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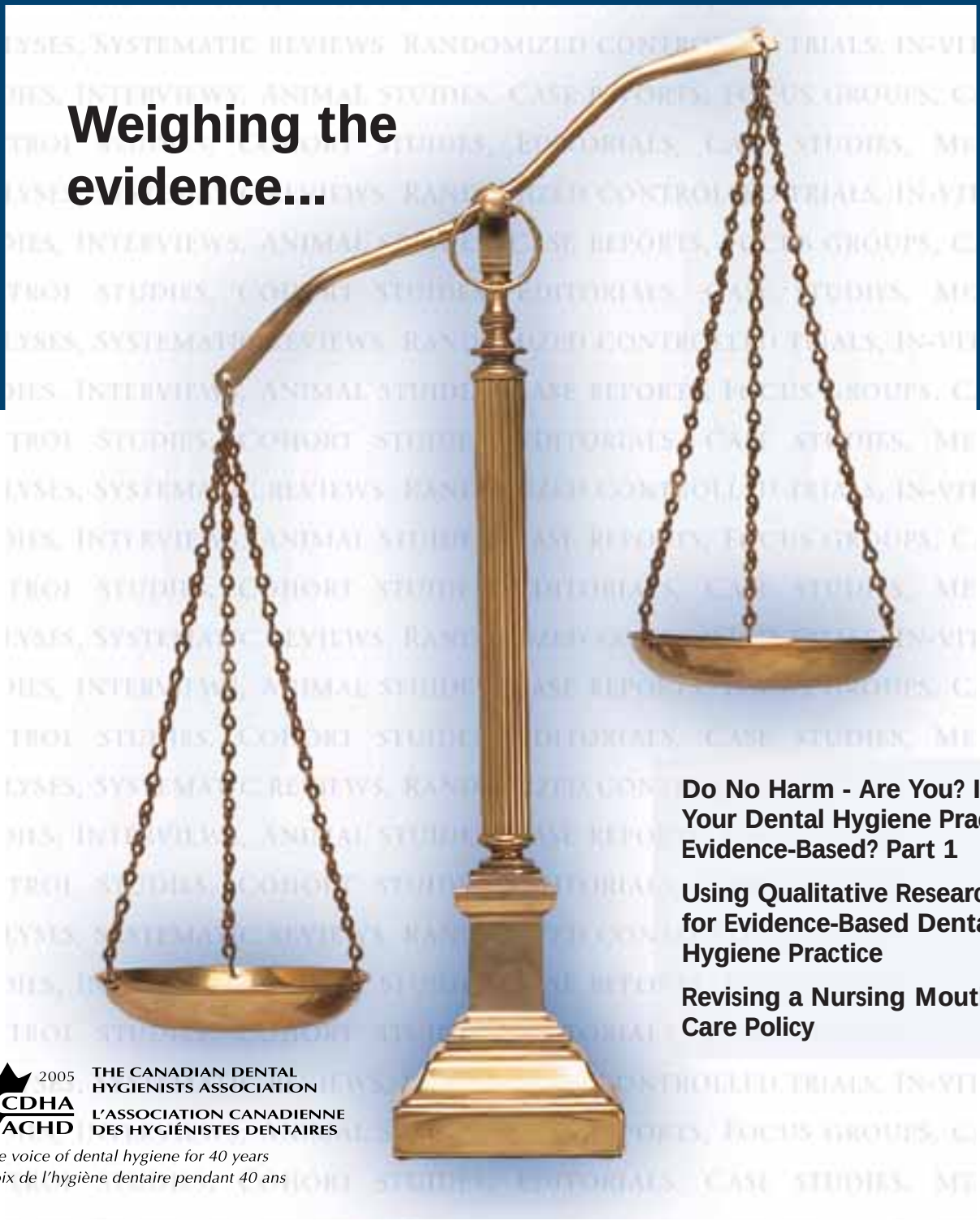
Weighing the evidence...



Do No Harm - Are You? Is Your Dental Hygiene Practice Evidence-Based? Part 1

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THE CANADIAN DENTAL HYGIENISTS ASSOCIATION

L'ASSOCIATION CANADIENNE DES HYGIÉNISTES DENTAIRES

The voice of dental hygiene for 40 years

La voix de l'hygiène dentaire pendant 40 ans

THE OFFICIAL JOURNAL OF THE CANADIAN DENTAL HYGIENISTS ASSOCIATION

The Board and You

by Patty Wickstrom

THE CANADIAN DENTAL HYGIENISTS Association exists for you, the members across the country, and for the profession of dental hygiene in Canada. Its Board of Directors directs the organization in its endeavours and represents the association at many events, some of them international. But the members are the true "owners" of CDHA and so it is right that the Board looks to you for input on how you would like to see the profession evolve. There are many different ways in which this input is gathered, a major one being through the representatives who comprise the Board itself—one from each province as well as one from the Dental Hygiene Educators of Canada (DHEC) and from the Federation of Dental Hygiene Regulatory Authorities (FDHRA). Please feel free to contact any one of the representatives.

The members are the true "owners" of CDHA

Another method of obtaining member input is through surveys, such as the recent labour survey that was available on the CDHA website. Thank you to all who took the time to answer this survey. Yet another approach to learning what members think about specific issues is the Town Hall Forum that has been an important event at the last few annual professional conferences. This is moderated by the Board members who welcome this opportunity to talk over concerns face to face with other dental hygienists from all areas of Canada.

Feedback concerning the CDHA journal has helped us make this publication more accessible and relevant to dental hygienists in many settings, clinical, corporate, and educational. With this issue, the journal has a new design, a new name, and a renewed focus on professional articles that are challenging, interesting, timely, and a resource for you in your work. We are pleased to unveil the new format in this inaugural issue of the *Canadian Journal of Dental Hygiene* that will further the professional agenda of our association. We encourage you to let us know what you think of it and look forward to receiving your comments.

At the CDHA conference last June in St. John's, Newfoundland and Labrador, we were very excited to launch the recently approved Canadian Foundation for Dental Hygiene Research and Education. Your involve-

The Board and You *…continued on page 231*

Le Conseil et vous

par Patty Wickstrom

C'EST POUR VOUS, LES MEMBRES DE PARTOUT AU pays, et pour la profession d'hygiéniste dentaire au Canada qu'existe l'Association canadienne des hygiénistes dentaires. Le conseil d'administration de l'organisme dirige celui-ci dans ses entreprises et le représente à de nombreuses activités, dont certaines à caractère international. Mais comme vous, les membres, êtes les vrais « propriétaires » de l'ACHD, il est juste que le conseil s'adresse à vous pour connaître votre opinion sur la façon dont la profession devrait évoluer. Il existe bien des manières de recueillir les points de vue, l'une des principales consistant à passer par les représentants qui composent le conseil d'administration lui-même. Chaque province en compte un; les Éducateurs en hygiène dentaire du Canada (EHDC) et la Fédération des organismes de réglementation de l'hygiène dentaire (FORHD) ont aussi leur représentant respectif. N'hésitez pas à communiquer avec l'un ou l'autre d'entre eux.

Les sondages constituent un autre moyen de recueillir l'opinion des membres; le récent sondage sur les conditions de travail que l'on pouvait trouver sur le site Web de l'ACHD en est un exemple. Merci à tous ceux et celles qui ont pris le temps d'y répondre. L'assemblée publique, qui s'est avéré un événement important lors des dernières conférences professionnelles annuelles, est encore une autre méthode utilisée pour connaître l'opinion des membres sur des questions précises. Ce forum est animé par des membres du conseil d'administration qui profitent de l'occasion pour discuter de vive voix des questions qui les préoccupent avec d'autres hygiénistes dentaires des quatre coins du pays.

Les réactions à propos de la revue de l'ACHD nous ont aidés à accroître l'accessibilité et la pertinence de cette publication pour les hygiénistes dentaires dans divers milieux de travail – en clinique, en entreprise et dans l'enseignement. À partir de ce numéro-ci, la revue a un nouveau design et un nouveau nom, et elle renouvelle l'accent mis sur des articles professionnels stimulants, intéressants, opportuns, des articles auxquels vous pourrez vous référer dans votre travail. Nous sommes heureux d'en dévoiler la nouvelle présentation dans ce numéro inaugural du *Journal canadien de l'hygiène dentaire*, revue qui contribuera au succès du programme professionnel de notre association. Nous vous incitons à nous faire savoir ce que vous en pensez et nous avons hâte de recevoir vos commentaires.

Le Conseil et vous *…suite page 231*

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Communication, collaboration, coordination, community — CDHA at 40

by Susan Ziebarth, BSc, MHA, CHE

Life begins at forty. — Walter B. Pitkin

THIS INAUGURAL ISSUE OF THE *CANADIAN JOURNAL OF Dental Hygiene* comes at a milestone in CDHA's history—the 40th birthday celebration of our association. We look forward to your feedback regarding the new look and feel of the *Journal* as we balance scientific rigor with readability and clinical practicality.

The *Journal*, however, is but one aspect of our year-long observance. The Canadian Foundation for Dental Hygiene Research and Education was launched at our 15th annual professional conference last June in St. John's, Newfoundland, where we held our first fundraiser. Salme Lavigne, Trudy McAvity, and Sharon Amer are the founding board members and will be hard at work in the next few months developing policies and putting a communication plan in place to keep you informed.

A milestone in CDHA's history—the 40th birthday celebration of our association.

In 2001, CDHA embarked on an internal audit, which involved a member survey and interviews with key stakeholders. As a result of that audit, we developed a five-year plan to address the issues identified. This year—year four of the plan—you will see some major changes in our *Members Only* website. We are partnering with the dental hygiene provincial associations in British Columbia, Saskatchewan, Manitoba, New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador to create a combined Intranet. Five local dental hygiene societies are also participating in this pilot project. The goal of this Intranet is to improve member **communication, collaboration,** and **coordination,** which will all help to develop a stronger dental hygiene **community.**

Communication, collaboration, coordination, community — CDHA at 40 *…continued on page 234*

Communication, collaboration, coordination, conscience collective – l'ACHD à 40 ans

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

La vie commence à 40 ans. — Walter B. Pitkin

CE NUMÉRO INAUGURAL DU *JOURNAL CANADIEN DE l'hygiène dentaire* arrive à un moment important dans l'histoire de l'ACHD — septembre-octobre 2004 — puisque c'est la première publication à souligner le début des célébrations entourant notre 40e anniversaire. Nous attendons avec impatience vos réactions concernant le nouvel aspect du *Journal* et sa convivialité, comme nous équilibrons la rigueur scientifique avec la lisibilité et la valeur clinique concrète.

Le *Journal* n'est cependant qu'un aspect de nos célébrations réparties sur un an. La Fondation canadienne pour la recherche et l'éducation en matière d'hygiène dentaire a été lancée en juin dernier, lors de notre 15e conférence professionnelle annuelle à St. John's (Terre-Neuve), où nous avons tenu notre première activité-bénéfice. Les membres fondateurs du conseil d'administration de la Fondation sont Salme Lavigne, Trudy McAvity et Sharon Amer. Celles-ci vont redoubler d'efforts au cours des prochains mois pour élaborer des politiques et mettre en place un plan de communication à votre intention.

En 2001, l'ACHD s'est lancée dans une vérification interne qui comportait une enquête et des entrevues avec des membres et des interlocuteurs clés. À la suite de cette vérification, nous avons dressé un plan quinquennal pour nous attaquer aux problèmes relevés. Cette année — la quatrième de notre plan —, vous verrez quelques changements majeurs dans la section *Réservée aux membres* de notre site Web. Nous établissons un intranet en partenariat ave les associations provinciales d'hygiène dentaire de la Colombie-Britannique, de la Saskatchewan, du Manitoba, du Nouveau-Brunswick, de la Nouvelle-Écosse, de l'Île-du-Prince-Édouard ainsi que de Terre-Neuve-et-Labrador. Cinq sociétés locales d'hygiène dentaire participent également à ce projet pilote. Cet intranet a pour but d'améliorer la **communication,** la **collaboration** et la **coordination** entre les membres, ce qui contribuera à renforcer la **conscience collective** des hygiénistes dentaires.

Communication, collaboration, coordination, conscience collective – l'ACHD à 40 ans *…suite page 208*

SCIENTIFIC EDITOR

Susanne Sunell, BA, DipDH, MA, EdD, has been named the new Scientific Editor for the *Canadian Journal of Dental Hygiene*. In this position, she will be working with the Research Advisory Committee and the Managing Editor of the journal to ensure that articles are of professional quality. Susanne has been a valuable contributor to the journal and CDHA for many years and was the recipient of the CDHA Distinguished Service Award last June. She is a dental hygiene educator with the Vancouver Community College, an educational and ergonomic consultant, and is currently involved in the evaluation of surgical magnification systems through the Surgical Telescope Evaluation Program at the University of British Columbia.

Susanne takes over from **Marilyn Goulding** who has contributed so much over the past 15 years, playing a pivotal role in the evolution of the journal. When Marilyn first took on the task, the Scientific Editor was essentially the managing editor of the scientific issues of *Probe* — involved with the advertising, printers, and layout in addition to the tasks more normally associated with the position. Marilyn managed all these responsibilities and helped the journal grow in quality and prestige. Her input, enthusiasm, and expertise have been greatly appreciated and we thank her for all her valuable work.

Communication, collaboration, coordination, conscience collective – l'ACHD à 40 ans *(suite de la page 207)*

Nous allons inaugurer sur notre site Web une nouvelle section destinée spécialement aux étudiants. Elle mettra l'accent sur leurs besoins en matière d'information concernant *les écoles, la recherche, la réglementation, la carrière, l'adhésion à l'Association et l'information sur les produits.*

L'estimateur de coûts des primes d'assurances, sur notre site Web, a remporté un prix d'excellence APEX. Les prix APEX reconnaissent l'excellence de la conception graphique et du contenu rédactionnel ainsi que la capacité d'atteindre les objectifs généraux en matière de communication. La concurrence a été particulièrement vive, cette année, puisque le concours a attiré près de 5 500 inscriptions. Parmi les organisations lauréates dans la même catégorie que l'ACHD figuraient l'Arthritis Foundation of America, la Colorado State University, la National Education Association of America ainsi que le U.S. Postal Service – pour ainsi dire, nous étions en compagnie plutôt impressionnante! (L'estimateur de primes se trouve à l'adresse suivante : www.cdha.ca/members/content/membership_services/membership_services_insurance_forms.asp.)

Nous nous intéressons aussi aux très jeunes étudiants. Soyez à l'affût des nouvelles au sujet d'un programme intéressant que nous commençons à planifier : un programme que vous pourrez introduire dans les classes de maternelle, si vous êtes en mesure de faire une heure ou deux de bénévolat, pour enseigner aux enfants comment bien prendre soin de leurs dents. Si vous avez accès à nos diffusions par courriel, surveillez les mises à jour de ce programme. Si vous n'avez pas accès à Internet, il suffit de nous faire part de votre intérêt et nous veillerons à vous faire parvenir l'information.

