CANADIAN JOURNAL OF DENTAL HYGIENE · JOURNAL CANADIEN DE L'HYGIÈNE DENTAIRE

CJDH JCHD

CDHA ACHD

SEPTEMBER–OCTOBER 2008, VOL. 42, NO. 5

Ethical perspective on research using shared data

Chemotherapy: Considerations for dental hygienists

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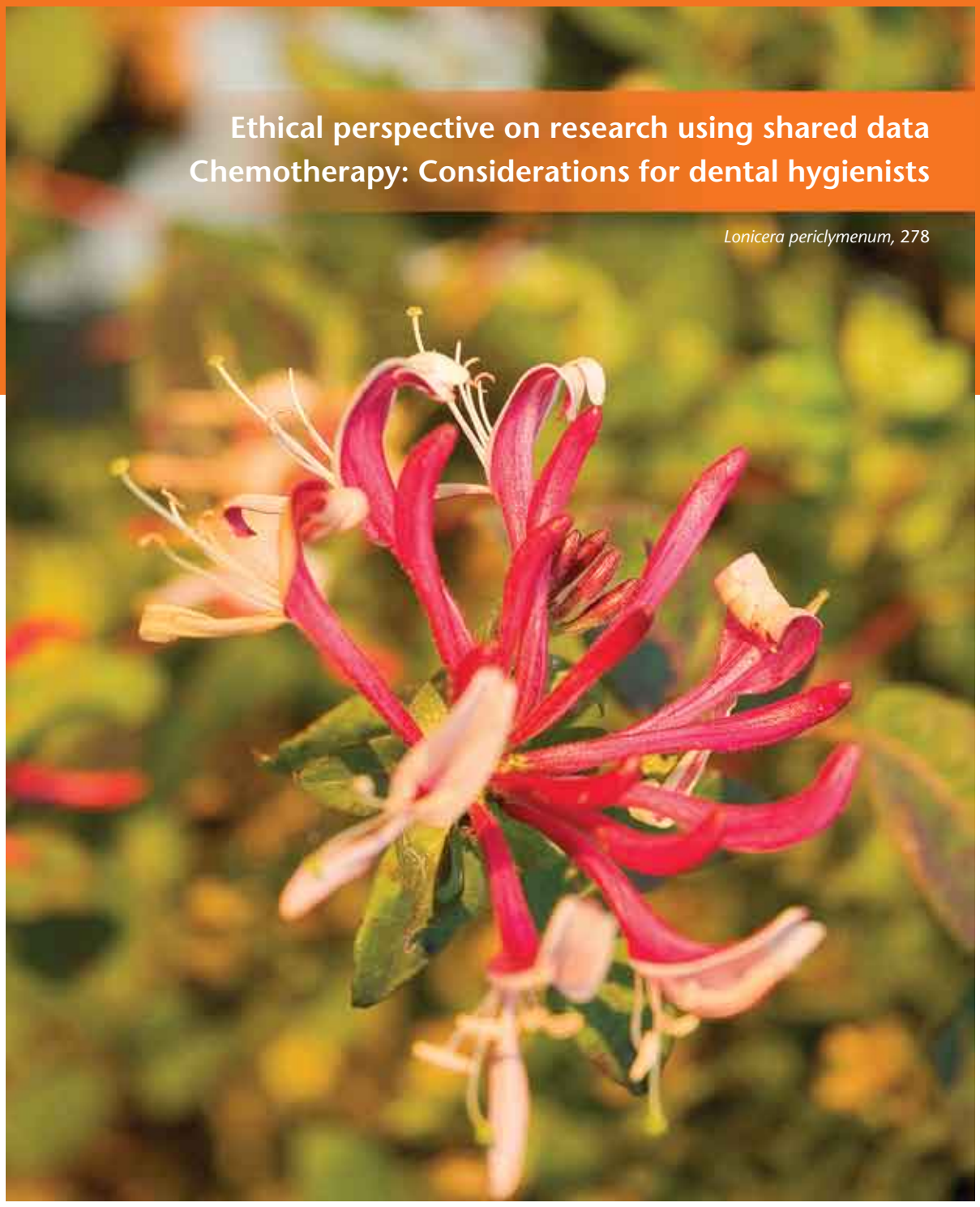

THE OFFICIAL JOURNAL OF THE CANADIAN DENTAL HYGIENISTS ASSOCIATION

Making your mark

Carol-Ann Yakiwchuk,
RDH, DipDH

A footprint, just like a fingerprint, is an imprint unique to each human being. In 1936, Mary Stevenson wrote the now famous *Footprints in the Sand*, a beautiful spiritual poem about understanding one's record of footprints over a lifetime.[1] Through the work of anthropologists and their analyses of fossilized footprints found all over the world, we have come to understand the lives of many creatures who walked Earth long before us. A much more contemporary reference to footprints is made by ecologists. With greenhouse gas emissions continuing to escalate, we are being called on to take action, to measure our *ecological* or *carbon footprint*, and to incorporate changes in our daily lives to tread more lightly upon the earth. Each person's ecological footprint measure is in fact a resource management tool, a measure of one's impact on the environment.

What would the ideal dental hygienist footprint be?

A measure of the positive impact of your practice on your clients, your community, and the profession of dental hygiene. Have you considered the size of your "dental hygiene footprint" - what it looks like now, what it might be in five years, ten years, and later on as you near the end of your career? What impact are you having on those you serve, your community at large, other health care professions, and on your profession? *Volunteer positions within our profession offer us mutually beneficial opportunities to make our mark.*

My 2008 "To do" list included many never-before-attempted items in my role as your President. Looking back on this past year, I feel that this volunteer opportunity has enabled me to grow personally as an individual and professionally as a dental hygienist, thus expanding my own dental hygiene footprint and that of the profession. I had the opportunity to represent CDHA on numerous occasions; at regional meetings, at conferences, as a member of the dental public health competencies working group, and with our American colleagues, the American Dental Hygienists Association executive. Along the way, I learned to effectively plan, organize, and chair national board meetings. I wrote journal messages, responded to the media and members, participated in the refinement of the new dental hygiene competencies, proudly presented CDHA awards to outstanding dental hygiene leaders at the premier leadership summit in Banff, and had the pleasure to work with so many incredible people.

This year, I also witnessed firsthand the remarkable accomplishments that can only happen with exceptional teamwork. I extend a heartfelt "thank you" to my fellow Board members, to the staff of CDHA, and to you, who made my time serving you so memorable, supportive, and enjoyable. My final challenge to you, as President, is to "make your mark". I borrow the words of a luminary,

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Laisser sa marque

Du pied comme de la main, les empreintes de tout être humain lui sont uniques. En 1936, Mary Stevenson rédigeait le fameux poème Footsprints in the Sand *(Des pas sur le sable), réflexion sur les empreintes que quiconque peut laisser dans sa vie.[1] Par leur travail et leurs analyses des empreintes fossilisées découvertes à travers le monde, les anthropologistes nous ont fait connaître la vie des nombreuses créatures qui ont parcouru la Terre longtemps avant nous. Les écologistes en dressent un tableau beaucoup plus contemporain. L'émission des gaz à effet de serre nous interpellent. Il faut passer à l'action, mesurer nos* empreintes écologiques *ou* carboniques*, intégrer des changements dans notre vie quotidienne et y aller doucement avec le sol. Les empreintes écologiques sont de fait un outil pour gérer individuellement nos ressources, un moyen de mesurer notre propre impact sur l'environnement.*

Quelles seraient donc les empreintes idéales d'une hygiéniste dentaire ?

Un moyen de mesurer l'impact positif de votre pratique sur votre clientèle, votre collectivité et votre profession d'hygiéniste dentaire. *Avez-vous pensé à la portée de vos « empreintes sur l'hygiène dentaire » – ce qu'elles sont maintenant, ce qu'elles pourraient être dans cinq ans, dix ans ou davantage quand votre carrière tirera à sa fin ? Quelle impression faites-vous sur les personnes que vous servez, votre collectivité, les autres professions de la santé et la vôtre en particulier ?* Le bénévolat au sein de notre profession nous ouvre d'heureuses perspectives pour laisser individuellement notre marque.

Ma liste « À faire » de 2008 comprenait plusieurs nouveaux projets inédits à titre de présidente. En y repensant, j'ai l'impression que ce bénévolat m'a donné la chance de grandir personnellement sur les plans individuel et professionnel comme hygiéniste dentaire, élargissant ainsi mes propres empreintes en hygiène dentaire et dans la profession. J'ai eu la chance de représenter l'ACHD à plusieurs occasions : aux réunions régionales, à des conférences, en tant que membre du groupe de travail sur les compétences en santé dentaire publique et auprès de nos collègues américaines, à la direction de l'Association américaine des hygiénistes dentaires. Chemin faisant, j'ai appris à planifier, à organiser et à présider efficacement les réunions du conseil national d'administration. J'ai rédigé des messages pour le journal, répondu aux médias et aux membres, participé au raffinement des nouvelles compétences en hygiène dentaire, présenté avec fierté la remise des distinctions de l'ACHD aux formidables dirigeantes en hygiène dentaire lors du premier sommet du leadership à Banff et eu le plaisir de travailler avec autant de personnes fantastiques.

Cette année, j'ai aussi été directement témoin de remarquables réalisations qui n'auraient pu se faire sans une équipe exceptionnelle. Merci de tout cœur à mes collègues du conseil d'administration, au personnel de l'ACHD ainsi qu'à vous, qui avez rendu mon temps passé à votre service si bénéfique,

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MASTHEAD

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GRAPHIC DESIGN AND PRODUCTION: Mike Donnelly

Published six times per year (January/February, March/April, May/June, July/August, September/October and November/December) Canada Post #40063062.

CANADIAN POSTMASTER
Notice of change of address and undeliverables to:
Canadian Dental Hygienists Association
96 Centrepointe Drive, Ottawa, ON K2G 6B1

SUBSCRIPTIONS
Annual subscriptions are $90 plus GST for libraries and educational institutions in Canada; $135 plus GST otherwise in Canada; C$140 US only; C$145 elsewhere. One dollar per issue is allocated from membership fees for journal production.

CDHA 2008
6176 CN ISSN 1712-171X *(Print)*
ISSN 1712-1728 *(Online)*
GST Registration No. R106845233

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The *Canadian Journal of Dental Hygiene (CJDH)* is the official publication of the Canadian Dental Hygienists Association. The CDHA invites submissions of original research, discussion papers and statements of opinion of interest to the dental hygiene profession. All manuscripts are refereed anonymously.

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The CDHA acknowledges the financial support of the Government of Canada through the Canada Magazine Fund toward editorial costs.

Canada

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Learning

Susan Ziebarth,
BSC, MHA, CHE

The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn. – Alvin Toffler

In my mind September and school go hand-in-hand. This relationship of the fall and new learning is something that is becoming a historical reference as we now have dental hygiene programs beginning and ending in any month of the year. As the Toffler quote suggests, we are in a century where the context within which we are learning is changing so quickly and sometimes in quite unforeseen ways that we must now unlearn and relearn. Fortunately, formal educational opportunities are no longer limited to youth but are available in many stages of our life and careers, and aided by improved communication technologies that formerly made geography a significant barrier.

CDHA will be taking a stronger leadership role with respect to education as it merges with Dental Hygiene Educators Canada over the next year. From a policy perspective, we have been the secretariat for the *National Competencies for Dental Hygiene Entry-to-Practice* project. Working with the planning committee members, the Commission on Dental Accreditation of Canada (CDAC), Dental Hygiene Educators Canada (DHEC), Federation of Dental Hygiene Regulatory Authorities (FDHRA), and the National Dental Hygiene Certification Board (NDHCB), this project has articulated entry-to-practice competencies that would be used to support dental hygiene education, accreditation, examination and regulation. The development of the competencies commenced with the implementation of a workshop to generate the initial draft ability statements. The workshop was followed by a national survey and focus groups to validate and refine the competency profile.

In April 2008, CDHA hosted a meeting of dental hygienists to assist in the development of a CDHA Education Agenda. The purpose of this document is to explore variables which influence the dental hygiene profession and impact on the educational needs of dental hygienists. This exploration occurs in the context of the ever increasing role of dental hygienists in supporting the oral health and the general well being of Canadians. In early September, CDHA will release the first version of this document and provide you an opportunity to comment on this document. The regular CDHA e-mail broadcast will announce the web link to the document and its related survey questions.

CDHA values our industry partners who help foster and advance dental hygienists' professional development. Our partner, the *DVD Quarterly* of Dental Hygiene, provides quality education which can be studied on your own schedule. Combining science, evidence-based research and communication techniques, the DVD Quarterly assists you in your daily practice. RDHU, our new educational partner,

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Apprendre

Les illettrés du 21e siècle ne seront pas ceux et celles qui ne sauront ni lire ni écrire, mais ceux et celles qui ne sauront pas apprendre, désapprendre ni réapprendre. – Alvin Toffler

À mon avis, septembre et école vont de pair. Le rapport entre l'automne et le nouveau savoir deviennent historiquement un point de référence, car nous avons maintenant en hygiène dentaire des programmes d'apprentissage qui commencent et se terminent à tous les mois de l'année. Comme le suggère la citation de Toffler, nous sommes dans un siècle où le contexte de l'apprentissage évolue si rapidement, parfois de façon fort imprévue, que nous devons maintenant désapprendre et réapprendre. Heureusement, les possibilités de formation formelle ne se limitent plus à la jeunesse mais sont maintenant accessibles aux nombreuses étapes de notre vie et de notre carrière, soutenues par de meilleures technologies de communication, celle-ci étant auparavant limitée par d'importantes barrières géographiques.

L'ACHD deviendra un chef de file en éducation lorsqu'elle se joindra l'an prochain aux Éducateurs en hygiène dentaire du Canada. D'un point de vue stratégique, nous avons servi de secrétariat au projet Compétences d'accès à la profession d'hygiéniste dentaire au Canada. *De concert avec les membres du comité de planification, la Commission de l'agrément dentaire du Canada (CADC), les Éducateurs en hygiène dentaire du Canada (ÉHDC), la Fédération des organismes de réglementation en hygiène dentaire (FORHD) et le Bureau national de la certification en hygiène dentaire (BNCHD) ont participé au projet d'articulation des compétences requises pour avoir accès à la profession, lesquelles serviraient à conforter la formation, l'agrément, l'examen et la réglementation en hygiène dentaire. La mise au point de ces compétences a commencé par la tenue d'un atelier pour en ébaucher les énoncés. L'atelier a été suivi d'un sondage à l'échelle du pays et de la création de groupes de discussion pour valider et peaufiner les profils de compétence.*

En avril 2008, l'ACHD a réuni des hygiénistes dentaires pour aider à l'élaboration de son agenda pédagogique. Ce document a pour objet d'examiner les variables qui influent sur la profession d'hygiéniste dentaire et ont un impact sur les besoins de formation. L'examen se situe dans le contexte du rôle sans cesse croissant de l'hygiéniste dentaire dans le soutien de la santé buccale et du bien-être général de la population canadienne. L'ACHD diffusera la première version du document au début de septembre, vous donnant ainsi l'occasion de le commenter. Elle précisera dans son courriel régulier le lien Internet qui mènera au document et au questionnaire qui s'y rattache.

L'ACHD apprécie ses partenaires de l'industrie qui aident à encourager et à faire progresser le développement professionnel des hygiénistes dentaires. Notre partenaire, le DVD Quarterly of Dental Hygiene, *offre sur disque vidéo un bon programme de formation de qualité supérieure que vous pouvez suivre à votre propre rythme. Combinant la science, la recherche fondée*

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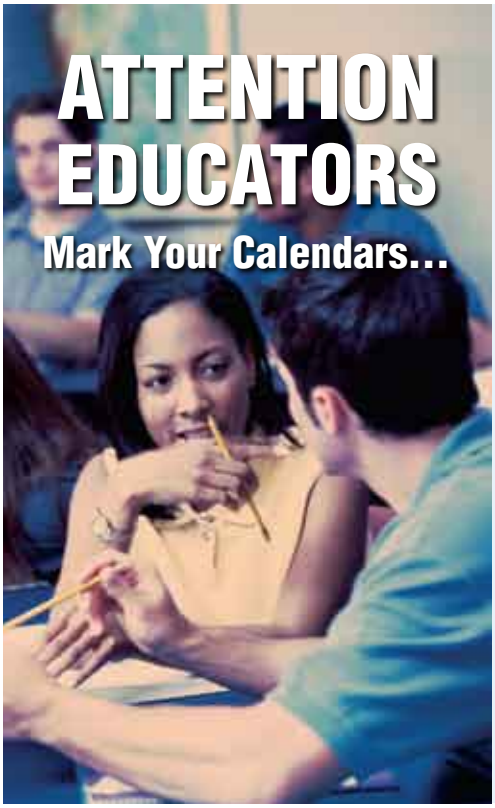

CDHA's Educators' Workshop is going West to East in 2008!

November 1, 2008 in New Westminster, BC
November 7–8, 2008 in Toronto, ON

CDHA will host its Educators' Workshop designed exclusively for dental hygiene educators. It is your exceptional professional career development and networking opportunity. Attend the workshop to…

- Become involved in shaping the future direction of dental hygiene education in Canada.
- Strategize how dental hygiene educators implement national dental hygiene competencies.
- Meet and mingle with fellow dental hygiene educators from across Canada.
- Make important career connections.
- Test-drive the newest oral health care products on our exhibit show floor.
- Discover how CDHA can assist you in your professional development.

Attention Directors… attend a dinner with fellow program directors for networking opportunities!

Register today and tell a colleague. Our last workshop sold out quickly, and space is very limited, so don't delay to register.

More information and registration is available online at www.cdha.ca

EDUCATORS' WORKSHOP

THE CANADIAN DENTAL HYGIENISTS ASSOCIATION
L'ASSOCIATION CANADIENNE DES HYGIÉNISTES DENTAIRES

2008 Dental Hygiene Programs Recognition Award

Prix de reconnaissance 2008 pour les programmes en hygiène dentaire

Dental Hygiene Programs Recognition Award

The Canadian Dental Hygienists Association is pleased to announce the 2008 Dental Hygiene Programs Recognition Award. This award is designed to recognize dental hygiene programs whose faculty achieves 100% membership in the CDHA. A certificate of recognition will be awarded to honour these programs for demonstrating such outstanding commitment to their national association and acting as professional role models for their students. The deadline for submissions is **28 November 2008**. Entry details are available on the CDHA members' web site, in the "*Networking and Recognition*" section.

