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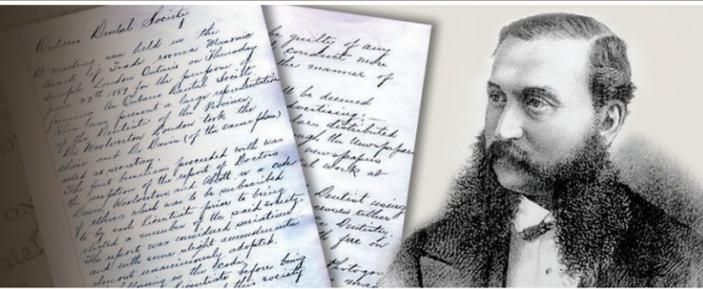
# Ontario Dental Association 150 YEARS 1867-2017



## A brush with the past, a trip to the future

### Inside:

The evolution of professional dentistry  
Dentists at war and at home  
Innovations in dental care



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# ODA 150: A look back



BEFORE 1867

## 1867

Nine dentists meet in Toronto at the Queens Hotel to form an association to fight the problem of unqualified dentists and lobby the Ontario legislature to regulate the profession.



## 1833

Barnabas Day, considered the father of professional dentistry in Ontario, is born.

## 1868

An Act Respecting Dentistry is passed by the Ontario legislature, putting control of the profession into the hands of the board of directors of the Royal College of Dental Surgeons of Ontario. The college becomes the sole authority to grant licences to practise dentistry in Ontario.

# Quacks and charlatans

## The ruthless world of unregulated dental practices

The year Canada officially became a country in 1867, another momentous occasion happened in the world of dentistry that you probably haven't heard of but are just as thankful for. The Ontario Dental Association (ODA) was formed.

Up until that time, people would let their teeth rot rather than go to the dentist because in those days, anyone with a pair of pliers could, and sometimes would, call themselves a dentist. There were essentially two types of dental practitioners offering their "services" to an unwitting public.



Quack "dentists" would mix dental services with entertainment, offering to pull a tooth for free if the patient bought a ticket to a show. WELLCOME COLLECTION

The first was made up of a motley crew of quacks, charlatans, wanderers and con artists of varying ruthlessness. These men would travel from town to town, staying for just a few days in each place and seldom returning to the same location twice, lest they be remembered for the oral carnage they left in their wake. Known collectively as "tramp dentists," they had little knowledge of dental science or sanitary practices. They worked for low fees and were very difficult to find when their patients developed problems. A trip to the wrong dentist could mean you were putting your life on the line.

Dr. Henry Wood, a dentist in Picton, Ont., at the time aptly described them as "men who went about the country ignorantly and presumptuously talking dentistry to the curious crowds which gathered to listen to them, and sometimes before the victim was aware of his intentions the dirty fingers of a dental vagabond would enter a rustic's mouth and many a good molar would be doomed."

"The country was infested with these quacks and truly some were cur-

riosityes," noted Dr. George Relyea, a dentist in Belleville, Ont., during this archaic era. "One came to my rooms and prided himself on having filled seven cavities before breakfast, his patient an apprentice, his office the blacksmith shop, and his operating chair, a wooden horse."

Some of these hucksters even mixed health care with entertainment, offering to pull your tooth for free if you bought a ticket to a show, and providing live demonstrations of

laughing gas.

Many of these men were physicians with an interest in dentistry while others had learned their profession by serving an apprenticeship with an experienced practitioner.

Legitimate dental practice in pre-confederation Ontario contrasted sharply with the ease of quack dentistry rituals. In an era before electricity, dentists performed all operations by hand. These techniques required both skill, sanitation and caution, but even in Ontario's most populated cit-

ies it was hard to find a dentist. Locals had little choice but to put aside their fears and intuition and seek care from unskilled, travelling practitioners.

Because of a lack of rules and regulation, it wasn't uncommon to see gunsmiths, wagon makers and even candy makers hanging signs in their window offering dental services. Some patients would head to their local blacksmith when they got a toothache - having their teeth pulled in the same barn where horses got their shoes!

Properly trained and educated dentists were understandably outraged to be lumped in with the kind of fly-by-night dentistry, outrageously false advertising and cut-rate treatment people had come to know and even expect. In the absence of any control or standards, the public had no means to distinguish good dentistry from poor dentistry. Authentic dentists were genuinely concerned about the public's welfare.

There was a growing desire in the dental community to address these very real problems by introducing proper regulations to protect the public from barbaric standards of care and false advertising.

By March, 1868, a group of dentists led by Dr. Barnabas Day succeeded in having *An Act Respecting Dentistry* passed in the Ontario legislature. This was the first act of its kind in the world to grant self-regulation to dentists. This meant it would be much easier for patients to figure out if they were getting treatment from a qualified dentist or a dangerous impostor.

The act became a model for similar legislation across Canada and around the world.

## DR. BARNABAS DAY

### The architect of organized dentistry

The date of July 2, 1833 may not immediately suggest a historic event, but it happens to be the birth date of the man who changed Ontario dentistry forever.

Born on a farm near Kingston, Ont., Barnabas Day was drawn to medicine in his early 20s. He served as an apprentice with a local dentist before establishing a rudimentary practice of his own. Craving more education and knowledge, Dr. Day later enrolled at Queen's College in Kingston and graduated with a medical degree in 1862. Before long he was being recognized as one of Ontario's most educated and skilled dentists.

