Twenty-five years ago, few people had heard of the Internet. The same was true for the business of dental hygiene. Few had ever considered the business of dental hygiene as a career opportunity. Now it is exciting to see the changes that have occurred with the business of dental hygiene.

According to the American Dental Hygienists’ Association, 29 states permit direct access to care provided by dental hygienists.1 “Direct access means that the dental hygienist can initiate treatment based on his or her assessment and patient needs without the specific authorization of a dentist, treat the patient without the presence of a dentist and can maintain a provider–patient relationship.”2 The total number of dental hygienists providing direct access services is unknown. In those states with required permit application, 476 dental hygienists are identified by the ADHA as providing direct access to care.1 In states without a permit process, self reported information is the only source of practitioner information.

Based on self-report, available literature and issuance of state permits, it is known that dental hygienists provide care in a variety of limited access settings such as public, community and Indian health clinics, schools, group homes that serve disabled children, adults and elderly patients. Others practice in nursing homes and assisted living facilities, home health agencies and private homes, senior centers, jails and juvenile detention centers, hospitals and senior centers.

The type of services provided varies based on state practice acts. Some permit the full scope of dental hygiene practice including dental hygiene diagnosis (Colorado, California). Other states have restricted, for example, the use of injectable local anesthesia, nitrous oxide–oxygen sedation, root planing and radiographs. Supervision requirements vary from no supervision and collaborative practice arrangements to off–site supervision agreements.2 Direct access providers are employed by agencies and living facilities, have independent contract arrangements or own practices as sole proprietors, form corporations or established not–for–profit corporations. Their service delivery models are unique to the needs of the dental hygienists and the patients they serve.

Dental hygienists receive reimbursement from a variety of sources. Fifteen state Medicaid programs allow direct reimbursement to dental hygienists. Many private dental insurance programs now provide direct reimbursement to dental hygienists or to members. The exact number has not been identified. However, there were none in 1989. The State of Washington has allowed direct access dental hygiene care since 1984. At that time there was little evidence to support the idea that a business in dental hygiene could become a successful venture. The need for preventive dental hygiene care, however, was evidence by the increasing demand from the dental consumer, especially from those with limited access to care.

After passage of the legislation, I started to explore the possibilities of providing care to elderly and disabled patients in nursing homes. I consulted with an attorney, an accountant, dentists and dental hygienists from Colorado, California and Washington. Their information was very helpful and their encouragement provided hope for success.

Although not a requirement of the practice act, I elected to complete my bachelor of science in dental hygiene degree. This enhanced my ability to provide care to persons with special needs and to create a business in dental hygiene.

In January 1989, I purchased an existing dental hygiene practice. Dental Hygiene Health Services was established as a sole proprietorship. My immediate goals were to provide quality, cost–effective care for special needs patients and develop a successful dental hygiene business.

In the past 20 years, Dental Hygiene Health Services has provided care to over 4,000 patients in a total of 11 facilities in the Greater Seattle area. On average, 400 patients receive dental hygiene care each year. Currently, 2 nursing facilities have fully equipped dental clinics. Other sites have dental chairs, lights and/or operator chairs. I transport a portable compressor, ultrasonic, instruments and disposable supplies. Each facility assigns a coordinator/dental assistant to manage the delivery of care. All patients are referred to dentists in the local community or at facilities.

Clinic is scheduled 10 to 12 days and office time 4 to 6 days each month. Payment for services is received from private pay, private insurance, Medicaid and facility sources.

The clinical delivery of dental hygiene care is only one side of a successful dental hygiene business. Practice management is critical for success. There are numerous tasks to manage, such as scheduling, billing, insurance claims, collections, inventory, product and equipment research and marketing.

Communications regarding care must be maintained on 4 levels for every patient:
- The facility, legal guardian
- The practitioner
- The patients
- The payer

The business of dental hygiene is a practice in its own right and requires the professional focus of the dental hygiene practitioner.
• Primary health provider
• Other health care providers
• The patient, based on their ability to participate in the decision for care

The task of communication and record keeping is managed with computer generated forms, reports and an accounting program. Computerized report features a series of drop-down selections and the ability to clone entire reports for modification which minimizes the need to create complete new reports for every patient encounter. Upgrades for computer reports and a dental hygiene practice management software system are in the development stage.

