increase, the pancreatic β-cells release insulin. Insulin acts as a key, binding to the receptors on the target cells and allowing glucose molecules to enter the target cells providing them with much needed energy.

There are many classifications of diabetes, however the following four are the most prevalent. Type 1 diabetes, formerly known as juvenile diabetes or insulin dependent diabetes, results from damage to the β-cells of the pancreas causing a total lack of insulin production. In addition, there is a presence of autoantibodies detected with a blood test. These antibodies are proteins that cause an autoimmune response against pancreatic β-cells definitively marking type 1 diabetes an autoimmune disorder. Type 1 diabetes is typically diagnosed early in life with symptoms that include excessive thirst (polydipsia), excessive urination (polyuria) and excessive hunger (polyphagia). In addition, the patient
might experience unexplained weight loss, xerostomia, blurred vision and lethargy; about one-third of the cases can present with diabetic ketoacidosis. Diabetes type 1 accounts for approximately 5-10% of those diagnosed with diabetes and it can also present later in adult life, usually without the classical symptoms mentioned above.

Type 2 diabetes, formerly known as non-insulin dependent diabetes, is caused by limitations of the body to effectively utilize insulin. Type 2 diabetes is far more common, accounting for approximately 90-95% of all cases and has an insidious onset. There is an absence of autoantibodies with type 2 diabetes. Type 2 diabetes can go undiagnosed for many years and can affect adults as well as children and adolescents.

Gestational diabetes (GDM) can be discovered around the 24th week of pregnancy. This type of diabetes usually resolves itself once the pregnancy has ended, however, women who experience gestational diabetes are more likely to develop type 2 diabetes later in life.

Another classification that is becoming more understood is type 1.5 or Latent Autoimmune Diabetes in Adults (LADA). This form of diabetes is slow to progress like type 2 diabetes, however, it presents with the autoantibodies like type 1. LADA is being understood to be a slower progressing late onset type 1 diabetes that can be misdiagnosed as type 2. Approximately 10% of patients with diabetes have type 1.5 making it the second most common form of diabetes in America. Because of the slow progression of type 1.5, insulin therapy is not always indicated in the first months or years of diagnosis.

Diabetes Risk Factors

A common risk factor for type 2 diabetes includes a first degree family history. Other risk factors include high-risk race/ethnicity (African American, Hispanic/Latino, Native American, Asian American and Pacific Islander), age (≥45 years), history of cardiovascular disease, hypertension or therapy for hypertension, high cholesterol levels, lack of physical activity, poor diet, obesity (≥25 kg/m² or more than ≥23 kg/m² in Asian Americans), history of GDM or delivery of a baby weighing >9 lbs, polycystic ovarian syndrome or acanthosis nigricans. The American Association of Clinical Endocrinologists added to these risk factors antipsychotic therapy for schizophrenia and/or severe bipolar disease, chronic glucocorticoid exposure, sleep disorders in the presence of glucose intolerance including obstructive sleep apnea, chronic sleep deprivation and night-shift occupation.

Cardiovascular disease occurs more in diabetic patients than in non-diabetic patients and at a younger age than non-diabetics. Hypertension is an important risk factor that when combined with type 2 diabetes can significantly raise the risk for a myocardial infarction and stroke. Because hypertension is a modifiable risk factor for cardiovascular disease associated with diabetes mellitus it should be monitored at every dental visit. In November 2017, the American College of Cardiology and American Heart Association task force on clinical practice guidelines announced new blood pressure targets and treatment recommendations for hypertension (Table 1). The definition of high blood pressure is now any systolic pressure over 130 mm/Hg and any diastolic pressure over 80 mm/Hg. The new 2017 blood pressure guidelines might open up a new category of patients being at risk for developing diabetes.

### Table 1: New Blood Pressure Guidelines

<table>
<thead>
<tr>
<th>Category</th>
<th>Systolic</th>
<th>Diastolic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>&lt;120 mmHg</td>
<td>&lt;80 mmHg</td>
</tr>
<tr>
<td>Elevated</td>
<td>120-129 mmHg</td>
<td>&lt;80 mmHg</td>
</tr>
<tr>
<td>Hypertension Stage I</td>
<td>130-139 mmHg</td>
<td>80-89 mmHg</td>
</tr>
<tr>
<td>Hypertension Stage II</td>
<td>≥140 mmHg</td>
<td>≥90 mmHg</td>
</tr>
</tbody>
</table>

Diagnostic Tests for Diabetes

The Expert Committee on Diagnosis and Classifications of Diabetes Mellitus, through years of analysis and research has set the standards for understanding the results of the different forms of glucose testing and publishes them every year in the month of January. The results were based upon elevated glucose levels and its correlation with advancement of retinopathy. The committee recognized a level of diabetes that showed blood glucose levels higher than normal, but not high enough to diagnose diabetes. This classification is termed “prediabetes.”

