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Tobacco cessation counselling among dental hygienists in Quebec

Non surgical treatment of peri-implant pockets: An exploratory study comparing 0.2% chlorhexidine and 0.8% hyaluronic acid

THE OFFICIAL JOURNAL OF THE CANADIAN DENTAL HYGIENISTS ASSOCIATION

Welcome to 2009, and all it has to offer

Wanda Fedora, RDH

Every year is filled with promise, and within the profession of dental hygiene across Canada, we are orchestrating change and growth that is redefining access to care for Canadians. We are living our mission statement:

The Canadian Dental Hygienists Association is the collective voice and vision of dental hygienists in Canada, advancing the profession, supporting its members, and contributing to the oral health and well being of the public. In pursuit of this mission, CDHA exists so there will be high quality accessible oral health care and advancement of the dental hygiene profession.

You can be proud to be a dental hygienist. You belong to a profession that exists for the greater good. It exists for the benefit of others, as well as ourselves, in that it advances our profession which in turn contributes to the health and well being of the public.

Each new year brings with it an opportunity to reflect on the past and plan for the future, and I have just had such an opportunity handed me through two Student Summits, held in November 2008, in Vancouver and Toronto. In my presentation on professional accountability, I think the most rewarding aspect was the opportunity to motivate others to find tools and attributes that have benefitted our members and others.

All too often we get caught up in our day-to-day routine and forget to remind ourselves why we enjoy what we do. Having the chance to address students of dental hygiene and feel that pride for who we are and the role we play in preventive health care, is something I wish all dental hygienists could experience. I draw from a larger parallel; it's not unlike being Canadians, and when others in the world are suffering, we are reminded to be thankful for who we are and where we live. As we enter this new year, take the time to enjoy who you are and reflect on your own professional accountability, and the many aspects of your profession that you enjoy.

As I had mentioned last issue, I was inspired by a song and I find it coming to mind once again when I look to the future and reflect on the past and professional accountability. My wish for you in the new year would be that you allow the pride that comes with your professional status to inspire you to be the dental hygienist you know you are.

Wanda Fedora RDH.

CDHA welcomes your feedback: president@cdha.ca

Bienvenue en l'an 2009, avec tout ce qu'il offre

Chaque année est remplie de promesses et, au sein de la profession de l'hygiène dentaire, partout au Canada, nous sommes à en orchestrer le changement et la croissance en redéfinissant l'accès aux soins pour la population canadienne. Nous actualisons notre propre mission :

L'Association canadienne des hygiénistes dentaires, représentant la voix collective et la vision de la profession de l'hygiène dentaire au Canada, se consacre à l'avancement de la profession en offrant du soutien à ses membres et en contribuant à la santé et au bien-être du public. Dans la poursuite de cette mission, l'ACHD veille à l'accès à des soins de santé buccale de haute qualité et à l'avancement de la profession d'hygiéniste dentaire.

Vous pouvez être fières d'être hygiénistes dentaires. Vous appartenez à une profession qui existe pour le plus grand bien de tous. Elle existe aussi pour le bien-être des autres, comme pour nous-mêmes, car à mesure qu'elle progresse la profession contribue à la santé et au bien-être de la population.

Chaque nouvelle année donne l'occasion de réfléchir sur le passé et de prévoir l'avenir; c'est précisément ce que m'ont permis en novembre 2008 deux Rencontres au sommet des étudiantes, l'une à Vancouver et l'autre à Toronto. De mon exposé sur la responsabilité professionnelle, je crois que l'aspect le plus gratifiant fut l'occasion que j'ai eue de motiver les autres à cerner les moyens et les attributs qui nous sont bénéfiques ainsi qu'au autres.

Nous sommes trop souvent prises dans l'engrenage de la routine quotidienne et oublions de nous rappeler pourquoi nous aimons ce que nous faisons. Avoir la chance de s'adresser à des étudiantes en hygiène dentaire et la fierté d'être ce que nous sommes et du rôle que nous assumons dans les soins de prévention, voilà une expérience que je souhaite à toutes les hygiénistes dentaires. Puis, dans une perspective plus grande, c'est comme être Canadiennes : lorsque nous voyons les autres souffrir dans le monde, cela nous rappelle d'être reconnaissantes de ce que nous sommes et de ce que nous vivons. Au début de cette nouvelle année, prenez le temps d'apprécier qui vous êtes et de réfléchir sur votre propre responsabilité professionnelle ainsi que sur les nombreux aspects de la profession que vous aimez.

Je mentionnais dans l'édition précédente qu'une chanson m'avait alors inspirée. La chanson m'est revenue à l'esprit en regardant vers l'avenir et en réfléchissant sur le passé et les responsabilités professionnelles. Mon souhait pour la prochaine année serait que vous laissiez la fierté que vous donne votre statut professionnel vous inspirer à être l'hygiéniste dentaire que vous savez que vous êtes.

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Series of small things

Dr. Susan Ziebarth

"Great things are not done by impulse, but by a series of small things brought together." – Vincent Van Gogh

This is a time of exciting new opportunities in dental hygiene research in Canada. This issue of the journal highlights the Canadian Foundation for Dental Hygiene Research and Education (referred to as the Foundation). The Foundation exists to develop a fund to enable dental hygiene research and education in order to enhance the oral health and well being of Canadians. This foundation is the only Canadian charity that exclusively directs its resources to educational and research initiatives for dental hygiene.

This is the right time for the dental hygiene profession to intensify development of a credible body of knowledge that will strengthen evidence-based practice. Research evidence and the need to transfer it to practitioners caring for clients, are all the more important as dental hygienists continue to come into their own as respected and valued health care professionals, working in increasingly independent roles and settings.

In this issue you will read of exciting research of award recipients. We are also waiting for the announcement of the first award recipient in partnership with the Canadian Institutes of Health Research (CIHR), Canada's leading health research granting agency. CIHR has joined with the Foundation to fund a new Master's Award program, valued at $17,500, to support research by registered dental hygienists studying full time in a Master's program. This is the first time that CIHR has funded a grant specifically for dental hygiene research. This partnership speaks of the growing recognition that research in dental hygiene is a critical aspect of health care research, and that oral health is a key determinant of overall health. The review process for this award is managed by CIHR and the deadline for submission is 2 February 2009.

CDHA views the partnership between these two research funding bodies as a breakthrough opportunity that stands to have a major impact on the course of dental hygiene research moving forward. It is going to help us develop the dental hygiene researchers of the future. With adequate funding, the Foundation will be able to realize the full potential of the Award. As well, the Foundation continues to award other grants to dental hygienists blazing new research trails and building knowledge to advance professional practice across the country, and enhance oral health among Canadians.

The Foundation also issues a yearly call for proposals for a competitive peer reviewed grant. The amount of this grant varies from year to year, and is dependent upon the amount of donations received. This year, the Foundation is providing $7,000 for research, dissemination of research,

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Que de petites choses!

« Les grandes choses ne se font pas sous impulsion, mais sont un enchaînement de petites choses qui constituent un tout. » – Vincent Van Gogh

De nouvelles et palpitantes perspectives s'ouvrent actuellement à la recherche en hygiène dentaire au Canada. La présente édition du journal porte à notre attention la Fondation canadienne pour la recherche et la formation en hygiène dentaire (ci-après désignée la Fondation). Celle-ci a pour mission de réunir des fonds pour soutenir la recherche et la formation en hygiène dentaire afin d'améliorer la santé buccale et le bien-être de la population canadienne. La Fondation est le seul organisme de charité qui affecte ses ressources aux initiatives en ce sens.

Le moment est propice pour que la profession de l'hygiène dentaire intensifie le développement d'un ensemble de connaissances pour renforcer une pratique fondée sur des données probantes. Les données de la recherche et le besoin de les transmettre aux praticiennes à l'intention de la clientèle ont d'autant plus d'importance que les hygiénistes dentaires continue de montrer ce dont elles sont capables en tant que professionnelles respectées et estimées des soins de santé, travaillant de façon de plus en plus autonome.

Dans la présente édition, vous découvrirez les recherches stimulantes des boursières. Nous attendons aussi l'annonce de la première récipiendaire de la bourse en partenariat avec les Instituts en recherche de la santé du Canada (IRSC), organisme principal de financement de la recherche en santé au pays. Les IRSC se sont joints à la Fondation pour financer un nouveau programme de bourses de maîtrise, évalué à 17 500 $, afin de soutenir la recherche des hygiénistes dentaires diplômées qui poursuivent à temps plein un programme de maîtrise. C'est la première fois que les IRSC subventionnent particulièrement la recherche en hygiène dentaire. Ce partenariat exprime la reconnaissance croissante du fait que ce type de recherche est un volet essentiel de la recherche sur les soins de santé et que la santé buccale est un des facteur clé de la santé en général. Le processus d'examen de cette bourse est géré par les IRSC et la date limite des soumissions est le 2 février 2009.

Selon l'ACHD ce partenariat constitue une percée qui pourrait avoir une portée majeure sur l'avancement de la recherche en hygiène dentaire, ce qui nous aidera à former des chercheuses en hygiène dentaire pour l'avenir. Avec un financement adéquat, la Fondation pourra réaliser tout son potentiel de bourses et continuer de verser d'autres subventions aux hygiénistes dentaires qui préparent de nouvelles pistes de recherche et misent sur le savoir pour progresser dans la pratique professionnelle partout au pays et améliorer la santé buccale de la population canadienne.

La Fondation tient à tous les ans une compétition dont les candidatures sont évaluées par les pairs. Le montant de la bourse varie d'une année à l'autre et dépend de la somme des dons reçus. Cette année la Fondation prévoit 7 000 $ pour la recherche, la diffusion de la recherche, l'information publique ou la

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Tobacco cessation counselling among dental hygienists in Quebec

Michèle Tremblay[*], MD; Jennifer O'Loughlin[§ ‡], PHD; Johanne Côté[◊], HD; Dominique Derome[◊], FCMA

ABSTRACT

Quebec Order of Dental Hygienists, *L'Ordre des hygiénistes dentaires du Québec* (OHDQ), undertook a program of activities, from 2004 to 2007, to motivate its members to integrate smoking cessation counselling into their daily practice. Specifically, OHDQ gave presentations and interactive training sessions, published articles in their professional journal, and made public their position on smoking during the "World No Tobacco Day". The overall goal was to build capacity among dental hygienists to conduct cessation interventions by sensitizing them to their role in regard to counselling, by providing information about cessation counselling and pharmacotherapy, and by informing them about resources available in the community to help smokers quit.

In spring 2005, a survey was conducted in a random sample of 500 dental hygienists to identify their counselling practices and beliefs, barriers that they perceive in providing counselling, as well as the kinds of help they would prefer in order to help them better intervene with smokers (training, documentation for smokers, practice aids). The data provided baseline information so that trends in counselling practices could be monitored over time, and adjustments be made to training interventions of dental hygienists. The response proportion was 70 per cent. The data suggested that the counselling practices of dental hygienists were not optimal—only 26 per cent assessed if smokers were ready to quit, and 25 per cent discussed strategies to quit with smokers preparing to quit. Although dental hygienists believe that they should intervene with smokers, they feel that they do not have the skills to intervene effectively. The challenge for OHDQ is to develop activities for dental hygienists that will increase their skill levels and their self perceived competence to provide effective cessation counselling.

RÉSUMÉ

L'Ordre des hygiénistes dentaires du Québec (OHDQ) a mené, entre 2004 et 2007, un programme qui avait pour objet d'inciter ses membres à intégrer dans leur pratique le counselling sur l'abandon du tabagisme. L'OHDQ a offert des conférences et des séances de formation interactive, publié des articles dans son journal professionnel et pris position publiquement lors de la « Journée Mondiale sans tabac ». Ces activités avaient pour objet d'habiliter les hygiénistes dentaires à intervenir auprès des fumeurs, en les sensibilisant au rôle qu'elles peuvent jouer et en les informant sur le counselling, sur la pharmacothérapie pertinente et sur les ressources communautaires disponibles pour aider les fumeurs à cesser de fumer.

