Chapter 8 Pharmacy 1907 – 1918 Revised 15 Feb 11

World Situation

The enormous increase in world trade created industrial cities in Europe and employment in the colonies and developing countries. Greater literacy and education resulted in a greater understanding of the world and its opportunities. People were no longer content to remain in their accustomed roles generation after generation. Also, economic cycles resulted in unemployment and hardship for many workers. All of this, combined with less expensive transportation, contributed to a wave of migration to the newly discovered territories in North and South America, Australia, and Africa. By far the greatest migration was to North America.

At the turn of the century there were many international economic rivalries, exploration as a prelude to the creation of colonies, and rapidly improving communication from wireless to underwater cable to the creation of steamship lines. A second wave of technology was transforming the world as the various sciences advanced and reinforced one another. Commerce and manufacturing were strongly influenced by the speed of communication and transportation. A century earlier there were immense difficulties in dealing over thousands of miles: endless losses, breakages, spoilage, market changes, bad debts, and communication over a period of months. Electricity was harnessed to run trolleys in the cities and to power lights, refrigeration, and household appliances. Electricity was vital in providing cheap power for manufacturing. Its cost was low due to the abundant waterfalls throughout the country. Agriculture was made more productive by new varieties of wheat and other cereal crops, the introduction of mechanized equipment run by steam and gasoline, and new inventions such as the combine. The shift from muscle and men to mechanized equipment greatly reduced the population necessary in agriculture and they began to shift from farm to cities.

The greater literacy and spread of information on scientific discoveries also led to changes in society with the use of electricity for streetcars, greater emphasis on urban growth with the need for sanitation and better health care. Inexpensive newspapers around the world now reported significant news items that were closely followed by the public: Messina earthquake of 7.5 (1908) and a tsunami of 40-50 foot waves resulting in the loss of 160 000 to 250 000 lives, the last Black Plague in India and China (1910-1913) killing millions, Montana-Idaho forest fire (1910) killing 85 and burning 2 million acres, the Yangtze river flood in China (1910) killed one hundred thousand immediately and even more from subsequent starvation, the unsinkable Titanic sunk in 1912 with the loss of 1517 lives, Lusitania torpedoed at sea (1915) with the loss of 1198 lives, another flood in China (1915) with water 79 feet above normal and the loss of over 100 000 lives, as well as the assassinations, rail and boat accidents, and political intrigue. In becoming more aware of the world around them people began to express their views, often in a jingoistic way, demanding that their country take action. Unfortunately, this often was a cause of wars and violence as in the case of the First World War where Europe was plunged into war and Canada, following Britain, joined in August of 1914.

The event that had the most dramatic impact on the modern world was World War I (1914-1918). It involved not only the European battlefield but also East Africa, the Middle East (Lawrence of

Arabia), and the Atlantic. Britain not only had its own troops involved but also the colonies in Africa, India, and the Americas, as well as a Labour Corps from China. The war changed the world in many ways, the most visible was the creation of new countries and new spheres of influence for the major powers. There was also a great deal of violence of an ethnic nature such as the slaughter of a million and a half Armenians by the Turks, the first holocaust. Technology and international trade soared and cities grew. It was a different world.

The First World War was long, bloody, and pointless. It made an enormous impact on many countries including Canada. At the beginning of the war Canada was mostly agricultural with a significant portion of the population recent immigrants to Canada, mainly from Britain and Europe. As part of the British Empire, Canada had little choice in entering the war although there was strong public support. Canada had a population of only 8 million but almost 650 000 men enlisted, 425 000 went overseas and over 60 000 gave their lives. There were more deaths than in the Second World War when Canada had a much larger population and the war lasted longer. Of Canada's 8 million people, over a million of them had arrived in Canada between 1910 and 1913.