Prix de reconnaissance pour les programmes en hygiène dentaire

L'Association canadienne des hygiénistes dentaires est heureuse d'annoncer la création du Prix de reconnaissance pour les programmes en hygiène dentaire. Ce prix est conçu afin de reconnaître les programmes en hygiène dentaire dont 100 % du corps professoral est membre de l'ACHD. Un certificat de reconnaissance sera remis pour mettre à l'honneur les programmes dont les membres font preuve d'un engagement exceptionnel envers leur association nationale et jouent un rôle de modèles professionnels pour leurs étudiants et étudiantes. La date limite pour les inscriptions est le **28 novembre 2008**. Les détails concernant les procédures d'inscription sont affichés sur le site Web réservé aux membres de l'ACHA, à la section « *Networking and Recognition* ».

THE CANADIAN DENTAL HYGIENISTS ASSOCIATION
L'ASSOCIATION CANADIENNE DES HYGIÉNISTES DENTAIRES

An ethical perspective on research using shared data

Sandra J Cobban[*], RDH, MDE; Eunice M Edgington[§], RDH, BSCD, MED; Janice FL Pimlott[‡], RDH, BSCD, MSC

ABSTRACT

Data sharing, and secondary analysis of archived data, can contribute to the advancement of knowledge and to greater transparency in scientific inquiry. These processes also make maximum use of public funding for research by making available sets of data for further analysis and discovery. However, data sharing raises some interesting ethical questions around the re-use of research data from human subjects. In Canada, the Tri-Council Policy Statement (TCPS) identifies a number of ethical principles for research involving human subjects including respect for human dignity, respect for free and informed consent, respect for vulnerable persons, respect for privacy and confidentiality, respect for justice and inclusiveness, balancing harms and benefits, minimizing harm, and maximizing benefits. The main ethical principles that need to be addressed when preparing data for archiving are informed consent and protection of privacy and confidentiality, especially around storage, security, and access requirements. Researchers who are planning to share their data need to address preparation for data archiving in the initial design stage. Education and training programs that prepare researchers, including graduate and post-graduate programs, need to evolve such that the practice of data archiving becomes automatic to build the necessary capacity for a culture of data sharing. When data is to be shared, the only appropriate ethical perspective is to view the data as an extension of the individual who contributed it, and to accord it the same respect in secondary as in primary analysis.

RÉSUMÉ

Le partage des données et l'analyse secondaire des données archivées peuvent contribuer à l'avancement du savoir et accroître la transparence de l'investigation scientifique. Ces procédés permettent aussi d'utiliser au maximum les fonds publics affectés à la recherche car ils donnent accès à des ensembles de données pour les analyses et découvertes ultérieures. Toutefois, le partage des données soulève d'intéressantes questions déontologiques sur la réutilisation des données de la recherche avec des sujets humains. Au Canada, l'Énoncé de politique des trois Conseils (EPTC) pose en matière d'éthique un certain nombre de principes de recherche avec les êtres humains, à savoir : le respect de la dignité humaine, le respect du consentement libre et éclairé, le respect des personnes vulnérables, le respect de la vie privée et des renseignements personnels, l'équilibre des avantages et des inconvénients, la réduction des inconvénients et l'optimalisation des avantages. Les principaux principes éthiques à considérer lors de la préparation des données à archiver sont le consentement éclairé et la protection de la vie privée et des renseignements personnels, surtout en ce qui a trait à l'entreposage, à la sécurité et aux modalités d'accès. Les chercheurs qui se proposent de partager leurs données doivent en prévoir l'archivage dès l'ébauche de leur projet. Les programmes d'enseignement et de formation en recherche, y compris ceux des deuxième et troisième cycles, doivent évoluer de façon à rendre l'archivage automatique et à acquérir la capacité nécessaire pour développer une culture du partage des données. Lorsqu'il faut recourir au partage, la seule voie déontologique à suivre consiste à situer les données dans le prolongement de la personne qui les a contribuées et à leur accorder le même respect lors des analyses primaires et secondaires.

Key words: research ethics, ethical review, ethics committees, secondary analysis, data archiving, data sharing, dental hygiene research

At a meeting in Paris on 30 January 2004, the governments of Canada and of thirty-three other countries adopted a *Declaration on Access to Research Data from Public Funding*.[1] These countries declared their commitment to establishing access for digital research data obtained through public funding, and invited the Organization for Economic Co-operation and Development (OECD) to develop a set of guidelines to facilitate cost effective access to this data. The Social Sciences and Humanities Research Council of Canada (SSHRC) has had, for some time, a research data archiving policy in place that requires recipients of SSHRC funds to archive all final research data collected and to make it available to other researchers within a reasonable period of time.[2] The National Institutes of Health (NIH) in the US adopted a similar policy for recipients of grants over $500,000.[3] This policy applies to data from research involving humans and laboratory research that does not involve humans. The purpose of both policies is to further contribute to the advancement of knowledge, to openness in scientific inquiry, to the testing of new and alternative hypotheses and methods of analysis, and to opportunities to further analyse, replicate, verify and refine research findings.[2-4] These policies have been developed from the perspective that data obtained with public funds belongs in the public domain.

Data sharing may also help prevent scientific fraud and misrepresentation of results through re-analysis of data and accompanying documentation. One of Canada's most serious cases of suspected scientific fraud[5], in which the researcher was alleged to have falsified data, may not have escaped detection for as long as it did had data sharing been a more common practice.

The National Consultation on Access to Scientific Research Data (NCASRD) identified a need for a national data archiving strategy in Canada out of concern for the potential for loss of data due to storage media degradation, media and metadata loss, software and hardware obsolescence,

A portion of this content was presented by SJ Cobban and EM Edgington at the International Symposium on Dental Hygiene, Toronto, 2007.
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Submitted 27 May 2008; Revised 11 July 2008; Accepted 14 July 2008
This is a peer-reviewed article.
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and time and costs required for migration.[1,6] Participants at the NCASRD expressed considerable concern about the loss of data, both as national assets and as longitudinal baselines for measuring changes over time. Fielding[7] has pointed out the increased use of computers to store data locally, and of computer software to analyze both qualitative and quantitative data, would suggest that data is more readily available for electronic archiving than in previous decades. One challenge is that many researchers lack knowledge about how to prepare their data properly and to document for archiving for future use by others.[8] Education and training programs that prepare researchers, including graduate and post-graduate programs, will need to evolve such that this preparation becomes automatic in order to build the necessary capacity for a culture of data sharing.

Professional organizations also support data sharing. The American Psychological Association, in its *Ethical Standards for the Reporting and Publishing of Scientific Information*, indicates that, subject to protection of confidentiality and legal rights concerning proprietary data, data sharing with other competent professionals is encouraged.[9] Given that a concern expressed in dental hygiene literature is the shortage of dental hygiene researchers and research funding, and a corresponding shortage of dental hygiene research, data sharing may hold some promise for helping address these issues.[10-13] While data sharing provides a pragmatic approach to the advancement of knowledge, it also raises some interesting ethical questions around the re-use of data obtained from human subjects for research purposes. These questions relate to protection of privacy and confidentiality of research subjects, informed consent for secondary analysis, and the role of Research Ethics Boards (REBs) in reviewing proposals for secondary analysis of archived data.

The Tri-Council Policy Statement (TCPS) provides guidance for addressing ethical questions that arise in connection with the use of human subjects in research in Canada.[14] The Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council of Canada (NSERC), and SSHRC collaborated to develop this policy statement to provide standards and procedures for ethical conduct of research involving humans and funded by each of these three agencies. This policy statement is based on the moral imperative of respect for human dignity. This moral imperative corresponds to a number of ethical principles in research, including respect for human dignity, respect for free and informed consent, respect for vulnerable persons, respect for privacy and confidentiality, respect for justice and inclusiveness, balancing harms and benefits, minimizing harm, and maximizing benefits. These principles form the framework for this examination of ethical issues to be considered when archiving research data for the purpose of future data sharing.

Data sharing has been defined to include a range of sharing, from provision of a copy of the data set by the primary investigator, to placing the data set in a data enclave or depository for the purpose of secondary analysis.[3,4] Secondary analysis refers to the use of research data gathered in a previous study by other researchers, generally to answer a further question or test new hypotheses beyond that of the original study.[15] Secondary use is considered to be the use of records collected for a purpose other than the research itself, such as the use of administrative or health records, for a secondary purpose such as health research.[14] An extended discussion of the ethical implications of secondary use of information that had been gathered for another purpose, for research purposes is beyond the scope of this paper. Rather, this paper will focus on identifying ethical considerations that may arise during planning and implementing data sharing practices, and will propose mechanisms to address these issues.

Tri-Council Policy Statement ethical principles and related data sharing considerations

The TCPS considers humans who provide the data, in one way or another for a research study, to be research "subjects". The TCPS indicates the term "participants" is not suitable because many others, including researchers and administrators, could also be considered participants but these others do not bear any of the risks associated with the research.[14] In this paper, the term "subjects" is used to describe humans about whom the research study is designed, and from whom the research data is obtained, following the TCPS definition. Each of the ethical principles and its inherent issues related to data sharing will be examined.

Respect for human dignity

This principle protects the many interests of the human subject participating in the research, including their bodily, psychological, and cultural integrity.[14] An ethical perspective would see the data provided by human subjects as an extension of the human subjects themselves, and that the data would merit the same respect as would the person. Keeping this perspective in mind, practices of data sharing would want to ensure that data contributed by human subjects are afforded the same protection in subsequent research studies as provided in the original research.

One way to contribute to this form of assurance would be to require an agent, such as an REB, to oversee these interests, such as through review of a plan for how the data will be used, and how the integrity of the human subjects will be protected. A proportionate approach to current processes for research ethics review by REBs can provide this form of assurance when applied to the secondary analysis of archived data. In a proportionate approach the level of the ethical review is proportionate to the vulnerability of the subjects and the level of risk to which subjects will be exposed. A proportionate approach delegates review of proposals that have potential for negligible harm to the population in the archived data set, to an appropriately prepared review body such as a committee of the REB, with an REB providing oversight. This provides both protection and assurance for contributors of research data, while reducing the burden on REBs.

Respect for free and informed consent

This principle is based on the presumption that human subjects have the right and capacity to make decisions for themselves, in this case about whether to participate in the research study or not. Consent is expected to be volun-

tarily given, generally based upon an understanding of the purpose of the research, how the data will be collected and used, and a description of any potential for harm. O'Neill[16] suggests the ethical importance of free and informed consent is that it provides assurance that the subject has not been deceived or coerced. When capacity for consent is in question, an appropriately authorized third party may consent on behalf of the individual.

This principle raises a number of questions for the practice of data sharing. At the time of obtaining consent, ethical practices are to provide as much information about the research and use of the data as possible in order that research subjects understand the use of their information and consent to that use. Given the inherent nature of secondary analysis, it is nearly impossible to determine potential research questions or designs that may be proposed by those planning secondary analysis years later. The moral imperative of research ethics is to protect human dignity, and as such REBs serve to protect the interests of human subjects who participate in research projects. In the case where archived research data is being accessed for secondary analysis, an REB could serve to protect the interests of the human subjects whose data is being accessed. This assurance can be provided to individuals at the time of original data collection and REB review required prior to any accessing of archived data by qualified researchers. The CIHR recommends that the researcher(s) collecting the original data "…reassure research participants and REBs that although future research purposes are not specified in detail, data management, storage and use will occur within a defined framework, including review and approval by an REB."[17] This can provide individual human subjects with assurance that their contributions are valued, and their data as an extension of themselves will be accorded respect and requests for its future use will undergo rigorous scrutiny through the REB process.

Respect for vulnerable persons

Those who have diminished competence or decision-making capacity may be considered vulnerable, and this principle accords a higher ethical obligation to their protection. REBs have an obligation to provide greater vigilance when ensuring that these vulnerable subjects are protected during the conduct of the research study.

Interestingly, data sharing provides a measure of protection for vulnerable populations by reducing respondent burden for participation by sharing and reusing the data repeatedly.[4] Children, the institutionalized, the elderly, and other special populations need to be protected from exploitation, and may find participation in research to be exhausting emotionally and physically. Data sharing can also reduce the burden on exploited groups such as Aboriginal populations, and mechanisms for access to data for secondary analysis can involve representatives from the Aboriginal community to participate in decisions about conditions of access. An REB can protect the integrity of re-use of their data contributions through its review and approval processes.

Respect for privacy and confidentiality

This principle respects human dignity by providing standards to protect privacy and confidentiality around the access, control and dissemination of personal information. REBs operationalize this by determining the need for various types of personal information in order to accomplish research objectives, and by placing limits on the collection of identifying information. Further, subjects need to be informed of measures that will be taken to protect the privacy, confidentiality, and security of their data. The perspective of recognizing the data contributed by an individual to be an extension of that person provides guidance for treatment of archived data. This data must be approached with the same privacy and confidentiality in a secondary investigation as the subjects themselves in the primary investigation. The best protection is provided by ensuring adequate provision for privacy and confidentiality around storage and access requirements.

A possible issue arises in archiving if verbal promises regarding confidentiality are made to research subjects by primary investigators but are not recorded within the documentation included with the data. Researchers accessing archived data from depositories would be ethically bound to respect such promises, but without documentation of this information it is difficult for these researchers to be aware of and implement appropriate practices. It is preferable during the original study that all such verbal exchanges of information are recorded, and that all documents associated with the study be archived along with the data as audit documentation.

Respect for justice and inclusiveness

This principle refers to fairness and equity, including fairness in the review of research as well as fairness in the distribution of benefits and burdens of research. It also ensures the vulnerable are not exploited for the advancement of knowledge.[14] This principle imposes responsibilities to neither neglect nor discriminate against individuals who may benefit from research. Ceci and Walker[18] suggest that public funding for research is intended to benefit the health and welfare of the public, not to advance the personal research careers of the investigators. A proportionate, or less onerous, approach to ethics review of proposals for secondary analysis of archived data contributes to fairness in the review of research. Data sharing also makes accessible non reproducible research, such as cross sectional studies at a point in time that will not occur again, but can serve as useful baseline data.

Balancing benefits and harms

It is the responsibility of researchers and REBs to balance benefits and harms of the proposed research for subjects. Since secondary analysis involves no therapeutic intervention, the potential for benefit on a personal level is limited, yet the benefit for the good of society is great through an advancement of knowledge. The potential for harm to an individual would be most likely to occur through identification of the individual, which can be protected through anonymization within archives or by the primary investigator prior to release, providing very little potential for harm.[16] Data sharing provides for a good balance of increased benefit and reduced risk.

Maximizing benefit

Maximizing benefit corresponds to the ethical principle of beneficence, which manifests in research as a duty to benefit subjects, including society in general. Data sharing inherently provides maximum benefits to society by continuing to advance knowledge without requiring further burden on research subjects, and when data are anonymized within archives or by the primary investigator prior to release, providing very little potential for harm. Data sharing also achieves maximum return on funding for research from public monies, a bonus in a climate where there are more applicants than funding available.

Minimizing harm

Minimizing harm corresponds to the ethical principle of non maleficence. Typically minimizing harm in research is accomplished through the use of the smallest number of research subjects and the smallest number of treatments for these subjects. Data sharing can contribute to minimizing harm by reducing respondent burden. This is particularly important for vulnerable populations and for unique data that cannot readily be replicated.[3,4] Harm in secondary analysis could occur through identification of people or places used in the primary research investigation. Steps for anonymization need to be implemented at the time of preparation of the data for archiving to eliminate this possibility.

Ethical considerations in data preparation for archiving

Data may be shared by the primary investigator, in data enclaves, or in data repositories. The principal investigator may provide a copy of the data to prospective researchers planning secondary analysis, and may specify conditions for security and use. A data enclave is a "controlled, secure environment in which eligible researchers can perform analyses using restricted data resources."[3] A data depository preserves, manages and makes accessible digital information acquired through research, with the aim of generating new knowledge. This process "provides stewardship for those outputs of research that exist between raw research materials and published results."[19]

Some concerns about data sharing identified during a national consultation in Canada were that some researchers with no experience in data sharing had feelings of ownership of their data and a reluctance to share. Others expressed "concerns about losing control of the research potential of their data – their fear of getting scooped by other researchers who find and use deposited data."[19] Another concern expressed was the lack of capacity among researchers to prepare their data for archiving, and for the time and costs of this activity, suggesting that it would be necessary for granting agencies to recognize this as a legitimate cost of doing research. Researchers who are planning to share their data "should think carefully about the study design, the informed consent documents, and the structure of the resulting data set prior to the initiation of the study."[3] The main ethical principles that need to be addressed in preparing data for archiving are protection of privacy and confidentiality, and informed consent.

Protection of privacy and confidentiality

Protection of privacy and confidentiality can be addressed in a number of ways—through the removal of identifying information through anonymization, by technological security measures applied to the data set such as encryption or scrambling of data, by controlling and restricting access to both the storage site or data enclave and the data set, and by requiring proportional REB review of proposals for secondary analysis of a given data set. The NIH Data Sharing Workbook[20] includes recommendations for de-identification of data sets, such as removing any identifying information, including geographic and biometric identifiers, and further implementing additional measures to protect identities in small or rare populations. The more sensitive the data set, the greater the need for security and anonymization measures during preparation for archiving and accessibility by other researchers. Primary investigators placing their data set in an enclave or depository can specify restrictions on access and use at the time of deposit. Requirements for proportionate review by an REB can provide further protection for research subjects who have contributed to a data set that will be archived.