Les nouveaux avantages réservés aux membres vous aideront à garder le sourire tout au long de l'année. Par exemple, vous pouvez désormais obtenir des rabais auprès de Location d'autos National, dans les centres de culture physique et de perte de poids Curves ainsi qu'auprès d'Hypothèques Logis Concept. Vous pouvez aussi obtenir une carte de crédit MasterCard Mosaik^{MD} de la Banque de Montréal, qui finance la recherche et l'enseignement en hygiène dentaire chaque fois que vous l'utilisez. Si vous avez déjà une carte de crédit MasterCard de la Banque de Montréal, vous pouvez l'échanger par téléphone contre une carte de l'ACHD, sans modification au contrat en vigueur. Appelez-nous pour savoir comment faire.

Dans le contexte des célébrations de notre 40^{e} anniversaire, nous témoignons notre gratitude envers nos membres par une série de tirages qui auront lieu au cours de l'année. Comme il y aura des prix fabuleux, vérifiez les résultats du tirage dans notre prochain numéro du *Journal* et surveillez les courriels que les Communications de l'ACHD vous envoient deux fois par mois.

Plus sérieusement, rappelons que l'ACHD continuera de travailler pour votre compte et de vous offrir des résultats de recherche et des outils qui vous aideront à améliorer la santé des Canadiens et des Canadiennes. Tout en gardant ces préoccupations à l'esprit, nous nous efforcerons de suivre les leçons de vie attribuées à Dick Fosbury, médaillé d'or olympique au saut en hauteur, concernant les conditions de la réussite. Dick a dû affronter les opinions décourageantes de gens qui ne voyaient pas en lui un champion. À force de détermination, cependant, il s'est frayé un chemin. Voici les conseils qu'il donne :

- Transformez les pensées négatives en pensées positives.
- Si le statu quo ne donne pas de résultats, remettez-le en question!
- Évaluez la situation actuelle de votre organisme en regard de la vision de votre profession prônée par votre organisme et déterminez ce qu'il faut faire pour combler les écarts.
- Suivez le régime et le plan d'exercice prescrits, gardez toujours la vision présente à l'esprit et allez jusqu'au bout.

Nous nous réjouissons à la perspective d'une année passionnante de célébrations de la profession d'hygiéniste dentaire. Fêtez avec nous!

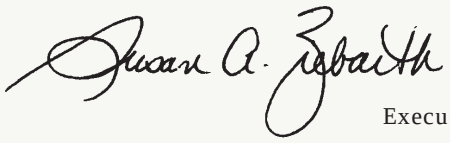
NOTICE OF ANNUAL MEETING OF MEMBERS
OF CANADIAN DENTAL HYGIENISTS ASSOCIATION (CDHA)

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 16th day of October, 2004, 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, 2004, and the report of the auditors thereon;
II. appoint auditors and authorize the directors to fix the remuneration of the 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 15th day of September, 2004.
BY THE ORDER OF THE BOARD OF DIRECTORS



Executive Director

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, avenue Centrepointe, à Ottawa (Ontario) le samedi 16 octobre 2004, 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 2004 et le rapport des vérificateurs à ce sujet;
II. nommer les vérificateurs et autoriser les administrateurs à fixer la rémunération des 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 15 septembre 2004.
PAR DÉCRET DU CONSEIL D'ADMINISTRATION

Directrice génerale

Do No Harm – Are You? Is Your Dental Hygiene Practice Evidence-Based? Part 1

by Salme Lavigne, RDH, BA, MS(DH), and Jane Forrest,† EdD, RDH*

ABSTRACT

The concept of *evidence-based decision-making* (EBDM) is one that is now seen and heard more frequently. However, it is often used inaccurately, demonstrating that it is not a clearly understood concept. With the overload of information from numerous sources, it is difficult for health professionals to decipher what information is valid and appropriate to use when making clinical care decisions. As regulated health professionals, dental hygienists have the duty and the obligation to *Do No Harm*, based on the Code of Ethics and National Practice Standards defined by the Canadian Dental Hygienists Association (CDHA) and used by several provincial regulatory authorities.

The purpose of this article (Part 1) is to introduce EBDM and to emphasize the importance of its use in contemporary dental hygiene practice. An introduction to levels of evidence and the related research study designs are discussed. EBDM requires developing new skills and understanding new concepts, the first of which is the formulation of a good clinical question. A process, referred to as PICO, is introduced for developing a good question and a clinical scenario is used to demonstrate its application. Use of secondary information sources such as systematic reviews is demonstrated in the case in order to locate the answer to the clinical question posed. Numerous on-line resources are provided as well as tips for dental hygienists on the use of EBDM.

KEYWORDS: Practice standards, code of ethics, evidence-based decision-making, evidence-based dentistry

INTRODUCTION

RECENTLY, THE TERMS EVIDENCE-BASED DENTISTRY, EVIdence-based medicine, evidence-based decision-making, evidence-based health care, and other permutations of these words are being heard. Continuing education providers, educators, practitioners, and the dental industry are using these terms freely. What is the appropriate use of this terminology and what is it referring to? Are all references to "evidence-based" truly evidence-based?

Evidence-based medicine was developed at McMaster University's Medical School in Hamilton, Ontario, in the late 1980s. It was first introduced by medical educators to address many of the deficiencies of traditional medical education and was labelled "evidence-based medicine" (EBM). It involved the use of self-directed, lifelong learning skills that introduced a new paradigm for medical practice.[1] Through the use of problem-based learning, McMaster University faculty developed a systematic approach to using evidence to answer questions that could then direct clinical actions. The value of using the medical literature to guide practice decisions was recognized and the randomized clinical trial (RCT) became the standard for demonstrating the efficacy of medical interventions.[1] In the late 1990s, dentistry followed suit and introduced "evidence-based dentistry."

* Associate Professor and Director, School of Dental Hygiene, Faculty of Dentistry, University of Manitoba, Winnipeg, Manitoba

† Chair, Division of Health Promotion, Disease Prevention & Epidemiology; Director, National Center Dental Hygiene Research; University of Southern California, School of Dentistry, Los Angeles, California

The evidence-based movement has further evolved and is now defined as "the integration of best research evidence with clinical expertise and patient values."[2] It is notable that this definition contains not only the research evidence but also values the clinical experience and judgment of the practitioner, along with patient preferences in order to make informed decisions about patient care.[3] It is this decision-making process that is called evidence-based decision-making (EBDM), which also takes into account the clinical circumstances of the patient that are not explicitly identified in the definition. (See Figure 1.)

The purpose of this article (Part 1) is to introduce evidence-based decision-making (EBDM) and to discuss the importance of its use in contemporary dental hygiene practice. A subsequent article (Part 2) will assist the reader in developing the necessary skills to incorporate evidence-based decision-making into clinical dental hygiene practice.

WHY SHOULD YOU INCORPORATE EBDM INTO DENTAL HYGIENE PRACTICE?

We are living in an era of information overload. Both practitioners and clients are exposed to multiple sources of information through print, radio, television, and the World Wide Web. What was once accessible only to health professionals is now accessible to everyone. Clients are becoming more informed health care consumers. They come to their appointments educated (sometimes inaccurately) about various products/procedures/treatments and expect practitioners to be able to answer their questions. It is a daunting challenge for practitioners to stay ahead and

the reality is, it is nearly impossible. Additionally, the "explosion" of new information has produced a need for new clinical skills based on a better understanding of prevention and effectiveness in combination with an awareness of community and cultural values.[4]

To ensure contemporary care, practitioners must be capable of evaluating both traditional and alternative procedures and products. Studies have demonstrated trends that the longer a clinician is out of school, the bigger the gap in their knowledge of up-to-date care, including when to adopt new procedures and when to stop using ineffective or harmful ones.[5-10]

As health care professionals, dental hygienists have an obligation to practise in an ethical manner. The CDHA *Code of Ethics*, Principle IV (Accountability), Standard 4b states dental hygienists: "accept responsibility for providing safe, quality, competent care including but not limited to, addressing issues in the practice environment within their capacity that may hinder or impede the provision of such care."[11] This Standard implies safe practice and the assumption of "Do No Harm," meaning that practitioners need to stay current with research so that more effective and safer techniques, treatments, and products are incorporated into practice.

As regulated health professionals, dental hygienists have the responsibility of providing care that meets standards. The CDHA Practice Standards that guide the practice of dental hygiene in Canada include the maintenance of competence through lifelong learning and the use of evidence-based decision making.[12] Practice Standard 1.5 states "Question and, if necessary, take action regarding policies and procedures inconsistent with desired client outcomes, evidence-based practices, and safety standards; evidence-based decision-making is the systematic application of the best available evidence to the evaluation of options and decision-making in clinical, management, and policy settings."[12] These Practice Standards, although designed to serve as a practice guide, are actually enforced by several dental hygiene regulatory authorities across Canada. The consequences of not basing practice decisions on sound evidence, judgment, values, and patient preferences can be costly to both the client and the practitioner. The world we currently live in is becoming more and more litigious and dental hygienists are not exempt from legal action. The interventions and advice given by dental hygienists to their clients must be based on sound evidence and as regulated health professionals, dental hygienists are held accountable for their actions.

Recent changes in accreditation requirements for dental and dental hygiene programs also have embraced the concept of evidence-based decision-making and new graduates of these programs are now familiar with the use of EBDM. The Commission on Dental Accreditation of Canada outlines in Requirement #2.2.1 that "The dental hygiene program must have a written plan for the ongoing review and evaluation of the curriculum, which includes…(d) a mechanism to ensure the incorporation of evidence-based practice and emerging information."[13]

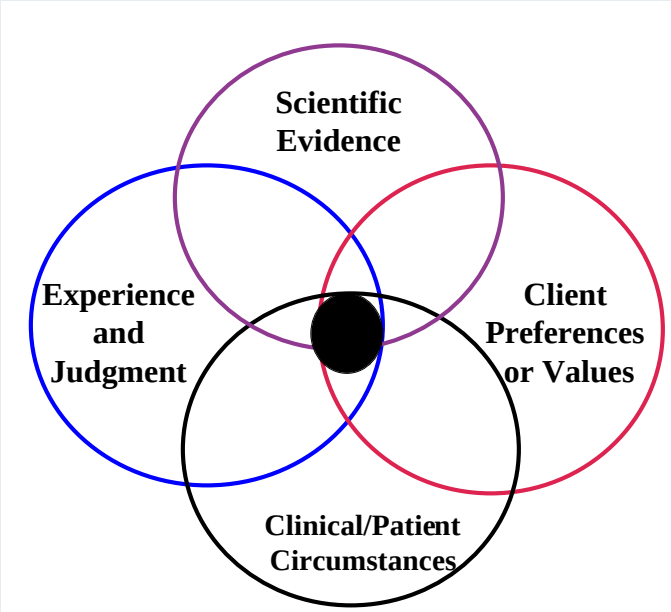


Figure 1. Evidence-based decision-making process

WHAT CONSTITUTES THE EVIDENCE?

With the vast growth in the professional literature, economic pressures and availability of newer information technology, the need for dental hygiene professionals to develop information management skills is critical. Dental hygienists are inundated with information from colleagues, continuing education courses, textbooks, newsletters, journals, clinical guidelines, sales representatives, and other sources. It is challenging for the practising dental hygienist to know which sources are credible and reliable.

Scientific evidence is the product of well-designed and well-controlled research investigations. It must be recognized that one study does not constitute the evidence. The evidence is a compilation of the results of multiple well-designed studies on the same topic that together comprise a "body of knowledge." This body of evidence is building constantly as more and more studies are conducted, underscoring the importance of staying current with the scientific literature. Once synthesized, this evidence can help the practitioner make better-informed treatment decisions.[14]

As mentioned previously, evidence comes in many shapes and forms, such as in textbooks, journals, conference proceedings, and clinical guidelines, all of which may not be based on well-conducted research. International standards for research are becoming increasingly stringent as more is learned about how to control for bias. Sources of evidence regarded as strong evidence include systematic reviews (two or more randomized controlled trials [RCTs] on the same topic), a single RCT, and well-designed non-randomized control studies.[15] Figure 2 provides a graphic depiction of the Levels of Clinical Evidence Pyramid. These levels are based on the notion of causation and minimizing bias.[16] The more control and objectivity a study

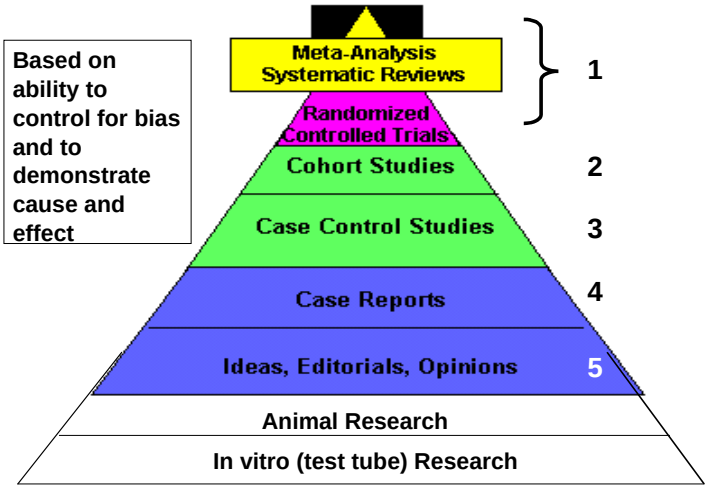


Figure 2. Levels of clinical evidence

has, the less the bias and the more valid the results. Additionally, causality can only be determined through well-designed randomized controlled trials. Thus the highest level of evidence is the meta-analysis, which is a statistical analysis of a systematic review. Although there are different levels of evidence, not all evidence is equal. It is important to recognize that this is a continuum and that each level contributes to our knowledge base.

The base of the evidence pyramid begins with laboratory or **in vitro studies** that test the efficacy and/or safety of products and treatments prior to any testing in humans. The next level is testing through **animal studies**. These constitute relatively weak evidence in EBDM because their results are often impossible to generalize to humans. The next level, **Ideas, editorials, and opinions,** is not related to scientific studies and information provided may not be founded on good research. EBDM does take professional experience and judgment into consideration, as demonstrated in Figure 1.

Case reports, although stronger than editorials or opinions, provide relatively weak evidence as they rely on reporting findings from one case by one individual and do not control for bias, cannot be generalized, and cannot be statistically analyzed. **Case control studies** compare patients who already have a condition with a matched group of those who do not. These studies may provide good information, but they are less reliable than RCTs or cohort studies because they rely on gathering data retrospectively and it is difficult to match those with the condition with a group that does not have the condition.

Cohort studies provide stronger evidence since both groups in a study do not have the condition of interest. For example, if you want to see if tobacco use causes oral cancer, you would have one group of tobacco users matched with a group of non-users. The two groups would be equivalent except for their use of tobacco, e.g., matched in terms of age, gender, education level, and socio-economic status. The groups would be followed over time to see who develops oral cancer and if the differences between the two groups are significant.

The **randomized controlled trial** (RCT) provides the best evidence as most bias can be controlled for and causality can be determined. Subjects are randomly assigned to either a treatment group or a control group, and preferably both examiners and subjects are blinded, although this is not always possible. The highest level of evidence or the "gold standard" is the **systematic review** and **meta-analysis**. These reviews are typically conducted by independent, non-profit groups such as the Cochrane Collaboration, which has 50 centres located in 13 countries around the world, including Canada.

