



# Canada's Historic Contributions to the Evolution of the Dental Profession in North America

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Canadian dentists have made many valuable contributions to the evolution of dentistry and the dental profession in North America. Yet, because Canada is overshadowed by its more populous and enterprising southern neighbour, the impression exists that Painless Parker (he of the colourful antics) is the country's major — or worse still — only contribution to North American dentistry. In fact, many Canadian initiatives have played a significant role in the evolution of the dental profession. This paper will examine the origins and development of the practice of dentistry in Canada and the United States, and look at some similarities and differences between the two countries. The Canadian dental profession has actually been a pioneer in several areas, including educational standards; social and ethical concerns; professional and governmental inter-relationships; military dentistry; and publicly funded dental care, with its underlying principle that health care is a public right and a professional obligation, not a commodity or privilege.

## The Origins of Dentistry in Canada

The beginning of dentistry in North America can be traced to the first health professional, the apothecary Louis Hébert, who arrived in Quebec at the turn of the seventeenth century with Samuel de Champlain. Hébert was undoubtedly the first health care professional in North America whose responsibilities included alleviating toothaches and extracting teeth. He was followed by Robert Gifford, who became the first doctor at the Hôtel Dieu in Quebec City in 1640.

The first directory published in Canada in 1791 listed nine "Saigneurs et Aracheurs de Dents" (bloodletters and tooth pullers) — the true forerunners of the dental profession in Canada. Seventy-five years later the great-grandson of one of them — Stephen Globensky — became one of Montreal's prominent dentists and the second dean of the department of dentistry at Bishop's Medical School at the turn of the twentieth century.

## The Evolution of the Dental Profession in North America

The evolution of the dental profession in Canada and the U.S.

is closely linked to their respective national histories, which accounts for the divergent paths taken by each. In the U.S., dentistry was born in the camps and battlefields of the American revolution under the tutelage of French dentists — disciples of Pierre Fauchard — who served as volunteers with the revolutionary forces. From its beginnings, American dentistry was practised in the spirit of individual entrepreneurship, with its distrust of government interference and control. This attitude, so ingrained in the American tradition, idealized solo practice, a striving for excellence, and the use of publicity.

As for Canadian dentistry, it came into being following the 1867 proclamation of the Act of Confederation, better known as the British North America Act, when the Dominion of Canada was established. At that time, federal and provincial powers were delimited, with health care becoming a provincial prerogative. In Ontario, one of the earliest legislative actions of the provincial government was the proclamation of the Ontario Dental Act in 1868, which gave birth to the first legislatively

established independent dental corporate body — the College of Dental Surgeons of the Province of Ontario. This legal professional entity had an elected board of directors, was responsible for the licensure and regulation of dental practice, adopted an enforceable code of ethics, and established a dental school with strict educational standards and guidelines.

The Ontario Dental Act still ranks as the first, most comprehensive dental legislation ever drafted. It has been copied or used as a model by every state and country in the world. The act may also have been one of the main reasons why Painless Parker and his ilk had to leave Canada and indulge in their sometimes questionable activities elsewhere as it contained strict rules regarding professional conduct and advertising.

Had it not been for a series of historic occurrences and mishaps, it is conceivable that professional dental corporate independence could have emerged in Lower Canada (Quebec) in 1840 — the same year that marked the founding of the American Society of Dental Surgeons and the Baltimore College of Dentistry under the guidance and leadership of Drs. Horace Hayden and Chapin Harris. An attempt was made by Dr. Aldis Bernard, a Montreal dentist who later served as mayor of the city, to insert clauses for the regulation of dentistry into a bill before the legislature. However, this legislative draft was initially sidetracked because of English-French conflicts and civil disturbances, and subsequently lost in a courthouse fire. A new draft was reintroduced in the legislature in 1869, when the College of Dental Surgeons of the Province of Quebec was established.

### Professional and Governmental Interrelationships

In Canada, a spirit of cooperation and trust existed between the dental profession and government from the earliest inception of organized dentistry. There was in this country an immediate and legal distinction of a profession from a vocation, a craft or a busi-

ness. Not so in the U.S., where governments — when involved at all — were concerned with establishing anti-monopoly regulations, and where organized dentistry, in an adversarial position, sought to defend its entrepreneurial independence and ward off government interference.

In terms of educational standards, admission requirements to dental schools and ethical guidelines, Canada served as a role model, with its practices emulated on numerous occasions. Canada had no proprietary schools of dentistry, so it never had to deal with tensions between dental schools, organized dentistry and the government, as occurred in the U.S. Both the Flexner and Gies reports on the American medical and dental professions respectively held up their Canadian counterparts as models of academic and scientific excellence, emphasizing that university and hospital affiliations did not diminish technical excellence, which tended to dominate the American dental curriculum. The Gies report stated: "In recent years, there has been more respect for the medical science and less waste of time or excesses of elementary dental technology in Canadian schools. As a consequence, the average graduate from Canadian schools has a better comprehension of dentistry as a health service, than many of his American colleagues." The report went on to note: "There is no evidence that having been taught the mechanical principles, he (the Canadian student) does not readily and rapidly acquire all the requisite manual dexterity or that he is less competent than his American confreres to profit from developments in their clinical application."

By 1912, preceptor training had come to an end in Canada, and graduates of American proprietary schools were being refused certification. Only chartered universities could issue doctorates. McGill University would award degrees as a Licentiate of Dental Science (LDS), Doctor of Dental Science (DDS) or Graduate of Dental Surgery (GDS) until 1920,

when it first issued a true DDS, or Doctor of Dental Surgery. Its admission requirements to dental school were a bachelor's degree of arts or sciences, followed by a four-year dental curriculum.