After 20 years of providing direct access dental hygiene care, I have met my start-up goals of providing quality, cost-effective care and I have a financially successful practice that has allowed me to continue providing dental hygiene care to my many special patients. To quote authors Robert Hisrich and Michael Peters, I agree that “Running a successful business is not only a financial risk – it is an emotional risk as well. I get a lot of satisfaction from having dared it – done it – and been successful.”

References


Dental Hygienist Prescribers in Alberta

Stacy Mackie, RDH, BS
Dental Hygienist Prescriber, CRDHA Pharmacy Course Administrator

In Canada, the regulation of health professions is province-specific. While labor mobility of health professions is a national concern, it is up to each provincial government to determine the legislation and scopes of practice for each profession. In Alberta, the profession of dental hygiene has been self-regulating since 1990. The College of Registered Dental Hygienists (CRDHA) is the regulatory body for dental hygienists in the province of Alberta, and is responsible for licensing (registering) dental hygienists and issuing practice permits.

The new Dental Hygienists Profession Regulation, effective Oct. 31, 2006 is part of Alberta’s Health Professions Act (HPA). The general intent of the HPA was to remove barriers to care and allow health professions to practice to the full extent of their competencies.

Under Alberta’s HPA, the process for regulatory changes for professions is well defined. Each step must be followed, allowing other stakeholders (e.g., other health professions, educational institutions) to have input at differing phases of regulation development or revision.

During development of the new regulations for the dental hygiene profession, the CRDHA requested removal of previous regulatory requirements for general supervision. Removal of the supervision clause would increase access to dental hygiene care in a variety of settings and geographical locations.

However, the challenge was ensuring that dental hygienists could provide the full spectrum of dental hygiene services to clients in new non-traditional practice settings. Thus, it was determined that dental hygienists would need the authority to prescribe the drugs routinely used in dental hygiene practice. This subset of drugs was listed in the Dental Hygienists Profession Regulation (Table 1).

A strategic, well organized educational process occurred to ensure government and other stakeholders (e.g., the regulatory bodies for physicians, pharmacists and dentists) that dental hygiene education in Alberta adequately prepared dental hygienists to safely make all the decisions around prescribing these drugs for the purposes of providing dental hygiene services.

Once the ability to prescribe was established in the Regulation, CRDHA, in collaboration with other stakeholders, determined the procedures that dental hygienists must complete to be authorized to prescribe the drugs listed in the Regulation.

The Prescriber’s Identification (ID) Program for Alberta dental hygienists was developed by CRDHA to ensure that there is a minimum, consistent level of competence, ensuring that dental hygiene prescribers can safely and effectively prescribe. The program includes the following steps:

• Self-paced, self-study course with modular curriculum, mandatory assignments and a final comprehensive examination
• Once successfully completed, the dental hygienist is eligible to apply for a prescriber’s ID number through CRDHA
• CRDHA issues a prescriber’s ID number and informs the Alberta College of Pharmacists (ACP)

It is important to note that obtaining a prescriber’s ID number is not required to be eligible to practice dental hygiene in Alberta, nor does the type of practice setting dictate who is eligible to become a dental hygienist prescriber. The opportunity to become a dental hygienist prescriber is open to all registered dental hygienists in the province. Given the geographic challenges in improving access to oral health care throughout the province, dental hygienists who practice independently, provide mobile or home-based client care and those practicing in remote geographic areas are more likely to be interested in obtaining a prescriber’s ID number.

The 6 month, self-paced, self-study course requires successful completion of multiple written assignments to earn eligibility to sit for a comprehensive final examination. Live, online support sessions are offered to participants bimonthly.

The final examination contains a range of 80 to 90 questions, including free-standing and case-based multiple choice items. The items assess knowledge, application and critical thinking skills on 52 competencies from the Alberta-specific dental hygiene competency profile.

