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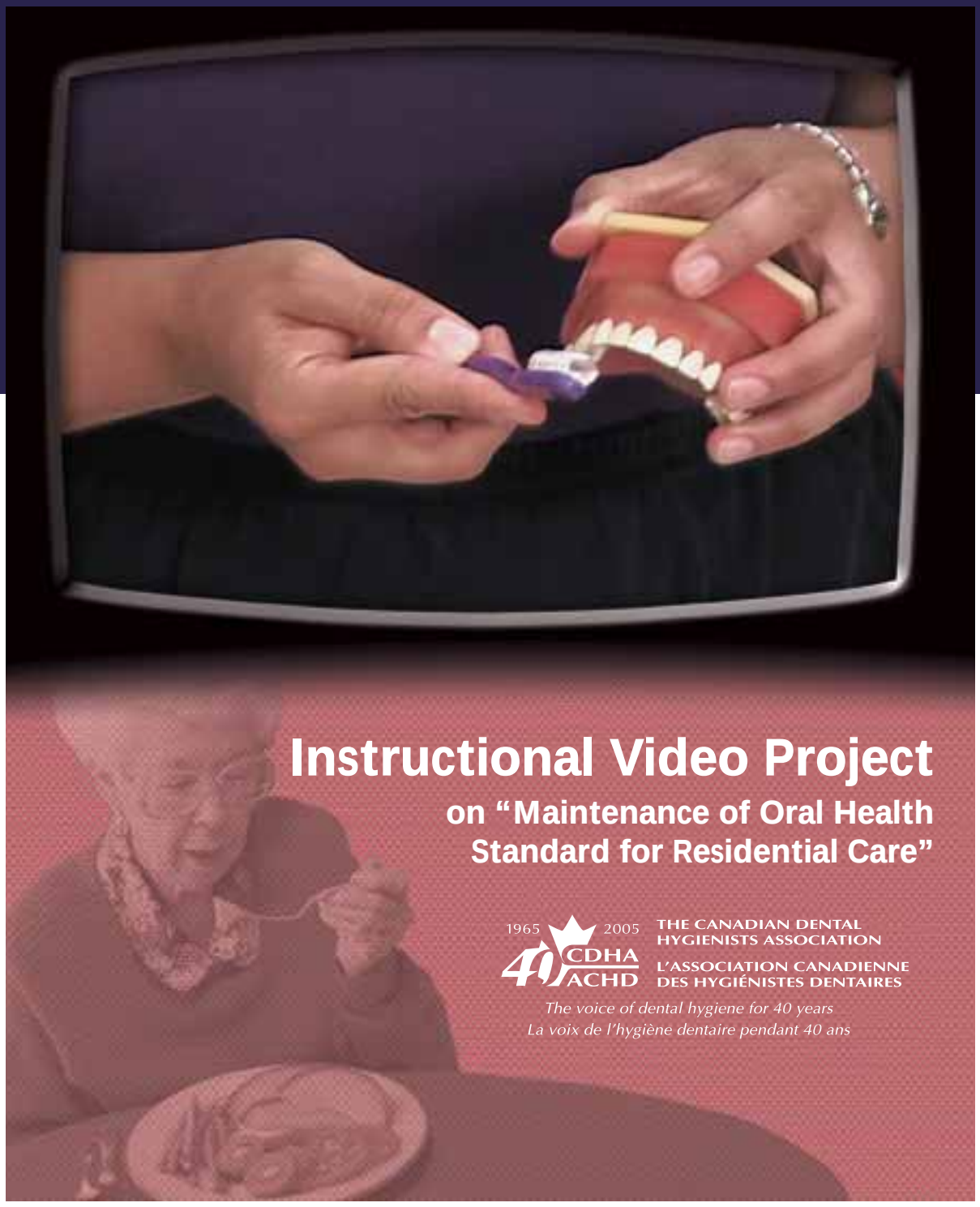

Instructional Video Project

on "Maintenance of Oral Health Standard for Residential Care"

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THE CANADIAN DENTAL HYGIENISTS ASSOCIATION

L'ASSOCIATION CANADIENNE DES HYGIÉNISTES DENTAIRES

The voice of dental hygiene for 40 years

La voix de l'hygiène dentaire pendant 40 ans

THE OFFICIAL JOURNAL OF THE CANADIAN DENTAL HYGIENISTS ASSOCIATION

Achievements and Perceptions

by Diane Thériault

As CDHA celebrates its 40th anniversary this year, I want to reflect on the incredible achievements we have realized over the years and the battles many of our members are currently waging. We have developed education programs comparable to most other health professions by offering baccalaureate degrees. Dental hygienists in five provinces have achieved self-governance, while those in the other five provinces are working hard to achieve this worthwhile goal. Similarly, supervision clauses are being disputed in some provinces in an effort to allow dental hygienists to practise in different settings and increase the access to dental hygiene care to all Canadians. I could go on and on.

But one struggle... is the need to improve the public's perception of the role of dental hygienists.

Indeed, many of you are familiar with the long struggles we have endured to improve the oral health and total wellness of all Canadians and also to protect the interests of our profession. But one struggle that cannot be emphasized enough is the need to improve the public's perception of the role of dental hygienists. Gone are the days of being called "the cleaning lady." Nonetheless, I still receive comments from clients that imply my services "might not be that important since this work is just to make their teeth look better." I see this as a reminder that we must continue our efforts in fostering a better understanding of how dental hygienists contribute directly to improving the oral health and total wellness of our clients. Henry Wadsworth Longfellow once said: "Perseverance is a great element of success. If you only knock long enough and loud enough at the gate, you are sure to wake up somebody." Similarly, I believe we can get the public to gain a better appreciation for the role we play by continuously educating our clients on the various aspects of dental hygiene and the link between oral health and systemic diseases.

It is up to each and every one of us to create a better understanding of our profession in the eyes of the public as well as other health professionals. There is no shame in promoting who we are and what we do. We are Oral Health Prevention Specialists and we should be proud of it.

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Réalisations et perceptions

par Diane Thériault

Comme l'ACHD célèbre son quarantième anniversaire cette année, j'ai envie de réfléchir sur les incroyables réalisations que nous avons à notre crédit et sur les batailles que bon nombre de nos membres livrent actuellement. Nous offrons des diplômes de baccalauréat, preuve que nous avons conçu des programmes d'enseignement comparables à ceux de la plupart des autres professions de la santé. Dans cinq provinces, les hygiénistes dentaires ont obtenu l'autorégulation, alors que dans les cinq autres, la profession met tout en œuvre pour atteindre cet objectif louable. De même, des clauses de surveillance font l'objet de controverses dans quelques provinces parce qu'on voudrait permettre à l'hygiéniste dentaire de pratiquer dans différents contextes et faciliter l'accès aux soins d'hygiène dentaire à toute la population. Je pourrais continuer indéfiniment.

Mais une lutte c'est la nécessité d'améliorer la perception qu'a le public du rôle des hygiénistes dentaires.

En effet, bon nombre d'entre vous sont au courant des longues luttes que nous avons menées pour améliorer la santé buccodentaire et le bien-être général de l'ensemble des Canadiennes et des Canadiens et aussi pour protéger les intérêts de notre profession. Mais une lutte sur laquelle on n'insistera jamais assez, c'est la nécessité d'améliorer la perception qu'a le public du rôle des hygiénistes dentaires. Ils sont révolus les jours où l'on nous appelait « la nettoyeuse ». Pourtant, je reçois toujours des commentaires de clients qui laissent entendre que mes services « ne sont peut-être pas si importants, puisque mon travail ne consiste qu'à améliorer l'apparence de leurs dents ». J'y vois un rappel que nous avons l'obligation de poursuivre nos efforts et de mieux faire comprendre la contribution directe des hygiénistes dentaires à l'amélioration de la santé buccodentaire et au bien-être général de leurs patients. Henry Wadsworth Longfellow a dit un jour : « La persévérance est un élément important du succès. Si seulement on frappe assez longtemps et assez fort à la porte, on est sûr de réveiller quelqu'un ». De même, je crois que nous pouvons amener le public à mieux apprécier le rôle que nous jouons en enseignant sans cesse à

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EVIDENCE FOR PRACTICE

DEPARTMENTS

The Dental Hygiene Ethos

by Susan Ziebarth, BSc, MHA, CHE

Throughout the 1980's, we did hear too much about individual gain and the ethos of selfishness and greed. We did not hear enough about how to be a good member of a community, to define the common good and to repair the social contract. And we also found that while prosperity does not trickle down from the most powerful to the rest of us, all too often indifference and even intolerance do.

– Hillary Rodham Clinton, Commencement speech at University of Pennsylvania, May 18, 1993

RECENTLY I READ A VERY INTERESTING STUDY ON THE ethos of the profession of physical therapy in the United States.* But what is ethos, you say, and what has it to do with dental hygiene? Ethos is defined as "the fundamental and distinctive character of a group, social context, or period of time, typically expressed in attitudes, habits, and beliefs."† So the ethos of the profession of dental hygiene is embodied by the attitudes, habits, and beliefs of the profession that guide the conduct and practice of practitioners.

Dental hygiene contributes to society as a "good member of the community."

Dental hygiene contributes to society as a "good member of the community." So is the dental hygiene ethos tangible or ethereal? I believe it is both. It is tangible in the documentation of dental hygiene ethical codes and practice standards and in the *Client's Bill of Rights*. It is a little less tangible when dental hygienists speak about the culture of dental hygiene. As Stiller suggests, "Learning about the professional world…involves not only mastering the skills needed to perform the work of the professional competently, but also internalizing the values and beliefs shared by others in the profession so that collectively held professional values and ideals come to characterize the

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* Stiller C. Exploring the ethos of the physical therapy profession in the United States. J Phys Therapy Educ. 2000;14(3):7-15.

† MSN-Encarta Dictionary [on-line]. Available from: http://dictionary.msn.com.

Les traits fondamentaux communs de l'hygiène dentaire

par Susan Ziebarth, B.Sc., M.H.A., C.H.E.

Au cours des années 1980, nous avons trop entendu parler du profit individuel et des traits fondamentaux communs de l'égocentrisme et de la cupidité. Nous n'avons pas suffisamment entendu parler de la façon d'être un bon membre d'une collectivité, de la façon de définir le bien commun et de renouveler le contrat social. Nous avons également constaté que si la prospérité ne rejaillit pas des plus puissants vers le reste de la population, en revanche, c'est trop souvent le cas de l'indifférence et même de l'intolérance.

– Hillary Rodham Clinton, Discours prononcé à l'Université de la Pennsylvanie le 18 mai 1993, lors de la collation des grades

J'AI LU RÉCEMMENT UNE ÉTUDE TRÈS INTÉRESSANTE À propos des traits fondamentaux communs de la profession de physiothérapeute aux États-Unis*. Mais, me direz-vous, qu'entend-on par là, et quels rapports ces traits ont-ils avec l'hygiène dentaire? Les traits fondamentaux communs désignent « le caractère fondamental et distinctif d'un groupe, d'un contexte social ou d'une période, qui s'exprime habituellement par des attitudes, des habitudes et des croyances† ». Les traits fondamentaux communs de la profession d'hygiéniste dentaire sont donc intégrés aux attitudes, aux habitudes et aux croyances de la profession qui guident la conduite et la pratique des praticiens.

L'hygiène dentaire contribue à la société à titre de « bon membre de la collectivité ». Alors, les traits fondamentaux communs de l'hygiène dentaire sont-ils tangibles ou éthérés? Je crois qu'ils sont les deux à la fois. Ils sont tangibles dans la documentation des codes de déontologie et des normes de pratique en hygiène dentaire et dans la *Charte des droits du client*. Ils le sont un peu moins lorsque

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* C. Stiller, « Exploring the ethos of the physical therapy profession in the United States », *Journal of Physical Therapy Education*, 14 (3) (2000), p. 7-15.

† MSN-Encarta Dictionary [en ligne], accessible au http://dictionary.msn.com.

Power, Control, and Economics: A Case Study in Professional Ethics

by Fran Richardson, RDH, BScD, MEd, DipMin*

Bill 116, *An Act to Amend the Dental Hygiene Act, 1991*, is currently being debated in the Ontario Legislature, the media, and within the oral health sector throughout Canada. The amendment will make oral health care services more accessible for people who are unable to attend a traditional dental office. The fact that this issue is being debated is healthy but long overdue. Now in the committee stage, the Bill will be returned to the Ontario Legislature for the vote that will take place, it is hoped, before the Ontario Legislature rises for the summer 2005 recess.

The purpose of this paper is to explore some of the ethical implications related to the accessibility of preventive oral health care.

HISTORY OF DENTAL HYGIENE

Dental hygiene as an occupation was created in Connecticut in 1907 when a dentist Alfred C. Fones determined that it was more cost effective to have his assistant, a woman, deal with the preventive aspects of oral health care. He thought that females would be better suited to the routine preventive tasks and would not aspire to any form of independence. The relationship would be modelled after the husband-wife paradigm of the time. The first dental hygienist to practise in Canada was in Saskatchewan in 1949. Dentistry quickly sought to have dental hygienists regulated by the dental governing bodies, thus ensuring that dental hygienists could only practise under the supervision and direction of a dentist.

As the dental hygiene profession grew and more academic institutions began offering the educational programs, dental hygienists realized that it was an inherent conflict of interest when the primary employer was also the regulator. Public interest and public protection are the only reasons for professional regulation. Dental hygiene was an anomaly, and still is in the United States and five provinces, in that it is the only regulated health care profession to be regulated by its primary employer. As the profession matured, its members realized that self-regulation was necessary to control their own professional standards and education. Dental hygienists also recognized that there was a significant component of society that was underserved by the traditional delivery model of dental care. To provide access for those citizens, dental hygienists required the authority to be able to travel to the client instead of expecting the client to come to them.

THE "ORDER"

When dental hygienists became self-regulating in Ontario through the creation of the *Dental Hygiene Act, 1991*,[1] organized dentistry lobbied to have the "order" requirement inserted into the Act, which has continued to

RÉSUMÉ

Le projet de loi 116, *Loi modifiant la Loi de 1991 sur les hygiénistes dentaires*, fait actuellement l'objet de discussion à l'Assemblée législative de l'Ontario, dans les médias et dans le secteur de la santé buccodentaire partout au Canada. La modification proposée vise à éliminer la nécessité, pour les hygiénistes dentaires, de recevoir un « ordre » d'un dentiste pour servir le public. Cette modification va faciliter l'accès des services de santé buccodentaire aux personnes qui sont incapables de se rendre dans un cabinet de dentiste classique. Actuellement à l'étude en comité, le projet de loi retournera devant l'Assemblée législative pour y être soumis au vote, et ce, avant que l'Assemblée ne suspende ses travaux pour les vacances d'été, espérons-le.

L'hygiène dentaire était et constitue toujours une anomalie aux États-Unis et dans cinq provinces, puisqu'il s'agit de la seule profession réglementée dans le domaine de la santé à être réglementée par le principal employeur de ses membres. Or l'autorégulation de l'hygiène dentaire par les hygiénistes dentaires est nécessaire pour permettre à la profession d'avoir la haute main sur ses propres normes et sa propre formation professionnelles. Une partie importante de la société est mal servie par le modèle classique de prestation des soins dentaires. Pour que les citoyens en question aient accès aux soins, les hygiénistes dentaires réclament le pouvoir de se rendre chez le client; ils ne veulent plus attendre que le client vienne à eux. La question semble être grâce à qui, à quel moment et à quel endroit le public aura-t-il la permission d'obtenir des services de santé buccodentaire.

L'article qui suit analyse certaines incidences déontologiques relatives à l'accessibilité des soins préventifs de santé buccodentaire.

MeSH terms: dental hygienists; ethics, professional; professional autonomy

* Registrar of the College of Dental Hygienists of Ontario and President of CDHA, 1993–94

tie dental hygiene services almost exclusively to the dentists' offices. Two private members' bills were introduced into the Ontario Legislature in June 2004 to amend the *Dental Hygiene Act, 1991*. One of these, Bill 116, passed second reading in the Ontario Legislature on December 2, 2004.[2]

The issue appears to be about who has access to the mouth and consequently the revenue that the provision of oral health care services brings in. What generates the need for one individual or a group of individuals to control the actions of others? Is it a question of power or control, or is it based on economics? Would not the best solution be a collaborative compromise that would be a win-win-win solution for the dentists, the dental hygienists, and the clients?

Dental hygienists do not claim to be dentists; they specialize in the prevention of disease.

In Ontario, negotiations did continue for two years at which time organized dentistry stated unequivocally that the only resolution they would accept was one that tied the dental hygienist to the practice of dentistry, primarily in dentists' private offices. Dentistry insisted that clients should access dental hygiene services only on the "order" of a dentist. This is similar to the 365-day rule in British Columbia and the supervision requirement in other jurisdictions. Dentistry saw a society where the dentist was the "gatekeeper" of the oral cavity within a hierarchy of responsibility with the dentist in the leadership position. Dental hygiene espoused a shared responsibility. Until very recently, dentistry has referred to the "team concept," albeit with the dentist as the captain of the team. Within the last few months, organized dentistry in Ontario has been using the word "collaboration" in their media releases to indicate their preferred working relationship with dental hygiene.[3] Dental associations, the advocates for the dental profession, have stated that they believe the current system of entrepreneurial dental offices works well.[3] The dental hygiene profession, however, is acutely aware that while the current system works for most clientele, there are individuals for whom the current system is a significant barrier. In Ontario Dental Association (ODA) press releases, organized dentistry disagrees with that premise and asserts that only a dentist has the expertise to be the initial contact with the client.[3]

PUBLIC SAFETY

Organized dentistry is attempting to convince politicians and the public that their sole reason for opposing the proposed legislative change is that the public will be unsafe, and that clients will die, if they attend a dental hygienist without the prior intervention of a dentist.

Dental organizations are fighting to retain control over all dental health services and the revenue produced. Dentistry has indicated that they see the issue as safety for the public, while dental hygiene has continued to stress the point of access for those unable to attend a dentist's office. For the most part, dental hygiene has avoided attacking dentistry for their position, but the reverse has not been true. In addition, dental hygiene has sincerely attempted to stay with the facts, while dentistry has made unsubstantiated allegations regarding unsafe dental hygiene care.[4] It is unfortunate that they have neglected to acknowledge that dental hygiene is a self-regulating profession with regulations, standards of practice, and codes of ethics that were developed to protect the public.

Organized dentistry claims that they should be the only ones to diagnose and treat oral health conditions because they have extensive "medical" education. Dental education in Ontario is a four-year academic program usually following an undergraduate degree in science, for an average of seven years of education. Dental hygiene in Ontario is a two-year college level education. Dental hygienists do not claim to be dentists; they specialize in the prevention of disease and have significantly more education than dentists in the area in which they practise. Many dental schools employ dental hygienists to teach prevention to dental students.[5]

Organized dentistry claims that the proposed legislative change would "endanger the health of patients who have certain medical conditions or who are on specific drug treatments, such as coumadin."[6] What the Ontario Dental Association fails to state is that dental hygienists are self-regulating oral health care professionals regulated under the same provincial umbrella *Act* as the nurses, physicians, and dentists. Organized dentistry's focus is on the fact that "unless a dentist is involved, these groups won't get the diagnosis they need and their overall health may be at risk."[6] The fact is that dental hygienists are bound by regulation to refer a client to a dentist or a physician if they encounter a situation beyond their competence. Is organized dentistry using omission of the facts to frighten readers? Is this ethical? It is generally understood that omission is just as damaging as commission.

