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

Financing Canada's Oral Health System

Brief Submitted to the House of Commons Standing Committee on Finance

by the

Canadian Dental Hygienists Association

September 9, 2002

Table of Contents

Executive summary

When the Canadian Dental Hygienists Association (CDHA) submitted a brief last year to the House of Commons Standing Committee on Finance, our goal was to ensure oral health care received the recognition—from a funding and policy development perspective—that it rightfully deserves. Our goal this year has not changed, but the urgency for change has increased due to a group of high-need Canadians with inadequately addressed oral health needs. CDHA asserts that prevention work by dental hygienists can address these needs and contribute to improved quality of life and a productive, competitive work force. These issues link well with the themes of the House of Commons Standing Committee on Finance: assuring the highest quality of life for all, and assuring greater levels of economic prosperity for all Canadians.[1]

This brief highlights CDHA's funding position related to key federal government activities. Some of CDHA's recommendations include the following:

- categorical Medicare coverage for low-income Canadians and seniors;
- improvements to Aboriginal peoples' oral health programs;
- a national prevention initiative to address oral health issues in Canada;
- improvements to dental hygiene professional education programs;
- development of a national research report on Canada's oral health status.

This plan for improving the public oral health care system was developed with system sustainability in mind. The key aspects of a fiscally sustainable system include oral disease prevention, early detection of oral disease, and population-based oral health promotion. To spend public oral health care money where it will have the greatest impact and contain future costs, the government must invest in health promotion and disease prevention.

Sommaire

L’an dernier, l'Association canadienne des hygiénistes dentaires (ACHD) a présenté un mémoire au Comité permanent des finances de la Chambre des communes dans le but d'assurer aux soins de santé buccale la reconnaissance méritée de plein droit, – au niveau du financement et du développement des politiques. Cette année, notre but reste inchangé. Mais l'urgence du changement s'est accrue étant donné qu’il y a un groupe de Canadiens et de Canadiennes dont les besoins importants de santé buccale ne reçoivent pas une attention suffisante. L'ACHD fait valoir que le travail de prévention effectué par les hygiénistes dentaires peut répondre à ces besoins et contribuer à l'amélioration de la qualité de vie ainsi qu’au maintien d'une main-d'œuvre productive et concurrentielle. Ces questions se relient bien aux thèmes du Comité permanent des finances de la Chambre des communes, – assurer la plus haute qualité de vie pour tous et des niveaux plus élevés de prospérité économique pour tous les Canadiens et Canadiennes.[2]

Ce mémoire souligne la position de financement de l'ACHD en rapport avec les principales activités du gouvernement fédéral. Voici certaines des recommandations :

- couverture sectorielle de l'assurance-santé pour les Canadiens à faible revenu et les aînés;
- améliorations apportées aux programmes de santé buccale des peuples autochtones;
- initiative nationale de prévention visant les questions de santé buccale au Canada;
- améliorations à apporter aux programmes d'enseignement professionnel de l'hygiène dentaire;
- élaboration d'un rapport national de recherche sur l'état de santé buccale du Canada.

On a élaboré ce plan d'amélioration du système public de soins de santé buccale en ayant à l'esprit la viabilité du système. Les aspects cruciaux d'un système viable, au point de vue fiscal, comprennent la prévention des maladies buccales, le dépistage précoce des maladies buccales et une promotion de la santé buccale axée sur la population. Pour défrayer à même les fonds publics les soins de santé buccale, là où ils auront l'impact le plus fort et pour contenir les coûts futurs, le gouvernement doit investir dans les domaines de la promotion de la santé et de la prévention des maladies.

Canadian Dental Hygienists Association

The Canadian Dental Hygienists Association (CDHA), a national professional organization since 1964, represents the voice of Canada's 14,000 dental hygienists. Its Board of Directors is appointed by the nine provincial dental hygienists' associations. The Board also includes a representative of the Quebec members, plus representatives from the Federation of Dental Hygiene Regulatory Authorities and the Dental Hygiene Educators of Canada. Our mission is as follows:

> The Canadian Dental Hygienists Association, as the collective voice and vision of dental hygiene in Canada, is dedicated to advancing the profession in support of our members and contributing to the health and well-being of the public.