Systematic reviews (SRs) focus on answering specific clinical questions, making these reviews narrower in scope than a literature review. SRs are rules based and include studies based on strict exclusion/inclusion criteria that have been identified prior to beginning the search for studies. Typically, a team of investigators independently reviews the studies to determine if they meet the eligibility criteria and disagreements are resolved by consensus. A **meta-analysis** is possible when data from these studies can be combined and analyzed statistically. Thus SRs and meta-analyses facilitate decision-making by providing a clear summary of the current state of existing evidence on a specific topic and provide a way of managing large quantities of information. For further information on research designs, a graphical review of research methods and designs can be found at the following website: http://servers.medlib.hscbklyn.edu/edm/ 2100.htm.[15]

HOW DO I FIND THE EVIDENCE?

The search for the evidence has been considerably simplified through the use of personal computers. However, converting information needs into asking the right question—a fundamental skill in evidence-based practice—requires learning some additional skills. This first step in the search process is the formulation of a structured question using a process referred to as PICO.[7] The elements of the PICO process are the following:

P = Patient problem or population
I = Intervention
C = Comparison
O = Outcome

By defining these terms, the PICO process facilitates the selection of the language or keywords used in conducting the computer search. The process also allows you to determine the type of evidence and information required to solve the problem and the outcome measures that will be used to determine the effectiveness of the intervention.[13] The use of this process will be illustrated in the following scenario.

Case scenario

A patient of yours, Jane Doe, received initial periodontal therapy two years ago and has been on a periodontal maintenance program, coming in every three months since that time. Although Jane Doe tries very hard to maintain her oral hygiene, there are always a few areas of

plaque retention and bleeding on probing found at each appointment. She expresses concern about this and asks if a power toothbrush would help her do a better job. She has seen numerous advertisements on a variety of power toothbrushes and is *relying on your professional knowledge to tell her which one works best*. Before making an investment, she would like assurance from you that it will be more effective than her manual toothbrush.

Although you have some opinions about power toothbrushes, you are not familiar with the scientific literature regarding whether any of them are superior to manual brushes. You let Jane Doe know you are certain that when used correctly, power toothbrushes can be at least as effective as manual toothbrushes, but to answer her question you need to do some further investigating. With the popularity of power toothbrushes, you know other patients will have the same question so it will be important to keep this information available in the practice. One way to do this is by creating an evidence-based "library" for all the PICO questions you answer and by sharing this information with others in the practice.

To find the answer, you must first identify each PICO component:

P **= Patient problem or population**

To assist you with this, begin with the phrase: **For a patient with____** and then insert the patient's question, chief complaint, or condition. For Jane Doe, this phrase is completed as follows: **For a patient with plaque and bleeding,**

I **= Intervention**

The main intervention being considered for Jane Doe is the use of a power toothbrush, so the question now reads: **For a patient with plaque and bleeding, will a power toothbrush**

C **= Comparison**

The comparison phrase is stated "as compared to" the main alternative, which in this case is a manual toothbrush. The question now reads: **For a patient with plaque and bleeding, will a power toothbrush, as compared to a manual toothbrush,**

O **= Outcome(s)**

Jane Doe's main concern is the removal of plaque and the reduction of bleeding. The outcome is then worded as follows: **better remove plaque and reduce gingival bleeding**

Based on these four parts, the final PICO question can be stated as:

For a patient with plaque and bleeding, will a power toothbrush, as compared to a manual toothbrush, better remove the plaque and reduce gingival bleeding?

With the identification of the clinical question, keywords can be identified and used in the subsequent database search. For example, the key terms that would be used in this situation are *power toothbrushes, manual toothbrushes, plaque,* and *gingivitis.* In order to conduct an efficient search, applying evidence-based limits and filters are necessary skills in addition to interpreting the findings. Further details on these elements will be discussed in a follow-up article (Part 2).

WHERE DO I FIND THE EVIDENCE?

There are two types of evidence-based sources: primary and secondary. Primary sources are original research publications. Secondary sources are synthesized publications of primary literature, usually on specific topics or articles. Many of these secondary sources are being developed by evidence-based groups to quickly inform the busy practitioner of important issues. Examples of these secondary sources are systematic reviews, evidence-based journals, and clinical practice guidelines and protocols. Table 1 on the next page provides links to several online resources.

For practitioners with limited computer search skills and research interpretation skills, finding systematic reviews by groups such as the previously mentioned Cochrane Collaboration is an excellent way to locate evidence. Groups such as Cochrane publish each step made so that you can see exactly what decisions were made and why, based on their pre-established criteria. This contributes to the credibility of the study and allows you to place confidence in their findings.

To follow up with our example of Jane Doe, we will go to the Cochrane Library website (www.cochrane.org/reviews/index.htm) and type in the keywords, "power toothbrushes." Immediately, you will see that a systematic review entitled "Manual vs. Powered Toothbrushing for Oral Health" has been conducted by Heanue et al. in 2003.[17] After reading the summary of this review, you quickly find the answer to your original PICO question. "Brushes that worked with rotation oscillation action removed more plaque and reduced gingivitis more effectively than manual brushes in the short and long term…..No other powered brush designs were consistently superior to manual toothbrushes."[17] Within the review, the categories of brushes are identified and in the "rotating oscillating" category, the "Braun Oral-B" and the "Phillips Jordan HP 735" (available only in Europe) were the only toothbrushes that had studies included in the systematic review.

Based on these findings, you can now inform Jane Doe that indeed there were two power toothbrushes that were found to be superior to manual toothbrushes. With full confidence, you can recommend the Braun Oral-B since it is the only one available for purchase in this country. This information can now be added to your evidence-based library. However, you must note that as more research is conducted on power toothbrushes, you need to update your library at regular intervals. For example, Cochrane groups repeat their reviews every two to four years, so as technology and research evolve, other power toothbrushes also may be found to be superior to manual brushes.

HOW DO I INCORPORATE EVIDENCE-BASED DECISION-MAKING INTO MY BUSY PRACTICE?

Perhaps the thought of incorporating evidence-based decision-making (EBDM) into your busy practice seems overwhelming. You may think it is next to impossible to

Table 1. On-line evidence-based resources

EVIDENCE-BASED ON-LINE TUTORIALS AND MATERIALS	
Evidence-based links, courses, and guides	www.shef.ac.uk/uni/academic/R-Z/scharr/links.htm
Evidence-based Medicine Resource Center, Teaching/ Learning Evidence-based Medicine	www.ebmny.org/teach.html
EBDM in Action, Parts 1 and 2 *Journal of Contemporary Dental Practice*	www.thejcdp.com/issue011/index.htm www.thejcdp.com/issue013/index.htm
Evidence Based Medicine Course from SUNY Downstate Medical Center	http://library.downstate.edu/ebm/toc.html
PubMed Tutorial, National Library of Medicine	www.nlm.nih.gov/bsd/pubmed_tutorial/m2001.html
Users' Guides to the Medical Literature	www.cche.net/ebcp/ebcpbiblio.htm
Journal of Evidence-Based Dental Practice	www.us.elsevierhealth.com/JEBDP/
Evidence-Based Dentistry	www.nature.com/ebd

PICO PROCESS AND FINDING THE EVIDENCE	
Centre for Evidence-Based Medicine, CEBM - Focusing Clinical Questions - Searching for the Best Evidence in Clinical Journals	[Under EBM Toolbox section] www.cebm.net/focus_quest.asp www.cebm.net/searching.asp
Introduction to EBM, Duke University/UNC - The Well-Built Clinical Question - The Literature Search	 www.hsl.unc.edu/services/tutorials/ebm/Question.htm www.hsl.unc.edu/services/tutorials/ebm/literat.htm

CRITICAL ANALYSIS, RESEARCH DESIGN, AND STATISTICAL TERMS AND CONCEPTS	
CONSORT Statement – International standards for clinical trial design, implementation, and reporting	www.consort-statement.org
QUOROM – International standards for improving reporting of Meta-analyses of RCTs	www.consort-statement.org/QUOROM.pdf
Critical Appraisal Skills Programme (CASP) CASP, Critical Appraisal Checklists	www.phru.nhs.uk/casp/casp.htm www.phru.nhs.uk/casp/appraisa.htm
Centre for EBM, Critical Appraisal Tools	www.cebm.net/toolbox.asp
BMJ How to read a paper, Statistics for the non-statistician, by T. Greenhalgh, 1997	www.bmj.com/archive/7104/7104ed.htm
How to read a paper: Statistics for the non-statistician. II: "Significant" relations and their pitfalls, by T. Greenhalgh, 1997	www.bmj.com/cgi/content/full/315/7105/422

CALENDAR OF EVENTS: TRAINING COURSES AND WORKSHOPS	
Centre for Evidence-Based Dentistry: Forthcoming Events	www.ihs.ox.ac.uk/cebd/events.htm
Centre for Evidence-Based Medicine [Under teaching EBM, Courses]	www.cebm.net/calendar.asp
Cochrane Oral Health Group	www.cochrane-oral.man.ac.uk/ebp.course.htm

EVIDENCE-BASED CENTRES	
Agency for Healthcare Research and Quality (AHRQ)	www.ahrq.gov/
Centre for Evidence-based Dentistry	www.ihs.ox.ac.uk/cebd/index.htm
Centre for Evidence-Based Medicine	www.cebm.net
Centre for Health Evidence	www.cche.net/
The Cochrane Collaboration	www.cochrane.org/index0.htm
The Cochrane Library	www.update-software.com/Cochrane/default.HTM
Evidence-Based Health Informatics, HIRU at McMaster	http://hiru.mcmaster.ca/
Evidence-Based News, National Center for Dental Hygiene Research	www.usc.edu/ebnet

continued…

DIRECTORIES AND DATABASES	
ADA Policy on Evidence-Based Dentistry	www.ada.org/prof/resources/positions/statements/evidencebased.asp
CDC Prevention Guidelines Database, includes prevention of oral diseases and tobacco cessation	http://aepo-xdv-www.epo.cdc.gov/wonder/prevguid/prevguid.shtml
Healthweb Dentistry includes guidelines and links to prevention topics, publications, and centers	www.healthweb.org/browse.cfm?subjectid=34
SUMSearch is a "meta-search" engine for evidence-based medicine resources	http://SUMSearch.uthscsa.edu
The Trip Database, searches over 61 sites of high-quality medical information	www.tripdatabase.com/
PubMed, Free access to MEDLINE, National Library of Medicine	www.ncbi.nlm.nih.gov/PubMed/
DARE [Database of Abstracts of Reviews of Effectiveness] Dental systematic reviews	www.york.ac.uk/inst/crd/darehp.htm www.cochrane-oral.man.ac.uk/dental_systematic_reviews.htm www.ncbi.nlm.nih.gov/PubMed/
Clinical Evidence a compendium of research findings on clinical questions	www.clinicalevidence.org/ceweb/conditions/index.jsp
Drug Databases Corey Nahman.com RxList MEDLINEplus Health	 www.coreynahman.com/druginfopage.html www.rxlist.com/ www.nlm.nih.gov/medlineplus/druginformation.html
HerbMed is an evidence-based database that provides access to scientific data underlying the use of herbs for health	www.herbmed.org/

accomplish with the plethora of new techniques and products, and perhaps you don't even have access to a computer at work. How then can you fulfill this professional obligation?

You must first begin by learning evidence-based skills related to formulating a good clinical question. In addition to this article, on-line tutorials and articles are available to assist you in this process, such as: "An Introduction to Evidence-based Medicine," by Duke/UNC at <www.hsl.unc.edu/lm/ebm/index.htm> and articles by Forrest and Miller.[14,18] In addition, if you have not conducted a search of the scientific literature, the PubMed tutorial (http://pubmed.gov) provides step-by-step searching procedures along with a visual demonstration of all the features.

Once you are familiar with EBDM and the PICO process, you can begin to share this with other members in your practice or with colleagues in a study club. Remember, you are not alone. Results of searches can be incorporated into an EBDM library along with the formulation of a mechanism to update the information on an annual basis. Additionally, numerous systematic reviews on a variety of dental hygiene interventions are available that can be added to your evidence-based library. As patient problems or questions arise, information in the library can be used to quickly answer questions and/or assist with decisions on interventions and product recommendations.

Once you have the process in place, you will find yourself asking more informed questions of product sales representatives and you will challenge lower-level evidence such as in-vitro "laboratory" studies. You can become an important resource in your practice for new information. You may also find that your credibility increases with your clients and employers as you effectively communicate current evidence, enabling them to make more informed decisions.

CONCLUSIONS

Given the obligations the practising dental hygienist has to his/her clients in following the CDHA National Practice Standards, the National Code of Ethics, and more specific provincial regulatory requirements in order to "Do No Harm," the PICO process provides an easy method for translating problems into clinical questions in order to find current research to answer those questions. Following the evidence-based approach, dental hygienists can feel confident that they are providing the safest and best possible care. This approach closes the gap between the realities of practice and the scientific literature. Although EBDM requires the development of new skills and knowledge, these skills will support you as a health professional committed to life-long learning.

This introduction to EBDM and the formulation of a specific clinical question using the PICO process provides you with the first step in using an evidence-based approach in clinical dental hygiene practice and an example of how the Cochrane Collaboration database can be used to find systematic reviews. Part 2 (to be published in early 2005) will guide you through conducting a PubMed

search to obtain evidence and then through the critical appraisal process to determine if the evidence is useful in answering a clinical question that does not have an available systematic review. Evaluation of the outcomes also will be introduced.

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Using Qualitative Research for Evidence-Based Dental Hygiene Practice

by Shafik Dharamsi, BEd, BSDH, MSc (DESc), PhD; Sandra J. Cobban,† RDH, MDE; and Sharon Compton,‡ DipDH, BSc, MA(Ed), PhD*

Evidence-based decision-making and practice is increasingly important in dental hygiene. Dental hygienists, along with other health professions, should be making clinical decisions based on evidence from sound research.[1,2] Many clinicians are challenged, however, when searching for evidence for the types of questions that traditional quantitative research methods have not been able to investigate. There is a growing demand for qualitative methodology in health services research.[3,4] Yet not all health professionals are comfortable with qualitative methods or how to use the knowledge derived from qualitative research.[5]

Much has been written on qualitative research and methodology,[6,7] and entire scholarly journals are dedicated just to the research methods. However, few dental hygienists read this literature. This obviously limits the range of evidence they can use to help improve health outcomes.[8] Knowledge produced by qualitative studies can play a significant role in a practice that is evidence-based, particularly as social issues affecting health care are becoming increasingly complex.[9,10] Yet, some researchers and clinicians call qualitative research "unscientific" either because they are not acquainted with its principles and research methods or because they do not realize its scientific value.[11,12] Part of the problem is that the whole *idea* of science itself is never really challenged in the biomedical disciplines. Added to this is the fact that the research traditions used in the biomedical disciplines have only a weak relationship with the traditions used in the social sciences.[13,14] As a result, some researchers and clinicians have a limited understanding of the social factors that influence health care.

In this paper, we provide a brief background on the basic differences between qualitative and quantitative approaches to research. Our aim is to challenge readers to examine common assumptions about science and research. We trace the historical development of the idea of science, followed by an overview of the basic tenets of qualitative research. We also provide examples from recent studies to highlight the type of evidence that qualitative research can produce.