Questions in the test item bank were written by an expert panel. All questions were pilot tested and reviewed by a select group of experts. Questions are delivered randomly from the question bank but must meet the examination blueprint criteria for testing of cognitive ability levels, competency groupings and course learning objectives. Item analysis is performed on each completed examination and remains ongoing as part of program evaluation. The exam is offered in 2 formats, electronic or paper based, at testing centers located throughout the province, with a required passing grade of 80%.

An extensive research plan to study and evaluate the outcomes of this program was conceptualized during the early stages of program development. An independent research consultant created the evaluation tools used to measure over 70 variables, using quantitative analyses. A statistician from the University of Alberta serves as a consultant to the project.
Demographic data on each participant is gathered at enrollment, including year of registration, educational program attended, number of years in practice and type of practice setting. Other data gathered includes standard testing outcomes, such as time required to successful course completion, participation in online support sessions and number of attempts and scores attained on assignments and the examination.

Prescribers will be invited to participate in a long–term study that will evaluate their prescribing behavior and the impact that prescribing authority has on their client populations, as well as on their related general and professional communities. We anticipate that prescribing behavior will vary by type of setting and geographic location. Surveys will be used to assess prescribing behavior, defined by number, frequency and types of drugs prescribed, plus the circumstances that dictate the need for these services, such as emergency intervention and management, palliative or therapeutic indications and prevention of oral disease. Interdisciplinary collaborative behavior, compliance with legislation and decision–making will also be assessed. Participants will self–assess their skills, confidence and practice behavior based upon what they were taught in the program. We look forward to sharing this important data with the global dental hygiene community in future publications.

The first intake of 40 students started in July 2008. The second intake of 35 students started in March 2009. Several participants have obtained their prescriber’s ID number and are currently eligible to issue prescriptions in Alberta. Figure 1 illustrates the geographical locations of the course participants.

### Table 1

*Dental Hygienists Profession Regulation: Section 13 (d) to prescribe the following Schedule 1 drugs within the meaning of Schedule 7.1 to the Government Organization Act for the purpose of treating oral health conditions, providing prophylaxis and treating emergencies:*

- **i** Antibiotics
- **ii** Antifungal agents
- **iii** Anti–infective agents
- **iv** Antiviral agents
- **v** Bronchodilators
- **vi** Epinephrine
- **vii** Fluoride
- **viii** Pilocarpine
- **ix** Topical corticosteroids
Improving the oral health status of the U.S. population is a significant challenge to policy makers, health officials, dental educators and dental care providers. One way to expand preventive dental services to underserved populations is by allowing dental hygienists to provide preventive services with less restrictive supervision in underserved communities.

In 2004, the Arizona legislation approved HB 2194 as law, which created a new opportunity for children to access preventive dental services offered by a dental hygienist without the direct supervision or prior examination of a licensed dentist. This law allows dentists and dental hygienists to work in collaboration to expand services through a non–traditional model called an Affiliated Practice Relationship.

There is a variety of possible Affiliated Practice model structures that include the use of portable, mobile or fixed dental equipment. Each of the Affiliated Practice dental clinics in Arizona has a different structure and unique partners, such as hospitals, elementary schools, community health centers, county health departments, Indian Health Services, dental schools and dental hygiene schools. There are more potential possibilities of collaboration and partnerships with state and county government agencies, nonprofit organizations, private practice dental or pediatricians and community clinics.

An Affiliated Practice dental clinic at San Marcos Elementary in Chandler, Ariz., licensed as CHW East Valley Children’s Dental Clinic, provides free preventive dental services to low income, minority and under/uninsured children. The clinic uses Dentrix dental software and a Microsoft Access database to collect and analyze oral health data. Data from the following patient assessments are collected:

- New decay
- No new decay
- Plaque score percent
- Caries risk level
- AAP Case Type
- White spot lesions
- Untreated decay
- Treated decay
- Early childhood caries
- Sealants present
- Treatment urgency

Assessing these conditions over time will allow dental clinics to assess their Affiliated Practice model’s impact on improving oral health outcomes.