The Interagency Advisory Panel on Research Ethics, also known as the ProGroup, recommends a proportionate approach to research ethics review based on characteristics of individual proposals.[21] A discussion paper prepared by this group notes, "To protect research subjects, institutions through their REBs must require ethics review of activities involving humans or their data when those activities have a component of research." Given that a research data set contains data from humans, and secondary analysis would inherently consist of activities having components of research, it follows that proposals for secondary analysis of archived research data sets should undergo ethics review. Determining the type of review process necessary, whether full REB review or a delegated or expedited review, is dependent on the vulnerability of the subjects and the probability and magnitude of any potential harm to subjects. Potential harm includes physical, emotional or psychological, social, financial, intrusion on privacy, loss of trust, or negative impact of research results. Assessment of risk also includes assessing the vulnerability of the research subjects, particularly vulnerability within the given circumstances, including influencing factors such as age, wellness, and power relationships, among others. A proportionate approach would see proposals for review of research that have negligible vulnerability and negligible risk of harms, such as secondary analysis of a properly prepared and archived data set, being eligible for review by a delegated authority of the REB while the REB maintains oversight. See Figure 1 for an illustration of the concept of proportionate review. Proportionate review approaches can also reduce the burden on REBs through delegation of lower risk proposals such as secondary analysis of properly archived data. Given that data sharing inherently minimizes risk through anonymization and reduction of respondent burden, including risk to vulnerable populations, delegated review can meet needs for protection of subjects from harm in future research projects conducted through data sharing.

One question that has arisen in the literature is whether anonymization should be the automatic default position in preparing data for archiving, and whether people may wish to recognized for their contribution.[22] This is something primary investigators need to consider in their original research design, as part of their archiving plans, prior to obtaining consent. Discussions about anonymization for secondary analysis should take place at the time of collecting initial consent, while recognizing that certain populations may not desire to be anonymized or "invisible", especially in qualitative studies.

Informed consent

The ethical principle of informed consent to participate in research is based on the concept that subjects understand the research study and understand how their data will be collected and used in the study. This understanding cannot readily occur during secondary analysis of archived data, as anonymization would prevent access to identifying data for obtaining further consent. Even when there is potential for linking research records to identities, CIHR, in their *Best Practices for Protecting Privacy in Health Research*, suggest that recontacting individuals to seek consent at the time of secondary analysis may be inappropriate and unethical, as it would require identifying information, and poses a risk of harm, psychological or social, to the individual.[17] This document notes that all possible future uses of the data could not be anticipated, but that some possible uses could be described to subjects. These best practices further suggested a need to indicate to research subjects that future "data management, storage and use ..[would].. occur within a defined framework, including review and approval by an REB." Knowledge of these planned practices could assist the research subject in consenting to the use of their data for the current research project, and to the storage of their data and future use under circumstances that would receive oversight from an REB. While this still leaves the research subject in a position of not being exactly "fully informed" of all future uses of their data contributions, Corti, Day, and Backhouse[23] have questioned whether research subjects can ever fully understand the research study and use of their data. The onus is on the researcher to provide the best information to the prospective research subject, and to adequately prepare the data set for archiving.

A properly prepared data set to be placed on deposit would include copies of all consent and information letters, as well as any audit documents that may include information about discussions with subjects regarding consent. Individual records may be withheld from the data set if they cannot be adequately anonymized or if the subject does not consent to deposit for data sharing. Information about the existence of such records, and their potential impact on the data set for future analyses, would be included with the documentation on archive. Information about these processes would be included in any applications for ethics review for secondary analysis of the data set, and in publications resulting from the secondary analysis.

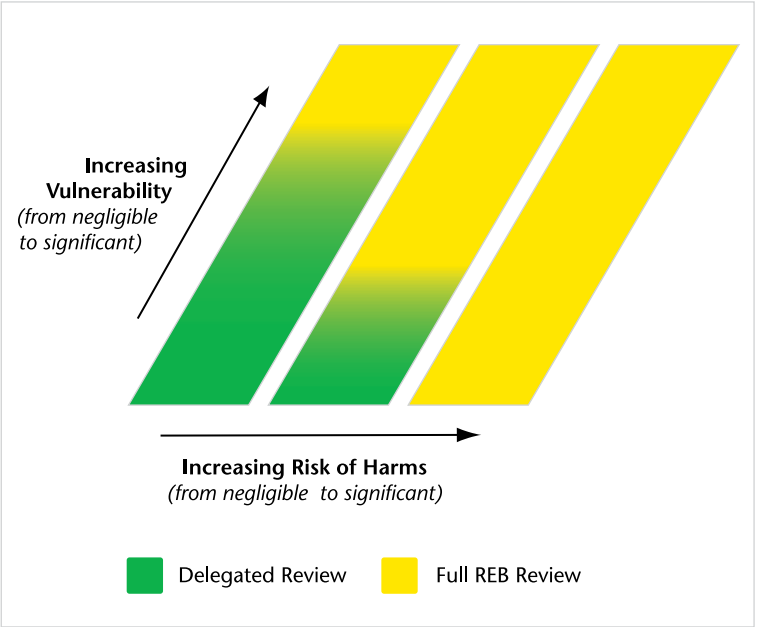

Figure 1. Concept of proportionate review for research requiring ethics review. Modified from the Working Committee on Procedural Issues for the TCPS (ProGroup) Interagency Advisory Panel on Research Ethics: *Refinements to the Proportionate Approach to Research Ethics Review in the TCPS*,[20] to illustrate delegated review for secondary analysis of properly archived data sets.

The use of oversight, such as proportionate review, is an important consideration, given that the literature is not clear on the use of personal data without specific consent, how participants feel about it, and how they feel about others making these decisions on their behalf.[24] While privacy laws provide a measure of protection for individuals, some researchers worry about restrictions on access to valuable sources of data, and contributions to society that derive from such research.[25] Given that there is so little research in this area, there is a need to study attitudes of research participants to determine their feelings about storage and repeated use of their data and what forms of consent and oversight can meet their needs.

Conclusions

Data archiving and sharing can contribute to the advancement of knowledge by making available sets of data for further analyses and discovery. Data sharing also has the potential to make maximum use of public funding for research, by making the data accessible to many researchers over time, including as baseline data for future studies on a given population. Data sharing can reduce respondent burden, particularly for vulnerable or exploited populations.

Steps can be taken to minimize potential harm to research subjects through anonymization of data and restricting access to the archived data set. Oversight measures, such as proportionate ethics review, can further protect the data contributed by research subjects. Subjects should be provided with information to help them understand that their data may form part of a data set proposed for future use, and that an oversight ethics review process will be implemented prior to any future use.

This oversight process can help ensure that plans for secondary analysis and publication approach the data from

the ethical and respectful perspective that the data are an extension of the human subjects who contributed it. The same ethical perspective that influenced the primary investigation can be extended to the secondary investigation.

Data sharing can make a valuable contribution to advancement of knowledge, and with adequate attention to ethical considerations, can enhance the value public and private research agencies receive for their funding, and the value of the contributions by research subjects. Given these points, it could be argued that data sharing is the ethical thing to do. The nearly ubiquitous use of software for collection and storage of data electronically makes movement to a culture of data sharing very timely. Further study is needed to better understand how research subjects feel about the storage and re-use of their data, and mechanisms for consent that they feel are adequate.

Acknowledgement

The authors would like to thank and acknowledge Dr. Glenn Griener for his advice and contributions to an earlier version of this paper. They would also like to thank Nigel Brachi for his preparation of the graphic depicting the concept of proportionate ethics review.

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Chemotherapy: Considerations for dental hygienists

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ABSTRACT

The incidence and mortality of cancer are on the rise in Canada. Chemotherapy is a highly aggressive, systemic cancer treatment that is used solely, or in conjunction with other modalities such as surgery or radiation. Its purpose is to cure a cancer, provide symptomatic relief or palliative comfort, and improve quality of life. Consequently, clinically practising dental hygienists can reasonably expect that they will provide care, at some time, to clients who have had cancer or are undergoing treatment for the disease. As primary oral healthcare providers, dental hygienists are responsible for providing comprehensive, safe, and effective care for a variety of healthy and medically compromised people. Oral and medical side effects, as well as psychosocial issues affecting clients undergoing chemotherapy will have an impact on the assessment, diagnosis, planning, and implementation of dental hygiene care. Information provided by an intraoral assessment, review of the medical history, consultation with physicians, oncologists and dentists, and listening to the client, will enable dental hygienists recognize some of the oral complications of chemotherapy and provide helpful home care advice.

RÉSUMÉ

L'incidence et la mortalité dues au cancer augmentent au Canada. La chimiothérapie est un traitement très agressif du cancer généralisé, qui est administré seul ou conjointement avec d'autres modalités, telles la chirurgie ou la radiothérapie. Elle a pour objectif de guérir un cancer, de soulager des symptômes ou apporter un soutien palliatif et d'améliorer ainsi la qualité de vie. En conséquence, les hygiénistes dentaires qui exercent en clinique peuvent raisonnablement s'attendre à prodiguer parfois des soins à des patients atteints de cancer ou recevant des traitements pour la maladie. Dispensatrices de soins buccodentaires primaires, les hygiénistes dentaires se doivent de prodiguer des soins complets, sécuritaires et efficaces à divers clients. Les effets secondaires sur les plans buccal et médical ainsi que les problèmes psychosociaux affectant les patients sous traitement chimiothérapique auront un impact sur l'évaluation, le diagnostic, la planification et la prestation des soins en hygiène dentaire. L'information fournie par l'évaluation intra-buccale, l'examen des antécédents médicaux, la consultation avec le médecin, l'oncologiste et le dentiste ainsi que l'écoute du patient permettront à l'hygiéniste dentaire de reconnaître certaines des complications buccales de la chimiothérapie et de conseiller les patients sur les soins à appliquer à la maison pour pallier aux symptômes.

Keywords: chemotherapy; oral complications; medical side-effects; psychosocial considerations; dental hygienist; oral care

INTRODUCTION

Cancer is a cellular disease.[1] Chemotherapy is the systemic chemical treatment of cancer; it involves using a drug or combination of drugs to kill, slow, or stop cancer cells from multiplying or metastasizing.[2] Goals of chemotherapy include destroying cancer, shrinking the tumour prior to adjunctive surgical or radiation treatment, destroying remaining cancer cells following surgery or radiation treatment, or both.[3] Although chemotherapeutic agents attack rapidly-dividing cancerous cells, they also damage healthy cells and tissue, including the highly sensitive oral mucosal lining and bone marrow, causing numerous temporary and potentially permanent side effects.[2,4] The incidence of oral complications in adults undergoing chemotherapy averages 40 per cent,[5,6] with a range of 12%-80% of patients affected.[7,8] Incidence and severity of complications are often dependent on the degree of stomatotoxicity and myelosuppression caused by the various chemotherapeutic agents.[9,10]

Roles of primary oral healthcare providers

A clean, healthy oral environment can substantially reduce the oral and systemic side effects and complications of chemotherapy.[11] Consequently, the oral healthcare team collaborates with the client and their multidisciplinary medical team to obtain optimal results of medical treatment with minimal side effects. Goals and objectives fall into two broad categories: 1) Assessment, diagnosis, treatment and management (including eradication or stabilization) of existing oral diseases (including caries, apical and periodontal infections) and oral complications secondary to chemotherapy.[8,11-13] 2) Education of clients, their families and their caregivers regarding the importance of optimal oral health, effective self-care strategies prior to, during and following cancer treatment, and possible short- and long-term side effects.[8,11-13]

Central venous lines

Chemotherapy drugs may be administered in a variety of ways. Although oral delivery causes the least disruption of normal daily activities, it does require a high degree of patient compliance.[14] Chemotherapeutic agents given by injection requiring the patient to visit a medical clinic or a physician's office will also cause minimal interruption to daily life. A third way of administering chemotherapy is via a *central venous line*.

A central venous line – also referred to as a 'Hickman'® line, peripherally inserted central catheter (PICC line), or 'Port-a-Cath'®[14] – is a catheter inserted into a large vein (often the subclavian vein just inferior to the clavicle).[15] Central venous lines are used to administer chemotherapy drugs and withdraw blood for analysis. Dental hygienists need to be aware that clients, who are preparing for or un-

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Resubmitted: 12 May 2008. Revised 29 June 2008. Accepted 18 July 2008.
This is a peer reviewed article.
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dergoing chemotherapy, may have a central venous line or catheter inserted. These catheters are susceptible to blood borne infections, and although there is little scientific evidence showing a direct causal link between oral bacteria introduced systemically via invasive dental procedures and the infection of central lines,[8,12] literature indicates that infected lines are frequently colonized by *Staphylococcus aureus* and *Staphylococcus epidermidis*.[16] Because these pathogens are commonly found in the oral cavity[17,18] as well as within periodontal pockets,[18,19] the mouth may be considered a portal of entry for the systemic infection of these microorganisms.[19] Consequently, it is frequently recommended that people with central venous lines be prescribed prophylactic antibiotic coverage as outlined by the American Heart Association (AHA) prior to invasive dental or dental hygiene treatment.[8,11-13]

Oral complications of chemotherapy

Oral complications related to chemotherapy are complex and multifaceted.[8,20] Primarily, the stomatotoxicity of the treatment regimen causes direct injury to oral mucosa. Secondarily, oral complications arise from indirect toxicities, including those caused by myelosuppression (i.e., suppression of the bone marrow's ability to produce immune cells such as neutrophils, considered one of the body's primary defenses against harmful bacteria).[9,21-23] Myelosuppression can interfere with normal healing processes and inhibit the control of infections.[7-9,21] Oral complications may include mucositis, infection, bleeding, xerostomia, dysguesia (impaired taste), dysphagia (difficulty swallowing) and neurotoxicity (pain).[8,9]

Oral mucositis

Healthy oral epithelial tissues turn over every 7-16 days.[6,8,24] Because chemotherapy agents affect rapidly dividing cells,[4] ulcerative mucosal changes appear approximately 4-14 days following initiation of stomatotoxic chemotherapy.[8,25,26] Inflammation and severe ulceration of oral mucosal tissues that occur secondary to cancer therapy is known as oral mucositis,[4,9,25,27] an acute side effect.[25] Variables affecting its severity may include the patient's medical diagnosis, age, level of oral health, type and dose of cytotoxic agent used, and the frequency and duration of treatment.[7,9] For example, patients with hematological neoplasms, or who are undergoing bone marrow transplantation, are more likely to develop severe mucositis than patients receiving treatment for solid tumours.[9] This relationship is likely due to the disease process itself, the immunosuppressive nature of the drug therapy, the cytotoxic dosage and frequency of administration.[7,9,25,28] Furthermore, because the ulcerations associated with mucositis may become entry portals for bacterial, fungal and viral microorganisms, the risk of developing septicemia is a very serious concern.[7,8,25,26,28] Patients with oral mucositis often experience unrelenting pain[27] that may be accompanied by an inability to take any nutritional substances by mouth, contributing to nutritional deficiencies and dehydration.[7,25,29] Oral mucositis has often been described as the most significant and debilitating complication associated with chemotherapy; it may affect overall quality of life.[9,11,26,29,30] Consequently, because patients may not be able to tolerate side effects accompanying optimal therapeutic doses of chemotherapy, oral mucositis is often considered a dose limiting factor of effective cytotoxic cancer therapy,[7,9,25,29,31] possibly affecting treatment outcomes.[5,9]

Although the role of oral micro organisms in the development and resolution of mucositis is not fully understood,[25,29] it is theorized that myelosuppressed patients are predisposed to oral infections that may prolong or aggravate the course of mucositis.[29] Altered oral flora, gram-negative bacteria and related endotoxins, potent inflammatory propagators,[29] and Herpes Simplex Virus (HSV)[9,25] may all influence the development and severity of oral mucositis.[29] Outcomes of research studying the effect of oral care in the prevention and reduction of mucositis are contradictory;[25,29-32] however, investigators from multi-disciplinary teams suggest that optimal oral care prior to chemotherapy, including treatment of dental caries, periodontal disease and periapical infection,[25,29] will minimize the pathological effects of oral microflora, thereby preventing or diminishing discomfort and risk of systemic sequelae associated with oral mucositis.[29,33]

The treatment and management of mucositis has been extensively studied,[9,25,29] however, most research has focused on palliation of symptoms.[30] Although treatment options have also been investigated, there are currently conflicting reports regarding the effectiveness of the various modalities.[25] Management strategies may include effective oral care (both professional and self-care), infection prevention, anti-inflammatory agents, cryotherapy (i.e., sucking on ice chips),[27] laser therapy and treatment with such protein based growth factors as Paliferimin.[34] Paliferimin is a modified laboratory manufactured version of the keratinocyte growth factor (KGF), a human growth protein approved by the FDA,[34] and recommended by the Multinational Association of Supportive Care in Cancer (MASCC) and the International Society for Oral Oncology (ISOO) to prevent or reduce the severity of oral mucositis resulting from high dose chemotherapy.[34,35]

As professionals dedicated to the promotion of oral and overall health, dental hygienists play an integral role in the management of chemotherapy-induced oral mucositis. Dental hygienists help people in the preparatory stages of chemotherapy, during active treatment and post-treatment. Their responsibilities are both clinical and educational in nature. There is little scientific evidence to support that optimal oral self care is necessary for the *prevention* of oral mucositis. However, caries prevention, the treatment and control of periodontal disease,[29] nutritional counselling, and self care education[33,36] have all been determined to be beneficial in the successful management of mucositis. The removal of calculus and subgingival biofilm has been shown to help optimize oral health by minimizing the oral complications of chemotherapy including mucositis, bleeding, local and systemic infection and pain.[24]

The Mucositis Study Group Guidelines Panel[36] (a group that included dental hygienists) of the MASCC/ISOO stated that basic oral care is part of the foundation of supportive care for patients receiving cancer treatment. Consequently, clients undergoing chemotherapy are advised to attain and maintain optimal oral health despite the limited scientific evidence to support the need to do so.[5,8,29,37] The goal of