The association serves the public by developing national positions and standards related to dental hygiene practice, education, research, and regulation. CDHA also promotes oral health for the public by working in cooperation with government, health agencies, public interest groups, and other health professions. Furthermore, CDHA provides services to its members, including continuing education, professional development, and representation on various external agencies. Through this work, the association is able to better prepare its members to serve the Canadian public more effectively.

Dental hygienists are registered primary oral health care providers who are integral members of the oral health care system. They have provided accessible, affordable oral health care for 50 years in Canada. The first point of contact in the oral health system is frequently with a dental hygienist who provides preventive, educational, clinical, health promotion, and therapeutic services—a process of care that includes assessment, treatment planning, treatment, and evaluation. Dental hygienists are the only health professionals whose primary concern is the prevention of oral disease. Registered dental hygienists have a unique body of knowledge, distinct expertise, recognized standards of education and practice, and a code of ethics.

We would like to thank the House of Commons Standing Committee on Finance for the opportunity to contribute this brief to the discussion of health financing. We believe that appropriate federal funding of oral health is key to the social, economic, physical, and mental well-being of Canadians. For the most part, dental and oral diseases are preventable. We look forward to working collaboratively in constructive partnership with governments at all levels, the public, and other stakeholders to ensure effective, long-term change that will lead to dental hygiene health services that meet the needs of all Canadians.

Oral public health expenditures in Canada are not out of control

The media is filled with reports that government health care costs are out of control and unsustainable. However, an examination of historical oral health care spending shows these reports are a myth. The Canadian Institute for Health Information (CIHI) forecasts Canadians will spend $7.1 billion in 2000, and $7.5 billion in 2001, on dental services. CIHI also forecasts per capita spending on dental services at $231 in 2000, and $240 in 2001.[3] The CIHI category of dental services includes health care spending by the public and private sectors, and expenditures for professional fees of dentists, dental assistants, dental hygienists, denturists, as well as the cost of dental prostheses, including false teeth and laboratory charges for crowns and other dental appliances. Although these figures show that per capita oral health costs and total health care spending is escalating, the amount of public funding for oral health care, as a percentage of dental service expenditures, has decreased by 1.7 per cent from 1975 to 1998.[4]

When we think of one of the largest health care human resources expenses, we traditionally think of physicians. Not much attention is given to costs for yearly dental services. It is a little-known fact that of all health professionals, oral health professionals were the second largest expense for Canadians, next to physicians.[5] The burden of this health care expense falls on individual Canadians, with governments responsible for only 15.27 per cent of these expenses.[6]

These figures provide a background for CDHA recommendations for a financial injection into Canada's public oral health care system. The following plan for improving Canada's oral health care system has been developed with system sustainability in mind. The plan will improve the quality of life for Canadians and Canada's economic stability. The key aspects of a fiscally sustainable health care system must include oral disease prevention, early detection of oral disease, and population-based oral health promotion such as social marketing of good dental hygiene behaviour and oral health education. To have health care money spent where it will have the greatest impact and contain future costs, we must invest in health promotion and disease prevention.

According to the plan outlined in this brief, the following oral health areas have an urgent need for increased funding:

- programs for the neediest Canadians, including low-income Canadians, seniors, and Aboriginal communities;
- oral health promotion and disease prevention programs;
- dental hygiene professional education programs;
- research.

Urgent needs of low-income individuals and seniors

Low-income Canadians

The Centre for Health Services and Policy Research at the University of British Columbia reports that differences in socio-economic status are associated with very real differences in health status.[7] Although this report examined general health, a similar trend is apparent in oral health status. Numerous studies have documented that individuals in lower socio-economic groups have inferior dental health compared with those in wealthier groups.[8,9,10]

The poor oral health of low-income Canadians may be due in part to a lack of access to existing programs. Although social assistance programs provide limited dental coverage, some dentists either severely limit or refuse to accept these clients. The theory of reduced access to existing programs is confirmed by a 1994 study at the West Central Community Health Centres in Toronto showing that 23 per cent of family benefits clients and 20 per cent of general welfare clients were refused dental treatment by a dentist.[11] CDHA members report similar anecdotal evidence from other provinces across Canada. This may be due to the low reimbursement rates in the government-sponsored programs, compared with market rates.