The strategy that the CHW East Valley Children’s Dental Clinic utilizes to measure the efficacy of the Affiliated Practice clinic is collection and analysis of the patient’s zip code, race, first visit to a dental care provider, number of patients seen, dollar value of services provided and dollar amount of grant funds secured. In addition, process evaluation of clinic services is continuous and supported with the use of parent/guardian satisfaction surveys and throughput evaluations. Measuring these indicators allows the Affiliated Practice dental hygienists to ensure that the model is effective at serving the target population, keeping costs low, receiving a return on investment and delivering quality care efficiently.

Cost effectiveness of the Affiliated Practice model is measured through analysis of the cost benefits of providing preventive services and the cost benefits of utilizing a non–traditional practice model. Providing preventive oral health care decreases the incidence of oral disease and saves money for Medicaid/insurers, the health care system and society. Affiliated Practice dental clinics are more cost–effective compared to traditional models of dental practices due to lower overhead costs. There are decreased overhead costs in an Affiliated Practice dental clinic because payment of a dentist’s salary is eliminated. Since dental services are limited to prevention, a smaller staff is needed, fewer instruments and equipment are required and malpractice insurance fees are lower. Awarded grant funds, reimbursement as a Medicaid provider for the Arizona Health Care Cost Containment System (AHCCCS) and partnerships with non–profit and community organizations that contribute resources allow Affiliated Practice dental hygienists to offer preventive services in areas of the greatest need and maintain low fees.

Affiliated Practice dental hygienists have discovered weaknesses of the model. Perhaps the most challenging weaknesses are the difficulties of financial sustainability and restriction on patient age. Affiliated Practice dental clinics rely on grants and reimbursement from Medicaid through only one plan of the AHCCCS. This limited payer mix does not allow many options for generation of revenue and financial sustainability. The restriction on Affiliated Practice dental hygienists to provide services for only underserved children age 0 to 18 years old is also very limiting. Arizona has a large population of underserved adults and seniors that would also benefit from the services of Affiliated Practice dental hygienists. Legislative efforts are currently being made to lift this patient age restriction in Affiliated Practice. These weaknesses are actively being addressed by the Affiliated Practice dental hygienists, Arizona Dental Hygiene Association and Arizona Department of Health Services.

The strengths of Affiliated Practice are many. The cost benefits of preventive oral health care to hospitals, emergency rooms, health care systems, insurance companies,
elementary schools and society are significant. Also, the cost effectiveness of the Affiliated Practice model has been demonstrated. Expenses are reduced due to the low overhead costs of this non-traditional model and with the utilization of partnerships that contribute resources. The Affiliated Practice model is successful at increasing utilization of preventive dental services, increasing points of entry into the oral health care system and reducing barriers of transportation, affordability and uneven distribution of dental professionals.

Affiliated Practice Relationship in Arizona was designed to reduce many of the main barriers to oral health care that contribute to oral health disparities. Affiliated Practice has proven to be a successful model that provides affordable care and increases access to dental services. Several assessment methods have been developed by CHW East Valley Children’s Dental Clinic, an Affiliated Practice dental clinic, which will demonstrate the impact on improving oral health outcomes in their patient population. Cost effectiveness of the Affiliated Practice model can be measured through analysis of the cost benefits of providing preventive dental services and the cost benefits of utilizing a non–traditional practice model with multiple partnerships and collaborations. Challenges within the Affiliated Practice model include difficulties with financial sustainability and a patient age restriction. Overall, Affiliated Practice is a strong model with a few weaknesses that will most likely resolve as the model becomes more established.
Mobile Van Delivery of Dental Hygiene Services
Patricia Clayton RDH, dipDH
Owner/Operator of Right to You Mobile Dental Hygiene Services Ltd.

In Canada, accessibility of oral health care services has been identified as a key barrier or challenge for rural–dwelling individuals and those that are home bound or living in long term care facilities. Mobile dental delivery models remove this barrier and are thereby said to increase access and utilization of dental services for those otherwise not accessing care in traditional dental settings.