### Professional Organizations in Canada

Regional and provincial dental associations have existed in Canada since the 1860s, and were often loosely affiliated with similar organizations in neighbouring American cities or states. However, the first and only Canadian national organization was and remains the Canadian Dental Association (CDA). The first meeting of CDA took place in 1902 in Montreal and was attended by 334 dentists representing some 1,500 practitioners from every province and territory. This historic gathering of Canada's dental profession established three pivotal foundations:

1. a Dominion Dental Council with Canada-wide powers of certification and reciprocity;
2. a Canadian Dental Corps to service Canadian military personnel serving with the British Imperial Forces during the Boer War in South Africa; and
3. a Code of Ethics, which was enforced even in the U.S., where American dentists in border towns were denied the right to advertise in Canada if such ads conflicted with the code.

In 1906, at CDA's third biennial meeting, concerns dealing with dental public health emerged, giving rise to proposals that were instituted almost immediately, including free examinations of school-children, the revision of school books to include dental hygiene, and the distribution of dental educational materials and pamphlets to schoolteachers. These proposals established early the principle that dental health was a right, not a privilege.

### Social Legislation in Canada

Canadian dentists have always felt a strong sense of social obligation. Before the formation of CDA, the Halifax Visiting Dispensary

Society opened in Nova Scotia, in 1855, offering free dental services to the underprivileged. In 1874, in Toronto, Ontario, Dr. J.G.C. Adams — who has earned the title of “Father of Public Health Dentistry” — opened the Toronto Dental Educational Institute, where emphasis was placed on preventive treatment as an alternative to artificial dentures, which were then in vogue. By 1919, the Canadian Red Cross had established caravans, followed in 1924 by travelling clinics that visited rural areas and offered dental services to children who either could not afford dental care or did not have easy access to dentists. At a historic joint meeting of CDA, the British Dental Association and the Ontario Dental Association in Toronto in 1932, CDA introduced initial plans for state dentistry (followed in 1938 by a “children’s plan”). Newspapers reporting on the meeting praised dental authorities for making Canada a leader in promulgating dental hygiene. In 1942, with the cooperation of CDA, the Canadian government introduced health legislation, which was sidetracked by a wartime “baby bonus.” It was not until the ‘50s and ‘60s that publicly funded medical and dental care began to have an impact on the Canadian public. Today, our “Canadian system” is highly regarded, especially by our neighbours to the south, as a model for public health services.

#### Research

While government funding, an entrepreneurial spirit, and the search for excellence have propelled the U.S. to the forefront of dental research, Canada has also had its share of major contributions in the clinical and technical fields. Canadian dentists, for example, have played a major role in the development of portable and mobile dental equipment, partly in response to the need for providing dental services to the scattered, far-flung native populations in the North, and partly as a result of pioneering efforts in military dentistry.

The development and introduction of the first carbide bur for high-speed handpieces was also the result of a series of Canadian initiatives. George Beavers, a Canadian manufacturer of toothbrushes, was asked by the federal government to supply the Canadian Dental Corps with dental burs after the world’s major suppliers in England and Germany became cut off from North America following the outbreak of World War II. When the war ended, representatives of Beavers Bur Company were sent to Germany to study German technology. While there, they met Rudolph Funke, who had developed the process of hardening steel with tungsten carbide in 1917, a technique that was not widely applied to dental burs because of the slow speed of handpieces. Funke was brought to Canada where he and Beavers collaborated in the development of the first carbide burs that saw wide application.

#### Dentistry in the Armed Forces

Canada’s role as a true world leader and pioneer in providing dental services to its armed forces is almost unknown. The world’s best kept military secret is probably the fact that, at the initiative of the newly formed CDA, the world’s first Dental Corps, staffed by commissioned dental officers, was sent off to care for the dental health needs of Canadian volunteer units fighting with Britain’s Imperial Army in South Africa during the Boer War of 1899-1902. The CDA also insisted, when hostilities broke out at the beginning of World War I in 1914, on the formation of a tri-service Canadian Dental Corps whose prime responsibility would be to render to all Canadian soldiers, whether in base camps or forward units, the best dental care and maxillofacial surgery available. The determination to render all military personnel dentally fit before being sent overseas, along with the development of mobile equipment and forward mobile units and maxillofacial field hospitals, made the Canadian soldier the envy of both allied and enemy nations.

Although the Dental Corps was demobilized after World War I, CDA and the military developed a plan so that at the outbreak of World War II in 1939, the Corps could be put in the field quickly. In this conflict, the heroic service of the Dental Corps resulted in casualties of 14 officers and 19 other ranks killed in action. The Corps was awarded the warrant of “Royal” by the then monarch King George VI. To this day, the Canadian Forces Dental Services — as the Corps is now known — continue to serve with distinction alongside Canada’s volunteer army, and in most instances, provide dental care to the United Nations peacekeepers around the world.

As the new millennium approaches, and along with it, the celebration of CDA’s centennial in 2002, the profession of dentistry in Canada can look back with pride on its numerous accomplishments, knowing it is recognized worldwide and honoured and trusted by the population it serves. Even as dental education in Canada undergoes review, there is no doubt that the dentists of tomorrow will continue to have, as the Gies report pointed out as far back as 1926, “a better comprehension of dentistry as a health service”. The evolution of dentistry in this country will continue in the direction pioneered by CDA in 1902, remaining true to the principle that dental health care is not a privilege but a right. It is dentistry’s obligation and responsibility to ensure that right is enjoyed by those it serves. ■

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