

# ORAL HEALTH



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Dr. Alfred Dean, president of the Canadian Dental Association, looks over x-rays with five-year-old patient Darcy Williams of New Waterford. The CDA is promoting a variety of health initiatives designed to promote good oral health for Canadians throughout their lifetimes.

Your smile starts with **Colgate**



# Giving dental health its due

Canada faces a challenge of unprecedented proportions, says Dr. Alfred Dean, president of the Canadian Dental Association (CDA). Its goal moving forward into this century must be to forge links between private dental care and public health care delivery. Only by working as a team can dentists, physicians, researchers and, in fact, all health care professionals overcome the staggering array of obstacles that stand between the average Canadian and ongoing good health.

"There is growing acceptance that oral health is directly linked to overall body health," he says. "Yet we persist in treating each as separate and unrelated entities. If Canada is truly to become among the healthiest nations in the world, we have to recognize that two systems, which have so long operated in parallel, must now forge links and address overall health care."

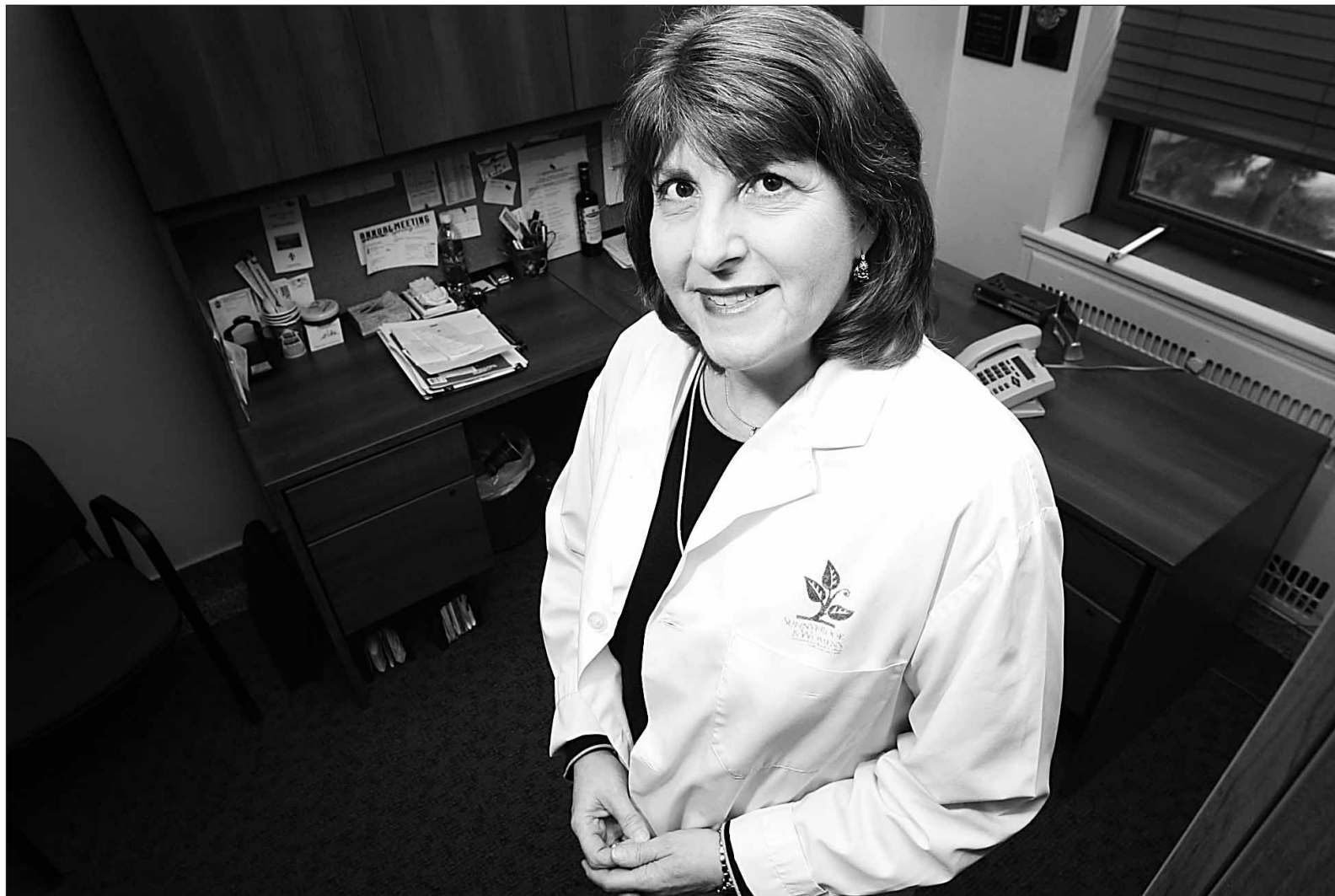
Neither Dr. Dean nor the CDA advocates a publicly funded dental care system for Canada. Instead, they are pressing for a new model, where dental care is given its right and proper place in overall health care policy and programs, where dental care is assigned a fair share of research dollars, where Canada's 10 university dental schools are properly funded and expanded to meet perceived need, and where all Canadians, regardless of age and economic circumstances, have access to both prevention programs and treatment.

"The importance of oral health to overall health has been overlooked for decades," Dr. Dean says. "And yet Canadians have been enormously well served by the private dental care system. Times, circumstances and demographics have changed, however.

"While in the 1970s and 1980s we appeared to have almost eradicated dental cavities, they are now making a comeback. One-third of Canadians report bleeding gums when they floss, a sign of potential gum disease. Gum disease, in turn, has been linked by researchers to cardiovascular problems.

"Increasing numbers of children are reporting serious dental problems, serious enough to require general anesthesia. Finally, Canada faces a huge growth in its population of seniors. They will require care and support we simply are not in a position to give, currently."

Yet right across Canada, there



Dr. Susan Sutherland, chief of dentistry at Sunnybrook and Womens College Hospital in Toronto, says a new model for oral health care delivery is needed.

are myriad points of light piercing these clouds of concern. Projects and initiatives have been launched, research undertaken and policies developed that give hope that Canada's 18,000 dentists can effect major change.

For example, this year, the federal government named Dr. Peter Cooney the country's first chief dental officer. His appointment gives dentistry a seat at the policy table and a voice in favour of increased research and resources directed toward oral health.