CHALLENGING TRADITIONAL IDEAS OF SCIENCE

We give our own meanings to the words "knowledge," "science," and "research" and our interpretations are based on the assumptions that we make.[15] The words "research" and "science" do not appear to be a problem, particularly if one is looking at them from a quantitative, empirical viewpoint—they relate to truth or facts that arise from what can be observed and measured. From this viewpoint, the word "science" conjures up images of laboratory experiments designed to discover universal truths about the world. Here, scientists attempt to test theories and cause-and-effect relationships through controlled experiments in controlled environments.

This, however, is quite a stereotypical and historically dominant view of science.[16] It has dictated what science is, and what it can and cannot mean. As a result, we seldom, if ever, question the whole idea of science or how we develop our ideas of knowledge. We take for granted what we think we know about science and what it stands for.

* Clinical Assistant Professor, Faculty of Dentistry, University of British Columbia
† Assistant Professor, Dental Hygiene Program, University of Alberta
‡ Associate Professor and Director, Dental Hygiene Program, University of Alberta

But, take a moment to reflect on the following questions:

- Where does the idea of science come from and why do we do it?
- What makes a scientific project valid?
- What meaning can a scientist give to a phenomenon that those who are not scientists cannot give?
- What qualifies as knowledge in society?
- How do we know something?
- How is knowledge developed, transmitted, and maintained in social settings?
- What is the relationship between knowledge and the person who "knows" it?
- How do scholars and scientists identify knowledge?
- What might stand for the evidence that produces knowledge?
- How should this evidence be gathered and presented?
- Who decides what is true and what is false? Who decides what is real and what is fact or fiction? Who decides what is subjective and what is objective?

Scholars have argued about the "true" definition of science for a long time. Different camps have different philosophies of science: there are empiricists, positivists, functionalists, structuralists, feminists, relativists, interpretivists, constructivists, phenomenologists, realists, materi-

alists, and post-modernists, among many others. All claim to be doing "science"; all believe that their efforts are legitimate; and all uphold and promote the value of science. Yet, if we look at individual researchers within the different camps, we would find that each one is involved in essentially different activities, and that each has a significantly different view of what he or she does. Some tell "stories" from the "actor's" perspective; others develop theories, laws, and rules of reality; and some use laboratories and clinics, while others use cultural spaces.

Nevertheless, all these different camps and researchers, whether experienced or novice, have a common belief: there has to be some form of "scientific" investigation of any occurrence or phenomenon if its resulting description is going to be valid and legitimate. To be legitimate, information has to be gathered, analyzed, and presented systematically within a specific scientific tradition. Some researchers carry out qualitative studies and others quantitative. Both types of researchers assume their work is a legitimate scientific activity. Both see their activities as a way of improving quality of life and of helping humanity in its pursuit of knowledge. Still, in some circles there is an ongoing debate as to which is the best way, which is truer to this cause, which is more legitimate and more appropriate.

Researchers who find themselves caught in such a debate need to reflect upon and examine more closely the assumptions that they bring to their work and how they respond to questions about reality, knowledge, bias, method, and language as these relate to the idea of science.

"TAKEN-FOR-GRANTED" ASSUMPTIONS ABOUT RESEARCH

Most researchers realize that they bring a set of assumptions or a particular view of the world to their work. And these assumptions are themselves influenced by the way scientists answer the following basic questions about such things as what is real, what is knowledge, what is the role of bias and prejudice, what style of language they should use, and what research methods they should employ:[17] Consider the following questions:

1. What is reality? Is there one reality that remains the same regardless of who is looking at it? Or is it something that is based on interpretation?
2. What does it mean to know something? Is knowledge found through the senses (sight, touch, smell, hearing, taste), or is it established by interpreting information in its context from one's own perspective?
3. Should researchers control for bias and prejudice, or are these an inevitable and fundamental part of experience? Whose values, truths, or ethics will prevail? Who is in power and who is at the margins?
4. Should language be formal and in the third person and essentially distant from the reader? Or should it be in the first person, with a closer bond with the reader? Should it evoke feelings or should it be impersonal? Which approach should prevail?

There has to be some form of "scientific" investigation of any occurrence or phenomenon if its resulting description is going to be valid and legitimate.

5. How should research proceed? What tools/instruments, if any, are necessary? Is a measuring stick required to count the frequency of occurrences, or is the researcher the instrument? Is data captured and displayed, or is information constructed and interpreted?

The way a person answers these questions shapes the way he or she views science. Given the biomedical background of dental hygiene, it is likely that many dental hygienists will favour quantitative approaches to research. However, concentrating exclusively on quantitative research limits one's access to all the knowledge that has been produced using different approaches in different disciplines and traditions, particularly those in the social sciences and humanities.[18]

An appreciation of how ideas about science and knowledge have evolved in our society can help researchers and clinicians recognize the different views on what constitutes evidence as well as the assumptions that are brought to the research project.[19]

TWO VIEWS OF SCIENCE

The scientific revolution (1500–1700) in Western Civilization introduced the idea of reason and the scientific method as the way to develop knowledge and truth.[20,21] The language of physics and mathematics was seen as pure, objective, and logical and as such, allowed scientists to "see" the truth. An example of one such tool was Galileo's (1564–1642) telescope, which enabled the "seeing" of Copernicus' theory that the sun was at the centre of the universe.

Science during this time was seen as a search for "pure" knowledge, free of the subjectivity, interpretation, or bias thought to result from social conditioning.[22] Sir Francis Bacon (1561–1626) called for a scientific method of observation, measurement, and experimentation in the search for absolute truth. René Descartes (1596–1650) called for the "certainty and self-evidence" of mathematics to explain how the universe "truly" functioned. John Locke (1632–1704) asserted that empiricism—the theory that all knowledge originates in the senses—is the only true way to come to know the world. Sir Isaac Newton (1642–1727) introduced the theory of gravity and the laws of motion that govern nature as it functions "perfectly and predictably." The scientific revolution challenged the status quo and carved a path for the Enlightenment (1700–1789)—an intellectual movement credited with introducing scientific thought.

Kant put forth the idea of human reason being the final judge of the origin of knowledge. He contended that we do not simply* experience *the world as it shows itself to us; we* interpret *it as well.

The 18th century also saw the establishment of social science, based on the principles of the Enlightenment.[23] During this time, Henri Saint-Simon (1760–1825) popularized the term *positivism* (from the French words positive and system or theory).[24] Positivists believe that truth and reason are permanent and are not affected by history and culture. They believe we could use rational, concrete principles to understand social interactions. Auguste Comte (1798–1857), considered the founder of modern social science, reaffirmed that true knowledge can be discovered and measured using scientific laws that had been established through controlled experiments and that could be demonstrated. The aim was to find the scientific laws that governed human beings and their behaviour. This is the **Received View** of science.[25] It asserted that the truths of scientific theories are absolute and that observed facts exist regardless of personal views. This definition of science became so predominant in the 18th century that society came to accept its principles unquestioningly. The aim was to replace intuitive knowledge with scientific knowledge that could not be challenged or questioned.[26]

Nevertheless, the Enlightenment's concepts of science soon began to change within some circles. In his *Critique of Pure Reason* (1781), Immanual Kant put forth the idea of human reason being the final judge of the origin of knowledge. He contended that we do not simply *experience* the world as it shows itself to us; we *interpret* it as well. This is the **Revolutionary View** of science. It states that science is deeply influenced by social forces and that interpretation (influenced by culture and the social environment) is deeply and undeniably embedded in science.[27] Followers of this view argue that what people *believe* to be true will determine how they act in and interpret situations. Scientists in this camp maintain that a holistic approach to research has to include consideration of the social context of the problem.

QUALITATIVE VERSUS QUANTITATIVE RESEARCH

There is a seemingly endless debate over these two views of science—and which is more legitimate—and over qualitative versus quantitative research.[28] Many researchers agree, however, that whatever perspective and research method is chosen—qualitative or quantitative—it must suit what is being studied. It is not uncommon to hear that the basic difference between qualitative and quantitative approaches is the way in which data are presented. As mentioned earlier, qualitative researchers report their findings through narrative accounts and conceptual frameworks rather than statistical generalizations and causal relationships. In other words, qualitative research questions tend not to ask how much; instead, they ask what, how, and why. Although, whether one counts or not is not the distinguishing factor here—qualitative researchers can and of course do count things. The distinction lies in the philosophy behind the research methods.[29]

Results that can be measured and analyzed statistically are the aim of quantitative research. It is the social aspects and context of an event that are the focus of the qualitative researcher. Qualitative researchers will argue that we view the world through individual perspectives and contexts and therefore do not automatically experience events the same way as others.[30] These perspectives and experiences are not easily measured but the qualitative researcher attempts to explore how people view a social event and what sort of meaning they take from it.

FUNDAMENTALS OF QUALITATIVE RESEARCH

Qualitative research allows interpretive and descriptive methods in studying human or social events. Researchers try to understand the nature, meaning, and content of social experiences; they explore people's experiences, interpretations, and cultural viewpoints (including their own) in particular social contexts.[31] The research questions deal with the "what," "how," and "why" of any particular occurrence and not with its size or quantity, that is, "how large" or "how many." Qualitative health researchers are interested in questions such as, "What is the meaning of illness, disease, or health?" Using open-ended discussions and interviews, qualitative researchers study people's accounts of events and focus on the complexity, variance, detail, and context of their experiences. These discussions, for example can help researchers examine different ways of interpreting a particular event and give greater insight into people's experiences and thoughts.[32] This insight can help clinicians understand better why people behave the way they do.

The intent of qualitative research is not to count how many people hold a particular view or to determine the majority opinion; the information is not "managed" and analyzed in a way that allows this type of quantification. Qualitative research is not a science of immutable facts, figures, and generalizations. Instead, the qualitative method helps researchers explore the meaning and significance of an occurrence or event from the point of view of the participants in the study. It allows for a reflective description of many related viewpoints and accounts of what people experience and understand. This type of knowledge is useful, for example, when developing individualized and realistic patient care interventions and enhanced clinical care. It can provide a deeper understanding of human experiences and interpretations of such things as health, illness, and health services—all issues that affect the well-being of individuals and populations.

USING THE EVIDENCE FROM QUALITATIVE HEALTH RESEARCH

Qualitative research methods employ several different designs for collecting and analyzing data, chosen according to the research objectives. It is beyond the scope of this paper to describe and discuss each method, but we will provide a few examples of the types of questions that have been explored using qualitative research methods. We present three examples of recent studies found in dental and dental hygiene journals to show (1) the kind of qualitative studies researchers are engaging in; (2) the type of evidence generated by such studies; and (3) how it can be used to inform dental hygiene practice.[33,34,35]

The qualitative method helps researchers explore the meaning and significance of an occurrence or event from the point of view of the participants in the study.

The study of Maryland dental hygienists, conducted in 2002,[33] used focus group interviews to gather in-depth information on dental hygienists' awareness and opinions of oral cancer, oral cancer examinations, and related factors. The study was conducted to supplement the findings from a state-wide *quantitative* survey of Maryland dental hygienists on the same topic. The authors of this *qualitative* study indicate that the focus groups not only provided candid, in-depth information but also allowed for a detailed and more meaningful insight into the range of factors that influence the decision to provide oral cancer examinations on a routine basis. Research findings from qualitative studies that highlight the experiences of dental hygienists in clinical settings help other clinicians not only to consider how they may change their own practice toward enhancing the quality of care they provide but also to encourage practitioners to reflect more deeply on why they choose one type of treatment decision over another.

The second study looked at adolescents' perceptions of oral health and influencing factors.[34] It was conducted using semi-structured interviews. The authors report that selecting participants strategically rather than randomly provided information of significant depth and breadth. The participants within the study provided a range of views on what they think about when it comes to their oral health. The script for the semi-structured interview included the following types of questions:

> "Can you describe what you mean by oral health? I would like you to describe your own oral health in your own words. What do you think has influenced your current oral health? How do you think you can influence your oral health in the future? I would like

Qualitative studies in health care can provide a significant insight into how social factors can influence the process of care and related health outcomes.

you to talk a little about your family/your leisure time."[34] (p. 168).

The authors report that a qualitative method for collecting data allowed relaxed discussions and more probing questions; something that is not possible in a survey design. A greater insight into how patients understand, experience, and construct their world can help clinicians to appreciate why some people see and do things in one way and not another. This is particularly useful for planning more meaningful and individualized interventions.

The third qualitative study explored the knowledge, attitude, and behaviour of schoolchildren toward soft drinks and its relation to dental erosion. In this study, the authors conclude that useful information came out of the focus group research that could be explored further in a larger quantitative study. In this way, the findings could be generalized to a larger population. This type of study can provide the practising dental hygienist with a more detailed and relevant understanding of the different beverage choices of children and adolescents. This information can be incorporated into oral health education counselling to make it more meaningful and individualized.

These studies attempt to explore and explain how members of a particular social group construct their social realities and how they experience notions of health and illness. The findings can help clinicians design appropriate treatment and intervention plans for individualized, comprehensive care. Recognizing the assumptions about knowledge that underlie dental hygiene practice helps to determine how different types of available evidence can be used. This in turn provides the practising dental hygienist with a broader scope of evidence to draw on when making decisions for dental hygiene practice.

CLOSING CHALLENGE

Our aim for this article was to provide a basic introduction to qualitative research and the type of knowledge derived from qualitative studies that dental hygienists can use to respond to related clinical practice questions within an evidence-based framework.

Approaches used in qualitative research are a fundamental part of social sciences. However, this tradition of inquiry is relatively new in dental and dental hygiene research.[36,37] Quantitative methods and randomized controlled trials are frequently referred to as the "gold standard" for evidence, even in studies of public health problems.[38] But quantitative approaches are challenged to interpret the complex social, political, and economic factors that affect health. We know very little about these multifaceted social factors that affect issues in health care in general and oral health care in particular. This may be one reason why dental research has had a minimal impact on social, economic, and political issues affecting oral health care. Dental public health research places significant emphasis on the causal model when studying the determinants of health. This becomes a problem when studying social factors affecting health and health care.[39]

Evidence-based decision-making requires clinicians to ask specific questions, identify and become familiar with the resources that best answer the questions, and to perform a systematic strategy to gather additional information. An understanding of how qualitative research contributes to this process and the type of knowledge it can provide is critical to employing comprehensive clinical interventions. It has been argued that clinicians are generally trained to rely predominantly on deductive reasoning.[40] Accordingly, quantitative results help clinicians decide the value of different types of clinical interventions, or the extent to which a particular risk factor predisposes to a specific disease. However, the research results do not offer any insight into the social, emotional, and experiential factors that affect patients. The best evidence on social dynamics and subjective realities that influence why patients behave in one way and not another, regardless of

the clinical interventions employed, is most often found in qualitative studies.

Qualitative studies in health care can provide a significant insight into how social factors can influence the process of care and related health outcomes. When dental hygienists and other oral health professionals better appreciate the value of qualitative research and the type of evidence it can generate, they may incorporate qualitative evidence more frequently into their evidence-based decision-making process.

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Revising a Nursing Mouth Care Policy

by Anne Clift, RDH

INTRODUCTION

This article looks at the process of developing/revising a nursing practice policy on mouth care from the perspective of someone with a non-nursing background. The major part of the paper deals with the actual revision process and the resulting mouth care policy. A short tale of a strike situation follows and puts the theoretical mouth care promoted by us dental hygienists into a real-life scenario of caring for very ill patients.