Alberta is a unique province in which to provide mobile dental hygiene services. Many factors add to the “Alberta Advantage,” all of which help to facilitate delivery of dental hygiene care using alternate delivery models. These advantages include the following:

- Alberta dental hygienists have the largest scope of practice with the least restrictions to practice of any province across Canada
- Dental hygienists operate on a fee–for–service basis with no fee guide (Alberta dentists do not have a fee guide either)
- Nearly 100% of insurance companies have been reimbursing independent dental hygienists at equal rates to dental hygienists providing services in traditional practice settings
- The Alberta government has a dental assistance program that provides coverage for low income seniors on a sliding scale with their income
- In Edmonton, the capital of the province and the city in which I reside, only 2 dental facilities exist that can accommodate severely disabled individuals:
The Glenrose Hospital and The University Hospital. The average wait time is greater than 3 months for routine appointments
- Alberta has a large segment of the population that is rurally located
All these factors could lead to the conclusion that demand and utilization of mobile dental services should be high. Unfortunately this is not the case, due to several difficulties.

New barriers to accessing care have arisen for Albertans located in rural communities or those that are home bound or living in long term care facilities. I have found that the lack of knowledge of oral health status and lack of perceived value of oral health care are 2 additional barriers to providing care for these populations.

Right to You Mobile Dental Hygiene Services began operation in May of 2008. At the start of operation, I approached 6 long–term care facilities within a 20 km radius of my residence. Only 2 sister facilities accepted the provision of services and agreed to provide information to residents and families of this relatively new delivery model of oral health service. In May of 2009, 2 more long–term care facilities have granted access to, but are not promoting, the delivery of mobile service to clients in their facilities. Accessibility of oral health services is not the only barrier that seniors in these facilities face – lack of knowledge of the availability of the service seems to be a larger barrier. Although the initial response to the provision of mobile service was lower than expected, I have been able to provide service to more than 60 clients in long term care settings.

In order to operate a successful mobile dental hygiene service, a collaborative approach to health care is essential. Developing a referral base for the continued care of clients is a necessity. Clients living in care facilities often have more challenging needs that require the cooperation of a number of disciplines to safely and effectively meet all of their oral health needs. Nearly 80% of my clients have required a referral for further oral services. Collaboration is a necessity within the facilities. Registered nurses, practical nurses, care attendants, social workers and occupational therapists are valuable resources to improving oral care of seniors.

Collaboration is the key factor to improving the oral health of clients. I have become involved in a pilot project within our health region that is a great example of interdisciplinary collaboration. It began with a speech language pathologist, a care manager at a long term care facility and me. It has grown to include administrative nurses and government health care managers, a public health dentist, public health dental hygienists and the College of Registered Dental Hygienists of Alberta (the regulatory body that registers dental hygienists in the province).

It is an exciting project in which the ultimate goal is to improve the oral health of residents in long term care facilities in Edmonton and hopefully throughout the province. We are looking at possible legislation changes and are studying many variables, including the policies for and frequency of assessing oral health needs, tools used for providing daily oral care, dental education improvements for nursing staff and a referral resource of community dentists and denturists willing to provide services to seniors. Knowledge of current oral health status and related care needs for seniors must be addressed in order to see true improvements in the oral health status of these clients following intervention.

Alberta is well known for its oil sands located in Fort McMurray. The oil sands employ an estimated 147,000 people. It is a relatively
isolated population — the largest barrier to accessing care is time. My solution was to propose that companies offer employees on–site dental hygiene services. Providing on–site services to employees is a benefit that helps retain employees in a competitive market.

In October 2008, Right to You signed a contract to provide service on location at a work camp once a month for a 2 year period. The company built a room to my specifications to hold my mobile equipment. The demand for the service has been overwhelming. I work 12 hour days providing basic dental hygiene care, emergency services such as temporary filling placement, aesthetic services including in–office whitening, and referral services to other health care providers (e.g., dentists). The average age of clients accessing my service is 50 years old and male, and the average length of time since their last visit to an oral health professional is 2.9 years.

Providing services to this population has been professionally rewarding. I have served as a change agent or a re–entry point back to oral health care. Plans are underway to develop a second site at a neighboring camp.

While new legislation has increased opportunities for dental hygienists to provide care in a variety of alternative practice settings, including mobile dental hygiene service, new barriers did make actual implementation of services in higher areas of need more challenging. However, these barriers can be adequately addressed. Providing a mobile dental hygiene service is a small step towards the ultimate goal of improving the oral health of all Albertans.
The greatest unmet health need for U.S. children is dental care, and dental caries is the leading chronic disease of children. Current statistics show that early childhood caries (ECC) rates continue to rise. This presents a tremendous health burden as well as a huge fiscal impact on families and governments. Dental care delivery models must be changed to increase the delivery of care and lessen the detrimental impact of this preventable disease.