Dr. Day was also blessed with political wherewithal and the kind of charisma that allowed him to catch the attention of and befriend high-ranking public figures. Thanks to his firm connections with the political elite of the time, Dr. Day was tipped off that Canada West (now known as Ontario) would be forever altered by the upcoming formation of the Dominion of Canada. He saw before him an atmosphere of great change and possibility, and a major opportunity to address the ongoing problem of untrained, unlicensed and fraudulent dentists that infiltrated

cities and towns across the province. Dr. Day was passionate about his profession and about bringing it and Ontarians the dignity they deserved.

It was apparent to Dr. Day that charlatans were destroying dentistry's reputation. These untrained practitioners relied on outrageous advertisements and dubious customs to attract clients, many of whom had little choice but to submit themselves to torturous, unsanitary treatment. Most of Ontario's population was left to the mercy of these hucksters and con artists, and many were understandably terrified by the mere thought of dental treatment.

In 1867, Ontario's population was just over 1.6 million people. The majority of them lived on farms and agriculture was the mainstay of the economy. The industrial revolution had taken hold but most factories were small and located in larger cities and towns like Toronto, Hamilton, Ottawa and Port Hope.

Despite a generally robust economy in the province, the dental health of the population was quite poor, mostly due to the less than desirable mix of charlatan and blacksmith dentists the public had either interacted with personally or heard



Barnabas Day, the first licensed dentist in Ontario, was passionate about bringing professionalism to the job. ONTARIO DENTAL ASSOCIATION

horrendous tales of through friends, family and neighbours.

Nonetheless, there was a small group of formally trained dentists with the will to make a difference. These men were often physicians with an interest in dentistry, who had studied in dental schools in the United States or had served an apprenticeship with an experienced dentist.

With the arrival of dental technology breakthroughs like the invention of vulcanite rubber, which could be used to make dentures, Dr. Day was inspired to reach out to reliable members of Ontario's dental profession to meet with him in Toronto to form a

professional organization.

While it's unclear how many dentists were working in Ontario in January, 1867, when Dr. Day arrived in Toronto, just eight dentists were waiting for him at the Queen's Hotel. Even with this small turnout, Dr. Day's initiative was successful at catching the attention of quality dentists in Ontario and those unable to attend this first meeting sent letters of support for the formation of the organization. Small turnout or not, it was at this meeting that the Ontario Dental Association was formed and would go on to petition the province for an act to regulate dentistry that

would, among other things, require dentists to pass an exam to achieve official certification.

Word soon spread of the new dental organization, and by July 1867, 31 dentists had joined the cause. Soon after that, a draft of an ODA Constitution and Bylaws was approved, codifying the association's commitment to shared knowledge and professional development.

The primary purpose of forming the Ontario Dental Association was to put organized pressure on the provincial government to create legislation that would outlaw the harmful, grotesque and carnival-like attributes of what was passing as dentistry for far too long. It was the actions of the ODA that quickly resulted in *An Act Respecting Dentistry* being passed in the Ontario legislature in 1868 and that same year, the formation of the self-governing body of the Royal College of Dental Surgeons of Ontario (RCDSO), which still exists to this day.

Dr. Day was the first dentist to be admitted formally to the profession in Ontario. He practiced for a few more years in the province before moving to Los Angeles in 1897, where he practised dentistry and grew walnuts, olives and fruit. He died in 1907.

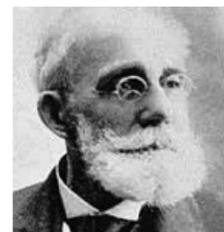
## DR. GEORGE RELYEA

### The dentist behind dentures

Along with Barnabas Day, another key figure in the development of professional dentistry in Ontario was Dr. George Relyea, who grew up on a farm near Albany, N.Y. Dr. Relyea was quick to say he was "not content to be a farmer" but after a failed attempt at being a shop owner, a chance encounter with a dental student set him on a much different path.

Dr. Relyea couldn't afford the cost of dental college tuition, so he attended lectures at a nearby college and apprenticed with a physician and dentist. In 1842, Dr. Relyea moved to Kingston, Ont., where there was no local dentist, a common trend he noticed in many Ontario towns he toured shortly after his arrival in Canada. He eventually settled in Belleville, Ont., and established a thriving dental practice.

Dr. Relyea became well known around the province for getting dental vulcanizers, used to make dentures, across the U.S. border and into Canada. Vulcanizers improved the process of making dentures, which had previously been hand-carved bridges affixed with wooden teeth or even teeth taken from corpses. A mixture of rubber gum and sulphur would be



George Relyea brought vulcanizers, used to make dentures, to Ontario. ONTARIO DENTAL ASSOCIATION

combined to form vulcanite and provide the basis of dental plates which would be hardened in the vulcanizer. Porcelain teeth would then be attached to the customized dental plates and worn just like today's dentures.

When vulcanite became available, Dr. Relyea went to his home state of New York and secured the distribution rights for the process for Canada. He went on to sell vulcanizers and tutorials on how to use it to fellow dentists across the province.

## 1909

The ODA forms a permanent educational committee to promote public awareness of the value of oral hygiene, while also finding ways to care for the teeth of the poor.



## 1893

Dr. Caroline Wells becomes the first female member of the ODA and the first female graduate of the Royal College of Dental Surgeons.



## 1914

Ontario's dentists answer the call to serve in the First World War, enlisting in the Canadian Army Medical Corps.