Au printemps 2005, une étude randomisée était menée auprès de 500 hygiénistes afin de définir leurs pratiques et leurs croyances en matière de counselling, les obstacles à surmonter ainsi que la sorte d'aide qu'elles souhaiteraient avoir pour mieux intervenir auprès des fumeurs (formation, documentation pour les fumeurs, outils d'aide à la pratique). Les données recueillies permettront de suivre l'évolution des pratiques de counselling et de rajuster la formation des hygiénistes dentaires. Le taux de réponse fut de 70 %. Les données suggèrent que les pratiques de counselling n'étaient pas optimales : seulement 26 % des hygiénistes évaluaient si les fumeurs étaient prêts à cesser de fumer et 25 % discutaient de stratégies avec les fumeurs qui s'y préparaient. Si elles estimaient qu'elles devaient intervenir auprès des fumeurs, les hygiénistes dentaires jugèrent cependant qu'elles n'avaient pas la compétence suffisante pour agir avec efficacité. L'OHDQ a donc le défi de mettre au point des activités qui accroîtront les capacités des hygiénistes dentaires et rehausseront ainsi leur sentiment de compétence et d'efficacité en matière de counselling sur l'abandon du tabagisme.

Key words: tobacco cessation, smoking cessation, dental hygienists, counselling

INTRODUCTION

Every day, about twenty-five Quebec residents die from tobacco-related diseases (amounting to nearly 10,000 per year).[1] Although the prevalence of tobacco use has declined in the past decade, approximately 1.6 million Quebec residents continue to smoke.[2] Since 2003, the Quebec Ministry of Health and Social Services, *ministère de la Santé et des Services sociaux du Québec* (MSSS) has funded various initiatives as part of its Quebec Plan for Smoking Cessation, *Plan québécois d'abandon du tabagisme*[3]. The objective of the plan is to motivate smokers to quit and to support them in the process. To accomplish this, a wide range of free services have been made available gradually across the province, including a telephone help line, a web site dedicated to helping smokers quit, and counselling services offered in more than 160 smoking cessation centres across the province.

In 2004, MSSS mandated the Quebec Public Health Institute, L'*Institut national de santé publique du Québec* (INSPQ) to develop a project in partnership with six professional associations in Quebec – le *Collège des médecins* (College of Physicians), l'*Ordre des pharmaciens* (Order of Pharmacists), l'*Ordre des dentistes* (Order of Dentists), l'*Ordre des hygiénistes dentaires* (Order of Dental Hygienists), l'*Ordre des infirmiers et infirmières* (Order of Nurses), and l'*Ordre professionnel des inhalothérapeutes* (Order of Respiratory Therapists). The aim was to help these organizations encourage their membership to become more actively involved in cessation counselling. Nearly 75 per cent of residents of Quebec visit a health professional at least once a year, representing an important opportunity to help smokers decide to quit and support them during the process of quitting.

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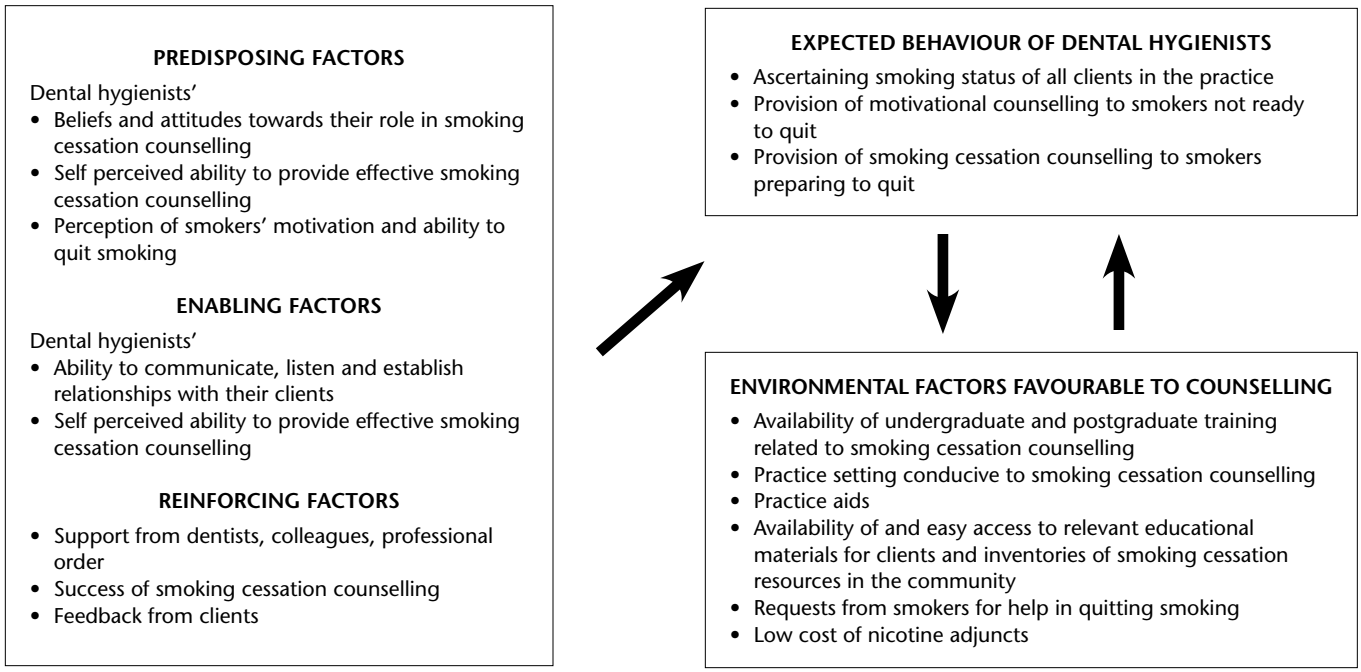

Figure 1: Theoretical model

Preparatory work with OHDQ involved two steps. First, a literature review was conducted to identify effective interventions to improve cessation counselling practices among dental hygienists.[4-7] Second, a meeting was held with the president of the OHDQ in 2004 to explore interest within the organization in developing activities geared for dental hygienists. OHDQ committed to the project enthusiastically, and in the fall of 2004, the first intervention for dental hygienists was launched. In 2004-2005, OHDQ included approximately 4,000 members who were mainly women (98%), and whose mean age was 31 years.

To address the lack of empirical information on cessation counselling practices among dental hygienists in Quebec, the authors surveyed a random sample of active licensed dental hygienists in the spring of 2005. The aim was to identify current practices and beliefs related to their role with smokers, to describe the barriers that they perceive in providing counselling, and to describe their level of interest in improving their knowledge on cessation counselling. They were also asked about the types of assistance that they would prefer in order to improve their counselling practices (training, documentation for smokers, practice aids).

The objective of this article is to describe the interventions that were developed and implemented by OHDQ for its members between 2004 and 2007, and to present the main findings of the 2005 survey. All activities, with one exception, were implemented after the survey was conducted.

DESCRIPTION OF INTERVENTIONS

The choice of interventions to develop and to implement was based on the literature describing past experiences in training health professionals to provide cessation counselling in Quebec and elsewhere.[8,9] The theoretical underpinnings of the project were based on the "Precede-Proceed" model which the authors used previously in a five-year project to optimize the cessation practices of general practitioners in Montreal.[9] Figure 1 illustrates an adaptation of this model for this project.

Since the project inception in the fall of 2004, four types of activities of varied intensity, including presentations, interactive training sessions, publication of articles, and the release of a public position statement have been implemented. The goals of these activities were to sensitize dental hygienists to the importance of their role with smokers, to transmit knowledge on counselling and pharmacotherapy for smoking cessation, and to identify community resources available to help smokers quit.

OHDQ devoted most of the articles in its October 2004 issue of *l'Explorateur* to tobacco-related issues.[10] The articles covered oral diseases associated with tobacco, smoking cessation counselling, pharmacotherapy and community resources available for smokers. In addition, the president of OHDQ authored an editorial in *l'Explorateur* to explain the rationale behind such emphasis on tobacco addiction, and invited her colleagues to attend a three-hour presentation on the topic at OHDQ's conference three weeks later. Based on data from the survey conducted six months later, approximately 75 per cent of dental hygienists in Quebec had read the issue on tobacco addiction (data not shown).

As part of the World Health Organization's *World No Tobacco Day* which in 2005, focused on the role of health professionals against smoking, a press conference was planned for 31 May 2005 involving MSSS, INSPQ and five professional organizations including OHDQ. However, the event was cancelled because of a conflict of schedules; MSSS and INSPQ had to attend a hearing on a planned tobacco bill in the Quebec National Assembly. However, OHDQ issued a press release entitled "*Les hygiénistes dentaires répondent à l'appel*" (Dental Hygienists Heed the Call), indicating their commitment in the fight against tobacco addiction.[11]

In 2005, a three-hour interactive workshop on smoking cessation counselling was developed by a well-known dental hygienist and former president of OHDQ. The workshop, advertised in *l'Explorateur* and in *Le mot d'Ordre*, (two OHDQ publications) as well as on the OHDQ web site, was offered on eight occasions in 2006, with a total of 120 attendees benefitting. Its content included a description of the effects of tobacco on oral and dental health, and an explanation on how dental hygienists can play a frontline role with smokers. Using clinical vignettes of dental clients who smoke, the presenter also described the counselling process for smokers not motivated to quit, and for those actively preparing to quit. As well, community resources to which smokers could be referred were enumerated. OHDQ adapted the 3-hour workshop to a 1-hour training session because of low attendance, and incorporated this into five training sessions on periodontitis, a very topical issue among dental hygienists. In 2007, 367 dental hygienists attended these five sessions in Quebec.

Two articles were published in *l'Explorateur* in April 2006 and April 2007 entitled *"Comment discuter de renoncement au tabac avec un fumeur"* (How to discuss quitting smoking with a smoker)[12] and "*Le counselling en abandon du tabac: Qu'en pensent les hygiénistes dentaires du Québec?"* (Smoking cessation counselling: What do Quebec dental hygienists think?).[13] The first article described conversations between a dental hygienist and three smokers at various stages of motivation to quit. The second article, accompanied by an editorial comment from the president of OHDQ strongly urging members to conduct interventions with their clients who smoke, presented the main findings of the survey of dental hygienists conducted in 2005.

COUNSELLING PRACTICES AMONG DENTAL HYGIENISTS

METHODS

In May 2005, the authors conducted a survey in a simple random sample of 500 members of OHDQ, selected from their 2004 database, in order to study their current smoking cessation counselling practices

A self administered questionnaire with 143 items, based on previous research, was adapted to the clinical context of dental hygienists.[9,14] It was pretested by ten OHDQ members for readability and ease of completion, and then modified to take their comments into account. The questionnaire, available bilingually, was mailed by OHDQ in May 2005. It was accompanied by a cover letter signed by the president of OHDQ and an INSPQ researcher responsible for the study. Two subsequent mailings were completed in June and July 2005 to non respondents. Eligibility criteria included that respondents had engaged in clinical practice during the year preceding the survey. This information was obtained from the questionnaire. Approval by the Ethics Committee of McGill University for this study was obtained in November 2004.

In addition to smoking cessation counselling with smokers not ready to quit or preparing to quit, the questionnaire collected data on socio-demographic characteristics, beliefs about smoking cessation, self perceptions of skills in counselling, barriers to intervening with smokers, desire to improve knowledge, and preferred types of assistance for interventions with smokers.

Descriptive analyses were conducted using the SAS 9.1 software program.

FINDINGS

The response proportion was 70 per cent.[15]

Determining client smoking status

Majority of dental hygienists asked clients on their first visit, as well as those with smoking-related health problems, whether or not they smoke (Table 1). For more than half of the clients who were smokers, 60 per cent of dental hygienists recorded the smoking status in the client's dental file, and 26 per cent assessed whether or not the smoker was ready to quit smoking.

Counselling practices

Tables 2 and 3 describe counselling practices among dental hygienists for two groups of smokers. Over half of dental hygienists (57%) discussed the effects of smoking on oral health with more than half of smokers not ready to quit, and 40 per cent of dental hygienists advised them to quit (Table 2). Forty-four per cent of dental hygienists asked more than half of smokers who were ready to quit how many cigarettes they smoked per day, 39 per cent discussed previous quit attempts and 25 per cent discussed strategies to quit smoking (Table 3). Thirty-five per cent indicated that the counselling they provided lasted more than three minutes.