The poor oral health of low-income Canadians may also be due to an inability to pay for services not covered by government programs. A 2002 study conducted across five countries of the inequities in health care reveals that in Canada, Australia, and the United States, between 20 and 51 per cent of citizens with incomes below the national median reported they needed dental care but did not get it because of cost.[12] A 1999 Statistics Canada survey reports a similar finding.[13] When Canadians were queried about reasons for not seeking needed dental care, 20 per cent of the lowest income group mentioned cost, compared with just 10 per cent of the highest income group. Similarly, while 22 per cent of the non-insured population cited cost as a factor, just 6 per cent of the insured group gave cost as the reason for not seeing a dentist in the past three years.

Children from low socio-economic status families are particularly susceptible to oral health problems and severe tooth decay.[14,15,16] The following facts emphasize the serious unmet needs in children's oral health:[17]

- poor children suffer from twice as many dental caries as their more affluent peers;
- more than 51 million school hours are lost each year to dental-related illness;
- poor children have nearly 12 times the number of restricted-activity days as do children from higher-income families;
- 25 per cent of poor children never visit a dentist before entering kindergarten.

This is a significant compromise to children's health, since healthy teeth contribute in a number of ways to a child's health, growth and development. Children's teeth are involved in nutritional intake, development of proper speech, and normal jaw development. They also guide the permanent teeth into proper position and contribute to a child's appearance and healthy self-esteem.

Although Canada's Medicare is one of the most progressively financed systems in the world (progressive in this context meaning that the proportion of income a person contributes increases with income), it ranks relatively low among OECD countries in

terms of the public financing for total heath care costs.[18] CDHA proposes a change in the mix of health financing, so that the burden of costs is re-distributed to allow low-income individuals greater access to the health care system.

CDHA recommends:

- ***Medicare coverage for public dental hygiene programs for all low-income Canadians, not just for those on social assistance;***
- ***government reimbursement schedules for oral health care providers based on average market rates.***

Seniors

Oral disease among seniors has become so prevalent that some health professionals referred to it as a "silent epidemic."[19] A number of factors have contributed to this situation. One barrier to obtaining proper oral health care is a loss of private dental insurance, which often comes with retirement. In fact, Canada has a startling rate of 75 per cent of senior men and 83 per cent of senior women who do not have dental insurance.[20] In addition, accessing services is difficult due to poverty and restricted mobility, and long-term care facilities often have a limited capacity to deliver oral health services.

Several oral health care statistics support the need for increased preventive primary oral hygiene care for the elderly:

- Over half of adults aged 55 or more had periodontitis.[21]
- Seventy per cent of patients in long-term care facilities had unacceptable levels of oral health.[22]
- A summary of four studies indicates a high degree of dental disease in nursing home residents.[23]

Furthermore, a demographic and epidemiological study shows that seniors' oral health concerns have changed over time. Trends show increasing longevity with fewer and/or less severe carious teeth, but a much greater potential for gingivitis and mild forms of periodontitis.[24] These oral health problems can lead to further general health problems such as malnutrition and weight loss, which can be prevented by healthy teeth and gums. A healthy mouth protects against systemic diseases, to which seniors may have less immunity. An examination of dental hygienists' scope of practice shows that they are the oral health care providers best suited to deal with seniors' gingivitis and periodontitis.

CDHA recommends:

- ***Medicare coverage for public dental hygiene programs for seniors.***

Aboriginal communities' appalling incidence of oral disease

The First Nations and Inuit Health Branch (FNIHB) of Health Canada administers the non-insured health benefits (NIHB) program, which includes a dental program valued at about $575 million annually. Of that amount, approximately 19 per cent is spent on dental benefits,[25] with program costs of $120 million in 2001.[26] Although a cursory look at program funding suggests that the 263,701 Aboriginal peoples[27] receive a low level of oral health services at a cost of approximately $46 per person annually, a closer examination shows the existing program is totally inadequate in addressing their oral health. In fact, Aboriginal peoples' oral health is in an appalling state, due to program flaws including underfunding, a lack of support for long-term oral health, and difficulties with benefits administration.