MEDICARE AND ORAL HEALTH CARE

Medicare in Canada is described as a "universal, accessible, comprehensive, portable, and publicly administered health insurance system."[7] Basic oral health care is not covered under the *Canada Health Act, 1984*. However, "insured surgical-dental services are services provided by a dentist in a hospital, where a hospital setting is required to properly perform the procedure."[7] These insured services are usually the removal of impacted third molars or jaw reconstructions performed by oral surgeons. These are not preventive services. Therefore, while all Canadians may have access to affordable basic medical services, this is not the case with basic oral health care services.

Politically, the mouth has been disconnected from the rest of the body. The reason for this separation was intentional, a result of deliberate lobbying by the national association that represents the interests of dentists. When the late Tommy Douglas brought forth the idea of a universal, government-insured health care scheme, organized dentistry chose to remain outside the funding mechanism.

Dentistry wanted to stay in the self-determined, traditional fee-for-service entrepreneurial system where the dental profession controlled the decisions on where, when, and how oral health services would be delivered. The economic realities of the twenty-first century, a time when provincial governments are in the process of de-listing covered health services, mean that citizens are unlikely to find oral health care included in any restructuring of Medicare benefits. Yet, at the same time, the Ontario Dental Association continues to insist that it is the government's responsibility to install dental facilities in long-term care facilities and seniors' residences.[3] They cite the lack of facilities as a reason why dentists may be reluctant to go to these clients. On the other hand, dental hygienists generally take their own equipment and make the best of the situation.

At the same time, Canadians are living longer. Recent information from Statistics Canada estimates that the current life expectancy for Canadian males is 75 years and 81 years for females.[8] Since averages indicate that some people will die younger, that means that many will live much longer than the predicted national average. Indeed, Canada has over 200 living centenarians. The reason for the increase in lifespan is multifaceted but can be attributed in part to improved nutrition, clean water, sanitation, and vaccinations against disease. Canadians are also keeping their teeth longer. Being edentulous is no longer an expectation for the senior years. Many of today's seniors are healthy and expect to continue their regime of regular preventive oral health care until the time of their death. As an integral part of their healthy lifestyle, seniors for the most part value oral health care as much as they do medical care. The difference lies in the accessibility and affordability of the former compared with the latter.

Growing old and/or being faced with mobility problems can be a challenge in our youth-oriented, fast-paced culture. Services and activities once taken for granted are often no longer available or accessible. Even if the activity or service *is* available, it may not be affordable for those living on fixed or supplemented incomes. Canadians are reminded daily in the media that we too may one day be a senior without unlimited physical or financial resources.

PRACTICE LOCATIONS

In 2005, approximately 92 per cent of the dental hygienists in Canada live in self-regulating jurisdictions.[9] But these self-regulating jurisdictions were not won without strong opposition from organized dentistry. When dental hygiene was seeking self-regulation, organized dentistry lobbied their respective provincial governments to insert clauses into the legislation that effectively maintained the tie to private dentists' offices. The exceptions were for those dental hygienists employed in public health units, academic institutions, or administrative roles.

The majority of dentists continue to practise in independent businesses either alone or in partnership with other dentists. Current dental regulations prohibit dentists from partnering with other health care professionals in most jurisdictions. This is not the case for other regulated health care practitioners. The construction of the dental practice is such that clients must come to them for care; very few dentists make house calls or travel off-site to see their clients. As people age, many lose mobility and are unable to attend the dental office. Dental hygiene is a very portable profession as demonstrated through the limited public health programs that remain after the last few years of government cutbacks. There are also other groups, such as students attending university, the homeless, the dental phobic who for various reasons cannot or will not attend a dental office yet would access preventive oral care services if they were available in another venue.

There are dental hygienists who are willing to go to the client rather than have the client come to them.[10] However, organized dentistry has a history of opposing any legislative change that would permit any other health care practitioner to access the oral cavity without dentistry's express permission. They fought unsuccessfully to prohibit the direct access of the public to denturists; they have stated publicly that they do not intend to lose the battle with dental hygienists.

This situation has denied access to oral health services to a substantial number of Canadians. It has also denied work to dental hygienists residing in communities without a dentist.

ECONOMICS AND ORAL HEALTH CARE

Since payment for oral health is external to the government funding system, provincial governments have not previously shown much interest in the problem. Third-party payment organizations such as those that pay dental insurance claims are beginning to realize that substantial savings could be realized if dentistry did not have a monopoly on oral health care.[11]

There is also a growing body of knowledge that links poor oral hygiene to systemic disease, thus strengthening the claim that preventive oral health care may reduce government health care spending. Prevention of disease is always more cost effective than treatment. A recent study in the United States found that residents in nursing homes suffer from respiratory problems, including pneumonia, when their oral hygiene is poor and dental plaque is not removed daily.[12] The authors note the seriousness of their findings and call for further research.

"Scaling and root planing teeth including the curetting of surrounding tissue"[1] is an invasive procedure that may induce bleeding and the introduction of bacteria into the blood stream. This is why the procedure is a controlled act in Ontario.[13] Oral care has not been a priority in long-term care facilities because it is not paid for by the government funding system. Residents often do not have private insurance and few facilities contain a room with the dental equipment required for dentists to see residents. In addition, families may not or cannot assume the expense involved in transporting a family member to a private dental office.

Dentists usually control the fees that are charged for dental hygiene services within the dentists' offices. The *Ontario Dental Association Fee Guide*[14] suggests the dentist charge the client approximately $180–$200 for a one-hour

appointment with a dental hygienist. The dental hygienist, depending on location and/or experience, may earn between $27–$50 per hour. Overhead costs are usually considered to be approximately one-third of the charged fee. Therefore dentists appear to be making a substantial profit from dental hygienists' services. Dentists are among the top professional wage earners in Canada according to Statistics Canada and part of that income comes from the dental hygienists in the practice. However, due to the archaic legislation supported by dentistry, dental hygienists are prohibited from practising their profession independently and reaping the profits themselves.

Dentistry claims that dental hygienists want "independent practice," a term determined by dentistry, and are hiding the issue behind terms such as "access" and "affordability." The profession of dental hygiene prefers the term "alternative" or "direct access" to describe their quest.[15] When the public does understand the issue, they too see it as one of choice and access. This reality has led to over two dozen seniors and health advocacy organizations writing letters to the Ontario government in support of the legislative change. To date, only dental organizations have opposed the change.

ETHICAL APPROACH TO ACCESS TO CARE

Ethically, organized dentistry and the dental hygiene profession definitely differ in their approach to the problem of access to oral health care. Dental organizations have called on the government to install dental clinics in nursing homes and residential facilities where dentists can see patients on an individual basis. They have also requested that additional money be injected into the health care system to support dental procedures. Press releases from the Ontario Dental Association focus on "patient safety" and the need for "medically trained dentists" to be the arbiters of all oral health care in the province. The concern expressed is for the safety of the medically compromised patient and thus for the need for the dentist to be in control. Dentistry is using a utilitarian ethic based on consequences. But the economic realities of maintaining control over all aspects of oral health care are substantial.

Dental hygiene's approach has been more deontological, in that they have seen an underserviced population in need of care and have been lobbying dentistry to facilitate access in this sector for over a quarter of a century.[16] The original approach was to work with dentistry to fulfill what many dental hygienists saw as their ethical obligations as health care practitioners. However, despite many negotiations and repeated attempts over the past 10 years to get dentists to provide "orders" for dental hygiene care away from the dental office, very few dentists were willing to assist in the endeavour.[17] Dental hygiene was convinced that the only solution was a legislative change.

ETHICS AND THE RIGHTS OF CANADIANS

The issue of choice is inherent in Canadian society. Under provincial health law, the *Regulated Health Professions Act, 1991,* people are entitled to "choose the health practitioner of their choice from a range of safe options."[13] The "order" provision has negated that choice for Ontario consumers. It has also restricted the choice of practice venues for dental hygienists. The province contributes tax-payer dollars to the education of dental hygienists yet has allowed these professionals to be controlled by a group that reaps substantial personal income from dental hygienists' labours. That is an ethical issue in itself, when one profession restricts access to another profession based on economic gain.

But there is also the issue of justice for those individuals who for reasons of mobility, infirmity, or economics are unable to access basic, preventive oral health care. Is health care in Canada a right or a privilege? Do we have an obligation to ensure that seniors are able to make choices regarding their own health care? Do health care professionals also have an ethical obligation to facilitate access to the services they provide? Should the good of the public be surrendered for the economic interests of a few? Is gender an influencing factor within the health care sector that leads to power imbalances? These are questions that all Canadians must answer.

Not all dentists are opposed to the legislative change and not all dental hygienists will take advantage of the opportunity to practise in different venues. There are many dentists who have sincerely tried to facilitate access to preventive oral health by assisting dental hygienists who are willing to attend to residents in nursing homes or residential facilities. Many of these dentists have reported being harassed by their peers and some report being contacted by their regulatory body.[17] A few dentists have continued to assist but most have terminated their relationship with the off-site dental hygiene practitioners.

Ethically, there appears to be a dichotomy. Dentists appear to be reluctant to treat those individuals where there is no secure evidence of remuneration. However, they also do not want the dental hygienists to do it either, even though there are dental hygienists who see this type of practice as an ethical duty. In a responsible society, should we not applaud those individuals who have the spirit and the desire to go where others will not? Do professionals have an ethical obligation to consider the vulnerable in society? It has been noted that "the sources of alienation and dehumanization operating on the lives of those who are older are political, economic, and cultural, not merely symbolic or psychological."[18] The article continues: "Our real problem – the moral one – is that we have a social system that cannot accommodate the well-being of real, living people, a system that shunts people aside if they do not 'fit' *its* needs."[18] Dentistry and dental hygiene have been talking about meeting the needs of this population for 25 years, but only dental hygienists seem prepared to take definitive action. They believe it is within their professional ethics to try. The dichotomy is that if dental hygienists can proceed along their chosen path, everyone will gain: the clients who receive care, the dentists who receive referrals, and the dental hygienists who believe they are doing something worthwhile.

Equality is a basic Canadian tenet under the *Canadian Charter of Rights and Freedoms.*[19] If that is truly the case,

then a person who is mobility challenged should have the same rights of access to oral care as someone who is able bodied. A person should be able to choose when, where, and how they receive services that are not covered under the *Canada Health Act*. Writing in relation to theological ministry, Christopher Lind states that "if we use the lens of professional responsibility to analyze the situation, then the question becomes one of power and the problem is political. Professionals are individuals who belong to, and are regulated by, a specified group. The standards of professional obligation require the professional to overcome culture in order to protect the most vulnerable."[20] This statement is as true in the oral health care sector as it is in the theological world.

CONCLUSION

The political will has to be there to make legislative changes. In our society, convincing politicians to amend legislation is called lobbying, a resource-dependent activity. Groups with money usually get their issue heard. Dentistry has the resources and has been adept at the political game for a very long time. Dental hygiene is just learning that skill and for many dental hygienists the "game" is offensive. If something is the right thing to do, then it should be done. Unfortunately, money talks and politicians want to get elected or re-elected. Dental hygiene may not previously have been taken seriously because of the lack of resources allocated to the government relations process. However, the substantial third-party support by client advocacy groups in Ontario[21] has made the politicians take notice.

We must all live by our own personal codes and belief systems. However, it is important to maintain one's personal ethics in conjunction with one's professional ethics. To use scare tactics regarding the dental hygiene quest would be to negate those ethics. This is why the dental hygiene community is understandably disappointed with organized dentistry for making unsubstantiated public statements that are meant to frighten those who are not intimately involved in the issue. To disagree with a position is one's right, but to knowingly mislead may question the validity of the argument.

We all dream of a world that is fair, a world where everyone uses their gifts for the betterment of society as a whole, and where we all live in harmony. Realistically, we see that human beings are forced to struggle, mostly against ourselves. If access to oral health care is going to improve, that change may not be led by dentistry. It is the dental hygiene profession that has publicly acknowledged the relationship between professional ethics and reaching out to the community at large. Unfortunately, it is the dental profession that has the power to control how and when that outreach would occur. The current situation in Ontario, when it is resolved, may change that scenario for other jurisdictions as well.

Dental hygiene is fighting for the public and it is the right thing to do. In the future, residents of nursing homes may be able to experience clean, healthy mouths and the joys of being able to smile with a full set of teeth because there were some radical individuals who were willing to challenge the system. There will also be dental hygienists, not only in Ontario, but also throughout Canada who will have rewarding careers knowing they have made a significant contribution to the health of those less fortunate. One day, in the not too distant future, dentists and dental hygienists will look back on this time and realize that confrontation was really unnecessary and that collaboration is what we do best in the interest of the public. One day, we may all be in a position to need oral health care at a time and place that is accessible to us. The outcome of the Ontario deliberations may be a determining factor whether or not that care is available.

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Instructional Video Project on "Maintenance of Oral Health Standard for Residential Care"

*by Beverley Contreras, RDH**

In my role as the site dental hygienist for two residential care centres in the Fraser Health Authority (B.C.'s Lower Mainland), I developed oral care policies and procedures for caring for residents. In addition, I developed a tool in 1999 called "Response to Brushing" that is used as an index to measure consistency and thoroughness of brushing. I have used it extensively at my two facilities, Queen's Park and Fellburn Care Centres.

Then, working closely with the Clinical Nurse Specialist, in 2001 we developed a "Maintenance of Oral Health Standard for Residential Care" (MOH Standard) for the North Area of the Fraser Health Authority (FHA). This is the largest health authority in the province, serving almost one and a half million people, or one-third of the population of British Columbia. The MOH Standard is in place in all the owned and operated residential care facilities in the North Area of the FHA and is available for all the contracted and affiliated facilities. Our ultimate goal is to have the standard in place throughout the FHA.

With funding from the Job Enrichment Committee of the FHA, I produced a video as a teaching tool accompanying the MOH Standard. Before the video's release, I compiled oral care statistics at one of my facilities (Queen's Park; Fellburn was unable to participate) and another facility participating in the project (Normanna Rest Home). The video was then made available to staff and I tracked the level of oral care at three and six months to determine the impact of the video on the quality of oral care delivered.

This article is about getting funding for the video and the impact of the video on the health of residents. This issue contains the proposal made to the Committee about the video and the six-month report on the video's effect. The "Response to Brushing" tool and the MOH Standard are also included at the end of the article. The twelve-month report will be published when it has been submitted to the funding authority.

MeSH terms: dental care for aged; dental hygienists; long-term care; oral hygiene

* At the time of writing, Beverley was the Registered Dental Hygienist in Dental Services at Queen's Park and Fellburn Care Centres in New Westminster and Burnaby, B.C. In mid-April, she moved to a new position as Coordinator of Quality Improvement and Accreditation for Normanna and Dania Rest Homes. Beverley noted that the offer of the position came about in part because of this project.

RÉSUMÉ

L'auteure est hygiéniste dentaire sur place dans deux établissements de soins pour bénéficiaires internes de la Fraser Health Authority (Lower Mainland de la Colombie-Britannique). Elle y élabore des politiques et des méthodes de soins buccodentaires à l'intention des résidents. Elle a également mis au point en 1999 un outil de réaction au brossage, que l'on utilise comme indice pour mesurer l'uniformité et la qualité du brossage. On se sert beaucoup de cet outil dans les deux établissements où elle travaille, le Queen's Park et le Fellburn Care Centres.

En étroite collaboration avec l'infirmière clinicienne spécialisée, elle a ensuite mis au point, en 2001, une « norme de maintien de la santé buccodentaire applicable aux soins en établissement » à l'intention de la partie nord du territoire de la Fraser Health Authority (FHA). La FHA constitue le plus important service de santé de la province, puisqu'elle dessert près d'un million et demi de personnes, soit un tiers de la population de la Colombie-Britannique. La norme en question est en place dans tous les établissements de soins pour bénéficiaires internes qui appartiennent à la FHA et sont exploités par elle, et elle est à la disposition de tous les centres exploités à contrat et centres affiliés. L'objectif en fin de compte est que la norme soit appliquée dans l'ensemble du territoire desservi par la FHA.

Grâce au financement fourni par le Comité de valorisation du travail de la FHA, l'auteure a produit une vidéo comme outil d'enseignement qui accompagne la norme de maintien de la santé buccodentaire. Avant la sortie de la vidéo, des statistiques sur les soins buccodentaires avaient été compilées pour l'un de ses deux établissements de soins (celui de Queen's Park) ainsi que pour un autre établissement participant au projet (la maison de repos Normanna). La vidéo a ensuite été mise à la disposition du personnel et l'on a suivi de près le niveau de soins buccodentaires au bout de trois et de six mois, afin de déterminer l'effet de la vidéo sur la qualité des soins buccodentaires fournis.

On a constaté des améliorations dans la plupart des catégories ainsi qu'un accroissement de la sensibilité du personnel à l'importance des soins buccodentaires.

APPLICATION FOR VIDEO PROJECT

Date: December 12, 2002
Project title: The How-To's of the Simon Fraser Health Area Maintenance of Oral Health Standard
Project leader: Beverley I. Contreras
Department/position: Dental Services, Registered Dental Hygienist

PROJECT SUMMARY

The goal of this project is to produce and pilot an instructional video that will promote and support the implementation of the Fraser Health Authority North Area Maintenance of Oral Health Standard (MOH) For Residential Care.

Objectives include:

1. developing a script for the audio portion of the video;
2. developing a plan of visual segments to accompany the audio portion;
3. developing and implementing a plan to coordinate all participants to record the video;
4. recording the video;
5. editing the video;
6. pilot use of the video;
7. measuring outcomes.

The video will be a teaching tool accompanying the MOH Standard and will be used to educate care staff on the MOH Standard and expectations for oral care. The video will show hands-on demonstrations of the various oral care situations outlined in the MOH Standard along with suggestions to facilitate oral care in what can often be very challenging situations.

The assessment tool that the dental hygienist uses to measure how well the standard is being met at Queen's Park and Fellburn care centres will be described. This criterion will be an oral care quality indicator and a benchmark for care. The assessment tool will measure performance before and after the video is introduced.

The video will be piloted to two groups simultaneously.

Group 1: Queen's Park and Fellburn care centres
Group 2: Normanna Rest Home

PILOT FORMAT

1. Performance measurement three months prior to introduction of video
2. Introduction of video with mandatory education
3. Performance measurement three months after the video introduction
4. Performance measurement six months after the video introduction

Post-performance measurement (at three and six months) will determine outcomes. Positive outcomes may warrant further funding by the health area to refine and market the video. Potential future customers are health care organizations and or health care educational institutions.

Author showing mouth props

1. Why do you (personally) want to do this project, and what skills do you anticipate developing or enhancing?

The College of Dental Hygienists of British Columbia defines dental hygiene as "a collaborative relationship in which the dental hygienist works with the client, other members of the dental team and society in general, to achieve and maintain optimal oral health as an essential aspect of well being."

As the site dental hygienist for Queen's Park and Fellburn care centres, I have experienced much success working within the interdisciplinary team to enhance the oral health for residents at these two facilities. The oral care policies and procedures I had developed in the past were in fact the basis for the present MOH Standard. During the development of the MOH Standard, I had the pleasure of working with the Clinical Nurse Specialist for the area as we revised the policies and procedures to become the present MOH Standard.