Beliefs, perception of skills, and barriers

Majority of dental hygienists had favourable beliefs about counselling, and many reported that they had an important role to play in helping smokers quit (data not shown). However, few thought it was their role to provide follow-up (data not shown), and few thought they had the necessary skills to provide effective cessation counselling (Table 4).

Barriers to providing counselling reported as very or extremely important by more than 70 per cent of respondents included the following: lack of knowledge on pharmacotherapy (75%), lack of knowledge on counselling (74%), lack of time (72%), clients' resistance to counselling (74%), lack of interest on the part of the clients (71%) and the difficulty of follow-up (70%). Barriers including perceived lack of impact on the client (65%), difficulty determining if a client wanted to quit (64%), lack of compliance among clients (59%), lack of resources for clients (59%) and educational documentation (52%) were also reported by more than half the respondents.

Interest in improving knowledge

Fifty-nine per cent of dental hygienists were interested in improving their knowledge about smoking cessation. Many indicated that educational material for smokers, an inventory of resources available in the community for smokers, articles about cessation published in professional journals, printed materials for dental hygienists, and implementation of a system to identify clients who smoke would help them incorporate counselling into their practice. Presentations, Internet-based training and interactive workshops were not considered as helpful educational approaches (Table 5).

Table 1: Dental hygienists who ascertain smoking status according to type of client

Type of client	Ascertain smoking status of more than half of clients %	Ascertain smoking status of half of their clients or less %
Clients on their first visit	78	22
Clients with smoking-related symptoms or diseases	73	27
Clients who were smokers at the last visit	55	45
Clients without smoking-related symptoms or diseases	34	66

Table 2: Dental hygienists who counsel smokers not ready to quit

Intervention	Provide intervention to more than half of smokers %	Provide intervention to half of smokers or less %
Discuss the effects of smoking on oral health	57	43
Discuss the effects of smoking on health	35	65
Discuss clients' perceptions of the pros and cons of smoking	25	75
Discuss clients' perceptions of the pros and cons of quitting	25	75
Express concerns about the client's smoking	28	72
Advise clients to stop smoking	40	60
Offer printed educational material on smoking or cessation	11	89
Offer an appointment specifically to discuss cessation	1	99
Discuss the effects of second-hand smoke on the health of relatives and friends	6	94

Table 3: Dental hygienists who counsel smokers preparing to quit

Intervention	Provide intervention to more than half of smokers %	Provide intervention to half of smokers or less %
Ask about the number of cigarettes smoked each day	44	56
Discuss previous quit attempts	39	61
Discuss worries about cessation	18	82
Discuss strategies to quit smoking	25	75
Discuss withdrawal symptoms	19	81
Advise setting a quit date	9	91
Ask whether clients smoke their first cigarette within 30 minutes of waking	1	99
Offer printed educational material on smoking or cessation	12	88
Refer clients to cessation resources available in the community	8	92
Recommend nicotine replacement therapy (gum, patch or inhaler)	21	79
Recommend Zyban (bupropion)	4	96

Table 4: Perception of skill levels to undertake cessation counselling among dental hygienists*

	Agree somewhat or completely %	Neither agree nor disagree %	Disagree somewhat or completely %
I have the skills to help my clients quit smoking	33	31	35
I am able to tailor smoking cessation counselling to the specific needs of my clients	59	24	17
It is easy for me to initiate a discussion about quitting with my clients	48	23	29
I am able to ascertain the level of addiction of my clients	37	24	39
I think that I can influence my clients to quit smoking	39	40	21

* Figures are rounded to the nearest whole number and therefore may not total 100.

Table 5: Level of interest among dental hygienists in training/tools to update cessation counselling skills*

Training/tools	Very or extremely interested %	Somewhat interested %	Slightly or not at all interested %
Educational material for smokers	76	18	6
Inventory of resources	71	21	7
Articles in *l'Explorateur*	69	23	8
Printed materials	66	25	9
System to better identify clients who smoke	57	28	15
Smoking cessation guidelines	55	30	15
Articles on smoking cessation on the OHDQ Web site	49	31	20
Conferences on smoking cessation counselling	36	33	31
Audiovisual materials	28	36	37
Internet-based training	27	31	42
Interactive workshops	24	36	39

* Figures are rounded to the nearest whole number and therefore may not total 100.

DISCUSSION

According to the study conducted in 2005, dental hygienists in Quebec believe that motivating and supporting smokers to quit is an integral component of their role as dental hygienists. Although few dental hygienists received training on cessation counselling during (1%) or following (9%) their education, there is marked interest in improving their knowledge about cessation.

Few dental hygienists currently intervene with smokers, and few feel competent to provide effective counselling. Perceived barriers to providing cessation counselling include lack of knowledge on counselling and pharmacotherapy, lack of interest in quitting among smokers, and lack of compliance with advice among smokers. Dental hygienists also indicated that they would like to distribute printed educational materials to smokers, and refer them to community resources. They themselves would like to receive printed educational materials on cessation.

The challenge in the coming years is, therefore, to develop activities that fulfil the needs expressed by dental hygienists to increase their feeling of competence and optimize their counselling practices. This is the challenge that OHDQ has committed itself in collaboration with its partners. For example, OHDQ partnered with Quebec Order of Dentists and INSPQ in 2007 to develop printed educational materials designed specifically for their members. The output was a concise yet detailed coffee-table book illustrating the effects of tobacco on oral and dental health, describing various strategies including pharmacotherapy to help smokers quit, and listing community resources. The book was focus tested in 2008 among dental hygienists and dentists to assure that information needed during client visits was easily retrievable; many changes were incorporated to take their comments into account.

Participants agreed that this new tool would be very helpful in their practice. Printed educational materials for smokers, including information on community resources, should also be developed.

Because few dental hygienists attend training sessions, this strategy should be reconsidered as it may not be optimal for professional development. Other means of conveying information such as the OHDQ professional journal should be used to address lack of knowledge on smoking cessation counselling and pharmacotherapy among dental hygienists. These publications should also emphasize that most smokers want to quit, and that they do intend to comply with advice given by health professionals, but find it very difficult because of nicotine addiction. A recent pilot study[16] among 161 Alberta dental hygienists (response proportion of 25.2%) suggested that dental hygienists do use dental hygiene journals and provincial association newsletters or publications as knowledge sources; such publications were ranked highest in their usefulness as were in-services and conferences.

Because the data from the authors' study are based on self reports, cessation counselling practices could be overestimated. As well, the results of the 2005 survey might be influenced by the publication of the October 2004 edition of *l'Explorateur,* devoted entirely to tobacco-related articles.

CONCLUSION

Tobacco use causes numerous oral diseases including cancer of the mouth, leucoplasia, and periodontitis which are diagnosed and treated by dental health professionals every day.[17] Dental hygienists can play a major role given that they can identify and show, in the mouths of their clients, the short term effects of smoking. Since more than half of Quebec residents visit a dental office at least once a year, tobacco cessation counselling by dental hygienists could contribute to reducing smoking. Components of effective counselling that could be an integral part of everyday practice are: asking if clients smoke and recording the smoking status of clients in their dossiers, advising smokers to quit and to think about strategies to quit, and supporting smokers in the process of quitting. The data collected from dental hygienists in 2005 will guide the development and implementation of interventions that respond to the needs of dental hygienists to help them optimize their smoking cessation counselling practices.

ACKNOWLEDGEMENT

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Why is market research important to dental hygiene practice?

CDHA's Independent Practice Advisor, Ann E. Wright

One of the initial steps a dental hygienist should take when considering independent practice is an analysis of the demographic environment, commonly referred to as "market research". In a nutshell, this involves an investigation of the members of the community to be targeted. With this information, a dental hygienist can weigh the pros and cons for choosing one location over another.

The demographic environment is more detailed than looking at population numbers. It includes the number of family units, population education, numbers of white- and blue-collar workers, and racial and ethnic representation in the population. Market research can be purchased through qualified organizations. However, the benefits of doing your own market research are: you develop a "sense" of the community you are considering; you establish a personal link by introducing yourself to neighbouring merchants and businesses; you have an excellent opportunity to observe the people who use the various services that surround your site, and you save money!

You may be considering setting up in your home, leasing retail space, owning a mobile practice, or a combination of the three. Decide where your practice is to be located. Then consider the following market analysis questions:

1. **Establishing a practice in your home:**
   - Is your home accessible by public transit? Is it within a reasonable walking distance?
   - Have you adequate parking: wheelchair accessibility?
   - Do many people typically "drive by" your property, and what are your city by-laws on "home business"?
   - Are you located near other home businesses for referrals, such as a hair salon?
   - Are you accessible from schools, community centres, other businesses?
   - Who are the major insurers, and do they pay dental hygiene claims?
2. **Establishing a practice in a retail or professional site**
   - Who are the neighbouring businesses, and are they businesses that will provide you with a good source of referrals?
   - Is the area you are considering clean and well-kept?
   - Is this a busy thoroughfare? How much pedestrian traffic do you observe at different times of the day?
   - Will your sign be visible from the street?
   - Are the stairways and hallways clean and in good repair?
3. **Establishing a mobile practice**
   - Do you know if there are many homebound clients in this area? Are there many seniors?
   - Have you visited the long term care residences, residential care facilities, local schools and day care centres? What is the enrollment waiting list?
   - What is their interest, and do they already have dental services?
   - Have you visited the local social service offices for information on local residents?

The Internet is a wonderful source of market research. An excellent starting place is Statistics Canada at www.statisticscanada.ca. A second resource is the *Financial Post Canadian Demographics* which adds such additional detail as income, retail sales, labour force, occupations, level of schooling, average household expenditures, and many more attributes. All cities and towns have web sites. Visit the city's official web site, and look for information on total population, age, gender, number of families, number of single family homes, number of rental units, average household income, education levels, home language.

In addition, the local Chamber of Commerce will provide you with details on:

i. Major businesses, industry, white- and blue-collar workers
ii. Number of schools, primary, secondary, post-secondary
iii. Daycare centres
iv. Places of worship
v. Arenas, community centres
vi. Contact your MPP, town councillor, mayor, school trustee for additional details about your community.

Now we get to the number crunching. Once you have derived the total population numbers in your community, the next step is to calculate the oral health care/population ratios to see if this community can support your practice. The Dental College and Dental Hygiene College in your province will have a directory of the names and addresses of all dentists and dental hygienists. Many of these directories are grouped by city. The following is an example from Ontario. Dentist: population ratios in Toronto are approximately 1:1100, and Toronto is considered a very saturated market. Ottawa for instance has a dentist: population ratio of 1:2500, and is much more attractive. Therefore a highly attractive oral health care/population ratio would be anything greater than 1:1300.

The calculations are straightforward. For instance, you have determined that there are 35 dental offices and zero dental hygiene practices in your city. The next step is to see if there are enough people living in your community who would come to your office to make it a viable business. For illustration purposes, we will assume that there are 125,000 people living in the community. Therefore the total oral health practitioner to population ratio is calculated as follows: 125,000÷35 = 3571; the oral health ratio is 1:3571. From the data presented above, these population numbers represent an attractive community to set up a dental hygiene practice.

One of the most important influencing factors of success of your dental hygiene practice is the market potential of the area. Take the time to conduct your market analysis.

CDHA welcomes your feedback: aew@cdha.ca

CFDHRE

CANADIAN FOUNDATION FOR DENTAL HYGIENE RESEARCH AND EDUCATION

A new era for dental hygiene research in Canada

A number of forces are combining to bring a new level of credibility to dental hygiene research in Canada and a growing recognition of its importance. This is translating into unprecedented research opportunities for dental hygienists, and is making the job of the Canadian Foundation for Dental Hygiene Research and Education (or the Foundation) more exciting and more valuable than ever.

Canada's only foundation dedicated exclusively to dental hygiene research and education is still quite young. The Canadian Dental Hygienists Association (CDHA) formed the Foundation in 2004, with a mission to "enable dental hygiene research and education in order to enhance the oral health and well-being of Canadians." The Foundation has since raised and awarded more than $63,508 in grants to dental hygienists for research projects to help advance clinical practice, dental hygiene education, and oral health outcomes.