There is a wide gap between the oral health of Aboriginal children and non-Aboriginal children. In 1999, the decayed/missing/filled teeth (DMFT) rate of 4.4 for 12-year-old Canadian First Nations children was two to three times higher than the DMFT rate for non-Aboriginal children in Canada.[28] Another more recent statistic from Health Canada's *Community Health Programs:1999–2000 Annual Review* of the First Nations and Inuit Health Branch indicates the dental decay rates for all ages of this population range from three to five times greater than the non-Aboriginal Canadian population.[29]

There are a number of reasons why the NIHB program is failing Aboriginal peoples. An oral health professional working with the NIHB program reports that "most First Nations People don't get much dental care; only 38 per cent see a dentist once a year, compared to 75 per cent of the rest of us."[30] This is confirmed in a report from the First Nations and Inuit Health Branch identifying evidence that the program reaches only 38 per cent of the eligible population.[31] In some communities, such as Moose Factory and Yellowknife, eligible NIHB dental clients lack access to dental care since there are no oral health care providers in these areas.[32,33] Northern towns are unable to attract new dentists because "the red tape scares them away . . . even $15 procedures must be pre-approved."[34] The Assembly of First Nations reports that access to dental care is threatened as increasing numbers of dentists opt out of the NIHB program and ask for payment at the time of service delivery[35] A June 17, 2002 First Nations and Inuit Health Branch report on a new Oral Health Plan also shows that providers and clients find program coverage and services confusing with substantial administrative requirements.[36]

Not only human resources and administration problems plague the program; weaknesses are also revealed in the program mandate and evaluation. The mandate is to provide restorative treatment and does not support long-term oral health.[37] In addition, a cost-benefit analysis shows little value for the expenditures.[38] A long-term oral health mandate that includes oral health prevention can result in program financial savings, since "children with extensive dental disease have extensive dental disease as adults."[39]

The CDHA recommends:

- ***increased financial support for both the Community Health and NIHB programs of the First Nations and Inuit Health Branch of Health Canada, so that additional oral disease prevention and oral health promotion programs can be created and carried out by dental hygienists, including mobile***

dental hygienists who serve remote areas (increases to take population growth into account);
- ***new funding for a comprehensive national preventive initiative to address dental disease in young Aboriginal children;***
- ***streamlining the NIHB program to reduce administrative requirements.***

Aboriginal peoples' desperate need for better tobacco cessation programs

The First Nations and Inuit Regional Health Surveys 1997 Tobacco Report indicates that smoking prevalence rates for First Nations youth are alarming, with 78 per cent of those under 24 using tobacco. Some youth start to smoke as early as five years of age.[40] CDHA applauds the federal government's response to this health issue: a September 2001 announcement of Health Canada's First Nations and Inuit Health Branch's Tobacco Control Initiative that commits $50 million over five years, followed by an ongoing, annual allocation of $12 million to promote and support tobacco cessation policies and programs.[41]

Dental hygienists are involved in tobacco cessation programs, which encourage the public to perceive non-ceremonial tobacco use in a negative light. In addition, dental hygiene oral health assessments are a first line of offence against the devastating effects of oral cancer caused by smoking. According to a recent study by the Oregon Research Institute, there is evidence that dental hygienists are quite effective in anti-tobacco campaigns.[42] Conclusions from the study show that counselling from dental hygienists on the danger of tobacco use proved to be a strong motivator to reduce or quit smoking.

CDHA recommends:
- ***ongoing federal support for Health Canada's First Nations and Inuit Health Branch Tobacco Control Initiative;***
- ***specific allocation of federal funding for dental hygienists to conduct anti-tobacco campaigns in the First Nations and Inuit programs, as a cost-effective means for preventing cancer and other illnesses associated with smoking.***

Funding prevention ensures fiscal sustainability and a competitive work force

In volume four of the interim report of the Standing Senate Committee on Social Affairs, Science and Technology, a number of experts verify that "health promotion and disease prevention can generate substantial long-term benefits, both by reducing overall costs to the health care system and by improving quality of life for Canadians."[43] The Canadian Dental Hygienists Association concurs with these experts and argues that with regard to oral health, it is possible to achieve a better return on the health care dollar by investing

in the preventive services of dental hygienists, rather than treating oral disease after it arises. We believe that the cost of oral health prevention is far less than the cost of neglect.

In 1988, the federal government identified "dental hygienists as the only health professionals whose primary concern is the prevention of oral disease."[44] Today, dental hygienists are involved in more health promotion and disease prevention than any other oral health professional. A common definition of health promotion is the process of enabling persons to improve and take increasing control over and responsibility for their health. In keeping with the practice of health promotion and disease prevention, dental hygienists advise clients about nutrition, related dietary issues, good oral hygiene practices, and encourage self-care.