It would give me great satisfaction to create and trial this video tool. Positive outcomes leading to wider use of the video will be my further contribution toward the enhancement of oral health for many residents in continuing care. I believe this tool will have a significant impact on the implementation and continual awareness of the MOH Standard and the expectations of oral care for all clients in our facilities.

In 1997, I drafted the script for a video produced by the Vancouver-Richmond Health Board entitled "Prevention of Early Childhood Tooth Decay." I was also an active participant in the filming process. I look forward to working in this educational medium again for the following reasons:

- enhancement of my script writing skills;
- enhancement of my ability to anticipate the educational needs of my audience;
- further development of my video presentation skills;
- further development of my video production knowledge base.

Introductory slide to module on dry, cracked or encrusted lips

2. Please define how this is outside your regular work/duties?

At present, my regular work at Queen's Park and Fellburn includes

- assessing all residents upon admission, annually and as referred;
- developing and revising oral care policies and procedures and individual oral care plans in collaboration with the interdisciplinary team;
- providing and promoting oral care and services to residents;
- providing clinical services to an appropriate group of residents (debridement, periodontal therapy, application of fluoride);
- initiating referrals as appropriate to the dentist, denturist, or other disciplines; and
- contributing oral health expertise to members of the interdisciplinary team via individual interaction, care conferences, educational sessions, and committee involvement.

As for the second point, much of this recent work has involved working with team members representing sites across the Fraser North Area and resulted in the MOH Standard.

I am currently able to support the implementation and ongoing awareness of the MOH Standard at the Queen's Park and Fellburn care centres through personal in-services and promotional contests. The development of this video will provide a totally different medium to educate.

Double-sided toothbrush

Not only will it allow me to reach greater numbers at my own work sites but it will promote access to the information for other facilities as well.

3. Please explain how this is outside the normal operations of your department.

As a member of the Dental Services Department for Queen's Park and Fellburn care centres, my services are site specific to these two facilities. While providing education for care staff is well within my scope of practice and the normal operations of our department, I am not assigned to provide the same service to other facilities.

4. Has this been done elsewhere in the Health Authority or in other Health Care Areas in British Columbia or Canada?

I am aware of a number of videos that deal with the topic of oral care for residents in continuing care facilities. However, to the best of my knowledge, there are no videos available that educate and make viewers aware of the existence of an oral care standard or the benchmark for care.

5. How will your project contribute to our goal of providing quality innovative and cost-effective health care? What outcomes do you anticipate for patients and/or staff?

This project will further establish and communicate the MOH Standard for oral care. It is a vehicle to ensure consistent quality oral care for the residents of Queen's Park and Fellburn care centres and has the same potential for all residential care facilities. The video may also initiate links between the owned and operated facilities with the MOH Standard in effect and the contracted and affiliated facilities should they choose to adopt the standard.

The video will provide an accessible and flexible learning tool on oral care. It may be viewed at any time and would not require any formally arranged in-services. This in turn will reduce labour time currently dedicated to such in-services.

The video can be used for

- staff orientation;
- practicum student training;
- mandatory education; and
- any other educational needs.

Outcomes for residents are improved oral health and an enhanced feeling of well-being. Using the criteria developed to measure how well the standard is being met prior to education with the video and following its viewing would be one means of measuring some level of success.

Outcomes for staff include increased knowledge of the importance and ability to deliver high-quality oral care. It is hoped staff will develop a greater sense of confidence to deliver this care.

6. Who will be impacted by this project? List those with whom you have discussed this proposal together with their responses/suggestions. [edited to be shorter]

Cathie Speers, Transition Director, Cascade Residence: "Having come from a site that was fortunate

enough to have a dental hygienist, and now seeing what our residents are missing out on here at Burnaby, I wholly support the concept of this video that could be shared among the Simon Fraser Area Facilities."

Kathy Young, Coordinator, Quality Improvement, Dania and Normanna Care Centres: "Recently two Affiliated Long Term Care Facilities in the SFHR completed satisfaction surveys about care and services in their facilities and have also completed a self-assessment of their services for the Canadian Council on Health Services Accreditation. On both occasions, responses from residents, their families, and the staff indicated the need for better oral care for our residents. A number of responses suggested that at the very least, we should have good educational materials and in-services for the care staff. Upon reading the draft outline of the video proposed, I think this would be an excellent resource for our staff and all other staff working in residential or home care.... I am confident from having seen the results of work Beverley has done educating staff at Queen's Park and Fellburn that this would be a most valuable educational tool and look forward to having it available for our staff."

Lottie Cox, Nurse Clinician, Ridge Meadows Hospital (Alouette and Creekside Care Centres): I support your proposal for this job enrichment project. We at Alouette/Creekside have introduced the oral standard via in-services to the staff. We still have concerns raised on the use of the toothbrushes." I think that a visual presentation would be very effective in demonstrating the use of the products and techniques for difficult situations, especially as we do not have dental support at this site. You could share your expertise and knowledge in a way that makes good use of your time. I also like the link your have made referring to the standards of care, e.g., dysphagia and agitation. Your focus has incorporated the whole person."

Jo-Ann Tait, Nurse Clinician, Queen's Park Care Centre: "I would love this video to be mandatory for staff to view/sign off that they have viewed it, on a yearly basis. I would also love it if each unit had a copy of the video easily accessible to the staff on all three shifts."

BUDGET

SUPPLIES/MISCELLANEOUS ITEMS

Purchase of a Pinnacle Studio AV Version 8	$250.00
(*This video editing computer package will enhance the quality of the video and curtail editing costs.*)	
Biotene Mouthrinse and Oralbalance Gel	$300.00
Office supplies	$100.00
Total supplies cost	**$650.00**

LABOUR COSTS

Activity	Person Responsible	Hours Required
1. Replacement training	B. Contreras	7.2
2. Script development	B. Contreras	21.6
3. Participant coordination	B. Contreras	7.2
4. Participation in filming	B. Contreras	21.6
5. Editing video	B. Contreras	21.6
6. Pre and post measurements	B. Contreras	21.6
7. Preparation of evaluations and test development	B. Contreras	7.2
8. Six-month report	B. Contreras	14.4
9. Final report	B. Contreras	7.2
Total hours		**129.6**
Total labour costs		**$4,245.03**
TOTAL REQUESTED		**$4,895.03**

Proper placement of toothbrush to ensure gingival massage

7. What indicators or outcomes will you use to assess the value of your project

a. Evaluations completed by staff demonstrating an appreciation for the information and mode of delivery
b. Staff knowledge testing/quizzes demonstrating any significant increase in oral care knowledge
c. Performance measurement through oral assessments pre- and post-use of the MOH Standard video

Staff will also be asked for evaluations of the quality of the video. Their suggestions and input will be valuable toward the refinement and potential marketing of the video.

8. How will you share the results of your project? Who will receive this information—at your site, regionally?

Six months after the video is available, I will submit a report incorporating the points identified in question #7. This report will be shared with the Fraser Health Authority North Area Clinical Practice Council and all facility administrators. A copy of the report will also be sent to the Job Enrichment Committee.

9. How long do you anticipate this project will take? Please indicate your expected completion date.

The projected duration of the project is 11 months. The project will begin on February 1, 2003, and the final report will be submitted no later than January 31, 2004.

10. If you do this project, by what date would you submit your final evaluation to the Committee?

The final evaluation would be submitted to the committee within six months of the final report submission, indicated in question #8.

Fraser Health AUTHORITY

FRASER NORTH RESIDENTIAL CARE

MAINTENANCE of ORAL HEALTH Standard

Approved February 2001
Revised August 2001

1. PURPOSE

1.1 To ensure residents have healthy, clean mouths, teeth and gums.

2. STANDARD

2.1 On admission and yearly all residents' oral cavity will be assessed by a health professional.
2.2 Dentures will be labelled with resident's name on admission.
2.3 Resident's oral cavity will be observed and assessed daily by care provider.
2.4 Resident's individual oral health needs will be documented on the Care Plan and the ADL.
2.5 Each resident will receive appropriate mouth care at least twice a day (day & evening shift) and as needed.
2.6 Residents and families will be encouraged to perform mouth care.
2.7 Residents will have a soft toothbrush, toothpaste or recommended oral hygiene supplies, as needed.

3. PROCEDURE

3.1 Assessment of Oral Cavity

- Natural Teeth: loose, broken, obvious decay.
- Condition & Fit of Dentures: indicate upper, lower or both. Chipped surface, intact teeth, loose fitting, broken clasp, comfort level.
- Lips: healthy, dry, cracked, sore, lesion present.
- Gums: red, bleeding with brushing, painful.
- Tongue: healthy, red, fissured, coated.
- Overall Condition of Mouth: appears healthy, odorous, dry, irritated.

3.2 Maintenance of Normal Oral Cavity

- All toothbrushes, toothpastes and denture cups should be labelled with resident's name.
- Toothbrushes should be replaced after a respiratory infection and at least every 3 months or as needed.
- Apply vinyl gloves to observe the oral cavity.
- Observe the oral cavity for: retained food in recesses of mouth, colour, consistency and odour of gums and tongue.
- All oral cavities (with or without teeth) are to be brushed and cleansed at least twice a day.
- Resident should be in an upright position (in a chair or bed) during oral care.
- Use a soft bristled toothbrush with a "pea" size amount of toothpaste in a circular motion to gently massage the gums, cleanse the teeth and to loosen food debris.
- Cleanse the tongue gently moving the toothbrush in a forward direction.
- Unless the resident objects, dentures and removable bridges will be removed at bedtime, cleansed and soaked in a labelled denture cup.
- If possible, assist resident to floss between teeth; curve floss against each tooth and rub in an up and down motion.

3.3 Denture Care (complete or partials)

- Labelled dentures will be brushed twice daily using tepid water, liquid hand soap and a toothbrush. Rinse well to remove soap from dentures.
- Residents will be encouraged to remove their dentures at night.
- Dentures will be brushed and immersed in water overnight.
- If resident wishes to wear dentures overnight, encourage soaking dentures for at least ½ hour daily in water.
- Ensure dentures are brushed and rinsed.
- Heavily stained dentures may be cleaned in an Ultrasonic Unit, if available.

4. COMMON ORAL CONCERNS

4.1 Thick Copious Mucous

- Use a toothbrush rinsed in water (or sugarless, clear carbonated beverage) to gently massage gums and tongue and to capture mucous.
- Repeat as necessary.

4.2 Thick Coated Tongue

- Moisten toothbrush with a sugarless, clear carbonated beverage and stroke tongue in a forward motion.
- May need to repeat mouth care q4 hours and prn when awake.
- Refer to Appendix A.

4.3 Dry Mouth

- Use a toothbrush to gently brush gums, teeth and tongue.
- Pour *Biotene* mouthwash into small cup, dip toothbrush into solution and cleanse mouth.
- Apply *Oral Balance* to tongue using a toothbrush.
- Ask resident to spread gel to palate and gums or use toothbrush to assist them.
- Encourage resident to drink fluids.

End of life mouthcare

4.4 Dry, Cracked or Encrusted Lips

- Cleanse lips with a warm, damp cloth.
- Lubricate with water-soluble solution *(Oral Balance)*

4.5 Dysphagic Residents & Those at High Risk for Aspiration of Thin Fluids

- Ensure resident is in upright position when providing care.
- Provide mouthcare at least twice a day as well as before meals.
- Dip toothbrush in water or *Biotene* mouthwash. Do NOT use toothpaste.
- Dab excess moisture off toothbrush to prevent aspiration of fluids.

4.6 End of Life Mouthcare

- To promote comfort, the mouth may be cleansed & lubricated following the above.
- Use toothbrush to collect fluid and/or mouthwash and gently press against tongue or inside of cheek to release fluid.
- Use toothbrush to gently apply water-soluble lubricant (*Oral Balance*).

4.7 Suspected Oral Infections

- If red, irritated, painful tissue and malodour is present and does not improve with regular oral hygiene interventions, consult physician, dentist or dental hygienist.

4.8 Guide for Dental Professional Referral

- If after following recommended interventions for 10 days and the resident's oral health has not improved, refer to a dental hygienist, dentist or denturist.
- Presence of abscess, drainage.
- Sensitivity when biting or chewing and/or to hot foods and fluids.
- Pain when in reclining position, with no apparent reason, disrupts sleep.
- Obvious tooth or denture repair required.

5. DOCUMENTATION

5.1 Admission Assessment

- Condition of Oral Cavity on admission.
- Name of regular dentist and whether will continue to visit dentist.
- Date of last dental visit.
- Has own teeth, partials or full dentures.
- How oral cavity is maintained, example: does own cleaning; uses toothbrush and toothpaste; uses commercial denture cleaners.

5.2 Progress Notes

- Any changes in condition, example: NPO, dysphagic
- When resident declines to have mouth cleansed or assessed.

5.3 Care Plan

- Statement of Dysfunctional Oral Condition, e.g. dry lips.
- Amount of assistance required to ensure clean oral cavity.
- Identification of location resident prefers to have mouth care provided (i.e. upright in bed or upright in wheelchair at sink).
- Products used for this resident: toothpaste, gels, tongue cleaner.
- Evaluation date.

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APPENDIX A

Relevant where services of dental hygienist are present (e.g. Queen's Park and Fellburn Care Centres).

Care of Thick, Coated Tongue

Dental Hygienist may recommend the use of a tongue cleaner.

Dental Hygienist may recommend the use of Biotene Mouthwash to brush the tongue or palate.

fraserhealth

Standard Review - Observation

Nursing Unit:	Signature of Evaluator:
Reporting Period:	Date:
Number of Assessments: 7 / unit	Met = M, Not Met = N, Not Applicable = N/A

NAME: _____ Room Number: _____ Time: _____

TEETH
- ❑ Upper
- ❑ Lower
- ❑ No teeth present

FULL DENTURE
- ❑ Upper
- ❑ Lower

PARTIAL DENTURE
- ❑ Upper
- ❑ Lower

HEAD & NECK
(N/A for random sample)
- ❑ Abnormalities detected (describe below)
- ❑ Clear

LIPS
- ❑ Dry / cracked – Location: _____
- ❑ Sore / lesion (describe below)
- ❑ Other abnormality (describe below)
- ❑ Appear healthy

SALIVA / ORAL MOISTURE
- ❑ Sufficient
- ❑ Insufficient
- ❑ States mouth feels dry/burns

TONGUE
- ❑ Red
- ❑ Fissured
- ❑ Dry
- ❑ Other (describe below)
- ❑ Appears healthy
- ❑ Clean
- ❑ Lt. Coat
- ❑ Hvy. Coat
- ❑ Easily dislodged
- ❑ Difficult to dislodge

FLOOR OF MOUTH
- ❑ Abnormalities (describe below)
- ❑ Appears healthy

PALATE
- ❑ Localized redness
- ❑ Generalized redness
- ❑ Other: _____
- ❑ Appears healthy

PRESENCE OF THICK COPIOUS MUCOUS
- ❑ Light
- ❑ Moderate
- ❑ Heavy
- ❑ Moist
- ❑ Dry, crusted
- ❑ Easily dislodged
- ❑ Difficult to dislodge
- ❑ Not present

Describe any oral lesions or head/neck abnormalities: _____

GINGIVA (GUMS)
- ❑ Loc. Red / Inflam. / Irritation – Location: _____
- ❑ Gen. Red / Inflam / Irritation
- ❑ Other: _____
- ❑ Appears healthy

Response to brushing: (see reference on back) ☐

Dental Professional use only
- ❑ Clinical list
- ❑ Lt. Cal
- ❑ Mod. Cal
- ❑ Hvy. Cal

Priority:
I – High
II – Moderate
III – Low

NATURAL TEETH

❑ Loose Location:	❑ Previously noted & monitored	❑ Secure
❑ Decay / fracture Location:	❑ Previously noted & monitored	❑ Appear sound
❑ Pain / infection Location:	❑ Previously noted & monitored	

Presence of debris / plaque
- ❑ Light
- ❑ Moderate
- ❑ Heavy
- ❑ Easily dislodged
- ❑ Difficult to dislodge
- ❑ Food remaining in mouth.
- ❑ Refer to dysphagia screening tool.

DENTURES
- ❑ Labelled
- ❑ Not labelled
- ❑ Loose fitting
- ❑ Uncomfortable
  - ❑ Upper
  - ❑ Lower
- ❑ Presently not in use
- ❑ Chipped / cracked Location: _____
- ❑ Broken or missing tooth Location: _____
- ❑ Broken clasp Location: _____
- ❑ No concerns

Presence of Debris
- ❑ Light
- ❑ Moderate
- ❑ Heavy

Presence of Stain
- ❑ Light
- ❑ Moderate
- ❑ Heavy
- ❑ Removable with soap & brushing
- ❑ Not removable
- ❑ Refer for ultrasonic cleaning to Dental Assistant

Presence of Tartar/Calculus
- ❑ Light
- ❑ Moderate
- ❑ Heavy
- ❑ Refer for ultrasonic cleaning to Dental Assistant

MOUTH CARE
- ❑ Independent
- ❑ Assist: _____
- ❑ Dependent: _____

CLIENT'S ACCEPTANCE OF MOUTHCARE

Compliant:
- ❑ Always
- ❑ Usually
- ❑ Sometimes
- ❑ Rarely
- ❑ Refer to or initiate Behaviour Pattern Record

Notes: _____

Appropriate treatment outlined on ADL:	Revised ADL:				
❑ Yes ❑ No	**ORAL CARE**				
	Oral Care: ❑ BID	❑ TID	❑ Before Eating	❑ After eating	
		Self	**Assist**	**Total**	
	Teeth/Gums:				
	Tongue:				
	Dentures:				
	❑ Toothpaste	❑ Mouthwash	❑ Diet Pop	❑ Oral Gel	

Foci of Care?

1. _____
2. _____
3. _____
4. _____

Interventions – See Care Plan

RESPONSE TO BRUSHING

Score

7 ❑ **Generalized (heavy, profuse, spontaneous hemorrhaging)** *i.e., Presence of blood over entire toothbrush head*

6 ❑ **Localized (heavy, profuse, spontaneous hemorrhaging)**

❑ Upper right	❑ Inner surface	❑ Outer surface
❑ Upper left	❑ Inner surface	❑ Outer surface
❑ Lower left	❑ Inner surface	❑ Outer surface
❑ Lower right	❑ Inner surface	❑ Outer surface

5 ❑ **Generalized (moderate hemorrhaging)** *i.e., Presence of blood over top half of toothbrush head*

4 ❑ **Localized (moderate hemorrhaging)**

❑ Upper right	❑ Inner surface	❑ Outer surface
❑ Upper left	❑ Inner surface	❑ Outer surface
❑ Lower left	❑ Inner surface	❑ Outer surface
❑ Lower right	❑ Inner surface	❑ Outer surface

3 ❑ **Generalized (light hemorrhaging)** *i.e., Bristles of brush have a pinkish shade.*

2 ❑ **Localized (light hemorrhaging)**

❑ Upper right	❑ Inner surface	❑ Outer surface
❑ Upper left	❑ Inner surface	❑ Outer surface
❑ Lower left	❑ Inner surface	❑ Outer surface
❑ Lower right	❑ Inner surface	❑ Outer surface

1 ❑ **Hemorrhaging minimal to nil**

Developed by Beverley Contreras, RDH
Queen's Park and Fellburn Care Centres
February 1999

PROGRESS TO DATE

April 30, 2003 – Official letter of approval for the project signed by Dianna McGowan, Administration, ERH.