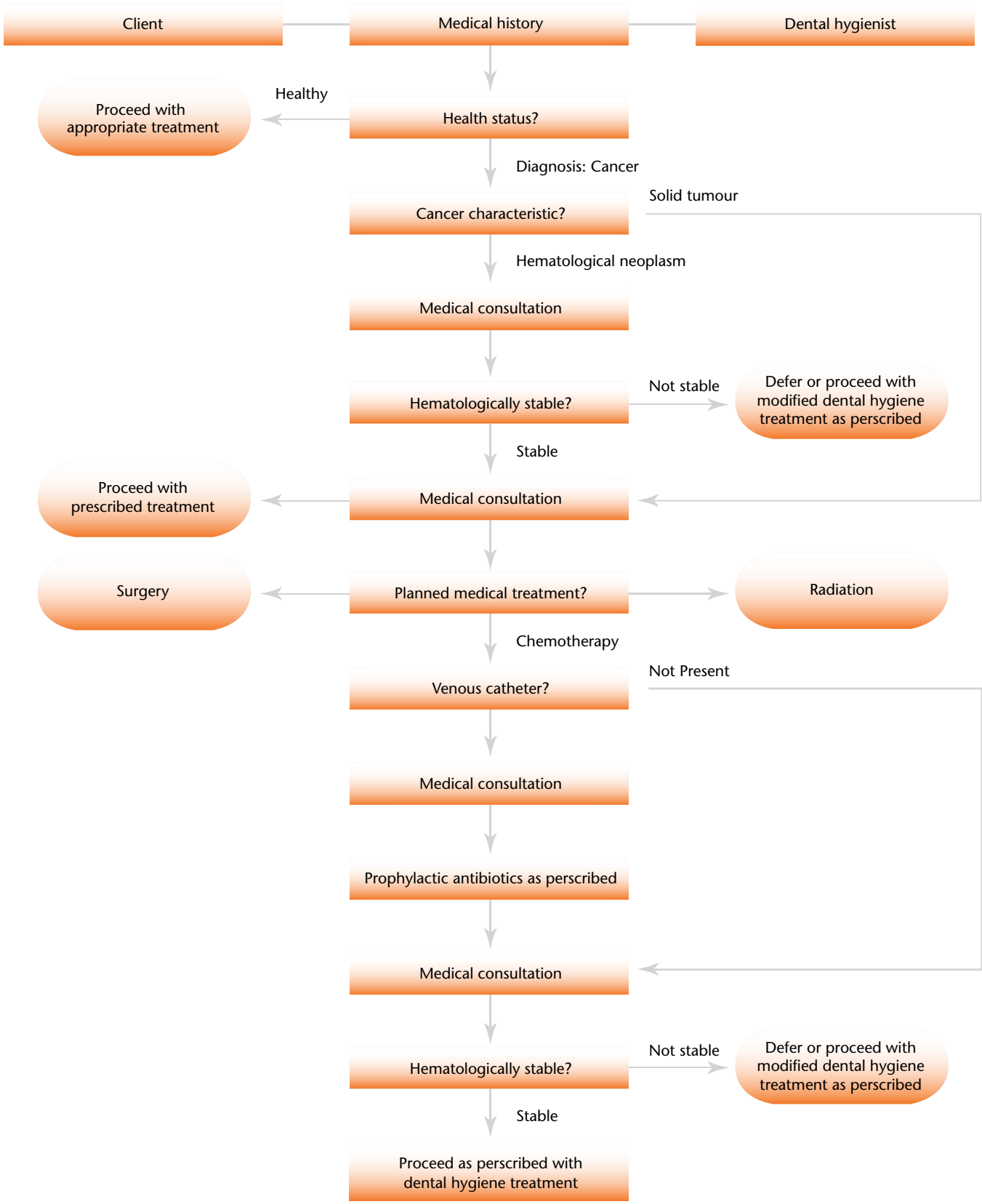

Figure 1: Consultative process for the provision of safe dental hygiene care.
One or more discussions with healthcare team members may be required during the consultative process.

basic oral care is to minimize the influence of microbial flora on oral mucosa and subsequently minimize resulting sequelae such as systemic infection and oral pain.[33] As suggested by McGuire et al. (2006) and the Basic Oral Care Group of the MASCC,[33] basic oral care includes brushing (with regular replacement of toothbrushes), flossing, rinsing with bland solutions (such as sodium bicarbonate and water) and using mouth moisturizers. Because severity of mucositis increases with high dose chemotherapy or increased duration of treatment,[8] dental hygienists in their role as clinicians and educators have a responsibility to help clients reduce the discomfort and the oral side effects associated with chemotherapy.

Hematological considerations

As noted, many chemotherapeutic protocols are myelosuppressive in nature, causing patients to become neutropenic and thrombocytopenic, thereby increasing their risk for infection and hemorrhage.[38] Normally, chemotherapy is administered in cycles or phases,[12,13] and several cycles are often required to achieve optimal treatment goals. The timing of medically necessary dental and dental hygiene treatment is crucial, completing dental care prior to chemotherapy is recommended.[13] Approximately 5-7 days after beginning a cycle of chemotherapy, blood counts (including red cells, white cells, and platelets) begin to fall and continue to fall until approximately day 14-21. At that time they begin to recover, reaching normal levels in the few days prior to the start of the next cycle.[12,13] If dental or dental hygiene treatment is not completed prior to the initiation of chemotherapy, it is recommended that medically necessary or emergency treatment (i.e., in case of pain, infection, swelling or any combination) be carried out when the patient is hematologically stable just prior to the start of a cycle.[13] Determining hematological stability and safety to provide dental hygiene treatment is a collaborative process between dental hygienists, oncologists, family physicians, primary care nurses and dentists.[13] A complete blood count (CBC), ordered by the patient's oncologist or family physician, and used as an interpretive tool will ensure the dental hygienist is aware of any necessary treatment precautions. See Figure 1.

Infection

Infection is a very serious complication of chemotherapy. Because of the lack of neutrophils caused by myelosuppression, neutropenic patients may not display classic signs and symptoms of inflammation and infection.[11,19] It is hypothesized that periodontal infections may not be detected visually because deeper areas of the periodontium may be involved.[19] Therefore, systemic sepsis may result from unrecognized, and subsequently undiagnosed, infections with periodontal foci.[19,39] It has been suggested that culturing possible areas of oral infection may be advisable if patients become febrile and the origin of infection is not known.[13] Although the degree to which subgingival microflora contributes to systemic infection is largely unknown, it is likely underestimated.[19] Further, there is evidence linking pre-existing gingivitis and periodontitis to fever.[19,39] Research shows that people with severe periodontal disease develop an increased number of fevers – typically an indicator of systemic infection – over those with a healthy periodontal status.[19,39]

In addition, neutropenia (or neutropenic dysfunction) may not only predispose a patient to infection, it may also contribute to extreme periodontal breakdown.[40] Because typical signs and symptoms of periodontal disease may be decreased, masked or absent in immunosuppressed clients,[11-13] an accurate assessment of periodontal health cannot be made without taking the underlying medical condition and hematological status into consideration. Therefore, it is insufficient to consider the appearance of the gingivae as an indicator of periodontal health or disease.[19] Consequently, a comprehensive periodontal assessment – including measurement of clinical attachment levels and radiographic interpretation[19] – for all clients is required in order to accurately diagnose periodontal status.

When treating a client undergoing chemotherapy, the 'absolute neutrophil count' (i.e., the actual number of neutrophils present in circulating blood) is a medical consideration that will have a direct impact on the safe provision of dental hygiene care. Although recommendations vary, it is suggested that prophylactic antibiotic coverage (AHA guidelines) be prescribed if the neutrophil count is between 1,000/mm^3 and 2,000/mm^3. Alternatively, it has been suggested that a neutrophil count above 1,000/mm^3 requires no antibiotics. If a neutrophil count is below 1,000/mm^3, deferral of elective dental and dental hygiene care is recommended.[8,13] In cases of medically necessary treatment or dental emergencies, alternative or more comprehensive antibiotic protocol may be necessary.[8,12] See Table 1. Consequently, consultation with the patient's oncologist is necessary to determine hematological status (blood cell counts and safety to proceed) related to disease process and myelosuppressive chemotherapy.

Hemorrhage

A client's potential risk of hemorrhage and bleeding emergencies resulting from thrombocytopenia (reduced platelets) is another potentially serious concern for dental hygienists.[38] To ensure that a patient's bone marrow is functioning adequately or has sufficiently recovered from a round of chemotherapy, dental hygienists should obtain a current platelet count [38] and clearance to proceed from the oncologist prior to initiating with dental hygiene treatment. Guidelines indicate there are no contraindications to invasive oral care if the platelet count is >75,000/mm^3. A platelet count <40,000/mm^3 – 75,000/mm^3 may require platelet transfusion, and if >40,000/mm^3, it is recommended that dental hygiene and dental care be deferred.[8,12] See Table 1. Because of the complexities involved in providing safe care to someone requiring a pre- or post-dental treatment blood transfusion, it would be appropriate to provide dental hygiene care in a hospital-based dental clinic. When thrombocytopenia or other clotting concerns, such as an elevated International Normalized Ratio (INR) which is the numeric value used to report blood coagulation, are evident scaling a 'test' site to observe bleeding response may help the dental hygienist determine whether or not it is safe to proceed. Spontaneous oozing[8] may occur if the platelet count is below 30,000mm^3, especially in the presence of pre-existing periodontal disease. Although patients

Consideration	Recommendation	Commentary
Clients with central venous catheters (i.e. Hickman®, Port-a-Cath® PICC Line).	• AHA prophylactic antibiotic recommendations.	• This precaution is often recommended in the absence of firm scientific support.
Hematological Variables		
May be related to disease process or medical treatment.		
Absolute Neutrophil Count		
>2,000/mm^3	• No special considerations necessary.	
1,000/mm^3–2,000/mm^3	• AHA prophylactic antibiotic protocol recommended.	• Consultation is recommended as clinical opinion and judgment may vary.
<1,000/mm^3	• Deferral if invasive dental/dental hygiene treatment. • Alternative or more comprehensive prophylactic antibiotics may be necessary.	• Consultation with the client's oncologist is crucial to determine any medically necessary invasive dental and dental hygiene treatment and appropriate antibiotic coverage.
Platelets **		
>75,000/mm^3	• No special precautions necessary.	• It may be prudent to scale a 'test site' and observe bleeding response.
40,000/mm^3 – 75,000/mm^3	• Locally applied techniques to maintain control of bleeding i.e. pressure, minimize trauma. • Platelet transfusion may be necessary.	• If transfusion is determined to be required, careful attention to co-ordination of treatment is needed. • It may be prudent for the client to receive treatment in a hospital dental clinic setting.
<40,000/mm^3	• Transfusion of platelets 1 hour prior to invasive treatment.	• Careful consideration to comfort level of clinician in providing DH treatment is crucial. • Providing DH care under these circumstances may be ill-advised in a private practice setting.

Table 1: Management guidelines for invasive dental and dental hygiene procedures* [8,13]

*These are only guidelines and are not intended to replace the consultative process. **Assumes all other clotting factors (i.e., INR) are within normal parameters.

may be directed to suspend oral home-care practices, it has been shown that minimal bleeding occurs during periods of thrombocytopenia if periodontal health has been attained and is maintained.[8]

In the event of an oral 'bleed', several strategies can be utilized to control it, including locally applied pressure, anti-fibrinolytic rinses and such systemic measures as platelet transfusions.[12,38,41]

Xerostomia

Approximately 40 per cent of people receiving chemotherapy will report xerostomia as a side effect of treatment.[8] Unlike xerostomia caused by head and neck radiation, chemotherapy induced dryness is usually temporary and resolves in 2-8 weeks following cessation of treatment.[8,20,42] Although more studies are needed to definitively identify the overall affects of chemotherapeutic agents on salivary gland function and oral health, [20] hyposalivation is reported to cause changes in oral pH, decrease mucosal lubrication, and alter oral flora [20,43] (including increases in levels of *Streptococcus mutans*).[20] Consequently, patients may experience difficulty in eating, swallowing and speaking, an increase in caries,[20,42,43] and a possible exacerbation of periodontal disease.[20,43] Further, difficulty maintaining optimal oral health is amplified by increased plaque levels and a decreased ability to clear food from the oral cavity.[8,20,43] When attempting to manage xerostomia, client education is paramount.[8] Discussing methods and products to minimize drying effects, exploring coping strategies, and providing oral home care information, may all help reduce the effects of xerostomia and improve comfort.[8] Topical application of neutral sodium fluoride has been recommended to reduce or reverse the effects of dental demineralization caused by the proliferation of cariogenic bacteria and an acidic oral environment often associated with xerostomia.[8,20,42,43] Palliation of symptoms may include sipping water, use of saliva substitutes and topical application of lubricating gels. Pilocarpine hydrochloride (Salagen), a drug therapy that has been used to stimulate saliva flow, also causes side effects such as sweating, increased urination with or without diarrhea[44] that may not be tolerable for some people.[43,44] Some mouth rinses may buffer pH (such as a solution of sodium bicarbonate and water) and reduce risk of infection caused by a change in flora (such as chlorhexidine).[45] Counselling clients to avoid foods that may damage fragile mucosa (such as highly spiced or hard/crusty foods) and substitute soft, bland foods that may be better tolerated may also help reduce xerostomia induced discomfort.[45]

Psychosocial considerations

In addition to coping with the physical side effects associated with cancer treatment, patients may experience numerous, and often serious, psychosocial issues.[46] Studies have shown that up to 94 per cent of patients believe that

issues pertaining to their cancer diagnosis and its treatment are emotionally distressing.[46] Distress attributable to chemotherapy treatment may centre on family and marital relationships, sexual relationships, financial concerns, and changes in activity levels (both generally and employment-related specifically).[46] According to the Canadian Cancer Society, the emotional effects of cancer may include denial, fear, panic, loneliness, sadness, and frustration, and are often accompanied by feelings of stress and anxiety.[47] Clients may become depressed or very angry. The release of emotion that manifests as anger may be directed toward many things or people, including health care providers. Consequently, when working with clients who appear unduly angry, dental hygienists need to be mindful that the anger may be linked to their disease and situation rather than directed towards the clinician personally.

By providing information pertaining to some of the obstacles and oral complications they may face and strategies to minimize them, dental hygienists are in a position to help clients alleviate some of the anxiety that often accompanies fear-provoking elements of their disease and medical treatment. Because clients often substantially underestimate the impact of potential side effects,[48] having sufficient information enhances their understanding and preparation, and enables them to provide informed consent for dental hygiene treatment.[49] However, although dental hygienists can certainly acknowledge client distress, show empathy for their situation, and help them with some coping strategies, the management or treatment of severely distressed, depressed or angry clients may be beyond our scope of practice. In these cases, it is appropriate to refer clients to other healthcare providers who are more qualified to address their emotional needs.

Open communication is a key to helping clients stay informed and knowledgeable. However, sometimes providing too much information can be overwhelming and can inhibit informed decision making.[49] Suggestions to facilitate communication include:

1. Ask clients to have someone accompany them to the dental hygiene appointment. The additional person may take notes during the discussion with the client or may think of additional points or questions.
2. Advise the clients to write down any questions (and subsequent answers), so they do not forget to discuss or ask about anything they believed was important. The client should be encouraged to ask questions.[50]
3. Involve the client and employ evidence-based decisions.[51] When a dental hygienist or a client has a question regarding the client's dental hygiene care, the dental hygienist should be prepared to research the literature and use critical thinking to evaluate the findings.[51-54] Discussing viable treatment options with clients will help them make decisions that align with their best interests and reflect their preferences.[49,51]

In addition to the emotional and physical distress experienced by people undergoing chemotherapy, the financial cost of cancer and cancer treatment are often significant, causing an additional and unexpected burden.[46,55,56] Even though provincial and federal health care sources and third party insurance plans may incur some of the costs, approximately 20 per cent of Canadians find the financial load problematic.[55] In Canada, indirect costs, such as lost production and employment income, have been shown to be considerably greater than those medical expenses incurred directly by the client.[55,57] Consequently, some clients may find it difficult to pay for the additional expenses associated with accessing dental and dental hygiene care. For some, the cost of being ill can seem overwhelming. Referral to an education setting, such as a dental or dental hygiene school where care is often available at a substantially reduced cost, may be one cost saving solution.

Summary

Dental hygienists must remain vigilant when providing care for clients who are receiving or who have received chemotherapy. Through collaboration with oncologists, family physicians and dentists, dental hygienists can safely and effectively provide dental hygiene services for this client group. Consideration should be given to medical issues such as hematological stability, the presence of a central venous line, timing of care during cycles of chemotherapy, as well as oral complications such as mucositis, xerostomia, bleeding and infection. Preventive and therapeutic intervention (including clinical care, education, and counselling for coping strategies) will help address the physical and emotional needs of this unique group of clients.

When reviewing the literature, it became clear that few articles exist pertaining specifically to the role of dental hygienists in the oral care of cancer patients. Despite apparent lack of published information, it is evident that as primary health care professionals, dental hygienists provide valuable therapeutic and preventative care for clients diagnosed with cancer and receiving treatment. The elements included in a dental hygienist's scope of practice make this group of professionals ideally suited to providing oral care and counselling prior to, during and following cancer treatment. Consequently, despite the lack of reference to dental hygienists in the reviewed literature, it is apparent that dental hygienists are integral members of interdisciplinary teams providing care for cancer patients.

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THE CANADIAN DENTAL HYGIENISTS ASSOCIATION
L'ASSOCIATION CANADIENNE DES HYGIÉNISTES DENTAIRES

AN OPEN LETTER FROM SUSAN A. ZIEBARTH, EXECUTIVE DIRECTOR OF THE CANADIAN DENTAL HYGIENISTS ASSOCIATION

Dear CDHA members,

Of all the tools you use in your practice, your CDHA membership may be the most important one. Here's why.

A membership in the Canadian Dental Hygienists Association is about more than just **exceptional insurance coverage, great member discounts** and **extraordinary networking** events. It's also about you becoming *the best dental hygienist you can be.*

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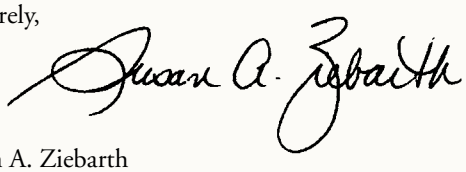

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THE CANADIAN DENTAL HYGIENISTS ASSOCIATION

L'ASSOCIATION CANADIENNE DES HYGIÉNISTES DENTAIRES

President's message, Making your mark … continued from 227

Mahatma Gandhi, who put it so beautifully, "You must be the change you wish to see in the world."

CDHA continues to lobby, support and provide resources that can assist you to realize outstanding personal and professional growth. Embrace these new opportunities and get involved as an active volunteer in your professional association. Not only will you create your own unique footprint, but will also contribute to the ever-expanding and lasting impression on the dental hygiene professional footprint in Canada.