In British Columbia in early March, the provincial government, at the urging of the British Columbia Dental Association, announced a series of new programs aimed at children. They include dental screening of all children before they enter grade one, five new dentists for the University of British Columbia residents program to work in under-served areas, a public

awareness program focused on early childhood dental decay and the treatment of genetic diseases affecting the mouth.

In 2001, a task force of the B.C. Dental Association produced a report focusing on severe dental decay among young children and identifying a number of recommendations to address the problem. "In B.C., over 5,000 children a year are treated under general anesthesia for dental problems, the majority due to extensive tooth decay; of these, 60% are under the age of four," says Dr. Ed O'Brien, president of the B.C. Dental Association.

"If we can reduce the number of children affected through preventive measures, the government can realize up to \$10-million in savings in the health care system, shorten wait lists for pediatric surgery and, best of all, give these kids the chance to be just that — kids, happy and smiling, free of pain."

In Nova Scotia, researchers at Dalhousie University's dental school have undertaken a range of research projects involving access to and affordability of health care for seniors. The goal is to provide evidence-based analysis that will form the basis of policy and action programs, says Dr. Debora Matthews, head of periodontics at Dalhousie.

"We look on the research studies being done here and the work on pediatric dentistry done in B.C. as bright lights," she says. "They give great hope for the future."

Turning those bright sparks into blazing light of reform will require innovative and imaginative measures, says Dr. Susan Sutherland, chief of dentistry at Sunnybrook and Women's College Health Sciences Centre in Toronto.

"We have to start looking at a new hybrid model, where the privately funded dental care

system intersects with publicly funded health care," she says. "The two systems should support each other and treat all health matters, including oral health, as part of a single holistic approach."

That means an acceptance by medical professionals and policy makers that a healthy mouth is essential to a healthy body. Once gained, that acceptance will likely lead not only to more research funding but also to a better allocation of resources such as operating room times, educational funding, preventative campaigns and outreach programs to deliver oral care where it is most needed.

"We have to recognize that Canada has changed greatly since the 1980s, when we had dental cavities in check. We have to gear up to recreate our success of those years under very different circumstances," Dr. Dean says.



Dr. Jack Cottrell prepares dental floss in his Port Perry, Ont., office. Flossing is one of the key elements in maintaining oral health, along with regular brushing, proper diet and regular checkups.

# Oral health a daily duty

Many Canadians have a false sense of security about the state of their oral health, according to a recent survey by the Canadian Dental Association (CDA).

While 90% of respondents described their oral health as good or better, a full 33% said their gums bleed when they floss — a telltale warning sign of potential gum disease. The survey indicates all Canadians should go back to the basics and adhere to the main principles of oral health: Twice-daily brushing, daily flossing, regular dental checkups and a healthy, balanced diet.

“Bleeding gums should be taken seriously — it could be a signal that something is beginning to go seriously wrong, not just in the mouth but in the rest of the body,” says Dr. Jack Cottrell, president-elect of the Ottawa-based CDA. “Gum disease is a silent threat. You might not have any pain. You might not even know you have gum disease. But it is the most common reason for tooth loss in adults.”

Worse yet, recent research has shown potential links between gum disease and other serious, life-threatening conditions.

“Gum disease has been connected to a number of serious health concerns, including heart disease, diabetes and pre-term, low-weight babies,” Dr. Cottrell says.

One theory is that harmful bacteria can form in the hard-to-reach pockets between teeth and gum tissue. These bacterial colonies can dislodge and enter the bloodstream, settling in other parts of the body. A recent study in *Circulation*, the American Heart Disease journal, found a direct relationship between periodontal disease and the thickening of the carotid arteries.

“The good news is that almost all gum and tooth disease is preventable,” says Dr. Euan Swan, the CDA’s manager of dental programs. “All that is required is that people go back to the basics and religiously follow a simple program of oral health and hygiene.”

That program starts with good

nutrition. Researchers have long known that a healthy, balanced diet is an effective preventative tool against an entire range of lifestyle-related diseases — not just cavities and gum disease but also type 2 diabetes, heart disease, high cholesterol, circulatory problems and the rising epidemic of obesity affecting Canadian adults and children alike.

“Prevention all starts with what goes in the mouth,” Dr. Swan says. “Start children at an early age and teach them that health is all wrapped up in a diet that is low in sugars and high in fruits, vegetables and fibre.

“Avoid between-meal snacks that are high in sugars and carbohydrates. The mouth needs time to recover and clean itself naturally after meals. The mouth has an amazing ability to look after itself if you follow simple rules.”

The second basic principle is to brush thoroughly at least twice a day. Three minutes in the morning and before bed will do the trick, Dr. Cottrell says. Use fluoridated

toothpaste and a soft-bristled brush. The type of toothpaste and the type of brush — manual or electric — is secondary. The important element is just to make sure you brush.

“We suggest people discuss preferences, needs and problems with their dentist,” he says. “If in doubt, look for the CDA seal of recognition on a product. There is such a wide range of products on the market that finding one that best suits individual needs is not a problem.”

Step three may be the one that poses the greatest challenge for many people — flossing. Yet flossing is vital not just for the prevention of cavities but to ward off the danger of gum disease, experts say.

“Flossing deals with areas between teeth that brushing can’t reach,” Dr. Swan explains. “Those crevices and crannies can catch tiny bits of food debris, which slowly harden into plaque and protect harmful bacteria as they eat their way into healthy teeth and gums. “Floss, and you can remove that debris; plaque doesn’t have a chance to form.”

While mouthwashes are not essential, they, too, can play a role in

good oral health, Dr. Cottrell adds. Mouthwashes reduce harmful bacteria and can be especially effective if used after flossing.

The final basic rule for good oral health is regular visits to a dentist, starting about six months after the first baby tooth appears and continuing though a long life.

Granted, third-party dental plans make an enormous difference in access to regular checkups. CDA surveys show that more than 75% of those with dental insurance visit the dentist at least once a year, compared with only 45% of those without coverage. On the plus side, surveys also show that more than 60% of Canadians have some form of dental insurance coverage.

“Regular checkups are crucial to both prevention and early treatment,” Dr. Cottrell says. “The dentist will not only clean teeth and remove tartar but also check for signs of a wide range of other problems, everything from cancers to early stage gum disease.

“The mouth is most often the bellwether for overall health. Our goal as dentists is to make Canadians not just the healthiest people in the world from an oral perspective but the healthiest people in the world, period.”

# A lifetime of smiles starts with first tooth

A bright, healthy smile that lasts a lifetime starts even before that first baby tooth pops through the gums. The best thing parents can do to ensure their children enjoy a lifetime of oral health is to teach them the basics, start early and make it fun, say Canada's dental experts.