May 2, 2003 – Letter of approval received by Project Leader, Beverley Contreras, RDH.

Prior to this date Queen's Park Care Centre; (QPCC) had experienced a viral outbreak. In keeping with infection control procedures Beverley had been requested to refrain from any direct and non-urgent dental hygiene care for the duration of the outbreak. This created open time that was used to develop the script for the video. Therefore Objective #1, "Develop a script for the audio portion of the video" was completed prior to official project approval.

With the official approval now received the hiring process for a replacement RDH commenced.

June 17, 2003 – Replacement RDH, Lisa Enns attended FHA orientation session.

June 27, 2003 – Beverley met with Gordon Jang, Media Services Specialist, Surrey Memorial Hospital to determine what preparation was needed to begin filming. Beverley initiated draft of Memorandum of Agreement between FHA and Normanna Rest Home.

[July 4, 2003, to May 2004: *The report provided a comprehensive account of filming the video with the various problems and triumphs along the way. Some of the problems or challenges included the following:*

- *Resident call bells forced a change of location as the audio equipment picked up the sounds.*
- *A resident who was scheduled to be in the video was administered medication prior to their time slot and couldn't be wakened enough to take part.*
- *Overhead fans thwarted initial attempts to do voice-over sections of the video.*
- *Gordon Jang's time for the video was limited.*
- *Producing the slides depicting the proper positioning for oral care for a resident in bed was more difficult than anticipated. Finally Beverley herself posed for the positioning slide. While it is not advisable for a demonstrator to pose as a receiver of care for teaching purposes, this was done in the end to move the project along.*
- *Video was finished just before Christmas 2003*
- *During the first months of 2004, the FHA was preparing for possible job action. It was decided to wait until contracts were settled before launching into the next phase of the project, rather than having the phase interrupted should job action take place.*
- *One of the proposed test facilities, Fellburn Care Centre initiated a change to an RN/LPN mix, with a number of RN displacements and several new LPN staff members joining the team. With such a major shift in the delivery of care, Fellburn was not able to participate in the project as originally planned. Pre- and post-assessments would not provide a true picture of the current care due to the changes in the composition of the care team. Queen's Park and Normanna Rest Home would now be the only facilities participating.]*

June 2004 – Implementation of the Maintenance of Oral Health Standard at Queen's Park Care Center.

The Clinical Care Coordinators at Queen's Park were directed to implement all the Fraser Health North Standards and Clinical Practice Guidelines for Residential Care. Therefore it was perfect timing to use the project video to implement the MOH Standard.

QUEEN'S PARK CARE CENTRE

During June 2004, eight sessions took place at Queens' Park Care Centre:

Attendance:	67 (combined total of RNs and Resident Care Aides)
Pre-test mean score:	53%
Post-test mean score:	74%

Interpretation: The difference between the tests written prior to viewing the video (pre-tests) and the tests written immediately following (post-tests) demonstrate a 21% increase in knowledge of the contents of the MOH Standard.

DISCUSSION

QPCC demonstrated a marked improvement with tongue cleansing reducing heavily coated surfaces from 27% to 17% at the three-month stage with a small increase back up to 20% by the six-month stage. Before the video circulation, tongue cleansing had only been demonstrated on an individual basis to staff. The video appears to have heightened awareness of the need to clean the tongue on a regular basis as per the Maintenance of Oral Health Standard. See table 1.

Very little change occurred to the level of locally and generally reddened palates at the three-month stage (10% and 11%) but significant gains have been noted at the six-month stage (4% and 2%). This may reflect an increase in adequate denture and soft tissue cleansing in compliance with the Maintenance of Oral Health Standard.

A reasonable improvement in the response to brushing occurred at the three-month stage (decrease from 15% to 11%) with a slight increase up to 12.5% by the six-month stage. Reduced levels of bleeding with brushing are considered an indicator of an increase in thoroughness and consistency of brushing. It will be important to continue monitoring response to brushing in the months ahead. The video will be useful in providing reviews for staff in this area.

A marked increase in oral dryness occurred when comparing the pre- to post-assessments at the three-month stage as shown by an increase of dry lips (from 13% to 17%) and reddened or dry tongues (from 7% to 11%). At the six-month stage, dry lips decreased to within 1% of the pre-assessment (pre-video) stage but tongues remained reddened and/or dry at the same level as the three-month stage.

It is worthy noting that during the summer months, QPCC struggled with extreme heat (summer temperatures) and the accompanying challenge of ensuring adequate hydration levels. Dry lips and reddened intra oral soft tissues are often an indicator of low hydration. The level of dry lips decreased at the six-month stage close to original measures during the pre-assessments. However, reddened/dry tongues remained at 11% at the six-month stage.

Equally interesting is a steady increase in overall dry mouth, indicated not only by dry lips and reddened/dry tongues but also as expressed by residents themselves during the oral assessments. Pre-assessment levels were at 4%; levels then rose to 6% at the three-month stage and to 11% by the six-month stage.

It would be interesting to continue monitoring dry mouth levels in the future in correlation with the meas-

Category	March 1–May 31, 2004 (assessments prior to video viewing)	July 1–Sept. 30, 2004 (assessments 3 months after video viewing)	Oct. 1–Dec. 21, 2004 (assessment 6 months after video viewing)
Lips dry, cracked	13%	17%	14%
Lips sore / lesion	0%	3%	2%
Tongue red / dry	7%	11%	11%
Tongue heavily coated and difficult to dislodge	27%	17%	20%
Palate locally red	10%	11%	4%
Palate generally red	10%	11%	2%
Moderate mucous and difficult to dislodge	0%	0%	0%
Heavy mucous and difficult to dislodge	0%	0%	0%
Response to brushing 4–7 (level of bleeding)	15%	11%	12.5%
Decay (obvious and not documented or referred)	6%	0%	0%
Pain / infection (obvious and not documented or referred)	1%	0%	0%
Moderate debris on teeth and difficult to dislodge	1%	3%	2%
Heavy debris on teeth and difficult to dislodge	3%	3%	2%
Moderate stains on denture and removable with soap and brushing	1%	3%	2%
Heavy stains on denture and removable with soap and brushing	0%	0%	0%
Denture not labelled	8%	9%	7%
ADL inappropriate or blank entry	23%	37%	14%
Dry mouth	4%	6%	11%

Table 1. Oral assessment statistics before and after the video sessions at Queen's Park Care Centre

urement of hydration levels to determine any clear links. Beverley will discuss this possibility with the Clinical Care Coordinators.

A stark increase in the number of ADL (activities of daily living) oral care entries that were inappropriate or blank during the post-assessment phase was noted (23% to 37%). However, inappropriate or blank entries declined to 14% by the six-month stage.

Additional education provided by the Clinical Care Coordinators may have influenced the ADL numbers. From June 14–25, sessions on Focus Charting were provided for RNs and Resident Care Aides. As the ADL sheet is the fifth step of Focus Charting, it stands to reason these sessions would have an impact on appropriate ADL completion. The sessions took place just prior to the summer months and many of the staff who attended the sessions then went on vacation during July and August. Perhaps the number of replacement staff who do not regularly work at QPCC and thus would not have attended the Focus Charting session contributed to an increase of inappropriate or blank entries.

The same Focus Charting education sessions were held from October 7–14 for all the other disciplines at QPCC (i.e., Dietary, Dental, Pastoral Care, Social Work, Physiotherapy, Occupational Therapy, and Music Therapy). It is during this period (October to December) that a significant gain in the level of appropriate oral care entry is noted (i.e., only 14% inappropriate or blank at the six-month stage compared with 23% from March to May and 37% from July to September).

Other factors that may have contributed to lower levels of oral care and ADL inappropriate entries are the impact on staff morale due to HEU (Hospital Employees' Union) imposed contract settlement resulting in decreased wages, holiday time and a shift from a 7.2 to a 7.5 hour day. It is also important to note changes in staffing procedures have resulted in some scheduling confusion and placement of some staff members in units where they have not worked in the past.

NORMANNA REST HOME

June 4, 2004 – Beverley completed the oral assessments, pre-video viewing, at Normanna Rest Home. Two copies of the video were left at Normanna for viewing by staff. During the month of June, several video viewing sessions took place at Normanna.

Statistics are as follows:

Attendance:	54 (combined total of RNs, LPNs, and Resident Care Aides)
Pre-test mean score:	53%
Post-test mean score:	70%

Interpretation: The difference between the tests written prior to viewing the video and those written immedi-

ately following demonstrates a 17% increase in knowledge of the contents of the MOH standard.

DISCUSSION

Normanna demonstrated a marked decrease in dry lips and reddened palates from 20% to 0% and in reddened/dry tongues from 30% to 0% at the three-month stage. By the six-month stage, an increase of dry lips and reddened tongues was noted (from 0% to 10%).

Locally and generally reddened palates decreased significantly from 20% and 10% respectively to 0% at the three-month stage; this gain was held into the six-month stage. The video may have contributed to an increased level of denture care that affected underlying tissue health. An increase in the level of hydration levels can contribute to healthier palatal tissue as well. However, this project can only speculate on such a connection at this point without any measurement of fluid intake included in the oral assessment numbers.

Dry mouth numbers (as expressed by the residents and/or noted during the oral assessments) were interesting when compared with those at QPCC. Normanna was able to reduce the original 30% levels to 0% during the three-month stage. It is relevant to note that Normanna is air-conditioned, a luxury QPCC does not enjoy. The decrease in dry mouths may also reflect the introduction of Biotene Mouthwash and Oralbalance Gel as supplied for the project. As in the case of Queen's Park, fluid intake measurements were not a part of this project but it would be interesting to do in the future. By the six-month stage, Normanna had increased to a 20% level of dry mouth. This may be an indicator that awareness and delivery of oral care following the video was heightened in the first three months following staff viewing. Normanna may benefit from showing the video on a three- or six-month rotation to keep an acceptable level of awareness of the Maintenance of Oral Health Standard.

Coated tongue levels decreased from 40% to 20% by the three-month stage and remained at this level by the six-month stage. It would appear the video has had an impact on the awareness of regular tongue cleansing.

Response to brushing levels showed a reasonable decrease at the three-month stage (from 30% pre-video to 20% at the three-month stage). Unfortunately, this gain was not held into the six-month stage where levels increased once more to 30%. Bleeding levels in response to brushing can be considered an indicator of thoroughness and consistency of brushing. Normanna would benefit

Category	March 1–May 31, 2004 (assessments prior to video viewing)	July 1–Sept. 30, 2004 (assessments 3 months after video viewing)	Oct. 1–Dec. 21, 2004 (assessment 6 months after video viewing)
Lips dry, cracked	20%	0%	10%
Lips sore / lesion	0%	0%	0%
Tongue red / dry	30%	0%	10%
Tongue heavily coated and difficult to dislodge	40%	20%	20%
Palate locally red	20%	0%	0%
Palate generally red	10%	0%	0%
Moderate mucous and difficult to dislodge	0%	0%	0%
Heavy mucous and difficult to dislodge	0%	0%	0%
Response to brushing 4–7 (level of bleeding)	30%	20%	30%
Decay (obvious and not documented or referred)	20%	20%	10%
Pain / infection (obvious and not documented or referred)	0%	0%	0%
Moderate debris on teeth and difficult to dislodge	30%	0%	0%
Heavy debris on teeth and difficult to dislodge	0%	0%	0%
Moderate stains on denture and removable with soap and brushing	0%	0%	0%
Heavy stains on denture and removable with soap and brushing	0%	0%	0%
Denture not labelled	30%	20%	30%
ADL inappropriate or blank entry	90%	90%	100%
Dry mouth	30%	0%	20%

Table 2. Oral assessment statistics before and after the video sessions at Normanna Rest Home

from focusing on this area of oral care in the future months. Showing the video on a three- to six-month rotation may have a positive impact on this area of oral care.

Normanna demonstrated a significant decrease in the level of moderate debris on teeth that is difficult to dislodge (30% pre-video to 0% at both the three- and six-month stage). This can be considered a clear indication that staff is more aware of the need to assist residents with their oral care. As stated above, a focus on brushing that not only removes visible debris but also massages the gum line well would likely decrease response to brushing bleeding levels.

Regarding ADL (activities of daily living) oral care entries, Normanna was at a disadvantage compared with QPCC as the oral care section of the ADL at QPCC has been designed in correlation with the Maintenance of Oral Health Standard. As a result, Normanna scored consistently low for appropriate ADL oral care entries. It may be helpful for Normanna to view the ADL forms used at QPCC to consider revising their oral care section to better support the Maintenance of Oral Health Standard and provide clearer direction for the staff.

ADDITIONAL INFORMATION

In addition to the project objectives, the video is being put to use in many other ways:

1. Education sessions for Ridge Meadows residential care. Beverley provided three education sessions on her own time using the video and pre- and post-tests. Statistics are as follows:

Attendance:	14
Pre-test mean score:	61%
Post-test mean score:	79%

Interpretation: The difference between the tests given before viewing the video and after demonstrates an 18% increase is knowledge of the contents of the MOH Standard.

A copy of the video is currently available at Ridge Meadows for further oral care education sessions.

2. Six months after the implementation of the RN/LPN mix at Fellburn, areas of weakness related to the quality of oral care were determined by reviewing the previous three months' oral assessment numbers. Areas to focus on are ADL oral care entries by RNs/LPNs and ADL oral care interpretation by all direct care staff. In addition, tongue cleansing required attention.

Beverley provided interactive education sessions where examples of ADLs were interpreted and appropriate ADL entries were practised. The module for Cleansing a Thick Coated Tongue was also shown to participants. This approach worked well and was very efficient, as the module is only two minutes long and focuses on the area of weakness requiring demonstration.

Plans are underway to share the full video (plus pre- and post-tests) with all the staff at Fellburn now that the RN/LPN mix is settling into place.

3. The video is available at QPCC for Clinical Care Coordinators to share with any RN/LPN/RCA practicum students, orientations, or reviews for nursing staff.

4. The video had been viewed by dental hygiene students and their instructors at Vancouver Community College in preparation for their externship at QPCC, February to April 2005.

This video has gain recognition from care facilities and Beverley has received requests from external sources who wish to purchase a copy of the video. As a result, copies are available for sale with the proceeds going to the Queen's Park Healthcare Foundation – Residents' Assistance Fund.*

* Cost of the video is $40. To obtain a copy, please send a cheque made out to the Queen's Park Healthcare Foundation to Shannon Harris, Queen's Park Care Centre, 315 McBride Blvd., New Westminster, BC V3L 5E8. Please note that the Fraser Health Authority retains copyright and thus the video cannot be copied or broadcast without the written permission of Fraser Health.

The Dental Hygiene Ethos *(continued from page 95)*

very identity of the novice practitioner" (p. 7). Dental hygiene educators are the champions of the profession, helping to instill the expectations and norms in students and new graduates. You, your peers, and your professional associations and regulatory bodies help to maintain them.

As time passes, we witness many changes both within and outside the profession. All of these changes cause the dental hygiene ethos to shift and change as well. In this issue of the journal, several contributions support the concept of a dental hygiene ethos. Fran Richardson provides a powerful piece entitled "Power, Control and Economics"; Pauline Imai and Bonnie Craig profile BDSc(DH) graduates of the University of British Columbia; Beverley Contreras writes about the Maintenance of Oral Health Standard in residential care centres in British Columbia and the impact on care after an accompanying instructional video was shown to staff; and finally there is an interview with Dr. Patricia Johnson, perhaps the most internationally renowned researcher on the profession of dental hygiene itself. When you are reading these contributions to the body of dental hygiene knowledge, think about the effect they are having on your own value systems and your personal view of dental hygiene culture.

CDHA contributes to strengthening the dental hygiene ethos by bringing people together who have fundamentally the same interests; by capitalizing on that group synergy; by coordinating, collaborating, communicating, and building a sense of community within the profession. A strong ethos that focuses on service to the community, competence, continuing education, research, and integrity in all we do is a firm foundation for the profession.

Profile of the University of British Columbia's Bachelor of Dental Science in Dental Hygiene Graduates from 1994 to 2003

by Pauline H. Imai, CDA, DipDH, RDH, BDSc(DH), and Bonnie J.Craig,† DipDH, MEd, RDH*

ABSTRACT

The purpose of this study was to explore the demographic profile, motivation, student experience, and career opportunities of the baccalaureate dental hygienist. All 28 graduates of the University of British Columbia's Bachelor of Dental Science in Dental Hygiene Program from 1994 to 2003 were mailed a consent letter and coded questionnaire in October 2003. The response rate was 96.4%. Descriptive statistics and Pearson's correlation were used to analyze the data. The demographic profile of the dental hygienist entering the Bachelor of Dental Science in Dental Hygiene Program was female, married or common-law with no children, 30 to 39 years old, and working more than 33 hours per week as an employee in a dental office. The primary reason for pursuing the dental hygiene degree was "personal satisfaction." Part-time enrolment in the baccalaureate program was chosen by 59.3% of the dental hygienists. The majority of the dental hygiene students (81.5%) continued to practise dental hygiene. The graduates were employed in clinical practice (40.7%), community health (7.4%), educational institutions (3.7%), professional associations (3.7%), and alternative practice settings (14.8%). Others continued their education in a master's degree program (14.8%). Overall, the graduates were satisfied with their baccalaureate education and the options provided by the dental hygiene degree.

MeSH terms: dental hygienists; education, professional; motivation; oral hygiene; universities

INTRODUCTION

Dental hygiene is a growing profession. According to the attribute theory of professions, all professions have specific characteristics or attributes; one such attribute is specialized education.[1]

Canadian dental hygiene education is two-year diploma program with the entry qualification either first year of a university/college course or high school graduation, depending on individual educational institutions. Although there is a high degree of specialization in dental hygiene education, two years is not considered a sufficient "amount" of education for professional status.[1] Therefore, in an effort to grow as a profession, dental hygiene is striving to establish the baccalaureate dental hygiene degree for entry to practice.[2] However, few dental hygienists have a dental hygiene degree in Canada.[3] In a Canadian-wide survey, 95.1% of dental hygienists held a dental hygiene diploma or associate degree; only 1.7 % had a baccalaureate degree specifically in dental hygiene.[3] Baccalaureate dental hygienists are dental hygienists who have continued their education beyond the dental hygiene diploma or who have earned the dental hygiene degree in a four-year university program. The limited number of baccalaureate dental hygiene programs may partially account for the small population of baccalaureate dental hygienists. The University of British Columbia (UBC) and the University of Alberta have offered the degree-completion program for qualified diploma dental hygienists since 1992 and 2000, respectively.[4–7] The University of Toronto offered a degree-completion program for two-year diploma graduates from 1977 to 2001, at which point applications were suspended indefinitely.[4,8] Although the current population of baccalaureate dental hygienists is small, the numbers could increase as the dental hygiene profession works toward having the dental hygiene degree as entry to practice requirement;[2] more baccalaureate programs become available;[4] and dental hygienists become more aware of the opportunities available for pursuing the dental hygiene degree.[9]

The purpose of this study was to explore the demographic profile, motivation, student experience, and career opportunities of the baccalaureate dental hygienist.