I am a dental hygienist (Dalhousie '74) and have been a dental manager for the past eight years with the Health Care Corporation of St. John's. This is the largest health care organization in Newfoundland and Labrador with approximately 6,500 staff, 500 doctors, and 1,000 volunteers. It is also one of the province's largest employers. The Health Care Corporation provides health care services to the St. John's region (population about 200,000) and serves as the tertiary or high-level centre for the province. The Corporation is composed of the Health Sciences Centre, which houses the General Hospital and the Janeway Children's Health and Rehabilitation Centre; Dr. Leonard A. Miller Centre; St. Clare's Mercy Hospital; Waterford Hospital; and Dr. Walter Templeman Health Centre. I work in the Child and Women's Health Program of the Janeway Children's Health and Rehabilitation Centre. Since I am the only dental hygienist employed by the Corporation, I have been most fortunate over the years to have the support and encouragement of my program's senior management to develop oral health related linkages throughout the Corporation and in the community at large.

Although I work with nurses throughout the organization, the revision of the mouth care policy was my first involvement with the Nursing Practice Council, a long-standing, well-organized group. All areas of nursing are represented on the Council with members elected for three-year terms. The purpose of the Nursing Practice Council is to "consolidate, develop and redevelop policies and procedures to guide nursing practice within the Health Care Corporation of St. John's." Its responsibilities include the following: "utilize and evaluate the established communication plan for nursing policies and procedures; use content experts, RN's, consumers and other key stakeholders for consultation and input in appropriate areas of policy development; integrate current research in policy development/ redevelopment; identify staff/public education needs related to policy implementation and develop action plan to meet same."

Policies and procedures are developed and revised using a common format, and existing policies are reviewed at regular intervals. This interval used to be every two years but at the Council's most recent meeting in early June 2004, a motion was passed to review policies and procedures every three years, the timeline followed by the Corporate Administrative Policy Group.

Because of my oral health initiatives, my name was known to some members of Corporate Nursing Practice Council. Therefore, when it was time to review the mouth care policy, the chair of the Council recommended that I be contacted. Thus began a most interesting exercise. In October 2002, I was approached by Charlene Downey, a member of the Council, who had been assigned the task of reviewing, and revising if necessary, the existing corporate nursing mouth care policy. She asked me if I could be a resource person for her. I responded enthusiastically to Charlene's request. Neither of us knew that we would be spending quite a bit of time together over the next few months, collaborating and meeting over this policy revision.

THE FIRST ATTEMPT

The original policy was a single page consisting of the title of the policy; the short policy statement—"Patients requiring mouth care will receive care a minimum of every four hours (4) hours or more frequently as patient condition indicates"; a guidelines section that listed items to have available to carry out mouth care; one nursing alert that cautioned against the use of lemon glycerin swabs; and a reference to the major nursing text, *Clinical Nursing Skills and Techniques* by A. Perry and P. Potter.

During this first attempt at revision, I was quite unfamiliar with the workings of Nursing Practice Council and did not realize that I really should have reviewed the Council's terms of reference. Rather, I just started providing Charlene with a mass of material on oral health care. We faxed and e-mailed back and forth. Since this was my first contact with Council, I was uncertain how involved I was expected to be. I did not know if they wanted me to take over and draft a policy or just provide information so they could revise it themselves. Not wanting to appear too forward, I limited my role to information-provider. Nevertheless, I will admit to disappointment when the Council's recommendation following the meeting was to keep the current policy as is, with the only change being a new reference to the most recent edition of *Clinical Nursing Skills and Techniques* by A. Perry and P. Potter (generally referred to in nursing circles as "Perry and Potter").

This excellent reference text is to nurses what *Clinical Practice of the Dental Hygienist* by Esther Wilkins is to us dental hygienists. Each new edition of Perry and Potter

contained evidence-based updates to the section on mouth care, but I still had concerns. First of all, not every nursing unit had the most recent edition. Second, while Perry and Potter contained excellent general information, I believed we could do so much more with an in-house policy to address the needs of our specific patient population.

I contacted Charlene who passed on my concerns to Council at its next monthly meeting. She was very convincing as we were authorized to draft a new policy. We were so pleased to be able to tackle the assignment again and this time, to do a thorough job. So it was a good thing for the patients that I had been disappointed with our first attempt at fixing the existing policy—it led to a more structured approach to the revision process.

THE SECOND ATTEMPT

Now was the time for some homework. I looked at how the policies were organized and followed that format. Charlene and I were in frequent communication. We did a literature search for other mouth care policies but found surprisingly little. Organizations such as cancer treatment agencies had developed specific policies for their clients and these certainly did help somewhat. We also reviewed journal articles on oral health issues for people in long-term care and for those who were medically compromised. Another source of information was other dental hygienists, particularly those working in long-term care. These generous colleagues whom I had met or corresponded with over the years through my involvement with CDHA were more than happy to share their knowledge and experience.

THE NEW POLICY

Our main aim was to make this policy evidence-based, but also practical, possible, and appropriate for our patient population. We determined that the new policy would contain more information such as the caries risk for chronically ill children taking sweetened medications and the use of chlorhexidine in oral care. (See overleaf for the revised policy.)

The **policy statement** contained a significant change: mouth care was recommended twice a day instead of four times. This differed from Perry and Potter but as dental hygienists, we know that plaque removal twice daily is sufficient to maintain good oral hygiene, and there is the evidence to prove it. This was a real plus for nursing staff as mouth care is more easily managed when the patient's personal hygiene is being attended to, such as during the morning bath and before settling in for the night—twice a day. The second part of the original policy statement, "or more frequently as patient condition indicates," remained unchanged.

A **purpose** section was included to explain the reason for performing mouth care. Reference was made to the links between oral health and general health.

The **nursing alert** section was expanded considerably. Some of the additions include the following:

- increased caries risk for chronically ill children from the high sugar content in oral liquid medications;
- gingival bleeding during mouth care;
- platelets below 50,000 per mm^3;
- xerostomia;
- chlorhexidine;
- non-compliance;
- cautions against using foam brushes (toothettes), lemon glycerin swabs, and cinnamon flavouring that is linked to mouth ulcers.

The last nursing alert provided an opportunity for me to find out first-hand how quickly and efficiently the Nursing Practice Council worked. I brought to Charlene's attention the fact that the Health Care Corporation provided a cinnamon-flavoured mouthwash for patient use and that there was evidence linking cinnamon and mouth ulcers. Within days, I was contacted regarding a change in the mouthwash. I recommended a non-alcohol–based mouthwash with no cinnamon. Again in very short order, a sample of a new mouthwash was delivered to my desk. The pediatric dentist and I assessed the ingredients and gave our approval and it was tested in a patient care area. Long before we had finished revising the mouth care policy, the Health Care Corporation of St. John's had a new alcohol-free, mint-flavoured mouthwash.

Guidelines formed the next section. Here we included specific information about the equipment required and about the various procedures for toothbrushing, denture care, and mouth care for the conscious, unconscious, or tube-fed patient.

References comprised the last section. The original list consisted of one reference, to Perry and Potter. In our revised policy, the number of references had grown to 16, reflecting the much longer and detailed information contained in the policy.

Approval

Our recommended revisions were brought to the January 7, 2003, monthly meeting of the Council. They made some changes and then a draft policy was prepared and sent out to staff for review and comments. A few final changes and the final redeveloped Corporate Nursing Mouth Care Policy was approved by the Nursing Practice Council. It was signed by the Director, Nursing Service Development, in February 2003.

IN-SERVICE PROGRAM FOR THE NEW POLICY

This approval could have signaled the end of my involvement. However, I believed a series of in-services with nursing staff would be appropriate in order to promote the new mouth care policy. Again with the support of some members of Council, I was invited to present at nursing education days.

But if you work for a 24/7 organization such as the Health Care Corporation, the number of staff available to attend in-services depends largely on the number of patients, on the severity of their condition, and on staffing levels in each nursing area. I was therefore not surprised when the attendance at these in-services was generally small. However, those who were present made up in interest and enthusiasm for their lack of numbers. At the end of one of the first sessions, one of the nurses asked if there

Figure 1. Mouth care policy, revised

MOUTH CARE POLICY

Policy

Patients requiring mouth care will receive care twice daily, or more frequently as patient condition indicates.

Purpose

Mouth care is performed to remove debris, which promotes growth of bacterial plaque, and to prevent the aspiration of bacteria released from bacterial plaque into salivary secretions. Poor oral health results in increased risk of oral and respiratory infection. Untreated dental disease can result in decreased ability to eat, sleep, speak, and in the case of children, thrive. Studies have also linked Periodontal (gum) disease and diabetes, low birth weight and coronary artery disease.

Nursing alerts

1) Toothbrushing should not be done if the platelets are below 50,000 per mm^3.
2) Chronically ill children are at high risk for tooth decay because of sugar content of oral liquid medications. Mouth care should be done every time liquid meds are given to these patients.
3) Cinnamon flavouring has been linked to increased mouth ulcers.
4) Unexpected Outcome: Bleeding gums: If gums bleed following mouth care, it is usually a sign oral hygiene needs to be improved. If this is the case, continue regular, gentle brushing twice daily. If bleeding persists for more than a week, consult the physician or a dentist.
5) Toothettes are not recommended as a substitute for a toothbrush.
6) Dental products containing chlorhexidine can be used as an adjunct to oral care for the non-compliant patient, and as a replacement for patients whose platelet counts are less than 50,000 per mm^3. Chlorhexidine functions to reduce levels of bacterial plaque. A common side effect is staining of teeth.
7) Lemon glycerin swabs should not be used. An acceptable substitute is Oral Balance Mouth Moisturizing Gel.
8) Patients taking medications or with medical conditions known to cause dry mouth should have mouth care done at least four times per day as decreased saliva production increases risk of oral disease.
9) Non-compliant patients are at high risk for dental disease and infection due to their challenging behavior. Chlorhexidine containing mouthwash (i.e. Peridex) can be swabbed inside the oral cavity of patients resisting mouth care to reduce oral bacteria levels. This may be done daily for 60 to 90 days; however, oral conditions should be re-evaluated at this time. Chlorhexidine may be used intermittently.

Toothbrushing

See Perry, A. and Potter, P. (2002) *Clinical Nursing Skills and Techniques.* 5th edition. St. Louis: Mosby, pp 137–140.

Guidelines

Equipment:

- soft toothbrush or a specialty toothbrush if recommended
- fluoride toothpaste OR
- mouthwash containing fluoride and NO alcohol
- cup, sink, or basin
- towel
- water soluble lip lubricant
- tongue depressor, cotton swabs or sterile gauze (A mouth prop may be made by taping several tongue depressors together and wrapping them with gauze. This may be useful when patients have difficulty opening their mouth.)
- non-sterile gloves

Procedure

1) Position patient for both the nurse's and the patient's comfort. NB: For the non-compliant patient, every effort should be made to do mouth care at least twice per day even if it only for a few seconds each time. It may be necessary to have a second person present to assist.
2) Place towel over their shoulder for wiping debris and foam from toothbrushing.
3) Cradle head with one arm while you work with the other.
4) Use only a small amount of toothpaste or dip brush in fluoride mouthwash.
5) Place bristles of toothbrush at gumline (45 degree angle) and move brush in circular motion. Brush outside and tops of teeth first; leave inside until last. Brush each quadrant for about 30 seconds.
6) Brush tongue.
7) Have patient rinse or wipe mouth with gauze or cotton swabs.

Denture care

See Perry, A. and Potter, P. (2002) *Clinical Nursing Skills and Techniques.* 5th edition. St. Louis: Mosby, pp 137–140.

Equipment:

- gloves
- paper cup and water
- towel or bib
- lip lubricant, water-based
- face cloth, gauze or soft toothbrush (to clean oral tissues)
- denture brush and denture cup
- clasp brush (in the case of partial dentures), if available

- regular toothpaste
- commercial disinfecting denture cleaner (Polident or Efferdent)

Procedure

1) Wear gloves.
2) Lubricate lips.
3) Place towel under chin.
4) Remove denture.
5) Remove partial denture (taking care not to bend clasps).
6) Line the sink with a towel.
7) Rinse with cool or tepid water (never hot) to remove debris.
8) Use toothpaste and denture brush; thoroughly brush all surfaces and rinse well.
9) For partial dentures, brush clasps well (with a clasp brush if available) to prevent tooth decay in supporting teeth.
10) Leave dentures out overnight, stored in disinfecting denture cleaner or plain water.
11) Ask patient to rinse mouth or use a clean washcloth or gauze to wipe and massage oral tissues.
12) Tip: if patients complain of burning sensation in their mouth, soak denture overnight in a solution of:
    1 tsp baking soda
    1 cup warm water

    A vinegar solution can be used to remove hard deposits on dentures. Use 1–2 tsp. of household vinegar dissolved in one cup of room-temperature water. Soak dentures in this solution overnight, then brush thoroughly and rinse well. You may need to repeat this 2–3 times to loosen hard deposits.

Unconscious / Tube Fed Patients

These patients get a mucous build-up on oral mucosa, tongue and teeth if the patient is dentate. The most effective way to remove the build-up is to use a suction toothbrush and fluoride mouthwash. Once teeth are clean, the brush should be turned toward the cheek and gently brush the mucosa, then palate and tongue. If a suction toothbrush is unavailable, use a regular toothbrush and suction. A mouth prop made using 3 or 4 tongue depressors wrapped with gauze and secured with tape or a rolled-up washcloth inserted between back teeth can assist carrying out mouth care for the unconscious or tube fed patient.

Exception: Critical Care: Patients who are unconscious, intubated, ventilated, and having a tracheotomy: Mouth care is provided Q2h, and performed with ½ strength hydrogen peroxide and chlorhexidine mouth rinse. This has been shown to decrease ventilation-associated pneumonia.

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* References are still a work in progress – AC.

was one place they could access the information I had presented.

But there wasn't such a place so I agreed to prepare a manual **and** agreed to have it ready by the end of the day! Talk about striking when the iron is hot.

Back in my office, I immediately went to information I had compiled over the years and had permission to use from colleagues across the country. I was able to include information on how to order specialty items such as suction toothbrushes, Collis Curve toothbrushes; on how to buy or make mouth props; on denture cleaning solutions; as well as a list of drugs that cause dry mouth. Within two hours, I had a manual to give to the staff. I made sure I was prepared for the next in-service and brought the manual with me. The first few manuals were just in ordinary three-ring binders but as demand increased,* I had our in-house print shop produce a nicely bound version entitled, *The Challenge of Mouth Care—A Manual for Nursing Staff*.

Evaluations of the in-services were both positive and informative with most participants indicating they had learned something new. I even went outside the Health Care Corporation, presenting a series of mouth care in-services for staff at long-term care institutions. Again I received a positive response.

THE REALITY OF PUTTING THE POLICY INTO PRACTICE

I learned in April of this year that my job can change in a moment. A situation arose where I could see first-hand how nursing staff on the floors manage patient care. It was an enlightening experience.

Midnight, March 31, 2004: 20,000 government service workers entered into a legal strike that lasted 27 days. During that time, the Health Care Corporation was without its clerical, housekeeping, LPN, and dietary staff. Managers were reassigned to do the work of the striking employees. I was put on the housekeeping team at the Miller Centre, the adult rehabilitation and continuing care hospital. Not having done this job before, I initially thought I would be able to help out with oral care for the patients on my breaks. I quickly gave up on that idea! My new job consisted of cleaning floors, walls, bathrooms, and anything else that required scrubbing—and I did it for 12 hours a day with four days on and one day off. I was so happy to put up my feet on my breaks and I didn't have the energy to give mouth care another thought.