"If you can start children at a very early age on a regular program of oral health, then it becomes ingrained. It becomes second nature," says Dr. Kelly Wright, president of the Canadian Academy of Pediatric Dentistry. "Make it as pleasant an experience as possible and make it a regular part of their routine.

"The rewards are enormous. It is not just a matter of cavities. The mouth is a vital part of overall health. What happens there affects almost everything in the body."

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## 'IF YOU START CHILDREN AT AN EARLY AGE ON A REGULAR PROGRAM OF ORAL HEALTH, IT BECOMES INGRAINED'

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That is why the basics begin with a healthy, balanced diet, explains Dr. Rob McGregor of Kentville, N.S., member of the board of directors of the Ottawa-based Canadian Dental Association. The other three include a thorough brushing twice a day, flossing daily and regular visits to a dentist for checkups.

"Diet is an intrinsic part of dental care, yet it may be the most overlooked," he says. "Sticky, sweet foods, carbonated beverages and sweetened juices can play havoc with teeth and gums and yet, because children love them, parents too often give in."

Sweetened juices are especially

problematic, adds Dr. Wright, who is in private practice in Brentwood Bay, B.C. "Parents seem to think that juice is better for children than water. It just isn't so, in most cases. The sugars in those juices can have a devastating effect on baby teeth."

While neither dentist suggests cutting out sugars entirely, they suggest concentrating sweets at meal times. "If a child gets sugars all at once, then it allows the mouth time to recover between meals," Dr. Wright says.

He also suggests small children eat six to eight small meals a day instead of three large ones, but they not be permitted to "graze." Meals should have definite time limits and then periods in between, to allow the mouth to recover and clear itself of sugars naturally.

Oral health to last a lifetime begins with a visit to the dentist about six months after the first baby tooth erupts, or by the age of one. The goal is not treatment but informational and educational, Dr. McGregor says, to explain to parents what can happen and how to avoid it.

Before a baby has teeth, use a soft, moist cloth to clean the gums, Dr. Wright says, and then move to brushing with a soft brush and a tiny smear of toothpaste once the first tooth appears. Parents should handle brushing chores until the child has enough dexterity to manipulate a toothbrush — about the same time they can handle crayons, Dr. McGregor says.

Even then, parents should do one of the twice-daily brushings until a child is seven or eight years old, he says.

The choice of manual or electric toothbrush — and the preference of cartoon character on the handle — is up to the individual. Whichever encourages the child to diligently brush for three minutes at a time is the route to go. Dr. Wright suggests alternating between manual and electric, to allow the child to develop necessary dexterity and to allow bristles to dry thoroughly.



Children should be taught at an early age the habits that provide a lifetime of healthy teeth, the CDA says.

Nor does choice of toothpaste matter, as long as it contains fluoride and it has a taste that encourages brushing — just don't let them get carried away with big globs of toothpaste. A pea-sized amount is plenty. Dentists suggest the choice in brushes and toothpastes be guided by the Canadian Dental Association Seal of Recognition, awarded to products that meet CDA standards.

Admittedly, flossing can pose a challenge, the dentists say. Persistence reaps enormous rewards, however. Inculcating in a

child a regimen of brushing and flossing is the best safeguard against dental problems down the line.

"There are now flavoured flosses, an electric flossing aid shaped like a slingshot that vibrates and disposable single use floss picks," Dr. Wright says. "Choose the one that works best for the child."

Molars deserve special attention, because food trapped between them in hard-to-brush spaces is the most common cause of cavities in small children, Dr. MacGregor says. Flossing is the only effective

way to remove those particles.

Above all, make dental and oral health fun and involving, dentists say. They point to the Nova Scotia Dental Association's award-winning healthy teeth site, [www.healthy-teeth.org](http://www.healthy-teeth.org), as a terrific resource for elementary school children. Even the tooth fairy can play a role.

Finding a shiny loonie under the pillow to replace a lost tooth can involve a child in oral health.

"It is a great opportunity to talk with kids about oral health," says CDA president Dr. Alfred Dean.



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# New challenge: senior care

Canada faces a unique challenge, according to the Canadian Dental Association (CDA). With a huge demographic bulge of Baby Boomers moving toward senior citizen status, the problems associated with providing them with continued dental care are certain to strain an already tightly stretched medical and dental care delivery system.

Chief among those challenges are access and ability to pay, says Dr. Wayne Halstrom, CDA vice-president. Access is an issue because, as people age, they begin to lose mobility, and a trip to a dental office can become an almost insurmountable chore. At the same time, few nursing and long-term care facilities have dental services adequate to meet the projected need.

Ability to pay is a major factor, because few third-party dental insurance plans provide coverage much beyond retirement. After a lifetime of dental plan coverage, seniors may suddenly find themselves forced to rely on limited retirement income to pay for dental care.

"So many of these soon-to-be-seniors have had wonderful care over the years," Dr. Halstrom says. "I know that here in British Columbia, where I practise, about two-thirds of the population has some form of coverage. Early on in life, they have had restorative work done — root canals, crowns and bridges.

"The problem is that restorative work ages just as people age. Seniors will likely face the need to replace that work as ageing takes its toll. The problem is, how can they afford it and where can they get the work done?"

Those most at risk will be the frail elderly 85 years of age and older, says Dr. Mary McNally, assistant professor of dentistry at Dalhousie University in Halifax.

"They are becoming the fastest-growing segment of the elderly population, and that change is creating a serious issue for dental care," she says. "Dental care has a tremendous impact on overall health. If you can't chew and swallow properly, you can't eat. The results can be devastating."

Compounding the problem is the fact that only now is serious research being done into the impact on dental care delivery this bulge of seniors will have, says Dr. Debora Matthews, head of periodontics at Dalhousie.



**Dr. Wayne Halstrom says the growing seniors population poses new challenges to the delivery of oral health care.**

"For years, the private dental care delivery system has run parallel to the public health care delivery system," she says. "While medical research received public funding, dental research did not. As a result, we have no hard evidence on which to base policies and practises to deal with the growing problem of dental care for the elderly.

"We have a wealth of anecdotal

evidence that inextricably links problems with the mouth with problems in the rest of the body, but [we] are only now beginning to do the research necessary. Our main goal now is to find a way to connect those two parallel health care delivery systems."