Researchers in the field believe the circumstances are right for a new era of dental hygiene research in Canada due to a combination of changes both within the profession, and in the wider sphere of health care research and delivery. "Absolutely, the timing for research couldn't be better," says Salme Lavigne, Chair of the Foundation, and Director of the School of Dental Hygiene at the University of Manitoba in Winnipeg. "It's a really exciting time right now for the profession, and at the same time, it's critical that we do everything possible to encourage the movement of the CDHA research agenda."

One of the factors elevating the need for research is the evolution of dental hygiene as a profession in Canada, and the move towards more independent practice in many provinces, according to Prof. Lavigne. "It's vital at this point that we take some accountability and begin to add to the dental hygiene body of knowledge."

"The time for research funding is certainly now," agrees Dr. Joanne Clovis, Associate Professor at the School of Dental Hygiene at Dalhousie University in Halifax, and one of Canada's most active dental hygiene researchers. "Over the past decade, legislative and educative initiatives to advance the profession have taken priority. Many of those initiatives are more stable now, which allow us to put more emphasis on research and research funding."

Dr. Clovis is the first dental hygienist in the role of principal investigator for a project funded by a grant from the

SANDRA COBBAN: A passion for moving research into the hands of dental hygienists

Sandy Cobban readily admits she is "passionately committed to advancing the dental hygiene profession through research." So much so, her own research projects are focused on research utilization by dental hygienists—to understand how to increase use of the latest evidence in dental hygiene practice.

"If we want to have high quality care based on the best research evidence, we really need to understand how dental hygienists get their knowledge for practice," says Ms. Cobban. "Studies suggest that dental hygienists are not using a lot of the available research evidence but we don't really understand why."

The Foundation has helped Ms. Cobban pursue her quest to understand why. The Foundation funded two of her projects; a 2005 study to determine if "critical thinking dispositions" affect dental hygienists' use of research in practice, and her current project, funded in 2007, focused on developing an instrument to measure facilitators and barriers to the use of research by dental hygienists.

Ms. Cobban is currently an Associate Professor with the Dental Hygiene Program, Faculty of Medicine and Dentistry, at the University of Alberta in Edmonton. At the same time, she is pursuing a PhD in knowledge utilization through the university's Faculty of Nursing.

In her first Foundation-funded project, she wanted to see if dental hygienists were more likely to use research in their practice if they showed a greater disposition to critical thinking. Previous research found this type of link for nurses.

"Critical thinking is very important in dental hygiene education programs now. I wanted to study whether it correlates with higher research utilization in our profession and my study did find a statistically significant correlation."

In her current study, Ms. Cobban is starting with focus groups to determine if instruments for measuring research utilization by nurses and others can and should be refined to measure barriers and facilitators for dental hygienists.

The end result she hopes is to "reduce the time gap between when research knowledge is known and when dental hygienists are applying it on a daily basis in frontline practice."

The Foundation's funding has been vital to her work, Ms. Cobban points out that many granting agencies will not fund researchers who are earning other income. She says, "I am a single mother working full-time. Without the Foundation, I wouldn't be able to do this type of research. I am so grateful that, as dental hygienists, we have this opportunity in Canada."

SUSANNE SUNELL: Building national competencies for dental hygiene entry-to-practice

The project began when Dental Hygiene Educators Canada (DHEC) called upon Dr. Susanne Sunell to help develop a proposal to review and revise the competencies which DHEC had developed for diploma and baccalaureate dental hygiene programs.

The DHEC Board and Dr. Sunell began to explore the idea of bringing together all the national dental hygiene organizations to develop one national standard for dental hygiene entry-to-practice in Canada. "We thought it would be fruitful to get all the organizations together and develop a common document that everyone could agree upon. It would be more meaningful for the profession and it would have more impact."

The Foundation helped make possible this valuable collaboration through a 2007 grant. The funding was awarded to the University of Manitoba's Joanna Asadoorian, who had an advisory role, with Dr. Sunell directing the research.

Dr. Sunell, who began her career as a registered dental hygienist in clinical practice, has a consulting company, Omni Educational Group, and is a part-time faculty member at the University of British Columbia's Faculty of Dentistry in Vancouver.

The project brought together CDHA, DHEC, Commission on Dental Accreditation of Canada (CDAC), Federation of Dental Hygiene Regulatory Authorities (FDHRA) and the National Dental Hygiene Certification Board (NDHCB). It was the first such collaboration in the Canadian dental hygiene profession. The result was a new draft framework for dental hygiene competencies which is to be further validated through broader consultations.

"We are hoping to move forward with one common national standard for entry-to-practice to raise the standard and equalize dental hygiene education across Canada," says Dr. Sunell. "This will support the inter-provincial mobility of dental hygienists and the ongoing development of the profession."

In 2005 as well the Foundation had funded research by Dr. Sunell. Working with a colleague from Sweden, she studied factors affecting research utilization by dental hygienists. One finding was that dental hygienists with more years of education made greater use of research in practice.

The Foundation provides considerable value to the profession, says this researcher. With its unique mandate to fund dental hygiene research, the Foundation is meeting a vital need. "It's essential for dental hygienists to be involved in research because we need to frame questions for our own practice. It is only by being involved that we will develop the strong research questions that will yield the data we need to support us in educational, clinical, or community practice."

Canadian Institutes of Health Research (CIHR). Her grant is one of four which CIHR awarded to research projects addressing oral health disparities in Canada. Many see her leadership role in this project as a sign of dental hygiene's evolving credibility, and Dr. Clovis is hopeful it will pave the way for future funding for dental hygiene researchers. CIHR has indeed demonstrated its commitment to dental hygiene research in a concrete way, through an innovative partnership with the Foundation.

MASTER'S AWARD PRESENTS BREAKTHROUGH OPPORTUNITY FOR DENTAL HYGIENE RESEARCH

In early August 2008, the Foundation announced a new Master's Award in partnership with CIHR, marking the first time that the national health research granting body has funded a grant specifically for dental hygiene research. The award is a breakthrough opportunity that will significantly influence the dental hygiene research community in Canada posits Susan Ziebarth, Executive Director of the Foundation.

"It's a very exciting opportunity because CIHR is focusing on dental hygiene as a recognized profession, a credible profession in terms of research and building a knowledge base," says Dr. Ziebarth. "This is an important step and one from which we can grow."

"This is a major step forward," says Prof. Lavigne. "It's going to be very prestigious and truly has given us a great deal of credibility with the government and with the research world."

The Award provides funding of up to $17,500 a year to support research project development by registered dental hygienists enrolled full-time in a Master's program, subject to certain other conditions. The deadline for applications is 2 February 2009.

EVIDENCE-BASED HEALTH CARE AND THE LINKS BETWEEN ORAL HEALTH AND OVERALL HEALTH

The explosion of the evidence-based movement in all aspects of health care is another development fuelling the need for dental hygiene research. The push to deliver cost-effective health care treatments and services that have a positive impact has never been greater. More research will produce the evidence to drive better clinical practice, giving dental hygienists new tools and knowledge to improve the oral health of their clients.

"With all the emphasis on evidence-based practice, it is vital that we advance the body of dental hygiene knowledge," says Dr. Ziebarth. "The more evidence we can build, clearly the more effective and more recognized the practice and the treatments will be."

Another important development is the growing understanding of the link between oral health and overall health. "Good oral health leads to good health outcomes," says Prof. Lavigne. "It's something we have always inherently known but now there's a growing body of research that further supports these connections. Dental hygiene

PAULINE IMAI: Helping people care for their oral health, and inspiring students

Pauline Imai appears to have endless energy for dental hygiene research. She has several projects either on the go or in development, and ideas for many more. Her particular research passions are Phase III clinical trials and education, and one of her missions is to inspire dental hygiene students to get involved in research.

Ms. Imai is a Clinical Assistant Professor in the Dental Hygiene Degree Program of the University of British Columbia's Faculty of Dentistry in Vancouver. After becoming a registered dental hygienist, she went on to earn a Bachelor's (Dental Hygiene) and a Master's Science degree (Dental Hygiene, Clinical Research) as well as a certificate in Teaching & Learning in Higher Education, all at UBC.

The Foundation provided funding in 2006 for her Master's research, a study on flossing with chlorhexidine (CHX). It's just the kind of clinical trial project that she enjoys the most.

"I find it very gratifying to do human trials because I can actually see the positive impact of research on people," says Ms. Imai. "In particular I want to empower clients to help themselves achieve oral health, by studying methods that they can use at home."

The research compared a group of subjects with gingivitis who used dental floss presoaked in CHX oral rinse, to a control group using dental floss in placebo solution. One of the objectives was to find an alternative application method for CHX because as a rinse, it causes unattractive tooth staining, leading to a drop in client compliance. Using CHX with dental floss carries it to the interproximal area, where most periodontal disease begins, while reducing this staining.

Both groups showed a reduction in gingival index over the twelve weeks, but the CHX floss group had statistically significant reductions in bleeding on probing for subjects with moderate gingivitis. There was no statistically significant difference between the groups for stain or plaque indices.

The Foundation also provided funding this year for another clinical trial in which Ms. Imai will compare plaque and bleeding among a group using a new interdental brush, to another group using the gold standard, dental floss.

Ms. Imai is also working on research studies related to dental hygiene education and the impact of UBC's entry-to-practice baccalaureate dental hygiene program on a community of low income families.

And she's continually encouraging the love of research in her students. "I say to them, if you have a question and it's not answered in the literature, why not find the answer yourself through research? Use your curiosity as a springboard to inform the entire profession."

researchers have a wonderful opportunity to conduct intervention studies and help build additional evidence about these important relationships."

Dr. Clovis agrees dental hygienists need to become more involved in this area of research. The oral health systemic link is driving the need for prevention of oral disease and oral health promotion, areas in which dental hygienists have unique expertise and experience; an untapped opportunity that dental hygienists should seize.

"There is a real lack of dentists and dental hygienists who are dental public health specialists," she says. "We need to have people with oral health backgrounds qualified at a Master's level with some specialization in dental public health. Dental hygienists are perfect in that role."

OPPORTUNITY AND NEED COME TOGETHER

The Foundation recognizes that both the opportunities and the need for dental hygiene research have never been greater. As a result, the Foundation is working to encourage more dental hygienists to get involved in research.

Researchers in the field believe strongly that dental hygienists should be leading dental hygiene research because they know the real life issues that affect care on the frontlines. "The questions for research should come from practice," says Dr. Clovis. "When we are actually with clients, how do we communicate with people, what kinds of clinical services do we provide? Those are key questions that should be addressed in research, and the answers can become the foundation of practice. This research needs to be done for dental hygiene by dental hygienists."

With the opening of new horizons for dental hygiene research, the Foundation is also urging members of the profession to provide support in other ways—through financial donations and by fundraising on behalf of the Foundation. More funding will help the Foundation build the financial strength to seek other partnerships, similar to the one just developed with CIHR.

Whether as researchers or through donations and volunteer work, dental hygienists have a key role to play in helping advance the profession and its body of knowledge by supporting research.

"All of us in the profession are called upon to support research that improves our clinical practice, as well as research in health promotion and community-based health," says Prof. Lavigne. "There is such a huge burden of dental disease in the country and so many vulnerable population groups. We need to figure out how to reach those population groups and how to improve oral health outcomes. Research is critical to achieving these goals."

ACKNOWLEDGEMENT

The Canadian Foundation for Dental Hygiene Research and Education would like to thank Kathie Lynas for writing this article.

CANADIAN FOUNDATION FOR

DENTALHYGIENE

RESEARCH AND EDUCATION

Salme Lavigne,
President, CFDHRE

Dear Colleague:

The timing couldn't be better.

As a dental hygiene professional, you already know about the strong relationship between oral health and our general state of health and well-being. Now is the time to invest in research aimed at advancing our knowledge of dental hygiene, and help Canadians to better understand the vital role our profession plays in promoting and fostering good health.

Please join me and your colleagues in supporting the Canadian Foundation for Dental Hygiene Research and Education (CFDHRE). Your gift will strengthen our profession by funding dental hygiene research and communicating the results of this research to Canadians.

It's time for our profession to come together and let Canada know that we care and have an important contribution to make in understanding, alleviating and preventing lung and heart disease, cancer, diabetes, and many other illness related to oral health.