REFERENCE

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Message de la présidente, Laisser sa marque … suite 227

agréable et inoubliable. En tant que présidente, je vous lance un dernier défi : « Laissez votre marque ». J'emprunte l'expression d'un personnage célèbre, le mahatma Gandhi, qui avait si bien dit : « Vous devez être le changement que vous voulez voir dans ce monde. »

L'ACHD poursuit son lobbying et continue d'apporter son soutien et de fournir les ressources susceptibles de vous aider à croître de façon remarquable sur les plans personnel et professionnel. Saisissez ces nouvelles occasions et impliquez-vous activement en tant que bénévoles dans votre association professionnelle. Non seulement vous créerez vos propres empreintes, mais aussi vous contribuerez à imprimer la marque sans cesse croissante et durable de la profession d'hygiéniste dentaire au Canada.

RÉFÉRENCE

1. http://www.footprints-inthe-sand.com

Executive Director's message, Learning … continued from 231

is a hands-on training facility designed to help you expand your knowledge base on topics such as periodontal disease, inter-oral cameras, oral cancer screening and sharpening your instrumentation skills. CDHA and RDHU will co-host their first hands-on training event designed especially for students on 7 November 2008 in Oakville, Ontario.

Building on the success of our initial student summit, we have expanded the program to include a program in Ontario and one in British Columbia. Please note the advertisement on page 277 for more information. In addition, educators will also have the opportunity to meet and explore issues of relevance to their profession as advertised in this issue on page 232. CDHA's Independent Practice workshops were also a success this year and we are assessing interest in expanding this program. Our online course catalogue has grown as has our technological delivery options. I invite you to review the advertisement on page 275 to pique your interest.

Educational resources for clients are extremely popular as are CDHA's publications in these evidence-based print materials. For a listing of the materials available and for information on how to order please see page 260. We are currently developing a brochure on oral health and tooth brushing, flossing and rinsing. It will be available sometime in the fall.

Last but certainly not least, I draw your attention to the 2008 Dental Hygiene Programs Recognition Award for faculties with 100 per cent CDHA membership and the 2008 CDHA Dental Hygiene Recognition Prizes offered on page 265 that recognize distinctive accomplishments of CDHA members.

CDHA stands with you as we learn, unlearn, and relearn.

Message de la directrice générale, Apprendre … suite 231

sur des données probantes et les techniques de communication, le DVD Quarterly *vous aide dans la pratique quotidienne. Le RDHU, notre nouveau partenaire pédagogique, a des ressources de formation pratique conçues pour vous aider à élargir vos connaissances sur des sujets comme les maladies parodontales, les caméras intrabuccales, le dépistage du cancer buccal et le raffinement de votre maniement des instruments. L'ACHD et le RDHU tiendront leur première activité de formation pratique à l'intention des étudiantes le 7 novembre 2008, à Oakville (Ontario).*

Comptant sur la réussite de notre premier sommet étudiant, nous avons élargi le programme pour y inclure une session en Ontario et une autre en Colombie-Britannique. Vous trouverez plus amples renseignements dans l'annonce de la page 277. De plus, les professeures auront la possibilité de traiter de questions pertinentes à leur profession comme le souligne l'annonce de la page 232. Les ateliers de pratique autonome de l'ACHD ont aussi été une réussite cette année et nous examinons l'utilité d'étendre ce programme. Notre catalogue de cours en ligne s'est accru de même que nos options de prestation technologique. Je vous invite à revoir l'annonce de la page 275 pour piquer votre curiosité.

Les ressources pédagogiques pour les clients sont extrêmement populaires tout comme le sont les publications de l'ACHD dans ce matériel imprimé fondé sur des données probantes. Pour dresser la liste des documents disponibles et savoir comment les commander, voyez à la page 257. Nous sommes à mettre au point une brochure sur la santé buccale, l'utilisation de la brosse à dents et de la soie dentaire, ainsi que le rinçage. Elle devrait être disponible à l'automne.

Enfin mais certes pas le moindre, j'attire votre attention sur le Prix de reconnaissance des programmes d'hygiène dentaire 2008 décerné aux facultés ayant une adhésion à 100% à l'ACHD et les prix de reconnaissance en hygiène dentaire 2008 de l'ACHD offerts à la page 266, pour souligner les insignes réalisations de ses membres.

L'ACHD vous accompagne dans l'apprentissage, le désapprentissage et le réapprentissage.

navigating the imagination

CDHA recognizes outstanding members

CDHA presented several awards at *Navigating the Imagination* conference in Banff, 26–28 May 2008
Left to right – Terry Mitchell, Sue MacIntosh, Brenda Walker, and Patricia D. Grant with Carol-Ann Yakiwchuk, President of CDHA

CDHA proudly presented Patricia D. Grant and Terry Mitchell the Distinguished Service Award, recognizing significant contributions by dental hygienists to the advancement of the profession or to CDHA for a minimum of four years. Both Patricia and Terry are former CDHA Presidents. Patricia's service to the dental hygiene profession extends beyond CDHA, where she served twice in leadership positions, to her contributions to the Dental Hygiene Educators of Canada, the Commission for Dental Accreditation of Canada, and the National Dental Hygiene Certification Board. Patricia is passionate about legislative and education issues, and shares her fire with future dental hygienists as educator and mentor at Dalhousie University. Terry has contributed to the dental hygiene profession as a national and provincial leader, educator, mentor, skilled presenter, and researcher. She has been a CDHA member since 1976, and has held many positions on the executive board. She has taken on leadership roles within the dental hygiene profession at organizations, including the National Dental Hygiene Certification Board and the Dental Hygiene Educators of Canada.

Brenda Walker and Sue MacIntosh both received Life Membership. This award honours the ongoing contributions of an active CDHA member who has made an outstanding contribution to dental hygiene profession, and CDHA at a national level. Brenda has demonstrated commitment to legislative issues affecting the dental hygiene profession. Brenda has contributed to advancement of the profession's legislation on a national level as a CDHA Board member, and as founder of the Federation of Dental Hygiene Regulatory Authorities. She is a provincial leader, and is the founder and current Registrar of the College of Registered Dental Hygienists of Alberta. Sue has provided strong leadership to the Canadian dental hygiene profession through her support to CDHA's national office during a transition time as the organization's President, and her continued efforts in sharing dental hygiene information. Sue's efforts contributed to the attainment of self regulation in Nova Scotia.

Thank you, to these remarkable CDHA members!

Student Leadership Prize winners

CDHA acknowledges the generosity of **TD Insurance Meloche Monnex**, our Future Leader Sponsor, for providing prizes of $2500 each to four dental hygiene students from four geographical areas across Canada to attend CDHA's *Navigating the Imagination* - Leadership Invitational in Banff, 26–28 May 2008.

Cindy Marie Isaak-Ploegman, RDH, BA, M.Ed, **Manitoba**

CDHA's *Navigating the Imagination* was an experience that was uplifting, encouraging, inspiring, enlightening, and educational.

Participants completed a Core Values Index on Day 1 of the event, and this exercise provided me with insight into which values motivate me, and how they are demonstrated in my chosen method of problem-solving and conflict management strategies. I was able to see, through the honesty of my table group members, how we can easily misperceive each other based on our leadership styles. The Outdoor Adventure was also a valuable time of self-awareness and appreciation for the benefits of teamwork. It is amazing what we can accomplish when we recognize each others' strengths quickly and let others shine to achieve great things, instead of undermining each other.

The main theme brought out in the small group table discussions was challenges CDHA faces today to engage its members, and to assist them in perceiving themselves as a group of professionals rather than as people with an occupation in common. The following questions arose: What are we to be expecting from our governing body and our professional associations? What can the association do for me versus what can I do for the association? Another challenge brought to the forefront was bridging the gap between the researcher/educator and the clinician. If the profession is to proceed to the next level and offer baccalaureate and graduate programs, more dental hygienists will need to be encouraged to continue with their education after their diploma program. Along with this challenge is the plethora of dental hygiene research that still needs to be completed. I think the challenge lies with every member pursuing an active versus a passive role in seeing our profession grow to the next level. This may be in the form of participating in professional association or regulatory body activities and inspiring others to do the same.

By attending this conference I gained an appreciation for all the work completed by the "wise women" – those who laid the early groundwork for the younger association members and have made the profession what it is today. I also gained an appreciation for the diversity represented across Canada within our profession. I spoke with independent practitioners and those who are still to achieve self regulation. My favourite part of the conference was collaborating with the other student prize winners. I tend to forget how rich collaboration can be in generating new ideas for research and teaching. I also found Banff to be a therapeutic and regenerating setting after a year of graduate work.

In upcoming years I hope, in my doctoral dissertation in education, to chronicle ethical issues in dental hygiene and to explore the implications to modern dental hygiene education. After 19 years, I stil l enjoy my role in this profession as a clinician and educator. It is inspiring to see my former students active in our professional associations and regulatory bodies and pursuing higher education. Thank you again to CDHA for sponsoring me to attend this conference. It was life-changing.

Danika Daley, RDH, BSc
Nova Scotia

I found *Navigating the Imagination* to be an inspiring and involving event. It introduced me to not only many mentors from across Canada but also to various opportunities in dental hygiene. Many of the activities throughout the conference helped me recognize my strengths and shortcomings as a leader, and how I could improve and grow. I enjoyed the session of Leader in the Mirror which encouraged inner reflection, and the Outdoor Adventure group activity that brought us together to reach common goals. I was honoured to share the weekend with so many trailblazers in the field of dental hygiene, and would like to extend a sincere "thank you" to all the participants for making me feel welcome and involved. The conference was also a great opportunity for me to talk to others about their education paths, as personal goals on my horizon involve pursuing a master's degree with the hopes of becoming a dental hygiene educator someday. The Leadership event should be offered as an annual event as it serves to engage new and upcoming leaders.

Denise M Laronde, RDH, MSc
British Columbia

Banff was a truly beautiful setting for *Navigating the Imagination*, a CDHA event designed to encourage professional growth among the membership. This event was held to bring together current and future leaders within our profession to discuss and promote important elements imperative to every emerging profession.

A highlight of the event was meeting some of the dental hygienists who have played significant roles in our profession in Canada, and whose names I recognized from their contributions via education, research, regulatory issues, community work and their professional contributions towards the advancement of dental hygiene. Brenda Walker brought us up to date on the political realities, Dr. Sharon Compton discussed the importance of education as the critical foundation for our role and vast professional

responsibilities, and Dr. Susanne Sunell spoke on the competencies for entry to practice, interprofessional education, and the value of research in our profession – focusing on evidence-supported practice, knowledge creation and capacity building. These talks about the current state of some of these issues were a defining moment and highlighted the need for the membership to take ownership of these areas to advance our profession forward.

Round table discussions on a variety of issues including, mentorship, research, and education, were invigorating but also highlighted what a diverse and heterogeneous profession we currently have, and how much work we have to accomplish in these areas.

Sharon Wong, RDH, DipDH, BSc
Ontario

Leadership within a profession is essential for it to progress where it provides direction and sets a model for others to follow. *Navigating the Imagination* was a three-day event that provided an environment for leaders and welcomed dental hygienists of all stages of their careers to engage in current issues and changes within the profession.

The event motivated and inspired participants by providing each of us an opportunity to connect with colleagues across the nation. We were involved in creating vision. We contributed to major issues, and established mentorship relations. I met role models and leaders who are expanding the definition of dental hygiene through their work in education, providing dental hygiene care in multi-disciplinary work settings such as hospitals and long-term care, research, and government policy change.

We discovered through the Core Values Index workshop the type of work ethic we each had and learned how to work with each other given our different roles based on our individual characteristics. This was put to the test the next day at the Outdoor Adventure where groups were assigned challenges and had to solve and execute them as a collective team.

A major part of the event was devoted to discussing and analyzing current dental hygiene issues such as standardizing education for entry-to-practice, encouraging mentorship, and developing public and interprofessional recognition of our professionalism. We explored the essence of emergent professional leaders – a journey of transitions from being a passive member into an owner, and eventually into a leader who is a professional that leads by example. Leadership can take many forms. Dental hygiene professionals create their own path, possess self-awareness that they are not mere clinical technicians, and share their success stories with others. I had the pleasure of meeting passionate and dedicated leaders who were willing to offer guidance and share their knowledge as professional dental hygienists.

Sealant clinics

As part of the national program titled ***"Crest Oral-B Pro Health at Wal-Mart"*** Proctor & Gamble provided CDHA with resources designated to fund free sealant clinics across the country. The dental hygienist's role was to help deliver the message to Canadians about the importance of preventive oral care and to educate consumers by providing oral care tips.

SEALED AND CERTIFIED SMILE CLINIC

Laura Perri, RDH, BSc, BEd, **Hamilton, Ontario**

The Canadian Institute of Dental Hygiene Inc. (CIDH) carried out a free sealant clinic for children, 10–11 March 2008, at a school in Hamilton, Ontario. "CIDH saw the Sealed and Certified Smile Clinics as another way to have a positive impact in the community and provide important oral health care services to children who might not otherwise receive it," said Laura Perri, CIDH Program Director. The Sealant Clinic was publicized with flyers designed at CIDH, and distributed to nearby schools after consulting with the Principals. The local community's cable television station came to CIDH and interviewed both faculty and some of the clients.

Eligibility criteria included that a child had to be between 7 and 12 years of age, and accompanied by a parent/guardian, so that all services could be reviewed and explained to both the client and the accompanying adult after receiving informed consent and permission prior to any treatment services. Each client was scheduled with one dental hygiene student for the duration of treatment. Treatment was client specific. All treatment planning and steps of the Dental Hygiene Process of Care were reviewed and supervised by a registered dental hygienist instructor and a dentist.

The scheduled appointment began with a screening and assessment to ensure there were no contra-indications to dental hygiene services. Clinical assessment findings and their significance were presented to the client and the parent/guardian, and oral health education was reviewed and demonstrated with the use of visuals and oral aids. Oral prophylaxis, such as de-plaquing with or without debridement, was performed and followed by dental sealant application (if indicated), and fluoride (if indicated). If time did not permit the completion of the client's treatment during the initial appointment, the client was scheduled to return to CIDH for treatment completion on another clinic date.

CIDH saw the Sealed and Certified Smile Clinic as a worthwhile effort where the services of its faculty and students were provided to the needs of the surrounding Hamilton community.

SEAL IN A SMILE PROGRAM: PARTNERING FOR PREVENTION

Georgina Jones, CDA and **Wendy King**, DipDH, MEd, **Prince George, British Columbia**

Over the years the program has grown from a one-day clinic to two clinics per week for a total of five weeks each May and June where College of New Caledonia (CNC) dental assisting and dental hygiene students apply sealants as well as perform rubber cup polishing, fluoride, oral health education and scaling for children aged 5–12 years from an inner city school.

The program functions in the following manner: Northern Health (NH) dental staff identify one or two inner city schools in School District 57 with historically high dental needs. NH staff use the following information to help identify an appropriate school: Kindergarten screening data, size of school "usually a school with 220 or more children", and location "the school needs to be close enough to CNC to bus children in realistic time frames".

Once target schools have been identified and a commitment secured, NH staff meet with the teachers, Principals, and aboriginal workers at the schools to outline particulars of the program. As well, dental hygiene students, as part of their community health course, make presentations to the students on how the program functions. NH staff arrange for consent forms and information packages to be sent home to parents. A typical response rate from parents is approximately 75%.

Students are not charged for any of the preventive services that they receive as CNC waives the normal preventive fee. NH covers the cost of busing, NH staff hours and printing costs. This year CDHA and Proctor & Gamble partnered with CNC, and generously funded CNC's program expenses.

Students are bused to CNC where a faculty dentist performs screenings. Students attend CNC for one or two appointments. On the first appointment, dental hygiene or dental assisting students perform oral health education, scaling as needed, rubber cup polish, and fluoride treatments as indicated. More routinely, students return for a second appointment where sealants are applied.

The following is a summary of the number of children who participated in the program in the past as well as the total number of sealants placed in each of the previous years.

Year	Children seen	Sealants placed
2000	38	191
2001	57	317
2003	107	221
2004	173	329
2005	123	319
2006	147	221
2007	198	378
2008	188	277
Totals	**1031**	**2253**

This program is an excellent example of collaboration and partnerships. It provides primary dental prevention to a significant number of underserved children and is an excellent learning opportunity for dental hygiene students and dental assisting students at CNC. There are plans to continue the program in the future.

Listerine Gingivitis Month Grants

In celebration of Gingivitis Month in June, Listerine Gingivitis Month Grants valued at $1,800 were awarded to four innovative dental hygienists across Canada. These dental hygienists showed both enterprise and innovation to create all kinds of educational activities. From bus adverts in Winnipeg, to family day at a YMCA in Kelowna, to community awareness seminars for at-risk groups in Charlottetown and Brantford, our dental hygienists are spreading the word about brush, floss and rinse.

GINGIVITIS, DO YOU HAVE IT?

Alison MacDougall, RDH, **Prince Edward Island**

My presentation called "Gingivitis: Do You Have It?" was given at the local AIDS PEI office on 27 June 2008. In partnership with their staff, I advertised at the office, clients were called at home and an e-mail was sent out via their distribution list. PHAs (people living with HIV/AIDS), their families, support networks, and friends were encouraged to attend.

I chose to do this seminar for PHAs because as a marginalized population, they are less inclined to seek regular dental care. A special gingivitis associated with HIV/AIDS called Linear Gingival Erythema poses a threat to PHAs overall health. If this condition is left untreated, it can lead to a more serious periodontal disease known as Necrotizing Ulcerative Periodontitis. One of the goals of AIDS PEI is commitment to "sharing resources and experiences in order to develop partnerships and to promote the collaborative development of a community-based response to AIDS throughout PEI."

As an added bonus, on the day of my presentation I was interviewed by Maggie Brown, a local CBC radio reporter. My interview aired on 30 June 2008 at 6:40 a.m. PEI residents woke up that morning to hear information about how to prevent gingivitis.