Because of the lack of insulin, or insulin resistance, the body cannot break down the glucose efficiently. Therefore, glycemic levels must be monitored constantly to ensure the diabetes is managed properly. Fasting plasma glucose (FPG), 2-h plasma glucose (2-h PG) as part of Oral Glucose Tolerance Test (OGTT) and glycated hemoglobin assay (HbA1c or simply A1c) are the main tests used for prediabetes and diabetes diagnosis and for monitoring the disease management (Table 2). FPG is a blood test performed...
after 8-h of fasting. OGGT is also completed after 8-h of fasting but followed by 75g of glucose intake. The blood glucose levels are repeated after specific time intervals and can take up to 2 hours to complete. These tests reflect only the blood glucose levels at the time the blood sample was drawn.6,12

**Table 2: Diabetes Tests Values used for Prediabetes and Diabetes Diagnosis**

<table>
<thead>
<tr>
<th>Blood Glucose Test Type</th>
<th>Healthy/ Normal Values</th>
<th>Prediabetes</th>
<th>Diabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fasting Plasma Glucose (FPG) (8 hours fasting)</td>
<td>&lt; 100 mg/dL</td>
<td>100-125 mg/dL</td>
<td>≥126 mg/dL</td>
</tr>
<tr>
<td>Oral Glucose Tolerance Test / 2-Hour Plasma Glucose (2h-PG)</td>
<td>&lt; 140 mg/dL</td>
<td>140-199 mg/dL</td>
<td>≥200 mg/dL</td>
</tr>
<tr>
<td>Hemoglobin A1c (HbA1c)</td>
<td>&lt; 5.7%</td>
<td>5.7-6.4%</td>
<td>≥6.5%</td>
</tr>
</tbody>
</table>

Hemoglobin is a protein component of the blood that carries oxygen to all parts of the body. Glucose attaches irreversibly to the hemoglobin and glycates. Because red blood cells survive approximately 120 days, this glycated hemoglobin can be measured in the form of A1c to identify a two to three month average of blood glucose levels. The A1c is calculated into a percentage.12 Patients with prediabetes and diabetes should be encouraged to have the test repeated every 3-6 months.9 A1c values between 5.7% and 6.4% indicate prediabetes while values of 6.5% and higher indicate the presence of diabetes. Since A1c values might be challenging for patients to understand, American Diabetes Association recommends converting the A1c into estimated average glucose (eAG) which is expressed in the same unit of measurement, mg/dL, as the glucose test the patients perform at home (Table 3).12,13

The diagnosis for prediabetes or diabetes is established by the medical doctors and it is based on repeating several tests. Different tests might be appropriate for different patients.6 While A1c is the test of choice for most patients, it has some limitations. A1c test is not recommended for patients with high red blood cell turnover such as sickle cell disease, pregnancy (second and third trimester), hemodialysis, recent blood loss, transfusion, or erythropoietin therapy.6,12

**Bidirectional Relationship**

The relationship between periodontal disease and diabetes has been confirmed through research over the last 50 years. Many research reviews and meta-analyses report confirm that patients with diabetes, especially those with poorly controlled blood glucose levels, are at a higher risk for periodontitis and tooth loss.14-17 The research does not reveal as clearly the effects periodontal disease may have on diabetes. Since A1c values might be challenging for patients to understand, American Diabetes Association recommends converting the A1c into estimated average glucose (eAG) which is expressed in the same unit of measurement, mg/dL, as the glucose test the patients perform at home (Table 3).12,13

Bidirectional Relationship

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Although diabetes is not responsible for causing periodontitis, it is known to exacerbate it. When the periodontium is inflamed, the neutrophils release matrix metalloproteinase-8 (MMP-
8), an enzyme responsible for destruction of type I and type III collagen fibers of the periodontium. Research has shown that patients with diabetes have higher levels of MMP-8 than patients without diabetes, and therefore they are at higher risk for developing periodontal disease. More studies will certainly need to be performed, but this evidence suggests that poorly controlled diabetes, individuals with undiagnosed diabetes and individuals with periodontal disease can be educated and helped significantly with appropriate periodontal therapy treatment, motivational interviewing for a healthier lifestyle, reducing modifiable risk factors, and medical management to improve their physical and dental health.