The bright light on the horizon is that a variety of public and private institutions have begun that neces-

sary research. In Nova Scotia, for example, the Nova Scotia Health Research Foundation, the provincial ministry of health and Dalhousie have funded a pilot project called the Seniors' Oral Health Assessment Project.

The project is examining treatment options available within the community, in nursing homes and in assisted-living facilities.

Dr. Matthews also points out that Dalhousie research is working to create a coding system for dental treatments, which might become part of the proposed national electronic health records system.

"If dental treatment becomes part of that national database, it will provide much-needed raw data, which can be used for research," Dr. Matthews says.

Dr. McNally points to the Nova Scotia Oral Health of Seniors Project, a study recently completed after two years. The study examined continuity of care for seniors, and policies in place to deal with the issue. That study found, among other things, that oral health among seniors is certain to grow in importance as a public policy issue. It also found there was no infrastructure in place to ensure continuity of care, that any successful approach will likely require collaboration among all health care professionals, and that those solutions will demand innovative and imaginative new approaches.

Dr. Halstrom draws comfort from various studies being undertaken by private insurers. Some, he says, are looking at the feasibility of creating group plans designed specifically for those over the age of 65. Others are studying personal wellness investment plans, which would operate much like registered retirement and registered education plans.

"People could start putting money into the plans when they are young and thereby have enough to ensure affordability of dental care after work-related benefits run out," he says.

Access, however, may be the more serious issue, Dr. McNally says.

"The ability to pay does not ensure care," she says. "As people age, they lose mobility. They can't come to a dental office; they may be living in a nursing home or assisted-care facility. We need to address a whole new approach to delivery of dental care."

At the same time, Canada's 10 dental schools must find the funding and continuing support for education in geriatric dental care.

"We simply don't have a system yet to train specialists in geriatric care, and the problems of the elderly are quite different from those of the young," Dr. Halstrom says.

# Protectors of public health

Ask Dr. Aaron Burry what he does, and he explains that he oversees a safety net. As dental officer of health for the City of Ottawa, his job is to try to prevent its residents from slipping through the cracks when it comes to dental care.

It is a large net, indeed, and one that may have some holes in it. For the overall public, he oversees the water fluoridation system, adding that amazing tooth decay preventative to the city's drinking water. To catch oral health problems early on, he runs screening programs for children in the elementary school system. For those on public assistance, he manages basic care and treatment.

Equally important, he is an evangelist for oral health, creating and managing education programs.

Like municipal dental health officers in those regions across the country fortunate enough to have them, Dr. Burry is an integral part of Canada's public health team. He sees first-hand that oral health is directly related to overall health.

Expanding the reach of Canada's

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## 'THERE IS A CONNECTION BETWEEN PUBLIC HEALTH AND ORAL HEALTH'

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public health system has become a top priority for the Canadian Dental Association, says Andrew Jones, CDA director of corporate and government relations.

"There is a straight-line connection between oral health and public health in general," he says. "Effectively preventing or treating oral problems in their early stages can save millions of dollars — the health care money that must be spent on resolving more serious problems later on."

The public health system, in fact, includes five main functions: Health promotion, disease prevention, protection of the public, surveillance against disease and assessment of overall and specific health.

Fulfilling all those obligations

may prove to be a challenge going forward in this new century, Dr. Burry says.

The CDA has taken positive steps toward creating a bridge between private dental care and public health care, Mr. Jones says. Canada now has a chief dental officer and, through him, a voice at the table when it comes to creating health policies.

The CDA joined the 37-member Canadian Coalition for Public Health in the 21st Century last year. That group includes virtually all of Canada's major non-governmental health care organizations. The goal of the group is to make Canadians the healthiest people in the world.

The coalition has called for \$1-billion to be spent annually on public health, with a portion of that spending directed toward oral care. The federal government has committed \$665-million over three years, plus the \$400-million initially granted the new Public Health Agency of Canada, created after the SARS outbreak.

One of the coalition's early successes was lobbying for the appointment of a Minister of State for Public Health, a cabinet post held by Dr. Carolyn Bennett.

"Our goals are to refocus attention on the need for prevention, to encourage expansion of the education system for dentists and to raise awareness of the need for oral health research," Mr. Jones explains.

"To date, our public health system has proven [to be] an enormous asset in many areas. Look at the impact water fluoridation has had," he says. "The challenge we now face is to find innovative ways to continue and expand those public health programs."

Part of the problem is a simple change in demographics, Mr. Jones says. In the past 20 years, Canada has seen an enormous influx of new immigrants, many of whom start their new life here in low-paying jobs. They have neither the money nor the cultural understanding of the Canadian dental care system to readily access dental care.

The public health system should find ways to identify their problems and then deliver basic care to those segments of that population most in need — the young and the elderly.

At the same time, the Baby Boom



Fluoridation of municipal water systems is one of the public health initiatives to promote oral health.

bulge is beginning to press into senior citizen status. The fastest-growing segment of the elderly is the 85-plus age group. These often-frail elderly simply lack the mobility to regularly visit a dentist. Nor are there safety nets in place within the community, assisted living facilities or nursing homes to meet their oral health needs.