LITERATURE REVIEW

Studies on Canadian baccalaureate dental hygienists are limited. The studies that do exist have focused primarily on the graduates' outcomes and satisfaction with the baccalaureate curriculum. For example, the University of Toronto's Bachelor of Science Degree (Dental Hygiene) graduates had assumed roles as educators, administrators, public health managers, researchers, or students in graduate programs.[5,7] Similarly, the University of British Columbia's Bachelor of Dental Science in Dental Hygiene graduates were successful in securing employment in educational institutions, regulatory authorities, community-

* 2004 graduate of the UBC BDSc(DH) program; this paper was written in partial fulfillment of a course in this program
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based programs, and clinical practice.[10] According to the evaluation of the University of British Columbia's program, all of the students and graduates were satisfied with the program.[10]

In comparison, literature about American baccalaureate dental hygienists is numerous. American studies have explored dental hygienists' motivating reasons for, interest in, and barriers to advanced dental hygiene education. For example, Waring's study of 189 dental hygienists identified the following motivators that certificate or associate dental hygienists may have had for pursuing the baccalaureate dental hygiene degree. Reasons were "for personal satisfaction (97.6%), to increase knowledge and skill (95.1%), for career advancement (80.5%), to better serve patients (80.5%), for the status of the degree (75.6%), and to work outside private practice (64.2%)."[11]

Part-time enrolment...and learning by correspondence...were strong program design factors

Newell and co-authors in 1989 explored the level of interest that certificate or associate dental hygienists had in pursuing the dental hygiene degree. The researcher discovered that "over 95% of the dental hygienists were interested in pursuing a baccalaureate degree completion program within five years of graduating from the certificate dental hygiene program."[12] Also in 1989, Tobian explored the dental hygienist's perceptions regarding the need of a post-certificate or post-associate degree and found that "65.0% of certificate and associate dental hygienists, 75.8% of baccalaureate dental hygienists and 71.5% of graduate dental hygienists 'strongly agreed' or 'agreed' that there is a need for post-certificate and post-associate programs based upon the requirements of dental hygiene practice."[13] Baccalaureate dental hygienists "attributed a very high degree of value to their baccalaureate education, claiming that it created an awareness of career opportunities, developed communication skills, self-confidence, and professional values; encouraged lifelong learning and inquiry; and provided meaningful interpersonal relationships and intellectual stimulation."[14]

Barriers to advanced dental hygiene education have also been studied.[11,14] Real or perceived barriers could affect the dental hygienist's decision to pursue the baccalaureate dental hygiene degree. In studies exploring the associate or certificate dental hygienists' interest in pursuing the dental hygiene degree, the dental hygienists frequently cited the following as barriers: inconvenient scheduling of courses (50%), time constraints (21.7%), financial limitations (45%), and family commitments (11.6%).[11,14] Where the program was located was also a concern for 91.5% of dental hygienists.[11] Options such as part-time enrolment (93.9%) and learning by correspondence (98%) were strong program design factors that affected the dental hygienist's decision to pursue the dental hygiene degree.[11] Other dental hygienists had doubts that the dental hygiene degree would be financially beneficial (38.9%) and were therefore not interested in advanced dental hygiene education.[14]

American studies have also explored the independent study component of baccalaureate dental hygiene curricula. Independent study allows dental hygiene students to pursue areas of individual interest, which enables dental hygienists to obtain the necessary education they require to pursue a variety of career options.[15] In Waring's study, dental hygienists in the baccalaureate program rated advanced clinical dental hygiene (73.2%) as the most important area to pursue for independent study, followed by dental hygiene education (teaching) (63%), dental hygiene research (50%), general education (liberal arts) (46.3%), and other areas outside of dental hygiene (43.9%).[11] However, Cameron and Fales indicated that 70% of dental hygienists choose education preparation as their focus while in the baccalaureate dental hygiene program.[16] Newell et al. also reported that dental hygiene education (20.5%) was the primary interest of dental hygienists in a degree-completion program.[12] This was fol-

RÉSUMÉ

L'enquête avait pour but d'analyser le profil démographique, la motivation, l'expérience comme étudiante et les perspectives de carrière des hygiénistes dentaires titulaires d'un baccalauréat. Chacune des 28 diplômées du programme d'hygiène dentaire du baccalauréat en sciences dentaires de l'Université de la Colombie-Britannique de 1994 à 2003 a reçu par la poste, en octobre 2003, une lettre de consentement et un questionnaire codé. Le taux de réponse a été de 96,4 %. Pour analyser les données, nous avons eu recours à des statistiques descriptives et à la corrélation de Pearson. Le profil démographique de l'hygiéniste dentaire à l'entrée au programme d'hygiène dentaire du baccalauréat en sciences dentaires était celui d'une femme mariée ou en union libre, sans enfant, âgée de 30 à 39 ans, qui travaillait plus de 33 heures par semaine comme employée dans un cabinet de dentiste. La « satisfaction personnelle » a été la raison première de leur inscription au diplôme en hygiène dentaire. L'inscription à temps partiel au programme de baccalauréat a été le choix de 59,3 % des hygiénistes dentaires. La majorité des étudiantes en hygiène dentaire (81,5 %) ont continué à pratiquer l'hygiène dentaire. Les diplômées travaillaient en pratique clinique (40,7 %), en santé communautaire (7,4 %), dans des établissements d'enseignement (3,7 %), dans une association professionnelle (3,7 %) ou dans d'autres cadres de pratique (14,8 %). Les autres ont poursuivi leurs études à la maîtrise (14,8 %). De façon générale, les diplômées se sont montrées satisfaites de leurs études de baccalauréat et des options offertes par le diplôme en hygiène dentaire.

lowed by public health (18.5%); specialized dentistry such as pediatrics, orthodontics, and periodontics (25.3%); hospital dental hygiene (7.2%); business/marketing (6.4%); health promotion/education (6.8%); dental hygiene administration (5.2%); dental hygiene research (2%); and other (10%).[12]

Other American studies have focused on the career outcomes of baccalaureate dental hygienists.[14,17,18] According to Brand, 54.2% of baccalaureate dental hygienists continued to be employed in private practice and 23.7% were employed as dental hygiene educators.[14] Only 4.6% were employed as public health hygienists, 3% as institution or hospital hygienists, and 2.3% as dental practice managers or supervisors.[14] Fewer than 1% held positions in business, consulting, public schools, and research.[14] Some of the respondents indicated that they held more than one position.[14] Although 63.6% of the baccalaureate dental hygiene respondents stated that their employment opportunities had increased as a result of the degree, 63.5% denied having pursued non-traditional dental hygiene employment such as practice management, consulting, business, industry, and research.[14] The reasons given for not pursuing these non-traditional positions were (1) unavailable job positions, (2) lack of awareness of career options available, and (3) satisfaction with private practice or teaching.[14,17] Unavailable job positions in an alternative practice setting was reflected in a study by Hunter and Rossmann.[18] In this study, 38.4% of baccalaureate dental hygienists were interested in community health but were unable to secure employment in this area.[18] Hunter and Rossmann also explored the baccalaureate dental hygienists' satisfaction with private practice and discovered that dental hygienists chose to practise in a dental office because of convenient working hours, salary, and personal satisfaction.[17] However, 52% of these dental hygienists also stated that they were interested in other practice settings.[17] Although the baccalaureate dental hygienists were interested and educationally prepared for alternative dental hygiene roles, few were able to secure employment in an alternative practice setting. It appears that the baccalaureate dental hygienists' perceptions of increased employment opportunities as a result of the dental hygiene degree are not supported.

Another aspect of career outcomes that has been studied was the effect of the dental hygiene degree on the dental hygienist's salary. According to Rigolizzo and Finocchi, baccalaureate dental hygienists employed in private dental practice were not paid a higher salary than the certificate and associate dental hygienists.[19] The dentists in this study stated that salary should be based solely upon performance and not upon educational background.[19] Interestingly, DeBiase discovered that approximately one-half of licensed certificate or associate dental hygienists also believed that the baccalaureate dental hygiene degree would have no effect on salary.[9] In comparison, a weak positive relationship between educational attainment and salary was mentioned in the Canadian Dental Hygienists Association's study conducted by Dr. Patricia Johnson.[3] However, no details were explained in the study report. Therefore, it remains unknown if a relationship exists between a baccalaureate dental hygienists' salary and the type of practice setting where they practise.

Although American studies may provide some insight about baccalaureate dental hygienists, the results may not be applicable to Canadian dental hygienists due to differing practice regulations, job market, and program curricula. Canadian studies are needed and the present study was undertaken at the University of British Columbia to provide baseline data about Canadian baccalaureate dental hygienists. An exploratory survey was conducted of all 28 graduates of the University of British Columbia's Bachelor of Dental Science in Dental Hygiene Program from 1994 to 2003 to determine (1) the dental hygienist's demographic profile and motivating reasons for pursuing the Bachelor of Dental Science in Dental Hygiene Degree; (2) the dental hygienist's enrolment and employment choices, and focus of interest while in the baccalaureate program; and (3) the dental hygienist's career path and satisfaction following graduation.

The present study was undertaken... to provide baseline data about Canadian baccalaureate dental hygienists

MATERIALS AND METHODS

In October 2003, a survey was mailed to all 28 graduates of the University of British Columbia's Bachelor of Dental Science in Dental Hygiene Program from 1994 to 2003. A cover letter explained the purposes of the study and invited the dental hygienist to participate. The coded questionnaire consisted of 31 items divided into three parts. Part I consisted of 3 open-ended and 11 fixed-alternative items to elicit demographic information about the dental hygienist prior to entering the UBC Bachelor of Dental Science in Dental Hygiene Program. A Likhert scale[14,20] was also included in Part I to determine the dental hygienist's motivating reasons for pursuing the dental hygiene degree. Part II had 3 fixed-alternative items to determine the dental hygienist's enrolment and employment choices while in the baccalaureate program. Part II also explored the dental hygiene student's focus of interest for independent study. Part III contained 10 fixed-alternative items and 2 open-ended questions to explore the dental hygienist's professional life after earning the Bachelor of Dental Science in Dental Hygiene Degree. Another Likhert scale[9,14,18] was used in this part to measure the graduates' career and professional satisfaction. The questionnaire was reviewed for clarity and relevance by eight registered dental hygienists in British Columbia, one dental hygiene faculty member, and one dental faculty member from the University of British Columbia. Due to the small study population, the questionnaire was not piloted. Attempts to find a suitable pilot population outside of the study group were unsuccessful because the College of Dental Hygienists of British Columbia and the Canadian

Dental Hygienists Association currently do not maintain records of the highest dental hygiene education attained by their members.

To bolster the response rate, non-respondents were sent a follow-up letter and questionnaire three weeks after the initial mailing.

The study received approval from the University of British Columbia's Behavioural Research Ethics Board.

The Statistical Program for the Social Sciences (SPSS) was used to produce descriptive statistics. Pearson's correlation was used only when the numbers were sufficient to support the statistical analysis.

92.6% of the respondents cited "personal satisfaction" as "very important" for pursuing the dental hygiene degree

RESULTS

A total of 27 surveys were returned, a response rate of 96.4%. Unfortunately, not all the surveys were complete. Due to the layout of the questionnaire, three respondents missed or did not answer the first question in Part I regarding the province he or she had resided in prior to enrolling into the UBC Bachelor of Dental Science in Dental Hygiene Program. The responses to the two open-ended questions in Part III varied from two-page responses to no response at all. Given the opportunistic nature of this type of question, this variability in response was not unexpected. Specific results of the survey are presented according to the three parts in the questionnaire.

Part I: Information about the dental hygienist prior to entering the university dental hygiene program

Demographic profile

The demographic profile of the dental hygienist entering the University of British Columbia's Bachelor of Dental Science in Dental Hygiene Program is shown in table 1. The dental hygienist was female, between the ages of 30 and 39, married or common-law, with no children or dependent parents. The majority (88.9%) of the respondents were registered with the College of Dental Hygienists of British Columbia[21] to practise dental hygiene and 88.9% practised primarily in a clinical practice setting. The employment status, "employee," was common among the respondents (92.6%). Over one-half of the dental hygienists practised dental hygiene for more than 33 hours per week. Although two-thirds of the respondents did not hold a certificate in dental assisting, the other one-third practised dental assisting for either three to five years or more than nine years prior to becoming a dental hygienist. The majority of the respondents (96.3%) did

Characteristic	# of respondents answering each item	Mode	Percentage of respondents
Province of residence	24[a]	B.C.	77.8
Registration category held	27	Full	88.9
Primary dental hygiene practice setting	27	Clinical	88.9
Employment status	27	Employee	92.6
Paid dental hygiene hours worked/week	27	> 33 hours	51.9
Marital status	27	Married/common-law	63.0
Children	27	No	77.8
Those with children	6	1 child	50.0
Care of elderly parents	27	No	92.6
Previously a CDA	27	No	66.7
Those who were a CDA, years of experience before becoming a dental hygienist	9	3–5 years > 9 years	33.3 33.3
Have a bachelor's degree, other than BDSc	27	No	96.3
Dental hygiene diploma education	27	B.C. institution	74.1
Dental hygiene diploma year of graduation	27	1988–1998	63.0
Number of years between dental hygiene diploma and enrolment in BDSc program	27	2–8 years	51.9
Age at time of enrolment into BDSc Program	27	30–39 years	40.7

[a] 3 respondents missed or did not answer this item.

Table 1. Characteristics of the dental hygienist entering the University of British Columbia Bachelor of Dental Science in Dental Hygiene Program (N=27)

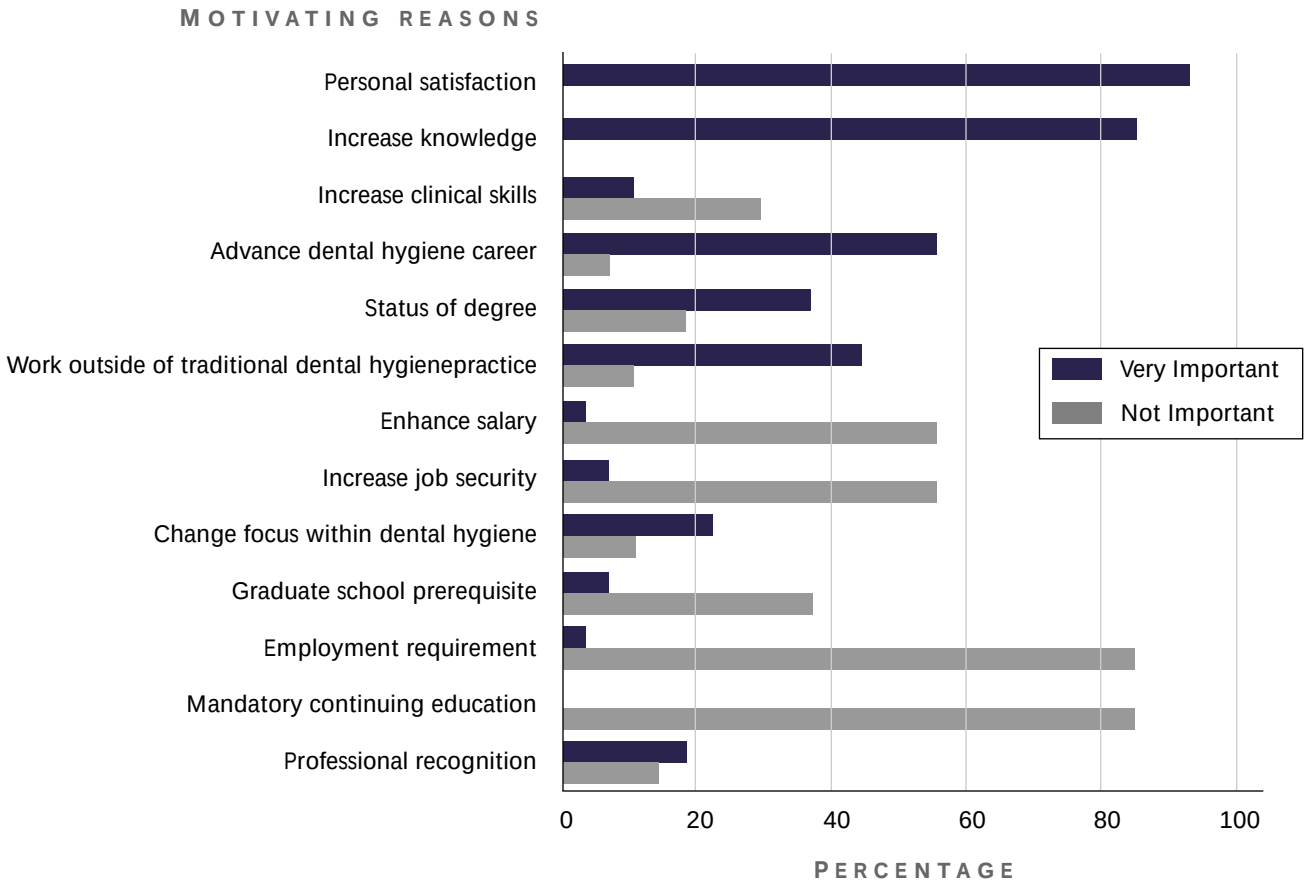

Figure 1. Motivating reasons for pursuing the BDSc(DH) degree

not have a bachelor's degree prior to earning the Bachelor of Dental Science in Dental Hygiene Degree. The dental hygienist's diploma was granted from an institution within British Columbia and was likely to have been granted between 1988 and 1998. Over one-half of the dental hygienists enrolled in the University of British Columbia's Bachelor of Dental Science in Dental Hygiene Program within two to eight years of their diploma graduation.

Motivating reasons

A Likhert scale was used to determine the strength of the motivating reasons the dental hygienist had for pursuing the Bachelor of Dental Science in Dental Hygiene degree. As seen in figure 1, 92.6% of the respondents cited "personal satisfaction" as "very important" for pursuing the dental hygiene degree. Other reasons that were deemed "very important" by the dental hygienists for pursuing the dental hygiene degree were "to increase knowledge" (85.2%); "to advance dental hygiene career" (55.6%); "to work outside of traditional dental hygiene practice" (44.4%); and "for the status of the degree" (37.0%). To change focus within the dental hygiene profession or for professional recognition was "very important" to only 22.2% and 18.5% of the respondents, respectively. The respondents stated that it was "not important" to pursue the dental hygiene degree to satisfy requirements for employment (85.2%) or for mandatory continuing education (85.2%). Salary enhancement (55.6%) and job security (55.6%) were also cited as "not important." Although 7.4% of the respondents agreed that the dental hygiene degree was "very important" for graduate school entrance requirements, 37% of the dental hygienists stated it was "not important."

Part II: Information about the dental hygiene student while in the UBC Bachelor of Dental Science in Dental Hygiene Program

Enrolment and employment choices

When exploring the enrolment and employment choices of the dental hygienist in the UBC Bachelor of Dental Science in Dental Hygiene Program, it was discovered that 59.3% of the dental hygienists pursued their baccalaureate education on a part-time basis. Regardless of whether the dental hygienists were enrolled full- or part-time, 81.5% continued to practise dental hygiene. More than one-third (43.5%) worked 17–32 hours per week, while approximately one-third (39.1%) worked 0–16 hours per week. A few of the dental hygienists (17.4%) continued to work more than 33 hours per week while pursuing their degree.