**Dental Team’s Role**

The dental team’s role should include not only caring for patients diagnosed with diabetes, but also identifying the patients who are unaware of their increased blood glucose levels. In 2015, 7.2 million adults over 18 years of age in the United States were undiagnosed with diabetes, while 84.1 million had prediabetes. Numerous studies have indicated that about 30-55% of asymptomatic patients with one or two risk factors for developing type 2 diabetes and who agreed to have their A1c checked in a dental setting had A1c levels consistent with prediabetes and 8% had A1c levels consistent with diabetes. As of January 1, 2018, the American Dental Association has introduced CDT code D0411 – HbA1c in-office point of service testing. The A1c test can now be performed in a dental setting utilizing a A1c point-of-care (POC) instrument certified by National Glycohemoglobin Standardization Program (NGSP). “Accuracy, precision, ease of use, and price, among other considerations” should be taken into account when selecting an A1c POC instrument for office use.

**Asymptomatic Adult Patients**

During medical history review, if asymptomatic adult patients present with one or two type 2 diabetes risk factors (overweight, family history of diabetes, etc) a risk assessment screening should be performed. Figure 1 illustrates a proposed protocol for prediabetes and diabetes screening in a dental setting, which could be performed within 10 minutes following the patient’s informed consent. The American Diabetes Association website, a free type 2 diabetes risk assessment test is available in both English and Spanish. This risk assessment test can be performed to determine if the patients are low or high risk. For patients whose score indicates high risk, a A1c POC test can be performed chair-side with the result being available within 5 minutes. If the A1c test score is ≥8% the treatment should be postponed and a medical clearance should be requested for that patient. If A1c values are < 8.5 % but >5.7%, a glucose test can be administered to determine the glucose level at that specific moment in time to prevent a possible medical emergency. All patients with A1c values >5.7% should be provided with referrals to their primary care physicians or medical clinics for further investigation. A pilot study of A1c chairside screening protocol indicated that having the patients, the periodontists and the dental hygienists signing the referral resulted in more than half of the patients scheduling a follow-up care within 2 weeks.

**Figure 1: Proposed Protocol for Assessing Prediabetes and Diabetes in Dental Setting**

Asymptomatic adult patients are administered Type 2 Diabetes Risk Test

Type 2 Diabetes Risk Test < 5

Type 2 Diabetes Risk Test ≥ 5

Asymptomatic adult patients are administered Type 2 Diabetes Risk Test

Re-assess in 3 years of if risk factors change

A1c <5.7%

A1c = 5.7%

A1c ≥5.7%

Blood glucose < 200 mg/dL

Blood glucose ≥ 200 mg/dL

Provide dental/dental hygiene treatment

Refer to physician for further evaluation and provide patient with literature about diabetes

Postpone treatment & require medical consultation w/ physician

Postpone treatment & require medical consultation w/ physician

Continued on Page 20
Adult Patients with Diabetes

During the medical history review it is prudent to ask the patients with diabetes the results of their most recent A1c. The dental professional should always inquire about their medications including whether there are any changes in dosage, if they are taking the medications regularly, when they last took their medications, last time they ate and what they ate.27,28 (Table 4) Discovery of this information can help the clinicians decide if patients can safely receive dental hygiene therapy at that moment, or if they need to stabilize their blood glucose levels first.27

Patients with diabetes can be on different regimens of medication to help control their condition.29 As part of the assessment procedure, dental clinicians should also review the side effects of any medications the patients are taking27 as some (glucocorticosteroids, thiazide diuretics and atypical antipsychotics) could increase the risk for developing diabetes.29 Sometimes, even though patients are compliant with their medication(s) and lifestyle recommendations (diet, exercise), A1c levels consistent with controlled (A1c <7%) or moderately controlled levels (A1c between 7% and 8%)30 cannot be

“I had a patient I’d seen in my office every 3-4 months for close to 10 years. His oral hygiene was poor with heavy plaque and bleeding with periodontal pockets consistently ranging from 3-5 mm. He was in his late 30’s when I began to treat him, was of low income status, had a slower mentality, and was not interested in changing his oral hygiene habits at home. One day he came in and, when reviewing the health history, he mentioned his medical doctor told him his blood sugar was elevated and recommended a low sugar diet. Once I started scaling, I noticed lower plaque levels and less gingival bleeding. By simply changing his diet he had, to some degree, improved his oral health.

This patient sparked my interest to learn more about how diabetes affects the oral cavity, periodontal status and overall health. My initial research led me to understand how many Americans are walking around with some form of hyperglycemia without even knowing it. With a simple questionnaire and the HbA1c available for chairside assessment, I asked myself, wouldn’t it be prudent for dental hygienists to assess glycemic levels for those patients who present at higher risk? Just as taking vital signs for patients has become a routine assessment, so can assessing for this potentially extremely damaging disease.”

~ Tracy Ross, RDH M.Ed
Table 4: Follow-up Questions for Patients with Diabetes

- When were you diagnosed with diabetes?
- What type of diabetes do you have?
- Do you have any diabetes-related complications?
- Would you say your diabetes is well controlled?
- What was your last blood glucose test? What was your last A1c result and when was it last checked?
- What medication are you taking to manage your diabetes? Or has your medication or dosage have changed since your previous visit?
- Are you taking your medication regularly? Did you take it today?
- Did you eat today? What did you eat and when?

achieved. In these cases, the oral care providers should work closely with the patient’s medical team to determine what the safest protocols are for those patients.