We as dental hygienists put oral care at the top of the totem pole of importance, especially because of the good studies linking oral health and systemic health. The reality on a busy nursing unit with 25 elderly patients is quite different. Many of the patients need help with everyday tasks such as feeding or bathing. Some require total care, assistance with every facet of daily living. Most have at least one complicating medical condition. Nurses care for the whole patient: those with diabetes need extra foot care; the patient suffering from dementia needs someone to walk with; the patient who had a serious stroke needs someone to listen as he tries to articulate his thoughts. There is so much to do and so very little time in which to do it.

One of the nurse managers working as an LPN during the strike wore a pedometer and ran up 18 km during a single 12-hour shift. Dental hygienists care for the whole person in that we do not view the oral cavity as being detached from the rest of the body. However, unless we have been there, it is hard to comprehend the number of tasks required to care for one patient with serious medical complications for one day.

We must accommodate reality. Patients suffering from dementia and angina who resist toothbrushing efforts to the point that they suffer an angina attack need some sort of compromise. Chlorhexidine (CHX) is an excellent adjunct to oral care especially when used on a short-term basis. Nurses are familiar with the antibacterial properties of CHX and we should be recommending its use more than we do.

Suction toothbrushes work very well in acute care hospitals where there is medical vacuum equipment at every bedside. It is a simple matter to connect the suction line to the wall outlet. However, in continuing care centres, it is quite different. In order to use a suction toothbrush, one needs a portable suction unit. The oral debris is collected in a bottle that must be cleaned and sanitized between patients. This can take more time than cleaning the patient's teeth! And then what about the foot care and nail care? There is an ample body of research demonstrating that foot infections can have serious, even fatal, health consequences. As well, what about feeding? A proper diet is essential to maintaining good health so time must be spent ensuring the patient is eating well. Oral care is important but all of the other tasks are also important.

The bottom line: we have to share the top of the totem pole!

CONCLUSION

Revising a mouth care policy for a large, tertiary health care centre is a challenge. My colleague and I received excellent advice and support from the Nursing Practice Council. Practical and efficient, the Council was right to ensure our policy was one that could be put into practice by the always busy nurses on the front line. We all want the best for the patients in acute and long-term care facilities. We believe that the new guidelines in the revised policy go a long way toward ensuring that mouth care does take place to the level that is possible, given the patient's medical condition. This was an exercise in collaboration and was also an opportunity to produce the best, most realistic policy for mouth care.

* The speech language pathologists (SLPs) heard about the manual and wanted copies. These health professionals are promoters of oral health throughout the organization. They are familiar with links between oral health and general health and routinely see patients at high risk of aspiration pneumonia. I will admit that I had never seen a suction toothbrush and had no idea how to obtain one when I happened to meet an SLP who worked at the adult hospital. She said that SLPs in our organization had been using them for some time and gave me a sample as well as ordering information.

The Board and You *(continued from page 203)*

ment in this body is encouraged as the Foundation is yet one more method of promoting dental hygiene research and therefore your ability to contribute to the well-being and health of all Canadians. Salme Lavigne, acting on behalf of the Foundation in her role as its first President, accepted with great appreciation liberal donations from sponsors such as Oral-B, GlaxoSmithKline, and Pfizer as well as generous donations from provincial dental hygiene associations. Fundraising auctions, both silent and live, were then held and enthusiastically supported by all the delegates in attendance. The donations and the proceeds of the auctions helped the Foundation begin its existence and its work with a solid base. The local volunteer conference organizing committee did an outstanding job of collecting items for the auction, this in addition to their year-long work to bring together an educational and most interesting conference program.

During the summer, I had the privilege of representing CDHA at the International Federation of Dental Hygienists (IFDH) House of Delegates meeting and at the International Symposium of Dental Hygiene in Madrid, Spain. The profession of dental hygiene is very fortunate to be able to bring delegates from around the world to develop international initiatives. We as Canadians can be pleased that many dental hygiene accomplishments in Canada have been used as examples for other countries. I heard on more than one occasion that Canadian dental hygienists should be very proud of the progress of their profession and that the CDHA is the envy of many international organizations. Meeting delegates from different regions of the world really confirmed the fact that we are all interconnected. Many of the obstacles we face here are not unique to Canada; they also exist elsewhere so we can find support from our international colleagues. You can visit the IFDH website (www.ifdh.org/index.shtml) for further information on international developments in the dental hygiene profession and on the plans for IFDH Day that is held the second Wednesday in October.

We are honoured and very pleased to be the host country for the 17th International Symposium of Dental Hygiene in July 2007 in Toronto. Over the next three years, organizers will be very busy preparing for this event that will be a perfect opportunity to showcase the dental hygiene profession in Canada. We look for your support and encourage you to make plans to take part in this exciting symposium and to meet your colleagues from around the world.

Patty Wickstrom can be reached at <president@cdha.ca>.

Le Conseil et vous *(suite de la page 203)*

À la conférence de l'ACHD à St. John's (Terre-Neuve-et-Labrador), en juin, le lancement de la Fondation canadienne pour la recherche et l'éducation en matière d'hygiène dentaire récemment approuvée nous a remplis d'enthousiasme. Nous vous encourageons à vous intéresser de près à cet organisme, étant donné que la Fondation constitue aussi une autre façon de promouvoir la recherche en hygiène dentaire et, par conséquent, votre capacité de contribuer au bien-être et à la santé de tous les Canadiens et Canadiennes. Agissant au nom de la Fondation dans son rôle de première présidente de l'organisme, Salme Lavigne a accepté avec beaucoup de reconnaissance les généreux dons de commanditaires tels que Oral-B, GlaxoSmithKline et Pfizer ainsi que les généreuses contributions des associations provinciales d'hygiène dentaire. Des ventes aux enchères, tant par écrit que de vive voix, se sont ensuite déroulées, suivies avec enthousiasme par tous les participants. Les dons et le produit des ventes aux enchères ont aidé la Fondation à entamer son existence et ses travaux sur des bases solides. Le comité local de bénévoles chargé de l'organisation de la conférence a fait un travail exceptionnel : il a recueilli les articles pour la vente aux enchères, en plus de travailler toute l'année à monter un programme à la fois instructif et très intéressant pour la conférence.

Au cours de l'été, j'ai eu le privilège de représenter l'ACHD à la réunion de la Maison des délégués de l'International Federation of Dental Hygienists (IFDH) ainsi qu'au Symposium international d'hygiène dentaire à Madrid, en Espagne. La profession d'hygiéniste dentaire a beaucoup de chance de pouvoir rassembler des participants du monde entier pour mettre au point des initiatives internationales. En tant que Canadiens, nous pouvons nous réjouir du fait que de nombreuses réalisations canadiennes en hygiène dentaire ont été citées en exemple à l'intention d'autres pays. Plus d'une fois ai-je entendu dire que les hygiénistes dentaires du Canada devraient être très fiers des progrès de leur profession et que l'ACHD fait l'envie de nombreuses organisations internationales. La rencontre des représentants de différentes parties du monde a véritablement confirmé le fait que nous sommes tous reliés les uns aux autres. Bien des obstacles auxquels nous nous heurtons ici ne sont pas particuliers au Canada : ils existent également ailleurs. Aussi pouvons-nous trouver un appui auprès de nos collègues de l'étranger. Vous pourrez visiter le site Web de l'IFDH (ifdh.org/index.shtml) pour en savoir plus sur les éléments nouveaux dans la profession d'hygiéniste dentaire, à l'échelle internationale, et sur les plans en vue de la Journée internationale de l'IFDH qui aura lieu le deuxième mercredi d'octobre.

Nous sommes honorées et très heureuses d'être le pays hôte du 17^{e} Symposium international d'hygiène dentaire en juillet 2007, à Toronto. Au cours des trois prochaines années, les organisatrices seront très occupées à préparer cet événement, une occasion idéale de présenter la profession d'hygiéniste dentaire au Canada. Nous sollicitons votre appui et vous encourageons à faire des plans en vue de participer à ce symposium enthousiasmant et d'y rencontrer des collègues du monde entier.

On peut communiquer avec Patty Wickstrom à l'adresse < president@cdha.ca >.

Oral-B Health Promotion Awards Announcement

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. Entries must be received by December 3, 2004 at CDHA, 96 Centrepointe Drive, Ottawa, Ontario, K2G 6B1.

To help you get your submission ready, please e-mail us at **info@cdha.ca**, call toll-free 1-800-267-5235, or fax us at 613-224-7283 to request an Oral-B Health Promotion Award kit in English or French. Hurry – quantities are limited. Please remember that members must make the request themselves and are limited to one kit each.

Once again, Oral-B has put together an outstanding *free* kit for CDHA members. Materials include Oral-B products and samples, as well as educational information and high-value coupons for clients.

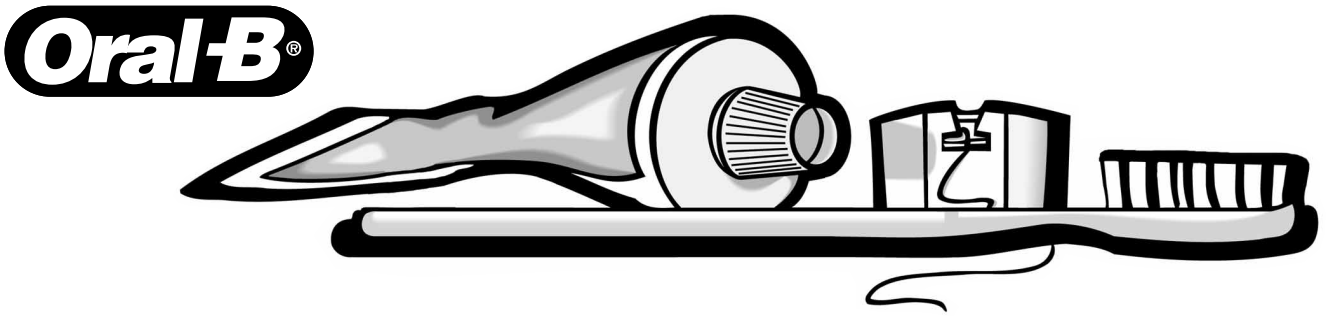
Get involved and you could win!

Enter by Friday, December 3, 2004

- **Individuals $1,000;**
- **clinic teams $2,000; and**
- **dental hygiene schools $2,000**

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

Remember — the deadline entry submission is December 3, 2004



La Bourse Promotion Santé Oral-B - Annonce

Dites-nous dans quelle mesure, cette année, vous avez exercé votre créativité pour faire la promotion de votre profession. Faites-nous parvenir des anecdotes et des photos. Les envois seront jugés par rapport à leurs résultats au niveau de la créativité, de la planification, du recrutement de bénévoles, des éléments éducatifs, des impressions faites sur la collectivité et de leur impact ainsi que sur la dimension innovatrice des partenariats créés. Les envois doivent parvenir à l'ACHD au plus tard le 3 décembre 2004, 96 promenade Centrepointe, Ottawa, Ontario, K2G 6B1.

Pour qu'on puisse vous aider à préparer votre présentation, veuillez soit nous faire parvenir un courriel à **info@cdha.ca**, appeler sans frais le 1-800-267-5235 ou télécopier au 613-224-7283 afin de demander la trousse pour la Bourse promotion santé Oral-B, en français ou en anglais. Hâtez-vous, car les quantités sont limitées. Et n'oubliez pas que les membres doivent faire la demande eux-mêmes et qu'ils ne peuvent obtenir plus d'une trousse chacun.

Oral-B a assemblé de nouveau une superbe trousse *gratuite* pour les membres de l'ACHD. Elle contient des produits et échantillons Oral-B, ainsi que des renseignements éducatifs et des coupons de grande valeur pour les clients.

5 000 $ en prix !

Inscrivez-vous au plus tard le vendredi 3 décembre 2004

- **individus, 1 000 $;**
- **équipes de cliniques, 2 000 $; et**
- **écoles d'hygiène dentaire, 2 000 $**

La moitié de chaque prix sera partagée avec le chapitre local de l'association d'hygiène dentaire de la gagnante.

N'oubliez pas — la date limite pour la présentation de votre participation est le 3 décembre 2004.

Membership Renewal

1965 2005 CDHA ACHD

The voice of dental hygiene for 40 years
La voix de l'hygiène dentaire pendant 40 ans

It's celebration time — Come join us!

CDHA is turning 40 this year — and what's a birthday party without gifts? To celebrate, a series of membership draws will be taking place throughout the year. But only CDHA members will be eligible for these special draws so don't delay; renew your CDHA membership today!

The membership renewal drive started on September 1st and is now in full swing. Have you received your membership renewal package by mail? If not, please contact the CDHA toll free at 1-800-267-5235 or by e-mail at mmp@cdha.ca.

This year, it is even easier to renew your membership through our ***new on-line renewal*** option! Just visit our website at **www.cdha.ca** to make sure you keep the single tool that helps ensure you are successful in your career — your CDHA membership!

We wish to remind you that renewals received by regular mail will take 4–6 weeks to be processed *after* they are received in our Processing Centre. Don't delay — send in your renewal ***today*** or visit us at **www.cdha.ca** to renew on-line to guarantee uninterrupted access to your membership benefits and the chance to win fabulous prizes in our 40th birthday membership draws!

Communication, collaboration, coordination, community — CDHA at 40 *(continued from page 207)*

The CDHA website will be introducing a new section specifically for students that will be focusing on their needs with information on *Schools, Research, Regulation, Career, Membership,* and *Product Information*.

The Premium Estimator for insurance costs on our website has won an APEX Award of Excellence. The APEX Awards recognize excellence in graphic design, editorial content, and the ability to achieve overall communication objectives. With nearly 5,500 entries this year, competition was exceptionally intense. Some of the other winning organizations in CDHA's category include the Arthritis Foundation of America, Colorado State University, the National Education Association of America, and the U.S. Postal Service—some rather impressive company! (The Premium Estimator can be found at www.cdha.ca/members/content/membership_services/membership_services_insurance_forms.asp.)

CDHA will continue to advocate on your behalf

Very young students are also getting attention. Watch for news of an exciting program that is in the initial planning stages—a program for you to take into kindergarten classes if you can volunteer an hour or two of your time to educate children about good oral health practices. If you have access to our e-mail broadcasts, please watch for updates on this program. If you do not have Internet access, just let us know you are interested and we will be certain to send you the information.

New member benefits will help to keep you smiling through the year. For example, you can now get discounts at National Car Rental, Curves Fitness and Weight-Loss Centers, and Home Loans Canada.

You can also get a Bank of Montreal/Mosaik™ MasterCard that supports dental hygiene research and education every time you use it. If you already have a BMO MasterCard, you can switch it to a CDHA card, with no changes to your existing agreement, with a simple telephone call. Call us to ask how.

As part of our 40th birthday celebrations, we are showing our appreciation of our members through a series of membership draws over the next year. There will be fabulous prizes so check in the next issue of the *Journal* and keep an eye out for CDHA Communications e-mails that are sent out twice a month.