## 1915

Four ODA members launch a dental clinic to treat new army recruits in Toronto. Its success leads to the creation of the Canadian Army Dental Corp.

# THE EARLY YEARS: 1867-1914

# Regulating dentistry

## The early days of the profession

A year after the Ontario Dental Association officially formed to bring much needed professional standards to dentistry, founder Dr. Barnabas Day, fellow members and supporters marched to the Ontario legislature in 1868. They were there to watch as Dr. George Boulter, MPP for Hastings North, presented a proposed bill to the house that if passed, would bring desperately needed regulation to dentistry in the province. The petition had the signatures of 68 dentists, 25 physicians, a pharmacist, a judge and the mayor of Toronto. That year, *An Act Respecting Dentistry* passed in the Ontario legislature, bringing with it a new era of professionalism and quality of care.

Essentially, the act put control of the profession into the hands of the board of directors of the Royal College of Dental Surgeons of Ontario. They had the right to self-govern and were the sole authority to grant licences to practise dentistry in Ontario. They also oversaw dental education in the province and enforced the standards required for practicing dentists. Critically, the board also had the right to hold dentists criminally liable if they remained unlicensed.

In 14 months' time, Dr. Day had organized a professional association of dentists united under a constitution, led the way in petitioning the provincial government, shepherded *An Act Respecting Dentistry*, and established the right for the profession to self-regulate.

It seemed fitting that Dr. Day was elected president of the newly formed board of directors of the Royal College of Dental Surgeons of Ontario (RCDSO). The board continued to move dentistry forward by formulating educational requirements that stipulated only students who had completed a two-year dental apprenticeship would be allowed to take a final exam to become a dentist.

By 1875, the ODA recognized an urgent need for an official college to train these young students and that November, the Royal College of Dental Surgeons (RCDS) opened. A small, two-room school at 46 Church St. in Toronto, the RCDS started with a mere 11 students. Nonetheless, the upstart school provided free dental care to 120 patients, and was Canada's only dental college for the next 17 years. In 1925 the



Freshman dental students from the Royal College of Dental Surgeons, class of 1909, assemble for a photo. UNIVERSITY OF TORONTO FACULTY OF DENTISTRY

college changed names and is known today as the University of Toronto Faculty of Dentistry.

Even with the establishment of trained, regulated RCDS dentists, in 1889 many dental practitioners were still advertising in newspapers and on billboards, making dubious claims of superiority over other dentists all while charging fees that were just too low to provide proper care. In spite of their best efforts, the ODA and RCDSO struggled to stop large numbers of ille-

gal, untrained dentists from practising in Ontario. With the image of the dental profession again tarnished, it was painfully obvious there needed to be a Code of Ethics.

Adopted in the summer of 1889, the code banned unethical and unprofessional newspaper advertisements, and set standards in advertising for dental practices. Violation of the Code of Ethics was severe and would result in being kicked out of the ODA. Most importantly, the Code of Ethics was ef-

fective. It virtually eliminated dishonest professional advertising in Ontario from that point on.

By the early 20th century, the Industrial Revolution had arrived in Ontario, bringing with it social problems and great concerns over public health. The ODA realized the public needed to be more aware of how to care for their oral hygiene. Believing that prevention was always a better solution than treatment, Dr. John Adams, the first dentist of record at the Hospital for Sick Children in Toronto, spent much of his career treating poor children and spearheaded a movement that convinced the Ontario government to create a program for schoolchildren province-wide to inspect and repair their decaying teeth.

A major breakthrough on the public dental care front came when it was discovered that the toothpaste made during this era wasn't only made with sugar, it was actually the main ingredient! The ODA quickly developed its own sugar-free alternative to help Ontarians keep their teeth clean and healthy. The profits from all the toothpaste sold were reinvested into public education and allowed dentists to hand out oral hygiene pamphlets, provide dental health programs and continue to lobby all levels of government to introduce dental screening programs for schoolchildren.

That lobbying eventually led to the Toronto Board of Education taking responsibility for children's dental health by hiring a dental inspector. The City of Toronto also opened a dental clinic to treat local children. Within a year, the obviously positive results were apparent, with some children displaying a 54 per cent increase in their grades at school after receiving proper dental care.

## DR. CAROLINE WELLS

### Ontario's first female dentist

By the end of the 19th century, organized dentistry was thriving and the public was more aware they could seek treatment from educated, experienced dentists rather than fly-by-night crooks that would yank people's teeth and vanish. By this time, a professional dental association was established along with a permanent dental college and a dental Code of Ethics. Dentistry had become a respectable profession.

It was in 1893, during this era of evolution and great positive change that Dr. Caroline Louise Josephine Wells became the first female member of the Ontario Dental Association and the first female graduate of the Royal College of Dental Surgeons (RCDS). Dr. Wells was married to a dentist and when his health started to fail, she decided to go into the profession. This was no easy feat, as she faced tremendous social and economic pressures to achieve her goal. Determined to overcome these obstacles, Wells sent her three children to live with relatives so that she could concentrate on her studies and successfully complete her education.

Dr. Wells' graduation and entry into the dental profession provided inspiration to other Ontario women and paved the way for them while also



Caroline Wells devoted years to providing care to vulnerable patients. ONTARIO DENTAL ASSOCIATION

signalling the end of male exclusivity in organized dentistry. The trailblazing efforts of Dr. Wells continued well into her career. For the next 36 years, she practised primarily in Toronto and provided ground-breaking dental care to patients in several of Ontario's mental hospitals, where her expertise was sorely needed.