Medical Emergency Recognition and Management

Medical emergencies that can occur in the dental setting related to diabetes include hyperglycemia, ketoacidosis and hypoglycemia reactions. Hyperglycemia, high blood sugar, is a rare but serious emergency. Hyperglycemia may occur with people who have a higher demand for insulin such as those who lack exercise or have gained weight in short a period of time. It could also develop with those who are undiagnosed for diabetes, or those who are diagnosed but are neglectful with their therapeutic regimens. The development of hyperglycemia is relatively slow so signs and symptoms are not readily noticeable but eventually, if untreated, could lead to unconsciousness. Clinical signs of severe hyperglycemia include hot, dry skin, a bright red color to the face and signs of dehydration.

As the glucose levels increase and insulin is not available to metabolize it, the cells burn fat instead of glucose for energy and ketones are formed in the blood resulting in severe metabolic acidosis and causing Kussmaul’s respirations. These are deep, labored respirations that are often accompanied with fruity or sweet smelling breath indicative of the high levels of circulating blood glucose. Diabetic ketoacidosis is a life threatening emergency that needs medical attention.

Medical treatment for hyperglycemia is the administration of insulin to help stabilize metabolism. The patient should be placed in a supine position with 6 liters of oxygen administered. Emergency rescue teams should be activated, vital signs monitored, and basic life support provided as needed. The patient will be transported to the hospital for definitive diagnosis and treatment.

Hypoglycemia is more likely to occur in the dental office. It can affect both diabetic and non-diabetic individuals. If the blood glucose level falls below 50mg/dL in adults, or 40 mg/dL in children, loss of consciousness can occur fairly rapidly unless proper management is taken. Patients with diabetes may take their medications in the morning and then rush to their dental appointment without eating to avoid being late, increasing their risk of hypoglycemia during the appointment. Signs of hypoglycemia include mental confusion, extreme hunger, slurred speech, skin that is cold, wet and sweating and agitation.

Emergency treatment for hypoglycemia is the administration of 3 grams of glucose. Position the patient in the supine position if the patient has lost consciousness. If the patient is still conscious, position them in any position they find most comfortable. Vital signs should be monitored and 3-4 ounces of oral carbohydrates in the form of glucose tablets, fruit juice, cake icing, soft drinks or candy bars should be administered every 10 minutes until the symptoms subside.

To best prevent a hypoglycemic emergency, scheduling mid-morning appointments for those with diabetes better ensures that their proper medication and meal regimen will be followed. Always ask the patient if they ate and took their medications before the appointment. If they ate, but did not take their medication and this is a normal pattern for them, dental treatment can be performed without concern of a hyperglycemic event. If they took their prescribed medications but did not eat, a simple blood glucose test should be given and a glucose/sugar source should be administered if blood glucose is < 70.

Continued on Page 22
“Last summer, in a casual conversation, my mom shared with me a few things about our family history. Both her parents have passed away from complications of type 2 diabetes; my grandfather was going blind and, following, a tractor accident, refused to get any medical help as he did not want to spend the rest of his life without one of his most precious senses, his sight. My grandmother, on the other hand, lived many years with complications from diabetes (loss of sight, dementia), which required my mom spending 10 years of her life caring for her mother until she passed away. She added that her sister is struggling with diabetes and her average glucose levels were over 200mg/dL, sometimes reaching levels of 300mg/dL. With such a strong family history, I realized my mother was also at high risk for developing diabetes.

I took her to a primary care physician requesting blood tests to determine her risk for diabetes. Unfortunately, the blood tests (A1c levels and fasting plasma glucose test) indicated she was pre-diabetic. We had a serious conversation about the disease and how to stall it as long as possible. She understood, made some lifestyle changes by modifying her diet and walking 30 minutes about three days a week. Three months later her A1c levels dropped from 6.0% to 5.9%, very close to a normal A1c (5.6%). She was so excited she became even more motivated, increasing her activity level walking 30-60 minutes for five days a week, eating smaller portions. When we reevaluated the A1c three months later, to our disappointment, it was the same level, 5.9%.

As a hygienist and educator, I started looking for answers. In my research, I learned the medication she was taking was increasing her blood glucose. Working with the primary care physician to decrease her medication, hopefully my mother's blood glucose will continue to decrease.

Through this journey I discovered many tools that we, as dental professionals, can use to identify patients at risk for diabetes, or even with diabetes, and refer them to medical professionals for further evaluation and hopefully change their lives.”