"We do not have in place the training in geriatric dentistry,

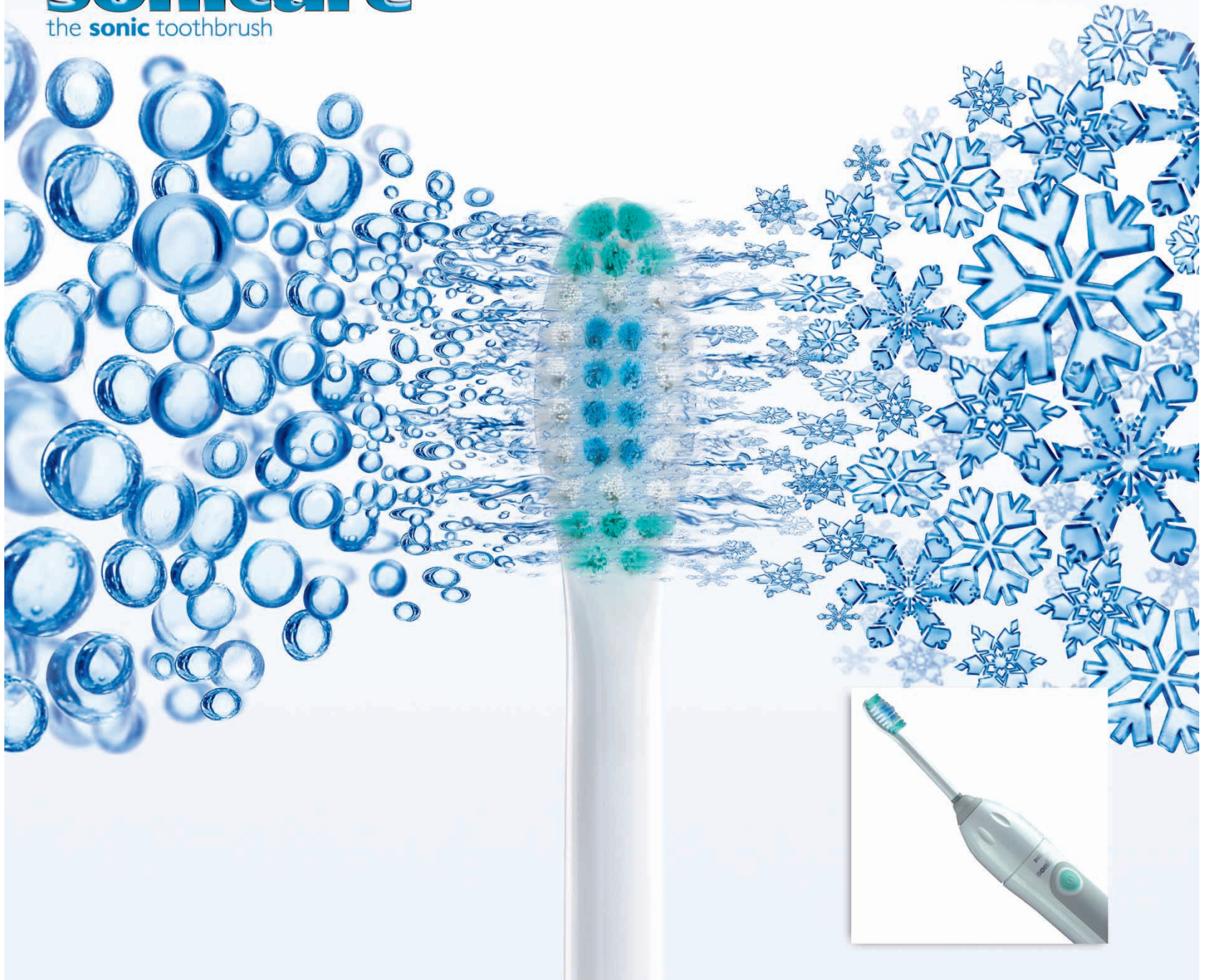
the research necessary to identify issues and develop responses or the delivery systems to ensure continuing dental care for seniors," Dr. Burry says.

The solution will likely be found in a revamping of both the private dental and public health care systems, he suggests. While those two systems operated on parallel courses over the past half-century, there has been no direct linkage.

Today's understanding — that oral health is intrinsic to overall health — demands the two find ways of working together, he says.

"Research is key," Dr. Burry says. "If we are to successfully tackle the challenges we can already identify anecdotally, then we simply must devote time and money to quantifying the problem and finding effective ways to deal with it."

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# Returning the smile to a face

From correcting nature's minor failings to entirely rebuilding after the traumatic results of illness or injury, modern dentistry is up to the task. An entire new range of techniques and technology has equipped Canadian dentists with the ability to provide almost any patient a bright, even, white smile and a set of teeth up to any chewing task.

"Restorative and cosmetic work have become everyday parts of our practice," says Dr. Jack Cottrell, president-elect of the Canadian Dental Association. "The past decade has seen advances in dental care that can literally work miracles."

Today's dentist can work with surgeons to rebuild and reshape jaws, to permanently implant replacements for missing teeth, and to straighten, whiten and even out smiles. Severely damaged or missing teeth can be replaced with porcelain crowns or plastic and metal permanent or removable bridges. Cavities from small to large can be filled almost invisibly with new polymers. Spaces can be filled with bonding materials and veneers can be applied to less-than-perfect teeth.

Above all, dentistry is now almost entirely pain-free. The focus today is on saving teeth, not pulling them, as in the past. In fact, dentists will make almost heroic efforts to retain unaffected pieces of teeth or even roots and incorporate what is natural into artificial replacements.

"There has been a dramatic change in the approach to dentistry during the past two decades," Dr. Cottrell says. "Today's dentist will go to imaginative lengths and take innovative measures to preserve teeth, even to the extent of preserving parts of teeth to be used in the restorative process.

"It reflects a dedication to the principle that our job is to preserve and prevent. No matter how advanced our skills and materials become, nothing matches the teeth nature endowed us with."

This is not to say that nature does not sometimes play cruel tricks.

"All of us would like perfect teeth and the perfect body; few of us get either," says Dr. Amanda Maplethorp, president of the Canadian Association of Orthodontists. "It is all a matter of heredity. With a good many people, the size of the teeth is not a good match for the size of the jaw."

The same applies to tooth colour, the spacing of teeth and the angles they come in at. Some



Dr. Amanda Maplethorp of Maple Ridge, B.C., says dental medicine is now so sophisticated it can return a smile to almost any face.

people are even more susceptible to cavities, thanks to a fluke of nature.

"That is where dentists come in," Dr. Maplethorp says. "Our role is to correct nature's mistakes, to overcome the effects of unhealthy diet or lifestyle [and] to offset the impact of disease or accident. In short, to provide patients with the teeth they want or need, or both."

The restorative process most often starts with straightening of teeth. That is where Dr. Maplethorp and Canada's more than 600 certified orthodontists come in. They are specialists in moving teeth. Using a variety of braces, retainers and appliances, orthodontists can transform a snaggle-toothed grimace into a snow white smile. The braces exert steady pressure on individual teeth, usually over a two-year period. As the tooth shifts, new bone forms in the space in the jaw left behind. The result can have dramatic effects.

"North Americans prize a white, straight and even-toothed smile," she says. "I have had patients as young as six and as old as 76 come to have teeth straightened. While most are in their late childhood or early teens, an increasing number of adults are now taking advantage of

can be filled and veneers applied.

"We can use titanium implants to anchor porcelain crowns to the jaw. We can create permanent or removable bridges. We can build porcelain crowns," Dr. Cottrell says. "In fact, in almost all instances, a dentist can suggest a range of

and is almost undetectable at normal distances.

New ultra-high-speed drills and almost instantly effective freezing administered by whisper-thin syringe tips ensure near pain-free work.