As you may have read in this issue of the *Canadian Journal of Dental Hygiene*, researchers believe the circumstances are right for a new era of dental hygiene research in Canada. Who better to lead the way in this new age of oral health than the very same professionals who are already on the front line of oral health care. This is one of the important reasons why the Canadian Dental Hygienists Association created this foundation.

I take great pride in the fact that we are the only foundation and registered charity in Canada dedicated solely to dental hygiene research. I hope you do to, and also understand the importance of our role and responsibilities. In order to flourish and produce the results that will ultimately benefit our patients and the work we do, we all need to contribute.

Please make your donation today by either visiting us on line at www.cfdhre.com, or completing the reply form attached to this letter and mailing in your cheque or credit card contribution in the return envelope provided. A tax receipt will be sent to you promptly.

Thank you for sharing in our commitment.

Sincerely,

Salme Lavigne,
President, CFDHRE

P.S. CFDRHE is your professional foundation. Please make it your charity as well!

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Executive Director's message, *Series of small things*
… continued from 7

public education, or publication of information. The submissions are reviewed by a team of reviewers whose mandate is to review proposals and to advise the Foundation with respect to continuous quality improvement in the proposal review process. The overarching principles inherent in the allocation of the Foundation funds are excellence, equity of opportunity, and due diligence in the use of the Foundation funds. Applicants must be organizations that can issue official donation receipts. The deadline for submission is 1 May 2009.

The Foundation is energized by the growing research opportunities. New doorways are opening, and CDHA is determined to do all we can to help dental hygienists walk through them by supporting the Foundation. But the Foundation is young and needs all of our help and support to grow the grant funds. As Van Gogh noted, we need a collective of small things to converge in order to achieve great things.

Sometimes it is difficult for us to recognize the value of research to our everyday lives. Just stop for a moment and think about the pace of change in our home and work lives. Where did many of these changes initiate from? Through dedicated, innovative, and questioning minds. I encourage you to consider your role in the series of small things and to help the dental hygiene profession reach higher—dental hygienists and the clients they serve will reap the rewards.

Message de la directrice générale, *Que de petites choses!*
… suite 7

publication de l'information. Les soumissions sont examinées par une équipe de réviseures qui ont le mandat d'examiner les propositions et de conseiller la Fondation quant à l'amélioration constante de la qualité du processus d'évaluation. Les principes fondamentaux inhérents à l'allocation des fonds de la Fondation sont l'excellence, l'équité des possibilités et la diligence quant à l'emploi des fonds de la Fondation. Les organisations candidates doivent être en mesure d'émettre des reçus officiels de dons. La date limite des soumissions est le 1er mai 2009.

La croissance des perspectives de recherche stimule la Fondation. De nouvelles venues s'ouvrent et l'ACHD est déterminée à faire tout ce qu'elle peut pour aider les hygiénistes dentaires à réussir en soutenant la Fondation. La Fondation est cependant jeune et a besoin de toute l'aide et de tout le soutien que nous pouvons lui apporter pour multiplier ses subventions. Comme le dit Van Gogh, il nous faut constituer un enchaînement de petites choses pour arriver à réaliser de grandes choses.

Il nous est parfois difficile de reconnaître la valeur de la recherche dans nos vies de tous les jours. Arrêtons-nous un moment et pensons au rythme des changements dans nos vies, à la maison et au travail. D'où viennent plusieurs de ces changements ? Du dévouement, de l'innovation et du questionnement. Je vous encourage toutes à considérer votre propre rôle dans l'enchaînement des petites choses et à aider la profession de l'hygiène dentaire à aller toujours plus haut – les hygiénistes dentaires et leurs clientèles en récolteront les fruits.

Non surgical treatment of peri-implant pockets: An exploratory study comparing 0.2% chlorhexidine and 0.8% hyaluronic acid

Miguel de Araújo Nobre[*§], RDH; Rosa Carvalho[*], RDH; Paulo Malo, DDS[‡]

ABSTRACT

Background: Peri-implant pathology consists of a chronic infection of the implant supportive tissues; its pathogenesis characterized by either the traditional pathway (from the soft tissues apically to the bone), or retrograde (from the bone to the soft tissues). In non surgical treatment, hyaluronic acid and chlorhexidine appear as eligible substances to apply in non surgical protocols, due to its antimicrobial and healing characteristics. This study aimed to compare the efficacy of a protocol for irrigating peri-implant pockets using a plastic needle with 0.8% HA or 0.2% CHX, through evaluation of clinical parameters included in the implant success criteria. The hypothesis tested was if the treatment success followed the same distribution in the HA and CHX groups. **Methods:** The study enrolled eighteen clients with one implant presenting probing pocket depth up to 6 mm. Bone loss and bleeding on probing were treated through mechanical debridement, and were randomly allocated to either a treatment with 0.8% hyaluronic acid (AH) or with 0.2% chlorhexidine (CHX) gels for irrigation of the peri-implant pocket. The success criteria determined that after the implementation of the protocol, the implants should have a modified bleeding index=0, probing pocket depths ≤ 4 mm, improvement of the attachment level, no suppuration and no clinical mobility. **Results:** The percentage of success for the treatment in both groups was 55 per cent and 89 per cent for the HA and CHX groups respectively. Intragroup analysis when compared to baseline, revealed a statistically significant improvement in both the HA and CHX groups on the clinical indices performed in the final evaluation. No significant differences were found between the two groups in treatment success. **Discussion:** The results obtained in this study favour the adoption of non surgical protocols. The fact that no significant differences were found between both groups supports the research hypothesis in the use of HA in the treatment of pockets up to 5 mm and of CHX for the treatment of pockets up to 6 mm. **Conclusion:** It was possible to conclude within the limitations of this study, that the use of non surgical therapy is effective, making it possible either to treat peri-implant pathologies with a simple protocol, or to prepare the site for surgical therapy in case of an unsuccessful treatment.

RESUMÉ

Contexte : La pathologie péri-implantaire est une infection chronique des tissus qui soutiennent l'implant, dont la pathogenèse se caractérise par le cheminement traditionnel (des tissus mous apicaux vers l'os) ou rétrograde (de l'os vers les tissus mous). Pour le traitement non chirurgical, l'acide hyaluronique et la chlorhexidine semblent être des substances appropriées à appliquer dans les protocoles non chirurgicaux à cause de leurs caractéristiques antimicrobiennes et curatives. Cette étude a donc pour objet de comparer les résultats du traitement non chirurgical des poches péri-implantaires, qui consiste à retirer les débris et à irriguer la poche péri-implantaire avec un gel (d'acide hyaluronique 0,8 % ou de chlorhexidine 0,2 %). **Méthodes :** Dix-huit patients qui ont, à un implant, une poche de 6 mm de profondeur et une perte osseuse et qui saignent au sondage ont été soignés par débridement mécanique et reçu au hasard un traitement de gels à l'acide hyaluronique (AH) 0,8 % ou à la chlorhexidine (CHX) 0,2 % pour irriguer la poche péri-implantaire. Les critères de réussite prévoyaient, après l'application du protocole, un indice de saignement =0 à l'implant, une profondeur de la poche de ≤ 4 mm au sondage, une amélioration du degré de fixation, l'absence de suppuration et de mobilité clinique. **Résultats :** Le pourcentage de réussite du traitement a été de 55 % et 89 % chez les groupes AH et CHX respectivement. L'analyse a révélé une amélioration statistiquement significative chez chacun des deux groupes, AH et CHX, selon les indices cliniques relevés lors de l'évaluation finale comparativement à celle du début. Quant à la réussite du traitement, il n'y avait pas d'écart significatif entre les deux groupes. **Discussion :** Les données favorisent l'adoption des protocoles non chirurgicaux en utilisant le traitement AH des poches ayant une profondeur maximale de 5 mm et le CHX pour les poches allant jusqu'à 6 mm. **Conclusion :** Dans les limites de l'étude, on pouvait conclure que a thérapie non chirurgicale est efficace, car elle permet de traiter les pathologies péri-implantaires avec un protocole simple ou de préparer le site pour la chirurgie si le traitement n'était pas réussi.

Key words: dental implant; irrigation; infection control, dental; chlorhexidine; hyaluronic acid

INTRODUCTION

Peri-implant pathology consists of an inflammatory process affecting the soft and hard tissues surrounding the implant, resulting in rapid loss of supporting bone associated with bleeding and suppuration.[1] Its pathogenesis is characterized by either the traditional pathway (from the soft tissues apically to the bone), or retrograde (from the bone to the soft tissues).[2]

The treatment of this pathology can be performed through two different interventions: surgical or non surgical approaches. The success of treating peri-implant pathologies through a non surgical approach by means of mechanical debridement has been demonstrated in several studies.[3-5]

The needle for irrigation represents an important issue for both the client's comfort and the efficacy in administering chemical agents when performing non surgical interventions using chemical agents (i.e. pocket irrigation), since it has the potential of provoking mechanical trauma to the client.[6] Trauma could be discomfort, pain and less compliance, thus affecting the efficacy of treatment. Another important issue lies in the chemical agent used for irrigating the pocket. In this field, chlorhexidine (CHX) represents an efficient antiseptic used in the oral

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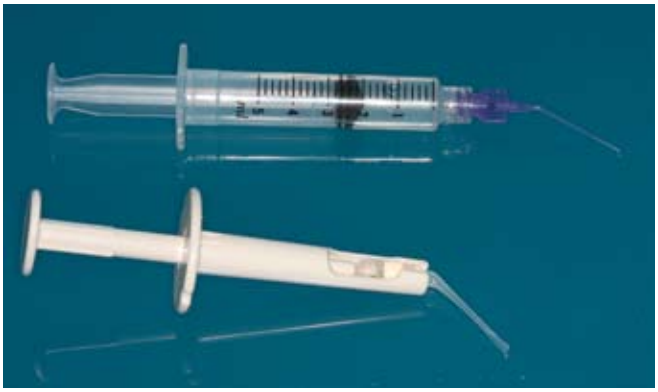

Figure 1. Devices for introduction of the CHX gel (upper) and HA gel (lower).

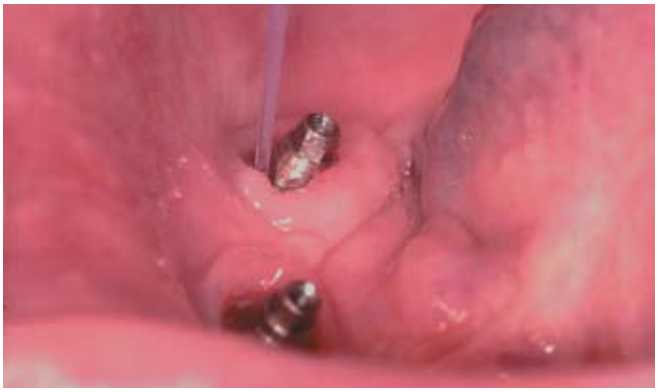

Figure 2. Irrigation of the peri-implant pocket using the device composed by the plastic syringe with the gel inside and a plastic tip.

cavity,[7,8] since it can inhibit the formation of dental plaque biofilm through several mechanisms, namely, immediate bactericidal effect, prolonged bacteriostatic effect by surface bound CHX, blockage of the acidic groups from the salivary glycoproteins that form the pellicle, binding to the bacterial surface in sublethal amounts so that initial adhesion to the surfaces is inhibited and disturbance of the plaque formation by precipitation of agglutination factors in saliva, and displacement of calcium from the plaques' matrix.[9]

The use of CHX gel in irrigating peri-implant pockets as an adjunctive to mechanical debridement therapy in the treatment of peri-implant pathology is documented with a treatment success of 89 per cent at client level and 85 per cent at implant level.[10] Characteristics of CHX and the results obtained make it the gold standard antiseptic for adjunctive treatment in non surgical therapy.

Hyaluronic acid (HA) is described as a natural organic substance, with physiological therapy activity, it is the main component of the extracellular matrix of many tissues such as skin, synovial joints and periodontal tissues.[11]

The HA multifunctional role in the healing process of chronicle lesions, including those that are observed in periodontal disease,[12] attests to its potential importance in the non surgical treatment. The administration of high molecular weight HA proved to be effective in inducing tissue repair and healing in clients with inflammatory gingivitis and surgical wounds.[11,13-15] According to the manufacturer, HA can be used professionally at a higher concentration of 0.8% for the treatment of pockets with probing depths up to 5 mm.[16] However, no studies were found using 0.8% HA in non surgical treatment that could support this hypothesis.