POSTER CAMPAIGN

Carol-Ann Yakiwchuk, RDH, DipDH and
Mary Bertone, RDH, DipDH, **Winnipeg, Manitoba**

With grant monies in hand we immediately set to work to bring our vision to life, working collaboratively with Pattison Outdoor Advertising, the company that also generously donated two free weeks of advertising, to prepare this year's poster. Large 70" x 21" posters featured on ten Winnipeg city buses, reaching out to over 58,000 Manitobans daily on a 6-week tour that began on 1 June 2008.

We received many positive comments on the gingivitis message and high profile visibility the bus posters provided. Indeed, which dental hygienist didn't smile when they read "A message from your Manitoba Dental Hygienist", essentially promoting dental hygienists as an integral link in the prevention and reversal of gingivitis? We became the "poster girls" for a while. Our gingivitis poster campaign generated such comments as:

"Bold and right in your face. Makes you think about your mouth as you sip that coffee or eat that bagel on your way to work", Gloria.

"This bus ad caught my attention and the wording hit home for me. When I read that the Manitoba Dental Hygienists Association had produced the ad, I couldn't help but think what a positive and powerful impact dental hygienists have on the dental industry and on the public", Jocelyn.

GINGIVITIS AWARENESS AND PREVENTION FOR SPECIAL GROUPS

Danielle Shannon, RDH, **Brantford, Ontario**

During Gingivitis Month, I prepared various posters with information about gingivitis, its prevention, proper oral hygiene and the health risks associated with poor oral health for mentally challenged individuals. The posters

Transit buses in Winnipeg carried this poster in June

were placed at multiple Brant Community Living facilities. The posters stayed up for one week, and then I followed up with an information booth at one facility, Dunn Building, for a "Question and Answer" session. I also distributed 150 oral health care packages to all the attendees. The packages contained the "Call to Action" gingivitis information sheets, toothbrush, floss, toothpaste and Listerine.

Participants were delighted to receive their packages. Vivid posters and display board attracted their interest as well as questions. Oral health is but one element in their overall health that is often neglected. The workers at the facility were also very interested in the information. They often don't realize the high risk of their clients for such oral health problems. My initiative encouraged enthusiastic responses from those who attended, and left me with a sense of fulfillment.

GINGIVITIS VERSUS HEALTHY GUMS

Sherry Priebe, BDSc(DH), RDH, **Kelowna, British Columbia**

I participated at the 2008 YMCA Healthy Kids and Families Day on Sunday, 1 June 2008 in Kelowna, British Columbia. My activity and educational station involved individuals identifying "Gingivitis versus Healthy Gums". The message was, "Oral health is part of a healthy body. Gingivitis is both preventable and reversible."

Approximately 3,000 families attended, undeterred by the rain, to enjoy what forty-three groups had to offer on community-based solutions to improve their health and lives. Parents used our educational booth as a teaching tool for their children to affirm what the dental hygienist and other dental professionals are telling them. Many adults questioned, "Aren't all mouthwashes the same?" "There is alcohol in Listerine, isn't there?" When adults learned about the links of gingivitis to overall health, they were interested in filling out their gingivitis checklist. Teenagers were interested in keeping their gums healthy and in getting a sample of Listerine for fresh breath. Vivid photos engaged visitors' attention.

The YMCA Family Day and Listerine Gingivitis Month provided me with the volunteering opportunity for a delightful experience of making a difference to individuals' oral health and to the larger community.

Sherry (left) and keen visitors at the Gingivitis booth in Kelowna

Leadership Invitational: Navigating the Imagination

Introduction by Katrina Stark, DM, and Roni Wielkie, DM

CDHA's *Leadership Invitational: Navigating the Imagination* held in Banff, 26–28 May 2008, encouraged extensive dialogue and creative idea sharing among attending dental hygiene students, member-owner-leaders, and Board members. The unique three-day event furthered the commitment of CDHA's Board members and Susan Ziebarth, CDHA Executive Director, to foster professional growth within the dental hygiene profession. The event began with the invitational welcome and event synopsis conducted by Susan Ziebarth, Executive Director, and Carol Yakiwchuk, CDHA President, followed by an overview of dental hygiene in Canada.

Continuing the overview, Brenda Walker, Registrar and Chief Administrative Officer, College of Registered Dental Hygienists of Alberta, discussed the political reality and regulatory issues facing CDHA members, and Dr. Sharon Compton, Chairperson of CDHA's Education Policy Committee and Director of Dental Hygiene, University of Alberta, provided details of CDHA's dental hygiene education agenda. The dental hygiene overview concluded as Dr. Susanne Sunell, Chairperson of CDHA's Research Advisory Committee and Education Consultant at Omni Educational Group, relayed CDHA's research agenda. Dr. Sandy Kolberg, Founder and President of StrateGEMS, a consulting firm dedicated to creating learning environments, then led a three-day interactive workshop permitting *Leadership Invitational* participants to refine their leadership abilities through self reflection and development of collaborative paths to navigate student-member-owner-leader roles successfully.

Throughout the event, participants displayed enthusiasm for the dental hygiene profession while exploring multiple issues to move the profession forward. Many participants relayed captivating stories about the history of the organization, past leaders, current events, and compassion often displayed by individuals within the organization. While relaying a vast array of stories and discussing concerns for the future direction of CDHA, distinct groups and leaders emerged. Leveraging the distinct differences between the dental hygiene students, member-owner-leaders, and Board members led to the design of the final *Leadership Invitational* Making Your Mark exercise.

"Making Your Mark" exercise, led by Dr. Katrina Stark and Dr. Roni Wielkie, incorporated a storytelling methodology to encourage participants to determine and endorse ownership of the direction of the dental hygiene profession. Storytelling is one of the most powerful methods to connect people through emotion, intellect, and kinetic sharing[1]. The exercise began by dividing participants into the emergent groups of dental hygiene students, member-owner-leaders, and Board members. Participant groups continued to evolve throughout the exercise as leaders emerged to speak on behalf of each group and dental hygiene students shifted into two distinct sub-groups.

The assignment was for each group to *tell their story* including the desired direction of the profession and participant recommendations. Leveraging diverse backgrounds and perspectives, participants were empowered to take ownership of the direction of CDHA and permit other student-member-owner-leaders to hear the recommendations for moving CDHA progressively forward. Participant passion for leading the dental hygiene profession to the next level quickly took hold. Writing began in earnest as participants realized their stories provided a voice to the thoughts expressed throughout the previous two days of invitational exercises and discussions. The voice of the participants also provided other CDHA members, unable to participate in the *Leadership Invitational*, the opportunity to further their professional growth and share in owning the direction of the dental hygiene profession. Offering diverse ownership paths, the following five stories share the common thread of taking CDHA to the next level through the combined effort and passion of dental hygiene students, member-owner-leaders, and Board members.

REFERENCE

1. Silverman LL. How do you keep the right people on the bus? Try stories. 2006. *The Journal for Quality and Participation*, 29(4)11. Retrieved April 28, 2008 from ProQuest database.

Building action – a student perspective

Foundations have been laid for us and seeds planted. Within the student culture emerging into the dental hygiene workforce there needs to be professional awareness. We think it's time to act providing mentorship and continued guidance for this thirsting and emerging community.

We think a more effective approach would be to have a Board member make a presence in the dental hygiene programs acting as a liaison to the professional membership and involvement. Opportunities are abundant with students graduating every year who have the interest and potential to be leaders in their profession, and who would benefit from having this gift of receiving mentorship. Apart from our professors, we have little connection with the dental hygiene community as a whole.

CDHA could make its presence felt in the programs and encourage professional development. For example, if there is a day allocated to professionalism within the academic curriculum, we think it would be very beneficial to have a panel discussion comprising a Board member of the province, a clinical dental hygienist in private practice, a member from the regulatory body, and someone involved in alternative practice (research, hospital, practice/long term care, independent practice) to speak to the students and foster their interest and involvement in the profession.

We also think that students can concentrate by forming focus groups where they discuss their concerns and questions about the profession and clarify issues they are concerned about. This helps students learn from each other. CDHA should get an inside look into the concerns and expectations of the students. This will help CDHA target possible leaders, and develop and implement plans of action.

The graduating fraternity is neither uninspired nor uninterested. Most of us just feel a lack of direction. By CDHA making a presence in the schools, it creates a connection, acts as motivation, and an invitation that creates a sense of community and ownership in the association. The groundwork has been laid and the path has been cleared by years of determined and involved dental hygienists. The emerging generations are ready and willing to learn from their legacy and take action.

True connections – another student perspective

The time for action is now. There needs to be a shift from passive to active.

Develop a professional awareness campaign

i. Form a task force.
ii. Set time lines.
iii. Set goals and objectives.
iv. Set target dates.
v. Define the issues to focus on (profession, membership, education and research).

Survey the membership

i. Knowledge translation via doer/non-doer assessment to identify both the barriers and facilitators to being an active member of the profession.
ii. Learn from our membership what they want and need.
iii. Target our message in response to barriers and facilitators.
iv. Dissemination of information.

The ebb and flow

The profession attracts a number of caring people into its fold—people who will ebb and flow within the profession. Not being present at this *Invitational* does not preclude any dental hygienist from contributing to leadership and to the profession.

We envisage the role of leaders in dental hygiene in paradigms of stability, participation, inclusion and sharing.

- Stability and the need to maintain that stability as people evolve within the profession.
- Keeping the spark of interest alive and open to acceptance, valuing each stage of evolution. Providing opportunities for sharing opinions and suggestions for those who cannot attend conferences, seminars, and other events due to family or other commitments.
- Enabling participation in a variety of ways. Leaders need to be enablers who make participation within the Association easy and valued. Being inclusive would allow people to be involved at whatever level they are comfortable at the time keeping the door open for re-entry at any time. Leaders should realize that each individual member may assess involvement with CDHA and leadership on their own terms; they have their own version of how being a member is important to them.
- Dual messaging: altruistic and egocentric; external and internal. Altruistic messaging relates to how CDHA moves the profession forward for the good of Canadians and dental hygienists. Egocentric messaging refers to way CDHA needs to be more vocal about accomplishments, victories, progress, and why they do what they do; why they need the leaders and members to continue progressing. External messaging deals with communications between CDHA and the public, government, and policy makers, as well as with other health professions and regulatory bodies. Internal messaging encompasses communications with dental hygiene societies and students. Involvement needs to be a dynamic partnership and relationship. It includes support and encouragement for each province with their unique issues.
- Idea of six degrees of separation – What are the connections? vs. Is there a connection? All dental hygienists are connected to each other and the actions of individuals have an impact on the whole. We appreciate the need to identify the connections, to not have leadership separate from membership, to show connections between practice and association/membership/leadership.
- Paying it forward by mentoring – the more you bring the more you take away.

Pathways

Trodden paths

Each of us possesses valuable skills and experiences to offer for the greater good of a large organization like CDHA. The dental hygiene profession in Canada is at an exciting time to move forward with creative vision. We are forming bridges, with people like us at one end of the bridge reaching out to others, willing to traverse the span and enhance the value of this profession. We endeavour to integrate traditional dental hygiene practice into the growing and learning processes of research and education. Through this link, we will be recognized by the public and other professions more easily in the future. We choose to maintain momentum, started by the dental hygiene establishment, to reach politicians, public and other professions.

Beating new paths

Leadership skills are inherent in everyone. We can move towards positive goals through mentorship conferences that could be instrumental in facilitating skill development. We will make positive efforts toward motivating and mobilizing our dental hygiene members, as well as stimulate the interest and enthusiasm of those who have not taken the opportunity to get involved. We choose to dwell on the positive forces. We want our paths to lead us to communicate with and educate other professions about our values. We are trying to understand why all dental hygienists do not sense the feeling of professionalism. Part of being a leader is knowing that there is a time to listen and a time to talk. Dental hygiene is part of the answer to overall health. The promotion of our profession to the public by the provincial associations partnering with our national dental hygiene association makes us more comfortable with the standardization and competencies of dental hygiene. This is the foundation for moving forward.

Laws of the Spirit

Our presence now

We are ambassadors of CDHA. We are on a journey; and have been on this path for a long time. This conference has provided us with the opportunity to grow and learn. We will continue to share what we have learnt and incorporate it into the vision of the profession. The conference presented enough diversity to grasp the basic needs of member-owner linkage, and we explored the diverse facets of this linkage: student, member, owner, leader relationship. We recognize that the sustainability of ownership is lacking. Ownership-linkage is obvious and is a necessity. How do we sustain our members' professional commitment? The Laws of the Spirit are important and are relevant guiding principles.

There are many different ways to lead, and facilitated leadership is important to nurture. We experience varied phases of leadership, and we can all work collectively despite our differences. We inspire each other to lead because we spark leadership qualities in each other. Leadership is ordinary people doing extraordinary things. Leadership is the bringing out of leadership qualities in our members. Utilizing these qualities in the individual is inspirational.

Communication happens from the top down and the bottom up, multidirectional and circular. Listening is also a part of communication. We don't want to lose the momentum of the outcomes of this conference. Don't look back; move on; when it's over, it's over. We have to look ahead.

Our direction ahead

It is important for CDHA to have a presence in each province on an annual basis. It is also equally relevant CDHA provides a variety of conference opportunities. We need to re-create the one-on-one relationship with our members. We need to be a visible presence, and to generate a renewed visibility with the membership. Social marketing will help create the drive for professionalism. We'll re-examine the mentorship component from our side.

Laws of the Spirit

Whoever is present are the right people.
Whatever happens is the only thing that could have happened
Whenever it begins is the right time
Whenever it's over, it's over.

CANADIAN FOUNDATION FOR DENTALHYGIENE RESEARCH AND EDUCATION

CIHR IRSC
Canadian Institutes of Health Research | Instituts de recherche en santé du Canada

Giant Step forward for Dental Hygiene Research: New Master's Award

The Canadian Foundation for Dental Hygiene Research and Education (CFDHRE) and the Canadian Institutes of Health Research (CIHR) jointly announce an exciting new award to facilitate development of dental hygiene research. This new award will significantly influence the dental hygiene profession by targeting funds exclusively for dental hygiene research projects. Dental hygienists previously competed with other healthcare researchers for CIHR grants and awards, and while some notable success has been enjoyed by these outstanding researchers, this Master's Award marks a breakthrough opportunity by bringing dental hygiene research to the forefront with new secured funding. The partnership between CFDHRE and CIHR recognizes the need to build capacity for innovative research within the Canadian dental hygienist community and the importance of encouraging investigation by future stewards of the profession.

This Master's Award provides funding to a maximum of $17,500 for a 1-year term to support the development of the recipient's research project. Deadline for application is February 2, 2009. For more information please visit the Call for Proposals section of the CFDHRE web site at http://www.cfdhre.com.

CDHA Dental Hygiene Recognition Program

CDHA is pleased to announce the 2008 Dental Hygiene Recognition Program. This program, made possible through the contributions of CDHA's Corporate Partners, is designed to recognize distinctive accomplishments of CDHA members, including both practising and student dental hygienists. Entry details are available on the CDHA members' web site, in the "*Networking and Recognition*" section.

Prize Categories

CDHA dental hygiene baccalaureate student prize in participation with Crest Oral-B
One $1,500 prize to be awarded to a dental hygiene student for contributing to the advancement of the profession in the context of educational and volunteer activities, and to be used towards education expenses.

CDHA dental hygiene diploma student prize in participation with Crest Oral-B
One $1,000 prize to be awarded to a dental hygiene student for contributing to the advancement of the profession in the context of educational and volunteer activities, and to be used towards education expenses.

CDHA oral health promotion prize in participation with Crest Oral-B
These three prizes* are awarded for the creative promotion of dental hygiene, including community impact, education, and innovative partnerships and include: Individual prize of $1,000; Clinic Team prize of $2,000; Dental Hygiene Schools prize of $2,000. * Half of each prize will be shared with the local dental hygiene society.

CDHA leadership prize in participation with Dentsply
One $2,500 prize to be awarded in recognition of a significant contribution to the local, academic or professional dental hygiene community through involvement and leadership.

CDHA achievement prize in participation with Sunstar G·U·M
One $2,000 prize to be awarded to a student enrolled in the final year of a dental hygiene program who has overcome a major personal challenge during his/her dental hygiene education.

CDHA global health initiative prize in participation with Sunstar G·U·M
One $3,000 prize in recognition of a registered dental hygienist who has committed to volunteering as part of an initiative to provide oral health related services to persons in a disadvantaged community or country.

CDHA visionary prize in participation with TD Insurance Meloche Monnex
One $2,000 prize awarded to a student in a masters or doctoral program in dental hygiene in recognition of a vision for advancing the dental hygiene profession.

CDHA Innovation in Oral Cancer Awareness Prize in partnership with LED Dental Inc.
One $1,500 prize to be awarded to a practising dental hygienist or dental hygiene student who has made a significant contribution to increasing awareness of oral cancer and the benefits of early discovery in clinical practice or community through innovative oral health promotion initiatives.

Get involved and you could win!

Application deadline is **28 November 2008**. CDHA will make a public announcement of the prize winners in April 2009 during National Oral Health Month.

Programme de reconnaissance en hygiène dentaire de l'ACHD

L'ACHD est heureuse de présenter le programme de reconnaissance en hygiène dentaire pour l'année 2008. Ce programme, rendu possible grâce aux dons des entreprises partenaires de l'ACHD, est conçu pour reconnaître les réalisations distinctives des hygiénistes dentaires et des étudiantes et étudiantes en hygiène dentaire membres de l'ACHD. Les détails concernant les procédures d'inscription sont affichés sur le site Web réservé aux membres de l'ACHA, à la section "*Networking and Recognition*". La date butoir pour soumettre les demandes d'inscription aux différents prix est le **28 novembre 2008**.

Catégories de prix

Prix de l'ACHD destiné aux étudiantes et étudiants au baccalauréat en hygiène dentaire, décerné avec la participation de Crest Oral-B

Un prix de 1 500 $ offert à une étudiante ou un étudiant en hygiène dentaire au niveau du baccalauréat pour sa contribution à l'avancement de la profession dans le cadre d'activités éducatives et d'activités de bénévolat.

Prix de l'ACHD destiné aux étudiantes et étudiants au diplôme en hygiène dentaire, décerné avec la participation de Crest Oral-B

Un prix de 1 000 $ offert à un étudiant ou une étudiante, inscrit(e) dans un programme en hygiène dentaire menant à un diplôme, pour sa contribution à l'avancement de la profession dans le cadre d'activités éducatives et d'activités de bénévolat.