On a more serious note, CDHA will continue to advocate on your behalf and continue to provide you with the research and the tools to help you help improve the health of Canadians. With this in mind, we will attempt to follow the life lessons attributed to Olympic High Jump Gold Medallist Dick Fosbury on what it takes to succeed. Dick was discouraged by many people along his path as he appeared an unlikely champion. However, he was committed and he developed his own path. His advice follows:

- Turn around negative thoughts.
- If the status quo is not bringing results, challenge it!
- Compare the organization's vision of the profession to where the organization is currently and determine what has to be done to close the gap.
- Follow the prescribed diet and exercise plan, keep the vision in the forefront at all times, and follow through.

We are looking forward to an exciting year of celebrating the profession of dental hygiene. Join in the fun!

Canadian Foundation for Dental Hygiene Research and Education

The Canadian Foundation for Dental Hygiene Research and Education was launched formally in June 2004 at CDHA's annual conference, held this year in St. John's, Newfoundland and Labrador. The goals of this foundation are the following:

1. To establish dental hygiene research programs within Canada;
2. To conduct, co-ordinate and assist in financing research into dental hygiene and innovation;
3. To establish educational programs for students, professionals and the general public on dental hygiene research and education;
4. To provide financial support to individuals, agencies and institutions in furtherance of dental hygiene research and education;
5. To promote scholarly activities within dental hygiene practice.

The founding Board members are Salme Lavigne (President), Trudy McAvity, and Sharon Amer who will be developing policies and a communication plan for the Foundation over the next few months. The Foundation's financial situation received a big boost from very generous donations during the launch and from the proceeds of a silent as well as a live auction held at the Gala Dinner during the conference.

Susanne Sunell — Recipient of CDHA Distinguished Service Award

During the opening event at this year's annual professional conference, Susanne Sunell received the CDHA Distinguished Service Award from the CDHA President, Patty Wickstrom. This award recognizes significant contributions by a dental hygienist or another person to advancing the dental hygiene profession or CDHA at the national level, for a period of at least four years. Susanne has served on numerous dental hygiene task forces, committees, and councils. Some examples of her involvement include the CDHA Board of Directors, representative for Dental Hygiene Educators of Canada, Documentation Committee for CDAC, and National Dental Hygiene Education Standards. In this capacity, she has acted as a generous leader, whose high standards, insight, dedication, innovation, and quick, adept reading of situations have benefited not only those with whom she has worked directly, but also the entire dental hygiene profession. Susanne's high energy, untiring support for her colleagues, and expertise continue to build and strengthen the dental hygiene profession.

Photo by Robert Young

Salme Lavigne and the launch of the Canadian Foundation for Dental Hygiene Research and Education.

International Federation of Dental Hygiene Symposium — Toronto 2007

CDHA is honoured to have been chosen as the host country for this international symposium scheduled for July 2007. The decision followed a presentation at this year's symposium in Madrid, Spain, by the CDHA President, Patty Wickstrom. The theme for the Toronto meeting is "The Many Cultures of Dental Hygiene," a fitting subject for this international federation.

Photo by Robert Young

Patty Wickstrom (l.) presenting award to Susanne Sunell

Gingivitis Week a Great Success

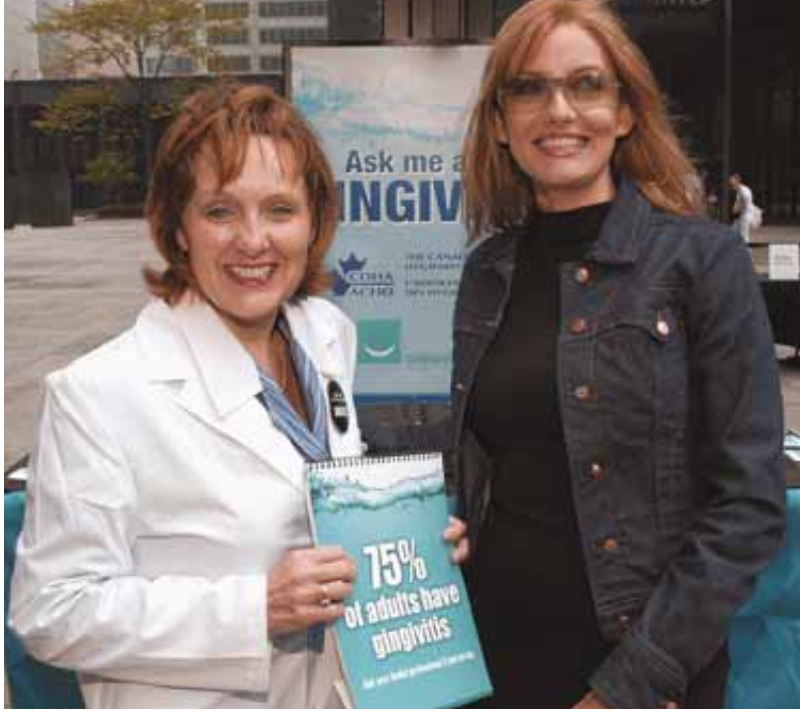
June 7–13, 2004: CDHA and Listerine partnered for the first-ever Gingivitis Week, which had two important goals: (1) to raise awareness about the earliest stage of gum disease across Canada, and (2) to close the knowledge gap between those that have gingivitis and those who think they have it. The need for this program is obvious: 75% of Canadians have gingivitis, but research results show that only 6% think they have it.

We were thrilled to have Canadian Idol judge and Juno Award Winner Sass Jordan as our spokesperson and star of our public service announcement. The PSA, airing across the country until early September 2004, has been shown during some prime time on CTV, during the premiere of *The Simple Life* and during the popular morning talk show *The View* with Barbara Walters. Sass participated in the Toronto launch, daring to sink the Evil Gingivitis in a dunk tank and conducting interviews with the *Winnipeg Sun*, CFPL, and CBC Radio One on their popular afternoon program, *Here and Now*. Sass did a great job of drawing attention to the startling gingivitis statistics, speaking about the link between oral health and overall health, and encouraging Canadians to ask their dental hygienist about gingivitis.

Live launch events were also held in Vancouver and Montreal. We received positive media exposure in such outlets such as the *Globe and Mail, National Post, L'Acadie Nouvelle, Edmonton Sun, Ottawa Citizen, Reader's Digest, 24 Hours,* and CKCO, to name just a few.

The **gingivitis.ca** website was also launched as part of this program and provides everything the average Canadian needs to know about gingivitis. It features an "Ask a Dental Hygienist" section, a gingivitis risk factor quiz, and a contest to attract visitors.

We would like to thank all of our members who participated in these events and those of you who discussed gingivitis with your clients in recognition of Listerine Gingivitis Week.



CDHA public service announcement star Sass Jordan and dental hygienist Marilyn Goulding are all smiles at the national kick-off of the first-ever Listerine Gingivitis Week in Toronto

Algonquin College Students Run for the Children's Hospital and for Dale Scanlan

The Dental Hygiene and Dental Assistant students of Algonquin College in Ottawa held a fun run/walk last spring with the proceeds going to the dental department of the Children's Hospital of Eastern Ontario in honor of Dale Scanlan. Dale has retired from Algonquin after 27 years of service, welcoming the students on their field placement activities, sharing her knowledge and skills, encouraging them in their chosen careers. Dale shared her wisdom and skills with the profession as well. In recognition of her unselfish commitment to the profession, the Canadian Dental Hygienists Association awarded Dale in 1989 with a life membership. Her accomplishments are many but here are a few. She brought great pride to Canada with a very successful International Dental Hygiene conference held in Ottawa and chaired five CDHA conferences. In 1992, Dale was appointed to the transitional council for the College of Dental Hygienists of Ontario, continuing as an elected member for another four years. She represented CDHA on the Canadian Dental Association Committee on Hospital Accreditation. Dale contributed to the chapter on Cleft Palate in Esther Wilkins's classic book, *Clinical Practice of Dental Hygiene.* She developed pamphlets, presented table clinics, and delivered lectures and seminars in Canada, Europe, and Japan. A real inspiration to us all.

Joan Degan (l.), Coordinator of the Dental Hygiene Program at Algonquin, with Dale Scanlan

Photo by Robert Young

CDHA's 15th Annual Professional Conference, June 2004, St. John's, Newfoundland and Labrador

Volunteer recognition

The CDHA 15th Annual Professional Conference was hosted in St. John's, Newfoundland and Labrador, Canada's province with the second smallest number of registered dental hygienists. This, however, did not prove to be a stumbling block for the very dispersed dental hygiene community of this province. The organizing committee's hours of hard work and dedication culminated in two and a half days of learning, sharing, and networking amongst the conference participants, lecturers, and exhibitors. The on-site volunteers, in traditional sou'wester hats, helped to ensure participants fully enjoyed their conference experience. The organizing committee and volunteers also provided everyone with the opportunity to celebrate the profession at the Saturday evening gala, which also marked the official launch of the Canadian Foundation for Dental Hygiene Research and Education. Through countless donations from dental hygienists throughout the province, a dedicated group of volunteers organized live and silent auctions that raised over $5,000 for the Foundation.

The organizing committee and volunteers of the CDHA 15th Annual Professional Conference showed conference participants the true meaning of Newfoundland hospitality — providing everyone with lasting memories of their time on the Rock. On behalf of CDHA and all the conference participants, we wish to thank our colleagues from Newfoundland and Labrador for the opportunity they provided us to look beyond the tip of the iceberg to the sea of opportunity.

Exhibitor recognition

An important component of the conference program is the participation of commercial exhibitors. The representatives of the following companies shared new trends and products in the industry, providing delegates the opportunity to stay abreast of the opportunities emerging in the profession. CDHA wishes to thank the following exhibitors for their time and effort: Ash Temple Ltd; BDM-Biotene Canada; Crest; Dentsply Canada; GlaxoSmithKline Consumer Healthcare; Hu-Friedy; Oral-B; Patterson Dental; Pfizer Consumer Healthcare; SciCan; Septodont of Canada; Sonicare/Philips Oral Healthcare; Sunstar Butler; Wright Dental Canada.

Sponsor recognition

CDHA has enjoyed a long-term partnership with Oral-B—a committed sponsor of dental hygiene over the years. As a Gold Sponsor, Oral-B not only provides significant support to CDHA's Annual Professional Conference, they generously contribute time and resources to the Oral-B Scholarship Awards for dental hygiene students in both diploma and degree programs and the Health Promotion Awards. CDHA also looks forward to Oral-B's upcoming donation of toothbrushes for distribution through our membership to special needs programs. We look forward to continuing our partnership with this highly dedicated company in the years to come. CDHA also wishes to extend our sincere thanks and appreciation to Listerine/Pfizer Consumer Healthcare as a Bronze Sponsor of the 15th Annual Professional Conference and as a valuable CDHA partner. In addition to sponsoring this year's conference, Listerine has collaborated with CDHA to advance the interests of the Canadian dental hygiene profession; Listerine contributed to the oral health and well-being of the Canadian public through the first-ever Canadian Gingivitis Week. We look forward to continuing our relationship with Listerine to further public awareness in this important area of oral health.

The CDHA wishes to recognize the support of the following organizations through sponsorship of events or speakers, donations for the live and silent auctions, or delegate gifts: Aon Reed Stenhouse Inc.; Clift Dental Supplies; Dentsply Canada; Dominion; Septodont of Canada. Their generous contributions made the conference an even greater success.

We wish to also recognize and thank all the Newfoundland and Labrador dental hygienists who contributed to the success of the Saturday Evening Gala by making donations toward the live and silent auctions. Your gracious contributions, too many to list, will help support the Canadian Foundation for Dental Hygiene Research and Education. Thank you all!

Call for Abstracts for the 16th Annual Professional Conference

Deadline for receipt of abstracts:
Midnight EST, Monday, November 8, 2004

THE CANADIAN DENTAL HYGIENISTS ASSOCIATION (CDHA) is accepting submissions of abstracts for the scientific program of the 16th Annual Professional Conference to be held in Ottawa, Ontario, June 17–19, 2005. Any dental hygienists interested in making an oral, poster, or table display presentation at the conference are required to submit an abstract for consideration. Note that the scientific program will be offered in both English and French.

Scientific Program Format: There are two different formats for the scientific program:

- *Oral presentations:* These will be 1½ hours long and will be presented as concurrent sessions over the course of two days.
- *Table display and poster presentations:* These will take place over a 1½ period during the scientific program.

Abstract Categories: Abstracts can be submitted in the following categories:

- Case study or project
- Technology
- Informal research (e.g., reports, workshops, etc.)
- Formal research

Submission Guidelines:

- Submission of an abstract in the oral presentation format constitutes a commitment by the identified presenting author to be in attendance at the conference if the abstract is selected.
- Authors submitting an abstract in the table display and poster presentations format are not required to be in attendance at the conference if the abstract is selected. Costs associated with the shipping of the table display and/or poster presentation are the responsibility of the author.

Submission Content: Your submission must include the three following elements:

1. Cover letter: Your cover letter must contain the following information: author(s); affiliation; address; city; province; postal code; e-mail; work and home telephone numbers; program format and abstract category of the submission. Author(s) must also disclose any sponsorship agreement he/she may have in place as it relates to speaking engagements. (N.B. If there are multiple authors, please identify the contact person with an asterisk (*) on the cover letter.)

2. Résumés: Your submission must include an abbreviated one-page résumé for the principle presenting author.

3. Abstract: The abstract must be in electronic form (Microsoft Word or WordPerfect), no longer than 250 words, in 12 point New Times Roman, double-spaced, flush left, with no word breaks. The abstract is to include the title as well as a brief statement of the objective, methods, results, and conclusions/outcomes. Please ensure these four key words appear in the abstract immediately followed by a colon.

Submission Instructions: The abstracts and accompanying information must be submitted electronicall to abstracts@cdha.ca, no later than no later than midnight EST, Monday, November 8 , 2004.

Evaluation Criteria: Abstracts will be evaluated in a blind peer-review process as follows:

- All of the requested information has been presented and properly ordered.
- The objective(s) and methods are clearly described.
- The results, including data and statistics when appropriate, are clearly described and based on accepted methodology.
- The conclusions/outcomes are clearly stated.

Selection Criteria: Abstracts will be selected according to the following criteria:

- Results of the peer-review evaluation;
- Professional experience and background of the author(s) based on their submitted résumé(s).

The selected abstracts will also be published in the Conference Program book and may be considered for publication in the Canadian Jouranl of Dental Hygiene (formerly Probe), CDHA's official journal. All authors will be notified in writing whether their abstracts are accepted.

Remuneration: The CDHA will provide author(s) selected for oral presentations with a complimentary full registration for the conference as well as two (2) nights' accommodation at the host hotel. Any expenses incurred for abstract submission and/or travel to the conference are the responsibility of the author(s).

CDHA will provide authors selected in the poster and table display presentation format with a discounted full conference registration. Any expenses incurred for abstract submission and/or travel to the conference are the responsibility of the author(s).

Honoraria and Expenses: CDHA will not provide honoraria to selected authors and will not be reinbursing expenses, travel costs, or any other expense incurred by the author.