With the outbreak of war in August of 1914, Canada quickly raised a small force of 33 000 to send to Britain, mainly of British-born Canadians some of whom had fought in the Boer War, and they were fighting in Europe by 1915. Canada then began a lengthy recruitment, training, and building program that grew to 500 000 as the war progressed. Since 1911 compulsory cadet training was required in high schools (continued until World War II) and this provided initial military skills for recruits. Initially Afro-Canadians, Japanese, and Indians were not accepted. As they pushed for inclusion and shortages of soldiers emerged, they became integrated into the army although they were required to have white officers. Conscripts were processed so quickly that only three to four months after enlistment they were on the front line. Fighting in the trenches was a horrible experience for the troops with a high mortality and morbidity from artillery shelling, machine gun fire, poison gas, and infection of the feet and mouth from trench conditions. The bravery of Canadian troops when poison gas was first used at Ypres in 1915 saved the front from disintegrating. Soon after this event a gas mask was developed by a Canadian, Dr. Cluny McPherson. Mental disorders were common due to the enormous stress in the trenches, referred to at the time as shell shock and more recently as Post-Traumatic Stress Disorder. Shell shock was considered to be cowardice and punished, sometimes by a firing squad. Care of the wounded at the front was difficult due to the total destruction and large number of casualties. During the War, John McRae, a physician and artillery officer, wrote the poem "In Flanders Fields", the most famous poem from the war. Unfortunately he was killed in 1918.

There was also an air war in which Canada played a prominent role and had a number of aces such as: Billy Bishop; William Barker, Canada's most highly decorated hero; and Raymond Collishaw. At the beginning of the war the role of the air force was unknown. The use of airplanes and dirigibles as observation tools were clear but that was all. Flight, beginning with the Wright brothers at the end of 1903, had progressed but was still in its infancy. Just keeping a plane in the air took all the skill of the pilot. Flight training was rudimentary and pilots were alone in the cockpit during flight training. Half the pilots being trained by the British were killed in training with 14 000 graduates. There is a pharmaceutical connection in that castor oil was used as fuel in some airplanes and the fumes were inhaled by the pilot resulting in the expected

pharmacological effects. Only toward the end of the war was there an expanded role for planes as bombers, fighters, observation (including photography), and attacks on ground forces.

The Canadian Expeditionary Force grew in Europe until there was an independent corps of four divisions. They incorporated lessons from the earlier slaughter and began to systematically attack the enemy in a manner that enabled them to pierce the line and capture important features, such as Vimy Ridge. It is generally believed that Canada became a country in the full sense of the word as a result of the formation of a Canadian Corps and its capture of Vimy Ridge in April of 1917. Canadians played a major role in the battles of the last 100 days and were described as the Allies' shock troops. There was also recognition for some of the pilots that became war heroes to the public: Billy Barker, Raymond Collishaw and Billy Bishop. In the North Atlantic, Canadian war ships played a major role in getting convoys of supplies and troops to Europe. In the Great War the number of military deaths to civilian deaths was 10:1. During the Second World War the ration was 1:1 and in more recent conflicts the ratio has shifted to 10 civilian deaths for each military death. It is unclear if this is progress.

During the War, pharmacists normally served as dispensers with the rank of Sergeant. In contrast, nurses, dentists, and physicians were officers. This situation led to many attempts by pharmacists to raise the standing of pharmacists in the armed forces but this was largely unsuccessful.

After the war, attempts were made by U.S. President Woodrow Wilson to correct many of the international problems but in the process many other problems were created that continue to bedevil us. For example, with the dismantling of the Ottoman Caliphate, the country of Iraq was formed. Its boundaries were set to meet British administrative purposes as this area was given to Britain as a mandate territory with the economic benefit of oil fields. It consisted of an area of Kurds, Shiite Muslims along the coast, and the Sunni Muslims in the centre and West. It was administered by Britain until a violent upheaval led to its independence. The problems created, however, continue to this day with ethnic conflict.