Prix de l'ACHD pour la promotion de la santé buccodentaire destiné à un programme d'hygiène dentaire, décerné avec la participation de Crest Oral-B

Les trois prix* suivants sont offerts pour la promotion créative de la profession de l'hygiène dentaire. Les inscriptions seront jugées selon les critères suivants : créativité, planification, recrutement de bénévoles, éléments éducatifs, impressions et impact sur la collectivité, ainsi que sur la dimension innovatrice des partenariats : Prix individuel de 1 000 $, Prix d'équipe clinique de 2 000 $, Prix d'école d'hygiène dentaire de 2 000 $. * La moitié de chaque prix sera partagée avec le chapitre local de l'association d'hygiène dentaire des gagnantes et gagnants.

Prix de l'ACHD pour le leadership, décerné avec la participation de Dentsply

Un prix de 2 500 $ offert à un étudiant ou une étudiante, inscrit(e) dans un programme en hygiène dentaire, en reconnaissance d'une contribution significative à la communauté locale académique ou professionnelle de l'hygiène dentaire par son engagement et son leadership.

Prix de l'ACHD pour une réalisation, décerné avec la participation de Sunstar G·U·M

Un prix de 2 000 $ offert à un étudiant ou une étudiante, inscrit(e) en dernière année d'un programme en hygiène dentaire, qui a surmonté un défi personnel important durant sa formation en hygiène dentaire.

Prix de l'ACHD pour un programme de santé mondial, décerné avec la participation de Sunstar G·U·M

Un prix de 3 000 $ offert à un ou une hygiéniste dentaire autorisé(e) qui s'est engagé(e) comme bénévole dans un programme visant à offrir des services liés à la santé buccodentaire à des personnes faisant partie d'une communauté ou d'un pays défavorisé.

Prix de l'ACHD pour l'esprit visionnaire destiné à un étudiant ou une étudiante de 2e ou 3e cycle dans un programme relatif à l'hygiène dentaire, décerné avec la participation de TD Assurance Meloche Monnex

Un prix de 2 000 $ offert à un étudiant ou une étudiante, actuellement inscrit(e) dans un programme de maîtrise ou de doctorat lié à l'hygiène dentaire, en reconnaissance de sa vision de l'avenir pour l'avancement de la profession de l'hygiène dentaire.

Prix de l'ACHD pour l'innovation dans la sensibilisation au cancer de la bouche, décerné en partenariat avec LED Dental Inc.

Prix de 1 500 $ qui sera attribué soit à un ou une hygiéniste dentaire en exercice soit à une étudiante ou un étudiant en hygiène dentaire qui aura apporté une contribution importante à l'amélioration de la sensibilisation au cancer de la bouche et aux avantages de sa découverte précoce en pratique clinique ou dans la collectivité, grâce à des initiatives novatrices de promotion de la santé buccodentaire.

Dental insurance fraud

CDHA's Independent Practice Advisor, Ann E. Wright

As a representative of the CDHA, this advisor attended a meeting of the Canadian Health Care Anti-Fraud Association in June. The meeting focused on dental fraud – from minor infractions to highly questionable billing practices.

Two common infractions cited are the waiving of co-pay "the difference between the fee charged and what the insurance pays" and an exaggeration of service in terms of time spent. More serious forms of dental fraud include changing the dates of service, charging for services that are not performed and substituting covered services for non-covered services. Another topic of discussion is the increase in incidence of dental fraud by dental office staff. Investigations have determined that this is often committed by the dental receptionist, the staff person with the greatest access to client files and billing information. The offender submits fraudulent claims for people who are not clients of the practice or who are family members.

Of particular interest to dental hygienists were the number of examples of dental fraud which pertain to the services and treatment that dental hygienists typically provide in a dental office. These include radiographs, scaling and root planning procedures. One of the most frequently exaggerated procedures cited is scaling units. The dental insurance carriers become suspicious when they see a provider who routinely charges for multiple scaling units on all clients, especially for those under the age of eighteen. Another suspicious practice is a provider who maximizes or "shops" the fee guide. This provider may submit insurance claims that match plan maximums with respect to the number and timing of radiographs and scaling units.

To compound the problem, the insurers see an increase of assignment of benefits to the providers. Therefore, the client as a non-participant in the process may not even see the dental claim form that is submitted. Clients of these offices report that the treatment codes and fees were never explained and that they did not receive a copy of the treatment billed to the insurance companies.

As incidences of dental fraud increase, the insurance companies are becoming increasingly diligent in the detection and monitoring of offending practitioners. The insurance industry has responded to the increased incidence of dental fraud by instituting the following procedures:

1. Increased third party audits.
2. Insistence on reasonable and customary fees, based on best practice guidelines.
3. Institution of watch lists, toll-free tips line, and monitoring of suspicious claims.

In addition, dental plan designers have made significant changes to dental plan design. In an effort to contain costs, rather than reduce health benefits, they are encouraging employees to participate more actively in their health coverage. There is a growing acceptance for "flex plans" and "health spending accounts" which permit the employee to decide where best to spend health dollars. On another note, as employers seek employee cost-cutting measures, approximately 17 per cent of Canadian employers have reported a reduction or elimination of health benefits for retirees.

What does this mean for dental hygiene practitioners who are submitting insurance claims?

1. Always adhere to best practice guidelines when assessing and initiating dental hygiene care.
2. Always document and sign your treatment notes.
3. Ensure that your treatment is appropriate and accurate in terms of time and service.
4. Ensure that your client understands and agrees to the treatment you provide, including a clear explanation of the service codes and fees.
5. Always provide your clients with a hard-copy of their treatment and fees.
6. Monitor staff access to client files.

What opportunities does this provide for independent practising dental hygienists?

1. An opportunity to promote dental hygiene care and oral disease prevention as a long-term cost-saving service.
2. An opportunity to practise effectively and efficiently according to dental hygiene standards of practice.
3. An opportunity to assume a leadership role as a primary oral health care provider.

As dental hygienists spread their entrepreneurial wings and establish independent practices, it is important to recognize that the onus to submit accurate insurance claims rests solely on their shoulders. Creating a practice environment where the needs of the client comes first and foremost will ensure high standards of care for the client and a business that is a growing source of pride for the dental hygienist owner.

CDHA welcomes your feedback: aew@cdha.ca

Our bookshelf revisited

CDHA staff

In the September-October 2006 issue of *CJDH*, the Library Column reviewed text acquisitions; now it is time once again to look at some new publications and editions of popular dental hygiene related texts in our library. CDHA members can borrow these books for a three-week period. This is a convenient way to preview a new reference text you are considering for purchase. You can make requests by telephone (1-800-267-5235 extension 122, or 1-613-224-5515 extension 122), or e-mail: library@cdha.ca

1. Delong, Leslie and Burkhart, Nancy. *General and Oral Pathology for the Dental Hygienist*. Philadelphia: Lippincott, Williams & Wilkins, 2008

This new text contains all the essential information needed to visually examine and recognize oral disease in practice. The *General Pathology* section includes the major determinants of disease and the body systems as they are considered when taking a client's health history. The *Oral Pathology* section is organized according to characteristics of lesions in order to assist in the identification of lesions by appearance and to differentiate similar lesions. There are more than 400 photographs and illustrations that detail visual characteristics of lesions. Clinical examples and case studies are included. Distinctive clinical and radiographic features of lesions are accompanied by lists of associated diseases.

2. Nield-Gehrig, Jill. *Patient Assessment Tutorials: A Step-by-Step guide for the Dental Hygienist*. Philadelphia: Lippincott Williams & Wilkins, 2007

The ability to perform and document client assessment procedures is vital to the practice of dental hygiene—a complete and accurate assessment is the starting point to planning and providing effective care. This text is a practical guide that takes you step-by-step through each assessment procedure including techniques for effectively communicating the assessment process and findings to clients. Excellent features include detailed, full-color illustrations and photographs to visually direct you through procedures and techniques, case studies and personal accounts that bring the content to life. The "Ready References" sections in each module include internet resources such as health literacy, drug reference and oral cancer sites. This is a great reference text for both students and practitioners.

3. Nield-Gehrig, Jill and Willman, Donald. *Foundations of Periodontics for the Dental Hygienist*. 2nd ed. Philadelphia: Lippincott Williams & Wilkins, 2008.

This text offers dental hygienists a comprehensive and easy-to-understand presentation of periodontal therapy. The evidence-based approach to care emphasizes use of research as the foundation for clinical decision making. This edition has more of the popular "Focus on Patients" and "Patient Case Study" features that help in the application of concepts to actual client care. A new "Patient Applications" feature presents critical thinking exercises using simulated cases. This edition has approximately 200 new illustrations, including new full-color clinical photographs. An accompanying CD-ROM includes an image bank of full-color photographs. CD-ROM Alert icons in the text direct users to these photographs. This book would be a valuable resource on current concepts for the practising dental hygienist.

4. Meiller, Timothy, Wynn, Richard, McMullin, Annmarie, et al. *Dental Office Emergencies: A Manual of Office Response Protocols*. Hudson (OH): Lexi-Comp, 2006.

This handy reference text is intended for use by dental office staff for preparedness training, as well as during times of crisis. The best management of medical problems is always prevention. This resource provides information for dental personnel so that prevention and management of emergencies are part of the office knowledge base. The first section of the text describes office preparedness and addresses the development of protocol and training for management of potential office emergencies. The second section addresses specific dental office medical emergency situations defined by symptom analysis. This section is tabbed for quick access and includes:

- Basic Action Plan for Stabilization
- Loss of Consciousness
- Respiratory Distress
- Chest Pain
- Allergic/Drug Reactions
- Altered Sensation/Changes In Affect
- Management of Acute Bleeding

The third and final section of the text includes information on pre-procedural antibiotics and decision algorithms, oxygen delivery systems, and office protocols for occupational injuries. This text would be a valuable edition for dental hygienists who are establishing independent practices.

5. Wilkins, Esther. *Clinical Practice of the Dental Hygienist*, 10th ed. Philadelphia: Lippincott Williams & Wilkins, 2008.

The previous edition of this definitive text on dental hygiene has been significantly revised and updated to provide even more focused guidance on all aspects of dental hygiene in the clinical environment. Ideal for both students and practitioners, the book reviews the clinical and educational skills needed for successful practice. Six comprehensive sections address orientation, preparation for appointments, patient assessment, treatment, and patients with special needs. New features include a significantly revised art program, case-based exercises to reinforce understanding, procedure boxes to enhance technique, and ethics boxes. One objective of the 10th edition is to assist the practising dental hygienist to understand and adopt the meaning and application of evidence-based care. There is an accompanying CD-ROM.

CDHA welcomes your feedback: library@cdha.ca

ANNUAL GENERAL MEETING OF MEMBERS
OF THE CANADIAN DENTAL HYGIENISTS ASSOCIATION (CDHA)

Proxy

The undersigned hereby appoints Wanda Fedora or, failing her, Carol-Ann Yakiwchuk, or instead of the foregoing*

_____

as proxyholder of the undersigned with full power of substitution to attend and vote at the Annual General Meeting of the members of the Canadian Dental Hygienists Association on 18 October 2008 and at any adjournment thereof (each a "Meeting") with the same powers as if the undersigned were personally present. This proxy revokes any and all previous proxies executed by the member in respect of the relevant Meeting.

Signature of Voting Member _____ Date (please print) _____

Voting Members Name (please print) _____

* A Voting Member has the right to appoint a person (who must be another Voting Member of the Canadian Dental Hygienists Association)

To be valid this proxy must be signed by the Voting Member; and received at the Canadian Dental Hygienists Association, 96 Centrepointe Drive, Ottawa, Ontario, K2G 6B1 (by mail or facsimile to 613-224-7283) not later than 9:00 a.m. ET 16 October 2008; and shall be valid only for the meeting for which it was specifically given or for any adjournment thereof.

ASSEMBLÉE GÉNÉRALE ANNUELLE DES MEMBRES
DE L'ASSOCIATION CANADIENNE DES HYGIÉNISTES DENTAIRES (ACHD)

Formulaire de procuration

La personne soussignée nomme par la présente Wanda Fedora, ou, à défaut, Carol-Ann Yakiwchuk, ou, à la place des personnes susmentionnées*,

_____

comme fondée ou fondé de pouvoir avec pleins pouvoirs de substitution pour assister et voter en son nom à l'assemblée générale annuelle des membres de l'Association canadienne des hygiénistes dentaires, le 18 octobre 2008, ainsi qu'à toute reprise en cas d'ajournement de cette assemblée (chacune constituant une « réunion »), avec les mêmes pouvoirs que si la personne soussignée y assistait personnellement. La présente procuration révoque toute autre procuration donnée antérieurement par le membre relativement à l'assemblée en question.

Signature du membre votant _____ Date (en lettres moulées) _____

Nom du membre votant (en lettres moulées) _____

* Tout membre votant a le droit de désigner une personne (qui doit être un autre membre votant de l'Association canadienne des hygiénistes dentaires).

Pour être valide, cette procuration doit être signée par le membre votant; elle doit être reçue aux bureaux de l'Association canadienne des hygiénistes dentaires, 96, promenade Centrepointe, Ottawa (Ontario), K2G 6B1 (par la poste ou par télécopieur, au 613-224-7283) le 16 octobre 2008 à 9 h HE, au plus tard; en outre, elle n'est valide que pour la réunion pour laquelle elle a été expressément donnée ou pour toute reprise en cas d'ajournement.

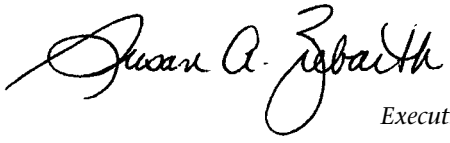
NOTICE OF ANNUAL MEETING OF MEMBERS OF CANADIAN DENTAL HYGIENISTS ASSOCIATION (CDHA)

NOTICE is hereby given that the annual meeting of the members of **CANADIAN DENTAL HYGIENISTS ASSOCIATION** will be held at CDHA, 96 Centrepointe Drive, Ottawa, Ontario, on Saturday the 18th day of October, 2008, at the hour of 9:00 o'clock in the forenoon, to:

I. receive the financial statement of the corporation for the fiscal period ended April 30, 2008, and the report of the auditors thereon;
II. appoint auditors; and
III. transact such further and other business as may properly brought before the meeting or any adjournment thereof.

Copies of the financial statements and the auditors' report are available for review at the corporation's head office during normal business hours.

DATED the 17th day of September, 2008.
BY THE ORDER OF THE BOARD OF DIRECTORS



Executive Director / Directrice génerale

AVIS DE CONVOCATION DE L'ASSEMBLÉE ANNUELLE DES MEMBRES DE L'ASSOCIATION CANADIENNE DES HYGIÉNISTES DENTAIRES (ACHD)

AVIS est par les présentes donné que l'assemblée annuelle des membres de **L'ASSOCIATION CANADIENNE DES HYGIÉNISTES DENTAIRES** aura lieu à l'ACHD au 96, promenade Centrepointe, à Ottawa (Ontario) le samedi 18 octobre 2008, à neuf heures. En voici l'ordre du jour:

I. recevoir l'état financier de l'Association pour l'exercice ayant pris fin le 30 avril 2008 et le rapport des vérificateurs à ce sujet;
II. nommer les vérificateurs;
III. régler toute autre question dûment soulevée à l'assemblée annuelle ou à toute nouvelle assemblée convoquée en cas d'ajournement de l'assemblée annuelle.

Des exemplaires des états financiers et du rapport des vérificateurs peuvent être examinés au siège social de l'Association pendant les heures d'affaires ordinaires.

FAIT le 17 septembre 2008.
PAR DÉCRET DU CONSEIL D'ADMINISTRATION

Health literacy and health communication

CDHA staff

Health literacy is defined as the degree to which individuals have the capacity to obtain, process, and understand basic information and services needed to make appropriate decisions regarding their health.[1] An immediate challenge facing health professionals is to mobilize the power of mass communication to empower individuals adopt healthy behaviours through clear and simple communication. Dental hygienists are in a commanding position to help educate, and communicate with their clients in their friendly workplaces that encourage client interaction rather than, what could present for the client, an intimidating hospital emergency room environment.

Health literacy also includes writing, listening, speaking, computing, and conceptual knowledge. Even well educated people with strong reading and writing skills may have trouble comprehending a medical form or a health professional's instructions regarding a drug or procedure. This column takes a look at how some organizations are addressing these pressing challenges.

1. http://www.cpha.ca/en/portals/h-l/h-l3.aspx

The Canadian Public Health Association (CPHA) Expert Panel discusses strategies to overcome barriers and enable capacity building in health literacy. This link offers some of these promising approaches for governments, communities, health and education professionals, and individuals.

2. http://www.centreforliteracy.qc.ca/health/healthlt.htm

A joint health literacy initiative of The Centre for Literacy of Quebec and the Department of Nursing of the McGill University Health Centre (MUHC) has been studying the complex combinations of factors involved with literacy and health and attempting to identify how various specific barriers to patient communication can be recognized and addressed.

3. http://www.ccl-cca.ca/CCL/Reports/Other+Reports/HealthLiteracy.htm

Initial results from the International Adult Literacy and Skills Survey (IALSS) are discussed in this report which indicates health literacy skills are considered to be at Level 2 and below (IALSS definition), and that 60 per cent of adult Canadians lack the capacity to obtain, understand and act upon health information and services and to make appropriate health decisions on their own.

4. http://www.thcu.ca/

The Health Communication Unit (THCU) at the Centre for Health Promotion, University of Toronto conducts workshops and events, offers consultation services and information and resources on health promotion.

5. http://www.nald.ca/healthliteracystfx/

This Nova Scotia research project explores the links between health and literacy, and lists five key strategies to collectively address health literacy to find, understand, and use the information to stay healthy, to get the services and supports needed, to make choices that help keep individuals healthy, to speak up about their own health needs, and to have more control over the things that make and keep an individual healthy.

6. http://www.nationalreviewofmedicine.com/issue/2007/04_15/4_patients_practice07_7.html

This article from the National Review of Medicine examines how well patients understand explanations and instructions about their care. Although health literacy now registers on most physicians' radars that doesn't mean patients understand any better what's going on. According to a recent CCL report, 55 per cent of Canadian adults came in below suggested health literacy levels.