The following three studies demonstrate how dental hygienists' early recognition of oral health problems can prevent costly treatment:

- In 1971, a British study reports that, on average, an adolescent not receiving oral health care will develop 2.2 new dental caries per year. However, a dental hygienist working full-time with 1,600 children per year can prevent 1.3 caries per child for a total of 2,080 caries.[45] A visit to a dental hygienist twice a year is far less expensive than treatment for dental caries by a dentist.
- In a 1999 report, the American Dental Hygienists Association concludes: "Every dollar invested in preventive care saves between 8 to 50 dollars of more costly care."[46]
- In 1997, the British Columbia Provincial Health Officer's Annual Report concluded that dental procedures are the most common surgical procedures that children receive in hospitals.[47] Dental procedures in hospitals, usually on a day-surgery basis, include general anesthesia, tooth extractions, fillings, and other restorative dental work. Many of these surgeries could be prevented if more children received oral health instruction and preventive services from dental hygienists. In this example, the cost-effectiveness of the care provided by dental hygienists can be defined by the overall financial savings associated with reduced surgical costs for nurses, anesthetists, and dentists.

Dental hygienists can provide a viable means of cost containment through their emphasis on oral health promotion and by preventing gum disease and caries that are costly to treat. Unless our health care services and the way we deliver them are refocused on preventing illness rather than just treating it, Canadians will be stuck in a spiral of increasing public and private expenditures with no real solution to our health needs. To have health care money spent where it will have the greatest impact, dental hygienists need to be more involved in public health departments, community public health systems, community health centres, and educational settings such as grade schools.

In spring 1998, Statistics Canada's *Perspectives on Labour and Income* indicated a serious lack of productivity in the Canadian work force due to absenteeism.[48] Most of this absenteeism is due to poor health; individuals are either ill themselves or have to care for a child with health problems. Since periodontal disease and caries are prevalent diseases, and oral diseases contribute to poor overall health and directly impact on important aspects of life—including attendance and performance at work—they contribute to the lack of productivity in the Canadian economy. The annual *National Health Interview Survey* in the United States supports this theory. The Survey reports

that in 1996, there were 3.7 days of restricted activity per 100 employed persons 18 years and older, associated with an acute dental condition. Compared with the 624 restricted-activity days per 100 persons per year for all acute conditions, the 3.7 days represents a relatively small loss on an individual basis.[49] However, they add up to a sizeable loss of productivity for the population as a whole.

CDHA asserts that dental hygienists' preventative work can contribute to a productive, competitive, healthy work force that would enhance Canada's economic position by increasing the standard and quality of life enjoyed by Canadians.

CDHA recommends:

- ***the federal government take a lead role in balancing the investment in dental hygiene prevention services, with the investment in dental disease and cavity treatment.***

Quality services through better education

Quality health services are a top priority for Canadians. In March 2000, the Environics Research Group surveyed Canadians and, out of five different aspects of health care that included quality, costs, publicly funded system, integrated community and hospital services, quality care was rated as the most important feature of health care.[50] CDHA agrees with Canadians on this issue and believes that the development of health human resources through education is an important way of obtaining quality services.

CDHA placed quality services and accountability high on its list of priorities when it developed a *Policy Framework for Dental Hygiene Education in Canada, 2005*.[51] This policy was developed in partnership with the Allied Dental Educators' Committee of the Association of Canadian Faculties of Dentistry, as well as a broad base of stakeholders from the dental hygiene professional associations, regulatory bodies, colleges, universities, and the Commission on Dental Accreditation of Canada. These experts concluded that future dental hygiene practice must respond to an expanding body of dental hygiene theory, changing demographics and oral disease patterns, and the increasing need for quality oral health services. In addition, they recognized that entry-level education for dental hygienists must adapt to remain commensurate with preparation for entry to an evolving health care system, which demands greater independence, accountability, and quality of service. To meet the changing demands on health care, the new CDHA education policy states that by the year 2005, a baccalaureate degree will be the minimum entry requirement for dental hygienists.

CDHA's new education policy provides the following advantages:

- consistent Canada-wide minimum academic qualifications;
- quality dental hygiene services provided by well-trained dental hygienists;
- a satisfactory response to globalization pressures and international business requirements to provide consistent health care services to employees across the country.