In 1911, a report detailing the state of dental care in provincial asylums painted a grave picture for the patients. There were no dental inspections and destitute patients had to rely on physicians to pull their decaying teeth. Dr. Wells was known for providing care to patients in Toronto and Mimico hos-

pitals, as well as at the Mercer Reformatory for Women, the first women's prison in Canada. While the 1911 report called for a more "uniform and systematic policy" guaranteeing treatment for asylum patients, it would take another 20 years before the province adopted a policy for resident dentists to be assigned to care for patients in mental hospitals.

It's clear Dr. Wells was a dentist well ahead of her time and devoted many years throughout her career to caring for this vulnerable and neglected population. She was so committed to her work, she didn't retire until she was 72.

**11930**

Ontario Dental Association creates a benevolence committee to raise emergency funds to help members struggling in the Depression. Some dentists sell their homes and move their families into the back of their practices to live.



**11931**

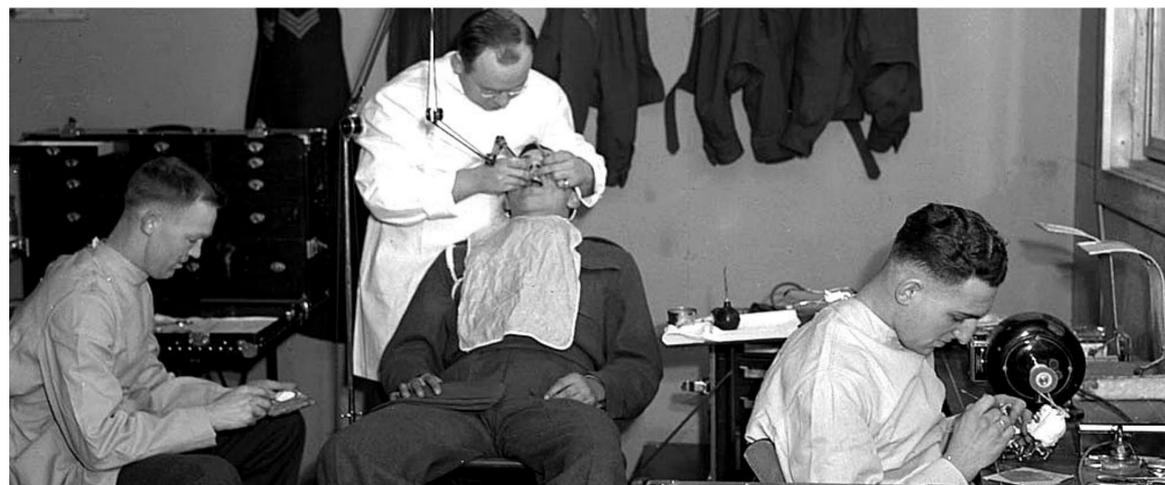
Dr. Robert Reade, an ODA member, partners with fellow dentists to open a free clinic in the Ovaltine plant in Peterborough, Ont. ODA also persuades Ontario government to secure a railway dental car that they staff to bring treatment to isolated northern communities along the Canadian Pacific Railway lines.

**11929**

Canada's economy is ravaged by the Great Depression. Ontario's dentists provide care at reduced or no cost for the growing number of poor and unemployed.



**THE WAR YEARS: 1914-1918, 1939-1945**



Many of Ontario's dentists joined the First and Second World War efforts, both as soldiers and to provide dental services to the troops. NATIONAL ARCHIVES

**Dentists play key roles in Canadian war efforts**

**FIRST WORLD WAR**

**Dentists join the Medical Corps in Europe**

At midnight on August 4, 1914, Britain's ultimatum to Germany demanding its withdrawal from Belgium expired. The British Empire, including Canada, was at war, allied with France, Russia, Serbia (and later the United States) against the German, Austro-Hungarian and Ottoman empires.

Few people believed that the war would last more than a few weeks. They were wrong. The First World War would last four terrible years, stunting the growth of civilization for a generation.

Afraid they might miss the action, Canada's young men rushed to join the armed forces. Many of Ontario's dentists also joined that rush. Military service was a new experience for most of them with the exception of a few who had joined the Canadian Militia before the war began. Each had received military training, along with the rank of honorary lieutenant and dental surgeon in the Medical Corps.

There was no designated Dental Corps, so the Medical Corps declared that dentists serving in the active militia dental service should be under their direct control. There were two downsides to this policy for dentists: the rank of honorary lieutenant and dental surgeon was junior to every other officer in the Medical Corps; and there were very few

promotions for dentists despite notable records of service.

In 1915, several Ontario Dental Association members stepped up to contribute for the war effort when they were given the task of launching and operating a dental clinic to treat new recruits. Located on the Canadian National Exhibition grounds in Toronto, it was open seven days a week. The clinic played an important role in restoring the teeth and oral health of Canada's soldiers so that they would be eligible to go off and fight. If they didn't get a clean bill of dental health, many soldiers would not have passed the medical examination. An applicant's teeth had to be in good order to join the Armed Forces and the loss or decay of 10 teeth would disqualify him.