~ Mihaela Popa, RDH, MBA

Conclusion
Dental teams can play an important role in assessing patients for elevated blood glucose levels and making the appropriate referrals. Using the assessment risk test, performing the A1c POC test when appropriate, and raising the patient’s awareness about diabetes seems to be the next step for dentistry.

Resources/References
All resources and references are continued on page 30.

About the Authors
Mihaela Popa, RDH, MBA, is an Associate Professor in the dental hygiene program at West Coast University in Anaheim, CA. Mihaela's interests include radiology, CAMBRA and international community outreach. Her outreach interests have taken her to Nepal and the Republic of Moldova and she is looking forward to future opportunities abroad. Mihaela is a member of the dental hygiene honor society, Sigma Phi Alpha, CDHA, ADHA and ADEA.

Tracy Ross, RDH, M.Ed has been in dental hygiene education since 2011. She holds a Master's in Higher Education which has helped her see education through the eyes of the new generation. Currently, at West Coast University, she facilitates blended learning courses in General Pathology, Immun-ology and Medical Terminology, and Medically Compromised Care and Emergencies. She is on the student regional council for California Dental Hygienists’ Association and hold a board position as student liaison for Orange County Dental Hygienists’ Association.
1. Which of the following is True about diabetes in the United States?
   a. Diabetes is the second leading cause of death
   b. Diabetes affects some racial/ethnic groups more than others
   c. Diabetes prevalence is decreasing
   d. Adults with diabetes have shorter life expectancies than previously

2. Which form of Diabetes affects over 90% of the population?
   a. Type I
   b. Type I.5
   c. Type 2
   d. Gestational

3. Gestational diabetes is characterized by which of the following?
   a. It appears during the first trimester
   b. It is always insulin dependent
   c. It predisposes for Type 2 diabetes later in life
   d. It is an autoimmune disorder

4. Which of the following are risk factors for Type 2 diabetes?
   a. Family history
   b. Obesity
   c. History of cardiovascular disease
   d. Hypertension
   e. All of the above

5. Which of the following measures a two to three month average for glucose levels?
   a. A1c
   b. FPG
   c. OGTT

6. Multiple research studies confirm that patients with diabetes are at higher risk for periodontitis and tooth loss.
   a. True
   b. False

7. Dental patients who exhibit signs of mental confusion, hunger, agitation, slurred speech and cold wet skin most likely are experiencing:
   a. Hyperglycemia
   b. Hypoglycemia
   c. Cardiovascular event
   d. Heat Stroke

8. Emergency treatment for hypoglycemia should include the monitoring of vital signs and________.
   a. The administration of insulin
   b. The administration of glucose/sugar
   c. Administering the chairside A1c test
   d. Performing an assessment risk test

9. Besides reviewing current medications, prevention of a hypoglycemic emergency includes which of the following?
   a. Ask the patient when they last ate and what they ate
   b. Ask the patient if they took their medication before they came
   c. Ideally schedule appointments for mid-morning
   d. All of the above

10. If asymptomatic adult dental patients present with one or two risk factors for Type 2 diabetes, what is the recommended course of action?
    a. Refer them to a physician
    b. Perform a risk assessment test
    c. Administer the chairside A1c test
    d. Perform a dietary analysis

The following information is needed to process your CE certificate. Please allow 4 - 6 weeks to receive your certificate. Please print clearly:

CDHA Membership ID#: ________________________  ❑ I am not a member
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Mailing Address: _________________________________________________________________________
Phone: ______________________  Email: __________________________  Fax: _____________________
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Please mail the completed Post-test and completed information with your check payable to CDHA:
1900 Point West Way, Suite 222, Sacramento, CA  95815-4706
Keep a copy of your test for your records.
Renewed Commitment as a Voice for Positive Change!

By: Lisa Okamoto RDH, GRC Co-Chair

California Registered Dental Hygienists are change agents – thank you for being CDHA members and a force for change!

At CDHA’s recent House of Delegates, our Policy Manual was updated to reflect California’s ongoing need for greater access to the services of dental hygienists, in more settings, with expanded scope and without the restrictions of supervision. This has been a long-time goal of dental hygiene’s professional organizations, both in California and nationally. There continues to be an unacceptably large percentage of our citizens with unmet oral healthcare needs and with an insufficient number of available and willing providers to meet those needs. Changes must be made, which is the focus of Susan Lopez’ article “Changing the Access to Care Equation” in this issue. CDHA and dental hygienists recognize that prevention is key.

CDHA’s work - your work - is ongoing and will be for some time. Change is slow, but necessary for growth and improvement. There is hope. Trends are encouraging. With the recent passage of legislation in Arizona, there are now seven states that allow dental therapists, most of whom are advanced dental hygienists. Will we one day see this change in California? This is not about expanding our professional “turf” nor is it about creating a mid-level provider, as claimed by opponents fearful of change. This is about meeting the healthcare needs of the people, in collaboration with all healthcare providers, for the good of the people and our state. We are oral health care specialists and there is nothing mid-level about the preventive services we provide. It is time we are recognized and respected as such!