CDHA recommends:

- ***federal and provincial governments work together to improve the quality of dental hygiene services in Canada through leadership, direction, and financial support for educational institutions as they move from diploma programs to baccalaureate programs.***

Oral health care research

During the 2000–2001 hearings conducted by the Standing Senate Committee on Social Affairs, Science and Technology, one of the main concerns raised by witnesses was that Canada's expenditures on research were low in comparison with other industrialized countries and that the federal government should devote more funding to health research.[52] CDHA echoes these concerns and promotes a strong role for the federal government in developing a national oral health research agenda. The U.S. government is one step ahead of the Canadian government in collecting a knowledge base of information on oral health. In 2001, the United States Surgeon General made oral health the focus of his yearly report, entitled *Oral Health in America: A Report of the Surgeon General.*[53] The Canadian federal government should follow this lead by commissioning a national report on oral health in Canada and developing a national preventive initiative to address oral health issues in Canada.

The Standing Senate Committee on Social Affairs, Science and Technology's fourth health report, dated September 2001, suggests that the federal research budget be increased from 0.5 per cent to 1 per cent of total health spending. CDHA supports this increase, with designated funds for the oral health care policy, system, and services research. This will provide important information for oral health care service and program decisions, which will result in improvements in the quality of oral health care and influence the availability and delivery of high-quality dental hygiene care.

The CDHA commends the federal government for the recent establishment of the Canadian Institutes of Health Research (CIHR) and for the CIHR funding of 55 oral health research projects in 2001 and 2002 to a total of $4,190,986. However, the lack of priority for oral health research compared with other areas of research is apparent in the fact that none of the institute titles include the words "oral health." This suggests that none of the institutes has oral health issues as their primary focus.

The Summary Report of the Institute of Musculoskeletal Health and Arthritis' (IMHA) *Strategic Plan 2002 to 2005* identifies four research priorities, including:

- injury, immunity, inflammation, repair and tissue engineering;
- pain, disability, and rehabilitation;
- mobility, fitness, and exercise;
- biomaterials and devices.[54]

These priorities provide moderate opportunities for oral health research, since oral health issues could be subsumed within three of these priority areas, except mobility, fitness, and exercise. However, if IMHA is to be the main meeting ground for oral research in Canada, CDHA asserts that oral health should be included as a fifth area of priority.

CDHA recommends:

- ***development of a national report on Canada's oral health status and a national prevention initiative to address oral health issues in Canada;***
- ***an increase to 1 per cent of total health spending for the federal health research budget.***

Summary of recommendations

The Canadian Dental Hygienists Association makes the following recommendations that are critical in ensuring effective, long-term change in the oral health and quality of life of Canadians and economic prosperity.

Low-income Canadians, seniors, and Aboriginal peoples

- Medicare coverage for public dental hygiene programs for all low-income Canadians, not just for those on social assistance.
- Government reimbursement schedules for oral health care providers based on average market rates.
- Medicare coverage for public dental hygiene programs for seniors.
- Increased financial support for both the Community Health and NIHB programs of the First Nations and Inuit Health Branch of Health Canada, so that additional oral disease prevention and oral health promotion programs can be created and carried out by dental hygienists, including mobile dental hygienists who serve remote areas (increases to take population growth into account).
- New funding for a comprehensive national preventive initiative to address dental disease in young Aboriginal children.
- Streamlining the NIHB program to reduce administrative requirements.
- Ongoing federal support for Health Canada's First Nations and Inuit Health Branch Tobacco Control Initiative.
- Specific allocation of federal funding for dental hygienists to conduct anti-tobacco campaigns in the First Nations and Inuit programs, as a cost-effective means for preventing cancer and other illnesses associated with smoking.

Prevention

- The federal government taking a lead role in balancing the investment in dental hygiene prevention services, with the investment in dental disease and cavity treatment.

Education

- Federal and provincial governments working together to improve the quality of dental hygiene services in Canada through leadership, direction, and financial support for educational institutions as they move from diploma programs to baccalaureate programs.

Research

- Development of a national report on Canada's oral health status and a national prevention initiative to address oral health issues in Canada.
- An increase to 1 per cent of total health spending for the federal health research budget.