The clinic also played a key role in the Canadian Dental Association's push to form a separate dental branch within the military. Soon after the exhibition clinic opened, Militia Minister Sam Hughes made an official inspection of the grounds. A few weeks later, honorary lieutenants Edmund Grant and Richard Hull received an order to come to his headquarters in Ottawa to provide a report on the overall dental fitness of Canadian recruits. That's where they learned the excellent work being done at the clinic was a key factor in Hughes' decision to form the Canadian Army Dental Corps.



Dentists performed thousands of treatments to ensure Allied soldiers were not distracted by toothaches and infections. GEORGE METCALF ARCHIVAL COLLECTION CANADIAN WAR MUSEUM

**SECOND WORLD WAR**

**Canadian Dental Corps is organized**

Between the two World Wars the Canadian Army Dental Corps grew into a more organized and cohesive unit and officially became the Canadian Dental Corps (CDC).

With the outbreak of the Second World War in 1939, the Ontario Dental Association acted again. At their annual spring meeting, members inspired others who hadn't already enlisted to join the fight. Dentistry's contribution to the cause would be to supply sufficient men to staff the CDC and many of the ODA's most experienced members joined the Armed Forces.

Eventually, Canada formed 24 dental companies, comprised of 24 officers and 80 men, for each military district across the country. Three were assigned to the navy, 15 to the army, and six to the air force. Each consisted of a headquarters and clinical detachments, with each detachment staffed with a dental officer, a sergeant assistant and an orderly. As the war continued, men and women were recruited into the services. The CDC trained members of the Women's Royal Canadian Naval Service, Canadian Women's Army Corps and Royal Canadian Air Force (Women's

Division) as dental assistants and clerks. In September 1943, the CDC established a Technical Training Centre with 16 officers and 22 men. During the Second World War, the centre offered 16 courses to over 1,200 officers and men of the corps. At the Royal Canadian Air Force Station in Trenton, Ont., the CDC, in conjunction with the RCAF Medical Service, also conducted research projects on military dentistry.

The No. 1 Field Dental Company had left Canada late in December 1939 with the First Canadian Infantry Division, but as the war spread, additional dental detachments served in France, Iceland, Sicily and Italy. The Canadian Dental Corps grew to 1,562 dental officers with 3,725 enlisted personnel of whom 748 officers and 1,747 enlisted personnel served overseas. Before the war ended, 14 of those officers and 19 enlisted personnel were killed or had died in active service.

Today, the Royal Canadian Dental Corps continues the tradition of providing high-quality dental care at home and abroad for Canada's Armed Forces.



The Canadian Dental Corps, shown in 1939, was first formed to serve in the Second World War. UNIVERSITY OF TORONTO FACULTY OF DENTISTRY

**11939**

ODA encourages members to help Canada's war effort by enlisting in the Canadian Dental Corps. Many join one of 24 dental companies that serve in France, Iceland, Sicily and Italy. A total of 33 personnel die in active service.

**11945**

Canadian and American governments begin to study the effects of water fluoridation on tooth decay. Tests show children who drink fluoridated water have 60 per cent fewer cavities than those who do not.



**11963**

City of Toronto begins fluoridating water.

**11946**

With the Baby Boom comes a mission to increase dental health education and preventative care programs. ODA and Canadian Red Cross launch a pilot program in Niagara region to educate parents and treat children's teeth. Children's dental health improves and the program marks a turning point in dental public health in Ontario.

**THE HOME FRONT: 1910-1960**

**Dentists enter new age with focus on prevention**

**Depression-era dentistry**

The post-war 1920s were a time of unprecedented economic growth and opportunity. The good times came to a halt, however, when the country's economy was decimated by the stock market crashes of 1929, bringing about the Great Depression. Much as they had in the First World War, the ODA and its members took it upon themselves to help their community during this time of crisis.

Dentists continued to provide care to the public at reduced or no cost for the growing number of poor and unemployed Ontarians. In 1931, a free clinic was opened at Spadina House in Toronto and Peterborough dentists opened a free clinic in the Ovaltine Plant for people in the community to receive dental care.

As the Depression continued, the ODA realized the very real need to reach people in remote Ontario communities, and encouraged the provincial government to secure a railway dental car so they could provide care for people in northern Ontario. The dental train began service in 1931, thanks in large part to the Canadian Pacific Railway's contribution of the rail car and free haulage. It was staffed by ODA member dentists and remodelled and equipped with funds raised by the Rosedale chapter of the Imperial Order of the Daughters of the Empire. The train was just like a modern dental office but on rails and able to travel along any train line in the province. Throughout its years of operation, dentists on board the train provided professional dental services to isolated communities along the Canadian Pacific Railway lines, helping ensure that Ontarians in need of care were getting help they could rely on.

**Baby boom years**

The end of the Second World War and the return of Canada's veterans



Lineup at Toronto soup kitchen during the Depression, when dentists often provided services for free.

gave rise to the baby boom and as the profession grew, so too did the belief that preventive care was essential for protecting teeth. In 1946, the ODA and Canadian Red Cross joined together to launch a pilot program in the Niagara district. Under this project, a specialist trained in dental public health provided education to parents, regularly inspected children's teeth and performed treatments in local dental offices. Two years after this program began, the overall dental health of children in the program improved, while other municipalities recorded annual increases in the number of childhood dental extractions and fillings.

The pilot program marked a positive turning point in dental public health in Ontario and the project quickly attracted the interest of health authorities

in other municipalities throughout the province. The lasting impact of these educational efforts were later reflected in a public education campaign piloted in the 1970s in part by Dr. Samuel M. Green, a public health dentist and ODA member, and the Ministry of Health. "Murphy the Molar" character was a popular icon that those who were children in this era may fondly recall.