All information inquiries should be directed to:
Canadian Dental Hygienists Association
Membership and Conference Coordinator
96 Centrepointe Drive, Ottawa, ON K2G 6B1
Tel.: (613) 224-5515
E-mail: mmp@cdha.ca

Invitation à présenter des sommaires de communications pour la 16e conférence professionnelle annuelle

Date limite pour la réception des sommaires : le lundi 8 novembre 2004 à minuit HNE

L'ASSOCIATION CANADIENNE DES HYGIÉNISTES DENTAIRES (ACHD) acceptera des sommaires de présentations pour le programme scientifique de la 16e conférence professionnelle annuelle qui se tiendra à Ottawa (Ontario) du 17 au 19 juin 2005. Les hygiénistes dentaires souhaitant faire une présentation orale, par affiches ou au moyen d'un étalage sur table dans le cadre de la conférence doivent soumettre un sommaire pour étude. Notez que le programme scientifique sera offert dans les deux langues officielles.

Format du programme scientifique. On peut utiliser deux formats différents pour le programme scientifique :

- Présentations orales. Elles auront une durée d'une heure et demie et se tiendront comme séances concurrentes pendant les deux jours de la conférence;
- Présentations par affiches et sur table. Elles se tiendront sur une période et demie pendant le programme scientifique.

Catégories de sommaires. Les sommaires peuvent être soumis dans les catégories suivantes :

- Étude de cas ou projet;
- Technologie;
- Recherche informelle (p. ex., rapports, ateliers, etc.);
- Recherche formelle.

Directives pour les soumissions :

- La soumission d'un sommaire dans le format de présentation orale constitue un engagement par l'auteur de la présentation identifié à assister à la conférence si le sommaire est sélectionné;
- Les auteurs qui soumettent un sommaire dans les formats étalage sur table ou affiche ne sont pas tenus d'assister à la conférence si le sommaire est sélectionné. Les coûts associés à l'expédition des présentations, étalages sur table ou affiches sont la responsabilité de l'auteur.

Contenu de la soumission. Votre soumission doit comporter les trois éléments suivants :

1. Une lettre de couverture. Votre lettre de couverture doit contenir les renseignements suivants : l'affiliation de l'auteur ou des auteurs, l'adresse, la ville, la province, le code postal, l'adresse de courriel, les numéros de téléphone à la maison et au travail, le format du programme et la catégorie de sommaire de la soumission. L'auteur ou les auteurs doivent également divulguer toute entente de commandite pouvant exister relativement aux présentations d'exposés. (N.B. S'il y a plusieurs auteurs, veuillez identifier la personne contact d'un astérisque (*) sur la lettre couverture.);
2. Votre soumission doit comprendre un *curriculum vitae* abrégé d'une page pour le principal auteur de la présentation;
3. Sommaire. Le sommaire doit être en format électronique (Microsoft Word ou WordPerfect), ne pas dépasser 250 mots et être présenté en New Times Roman 12 points, à double interligne, aligné à gauche et sans coupure de mot. Le sommaire doit inclure le titre, ainsi qu'un bref énoncé de l'objectif, des méthodes, des résultats et des conclusions ou produits résultants. Veuillez vous assurer que ces quatre mots clés apparaissent dans le sommaire, immédiatement suivis du deux-points.

Instructions concernant la soumission : Les sommaires et l'information jointe doivent être soumis par voie électronique à l'adresse abstracts@cdha.ca au plus tard le 8 novembre 2004 à minuit HNE.

Critères d'évaluation : Les sommaires seront évalués suivant un processus d'examen anonyme par les pairs.

- Tous les renseignements demandés ont été présentés et bien ordonnés;
- Les objectifs et les méthodes sont clairement décrits;
- Les résultats, y compris les données et les statistiques, au besoin, sont clairement décrits et basés sur une méthodologie acceptée;
- Les conclusions et produits résultants sont clairement énoncés.

Critères de sélection. Les sommaires seront sélectionnés en fonction des critères suivants :

- Les résultats des évaluations découlant de l'examen par les pairs;
- L'expérience professionnelle et les antécédents de l'auteur ou des auteurs sur la base du *curriculum vitae* soumis.

Les sommaires sélectionnés seront également publiés dans le programme de la conférence et pourront être considérés pour publication dans le *Journal canadien de l'hygiène dentaire* (anciennement *Probe*), le journal officiel de l'ACHD. Tous les auteurs seront avisés par écrit si leur sommaire est accepté.

Rémunération : L'ACHD offrira à certains auteurs sélectionnés pour donner des présentations orales une inscription gratuite complète à la conférence ainsi que deux (2) nuits d'hébergement à l'hôtel hôte. Toutes les dépenses associées à la soumission de sommaires et les frais de voyage pour se rendre à la conférence sont la responsabilité des auteurs.

L'ACHD offrira à certains auteurs sélectionnés pour une présentation par affiche ou par étalage sur table une réduction des frais d'inscription complets à la conférence. Toutes les dépenses associées à la soumission de sommaires et les frais de voyage pour se rendre à la conférence sont la responsabilité des auteurs.

Honoraires et dépenses : L'ACHD ne versera pas d'honoraires aux auteurs sélectionnés et ne remboursera pas les dépenses, les frais de voyage, ni aucune autre dépense de l'auteur.

Veuillez adresser toute demande de renseignements à l'adresse suivante :

Coordonnatrice des inscriptions et des conférences
Association canadienne des hygiénistes dentaires,
96, promenade Centrepointe, Ottawa (Ontario) K2G 6B1
Tél. : 613 224-5515, Courriel : mmp@cdha.ca

Full-text Journal Articles on Internet

by CDHA Staff

ARTICLES ON RESEARCH AND EVIDENCE-BASED DECISION-making and practice form a major part of this issue. A list of websites that will be very useful for both novice and experienced researchers and clinicians is in the article "Do No Harm - Are You? Is Your Practice Evidence-Based?" on page 210 of this issue. This list includes sites for directories and databases, training courses and workshops, evidence-based centres that provide information on the various types of research, how to interpret it, and how to introduce evidence-based research into your practice. One other site is listed here. The other URLs provide names of journals that allow access to the full text of articles.

National Electronic Library for Health – Evidence Based Decision Making
www.nelh.nhs.uk/ebdm/

This is an extremely good site to get information about the different types of research—"randomized controlled trials, qualitative research, complex interventions, public health"— what they are, and how they are structured. There are also guidelines about how one should be "asking, finding, appraising, storing" information for research.

Advances in Dental Research (International Association of Dental Research)
http://adr.iadrjournals.org/

While full-text articles are available only to those with subscriptions, non-subscribers can view tables of contents and the descriptive abstracts that give the results of the research.

Australian Dental Journal
www.ada.org.au/_Journal_Archives.asp

Access to the current issue on-line is restricted to those with subscriptions but all the previous issues can be accessed freely as PDF files.

BMC Oral Health
www.biomedcentral.com/bmcoralhealth/

Registration is required on this site but is free. Once you are signed up, you have access to numerous health and medical databases. This journal "publishes original research articles in all aspects of the prevention, diagnosis and management of disorders of the mouth, teeth and gums, as well as related molecular genetics, pathophysiology, and epidemiology."

British Dental Journal
www.nature.com/bdj/

This eminent journal has full-text articles available, made even more accessible by a good search capability. The archives go back to 1974 although many of the early issues do not have the full text on-line.

Bulletin of the World Health Organization (International Journal of Public Health)
www.who.int/bulletin/en/

This journal, as can be seen from the title, deals with public health. Searching on "dental" brings up articles on periodontal disease, oral health education, and the oral health status of population in countries around the world.

Dimensions of Dental Hygiene
www.dimensionsofdentalhygiene.com/

This on-line journal started in February 2003. The articles are fully accessible in this "peer reviewed journal offering the latest in research and technology while speaking the language of the practicing dental hygienist." A worthwhile site to bookmark.

International Poster Journal of Dentistry and Oral Medicine
http://ipj.quintessenz.de

This on-line site, which started in 1999, has posters and abstracts for current research, dealing with a wide variety of topics.

Journal of Contemporary Dental Practice
www.thejcdp.com/issue018/index.htm

The mission of this journal is "to provide an international peer-reviewed, visionary forum for oral health care.... The guiding principle of the journal is to lead dental professionals to new thinking for the twenty-first century with content that is sound in principle and science. Journal content will foster prevention intervention strategies for disease control."

Journal of the Canadian Dental Association
www.cda-adc.ca/jcda/

This journal is probably familiar to you and the full-text articles (in HTML or PDF formats) on the Internet site make this a valuable resource.

Until next time...

CLASSIFIED ADVERTISING

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YUKON

WHITEHORSE February 2004: A new clinic, in a new building, in a thriving northern city. Six state-of-the-art ops, digital radiology, booking four months in advance. What more could we ask for? A SECOND HYGIENIST!!! Contact MURRAYA DENTAL, 4069 4th Ave, Whitehorse, Yukon Y1A 1H1. Telephone: **867-633-6549**.

BRITISH COLUMBIA

NORTH SURREY Modern and rapidly growing dental office requires a P/T hygienist to join our experienced and friendly team. Flexible hours and above-average income. Signing bonus included. Tel: **604-581-2461**; fax: **604-581-2462**.

OKANAGAN Sunny Okanagan: Our new dental practice is rapidly growing and is searching for a caring, patient-oriented Registered Dental Hygienist. Now utilizing four of five bright and spacious operatories, we are employing the latest technology and techniques including digital radiography and cosmetic dentistry. Position available for either part-time or full-time. Enjoy a quality lifestyle in the breath-taking lakeside town of Osoyoos, BC. Contact us at **250-495-2393**; fax, **250-495-2394**; or e-mail, **admin@sunvalleydental.com**.

PRINCE RUPERT Dental Hygienist required full-time, 4 days per week, for family practice in friendly, close-knit community. Our office is located in scenic Prince Rupert with lots to do including enjoying the great outdoors. New grads welcome. For further information, call Dr. William Redman at **250-624-9809** (office) or **250-627-1024** (home), or fax or mail résumé to **250-624-6821**, 501 McBride St., Prince Rupert, BC V8J 3G5.

SECHELT On the beautiful Sunshine Coast of British Columbia. Enjoy the benefits of healthy, affordable, community-based living with access to Vancouver at your doorstep. Warm, friendly office requires a full- and/or part-time hygienist to join our staff. Call **604-885-4669**; fax **604-885-4613**; e-mail **cowrie_dental@dccnet.com**.

ALBERTA

BANFF Aurora & Associates Dental Surgeons, located in Banff, Alberta, seeks a compassionate, enthusiastic dental hygienist to join our patient-oriented team. Excellent diagnostic and clinical skills required. Please fax résumé to **403-762-8095** or e-mail **simmila@telus.net**.

CALGARY Dental Hygienist Required: Registered hygienist needed for well-established family-oriented dental practice in the north Calgary area. Modern, computerized environment, large operatories with windows. Flexible hours, part-time or full-time. Salary range $60 per hour for evenings and $50 per hour for daytime. Please contact us at: e-mail, **pritg@shaw.ca**; fax, **403-948-6691**.

EDMONTON South Side dental office in Edmonton looking for a part-time dental hygienists 3 days/week, no weekends, salary $45/hr. Fax résumé to **780-988-5312**.

MEDICINE HAT Dental practice seeking a personable, compassionate, progressive HYGIENIST. We are a family-oriented practice with a team offering services in all areas of dentistry including implants, orthodontics, periodontics, prosthodontics, and esthetic dentistry. If interested in a full-time position, please forward your résumé including career goals, personal interests, and references to Mrs. Val Leitch, River Centre Dental Clinic, 378-1 Street SE, Medicine Hat, AB T1A 0A6. Telephone, **403-526-5991**; fax, **403-529-9043**.

ONTARIO

KINGSTON DENTAL HYGIENISTS, ONE FULL-TIME and ONE PART-TIME required from July 20th for general dental practice located in Kingston, Ontario. Excellent wages, Monday-Thursday, no evenings or weekends. Please fax résumé to **613-389-0140** or to **vanburen2@cogeco.ca**.

TORONTO Hygienist required in busy downtown Toronto practice. Please fax résumé to **416-469-3625** or call **416-469-5261**.

NOVA SCOTIA

AMHERST Dental hygienist wanted. Busy, well-established, family dental practice in Amherst is seeking motivated, caring, experienced dental hygienist to join our team for a full-time or part-time maternity position. Please send résumé to Dr. Paul MacEachern, 18 Maple Ave., Amherst NS B4H 3G1.

HALIFAX Full-time dental hygiene position for 1 year maternity replacement starting August 16, 2004. Please send résumé or telephone Dr. Lea B. McQuaig, Park West Dental Office, 118-287 Lacewood Drive, Halifax, NS B3M 3Y2. Telephone, **902-457-7787**.

INVERNESS Full-time/Part-time dental hygienist is required for a busy dental practice located in the breath-taking ocean-side town of Inverness on Cape Breton Island. Great hiking, cycling, golfing, swimming, and more. Enjoy working in a bright spacious office overlooking the Gulf of St. Lawrence. Bonus incentives available. Please fax or mail résumé to Tri Harbour Dental Corp. Ltd, PO Box 488, Inverness, NS B0E 1N0. Telephone, **902-258-2900**; fax, **902-258-2223**.

NEWFOUNDLAND AND LABRADOR

CORNER BROOK F/T caring, patient-oriented dental hygienist wanted to join our friendly dental team in Corner Brook, Newfoundland. Excellent growth opportunity for an ambitious, energetic, self-motivated team player. Great area to live and work in, excellent outdoors. For further info, please call **709-639-8451**, or fax **709-634-4623**, Attn: Sonia.

GANDER Permanent full- or part-time dental hygienist required immediately for busy dental practice located in Gander, Newfoundland. Flexible hours are available. Hygienists who are interested in doing a locum are also welcomed to apply. Accommodations can be provided. Please call **709-256-7400** or fax résumé to **709-256-7433**.

INTERNATIONAL

DUBAI, ARAB EMIRATES A dental hygienist needed for a dental practice in Dubai, The Arab Emirates. Salary is $1000/m, free single accommodation, and production incentive. In addition, three-week annual vacation, two-way annual ticket, and end-of-service benefit. Please contact Dr. Mourany at **info@moc-uae.com**, **Elo@emirates.net.ae**, or send your CV to **0 971 3 755 0128**.

JAMAICA Sunny Jamaica! Looking for a RDH to join our family practice on the beautiful island of Jamaica. Applicants must be self-motivated, independent, friendly, a team player, and able to work with little supervision. We are offering a full-time position with a minimum one year contract. Fax résumé to **876-90-63588** or send by e-mail to **goosiefoote@hotmail.com**.

HONG KONG Very progressive U.S. group practice in Hong Kong seeking serious applications for an available hygienist's position ASAP. US$4,000 – US$5,000 monthly or 30% commission, whichever is higher. Spoken Chinese an asset but not necessary. Address: Suites 513-516, Prince's Building, Central, Hong Kong. Tel: **852-2526 2288**; fax: **852-2521 8632**; e-mail: **dental@adgl.com.hk**.

CDHA CLASSIFIED ADS

Classified job ads are posted on CDHA's web site (**www.cdha.ca**) in the Career Centre *(Members' Only* section). Complimentary ads will also be published, at no cost to the advertiser, in the issue of *CJDH* that follows submission of the ad. These complimentary ads should be no longer than 70 words and are inserted in the order of submission to a maximum of one page. These ads reach over 10,000 CDHA members across Canada, ensuring that your message gets to the target audience promptly. Contact CDHA for more information at **613-224-5515** or at **info@cdha.ca**.