Here in California, legislators and others are hearing our message: that dental hygienists form an educated, available and professional workforce, and would be an important part of the solution if obstacles to practice were removed and dental hygienists were more utilized. The policies of the Department of Health Care Services (DHCS) have been ineffective in meeting the needs of our poor and underserved populations, have not prioritized cost saving prevention and have actually obstructed access to care. Those were our core messages at our March 2018 CDHA Legislative Day in Sacramento. Our Voice is being heard.

Change is coming. The April 2016 Little Hoover Commission (LHC) Fixing Denti-Cal Report condemned the DHCS, citing harm to its beneficiaries and historic inability to reform. Following testimony from CDHA and RDHAPs, the LHC’s Nov 2017 Letter to Governor Brown and the Legislature states that Denti-Cal is still broken. A judge recently ruled in favor of Registered Dental Hygienists in Alternative Practice (RDHAP) seeking to stop DHCS policies detrimental to the health of our fragile populations and restricting access to the services of RDHAP. Although that ruling is being appealed, it is a win none-the-less. DHCS intends to file a State Plan Amendment in an effort to get federal approval for those disastrous policies. Opposition letters were sent, not only by CDHA but by other organizations including Justice in Aging and AARP. The lawsuit, the ruling, CDHA and RDHAPs have brought greater attention to the ongoing neglect of our elderly and the disadvantaged!

CDHA has increased our presence, attending various stakeholders’ meetings to spread our message and ensure a seat at the table. Other organizations have joined CDHA as advocates for the underserved and for improved oral healthcare policy. Outraged disbelief that distribution of
2017-2018 Tobacco Tax Funds did not include any preventive oral health procedures was heard. Some preventive services will be included in the 2018-2019 CA State Budget.

The dental industry environment is changing with the unmet healthcare needs of people; with ever-rising professional student debt for both dentists and hygienists; with the recognition that oral health care is an integral component of overall systemic healthcare; and most importantly, with the understanding that prevention is key. What will our jobs, our role and our responsibilities be in this ever-changing environment? Both RDH and RDHAP must be adaptable and prepared to meet these challenges. We are so much more than “cleaning ladies” (and men)! We are preventive oral health therapists – a Voice for positive change!

References

CDHA continues to work with bill authors to ensure dental hygienists are part of the solution and the picture (as of June 30):

- **SB 1482** (Hill) Dental Hygiene Committee of California (DHCC) Sunset Bill – Passed Senate unanimously with language that would rename DHCC as the Dental Hygiene Board of California. The Joint Legislative Sunset Committee of California’ Sunset Report also commented favorably on a number of DHCC recommendations to remove obstacles to DH services.

- **SB 707** (Cannella) to establish the Denti-Cal Advisory Group in the DHCS, including a representative from CDHA. Passed the Senate.

- **SB 1125** (Atkins) to allow Federally Qualified Health Centers (FQHC) and Regional Health Centers (RHC) to bill for 2 visits in a day – amended language includes RDH and RDHAP as specified healthcare professionals. Passed the Senate

- **SB 1148** (Pan) for DHCS to authorize the use of Silver Diamine Fluoride (SDF) as a caries arresting agent, with specified conditions - amended language includes RDHAPs as a provider of this service. Passed the Senate

- **SB1464** (Wiener) for DHCS to provide a payment adjustment to dental providers serving Denti-Cal beneficiaries with special dental care needs such as those served by RDHAPs. Passed the Senate

Current status of bills can be found on the cdha website – www.cdha.org

L to r: Legislative Advocate for CDHA Jennifer Tannehill; GRC Co-Chairs Maureen Titus, RDH, RDHAP, BS and Lisa Okamoto, RDH; and CDHA Speaker of the House Susan Lopez, BSDH, RDH following a successful lobbying day at the state Capitol.
Changing the Equation  
Dental Health Care Spending for California’s Vulnerable Populations

By: Susan Lopez, BSDH, RDH

Originally presented at The Annual California Statewide Task Force on Oral Health for People with Disabilities and Aging Californians.

As health care providers and professionals, we have a common goal - a common passion that unites us on how to best serve our fellow Californians.

- How to reach deep into our communities and achieve access to care for all, regardless of any economic, social or physical barriers;
- How to solve the California budget equation of Dollars + Providers = Increased number of Californians receiving appropriate care.

The numbers currently in this equation are staggering: 13 million Californians are eligible for Denti-Cal, with only 8,361 Denti-Cal dentists, many of whom are not accepting any new Denti-Cal patients for many valid reasons, and potentially 543 RDHAPs trying to care for the 13 million members.