The aim of this study was to compare the efficacy of a protocol for irrigating peri-implant pockets using a plastic needle with 0.8% HA or 0.2% CHX, through the evaluation of clinical parameters included in the implant success criteria. The hypothesis tested was if the treatment success followed the same distribution in the HA and CHX groups.

MATERIALS AND METHODS

This prospective clinical study was performed in a private clinic, Malo Clinic, in Lisbon, Portugal. The study comprised eighteen treated clients (mean age 57 years, ranging 45-77 years), 10 males and 8 females, and with 18 implants supporting 18 prostheses. The first client was treated in January 2007, and the last in July 2007. All clients were rehabilitated through an immediate function protocol (implant + abutment + crown/bridge in the same surgical step)[17,18] with the implants osseointegrated and in function for at least one year.

The clients were included in the study provided that they had at least one implant respecting the following inclusion criteria:

- peri-implant pockets of ≥ 5 mm;
- bleeding on probing;
- absence of implant clinical mobility;
- bone loss between the coronal and the medium ⅓ of the implant;
- and signed written informed consent to participate in the study.

The clients were randomly allocated to one of the treatment groups (HA or CHX) using a random number sequence generator computed at www.random.org

A homogeneity analysis was performed to the two samples: gender was equally distributed between the two groups (4 females and 5 males in each group); mean age (SD) of 56.2 (1.7) and 58.7 (3.1) for AH and CHX groups, respectively, with no significant difference between both groups (p=0.494; t-test).

The rights of the participants were safeguarded, following the indications present in the Declaration of Helsinki. The protocol included the right of cease or refuse to participate in the study, confidentiality, information about the outcome of the study, access to data, justice and beneficence. These rights were explained to participants at the time they were asked for written informed consent to participate in this study.

The evaluation parameters included:

- Marginal bone loss readings from periapical radiographs (taken at the baseline diagnostic appointment), with the bone level registered according to implant thirds: the implants' coronal third, medium third or apical third.
- Modified bleeding index (mBI),[19] assessed by inserting a periodontal probe 1 mm into the sulcus, circumferentially around the implant/abutment, and registered in an ordinal scale with values between 0 and 3 (0=no bleeding visible, 1=isolated bleeding spot visible,

2=the blood forms a confluent red line on the margin, and 3=heavy or profuse bleeding).
- Clinical mobility (Mob),[20] evaluated using manual movement to assess individual implant mobility and registered as present or absent.
- Suppuration (Sup),[20] evaluated by applying finger pressure to the peri-implant complex and registered as present or absent.
- Probing pocket depth (PPD) assessed to the nearest mm.[21]
- Distance between implant shoulder and mucosal margin (DIM) assessed to the nearest mm (in the presence of a sub gingival implant shoulder, the measurement was recorded as a negative value).[21]
- and Attachment level (AL) computed for each site by adding PPD and DIM.[21]

Before enrolling the clients in this study, a thorough evaluation of the prosthesis was performed to check the client's occlusion and any problems with the design of the prosthesis that could influence the client's oral hygiene.

The predetermined criteria for success in this study included:
- mBI=0;
- PPD ≤ 4 mm;
- improvement of the attachment level;
- absence of suppuration, and
- absence of mobility.

All the diagnostic indices were registered as baseline values before implementing the protocol. After registering baseline indices, dental plaque biofilm and calculus were removed in the infected sites, and followed by irrigation with the gel. Irrigation followed the same procedures according to a previously described protocol.[10]

The materials used to irrigate the peri-implant pockets were a plastic disposable syringe (BD Plastipak® 15 ml, Becton and Dickinson Company, Lisbon, Portugal), a plastic needle of 0.4 mm of diameter (Capillary tip®, 27 gauge, Ultradent Products Inc, South Jordan, UT, USA) attached to the syringe, and CHX 0.2% gel (Lacer Chlorhexidine Bioadhesive Gel®, Lacer, Barcelona, Spain) or a HA 0.8% gel (Gengigel®, Ricerfarma, Milano, Italy) depending on the group to which the client was allocated. The protocol included the following parameters:
- The area was isolated and dried before the technique was applied.
- The gel was placed into the syringe, and compacted into its lower portion without attaching the needle so that the air could be released from the syringe's interior.
- After this procedure, the needle was attached to the syringe (Figure 1).
- For irrigation, the peri-implant pocket was first gently air dried.
- The needle was positioned inside the full length of the pocket.
- The syringe was pressed so that the gel could be released, filling the peri-implant pocket (Figure 2). Slight coronal–apical–coronal movements were performed so to better administrate the gel in the peri-implant pocket.
- After seeing the gel pouring out of the pocket, the pressure in the syringe was stopped, and the needle was removed from the peri-implant pocket.

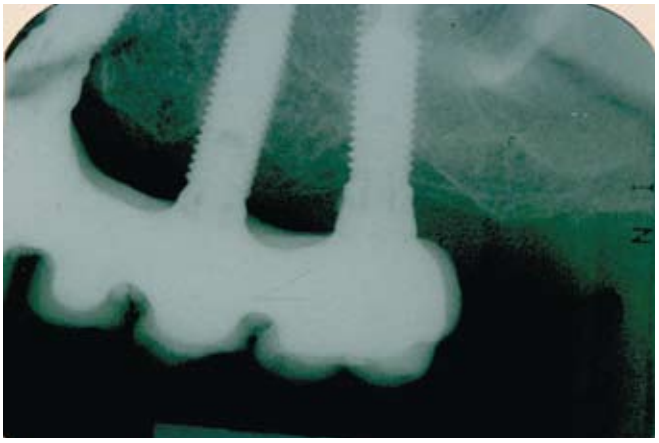

Figure 3. Clinical situation. Periapical x-ray at baseline evaluation. Note the vertical 2-wall bone defect in implants #25 and #26.

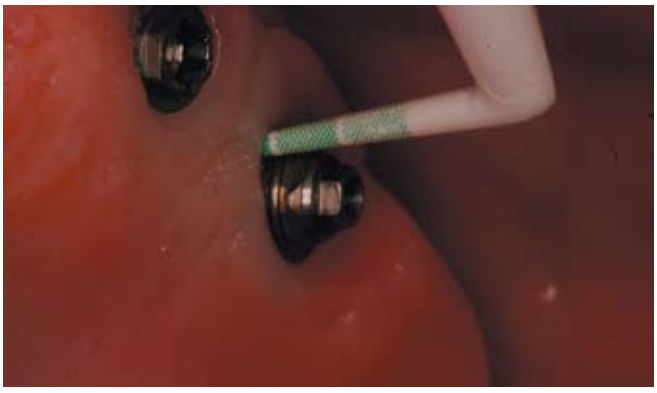

Figure 4. Clinical situation. Baseline evaluation of implants #25 and #26. Note the diagnosis of a peri-implant pocket of 5 mm on the mesial aspect of implant #26.

This procedure was repeated in all peri-implant pockets. After the irrigation, the client was instructed not to eat, drink or rinse for at least half an hour so that the gel could remain in the pocket for the longest period possible. A clinical situation is illustrated in figures 3–5.

For self care, the client received dental hygiene instructions to brush with a 0.2% CHX gel or a 0.2% HA gel (according to the group distribution) and a soft toothbrush. One month later all indices were re-evaluated, to assess if the implants met the success criteria.

Descriptive statistics were used to perform univariate analysis of the clinical indices (mPlI, mBI, PPD, DIM, AL). Inferential statistical analysis was used to determine the equality of mean ranks in the clinical indices in intragroup (post treatment evaluation vs. baseline) and intergroup evaluation, and for the comparison of success between both groups (α=.05).

RESULTS

At baseline, the overall mPlI ranged from 0 to 3 (mean of 1.5); mBI 1–3 (mean of 2.1); PPD 5–7 mm (mean of 5.6 mm); DIM -4 to 0 mm (mean of -2.4 mm); AL 1–5 mm (mean of 3.2 mm). Four of the 18 implants presented bone loss localized in the medium third of the implant, whereas 14 implants presented bone loss in the coronal third of

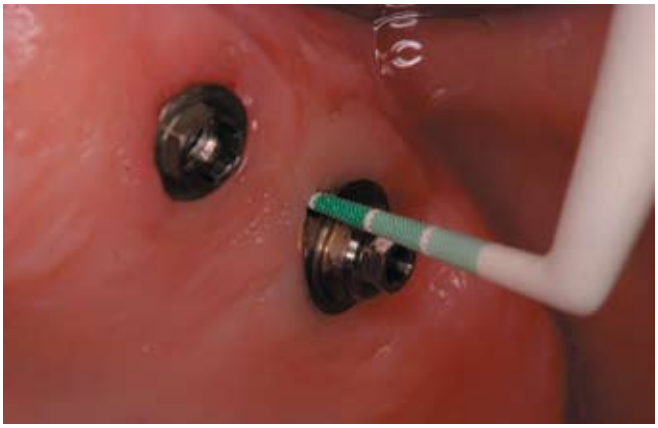

Figure 5. Clinical situation. Post treatment evaluation of implant #26 after one month. Note the reduction of the pocket to 3 mm.

the implant. The baseline clinical indices distributed by group are presented in Table 1. Post treatment diagnosis revealed significant changes in the clinical parameters which are presented in Table 2. Overall, the mPlI ranged from 0 to 2 (mean of 0.6); mBI 0–3 (mean of 0.8); PPD 3–7 mm (mean of 4.3 mm); DIM -4 to 1 mm (mean of -2.1 mm); AL 0–4 mm (mean of 2.2). No suppuration or clinical mobility was recorded for any implant in the post treatment evaluation. Significant differences were found in the intragroup evaluation (baseline vs. post treatment) for mPlI, PPD and AL in the HA group; and for PPD and AL in the CHX group. Applying the criteria of success, the therapy was considered successful in 5 of 9 clients of the HA group. In the CHX group, the therapy was considered a success in 8 of 9 clients, with no significant difference between the two groups (p=0.294; Chi-square test). For the five implants that did not meet the success criteria, surgical treatment was performed and the clients were withdrawn from the study.

After one year, the clinical parameters were again documented. During the follow-up period between post treatment and 1-year evaluations, one client died due to causes unrelated to the treatment (HA group), and five clients failed to comply with the control appointment (3 in the HA group; 2 in the CHX group).

Overall, the mPlI ranged from 0 to 2 (mean of 1.0); mBI 0–1 (mean of 0.3); PPD 2–4 mm (mean of 3.3 mm); DIM -2 to 2 mm (mean of -0.7 mm); AL 0–5 mm (mean of 2.6).

DISCUSSION

The different etiopathogenesis of peri-implant pathology makes it challenging to treat. However, by applying a non surgical therapy, it is possible to treat the pathology successfully, or at least to initiate the hygienic phase of the treatment prior to surgery (in case the non surgical therapy fails). In this protocol, the infection control takes part as the most important variable. By performing an optimal diagnosis first,[22] following the removal of the aetiological factor (removal of deposits and decontamination of the pocket), and guaranteeing a good client self care, it is possible to achieve good outcomes in the treatment of these pathologies. It was the objective of this study to compare the efficacy of two non surgical protocols for the treatment of peri-implant pathology.