After restorative work or simply to correct the ravages of time and lifestyle, dentists are now able to safely and speedily whiten teeth, restoring them to the natural, pristine beauty.

"The past five years have seen a terrific upsurge in whitening products," Dr. Cottrell says. "There are over-the-counter products and treatments that can be administered in a dentist's office. When done by a professional, the process is both simple and safe.

"When it comes to dental makeovers, there is now little we can't do to effectively correct nature's mistakes or the ravages of time, accident and disease."

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## 'THERE IS NOW LITTLE WE CAN'T DO TO EFFECTIVELY CORRECT NATURE'S MISTAKES'

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the wonders we can perform and are opting for braces.

"Straightening is usually the first step in cosmetic work."

The next can be restorative, Dr. Cottrell says. Here, teeth can be physically reshaped with abrasives or through bonding new material on to the surface. Gaps

options to suit individual needs and pocketbooks."

In addition, there are many more options available in filling materials than there were a few decades ago — some are tooth-coloured and harden in seconds when exposed to blue light. The result is a filling that matches natural tooth shadings



Canada's dentists are trying to convince smokers to quit, warning the habit means more than stained teeth — in the mouth, it contributes to health concerns ranging from tooth loss to cancer.

## Dentists promote butt-out policies

Canadian dentists are taking a front-line stance in the battle to convince a nation to stop smoking. Earlier this month, l'Ordre des Dentistes du Québec joined Ontario, British Columbia and Alberta dentists in creating a campaign to help their patients butt out.

"It is our responsibility as health care professionals; it is part of our mandate. The damage done by smoking is enormous," says Dr. Robert Salois, president of the ODQ. "The number of smokers in Quebec is significantly higher than the rest of Canada, and anything we can do to stem the tide, to persuade people to quit smoking, we must do."

Many people are unaware of the health effects on the mouth of smoking, says Dr. Ian McConnachie, vice-president of the Ontario Dental Association. Since 2000, the ODA, working collaboratively with the Ontario Medical Association and the Ontario Pharmacists Association, has had a Clinical Tobacco Intervention (CTI) program in place

to train dentists, physicians and pharmacists to help their patients quit tobacco use.

"All patients usually see are the cosmetic changes, the staining of teeth. In reality, smoking presents a very grave health care risk to the mouth, lips and throat."

Last year, for example, 3,100 new cases of oral cancer were reported by the National Cancer Institute of Canada; they accounted for 2.1% of all new cancer cases. The death rate for oral cancers is one in three, significantly higher than the one in four for breast cancer and one in five for prostate cancer.

"If diagnosed early, those mortality rates drop significantly," Dr. McConnachie says. "If, however, we can advise and assist our patients to quit tobacco use, the threat virtually disappears."

Of special concern is smoking among teens, says Dr. Burton Conrod, Canadian Dental Association past-president and a past member of the Minister's Advisory

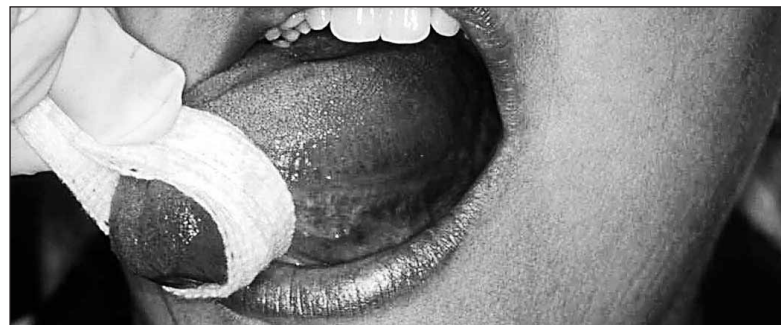
Council on Tobacco to former health minister Allan Rock. The average teen smoker starts at age 12, he says.

"About 20% of teens who start smoking at that age will die in their 40s or 50s," he says. "We feel that dentists are one of the most effective resources in the fight against smoking. The nature of our relationship with patients is a definite plus."

While provincial anti-smoking campaigns include radio, television, print and billboard advertising plus media conferences, the heart of organized dentistry's fight against tobacco use is in dental offices themselves.

The advantage dentists have is that they can show the direct effects of smoking on the mouth and teeth, Dr. Conrod says. "A physician can talk about lung disease and cancers, but we can show them in their own mouths exactly what is happening."

This is a big part of CDA's contribution to the national campaign for warning labels on cigarette packaging. As a member of the Canadian Coalition for Action on Tobacco, CDA advocated warnings to show the effects of smoking on oral health. That can include the appearance of rough white patches called leukoplakia on the mouth and tongue, which are a form of pre-malignant lesions; between 4% and 5% will become full-blown cancers. Smoking also promotes gum disease and helps destroy the tissue anchoring teeth.



A patient is examined for signs of oral cancer.

"If we can help patients quit, we can very quickly show them the difference it makes to oral health," he says. "Six months later, on their next checkup, they can usually see a dramatic difference in their teeth and mouth. It is positive reinforcement."

With teens, the major thrust of the campaign is on the cosmetic and social effects of smoking, Dr. McConnachie says. Dentists can show first-hand the effects on the smile of a healthy mouth.

CTI, the five-year-old Ontario program, starts with training physicians, dentists and pharmacists through a series of evidence-based seminars held throughout the province. In addition, the ODA has a two-year-old, award-winning communications campaign to increase public awareness of oral cancer.

In Quebec, the media campaign

goes hand in hand with a concerted effort by individual dentists to counsel and coach patients in anti-smoking techniques.

"Quebec has the highest proportion of smokers in Canada; 25% of the population smokes as opposed to 21% as a national average," Dr. Salois says. "The situation among teens is especially worrisome: 26.2% of girls and 20.1% of boys were regular smokers in 2002."

"Of equal concern is the ignorance of many smokers. Only 50.5% of smokers thought oral health was important, [compared with] 72.9% of non-smokers."

According to Dr. Conrod, the battle against smoking is a fight dentists can not afford to lose.

"Dentistry is all about prevention," he says. "And preventing people from smoking is absolutely necessary to oral and overall health."



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# Dental schools need injection of new funds

The 10 universities across Canada that educate and train dentists are in a quandary.

While the current number of new graduates — between 400 and 450 a year — is enough to meet demand, even the most rudimentary projections suggest the country will face a shortage of dental professionals within the next two decades.

“There is no way to tell the perceived need,” says Dr. Johann De Vries, dean of the Faculty of Dentistry at the University of Manitoba in Winnipeg. “Very little research has been done, and current models contain too many variables.”