A major catastrophe from the war in terms of civilian deaths was the Halifax Explosion which took place in 1917. Two ships collided in Halifax harbor and a munition ship exploded creating a huge shock wave that destroyed hundreds of buildings in a two mile radius, injured over 8000 people, and killed over 1600. It was a major calamity. Rescue and reconstruction efforts continued for a long time with a very welcome train load of emergency supplies coming from Boston. It is for this reason that Halifax sends a giant Christmas tree to Boston each year to commemorate their appreciation.

During the war there was a sense among Canadians that everyone must contribute and everyone did one way or another. Young men who were not in uniform were subject to strong social pressure to volunteer for service (there was no conscription until near the end of the war). On the university campus both students and staff enrolled in large numbers leaving only a skeleton staff and small classes. There was a great deal of discrimination and sometimes violence against German and Austrian immigrants who were interned in camps located in Canadian national parks and in the wilderness where they were employed building roads and timber work. Overall the war created a strong sense of national identity and a pride in being a member of the British Empire. It also transformed the economy and culture of the country.

Canadian Development

Other results of the conflict in Canada were the development of industry and the creation of a strong sense of nationhood. The size of government increased by 50% as a result of the war and there was a huge increase in exports of both agricultural and manufactured goods. Government debt increased three fold in 5 years! Up to this time government was run in a very frugal manner. Revenue to cover this debt came mostly from customs and excise taxes (80% of revenue). The need for more money during the war and to pay war debts led to the government levying a temporary income tax, which we still have. Within Canada the social fabric was drastically changed with urbanization, increased manufacturing jobs, the opportunity of social advancement, and a different perspective on life gained from military service, travel, and escape from the restrictions of family and community, especially for ethnic minorities.

Canada became more urban with the growth of cities across the nation. Downtown became a busy focus for social and commercial activity and skyscrapers of 10 floors emerged. The term "skyscraper" initially referred to high-flying birds but with the advent of tall buildings it increasingly referred to buildings. Although there were movies and telephones, the social conventions remained intact with very few businesses or services available on Sunday, except those linked to religious activities. The restrictions of the Lord's Day Act across Canada lasted until quite recently. One of the few exceptions to mandatory closing was given to pharmacies. This was a contentious issue as pharmacies sold not only medication but many other items which competing stores were not allowed to stay open and sell. Again this situation lasted for many decades. Sales restrictions on goods such as alcoholic beverages also brought business to pharmacies. Until prohibition, whisky was sold in quart bottles (40 ounces) in grocery stores as there were no liquor stores.

Living conditions in Canada in this period were difficult for most of the population. This was particularly the case in the West where there were few established communities. It is reported that in Edmonton in 1907 1550 people were living in 575 tents. Conditions in the cities could be described as similar to those of Dicken's London. There were no programs to assist the destitute, people went hungry when unemployed. In some areas welfare recipients were auctioned off to families to be used as casual labour. There were no laws requiring children to go to school and many were employed as child labour, children convicted of crimes were sent to jail or hanged (until the Juvenile Delinquency Act of 1908), lunacy was treated as a crime and those arrested for being at large were jailed indefinitely, and there was open discrimination against the Indians with people insisting that they be confined to their reservations. On the other hand, personal charity was evident with people offering food and money often in the context of Christian charity.

Charitable hospitals were a favorite cause for the wealthy, following British tradition. Religious orders also operated hospitals with support of their congregations. In the early 1900's there were many hospitals built to meet the needs of a growing number of communities, many of them built and supported by the community. Their names often reflected this with the words "city hospital" or "civic hospital". Every small town had a hospital and when the province took over responsibility for them 50 years later they attempted to close many of them. This was a particular

problem in Saskatchewan leading to the statement that the word Saskatchewan was an Indian word meaning “place of many small hospitals”.