The Bachelor of Dental Science in Dental Hygiene degree provided provided a "window" for future graduate studies

Area of independent study

This part of the survey also explored the dental hygienist's focus of interest for independent study while in the baccalaureate program. The majority (88.9%) of the respondents indicated that they were interested in one or more of the following subjects: education, community health, residential care, and dental hygiene research.

Part III: Information about the dental hygienist after earning the Bachelor of Dental Science Degree

Demographic profile

The majority of the graduates continued to reside (85.2%) and practise (88.9%) dental hygiene in British Columbia after graduation. In addition to being registered with the College of Dental Hygienists of British Columbia,[21] three respondents were now qualified to provide dental hygiene care to clients in residential care. Three other respondents indicated that they were not practising dental hygiene at the time of the survey.

Figure 2 compares the practice settings of the respondents before and after earning the Bachelor of Dental Science in Dental Hygiene degree. Before, 88.9% of the dental hygienists were employed in clinical practice settings, 7.4% in educational institutions, and 3.7% in "other" practice settings. After earning the Bachelor of Dental Science in Dental Hygiene degree, the dental hygienists were employed in a broader selection of practice settings: 40.7% primarily in clinical practice, 7.4% in community health, 3.7% in regulatory bodies and professional associations, 3.7% in educational institutions, and 14.8% in "other" practice settings. Some dental hygienists were employed in a combination of educational institutions and clinical practice (11.1%) or community health and clinical practice (11.1%). Two respondents (7.4%) were not employed at the time of the survey.

Pursuit of the graduate degree

Part III of the survey also explored the dental hygienist's intention of pursuing a graduate degree. Although 48.2% of the graduates planned to pursue a graduate degree in the future, 44.4% decided not to continue with advanced education and 7.4% were undecided. However, many of the respondents commented that the Bachelor of Dental Science in Dental Hygiene degree provided a "window" for future graduate studies. At the time of the survey, 4 of the 27 respondents were in a graduate program. Two respondents had completed a master's degree. One respondent completed a Master of Science in Dental Science Degree at the University of British Columbia and the other completed a Master of Education Degree at the University of Victoria. At the time of the survey, no respondents had completed a doctorate degree or were enrolled in a doctoral program.

Career satisfaction and professional expertise

The Likhert scale in Part III of the survey was used to determine the graduates' career satisfaction and professional expertise. As seen in table 2, the dental hygienists "strongly agreed or agreed" that having the baccalaureate degree expanded their career opportunities (85.2%) and prepared them for the career path they chose (92.6%). The majority of the respondents (76.9%) indicated that they were able to find employment in their chosen area within the dental hygiene profession. Almost half of the respondents (48.2%) agreed that there was a variation in their daily work routine as a result of having the dental hygiene

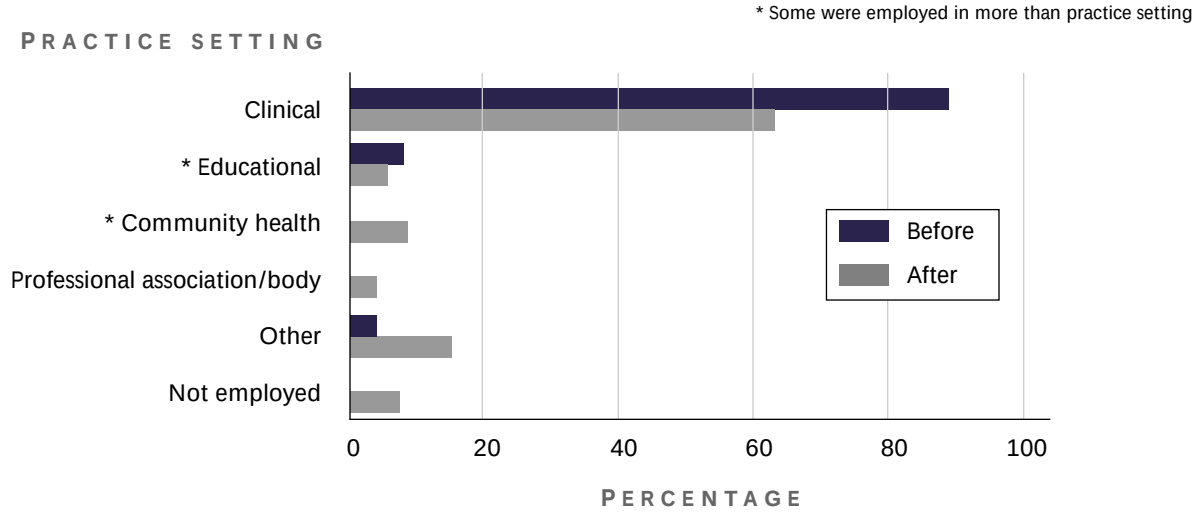

Figure 2. Comparison of practice settings before and after the BDSc(DH) Program

Statement	# of respondents who answered the item	Strongly agree %	Agree %	Disagree %	Strongly disagree %
Obtaining the BDSc degree has expanded my career opportunities	27	44.4	40.8	11.1	3.7
The BDSc education has prepared me for my chosen career path	27	55.6	37.0	7.4	0
I am able to find employment in my area of interest in dental hygiene	26[a]	34.6	42.3	23.1	0
I have more opportunities for professional/ career advancement	25[a,b]	32.0	48.0	20.0	0
I have more variation in my daily work routine	27	22.3	25.9	44.4	7.4
I have more job security	27	18.5	25.9	37.0	18.5
I earn more income	27	0	25.9	44.4	29.6
I have more benefits	27	11.1	14.8	40.7	33.3
I have developed better scientific skills for gathering information, planning and implementing strategies, and evaluating results	26[a]	80.8	15.4	3.8	0
I have enhanced analytical skills for problem solving	26[a]	65.4	30.8	3.8	0
My clinical skills are enhanced for traditional dental hygiene practice	26[a]	19.2	50.0	23.1	7.7
My knowledge is enhanced for traditional dental hygiene practice	26[a]	34.6	46.2	15.4	3.8
The BDSc Program encourages life-long learning	27	63.0	37.0	0	0
I recommend the BDSc Program to other dental hygienists	27	63.0	33.3	3.7	0
I have expanded my network of professional colleagues	27	44.4	44.4	11.1	0

[a] One respondent was retired from dental practice and noted "not applicable" to these items
[b] One respondent added a "neutral" response, which was not one of the choices on the Likhert scale

Table 2. Dental hygienists' opinions regarding career satisfaction and professional expertise after earning the Bachelor of Dental Science in Dental Hygiene

degree. Pearson's correlation was used to determine if a relationship existed between "a variation in daily work routine" and a practice setting other than clinical practice. The resulting correlation was weak (r = -0.383).

The respondents were also asked for their opinions regarding any changes in tangible aspects of employment that may be attributed to earning the Bachelor of Dental Science in Dental Hygiene Degree. The respondents disagreed that the dental hygiene degree increased their job security (55.5%), increased their income (74.0%), or increased their benefits (74.0%). Yet the majority of the respondents (80%) agreed that the dental hygiene degree improved their opportunities for professional/career advancement.

Overall, the dental hygienists were of the opinion that these tangible aspects of employment were not enhanced as a result of earning the dental hygiene degree. In regards to professional expertise, 80.8% of the respondents "strongly agreed" and another 15.4% "agreed" that the baccalaureate dental hygiene education enhanced their scientific skills for gathering information, planning and implementing strategies, and evaluating the results. The respondents also agreed that the baccalaureate education enhanced their analytical skills for problem solving (96.2%). Although advanced clinical skills were not part of the core curriculum in the University of British Columbia's Bachelor of Dental Science in Dental Hygiene Program, 69.2% of the respondents agreed that their clinical skills were enhanced. Knowledge for clinical dental hygiene practice was also enhanced for 80.8% of the respondents. The respondents were also satisfied with their expanded network of inter-professional colleagues.

The survey provided the dental hygienist with an opportunity to make additional comments and 24 of the 27 respondents responded. The following comments were made in support of the Bachelor of Dental Science in Dental Hygiene Degree for entry to practice: "This level of education [baccalaureate dental hygiene] ought to be entry level to the profession given the dental hygienist's responsibility and demands." "After completing the pro-

gram, I feel that the [dental hygiene] diploma level education just isn't enough anymore." "The program was a fantastic experience and I learned so much more than just a diploma. I feel like every diploma program should become a 4-year degree."

Respondents also commented on the curriculum. "Course selection was great." "Distance access to courses is great!" "It [the Bachelor of Dental Science in Dental Hygiene Program] was very applicable and had great depth and exposure to a number of areas of dental hygiene practice as well as other areas of health care. Gave a broad, global perspective."

The following comments were made about the degree program's increasing the respondent's sense of professionalism: "It provides increased professionalism to my career." "I feel more like a professional who is respected for my knowledge and expertise in my chose field." "The degree has raised my profile/profile of dental hygienists [when] talking with other health care professionals."

Other respondents commented on their increased level of confidence. "It [the Bachelor of Dental Science in Dental Hygiene Program] increased my self-esteem through knowledge of a special population." "I am more confident because of up-to-date knowledge." "I am more confident with critically analyzing and performing research." "It improved my analytical abilities and therefore I am better able to diagnose my patients and provide them with a higher standard of care."

This degree also provided the dental hygienist with an opportunity to pursue graduate studies and this was discussed by some of the respondents. "It [the Bachelor of Dental Science in Dental Hygiene Degree] allows registered dental hygienists to access post-grad studies." "I feel well prepared if [I] was to pursue a graduate program." "It provided a window for further education."

Other respondents chose to comment on the employment opportunities that were available after earning the degree. One respondent commented, "If I hadn't got my degree, I would never have had the opportunities I have been given outside of dental hygiene practice." Although another respondent agreed that the Bachelor of Dental Science in Dental Hygiene Degree increased his or her potential career options, he or she added, "My perception of increased career opportunities and professional advancement may have been unrealistic because at the current time, most dental hygiene positions can be filled with a diploma dental hygienist or a BDSc [dental hygienist with a Bachelor of Dental Science in Dental Hygiene Degree]. Many respondents stressed that "personal satisfaction" or "personal goal" was the motivating factor for pursuing their dental hygiene degree. There is an overall sense of accomplishment and pride in the graduates.

The majority (92.6%) of the respondents are satisfied with their baccalaureate dental hygiene education and 96.3% would recommend the University of British Columbia's Bachelor of Dental Science in Dental Hygiene Program to other dental hygienists.

DISCUSSION

Although the results of the University of British Columbia study are limited by the self-reported nature of the data and its unique population of baccalaureate dental hygiene graduates, the demographic profile of the dental hygienist entering the baccalaureate dental hygiene program reflects the demographic profile of the Canadian diploma dental hygienist.[3,5,7,11,12,14,17,20] The dental hygienist is female with an average age of 31 years, married, has a dental hygiene diploma as the highest academic achievement in dental hygiene, and is employed by a dentist(s) in clinical dental practice.[3]

In the University of British Columbia study, 51.9% of the dental hygienists enrolled in the Bachelor of Dental Science in Dental Hygiene Program within two to eight years of their dental hygiene diploma graduation. This finding is similar to the study by Newell et al. who discovered that over 95% of American certificate or associate dental hygienists expressed an interest in continuing their dental hygiene education within five years of their certificate or associate graduation.[12] It appears that the time frame Newell et al. cited between diploma graduation and enrolment in a degree-completion program is similar to the time frame chosen by over one-half of the University of British Columbia dental hygienists. However, since Newell et al. did not verify the enrolment of the study's dental hygienists in a dental hygiene degree-completion program within this time period, caution must be exercised in generalizing these results to the University of British Columbia study.

The University of British Columbia's dental hygienists indicated that personal satisfaction (92.6%) was a "very important" motivating reason for pursuing the dental hygiene degree. This finding supports the finding in Waring's study, which indicated that 97.6% of study subjects would seek a dental hygiene degree for "personal satisfaction."[11] One of the purposes of Waring's study was to determine the predictive strength of the motivating reasons for determining likely participation in an external degree program. However, the predictive strength of the motivating reasons "status of the degree (LB = 0.18) and to gain entrance into graduate school (LB = 0.14)" for determining likely participation in an external degree program[11] did not reflect the results found in the University of British Columbia study. Only 37% of the University of British Columbia's Bachelor of Dental Science in Dental Hygiene respondents cited "status of the degree" as a "very important" reason for pursuing the dental hygiene degree and only 7.4% cited "to gain entrance into graduate school" as "very important," compared with 75.6% and 35.8% of American certificate or associate dental hygienists,[11] respectively.

Unfortunately, an editing error affected the reliability of the Likhert scale in the University of British Columbia survey that was measuring the "importance" of the dental hygienist's motivating reasons for pursuing the dental hygiene degree. The middle choices of "quite important" and "somewhat important" were reversed on the Likhert scale. Although 3 of the respondents noted this reversal on

the survey, it is unknown if the other 24 respondents noticed. Therefore, only the extreme responses, "very important" and "not important," were considered reliable. This error may have had an impact on the strength of importance given to each motivating reason for pursuing the dental hygiene degree. Some percentages may have been higher than stated if the categories "very important" and "quite important" were combined. This may explain the lower percentages cited in the University of British Columbia study compared with those in Waring's study.

A section of the University of British Columbia study focused on the baccalaureate dental hygiene curriculum. The University of British Columbia's Bachelor of Dental Science in Dental Hygiene Program is a hybrid of on-site courses and on-line learning. On-line learning is an important feature of a dental hygiene degree-completion program because it enhances accessibility. In the study by Waring, 91.5% of the dental hygienists were concerned about the geographic location of the baccalaureate dental hygiene program.[11] Since the baccalaureate dental hygiene program at the University of British Columbia is one of the two available programs in Canada, on-line courses could provide diploma dental hygienists throughout the country, and feasibly throughout the world, with the opportunity to complete their dental hygiene degree without having to travel to Vancouver. On-line or correspondence courses are the favoured method of learning (98%) by dental hygienists pursuing the dental hygiene degree because of it enhances accessibility to the program regardless of geographic location and allows for flexibility in course scheduling.[11]

On-line or correspondence courses are the favoured method of learning...by dental hygienists pursuing the dental hygiene degree

The option of enrolling part-time is another important design feature of a degree-completion program. Release from work was a concern for dental hygienists interested in pursuing the dental hygiene degree.[11] Only 27% of dental hygienists indicated that they could attend classes full-time for one semester.[11] Many dental hygienists (74%) prefer to attend university on a part-time basis.[11] In the University of British Columbia study, 59.3% of the dental hygienists chose part-time enrolment. The availability of on-line courses and part-time enrolment provides dental hygienists with the flexibility they need to balance work, family, and educational commitments. In the University of British Columbia study, this was evident by the number of respondents (81.5%) who continued to practise dental hygiene while in the program. Although only 22.2% of the respondents had children, these program design features may have played a positive role in the dental hygienists' decision to return to formal education.

As part of the UBC Bachelor of Dental Science in Dental Hygiene Program, dental hygienists have the opportunity to explore an area of their own interest for independent study while still maintaining a dental hygiene focus. According to Zier, it is important to provide dental hygiene students with an educational opportunity to expand their career options in alternative practice settings such as education, management, public health, hospital dentistry, and research.[15] In a study by Cameron and Fales, dental hygienists were interested in preparing for teaching (70%), fulfilling graduate program pre-requisites (39.0%), expanding clinical dental hygiene skills (65%), preparing for alternative practice settings (26.0%), and learning skills for increasing career options (43.0%).[16] The dental hygienists in the University of British Columbia study chose education, community health, residential care, and research, which are similar to the focus areas chosen by the dental hygienists in Cameron and Fales' study. Each dental hygiene student in the University of British Columbia Bachelor of Dental Science in Dental Hygiene Program has the opportunity to pursue an area, or areas, of individualized interest. Unfortunately, the percentages and ranking of the respondents' focus of interest were unavailable for this study because the format of the question did not ask respondents to rank their choices and allowed for multiple responses.

Of key interest to baccalaureate dental hygiene administrators, educators, and potential students is the outcome of the program's graduates. Similar to the studies done of the University of Toronto Bachelor of Science (Dental Hygiene) graduates,[5,7] the University of British Columbia graduates were able to secure employment in community health, regulatory bodies, educational institutions, a combination of one of these practice settings and clinical practice, or other alternative practice settings. Although 85.2% of the University of British Columbia respondents perceived that the dental hygiene degree had expanded their career opportunities, 40.7% of the respondents continued to be employed primarily in clinical practice. This finding is reflected in another study where 63.6% of baccalaureate dental hygienists claimed that their employment opportunities had increased as a result of the dental hygiene degree, yet they did not pursue "non-traditional dental hygiene employment."[18] One respondent commented that his or her perception of increased career opportunities and professional advancement may have been unrealistic because at the current time, most dental hygiene positions can be filled by a diploma or baccalaureate dental hygienist. In the Canadian Dental Hygienists Association survey, only 6.6% of dental hygienists in Canada were employed in a practice setting outside of a private dental office.[3] Whether this is a reflection of jobs being unavailable in alternative practice settings,[17,18] regulatory issues, lack of entrepreneurial skills, and/or other factors is unknown. Another possible reason a baccalaureate dental hygienist may choose to continue to practise dental hygiene in the private dental office may be job satisfaction. Many of the University of British Columbia respondents commented on having more self-confidence and a renewed enthusiasm for dental hygiene practice. The dental hygienists were eager to use their enhanced critical thinking skills

and knowledge to provide a higher standard of care for their clients. These dental hygienists were satisfied with clinical practice in a dental office and thus had no desire to pursue dental hygiene practice in another practice setting. According to Hunter and Rossmann, baccalaureate dental hygienists are satisfied with dental office employment because of (1) convenient working hours, (2) good income, (3) high job availability, and (4) personal satisfaction.[18] Since 62.9% of the UBC respondents continued to be employed either full- or part-time in clinical practice, it was not unexpected to discover that 51.8% of the respondents disagreed that the dental hygiene degree changed their daily work routine. The 48.2% of respondents who indicated that the dental hygiene degree resulted in a change in their daily work routine may have been employed in an alternative practice setting. However, Pearson's correlation was weak for this relationship.

Approximately one-half of licensed dental hygienists perceived that the...degree would have no effect on their salary

Another aspect of the graduate's career satisfaction that was explored were changes in the dental hygienist's income, benefits, and job security as a result of earning the dental hygiene degree. For many professions, additional education usually results in promotions, more responsibilities, and increased salary and benefits. While the potential for higher income can be a strong motivating factor when deciding whether or not to pursue higher education in other professions, it was "not very important" to the UBC graduates (55.6%). Only 3.7% of the respondents thought the dental hygiene degree would increase their salary potential and only 7.4% agreed that the degree would increase their job security. The fact that most of the respondents did not pursue the dental hygiene degree for potential increases in salary, benefits, and job security reflects the findings found in other studies.[15,19] Approximately one-half of licensed dental hygienists perceived that the dental hygiene degree would have no effect on their salary.[9] The dentist-employers' philosophy—that a baccalaureate dental hygienist does not deserve a higher salary—further supports the dental hygienist's belief that the dental hygiene degree has no effect on salary.[19] The 25.9% of University of British Columbia graduates who had an increase in salary after earning their dental hygiene degree may have been employed in a practice setting other than clinical practice. However, there were not enough subjects to conduct a Pearson's correlation to determine if this relationship was true. It is possible that the same group of respondents also had an increase in employment benefits. Benefits are more likely to be available to employees in practice settings other than clinical practice.[3] The respondents tended to disagree (55.5%) that the dental hygiene degree increased their job security. Job security could be affected by a number of factors such as employer-employee relationship, demand for services, etc., but these variables were not explored in this current study. It is therefore unknown if educational credentials plays a significant role in job security.