The problems associated with this projection are manifold. That lack of research means the profession cannot project the size of that shortfall or indicate which communities or dental specialties will be

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## ‘WE NEED TO KNOW WHAT IS HAPPENING, AND WHERE THE NEED IS’

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hardest hit. Nor is there funding available to increase the intake of dental undergraduates and train them through the four-year course leading to a Doctor of Dental Surgery (DDS) or Doctor of Dental Medicine (DMD) degree.

Rising tuition costs plus the cost of associated equipment mean new graduates may be facing student loans in the hundreds of thousands of dollars. Debt of that size means new graduates look toward urban practices rather than lower-revenue rural ones.

At the same time, applicants to dental schools have increased almost geometrically. The University of Manitoba now gets 10 applicants for every first-year opening, Dr. De Vries says.

“Last year, we saw a 23% increase in applicants. Over the past five years, the increase has been close to 50%,” he says.

In Canada’s fastest growing province, Alberta, the province’s sole dental school graduates only 60% of the number of dentists it did in 1980. Other schools across Canada have also reduced class size over this period, says Dr. Darryl Smith, a member of CDA’s board of directors.

“Universities have cut back on funding to dental schools because dentistry is probably the most expensive course to finance,” he says. “Medical and nursing schools do not provide clinical training, this is done in hospitals outside the university and paid for as part of the health budget. This is not the case for dental schools, which must maintain their own clinics, paid for with education dollars, to give students vital hands-on experience and prepare them to be practice-ready.”

The total cost of education for a career as a dentist ranges from \$70,000 to \$95,000 a year, Dr. De Vries says, and tuition may only cover 20% of that cost. At the University of Manitoba, for example, tuition is \$13,700 a year. On top of that, however, students must pay a total of about \$25,000 for necessary equipment and other costs spread over the four-year program.

The result can be a student loan debt bigger than many home mortgages.

“One young woman I know recently graduated from Dalhousie University carrying a student loan of \$200,000,” says Dr. Alfred Dean, CDA president and a private practitioner in New Waterford, N.S. “With debt like that, it is hard to attract new graduates to small towns and rural settings. They feel they must head to cities and earn as much money as possible to reduce that burden.”

The result has been a disparity in dental care across Canada, Dr. Smith says. While larger towns and cities have more than enough dentists to meet the demand,



Dr. Johann De Vries says projections show Canada could be facing a shortage of dentists in the next two decades.

smaller centres and rural areas face a continuing shortage.

The University of Manitoba dental school is trying to redress this disparity by exposing students to rural and small-city settings as part of their hands-on practical training, Dr. De Vries says.

“I am pleased to say that a number of students have found that they very much enjoyed small-town and rural practices,” he says.

Lack of funding for dental schools extends beyond training of dentists. Research dollars are also hard to come by, Dr. Smith says. He notes that oral health accounts for 7% of all

health care spending in Canada, yet research in the field amounts to only 1% of total spending.

“Increasing research funding is vital,” Dr. De Vries says. “You can’t create effective health care policies without it. We need to know what is happening, and where the need is. We also need laboratory-based research into new treatments and new preventative care techniques.”

“The links between oral health and low-birth-weight babies, diabetes and cardiovascular disease are now recognized. We very much need the funding to produce hard evidence on which

preventative and corrective measures can be taken.”

Dr. De Vries and Dr. Smith also call for more research into the care and treatment of oral health in Canada’s fast-growing seniors population.

To date, only Laval University has a program in geriatric dentistry, Dr. De Vries says, and yet care for seniors will pose one of the country’s greatest challenges with 15 to 20 years.

“These are all problems that won’t disappear,” he says. “If we don’t begin to address them now, they will just worsen with time.”

# Dental plans boost oral health

Third-party dental plans are a very popular and well-used benefit, according to the Canadian Dental Association (CDA). That very popularity, though, has led to some challenges that employers will need to take into consideration to continue to grow the value of dental plans to their employees.

The upside is that utilization rates have increased dramatically since the plans were introduced 30 years ago. As a result, the majority of Canadians enjoy excellent oral health.

Unfortunately, rising utilization has meant increased premiums, limits on use or even cutbacks in benefits.

"The good news is increased utilization; the bad news is that with increased use comes increased expense," says Dr. Michael Connolly, a member of the CDA's board of directors, with a private practice in Charlottetown, P.E.I. "Usage has grown exponentially."

Dr. Connolly points out that, in the early 1970s, use of dental plans amounted to just \$1-million. Last year, it hit \$3.6-billion.

According to recent statistics, about 60% of Canadians have some form of third-party dental coverage, says Dr. Benoit Soucy, director of membership and professional services at the CDA in Ottawa. In addition, each province has its own publicly funded dental care program, although who is covered varies greatly from province to province.

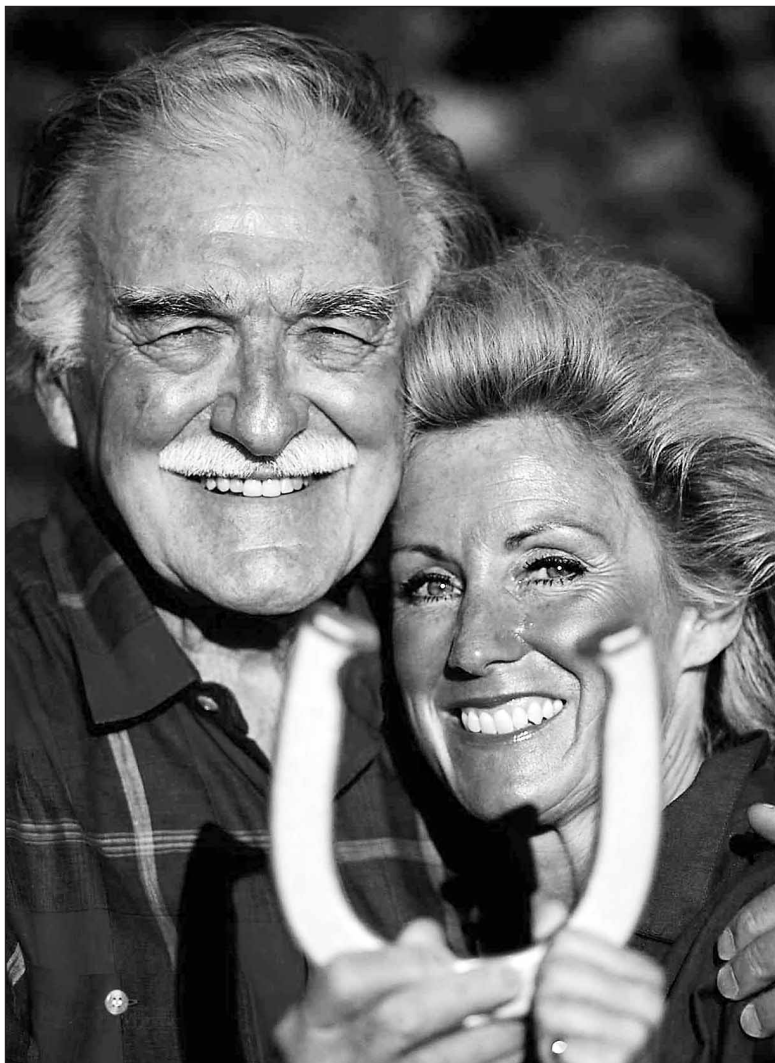
"In Quebec, it is those on public assistance and children under 10; in Ontario, it is those on public assistance. Each province has its own approach," Dr. Soucy says.