Some progress has been made towards removing barriers to care, but change must continue. Increased funding for services alone will not guarantee access to care. There are fewer dentists available to provide care. This creates more choices for lucrative practices and offers little incentive to serve publicly funded and/or underfunded recipients or remain open during more easily accessible hours. In contrast, the number of registered dental hygienists is growing at a much faster rate. In an effort to reach the most vulnerable populations, we must work together to integrate oral health into overall health and come together at community, educational and policy levels. We must look at oral care delivery models that increase the utilization of dental hygienists and primary care medical providers. Medical and dental teams need to be sending consistent messages about the need for and value of oral health care services.

Historically, dentistry has not felt it had a primary role in the oral health of pre–school age children (0 to 3 years old). Other health care professionals were not confident in assuming oral health related roles. However, these dynamics are starting to change, as pediatric and primary care practices seek ways to improve oral health. There are 2 interventions that are strongly supported to prevent childhood dental caries – community water fluoridation and school–based sealant programs. There is also increasing evidence to support the application of fluoride varnish as an effective means of preventing ECC.

Health Promotion Specialists (HPS) is a school–based dental hygiene prevention program that has been addressing the needs of underserved children in South Carolina during a time when South Carolina law enabled school children direct access to preventive services provided by registered dental hygienists. After a turbulent start filled with character enhancing opportunities, including a settlement in its favor by the Federal Trade Commission, the program has begun building its success story since February 2002. HPS contracts with the South Carolina Department of Health and Environmental Control to provide public health services. It is a unique public/private partnership. The state does not have the responsibility or overhead of administering the program, but is able to utilize the data generated from the program to seek grant funding for other expenditures such as infrastructure and social marketing. The collaboration includes the South Carolina Department of Health and Human Services, the South Carolina Department of Education, the South Carolina Rural Health Resource Center, the USC School of Public Health and the South Carolina Office of Research and Statistics. This allows the data collected by HPS to be cross–referenced with Medicaid data and free and reduced school lunch data. From 2001 to 2007, HPS provided preventive care to over 69,000 children. Of those, 48,000 were enrolled in Medicaid. Prior to services through the HPS program, only 43% had received any form of exam or preventive services. Over 70% of the children seen continued with exams and preventive care after being seen by HPS.

Starting in 2002, South Carolina created a state oral health surveillance system that collects statewide data every 5 years for school–aged children. HPS has been largely instrumental in the collection of this data as well as providing preventive services and education. The changes noted in oral health status from 2002 to 2007 are very promising and indicate that South Carolina is moving in the right direction. The number of children with treatment urgency dropped over 10% during the 5 year study period. Additionally, the data shows that while Medicaid enrolled children experienced higher rates of caries, they were the children who were most connected to care. The prevalence of sealants among black children is now no different than that of white children. Overall, sealant use has increased while untreated caries and treatment urgency have decreased.

While oral health is improving, there are still a number of limitations to overcome. The rural areas of the state still show greater oral health disparities. Some of the influencing factors include a shortage of dentists to see the children, transportation issues, missed time at work by caregivers and a lack of perceived value of oral health by the parents and/or caregivers. Changing the perceived value of oral health in the caregivers directly influences most of the other limitations. Long term prevention programs such as this one can improve perceptions of value. The children that have been, and will be, seen on a regular basis will become future caregivers themselves, and are an important target for educational efforts.

There are a number of factors that affect the delivery and cost–effectiveness of oral health programs. The level of impact that a program has is directly related to its...
outcomes and cost. Utilizing dental hygienists without supervision to provide services may increase efficacy.3 Dental hygienists can and should be actively involved in the delivery of fluoride varnish and dental sealants in a variety of settings. They must be prepared to gather the data to demonstrate the benefits of this and other preventive interventions. The strengths and limitations of delivery models must continue to be addressed and studied.

References