Another outcome that was explored was the respondents' intention to pursue a master's or doctorate degree. One of the goals of the University of British Columbia's Bachelor of Dental Science in Dental Hygiene program is to provide the diploma dental hygienist with the educational credentials he or she needs to pursue a master's degree.[22] In order for the dental hygiene profession to continue to grow, it is essential for some dental hygienists to have advanced degrees to conduct dental hygiene research.[1] Currently, the quality and quantity of dental hygiene research barely advances the knowledge base of the profession.[1] In the University of British Columbia study, 48.1% of the respondents were interested in pursuing a graduate degree, but only six dental hygienists were enrolled in a master's program or had earned a master's degree. Clearly the intention to pursue advanced education is not predictive of the dental hygienist's actual enrolment in a graduate level program. In a study about dental hygienists with a master's degree in dental hygiene, 79.5% of the dental hygienists had pursued the advanced degree for their own professional growth or to advance their dental hygiene career (71.3%).[23] Unfortunately, the reasons a University of British Columbia's Bachelor of Dental Science in Dental Hygiene graduate may have had for pursuing a master's degree were not explored in this study. Barriers such as family and work commitments that play a role in a diploma dental hygienist's decision to pursue the baccalaureate degree may also play a similar role in the baccalaureate dental hygienist's decision to pursue a graduate degree. Further studies on dental hygienists with master's and doctorate degrees are needed.

A significant finding in the University of British Columbia's survey is the overall support the graduates have for the baccalaureate dental hygiene degree for entry to practice. These dental hygienists have a unique perspective; they have practised dental hygiene with a diploma and a dental hygiene degree. As such, they are able to comment on how the baccalaureate education has affected their professional lives. As one dental hygiene respondent stated, "After completing the [UBC degree] program, I feel the diploma level education just isn't enough anymore." Several dental hygienists commented that the baccalaureate education enhanced the standard of care they offer to their clients, enhanced their credibility, and promoted dental hygiene as a profession. This sentiment is echoed in other studies, which found that although the dental hygiene degree may not significantly affect the clinical dental hygienist in private practice, the degree expanded the dental hygienist's career options, credibility, and promoted the dental hygiene profession.[9,18] Whether this sentiment is reflective of all dental hygienists is unknown and further studies exploring the diploma dental hygienists' opinions regarding the dental hygiene degree for entry to practice could provide valuable information for the dental hygiene profession as it seeks to grow.

During the implementation of the survey, there was a loss of participant anonymity, which resulted in potential researcher bias. Steps were taken to interpret the aggregate data as much as possible and to use the respondent's actual words to minimize the amount of researcher bias in the study.

CONCLUSION

The diploma dental hygienist entering the University of British Columbia's Bachelor of Dental Science in Dental Hygiene Program was female, married or common-law with no children, 30 to 39 years old, and was employed primarily in a clinical practice setting. The dental hygienist's primary motivating reason for pursuing the Bachelor of Dental Science in Dental Hygiene Degree was for personal satisfaction. The majority of the dental hygienists continued to practise dental hygiene while studying in the baccalaureate program. The respondents' areas of interest for independent study were education, public and community health, residential care, and research. After graduating, the dental hygienists were able to find employment in a broader selection of practice settings such as educational institutions, professional associations and bodies, and community health but often continued to practise dental hygiene in a clinical practice setting as well. In the dental hygienists' opinion, the baccalaureate dental hygiene education enhanced their knowledge, skills, and confidence, which enabled them to provide a higher standard of care for their clients. Although only a few of the University of British Columbia's Bachelor of Dental Science in Dental Hygiene graduates pursued graduate degrees, the majority of the respondents commented that the dental hygiene degree provided a "window" for advanced education. Graduates of the UBC Bachelor of Dental Science in Dental Hygiene degree program supported the baccalaureate dental hygiene degree for entry to practice as a means of expanding career options and credibility for dental hygienists. Overall, baccalaureate dental hygienists were satisfied with their education and the opportunities the degree provided.

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Interview with Patricia M. Johnson, PhD

by Dennis Jones

Patricia M. Johnson made an early start in her profession, obtaining her Diploma in Dental Hygiene at the University of Toronto in 1958. She now holds a master's degree and a doctorate in community health and, for more than a decade, has been doing research into how dental hygiene is practised in Canada and abroad. Among her achievements are the 22-country International Longitudinal Database on Dental Hygiene and important labour-force studies in Canada. In collaboration with the College of Dental Hygienists of Ontario (CDHO), she also carried out the research necessary to support the development of the CDHO Quality Assurance Program. She has many years of clinical experience in both general and specialized practice and, until her retirement, was a professor in Seneca College's Dental Health Programs.

During her professional life, Dr. Johnson has been active in many dental hygiene organizations, both nationally and internationally. She is a past president and life member of the International Federation of Dental Hygienists, of the Canadian Dental Hygienists Association, and of the Ontario Dental Hygienists' Association. The author of articles, reports, papers, and book chapters too numerous to mention, she is currently President of PMJ Consultants, a research and consulting company. We spoke with Dr. Johnson about her long experience in dental hygiene and her perspectives on the future of the profession.

Q: Dr. Johnson, what made you want to be a dental hygienist?

It was a very new profession in 1956, and there were so few dental hygienists around that I hadn't heard much about it. But I did know that I didn't want to enter any of the professions that were usual for women in those days. I credit my mother very much with my opportunity to become a dental hygienist. She was always very supportive of my three siblings and me, and when she discovered that I was interested in dental hygiene, she asked me if I wanted to go into dentistry. She was widowed with four children by this time, but she would have made it happen if I'd asked her to. But when I thought about becoming a dentist, I decided it wasn't really the profession I wanted to be in, because even then, I was very interested in health promotion and wellness. I liked the way dental hygiene emphasized this area, as opposed to the more technical approach that appeared to be prevalent in dentistry at the time.

Q: You did your training and went into practice while the profession was still very new. Can you give us an idea of what dental hygiene was like in those early days?

It was quite different from the way it is now. I trained at the University of Toronto in the Faculty of Dentistry, which in 1956 had the only dental hygiene program in Canada. There were 14 of us in the class, which was the largest to date. Many of my fellow students were on bursaries from other provinces because the provincial governments wanted to employ dental hygienists in their public health programs. Studying with people from across the country encouraged us to think nationally rather than locally, which turned out to be very useful when we were building our professional associations.

RÉSUMÉ

Patricia M. Johnson a commencé tôt sa vie professionnelle, puisqu'elle a obtenu son diplôme en hygiène dentaire à l'Université de Toronto en 1958. Elle détient maintenant une maîtrise et un doctorat en santé communautaire et, pendant plus de dix ans, elle a fait de la recherche sur la pratique de l'hygiène dentaire au Canada et à l'étranger. Parmi ses réalisations figurent la base de données longitudinales sur l'hygiène dentaire dans 22 pays et d'importantes études sur la main-d'œuvre au Canada. En collaboration avec l'Ordre des hygiénistes dentaires de l'Ontario, elle a également effectué la recherche nécessaire à la mise sur pied du Programme d'assurance de la qualité de l'Ordre. Elle compte de nombreuses années d'expérience clinique tant en pratique générale qu'en pratique spécialisée et, jusqu'à sa retraite, elle était professeure au collège Seneca, aux programmes de santé buccodentaires.

Pendant sa vie professionnelle, M^{me} Johnson a été active dans de nombreux organismes d'hygiène dentaire, à l'échelle nationale et internationale. Elle est ex-présidente et membre de la vie de la Fédération internationale des hygiénistes dentaires, de l'Association canadienne d'hygiénistes dentaires et de l'Association des hygiénistes dentaires de l'Ontario. Auteure d'articles, de rapports, de communications et de chapitres de livres trop nombreux pour les énumérer, M^{me} Johnson est actuellement présidente de PMJ Consultants, une entreprise de recherche et de consultation. Nous nous sommes entretenue avec elle au sujet de sa longue expérience en hygiène dentaire et de ses perspectives sur l'avenir de la profession.

In many of our classes, we were tucked in with the dental students. This helped me later on when I was working on interdisciplinary committees, because they included people I knew from school.

When I graduated, I went into clinical practice in Hamilton, since there were few positions available in private dental offices in Toronto. I worked with a periodontist—it was an excellent start, since periodontics is traditionally such a core part of dental hygiene practice. I always had to explain to the clients who I was, because dental hygienists were very rare at the time and the natural assumption was that I was a dental assistant. The dentist was very supportive, though, and would introduce me to clients as the dental hygienist. I also wore my graduation pin and a name badge, and hung my diploma in the operatory where I worked, which helped.

After I got married, my husband and I lived in Toronto. I went on working clinically, in a practice where the focus was on crowns, bridges, and prosthetics. Again, it was very specialized work. Altogether, I spent 18 years in clinical practice in both general and specialty dental offices.

Q: I understand that you were one of the founders of the Ontario Dental Hygienists' Association. How did that come about and what did it lead to?

I was involved in establishing the Dental Hygiene Alumni Association of the University of Toronto in 1958, the year I graduated. But it soon became clear to us that an alumni association couldn't meet all the needs and objectives of our emerging profession. By 1963, a small group of us had established the Ontario Dental Hygienists' Association, the first in Canada, as well as a proposal for a national association. Even as a stay-at-home new mom, I kept up contacts with other dental hygienists and some of that early planning actually took place in my living room.

By 1965, the Canadian Dental Hygienists Association was established, with Alberta, Manitoba, Nova Scotia, and Ontario as the founding provincial associations. Later, we saw that we could learn from and contribute to things that were happening internationally, and in 1970 the International Liaison Committee on Dental Hygiene was formed, with CDHA as one of the seven founding national associations; I was a Canadian delegate. By 1986, the Committee had evolved into the more formally structured International Dental Hygienists' Federation, later renamed the International Federation of Dental Hygienists, with 10 national dental hygiene associations as founding members. Wilma Motley was its first president and I was its first vice-president.

Q: What motivated you to shift to a career in applied research after 18 years of clinical practice?

My involvement with dental hygienists' professional organizations had made me acutely aware of the issues surrounding dental hygiene and oral health. Moreover, as an officer with these organizations, I felt responsible for finding resolutions to the issues. But I also felt I didn't have the knowledge and skills to do that, so in 1976 I went back to school.

The challenge was finding a program that fit. The baccalaureate programs available at the time were either too general or seemed to direct me to a career other than dental hygiene—I might have ended up as a microbiologist, whereas my interests were in applied research and the planning and delivery of services. Also, the existing programs didn't give me credit for the non-dental course work I'd completed during my dental hygiene program at the University.

During this period, the ODHA had been documenting the need for a baccalaureate program for dental hygienists at the University of Toronto. I was ODHA president at that time, and I remember meeting with the Dean of the Faculty of Dentistry to petition the school for a degree-completion program. The program wasn't intended to provide more clinical training for dental hygienists, because there was an ample amount of that. It was to broaden their base, so they could take on a wider range of roles and responsibilities in a greater variety of practice settings.

The result was that I stopped taking courses for a while, until the University of Toronto established the new Bachelor of Science in Dentistry (Dental Hygiene) program. I then enrolled in it and graduated in 1982.

However, I still felt I hadn't acquired all the skills and knowledge I needed, so I applied to the Faculty of Medicine's Graduate Program in Community Health, where I obtained my master's and my doctorate. I specialized in Health Administration (Health Policy and Economics), which was a very enriching experience—it enabled me to see things not simply as dental issues or even as health issues, but in a broader social and political-economic context.

I was fortunate in qualifying for several scholarships and awards to support my studies and research. In fact, I set precedents with several agencies as the first dental hygienist to qualify for this support, and it gives me great pleasure to see how many dental hygienists have received similar recognition since then.

I completed my doctorate in 1990. All the time I was studying, though, I remained very active outside the university. I'd been teaching at Seneca College since 1977, when Seneca's dental hygiene program was only a year old, and I continued to do so until my retirement.

Another part of my life was working with both the Ontario and the Canadian Dental Hygienists Associations, as well as with the International Federation of Dental Hygienists, where I was president from 1989 to 1992. In addition, I held memberships on interdisciplinary and advisory committees at the provincial and national levels, and my involvement with other health-occupation groups allowed me to address the issues that I went back to university to research and understand. Among these were the politics of the health care system, how the system works and can be improved, how government interfaces with the private sector and, in particular, human resource planning for the oral health sector—that is, the number and kinds of personnel that will be needed to provide services in the future, and how they should be organized.

Q: While you were carrying out your master's and doctoral research, what did you discover about oral health programs and how they were planned?

Gerontology was my focus for my masters program. Realizing that many older people have poor oral health, along with financial and physical difficulty in accessing services, I investigated Ontario's community-based dental programs for seniors. It turned out that a major problem wasn't the availability of services, but access to them. For example, I found that while dental hygienists were in good supply and were qualified to provide many of the services required, legislative and other restrictions limited their ability to do so. Moreover, where dentists provided these services, technical efficiency declined and program costs increased.

For my doctorate, I focused on human resource planning and specifically on dental hygienists, rather than on the programs themselves. It soon became clear that reliable information about dental hygienists was scarce, and that there were persistent myths and stereotypes about them that had policy implications. For example, one myth said that female dental hygienists tended to work for only a few years before leaving the profession. This implied that publicly funded oral health programs shouldn't rely on dental hygienists as a significant part of their workforce.

In 1987, I conducted a mail survey of all dental hygienists registered to practise and residing in Canada, which enabled me to examine the supply, distribution, labour force behaviour and employment patterns of Canadian dental hygienists. The mailing included a census survey and a probability sample survey. To my astonishment, I got an 89 percent response to the census survey, and an 86 percent response to the sample survey, even though the latter involved a long, detailed questionnaire. Some years later, in 2001, I replicated the sample portion of the survey to examine trends and changes in the profession.

The results from both the 1987 and 2001 surveys were very interesting. For example, I knew from a 1977 Statistics Canada survey that 80 percent of hygienists were working in their field, which was a very high proportion compared to other female-dominated occupations of the time. By 2001, the proportion was up to 93 percent. I also found that dental hygienists work for a considerable length of time, even allowing for the dual demands of household and paid work, and for the competition from increased numbers of recent graduates. In 2001, one out of every two dental hygienists had worked at least 10 years in the profession, and almost one in five had worked for more than 20 years. So much for the myth of attrition!

The other important question for human resource planning involves the proportion of part- to full-time work (defined as 30 hours per week or more). This proportion has remained remarkably stable over the years; in 2001, 57 percent of dental hygienists were working full time, a slight increase from the 1977 figure of 50 percent. Even among dental hygienists who work and have a child under five years old, time spent in practice is relatively high. In 2001, this group worked an average of 25 hours per week, compared to 28 hours per week for dental hygienists overall.

The research also shows that concerns about workforce stability have no real basis. Between 1977 and 2001, there was very little interprovincial migration; dental hygienists tend to stay in the province in which they were educated. They are also likely to work at least 50 weeks per year rather than seasonally. In 2001, one in two had not changed jobs in the previous 10-year period, a pattern consistent with findings from previous surveys.

Dental hygienists comprise an important resource for improving the oral health of Canadians. Demographically, we have a very stable workforce. Participation remains exceedingly high, in spite of the overall aging of the dental hygienist population and the childcare responsibilities of the younger members of the profession. This means that we can plan programs around these people and count on them to be there.

Q: This work evolved to have an international aspect, didn't it?

The international side was a natural progression from my involvement at the provincial and national levels. When we first established the International Federation of Dental Hygienists, we decided we needed to know a lot more about dental hygiene internationally. I wanted to encourage dental hygienists in other countries to establish and maintain databases that would be useful for program planning purposes, so I decided to conduct a study, and that's how the International Longitudinal Database on Dental Hygiene got started. We now have good information about dental hygienists in 22 nations, and less comprehensive data for several more countries. For 11 of the 22 countries, the information goes back to 1987.

Q: Is the face of the dental hygiene profession changing in Canada and in other countries? What are the implications of these changes?

Based on the evidence from these studies, it's definitely changing. Perhaps most noteworthy for Canada and other nations is the amazing growth in the supply of dental hygienists, both in numbers and as a proportion of the population. For example, in 1965 Canada had 211 dental hygienists, or one for every 16,600 citizens. By 2001, we had 14,000, or one for every 2,240 Canadians. Globally, there has been a similar expansion. There are now more than 350,000 dental hygienists worldwide.

However, the number of dentists hasn't grown at the same rate, either in Canada or in any other country I've studied. In 1977, the ratio of dental hygienists to dentists in Canada was one to five. Now it's one to one, and there are regions where some dental hygienists say it's hard to get a job. Moreover, the increased number of dental hygienists hasn't necessarily translated into increased access for people who don't fit the classic profile of private-practice clients, such as the poor and those with physical or mental disabilities. This lack of accessibility has to be addressed.

The dental hygiene population has also been aging in countries where the profession has existed for some time. In Canada, between 1977 and 2001, the proportion of dental hygienists 30 years of age and under declined from 68 to 21 percent, while the proportion of those 40 and over increased from 4 to 37 percent.

Globally, there has been an increase in baccalaureate dental hygiene programs, with the entry-level qualification shifting gradually from a diploma to a degree. In Canada, the proportion of dental hygienists graduating from a diploma-level program remains at about 90 percent, although this will change as the number of graduates from degree-level programs increases.

In Europe and North America in particular, there has also been an increase in scope of practice, in professional autonomy and in decision-making responsibility among dental hygienists. This has been accompanied by a decline in legally mandated levels of work supervision and a slight but gradual increase in independent practice.

For Canada, one change that does worry me is the decline in the proportion of dental hygienists who work in public health and other community-based health programs, providing care for people who can't access the private system. Already relatively low at 13 percent in 1977, this proportion had shrunk to 4 percent by 2001.

Q: Dental hygiene is striving for self-regulation across Canada. In this context, can you tell us about quality assurance and continuing competency, and the implications of these for self-regulation?

This has been of particular interest to me, because I've been working with the College of Dental Hygienists of Ontario (CDHO) in the development, monitoring, and evaluation of their quality assurance program. We have found that the overall quality of dental hygiene practice in Ontario increased after dental hygienists assumed responsibility for self-regulation, and that the improvement was associated primarily with this CDHO program.

In 1995, when dental hygiene in Ontario became self-regulating, I was asked to conduct a baseline study for the CDHO to find out where we were starting from in terms of basic characteristics, continuing education activity (also called continuing quality improvement or CQI), and patterns of clinical practice. The study was repeated in 2002. During the intervening seven years, CDHO implemented a comprehensive quality assurance program with which registrants were required to comply.

For both studies, every dental hygienist in the province was surveyed to determine their qualifications, work experience, CQI activities, the characteristics of their workplaces, and their clinical practice behaviours. Quality was measured using an index compiled from their survey responses to a set of standardized clinical procedures. Across both studies, we found that dental hygienists who scored high in terms of CQI tended to perform above average in quality of practice, whereas those who scored low in CQI were more likely to perform below average.