The enormous demand has been driven by an increasingly sophisticated public that has ready access to affordable treatment, Dr. Connolly says.

"What I have found is that people's dental IQ has increased," he says. "They are increasingly aware of the vital importance of oral health and of the benefits prevention brings. Changes in technology have also made a visit to the dentist a pleasure rather than a painful experience."

"If people have a plan, they will certainly use it."

That use has a direct side effect, however. As use grows, so do the costs to the third-party insurers. To maintain profitability they have both raised premiums and, in many cases, frozen or reduced coverage. Their actions have a near-daisy chain effect.



Dental plans have helped Canadians for more than 30 years.

Faced with rising premiums, employers who sponsor programs look for ways to contain costs. The risk is that employees, also facing increased premiums, may decide to reduce coverage rather than accept higher paycheque deductions.

This could result in a flip of the popular adage, or "short-term gain for long-term pain."

Dr. Connolly points out that many plans have not raised yearly maximums for benefits during the past 20 to 25 years. Insurers are also changing the frequency of regular dental checkups to nine months or a year, from every six months.

"With a six-month frequency for recall visits, dentists can catch problems in the bud," Dr. Soucy says. "If the visits are annually, then the problems will have become much worse. The cost of restorative work will be greater than any savings [produced] through reducing recall visit frequency."

The CDA is addressing the matter by helping insurers save costs through increased efficiencies, Dr. Soucy says.

"If we can reduce administrative costs for insurers, then that leaves more money in the plan to pay for dental care," he explains.

In 1992, the CDA introduced CDAnet, a system for the electronic transmission of dental claims from the dental office to the benefit administrator. To make that system work CDA provides such features as a registry of subscribing dentists, the treatment codes that the carriers use in their adjudication and a help line for participating dentists.

The association is now working on converting that system to the Internet, to provide access to higher communication speed at a lower cost.

"What we are focusing on is simplifying the process and reducing any chance of error," Dr. Soucy says. "Once you become used to doing things electronically, you want more and more functionality with fewer errors."

"Increasing efficiency and reducing overhead costs is a very positive way to ensure continuing affordable coverage."

## CONFERENCE SERVES AS CATALYST FOR CHANGE

For four days in late August, the dental world's attention will be focused on Montreal. An estimated 20,000 dentists from countries around the globe will gather for the annual meeting of the Fédération Dentaire Internationale.

The event, which runs Aug. 24 to Aug. 27 at the Palais de Congress, is the ultimate must-attend conference and trade show for the dental profession. There, the gathered dentists will see such revolutionary advances as the use of genetic engineering to grow new replacement teeth and the use of lasers, abrasion and even ozone to remove or reverse decay.

They will stroll the 150,000 square feet of exhibition space, be presented with cutting-edge research and even have an opportunity to make their own presentations. For Canada, the event is a feather in the cap of organized dentistry and an unequalled opportunity to focus attention on the progress dentists have made and the challenges they face, says Dr. Burton Conrod, past-president of the Canadian Dental Association.

"This is a tremendous opportunity for Canada. The FDI convention is a global event, and we are host. It is a wonderful opportunity for Canadian dentists, researchers and manufacturers to show what they have accomplished," he says.

This is only the third time Canada has played host to the FDI since its founding in 1900. Previous venues were Toronto in the 1970s and Vancouver in 1994. Last year's event was in New Delhi and next year, Shenzhen, China, is host city.

"This is an historic event for Canada," says Dr. Denis Forest, executive director of Journées Dentaire International de Québec and chair of the Canadian organizing committee. The event is sponsored by the Journées, the CDA, and the FDI. "It is also a rare opportunity to focus

not just Canadian but international public attention on dentistry."

The FDI, based in France, represents 150 dental associations in 130 countries. Its goal is to promote oral health, facilitate the exchange of scientific information and pool the resources of developed nations to help developing countries create their own policies and programs.

As a result, sessions at the annual conference cover an enormously broad range, Dr. Forest says.

"For developed countries, the show will offer an exchange of leading-edge techniques and technology. Laser drills and genetic engineering are examples. For developing nations, their greatest need may be help and support in establishing basic preventive care. The event offers all of those."

The FDI is offering dentists the opportunity to make presentations on interesting or leading-edge work they are doing. Dentists can register to make 10-minute oral presentations or to submit a poster detailing their accomplishments. To date, with the show still four months away, more than 200 dentists have registered to submit posters, Dr. Forest says.

The CDA has long played a major role in the FDI, Dr. Conrod says. Both staff and elected members occupy key positions on various committees. Dr. Conrod himself has been one of the 15 FDI council members for the past five years.

"Canada's success in preventing and treating cavities and other oral health issues has made it a major player in the FDI," he says. "What we hope to do with the Montreal event is to refocus both public and government attention on what we have accomplished, and what we must now do to face the challenges this century presents."

The CDA's support of FDI extends well beyond Canadian borders, however. The annual meeting can often act as a spark leading to action in developing countries. Last year, for example, the FDI staged a conference on oral health in Nairobi.

"Before that event, oral health was not on the agenda of many African health ministries," he says. "Since that oral health planning conference, organized by the FDI and co-sponsored by the World Health Organization, several countries have developed and funded their first policies and programs for promotion or oral health. It is gratifying for Canadian dentists to be a part of the success of FDI."



Dr. Burton Conrod



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