By 1950, eight out of 10 provincial governments had created dental health divisions. This was a welcome improvement because up until that point, public dental health initiatives depended almost entirely upon the voluntary efforts of dental organizations like the ODA. Informing the public on proper oral hygiene and getting them routine dental care became much easier.

Within the dental community, dental public health became the fifth

dental specialty recognized by the Royal College of Dental Surgeons of Ontario. Following orthodontics (straightening crooked teeth), oral surgery, periodontics (diseases and conditions of gums and bone) and paedodontics (children's dental care).

In 1958, the ODA took over a provincially funded dental care program for low-income children but the dental services covered by the government were limited and the level of funding for dentists often didn't cover the costs of treatment the children needed. It didn't take long for everyone involved to realize the program needed improvement.

The ODA has always believed preventative programs and education are essential, so their proposed solution came in 1971 with the "dental plan for children." The project called for incremental care "to make the benefits of

dental health education, preventive dentistry and dental care available to all children and young adults, up to and including those 18 years of age."

Today, the ODA and its member dentists continue to advocate for prevention, education and access to care for all Ontarians.

**Fluoride makes an impact**

As early as 1922, British researchers observed that fluoride seemed to have a role in preventing cavities, but only sporadic research was done over the years. In 1945 the Canadian and American governments began a joint study on the effects of water fluoridation on tooth decay. The Ontario town of Brantford was one of the test cities chosen, and within five years results showed that children who drank fluoridated water had 60 per cent fewer cavities than those who had not. By 1952, Toronto's Board of Health approved community water fluoridation as a safe and cost-effective tool for fighting tooth decay. However, this landmark development in health care was not without its share of controversy, and it wasn't until 1963 that the city of Toronto began water fluoridation.

While science ultimately prevailed and many Ontario communities began water fluoridation, unfounded fears and conspiracy theories continued to make fluoride a controversial issue. Today, more than 30 countries around the world have community water fluoridation programs which provide more than 370 million people with optimally fluoridated water. The effective and inexpensive public health measure is proven to reduce the chance of developing cavities for everyone, regardless of their age, location or socioeconomic status.

For more than 60 years, fluoridation has been used safely and successfully across Canada and the United States. Years of scientific studies have not found any credible link between optimally fluoridated water and adverse health effects.



Children brush their teeth at High Park Forest School in Toronto in 1913. Public health programs were supported by the ODA. CITY OF TORONTO ARCHIVES

**1985**

A capitation insurance payment plan is introduced in Ontario, allowing insurance carriers to pay dentists a flat rate for each patient, regardless of treatment. The plan also forces patients to see dentists selected by their insurance carrier, limiting their personal choice. The ODA launches a campaign highlighting the plan's drawbacks and, two years later, capitation fails to make an immediate or lasting impact.

**1971**

ODA proposes a plan to make dental care available to all children 18 and younger. Also, the Ontario Ministry of Health creates "Murphy the Molar," a public education campaign to get children to brush their teeth.



**1990**

ODA backs Electronic Data Interchange, which allows dental offices to directly submit their patients' dental insurance claims.



**21ST CENTURY**



# Technology changes dental care

Most of us are familiar with the standard home dental care tools like toothbrushes, toothpaste, floss and mouthwash. But it wasn't always as easy or convenient to keep teeth in good condition. Here's a few examples of how technology has had a major impact on dentistry. The history of toothpaste alone is fascinating!

Expenses

Hair cut .... \$28  
 Facial .... \$60  
 Massage .... \$120  
 What about your teeth?

Your Teeth Are Worth it.

Book an appointment with your dentist today!



**2012**

The ODA launches *Your Oral Health.ca*. Found in dentists' waiting rooms across the province, it includes articles on dental care tips and myths and helpful nutrition and lifestyle information.



**1994**

Finance Minister Paul Martin says he is considering taxing health and dental services in the next federal budget. ODA and Canadian Dental Association launch a campaign opposing the move and it is not included in the 1995 budget.



**2017**

Today, the ODA represents more than 9,000 dentists and is Ontario's primary source of information on oral health and the dental profession.

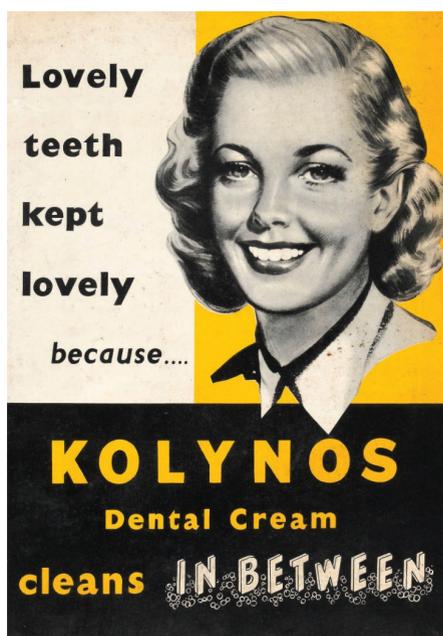
Visit <http://150.oda.ca> for more about the ODA and the history of dentistry in Ontario, including additional photos and video.