7. http://www.hlnnews.blogspot.com/

The Health Literacy Network News provides current information on health resources, services and events in British Columbia.

8. http://www.gwu.edu/~cih/journal/

The *Journal of Health Communication* presents a global initiative in the latest developments in the field of health communication including research in risk communication, health literacy, social marketing, communication (from interpersonal to mass media), psychology, government, policy-making, and health education.

9. http://www.healthcommunication.net/

This network, comprising three organizations, recognizes the need to promote the integrity of and advance the field of health communication while assuring a focus on "communication" in those efforts. The network recognizes that health communication research and practice are conducted across numerous disciplines.

10. http://www.nlm.nih.gov/medlineplus/healthliteracy.html

The consequences of limited health literacy affect an individual in many ways from difficulties in filling out complex medical forms, to inability to locate providers and services or share personal information such as health history.

11. http://www.m-mc.org/hcmn/

The M/MC Health Communication Materials Network (HCMN) is an international network of professionals specializing in the development and use of health communication materials - pamphlets, posters, video, radio, novelty items, flipcharts, cue cards, training materials, and electronic media. The network invites anyone involved in developing health communication materials to apply for free membership.

CDHA welcomes your feedback: journal@cdha.ca

REFERENCE:

1. *Healthy people 2010*. 2nd ed. Department of Health and Human Services Washington DC. 2000 Nov.

Continuing Education Opportunities

©iStockphoto.com/Lise Gagne

With fall and winter fast approaching, CDHA offers you the perfect solution to combat the end-of-summer doldrums. Our online CE courses will allow you to expand your knowledge base and stay up-to-date on new developments in the comfort of your own home.

Obtain a certificate of course completion to satisfy provincial dental hygiene regulatory professional development requirements. Remember, it is your professional responsibility to be a life long learner. You can keep track of the continuing education initiatives you have completed or are in the process of completing with the Professional Development Manager at http://www.cdha.ca/members/content/continuing_education/ProfessionalDevelopment.asp

One of our courses is sure to meet your own specific learning needs. A new online course will be available to CDHA members at no cost from December 1, 2008 until September 15, 2009. Visit the CDHA continuing education site at: http://www.cdha.ca/members/content/continuing_education/ce_home.asp

Take the demonstration tour of our most recent course on Difficult Conversations. We believe that you will find the unique format very enjoyable.

Featured Courses

Self-Initiation for Dental Hygienists

The amendment to the Dental Hygiene Act, 1991 was proclaimed in Ontario on September 1, 2007. Registrants approved by the College of Dental Hygienists of Ontario to self-initiate their authorized act of scaling teeth and root planing, including curetting surrounding tissue may now do so in Ontario without an order from a dentist subject to the provisions of Regulation 501/7 Part III. Successful completion of this course will allow dental hygienists from Stream Two to meet the requirement and from Stream Three to meet one of the requirements for eligibility to apply for approval to self-initiate their authorized acts according to the CDHO Standard of Practice for Self-Initiation. Aussi offert en Français

Certificate Program: Independent Practice for Dental Hygienists

Legislative changes in some Canadian jurisdictions now allow the establishment of independent dental hygiene practices. The business environment is challenging and requires energy and hard work, and to be successful, dental hygienists must now develop the necessary management skills to complement their role as primary preventive oral care providers.

Treatment vs. Prevention: New Insights on Common Oral Conditions
(Free Membership Renewal Benefit until October 31, 2008)

There is no "trap door" at the neck that separates oral health from overall health. This is a paradigm shift that has significant implications for the treatment and prevention of oral conditions and for the role of dental hygienists as healthcare professionals.

Clinical Tobacco Intervention

This online course has been developed by the BC Cancer Agency to meet the requirements of a variety of health professionals. The course will enable you, the practitioner, to answer patients' questions about tobacco use with evidence-based recommendations.

Work and Personal Life Balance

Are you feeling that life is just too hectic and unmanageable? This engaging course explores stress and work and life imbalance, helping you develop coping strategies and a personal plan of action to deal with the stress in your life.

Negotiation

As a dental hygienist you negotiate on an ongoing basis in your day-to-day life. When negotiating an issue that is very important to you, do you find yourself at the losing end of the negotiation? You may already be a good communicator, but you may like to improve your negotiation skills to achieve better results and be more effective in all areas of your life. This course will assist you in developing or improving your persuasive communication skills.

Interpersonal Skills

As a dental hygienist it is imperative that you develop your interpersonal skills. Interpersonal skills enable you to work with others harmoniously and efficiently. Employers, co-workers and clients appreciate individuals who get along well with people at all levels. This course will assist you with improving your interpersonal skills, including communication, problem solving, and teamwork abilities.

The Professional Role

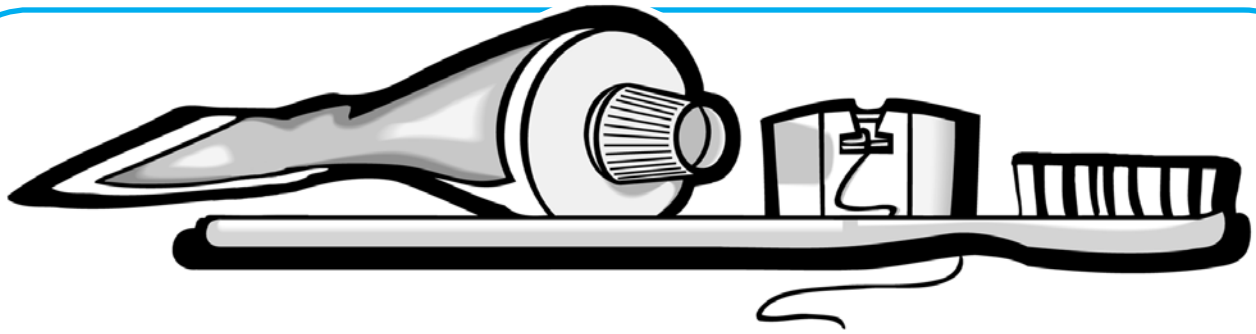
As a dental hygienist, you may ask yourself, "Am I acting like a professional?" This course will enhance your professionalism. How you look, talk, write, and act at work determine how you are perceived as a professional. Theoretical and practical concepts are presented, along with opportunities for self-reflection and critical thinking.

Help Your Clients to Stop Gambling With Their Health

As members of the tobacco cessation team, dental hygienists can play a key role in helping their clients to stop using tobacco. This course presents current facts about tobacco use and tobacco cessation. It will help you integrate this knowledge into the DH process of care in order to implement an evidence-based tobacco cessation program for your clients. Aussi offert en Français

Difficult Conversations

Do you find it hard to deliver tough messages? Do you get anxious when others get angry at you? Do you avoid conversations that may end in arguments? The Stitt Feld Handy Group Online Difficult Conversations Course is designed to help you have the hard but necessary conversations that we all have to face.



CDHA oral health promotion prize 2008, in participation with Crest Oral-B

We want to hear how creative you've been in promoting your profession this year. Send us your stories and photos. Entries will be judged on their creativity, planning, volunteer recruitment, educational elements, community impressions and impact as well as innovative partnerships. Applicants must submit an essay of less than 500 words. By submitting their essay and photos, applicants agree to have their essay or parts thereof published in the *Canadian Journal of Dental Hygiene*, at the discretion of CDHA.

To help you get your submission ready, please e-mail us at lm@cdha.ca, fax us at 613-224-7283, or call toll free at 1-800-267-5235. Entries must be received by 28 November 2008, at the CDHA, 96 Centrepointe Drive, Ottawa, Ontario, K2G 6B1.

Get involved and you could win!

Enter by Friday, 28 November 2008

- Individuals: $1,000
- Clinic teams: $2,000
- Dental hygiene schools: $2,000

Half of each prize will be shared with the winner's local dental hygiene chapter.

Remember — the deadline for entry submission is 28 November 2008.

Prix 2008 de l'ACHD pour la promotion de la santé bucco-dentaire, décerné avec la participation de Crest Oral-B

Nous désirons savoir à quel point vous avez fait preuve de créativité pour promouvoir votre profession cette année. Faites-nous parvenir des anecdotes et des photos. Les envois seront jugés selon les critères suivants : créativité, planification, recrutement de bénévoles, éléments éducatifs, impressions et impact sur la collectivité ainsi que sur la dimension innovatrice des partenariats créés. Les candidates et les candidats doivent soumettre un essai de moins de 500 mots. En soumettant leur essai et leurs photos, les candidates et les candidats acceptent que leur essai ou des extraits de celui-ci soient publiés dans le *Journal canadien de l'hygiène dentaire*, à la discrétion de l'ACHD.

Pour qu'on puisse vous aider à préparer votre présentation, faites-nous parvenir un courriel à lm@cdha.ca, télécopiez au 613-224-7283 ou appelez sans frais au 1-800-267-5235. Les inscriptions doivent être reçues au plus tard le 28 novembre 2008 à l'ACHD, 96 promenade Centrepointe, Ottawa, Ontario, K2G 6B1.

Participez, vous pourriez gagner !

Inscrivez-vous au plus tard le vendredi, 28 novembre 2008

- Individus : 1 000 $
- équipes de cliniques : 2 000 $
- écoles d'hygiène dentaire : 2 000 $

La moitié de chaque prix sera partagée avec le chapitre local de l'association d'hygiène dentaire des gagnantes et gagnants.

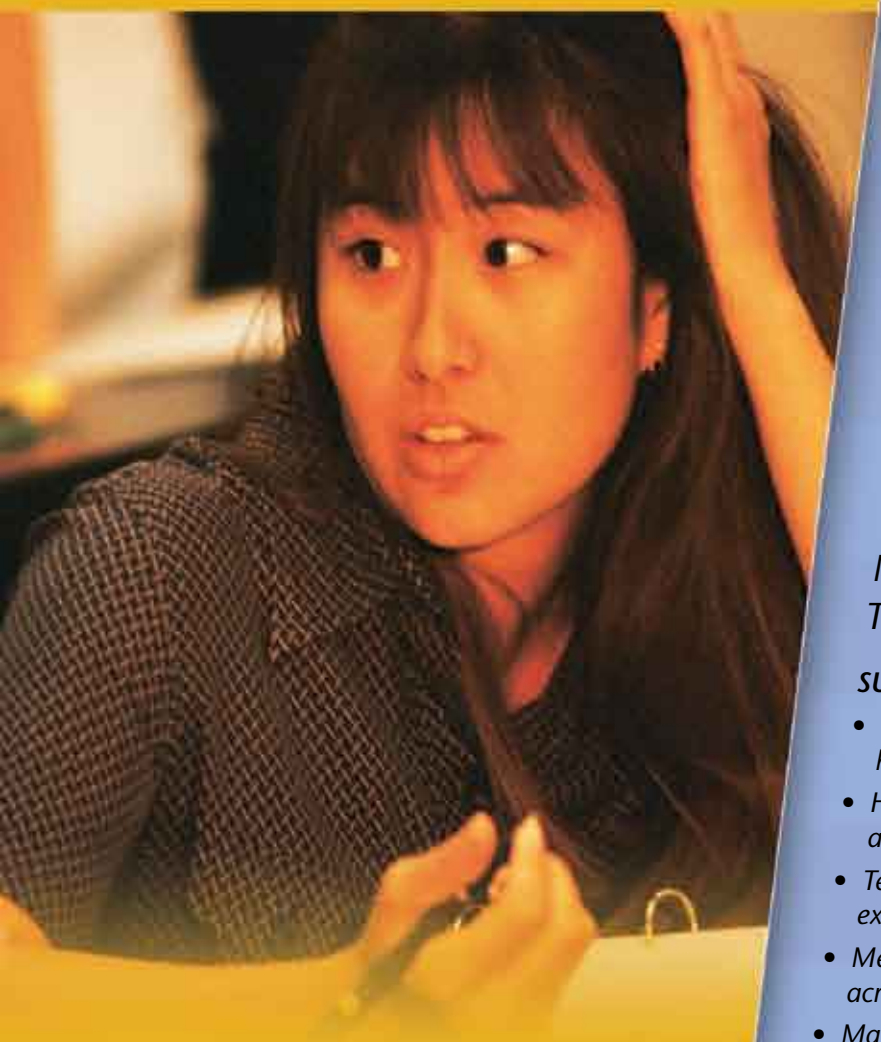
N'oubliez pas — la date limite pour la presentation est le 28 novembre 2008.

Crest® Oral-B®

Canadian Dental Hygienists Association

STUDENT SUMMIT

NEW WESTMINSTER, BC · TORONTO, ON



Attention Students

Mark Your Calendars...

The CDHA Student Summit is going West to East in 2008!

New Westminster, BC, November 1, 2008
Toronto, ON, November 8, 2008

SUMMIT HIGHLIGHTS

- *Discover the array of rewarding non-traditional dental hygiene professional career options*
- *Help with the transition from being a student to becoming a practising dental hygienist*
- *Test-drive the newest oral health care products on our exhibit show floor*
- *Meet and mingle with fellow dental hygiene students across Canada*
- *Make important career connections*
- *Discover how CDHA can assist you in your professional development*

Register today and tell a friend.

More information and registration is available online at www.cdha.ca

THE CANADIAN DENTAL HYGIENISTS ASSOCIATION
L'ASSOCIATION CANADIENNE DES HYGIÉNISTES DENTAIRES

CLASSIFIED ADVERTISING

CDHA and *CJDH* are not responsible for classified advertising, including compliance with any applicable federal and provincial or territorial legislation.

BRITISH COLUMBIA

REVELSTOKE *Company/practice name:* Dr W Scott LeBuke Inc. *Position available:* Dental hygienist, one year maternity leave. *Last date:* September, 2008. *Position description:* We are looking for part time or full time dental hygienist to cover a maternity leave in Canada's newest ski resort town with the highest vertical ski runs in North America. The maternity leave starts January 2009 for one year. We offer a competitive salary and help with housing if needed. Come join our friendly and fun staff for a year of adventure. Visit us at www.revelstokedental.com or www.discoverrevelstoke.com and www.seerevelstoke.com. *Qualifications:* Certification to practice hygiene in BC. *Contact:* Dr W Scott LeBuke Inc. Box 2879, 111 2nd street West, Revelstoke, BC V0E 2S0, Canada. Tel: 250-837-6231; Fax: 250-837-4229; e-mail: drscott@revelstokedental.com

ALBERTA

EDMONTON *Company/practice name:* Clareview & Belmont Dental Associates. *Position available:* Registered dental hygienist. 2-4 day week. *Position description:* 2-4 days registered dental hygienist required for Northeast Edmonton dental office. Family orientated modern practice with digital X-rays, charting and new equipment in a friendly atmosphere. Wages and benefits depend on qualification and experience. Position available immediately. *Qualifications:* Registered dental hygienist for province of Alberta. *Contact:* Joannie Au, Clareview & Belmont Dental Associates, 2911-137 Ave., Edmonton, AB T5A 5G8, Canada. Tel: 780-475-5922; Fax: 780-475-8998; e-mail: jau1@telus.net

CDHA classifieds

CDHA classified advertisements are listed on www.cdha.ca >Members Only>Career Centre>Employment Opportunities>All/by province. Online advertisers can list their advertising in the *Canadian Journal of Dental Hygiene* for an additional fee. For pricing details, visit http://www.cdha.ca/content/corporate_opportunities/hire_a_hygienist.asp

CDHA classified advertising reaches more than 11,000 members across Canada, ensuring that your message gets to a target audience of dental hygienists in a prompt and an effective manner. Contact CDHA at info@cdha.ca or 1-800-267-5235 for more information.

ONTARIO

LONDON *Company/practice name:* 5 Eleven Dental Hygiene & Cosmesis. *Position description:* Opportunity available in London, Ontario for self initiated dental hygienists interested in independent practice. Terms flexible. *Contact:* Della on tel: 519-455-5511 or send résumé by e-mail: 5elevendental@live.com

OTTAWA *Company/practice name:* Canadian National Institute of Health. *Position available:* Full time Program Coordinator (Dental Hygiene Program). *Position description:* Primary responsibilities: Curriculum management, hiring and orienting staff, staff evaluation, Chair of the team, Academic Advancement Committee and Curriculum Committee meetings. The ideal candidate must be able to work well within a management team, faculty and with student body. The candidate must have knowledge/experience of dental hygiene education programming, excellent writing, communication, and interpersonal skills. *Qualifications:* Current registration in dental hygiene and a Bachelor's degree or higher. The candidate must have 5 years clinical experience, knowledge of the governing bodies of the profession and experience in both clinical and theoretical instruction. *Contact:* James Kelassy or Nanette Feil-Megill. Tel: 613-726-2644; fax: 613-726-3366; e-mail résumé: jkeslassy@cnih.ca or nmegill@cnih.ca. References only on request.

CALL TO DENTAL HYGIENE RESEARCHERS AND GRADUATE STUDENTS

If you are a dental hygiene researcher or graduate student, CDHA requests your theses and dissertations for the CDHA library. Making print copies of dental hygiene research available in this central repository will enable dental hygienists and students in other health related disciplines to benefit from your expertise. Sharing new research will also inspire others to contribute to the dental hygiene body of knowledge.

For further information contact:
Brenda Leggett, Information Coordinator
e-mail: library@cdha.ca
Phone: 1-800-267-5235 extension 122

Advertisers' index

ABOUT THE COVER

People through the ages did spend time trying to take care of their teeth and dental hygiene. The front covers of Volume 42 feature plants used as remedies in dental treatments during the Renaissance period, and this note provides a ***historical*** perspective of their traditional use in oral or dental care, and hygiene.

Volume 42.5, September-October 2008
Cover picture credit:
©iStockphoto.com/Mike Bentley.

Lonicera periclymenum **(honeysuckle, woodbine)**
"The water of the honeysuckle is good against soreness of the throat and uvula, and with the same leaves boiled, or the leaves and flowers distilled, are made diverse good medicines against cankers and sore mouths."

John Gerard (1545-1612), *The Herbal or General History of Plants*. Reprint of the 1633 edition as revised and enlarged by Thomas Johnson. 1975. Dover Publications, NY. 890-892.