The mPlI results allow to conclude that the client's self

Table 1: Pre treatment evaluation in HA and CHX groups

N	Implant position	mplI	mBI	PPD	DIM	AL	Bone loss (implant thirds)
HA group							
1	44	0	3	5	-3	2	Medium third
2	22	2	3	6	-4	2	Medium third
3	13	1	2	5	-2	3	Coronal third
4	36	2	2	6	-3	4	Coronal third
5	46	2	3	5	-3	2	Coronal third
6	46	2	1	6	-3	3	Coronal third
7	22	2	1	6	-3	3	Coronal third
8	16	0	3	6	-2	4	Coronal third
9	42	0	2	5	0	5	Coronal third
Mean	-----	1.2	2.2	5.6	-2.6	3.1	-----
CHX group							
1	42	3	2	7	-3	4	Coronal third
2	16	0	0	6	-3	3	Coronal third
3	15	2	2	6	-2	4	Coronal third
4	21	2	2	6	-3	3	Medium third
5	45	1	1	5	-2	3	Medium third
6	42	1	2	6	-2	4	Coronal third
7	42	3	3	5	-1	4	Coronal third
8	36	1	2	5	-1	4	Coronal third
9	42	3	3	5	-4	1	Coronal third
Mean	-----	1.8	1.9	5.7	-2.3	3.3	-----

Table 2: Post treatment evaluation in HA and CHX groups

N	Implant position	mpII	mBI	PPD	DIM	AL	Bone loss	Treatment success/failure
HA group								
1	44	0	0	4	-2	2	Medium	Success
2	22	1	2	6	-4	2	Medium	Failure
3	13	0	0	3	-2	1	Coronal	Success
4	36	1	1	4	-2	2	Coronal	Success
5	46	1	1	4	-3	1	Coronal	Success
6	46	1	3	7	-3	4	Coronal	Failure
7	22	1	1	5	-3	2	Coronal	Failure
8	16	0	1	5	-2	3	Coronal	Failure
9	42	0	0	2	1	3	Coronal	Success
Mean	-----	0.6[a]	1.0	4.4[b]	-2.2	2.2[c]	-----	-----
CHX group								
1	42	2	2	7	-3	4	Coronal	Failure
2	16	0	0	4	-3	1	Coronal	Success
3	15	0	0	4	-2	2	Coronal	Success
4	21	0	1	4	-2	2	Medium	Success
5	45	0	2	4	-2	2	Medium	Success
6	42	1	1	4	-1	3	Coronal	Success
7	42	1	0	4	-1	3	Coronal	Success
8	36	0	0	3	-1	2	Coronal	Success
9	42	1	0	3	-3	0	Coronal	Success
Mean	-----	0.6	0.7	4.1[d]	-2.0	2.1[e]	-----	-----

[a] Significantly different when compared to baseline (p=0.007; Chi-square test); [b] significantly different when compared to baseline (p=0.031; Chi-square test); [c] significantly different when compared to baseline (p=0.046; Wilcoxon test); [d] significantly different when compared to baseline (p=0.008; Wilcoxon test); [e] significantly different when compared to baseline (p=0.009; Wilcoxon test)

care plays a major role in the success of the treatment: it allowed for removal of the aetiological cause of the disease, and this way establishing good conditions for the healing of the soft tissue.[23-25] The decrease in the mPlI index between baseline and post treatment diagnosis (significantly different for the HA group) was due to better self care performed by the clients.

In this study, the significant reduction of PPD and AL in both groups is indicative of disease control. Taking into consideration that DIM did not differ significantly between baseline and post treatment, the changes in AL can be interpreted as a reduction of the peri-implant pocket and gingival inflammation.

The non surgical protocols rendered 56 per cent and 89 per cent success in the HA and CHX groups, respectively. However, the difference in the treatment success distribution between both groups was not significant, supporting the research hypothesis. The results obtained with this approach are comparable to other studies, where the combined use of CHX with mechanical treatment produced good results in the treatment of peri-implant infections.[3-5,26-28] Specifically, it is possible to reproduce the results from the CHX group with a previous study following the same protocol.[10]

It is possible to increase its efficacy in the treatment of peri-implant pathologies with the long-acting antimicrobial properties and substantivity of CHX,[29-31] and by keeping the chemical inside the pocket for a long period, in a way similar to periodontal treatment.[32-38]

Taking into consideration the results achieved with HA (with a successful outcome for pockets equal to 5 mm, but only one successful treatment in pockets of 6 mm), the authors suggest that this treatment should be administered only in cases of mucositis and peri-implant pathologies with probing depths up to 5 mm, following the specifications for 0.8% HA use provided by the manufacturer.[16]

The overall clinical parameter results at 1-year follow-up tended to further improve (compared to post treatment) or stabilize below those of the baseline (Table 3), a result that finds parallel in similar studies.[10]

Despite the efforts for controlling the threats to internal validity, some threats existed, namely, the small sample size, the number of withdrawn clients and the involvement of only one clinic. The small sample size may have a possible influence on two levels: the statistics, in relation to the outcome (success/failure) and consequently the testing of the hypothesis; and on the representativeness of the population (limited to the middle aged population and a predominance of males) making it mandatory to extrapolate the results from this study to the general population with caution. The large number of withdrawn clients at the 1-year follow-up (a total of six clients) is the main limitation, as it may also influence the statistics in relation to monitoring of clinical parameters in the long term. However it is important to point out the difference between the efficacy of the non surgical treatment, suitable to be evaluated in the short term as successful or unsuccessful, and the maintenance of that efficacy, suitable to be evalu-

Table 3: Mean values of clinical parameters measured

	Baseline	Post treatment	1-year follow-up
mPLi (0-3)	1.5	0.6	1.0
mBI (0-3)	2.1	0.8	0.3
PPD (mm)	5.6	4.3	3.3
DIM (mm)	-2.4	-2.1	-0.7
AL (mm)	3.2	2.2	2.6

ated in the long term.

Larger randomized controlled trials are needed to further study the efficacy of local antimicrobials on bacteria present in the peri-implant pocket when managing peri-implant pathology.

CONCLUSION

Within the limitations of this study, the authors conclude that the use of non surgical therapy for the treatment of peri-implant pathology is possible, and with good outcomes in the short term follow-up. There was no significant difference in the treatment success between HA and CHX groups. However, the use of HA did not produce successful results in the treatment of pockets with more than 5 mm, while the treatment with CHX produced reliable results in the short term follow-up in pockets of 5 mm and 6 mm.

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Unravelling the Literature, an unprecedented success

CDHA marked its inaugural workshop as a new member of the Canadian Cochrane Network and Centre on Saturday, 25 October 2008. The workshop was held in conjunction with Niagara College at their Niagara-on-the-Lake campus in Ontario. Marilyn Goulding facilitated, with her fellow Dental Hygiene Faculty volunteering, to host this benchmark event. Also contributed were donations of twenty door prizes from the college, and local dental and business communities.

Sixty participants enjoyed the session by guest speaker Vicki Pennick, RN, BScN, MHSc(Health Administration), Senior Clinical Research Project Manager, for the Institute for Work & Health. She is also the managing editor for the Cochrane Back Review Group. Vicki conducted a morning lecture followed by an interactive workshop in the afternoon. The day focused on clarifying research terminology and use of literature searches to best support evidence-based practice, evidence-based decision making and systematic reviews.

Niagara College played its part by providing a memorable gourmet three-course luncheon, with resident wine and culinary expert Jorge Dominguez, who enlightened the group with a short wine education session, serving wines produced from the college's own vineyard. The participants ended the day both mentally and physically well fed.

The CDHA/Cochrane partnership is intended to add yet another item to the growing roster of CDHA benefits for its members. The Canadian Cochrane Network and Centre is one of twelve independent, not-for-profit Cochrane Centres worldwide. Over 1,000 people in Canada are Cochrane members who contribute to systematic reviews of treatments used in health care. Systematic reviews are a reliable source of evidence to help people make well informed decisions about health care.

The Cochrane Library contains high quality, independent evidence to inform healthcare decision making. It includes reliable evidence from Cochrane and other systematic reviews, clinical trials, and more. Cochrane reviews bring you the combined results of the world's best medical research studies, and are recognized as the gold standard in evidence based health care.

This fully attended event raised enough funds to make a sizable donation to the Canadian Foundation for Dental Hygiene Research and Education.

Looking ahead to National Dental Hygienists Week 2009

National Dental Hygienists Week 2009 is fast approaching. This year, from 19–25 April 2009, CDHA will celebrate the importance of dental hygienists providing services in alternative practice settings. In response to the growing desire for interprofessional healthcare collaboration, dental hygienists across the country are sharing their oral health expertise with other healthcare professionals in new practice settings. CDHA members can find out about news and opportunities to get involved in this celebration at the website, http://www.cdha.ca/members/content/events&conferences/ndhw.asp Stay tuned for updates.

Health Canada advisory

(Source: http://www.hc-sc.gc.ca/ahc-asc/media/advisories-avis/_2008/2008_184-eng.php Accessed 2009, January 4)

Health Canada is advising consumers of the outcome of its review of cough and cold medicines for children under the age of 12. Health Canada is requiring manufacturers to relabel over-the-counter cough and cold medicines that have dosing information for children to indicate that these medicines should not be used in children under 6. The

products affected are those containing any of the active ingredients listed below that are given orally:

Table 1: Active ingredients affected by Health Canada's decision on cough and cold products for children

Therapeutic category (purpose)	Active ingredients
Antihistamines in cough and cold medicines (used to treat sneezing, runny nose)	• brompheniramine maleate • chlorpheniramine maleate • clemastine hydrogen fumerate • dexbrompheniramine maleate • diphenhydramine hydrochloride • diphenylpyraline hydrochloride • doxylamine succinate • pheniramine maleate • phenyltoloxamine citrate • promethazine hydrochloride • pyrilamine maleate • triprolidine hydrochloride
Antitussives (used to treat cough)	• dextromethorphan • dextromethorphan hydrobromide • diphenhydramine hydrochloride
Expectorants (used to loosen mucus)	• guaifenesin (glyceryl guaiacolate)
Decongestants (used to treat congestion)	• ephedrine hydrochloride/sulphate • phenylephrine hydrochloride/sulphate • pseudoephedrine hydrochloride/sulphate

Until the relabelling of these products is completed, Health Canada advises parents and caregivers to follow these important guidelines:

- Do not use these over-the-counter cough and cold medicines in children under 6 years of age.
- With children older than 6, always follow all the instructions carefully, which includes the dosing and length-of-use directions, and use the dosing device if one is included.
- Do not give children medications labelled only for adults.
- Do not give more than one kind of cough and cold medicine to a child. Cough and cold medications often contain multiple ingredients. Combining products with the same ingredient(s) could cause an overdose that may result in harm to a child.
- Talk to your health care practitioner (doctor, pharmacist, nurse, etc.) if you have questions about the proper use of over-the counter cough and cold medicines.
- The common cold is a viral infection for which there is no cure. Cough and cold medicines offer only temporary relief of symptoms such as runny nose, cough, or nasal congestion Symptoms can also be managed using a variety of non-medicinal measures such as adequate rest, increased fluid intake and a comfortable environment with adequate humidity.
- For babies and young children, it is important to rule out serious illnesses that have cold-like signs and symptoms (for example, pneumonia, ear ache or other infections). This is especially important if symptoms do not improve, or if the child's condition worsens.
- If you are concerned about the child's health (such as if symptoms worsen, last for more than a week, or are accompanied by a fever higher than 38 C or the production of thick phlegm), consult a health care practitioner for a medical evaluation.

For more information about Health Canada's decision and the use of cough and cold products in children, consult the Health Canada web site or call toll free at 1-866-558-2946.

Keep off dieting to avoid flu

(Source: http://news.bbc.co.uk/2/hi/health/7807848.stm Accessed 2009, January 3)

Dieting at this time of year could impair your body's ability to fight the flu virus, a study warns.

US researchers found mice who were put on a calorie-controlled diet found it harder to tackle the infection than

those on a normal diet. The findings, published in the *Journal of Nutrition*, suggest that contrary to the old adage "starve a fever", those with a temperature should eat well.

Killer cells need food.

The team at Michigan State University found even though the mice on the lower calorie diet received adequate amounts of vitamins and minerals, their bodies were still not able to produce the amount of killer cells needed to fight an infection. As well as being more likely to die from the virus, the mice–which were consuming around 40% of the calories given to their counterparts on a normal diet –took longer to recover, lost more weight and displayed other symptoms of poor health.

Even those who have received the flu vaccine should steer clear of dieting until the warmer months arrive. "If the strain of flu a person is infected with is different from the strain included in the flu vaccination, then your body sees this as a primary infection and must produce the antibodies to fight it off," Professor Gardner said.

The study, the team added, should not be seen as a carte blanche to avoid dieting all year, but to reserve weight control to the eight months of the year when flu is not so virulent.

Professor John Oxford, an influenza expert at Queen Mary's School of Medicine and Dentistry, said, "There are a lot of viruses and while it might have been better to avoid those extra helpings of Christmas pudding in the first place, now is not the time to be thinking about diets."