Our state has historically been comfortable turning a blind eye to many of our citizens’ oral health care needs. It has balanced our State budget on the backs of those patients who could not walk through our private practice doors, challenged them with a complicated system that often left them unserved, and placed obstacles to the providers who might wish to serve this population.

California, after a long drought of dental care for the underserved, is the beneficiary of two funding sources which could address some of the challenges. These funds, both from the Transformational Initiative and Proposition 56, have the potential to alter the access to care equation for some of our citizens.

The five-year, federally funded Transformational Initiative demonstration project for our state’s youth, ages 1 – 20, can change the equation with an additional $750 million dollars to deliver care, prevention and educational services. Successful outcomes will be measured by improved health, a decreasing need for more invasive restorative procedures and decreased emergency room expenditures.

Medi-Cal 2020 – the provider of the Transformational Initiative recognized the importance of preventive services and mandated prevention in two of its three goals for the state’s implementation of the Initiative:

1. Increasing the use of preventive dental services and oral health disease management
2. Expanding prevention and risk assessment models focused on preventing and treating more early childhood caries
3. Increasing dental continuity of care for children

The equation to improve the oral health of children with Denti-Cal will hopefully be: Increased incentivized dollars = increased provider participation = increased patient care.

Our remaining underserved populations also deserve to have their oral health care equation improved.

Proposition 56, titled The California Healthcare, Research and Prevention Tobacco Tax Act, was approved by the voters in November 2016. This year, $140,000,000 was appropriated by the legislature from this tax to the Department of Health Care Services to structure as they felt appropriate.

The DHCS plan to improve the health of the Denti-Cal population is to increase the number of dentists in the system by incentivizing or increasing reimbursement for certain procedures. The payment categories for dental services are restorative, endodontic, prosthodontic, oral and maxillofacial surgery, adjunctive (i.e. anesthesia, night guards), visits and diagnostic services.
It is hoped these procedures will relieve the pain and wait time for our Denti-Cal members, decrease the horrific lines at our 3-day stadium venue dental relief efforts and address some of the concerns of the members of the Hoover Commission relating to the inability of our citizens to obtain dental care.

Ironically, missing in the list of 272 incentivized codes Denti-Cal chose were any preventive procedures. If the state continues with this allocation of the tobacco tax funds exclusively for restorative procedures, the Access to Care Equation will never improve. The supplemented money will never be enough to stem the tide of continued dental disease due to the lack of preventative services.

Research proves the monetary savings of preventive services. Results of a 15-year study, reviewing 750,000 insurance claims to Delta Dental of Michigan, showed an increase in prophylaxes provided from once a year to an average of 1.5 times per year showed a statistically significant drop in restorative work from 1.5 to 2 fillings per year to one or fewer fillings across all age groups. There was also a significant decrease in extractions. The ADA agreed that during this time period, the significant drop in restorative procedures was due in part to improved oral health.7

Both the Tobacco Tax and the Transformation Funds support a population that can utilize dentists’ services at their offices. As a result, Californians, who cannot access a traditional dental office, are being left out of the Access to Care equation. The population that is being neglected and omitted are our vulnerable elderly and special needs Californians that must have nontraditional care. These citizens are often, if not always, part of our high-risk population for oral health diseases. These individuals have unique personal issues that require a unique approach to their oral health care requirements.

The California Department of Aging states California’s elderly population, 60 and over, has been and is growing twice as fast as the state population between 1990 and 2020. Currently 1 in 5 Californians are over 60. Our super seniors (85 and older), had a growth of 143% over that same time period. While 1 in 62 Californians are over 85, the expectation is both groups will have an even faster growth rate after 2020.8

While the majority of this group can currently access traditional dental care, according to the Public Policy Institute of California over half a million seniors have significant difficulties with self-care and by 2030 this will be over one million requiring care assistance. California currently ranks thirtieth in the nation in our care for older adults due to Denti-Cal’s omission of critical oral health services for preventive and restorative needs.9

Our vulnerable elderly members ability to seek oral health care is limited by reduced mobility, limited resources and complex health issues, as well as dentists unprepared to serve them. An article in the Journal of Dental Education concluded that “there are few dental students who received focused clinical experience in treating older adults” and “The barriers dental schools face include: lack of time in the curriculum, lack of faculty members to teach these courses, lack of a CODA standard for requiring treatment of medically compromised older adults. Further lack of these patients to treat in a setting where dental students have access to them.”10

Serving our vulnerable elderly requires an understanding and ability to adjust to their diverse and individual cognitive, physical and sensory needs such as limiting encounter times, working with wheelchairs, care givers, limited mobility and reactions to stress, strangers and sounds. The elderly are at high risk for periodontal disease caused by decreased salivary flow, loss of manual dexterity and loss of memory to maintain self-care as well as other medical factors. These patients, despite being unable to maintain office visits, must be treated or their health, as we know, will deteriorate. However, the California Commission on Aging states that of the 65-75 year old Californians, “40% have not been to the dentist in more than 10 years”.11

Just as with our elderly population, many of our disabled cannot access or tolerate a traditional office setting – their needs are acute. A 2012 research article in the Journal of the American Dental Association discussing the oral health status of adults with intellectual or developmental disabilities concluded that over 80% of the adults had periodontitis.12 This supports the assertion that periodontal disease occurs more often and more dramatically in the developmentally disabled.