**INNOVATIONS AND IMPROVEMENTS**

From burnt eggshells to 'aristocratic dental cream'

Until about 120 years ago, sugar was the main ingredient in toothpaste and while that alarming fact spurred Ontario dentists to create and sell their own healthy alternative, it was certainly a more palatable ingredient compared to what had been used to keep mouths clean in even earlier times. Ancient Egyptians used a powder of crushed rock salt, mint, dried iris flower and pepper. It was applied to the teeth and when mixed with saliva, created an abrasive and undoubtedly pungent toothpaste. The ancient Greeks and Romans also brushed with overly abrasive ingredients like crushed bones, oyster shells, burnt eggshells and the ash from ox hooves. Some tooth powders even used powdered bark and charcoal for flavour and to combat bad breath.

It wasn't until 1850 that toothpaste started to resemble what we know and love today. Dr. Washington Sheffield, an American dental surgeon, invented Dr. Sheffield's Crème Dentifrice, "the aristocratic dental cream." It was packaged in a glass jar and claimed to "arrest decay, check infection and keep the oral cavity sweet and pure." In 1892, the toothpaste was sold in collapsible tin tubes. Colgate began mass-manufacturing its first toothpaste in 1872, at first selling it in a glass jar like Dr. Sheffield's before switching to the collapsible metal tube packaging. But because of the shortage in tin and lead during the Second World War, plastic toothpaste tubes were invented and are still used today.



Sugar was an ingredient in early toothpaste, which encouraged dentists to create their own versions. WELLCOME LIBRARY, LONDON

Ending the drudgery of insurance forms

As technology continued to develop in our increasingly modern society, so too did its use in the dental clinic. The creation of Electronic Data Interchange (EDI) in 1988 was a blessing for anyone familiar with the drudgery of form filling and paperwork sending. This network links insurance carriers with dental offices via telephone lines and computers. The technology was implemented in dental offices across Ontario a couple of years later and, for the first time, dental clinics could submit patients' insurance claims electronically. This was a welcome technological advancement for both patients and dentists alike, saving them both the time and expense of manually filing insurance claims.

Digital techniques minimize pain

It's hard to accurately predict how technology will shape the future of dentistry, but if the present is any indication, it will mean greater efficiencies and less discomfort. Long gone are the days of foot-cranked drills that would loudly and terrifyingly grind out cavities from patients' teeth. Today, drills still exist but are starting to be replaced by highly accurate laser technology. Because less vibration, pressure and heat are created with a laser, there's minimal physical pain for patients and they're also spared the

horror of listening to the sound of old-fashioned drills.

There have been many improvements in cutting pain out of dental treatments. Specialized sedation dentistry uses medication and other relaxation techniques for patients with health conditions or severe dental anxiety. Other methods of delivering local anesthesia as alternatives to needles are being developed to offer a less invasive freezing process for patients. There was a time when elevator music would be played in the dental clinic to soothe patients but it has become more common to see TV screens by the dentist's chair to provide patients with a calming distraction during their treatment.

The increasing use of imaging software, computer-aided design programs and digital photography is also expected to become the industry norm to help dentists create crowns, tooth fillings and other prosthetic restorations. We've come a long way from the days of hand-carved dentures affixed with wooden teeth. Now, more dental offices in Ontario are offering patients CEREC (Chairside Economical Restoration of Esthetic Ceramics) technology. In this process, a dentist scans the area of a patient's mouth that needs reconstruction, a digitally crafted replica tooth image is created and a milling chamber then sculpts the tooth right there in the dentist's office, eliminating the need to send the job to a lab. This means patients can get their smiles improved in less time.

# The future

Good oral health = good overall health

It seems like every other day new research is identifying health-related issues and ways we can take better care of ourselves to achieve ideal levels of physical health and well-being. The very tangible connection between oral health and overall health is also becoming clearer and the dental profession is increasingly recognizing that collaborating with other health-care professions is an ideal way to better care for patients and help them achieve overall health goals.

This teamwork approach, called inter-professional collaboration, is one new trend. Professionals from different disciplines join forces to create a better outcome than what would have been achieved on their own. For example, your dentist would collaborate with your family doctor and other specialists to address medical issues that affect your oral health and overall health, such as diabetes, and discuss complementary therapy plans to make sure your total health is being treated. Having all your doctors communicate and work with each other provides comprehensive treatment and may even identify potential warning signs or conflicts between the different medications you may be taking.

Establishing an understanding of this collaborative approach to patient care begins in dental school, where modernized courses will teach future dentists the best strategies for working with general health-care practitioners and medical specialists. Bridging medicine with dentistry – through seminars, conferences and journal articles – will bring about a more holistic approach to health care. The



Professionals are increasingly emphasizing the importance of collaboration between their disciplines as a more effective way to treat health issues. ISTOCK

hope is that maintaining good dental health will become a fundamental part of everyone's overall health-care strategy.

Total body health

Total body health means taking a fuller and far more encompassing approach to health care by understanding how the entire body is connected and treating it as a whole for maximum effect. It's becoming more evident that dental health is directly related to physical and mental health.