Activity and Canadians

(Source: http://www.cbc.ca/health/story/2008/12/22/f-health.html Accessed 2009, January 4)

Canada isn't as active as it used to be, according to a report from Statistics Canada. The survey found that barely 3 in 10 Canadians aged 15 years and over participated regularly in at least one sport in 2005, down dramatically from nearly half in the early 1990s.

The report estimates that 7.3 million people, or about 28 per cent of the adult population, participated in some form of sport. That's down substantially from 8.3 million, or 34 per cent, in 1998, and 9.6 million, or 45 per cent, in 1992. "Society is aging and becoming less active," said the report. "Only 17 per cent of Canadians aged 55 and over participated in sports, well below the proportion of 25 per cent in 1992."

That bodes ill for the health of the nation as does the findings of another report. Canada's Report Card on Physical Activity for Children and Youth for 2008, published by the charitable group Active Healthy Kids Canada, finds that 90 per cent of Canadian children and youth are still failing to meet the guidelines outlined in Canada's Physical Activity Guides for Children and Youth. The guidelines recommend 60-90 minutes of moderate intensity physical activity per day on most days of the week.

Natural health products in Canada

(Source: http://www.hc-sc.gc.ca/dhp-mps/prodnatur/applications/licen-prod/lnhpd-bdpsnh-eng.php Accessed 2009, January 4)

The Licensed Natural Health Products Database (LNHPD) contains product specific information on those natural health products that have been issued a product licence by Health Canada. The LNHPD is managed by Health Canada and includes information on licensed natural health products, such as vitamin and mineral supplements, herb and plant-based remedies, traditional medicines (such as traditional Chinese medicines or Ayurvedic [Indian] medicines), omega 3 and essential fatty acids, probiotics and homeopathic medicines as well as many everyday consumer products, such as certain toothpastes, antiperspirants, shampoos, facial products and mouthwashes.

The issuance of a product licence means that the product has been assessed by Health Canada and has been found to be safe, effective and of high quality under its recommended conditions of use.

For every licensed product listed in the LNHPD, the following details are provided:

1. Product Name
2. Product Licence Holder
3. Natural Product Number (NPN) or Homeopathic Medicine Number (DIN-HM)
4. Product's Medicinal Ingredients
5. Product's Non-Medicinal Ingredients
6. Product's Dosage Form
7. Product's Recommended Use or Purpose
8. Risk Information Associated with the Product's Use

Taking action

CDHA staff

The *National Dental Hygiene Competencies for Entry-to–Practice* identifies advocacy as one of the five core abilities that form the foundation necessary for entrance into the dental hygiene profession in Canada. Advocacy is defined in this document as "speaking, writing or acting in favour of a particular cause, policy or group of people—often aiming to reduce inequities in health status or access to health services". Advocacy is used to advance an issue in order to influence policy makers and encourage social change.

Improving the public's oral health and increasing access to preventive oral care continue to be major concerns for dental hygienists and their supporting associations. Advocacy in public health plays a role in educating the public, swaying public opinion or influencing policy-makers.[1]

The number of organizations and individuals engaged in some form of advocacy is vast, as are the issues targeted. Public policy makers are under constant pressure to respond to a wide variety of issues. They, therefore, need to know exactly where a message originates and if the source is credible and authoritative.[2]

This column will focus on resources related to the advocacy process for improved access to preventive oral care and to tobacco control initiatives—two issues germane to dental hygienists.

APHA Media Advocacy Manual

This resource, from the American Public Health Association, reinforces the view that one of the best ways to gain the attention of decision makers is media coverage. The media can also be used to publicize public health conferences and events. This manual includes sections on planning the message, creating a local and national media list, contacting the media and preparing a media event. The manual can be accessed at: http://www.apha.org/NR/rdonlyres/A5A9C4ED-1C0C-4D0C-A56C-C33DEC-7F5A49/0/Media_Advocacy_Manual.pdf

Working with policy makers to improve oral health

Prepared for the Center for Health Care Strategies Purchasing Institute on Best Practices for Oral health by Burton L. Edelstein, DDS, MPH, this concise guide examines the issue of oral health advocacy from the perspective of the policy maker. Dr. Edelstein describes the process necessary to engage decision makers with the right message and the right spokesperson. This report can be accessed at: http://www.cdhp.org/Advocacy/WhatisAdvocacy.asp

Using the Internet for effective grassroots advocacy

The Internet is transforming the way activists mobilize, in support of a cause. Produced by Convio Inc in 2005, this online guide covers key topics that should be considered when planning online advocacy campaigns, motivating volunteers and measuring program results. There are also examples of online advocacy pages from successful organizations such as MADD (Mothers against Drunk Driving). The guide can be accessed at: http://www.garivers.org/pdf_files/convio_online_advocacy.pdf

The AdvoKit: A step by step guide to effective advocacy

AdvoKit, produced by the Penticton Advocacy Network, provides a step-by-step action plan on how to be clear about, and aim for, what you want. The suggestions in this booklet are ideas that have been used in all kind of situations. As everyone's situation is unique, the guide suggests that you "use what works for you; ignore the rest." Worksheets and sample letters are included in the AdvoKit.

The guide can be accessed at: http://www.bccerebralpalsy.com/pdfs/speakup.pdf

Advocacy guide for the Multiple Sclerosis Society of Canada

This guide explores the concept of self advocacy; specifically in relation to the way in which people with disabilities deal with political and health care systems. It discusses both systemic and individual advocacy. Many programs and services that people with special needs require are funded and run by government departments. To advocate in this context, it is necessary to know how to find help using the political system and this manual explains how to locate and arrange meetings with members of Parliament.

The guide can be accessed at: http://www.mscalgary.org/advocacy_guide.htm

Tobacco or Oral Health: an advocacy guide for oral health professionals

This comprehensive advocacy guide was prepared jointly by the FDI World Dental Federation and the World Health Organization. It provides facts about tobacco use, discusses the important role of dental professionals in tobacco control, and examines the role of advocacy. The guide is divided into five chapters addressing such issues as the impact of tobacco use on oral and general health and overcoming common barriers to tobacco control. A number of country case studies showing tobacco free initiatives are presented. Appendices provide further links and resources as well as a sample advocacy letter. The manual can be accessed at: http://www.who.int/oral_health/media/orh_tobacco_fdi_book.pdf

The role of an advocate can take many forms. Conducting a needs assessment and publicizing the findings, participating in grassroots organizing efforts, or responding to public policies and regulations are only a few examples. To be effective, advocacy must be selective and focused: choose a particular issue, develop arguments to gain fellow activists, create coalitions, and then work to promote it.

CDHA welcomes your feedback: library@cdha.ca

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Portal power

CDHA staff

What is a portal? Web pages are not completely self referential anymore. The idea of a portal is to collect information from different sources and create a single point of access to information—a library of categorized and personalized content.[1]

Portals can be roughly broken down into two major classifications:[2] the enterprise information portal and the content management portal.

- **Enterprise information portals** are primarily intended to consolidate a vast array of information from a multitude of sources onto a single screen. The users typically do not publish to this type of portal; rather, they are the consumers of the information prepared and published by others. An enterprise information portal can support thousands of users or just a handful. Yahoo! is such an example, providing up-to-the-minute data from financial institutions, weather feeds, and other sources all over the globe.
- **Content management portals** are designed to improve the access and sharing of information. This type of portal empowers the majority of users to both publish and retrieve information within the portal framework. Users typically require such services as:
  - Check-in/check-out capabilities, so that users cannot overwrite each other's changes.
  - Version control, so that successive versions of a particular item can be retained or overwritten.
  - A security mechanism, by which content can be protected from unauthorized view or manipulation.
  - Workflow, which establishes a process through which a document or request flows among users.
  - Organizational mechanisms to create a content structure that is easily browsed by the portal user.

The ***Canadian Best Practices portal for health promotion and chronic disease prevention*** is a portal with an excellent resource value. A search in this portal using the key words "oral" and "dental" turned up related links that are briefly introduced here. http://cbpp-pcpe.phac-aspc.gc.ca/search/index_e.cfm

1. Abuse-Focused Cognitive Behavioral Therapy for Child Physical Abuse

The objective of this study is to examine the weekly course of two treatments designed to minimize abusive behaviour as well as psychological consequences of child physical abuse. The delivery of treatment is organized into three phases. http://cbpp-pcpe.phac-aspc.gc.ca/search/int_details_e.cfm?dbannotationID=386

2. The **Body & Soul** program encourages members to eat a healthy diet rich in fruits and vegetables every day for better health. http://cbpp-pcpe.phac-aspc.gc.ca/search/int_details_e.cfm?dbannotationID=326

3. Community Infant Program This study describes an evaluation of the Community Infant Project (CIP), an interdisciplinary, early intervention program that was designed to prevent parental dysfunction in high risk families with difficulties in parenting (as determined by Family Functioning Scale) who were residing in Boulder, Colorado, USA. http://cbpp-pcpe.phac-aspc.gc.ca/search/int_details_e.cfm?dbannotationID=472

4. Dental Hygiene Visit This intervention aims to cease the use of smokeless tobacco (ST), and consists of one dental appointment with a follow-up telephone call within two weeks after the appointment. http://cbpp-pcpe.phac-aspc.gc.ca/search/int_details_e.cfm?dbannotationID=145

5. Five-a-Day Power Plus is a school-based, multi component intervention aimed at increasing fruit and vegetable consumption among fourth- and fifth-grade students. It links to the Effective Public Health Practice systematic review examining the effectiveness of school-based strategies for the primary prevention of obesity and for promoting physical activity and nutrition. http://cbpp-pcpe.phac-aspc.gc.ca/search/int_details_e.cfm?dbannotationID=164

6. Sunny Days Healthy Ways is a skin cancer prevention curriculum is a comprehensive course for children in Grades 4, 5, and 6. The five-session curriculum presents material from science, history, social studies, health and geography in a comprehensive and cause-and-consequence presentation about the relationship between humans and the sun. The curriculum integrates behavioral skills, interactive activities, and lessons to motivate. http://cbpp-pcpe.phac-aspc.gc.ca/search/int_details_e.cfm?dbannotationID=140

7. Women's Health Trial: Feasibility Study in Minority Populations was a multi centre randomized trial in 1991–1995 sponsored by the National Cancer Institute. The WHTFSMP involved 2,208 women from Atlanta, Birmingham, and Miami, and its goals were to reduce fat intakes especially of saturated fat and to increase the consumption of fruits, grain products, and vegetables. http://cbpp-pcpe.phac-aspc.gc.ca/search/int_details_e.cfm?dbannotationID=390

8. California Comprehensive Tobacco Control Program uses a comprehensive framework that is based on the National Cancer Institute's "Standards for Comprehensive Smoking Prevention and Control" (http://www.nci.nih.gov/cancertopics/tobacco) and includes a focus on community norm change strategies. http://cbpp-pcpe.phac-aspc.gc.ca/search/int_details_e.cfm?dbannotationID=165

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Accessed 2008, 21 November

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Thank you to reviewers of 2008

Reviewers of peer-reviewed manuscripts serve as unsung and unseen mentors who strive to enhance the value of content in the manuscripts they volunteer to review. The editorial office of the *Canadian Journal of Dental Hygiene* gratefully acknowledges the service of its reviewers in 2008.

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Advertisers' index

ABOUT THE COVER

The outer front covers in issues of volume 43 in 2009 feature "**Independent Practices**", supporting the spirit of entrepreneurship in dental hygienists who have broken ground to establish their own practices in Canada. This picture was one among the entries selected for the competition advertised between October and December 2008. Volume 43.1, January-February 2009 Cover image reproduced with permission from Georgia Thomas, ON

Impressions, the dental hygiene spa

Georgia Thomas, RDH, graduated from Confederation College, Thunder Bay, Ontario, in 1997. In July 2008 she opened her own independent practice, ***Impressions***, the Dental Hygiene Spa at *1956 Danforth Avenue* in Toronto, where clients receive more than just oral hygiene care. They enjoy aromatherapy, paraffin wax hand treatments, personal slippers, and massaging dental chair at every visit. *E-mail:* thedentalhygienespa.ca