Endnotes

[1] Canada. House of Commons Standing Committee on Finance: House of Commons Standing Committee on Finance invites Canadians to participate in its pre-budget discussions [on-line]. [Cited September 4, 2002.) <www.parl.gc.ca/InfoComDoc/37/1/FINA/PressReleases/FINAPRI-E.htm>

[2] Canada. Comité permanent des finances de la Chambre des communes : Le comité permanent des finances de la Chambre des communes invite les Canadiens à participer à ses discussions préalables au budget [en ligne]. (Le 4 septembre 2002.) <www.parl.gc.ca/InfoComDoc/37/1/FINA/PressReleases/FINAPRI-E.htm>

[3] Canadian Institute for Health Information: National Health Expenditure Trends Data Tables, 1975-2001,Ottawa: CIHI, p.82, 2001

[4] Canadian Institute for Health Information: *National health expenditure trends, 1975–2000*. Ottawa: CIHI, 2000

[5] Canadian Institute for Health Information: *National Health Expenditure Trends, 1975-2000*. Ottawa: CIHI, 2000

[6] Canadian Institute for Health Information: National health expenditure trends, 1975–2000. Ottawa: CIHI, 2000

[7] Barer, M.L., Evans, R.G.: Health care in Canada: organization, financing, and access. Health Policy Research Unit Research Reports. Vancouver: Centre for Health Services and Policy Research, University of British Columbia, May 2001

[8] Brodeur, J.M., Benigieri, M., Olivier, M., et al.: Use of dental services and the percentage of persons possessing private dental insurance in Quebec. *J Can Dent Assoc* 62(1): pp. 83–90, 1996

[9] Charette, A.: Dental health. In: Stephens, T., Fowler, G.D., eds. Canada's health promotion survey, 1990: Technical Report. Ottawa: Health and Welfare Canada, pp. 211–22, 1993 (Catalogue H39-263/2-190E)

[10] Locker, D., Leake, J.L.: Income inequalities in oral health among older adults in four Ontario communities. *Can J Public Health* 83(2): pp. 150–54, 1992

[11] Ung, H. An assessment of oral health needs of the community served by West Central Community Health Centres. Toronto: Faculty of Dentistry, University of Toronto, p. 53, 1994

[12] Blendon, R.J., Schoen, C., DesRoches, C.M., Osborn, R., Scoles, K.L., Zapert, K.: Inequities in health care: A five country survey. *Health Affairs* 21(3): pp. 182–91, 2002

[13] Canada. Statistics Canada: *Health Reports* 11(1)(Summer), 1999 (ISSN 1209-1367)

[14] Acs, G., Lodolini, G., Kaminsky, S., Cisneros, G.: Effect of nursing caries on body weight in a pediatric population. *Pediatr Dent* 14(5): pp. 302–5, 1992

[15] Ayhan, H., Suskan, E., Yidirim, S.: The effect of nursing or rampant caries on height, body weight and head circumference. *J Clin Pediatr Dent* 20(3): pp. 209–12, 1996

[16] Acs, G., Shulman, R., Ng, M.W., Chussid, S.: The effect of dental rehabilitation on the body weight of children with early childhood caries. *Pediatr Dent* 21(2): pp. 109–13, 1999

[17] Burns, R., Krause, B.: Improving children's oral health [on-line]. National Governors Association and NGA Center for Best Practices. [Cited September 7, 2002.] <www.nga.org/center/divisions/1,1188,T_CEN_HES^C_ISSUE_BRIEF^D_3915,00.html >

[18] Barer, M.L., Evans, R.G. *Op cit.*

[19] Atlantic Health Promotion Research Centre: The oral health of seniors project [on-line]. [Cited September 3, 2002.] <www.medicine.dal.ca/ahprc/oralhealth/>

[20] Canada. Health Canada: Statistical report on the health of Canadians. Ottawa: Health Canada, p. 97, 1999

[21] Albandar, J.M., Brunelle, J.A., Kingman, A.: Destructive periodontal disease in adults 30 years of age and older in the United States, 1988–1944. *J Periodontol* 70(1): pp. 13–29, 1999

[22] Kiyak, H.A., Grayston, M.N., Crinean, C.L.: Oral health problems and needs of nursing home residents. *Community Dent Oral Epidemiol* 21(1): 49–52, 1993

[23] U.S. Department of Health and Human Services: Oral health in America: A Report of the Surgeon General [on-line]. [Cited August 8, 2002.] Rockville, MD: USDHHS, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000 <www.surgeongeneral.gov/library/oralhealth/default.htm>