Continued on Page 28
This population, which includes the spectrum of developmental and intellectual disabilities such as cerebral palsy, Down Syndrome and autism, has complications due to malocclusion, muscular abnormalities, oral habits such as tongue thrusting as well as oral side effects from anticonvulsant, antihypertensive and immunosuppressant medications. Over 25% of California’s disabled live in poverty. All of these issues place this population at high risk for oral diseases and require a unique approach for each patient depending on the patient’s level of ability to accept treatment.

Over twenty years ago, our legislators realized the overwhelming challenges to achieve oral health of too many of their constituents and approved the addition of the Registered Dental Hygienists in Alternative Practice (RDHAP) as health care providers who specifically address the needs of our vulnerable elderly and disabled who cannot be seen in traditional dental settings. This category of dental professionals has received focused education to expand their knowledge and ability to treat people with complex physical, medical, psychological and social challenges.

RDHAPs serve California’s disabled and vulnerable elderly populations, but the ability to include them in the access to care equation may have hit a barrier that even these passionate providers cannot push through.

1. DHCS (Department of Health Care Services) has reduced the Denti-Cal reimbursement rate by almost 60% for the ongoing treatment necessary for people with periodontal disease. (In February, the Los Angeles County Superior Court ruled that compensation cannot be cut without federal approval. This issue is being appealed by DHCS).14

2. DHCS has imposed new requirements for the approval of periodontal disease treatment – now requiring full mouth x-rays or photos of this population prior to authorizing appropriate periodontal therapy. This is an impossible pre-requisite for this home or institution bound population.

3. No follow-up periodontal therapy to prevent the return of disease for non-institutionalized, adult Denti-Cal patients

4. RDHAPs and RDH informed that they “shall not be permitted to bill for services rendered via teledentistry”15

5. DHCS does not recognize a Caries Risk Assessment provided by an RDHAP

Denti-Cal’s policies for care demand we work to remove barriers and increase understanding of disease among providers and Denti-Cal. Without these efforts, California’s underserved vulnerable populations will decline in health as bacterial infection causes complicated systemic conditions that could have been prevented.

The opportunities to improve the health of our most vulnerable citizens with the funding from the Transformational Initiative and the Tobacco Tax are the first steps in changing the historically insufficient climate of care that has clouded Denti-Cal for decades. As health care providers and citizens of California, we need to be vigilant and monitor these projects and allocated funds to make sure our Denti-Cal members are getting the utmost benefit from the funds and result in improved health and wellness for our neighbors. With that, we will have improved the equation for Access to Care.

About the Author

Susan Jordan Lopez, RDH graduated from UCSF in 1972. She is part of a family committed to dentistry. For the last 38 years Ms. Lopez has provided clinical dental hygiene care, working with her husband, son and now her daughter.

She served for three years on the Executive Committee for the California Dental Hygienists’ Association, led the organization as President from 2012-2013, and is currently serving her second term as CDHA Speaker of the House.

Ms. Lopez sits on the California Telehealth Coalition task force committees for Parity in Payments and Coordination of Care.
References

5. http://www.dhcs.ca.gov/provgovpart/Pages/DTI.aspx
8. https://www.aging.ca.gov/Data_and_Statistics/Facts_About_Elderly/
11. CA Com on Aging, Senior Related Health Issues, April 2003
15. Denti-Cal Bulletin March 2016 vol.32, #4
References (continued from page 22)


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2018-2019 Calendar of Events

July 14-15, 2018
Executive Committee Meeting
Sacramento, CA

August 4, 2018
CDHA Leadership Workshop
Courtyard by Marriott
Sacramento Airport Natomas

August 5, 2018
Board of Trustees Meeting
Courtyard by Marriott
Sacramento Airport Natomas

September 15, 2018
Executive Committee Meeting
Sacramento, CA

October 20, 2018
Board of Trustees Meeting
LAX

February 23-24, 2019
Executive Committee Meeting
Administrative Council Meeting
Sacramento, CA

March 23, 2019
Board of Trustees Meeting
Southern California
LAX

Friday, May 17, 2019
Spring Scientific Session
Anaheim, CA

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