There have been increasing scientific and medical studies suggesting links between poor oral health and illnesses like diabetes, heart disease, arthritis and dementia. People

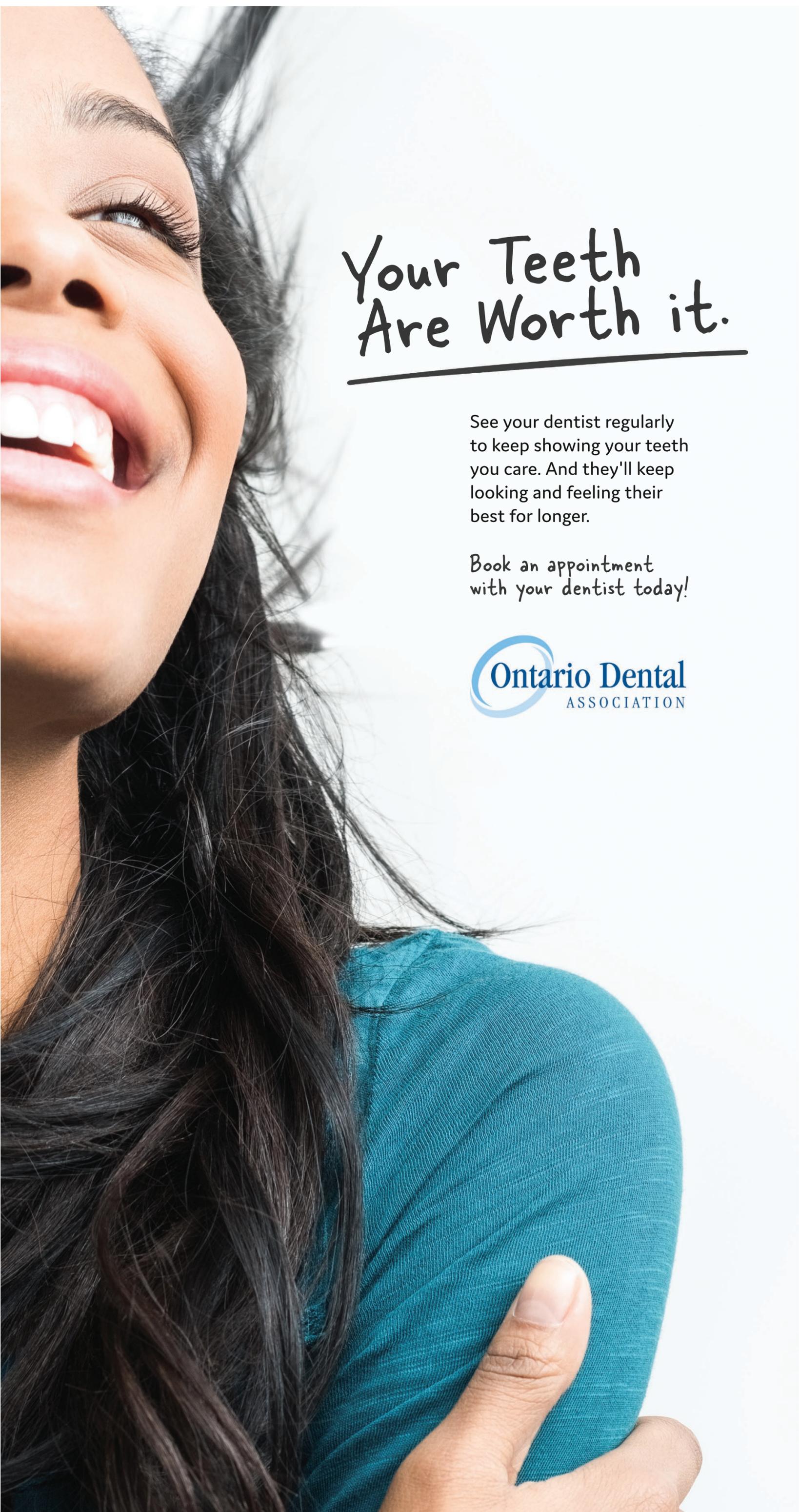
with generally poor dental health, such as neglected or missing teeth, can also suffer from low self-esteem which can deeply impact their lives socially and professionally. There's also growing research suggesting the human papilloma virus (HPV) is the leading cause of some head and neck cancers, like oropharyngeal cancer. These are just a few of the many

ways that dental health and overall health are connected and can negatively impact on each other. As medical treatment continues to evolve, treating the body as a whole is expected to become the norm.

Access to dental care

From the early 20th century to today, Ontario's dentists have shown a long-held commitment to public service by providing dental health education and treatment to the public. That advocacy for preventive care continues today with the goal of bringing accessible and sustainable dental health care to everyone in the province, regardless of their age, income and location. From remote areas to small towns to big cities and everything in between, all Ontarians deserve easy access to quality dental care.

How do we do achieve this? There are several steps, starting with dental health education in schools so that children learn from an early age how to properly care for their teeth throughout their lifetime. Just as important is treating the body as a complete unit and recognizing what kind of impact the rest of the body suffers when one part is neglected. Staying committed to promoting access to optimally fluoridated drinking water is key as it's the most practical, cost-effective, equitable and safe measure to prevent tooth decay in our communities. Understanding the full health-care system picture is vital because good dental health care practices mean not only treating the obvious problem but also developing a complete preventive treatment plan, which will lessen the chances of more costly treatment later on, while also putting less of a burden on the rest of the health-care system. Finally, encouraging and growing meaningful partnerships between the dental and medical professions, public health units, dental facilities, government and non-government community agencies will go a long way to help all Ontarians enjoy healthy, happy smiles.



# Your Teeth Are Worth it.

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See your dentist regularly to keep showing your teeth you care. And they'll keep looking and feeling their best for longer.

Book an appointment with your dentist today!