We also found that the level of CQI activity increased dramatically after 1995, and that this was reflected in an increased overall quality of dental hygiene practice. Specifically, the proportion of dental hygienists who performed above average rose from 25 percent in 1995 to 41 percent in 2002. The level of CQI was by far the most important factor associated with quality of practice, followed by regional, occupational, and workplace-related factors. What this demonstrates is that self-regulating dental hygienists can be responsible and accountable for the quality of the care they provide. During the period when dental hygiene was regulated by dentistry, this type of quality assurance program did not exist and to the best of my knowledge, dentistry still has not embraced such a comprehensive and proven method for continuous quality improvement.

In 1997, I also did a public opinion survey in Ontario to help the CDHO find out how the public would feel if dental hygienists were allowed to provide services directly. The survey showed overwhelmingly that people are prepared to go to a dental hygienist in an independent practice, assuming they're not seeking dental care.

With respect to legislation on this matter, there is now a bill before the Ontario Legislature to amend the *Dental Hygiene Act* of 1991 to eliminate the "order" requirement. This will allow greater access to dental hygienists' services. That, by the way, is nothing unique. There are already seven countries where dental hygienists may work independently of a dentist.

Q: You've seen the profession of dental hygiene evolve almost since its beginning in this country. How do you believe it will continue to change in the coming years?

We're seeing dental hygiene move toward a situation in which it could, potentially, provide much more accessible services. Whether dental hygienists will become more entrepreneurial and set up their own practices remains to be seen.

If you look globally, though, we do see it happening. Canada was in the forefront when I first started my research, but I would say that Western Europe has surpassed North America in terms of professional autonomy. Interestingly, the majority of dental hygienists there work in publicly funded, community health programs.

So where will we go? Depending on how quickly dental hygienists across Canada obtain and accept responsibility for self-regulation and continued competence, use educational opportunities to advance their careers, and work to establish quality dental hygiene practices, an increasing range of options will be open to them. The end results will be increased access to their services and improved oral health.

Q: Looking back, how would you sum up the evolution of dental hygiene in Canada and internationally?

The development of dental hygiene, provincially, nationally, and internationally, has been an evolution, not a revolution. At times, it seems to have been a slow process, but there's been steady progress built on a solid foundation of knowledge and on a strong vision for the profession. Overall, changes have been consistent across

most countries, and the profession remains remarkably homogeneous. The role of the dental hygienist has evolved from dental auxiliary to colleague and partner, working in collaboration with dentists, other healthcare professionals, and the public to achieve the shared goal of improved oral health as part of total health.

Q: What advice and observations do you have for dental hygienists who are just embarking on their careers?

I found my career to be personally satisfying, extremely so. I've had the opportunity to meet and work with dental hygienists from around the world, and I have been deeply impressed by them and the calibre of their professionalism.

I think dental hygiene is a remarkable profession. It's allowed me to work part-time when necessary to meet my family's needs. It's allowed me to teach, practice clinically, and do research. There are all kinds of opportunities and challenges in dental hygiene, so I'd say to new graduates: Go for it. Be involved in creating your own future as a dental hygienist. Focus on your clients, whether that client is an individual, a group, or a community. Focus, and do the best you can.

Achievements and Perceptions *(continued from page 91)*

We have crossed many milestones and together will again break down barriers in order to further develop our profession. It is with this reason that I invite each and every one of you to attend the next professional conference, which will be held in Ottawa in June. The theme of this conference is "Together/Ensemble." I cannot think of a more appropriate title to mark our association's 40th anniversary. Indeed, it is the collective effort of countless devoted members like you that has made it possible for our profession to flourish to such an extent.

I cannot wait to see what the future will hold for this profession. What will it be like in 10, 20, or even 40 years? What more will we be able to achieve together in the years to come? Knowing the history of dental hygiene in this country, it should be a great adventure! Having been surrounded by the professionalism of dental hygienists in this association, I am convinced that things can only get better.

I encourage you to come and join your colleagues from around the country this June in Ottawa and help celebrate the achievements of CDHA. Take this opportunity to discuss current issues as well as the future of dental hygiene in this country. Come meet the pioneers of our profession!

You can contact Diane Thériault at <president@cdha .ca>.

CDHA Board – Highlights of Meeting

Saturday, March 19, 2005, Ottawa

1. Monitoring reports: The board accepted the monitoring reports provided by the Executive Director for the policies of the organization. These reports and the positive feedback from the Governance Policy facilitator indicate that the board is well positioned in its process of governance policy, including the End items of our organization.

2. End items for decision: The Town Hall committee report (collected at June 2004 CDHA annual professional conference Town Hall) was presented and discussed to assist in evaluating the End items. An environmental scan, on-line CDHA membership survey, and provincial updates were also included to assist in identifying further needs for Ends revision. The Board reviewed the End items, resulting in approving minor revisions. The Board continues to plan further endeavours to link with the ownership.

3. Executive limitations items for decision: The board reviewed the Executive limitations and approved minor revisions.

4. Review of governing policies: The board reviewed its compliance with governance policies and made minor revisions as appropriate. Palmer Nelson was elected as President Elect by acclamation.

5. Linkage with other boards: The board is actively involved in linking with other organizations through its boards. Reports from NDHCB, CDAC, IFDH, the provincial presidents' meeting, and the board-appointees teleconference were provided to board members for discussion and consideration.

6. Board awards for decision: The Board reviewed nominations and made decisions regarding the Distinguished Service award and the Life Member award.

7. Communication from ODHA: The Board received a list of questions from the ODHA. These questions were brought forward by CDHA Board member Evie Jesin. The Executive Director will be providing responses to the questions.

8. Dates for next meetings: The next board meeting is scheduled for June 17–19, 2005, in conjunction with CDHA National conference, themed *Together Ensemble,* in Ottawa on June 17–19, 2005. The Fall Board meeting will take place October 28–30, 2005.

Les traits fondamentaux communs de l'hygiène dentaire *(suite de la page 95)*

les hygiénistes dentaires parlent de la culture de l'hygiène dentaire. Comme le laisse entendre Stiller, « l'apprentissage au sujet du monde professionnel [...] suppose non seulement la maîtrise des compétences nécessaires à l'exécution du travail du professionnel de façon compétente, mais aussi l'intériorisation des valeurs et des croyances partagées par les autres membres de la profession; ainsi les valeurs et les idéaux détenus collectivement par la profession en viennent-ils à caractériser l'identité même du praticien novice » (p. 7). Les éducateurs en hygiène dentaire sont les étoiles de la profession puisqu'ils contribuent à instiller les attentes et les normes chez les élèves et les nouveaux diplômés. Vous, vos pairs ainsi que vos associations professionnelles et vos organes de réglementation contribuez à les maintenir.

À mesure que le temps passe, nous sommes témoins de nombreux changements tant au sein de la profession qu'à l'extérieur. Tous ces changements amènent les traits fondamentaux communs de l'hygiène dentaire à se modifier. Dans le présent numéro du journal, plusieurs contributions étayent la notion de traits fondamentaux communs de l'hygiène dentaire. Fran Richardson propose un solide article intitulé « Pouvoir, maîtrise et économique »; Pauline Imai et Bonnie Craig dressent le profil des diplômées du baccalauréat ès sciences dentaires (hygiène dentaire) de l'Université de la Colombie-Britannique; Beverley Contreras traite du maintien d'une norme de santé buccodentaire dans les établissements de soins pour bénéficiaires internes de la Colombie-Britannique et des répercussions sur les soins qu'a eues la présentation, au personnel, d'une vidéo didactique d'accompagnement; finalement, nous présentons une entrevue avec M^{me} Patricia Johnson, qui est sans doute la chercheure la plus réputée à l'échelle internationale en ce qui concerne la profession d'hygiéniste dentaire en tant que telle. En lisant ces contributions au corpus de connaissances en hygiène dentaire, songez à l'effet qu'elles ont sur votre propre système de valeurs et sur votre opinion personnelle de la culture en hygiène dentaire.

L'hygiène dentaire contribue à la société à titre de « bon membre de la collectivité »

L'ACHD contribue au renforcement des traits fondamentaux communs de l'hygiène dentaire en rassemblant des personnes qui ont fondamentalement les mêmes intérêts; en tirant profit de la synergie de ce groupe; en coordonnant, en collaborant, en communiquant et en développant un sentiment d'appartenance au sein de la profession. De vigoureux traits fondamentaux communs axés sur le service à la collectivité, la compétence, la formation continue, la recherche et l'intégrité dans tout ce que nous faisons constituent de solides fondements pour notre profession.

What's New in the CDHA Library?

by CDHA Staff

THE "LIBRARY COLUMN" IS A NEW ADDITION TO THE JOURNAL. THE CDHA office in Ottawa has a fully functioning library open to members of CDHA—you can come in person with requests to support both your daily practice and educational endeavours, or you can call, fax, or e-mail your requests for information. All will receive prompt and expert assistance. This first column has mostly "housekeeping" information but later columns will focus on recent acquisitions, library material that can complement the featured articles, and other interesting articles or tips on how to find the answer to that tricky question, using a variety of reliable sources.

HOURS OF SERVICE

The library's information consultant is available to members Tuesday to Thursday, 8:30 a.m. to 4 p.m. (Eastern Time). You can call 1-800-267-5235, ext. 22 or 1-613-224-5515, ext. 22, or you can e-mail your requests to **library@cdha.ca**.

SERVICES

Members can borrow books and audiovisual material for 3 weeks with 1 renewal allowed. All you have to do is to provide us with your credit card information for security and pay the return postage. Once the item is returned, we erase your credit information.

We can also help with Internet research, finding those difficult-to-find articles ("grey literature"). The Library has access to a number of research databases, search engines, and bookmarks that focus on a number of professional and oral health topics.

For journal articles from the CDHA collection, members can receive the first 20 pages free. After that, each page will cost 20¢ plus GST. If you would like the material faxed to you, there may be extra charges depending on your location.

We can arrange interlibrary loans to support your research. However, we have to ask that you pay any costs involved in getting this material for you. Loans from other institutions typically cost between $5 and $20 per article.

MATERIAL RELEVANT TO THIS ISSUE

In this issue there is a discussion of the relationship between the dentist and the dental hygienist. The library has a few books on interprofessional relationships that may be of interest to you.

McKane-Wagester, C. Dental hygiene: the pulse of the practice. Tulsa (OK): PennWell; 2002.

Makely, S. The health care worker's primer on professionalism. Upper Saddle River (NJ): Prentice-Hall; 2000.

Adams, T. Inter-professional conflict and professionalization: dentistry and dental hygiene in Ontario [reprint]. Soc Sci Med. 2004;58:2243-52.

Bender, P. Leadership from within. Toronto: Stoddard; 1997.

Lautar, C. The status of dental hygiene as a profession: perceptions of dental hygienists and dentists in Alberta. Calgary: University of Calgary; 1993.

Patricia Johnson, the subject of our interview, has over the years written several documents about dental hygiene practice in Canada. Some of our holdings include the following:

What's New in the CDHA Library? *...continued on page 141*

Free On-Line Journals

by CDHA Staff

IN THE SEPTEMBER-OCTOBER 2004 ISSUE, WE PROVIDED the URLs for some sites that allowed readers to access full-text journal articles. More free on-line journals are listed below. Some require pre-registration.

Critical Reviews in Oral Biology and Medicine

http://jdr.iadrjournals.org/search.dtl

At this site, you can search by author and/or by keywords in title, abstract, or text in the *Critical Reviews*. You can also choose to search across all IADR journals, *Critical Reviews*, *Journal of Dental Research*, and/or *Advances in Dental Research*. Full text is available for journals from 1979 to present, abstracts from 1975 to 1978, and tables of contents from 1965 to 1974.

Journal of Dental Education

www.jdentaled.org/

This monthly journal is published by the American Dental Education Association and contains scientific and educational research in dental and allied dental education. It covers "topics ranging from the impact on oral health research of recent findings in such areas as genetics and the brain, to innovative testing methodologies, to curriculum reform, to systematic reviews of clinical trials regarding oral, dental, and craniofacial diseases and disorders." Full-text access is available free only for journals that are a year old. For issues in the last year, readers have the option of purchasing access for one day for one article (US$15) or accessing all content in the on-line journal for 30 days (US$25).

Internet Journal of Dental Science

www.ispub.com/ostia/index.php?xmlFilePath=journals/ijds/front.xml

This is a very recent addition to on-line journals, this being its second year. However, it looks interesting and will be even more so once it has published more issues. It has sponsors but is a peer-reviewed journal with every published article reviewed by members of the editorial board and the editor-in-chief.

BMC Oral Health

www.biomedcentral.com/bmcoralhealth/

A general description of this journal, from its website: "*BMC Oral Health* is an Open Access, peer-reviewed journal that considers articles on all aspects of the prevention, diagnosis and management of disorders of the mouth, teeth and gums, as well as related molecular genetics, pathophysiology, and epidemiology." Registration is required but is free.

Free Medical Journals

http://freemedicaljournals.com/htm/about.htm

This site has been reactivated and lists over 1,400 titles. A caveat: it also lists sites that have a free trial period before you have to subscribe and those that have embargo periods.

Annals of Long-Term Care: Clinical Care and Aging

www.mmhc.com/altc/index.cfm

This journal is "a peer-reviewed medical journal of the American Geriatrics Society, focusing on the clinical and practical issues related to the diagnosis and management of long-term care residents." While the target audience is mainly medical practitioners, there are articles on oral care for the elderly, the subject of one of the articles in this issue of *CJDH*.

What's New in the CDHA Library? *(continued from page 139)*

Johnson PM. Dental hygiene practice in Canada 2001. Ottawa: CDHA; 2002. [This report has three parts: No. 1 – Technical report; No. 2 – National weighted frequencies and regional cross-tabulations; No. 3 – Findings.]

Johnson PM. International profiles of dental hygiene 1987 to 2001: a 19-nation comparative study. Int Dent J. 2003;53:299-313. Available from: www.ifdh.org/19_nation_dh_study.pdf

Johnson PM. La pratique de l'hygiène dentaire au Canada en 2001. Ottawa: CDHA; 2002. [The library has part three only – Constatations.]

CLASSIFIED ADVERTISING

CDHA and *CJDH* take no responsibility for ads or their compliance with any federal or provincial/territorial legislation.

BRITISH COLUMBIA

COQUITLAM Permanent full-time or part-time hygiene position available Monday to Thursday in Coquitlam office near Lougheed Mall. Please contact Helen at **604-931-3431** or send résumé to **604-931-3436**.

DAWSON CREEK Full-time dental hygienist required in well-established, BUSY family practice in Northern B.C. No evenings or weekends. Flexible hours. Competitive wages. NEW GRADS WELCOME!! Call **250-782-4440**, fax résumé to **250-784-0133**, or e-mail information to **drsevier@telus.net**.

PORT COQUITLAM A practice that provides excellent patient care is looking for an enthusiastic, patient-caring team player. We have a modern, friendly practice in the Vancouver suburb of Port Coquitlam. Excellent wage and bonus. Flexibility to work some evenings and occasional Saturdays an asset. We have daffodils in March; Canada's mildest climate; local mountains for skiing, snowboarding, mountain biking, or hiking; skiing at Whistler; and sailing the beautiful harbour and islands! Send résumé to **drkathy@pocodental.com** or fax it to **604-941-0066**.

KAMLOOPS Established prosthodontic and implant practice in beautiful Kamloops, B.C. requires a part-time or full-time dental hygienist to begin employment April 2005. Our practice is busy and located in a city where an active outdoor lifestyle is easily enjoyed. Contact us at **250-372-8578** or **dntakahashi@telus.net**.

Advertisers' Index

RICHMOND Professional and friendly hygienist required. We are located at a central location in Richmond B.C. Excellent team and excellent patients. Established general practice focused on high-quality dentistry. Modern facility with laser. Please e-mail to **dental222@hotmail.com**.

ALBERTA

OLDS Busy family practice seeking registered dental hygienist. Our team maintains a strong focus on preventive and periodontal care. Olds is located midway between Calgary and Red Deer. Please fax résumé to **403-556-1221** or e-mail it to **oldsfdc@telus.net**. For more information, please call **403-556-8818**.

ONTARIO

TRENTON Dr. Steven Bongard & Associates at West End Dental Centre in Trenton seeking enthusiastic dental hygienist for busy, progressive practice with advanced perio program. Experience an asset but willing to train newer grad. Full-time, permanent position. You are a team player and value working with an assistant to provide high level of care and service to patients. Excellent working conditions; competitive salary. Please fax résumé to Diane at **613-392-3783**.

NEW BRUNSWICK

SAINT JOHN Dental hygienist required for growing family preventive dental practice. **Offering:** signing bonus, flexible hours, competitive wages, no evenings or weekends, performance-based incentives/bonuses, tuition/licence fee reimbursement, comfortable pace schedule. If you are a dedicated professional who is conscientious, caring, and committed to providing high-quality dental care, please fax your résumé to Dr. T. Debly at **506-365-4124** or call **506-652-3335**.

CDHA CLASSIFIED ADS

Classified job ads appear primarily on the CDHA's website (www.cdha.ca) in the Career Centre (*Members' Only* section). On-line advertisers may also have their ad (maximum of 70 words) listed in the journal *CJDH* for an additional $50. If an advertiser wishes to advertise only in the print journal, the cost will be the same as an on-line ad. These classified ads reach over 11,000 CDHA members across Canada, ensuring that your message gets to the target audience promptly. Contact CDHA at **info@cdha.ca** or **613-224-5515** for more information.

Réalisations et perceptions *(suite de la page 91)*

nos patients les divers aspects de l'hygiène dentaire et le lien entre la santé buccodentaire et les maladies systémiques.

Il nous appartient à chacun et à chacune de mieux faire comprendre notre profession tant au public qu'aux autres professionnels de santé. Il n'y a aucune honte à promouvoir qui nous sommes et ce que nous faisons. Nous sommes des spécialistes de la prévention en santé buccodentaire et nous devrions en être fiers.

Nous avons franchi de nombreuses étapes importantes et ensemble, nous allons encore aplanir des obstacles afin de faire avancer notre profession. C'est pour cette raison que je vous invite tous et toutes à assister à la prochaine conférence professionnelle, qui aura lieu à Ottawa en juin. Le thème de cette conférence est « Together/Ensemble ». Je n'arrive pas à imaginer un titre plus approprié pour marquer le quarantième anniversaire de notre association. En effet, c'est l'effort collectif d'un nombre incalculable de membres dévoués comme vous qui a permis à notre profession de s'épanouir à ce point.

Je n'ai pas la patience d'attendre pour voir ce que l'avenir réserve à cette profession. À quoi ressemblera-t-elle dans dix, vingt ou même quarante ans? Quoi d'autre encore serons-nous en mesure de réaliser ensemble dans les années à venir? Si je me fie à l'histoire de l'hygiène dentaire au pays, ce devrait être une grande aventure! Après avoir été entourée par le professionnalisme des hygiénistes dentaires dans cette association, je suis convaincue que les choses ne peuvent que s'améliorer.

Je vous encourage à venir vous joindre à vos collègues des quatre coins du pays en juin prochain, à Ottawa, et à contribuer ainsi à souligner les réalisations de l'ACHD. Profitez de l'occasion pour discuter des questions d'actualité aussi bien que de l'avenir de l'hygiène dentaire au pays. Venez rencontrer les pionnières de notre profession!

On peut communiquer avec Diane Thériault à l'adresse < *president@cdha.ca* >.