[24] Manga, P.: The independent practice of dental hygiene: economics, politics and policy. Draft paper, September 2001

[25] Canada. Health Canada. Federal Dental Care Advisory Committee: Meeting minutes November 19–20, 2001. Health Canada, Ottawa, Ontario, 2001
[26] Fletcher, S.: Biting back [on-line]. *Globe and Mail*, Toronto, June 25, 2002. [Cited August 8, 2002.] <www.globeandmail.com/servlet/ArticleNews/freeheadlines/gam/20020625/TUELETS-7/health/Health>
[27] Canada. Health Canada. First Nations and Inuit Health Branch: An oral health plan. Presentation to the Federal Dental Care Advisory Committee. Ottawa: Health Canada, June 17, 2002
[28] Canada. Health Canada: A second diagnostic on the health of First Nations and Inuit People in Canada [on-line]. November 1999. [Cited September 4, 2002.] <www.hc-sc.gc.ca/fnihb/chp/publications/second_diagnostic_fni.pdf>
[29] Canada. Health Canada. First Nations and Inuit Health Branch: Community Health Programs: 1999–2000 Annual Review [on-line]. Ottawa: Health Canada, August 2000. <www.hc-sc.gc.ca/fnihb/chp/annualreview/dental_health.htm>
[30] Wente, M.: First Nations people, Third World teeth. *Globe and Mail*, Tuesday, June 18, 2002
[31] Canada. Health Canada. First Nations and Inuit Health Branch: An oral health plan. *Op cit.*
[32] Canada. Health Canada. Federal Dental Care Advisory Committee. *Op cit.*
[33] Wente, M. *Op cit.*
[34] Wente, M. *Op cit.*
[35] CBC News Online Staff: First Nations dental health alarming: dental association [on-line]. CBC News, June 2002. [Cited August 8, 2002.] <www.cbc.ca/stories/2002/06/07/dental_afn020607>
[36] Canada. Health Canada. First Nations and Inuit Health Branch: An oral health plan. *Op cit.*
[37] *Ibid.*
[38] *Ibid.*
[39] *Ibid.*
[40] Assembly of First Nations Health Secretariat: First Nations health bulletin, Fall/Winter 2001–2002 [on-line]. [Cited September 3, 2002.] <www.afn.ca/Programs/Health%20Secretariat/PDF's/hb02.pdf>
[41] *Ibid.*
[42] Lyons, S., Majeski, J., Scott, B.L.: Dental hygienists effective as anti-tobacco messengers. *Access* 13(8): pp. 44–45, 1999
[43] Canada. Senate. Standing Senate Committee on Social Affairs, Science and Technology: The health of Canadians – The federal role. Volume Four: Issues and options. Ottawa: The Senate, p. 55, 2001
[44] Canada. Health Canada: The practice of dental hygiene in Canada. Report of the working group on the practice of dental hygiene in Canada. Ottawa: Health Canada, 1988
[45] McKendrick, J.J.: The economics of caries prevention by dental hygienists. *Public Health* 85(5): 219–27, 1971
[46] American Dental Hygienists' Association: The future of oral health. Chicago, Illinois: ADHA, p. 2, 1999
[47] British Columbia. Provincial health officer's annual report 1997. Victoria: Ministry of Health and Ministry Responsible for Seniors, p. 92, 1998
[48] Canada. Statistics Canada: Perspectives on labour and income. Spring 1998 (Catalogue No. 75-001-XPE)
[49] U.S. Department of Health and Human Services: *Op cit.*
[50] Environics Research Group: Presentation to the Standing Senate Committee on Social Affairs, Science and Technology. Ottawa, March 2000
[51] Canadian Dental Hygienists Association: Policy framework for dental hygiene education in Canada, 2005. Ottawa: CDHA, 2000
[52] Canada. Senate. Standing Senate Committee on Social Affairs, Science and Technology: *Op cit.*
[53] U.S. Department of Health and Human Services: *Op cit.*
[54] Canadian Institutes of Health Research: Strategic plan 2002–2005, Institute of Musculoskeletal Health and Arthritis, Summary Report [on-line]. [Cited August 8, 2002.] <www.cihr-irsc.gc.ca/institutes/imha/publications/strategic_plan_e.pdf>