Women became more liberated as the Suffrage movement campaigned to get the vote for women. Henrietta Edwards, Emily Murphy (a statue of her is next to the University of Alberta campus. She was the first female magistrate in the British Commonwealth in 1916), Nelly McClung (her husband was a pharmacist), and Irene Parlby were the leaders in this era and resulted in achieving the vote in 1917. Louise McKinney was the first woman in the British Empire to be elected to a provincial legislature in Alberta in 1917. Women won the right to vote in most of the Western provinces in 1916-1917. Bicycles were popular and women began to ride them which liberated them from the restrictive clothing of the Victorian era. The first woman in the British Empire to attend university occurred at Mount Allison University in 1874, then a decade later at the University of Toronto. During this period, pharmacy students in university pharmacy programs included women. Female pharmacy students became a growing proportion of the class until they outnumbered men in 1966 at the University of Alberta and then in the other provinces. Currently in Canada, United States, Japan, Britain, and many European countries the proportion of women in pharmacy has remained steady at about two thirds.

Universities were founded in the Western provinces. In 1908 the University of British Columbia was formed as a branch of McGill University, then became independent in 1915. The University of Alberta and the University of Saskatchewan were also established in 1908.

The manufacturing industry in Canada was developing as part of the North American market. In 1909 there were only 8000 cars in Canada and only 144 miles of paved roads. In the East, people drove on the right side of the road and in Western Canada they drove on the left (until 1922). Fuel for some cars was sold only in pharmacies. The McLaughlin Company in Ontario that made horse carriages shifted to automobiles and linked itself to the Buick Company by using their motors beginning in 1908. They also made Chevrolets, but they were different from those made in the US, a tradition that continued for some time. It is interesting that Louis Chevrolet, a Swiss born Frenchman, immigrated to Canada as a young man and worked in Montreal as a chauffeur. He was then hired by Fiat to drive racing cars. When he became famous for his car designs he was hired by Mr. Durant of GM to design a new line of cars called Chevrolet. Pontiac was the chief of the Ottawa Indian tribe in Michigan area and was a well known warrior for his battles against the British in 1763. He had the tribes in the area to combine to capture eight forts and massacre over 2000 settlers. Some French soldiers had encouraged him by stating that the French would return although this was false. British troops were sent against him and the confederation collapsed with the various tribes returning to their home areas. Pontiac was a famous name in the automobile manufacturing area and was used to name one of the early automobiles that had a hood ornament of an Indian head.

One of the McLaughlin sons, John, was a pharmacist who became interested in the ice cream parlor concept and established a business in Toronto selling equipment for soda fountains. He developed Canada Dry Ginger Ale in 1907 and it became a popular drink in Canada and the U.S. Its advertising slogan was “Drink Canada Dry”, a slogan with a bit of dry humor. His wife created the more elegant advertising description “The Champagne of Ginger Ales”. A popular Canadian drink over the next few decades was rye whisky and ginger ale (rye and ginger). It was

a distinctly Canadian drink that was popular into the 1960's and its use is revived from time to time.

In the early 1900's catalogues became important, advertising and selling media for rural residents. This enabled a large population to access health and beauty products, including medication such as vitamins, patent medicines, and household products such as Tincture of Iodine. Almanacs were also issued by firms to publicize their products.

The surge in growth in the West during the 1880's from the building of the railways, growth of towns, arrival of immigrants, and the beginning of mining and lumber industry brought a large number of men with little to do after work. The solution was to go to a bar, a large, crowded, smoky room with no chairs. Winnipeg, the gateway to the West, grew rapidly, especially with the arrival of the railroad in 1882. The number of hotels and bars grew rapidly resulting in a lot of drunkenness and violence. This pattern continued and became worse into the early 1900's leading to communities organizing temperance groups to fight the devil rum. Spearheaded by religious leaders there was a political drive to establish prohibition. The first national vote on prohibition was held in 1898 and the majority supported it. However, the government did not act on this result. More referenda were held nationally and in the provinces as the country marched steadily towards prohibition which was finally voted for in 1916 and again in 1920. The importance of this to pharmacy was that alcoholic beverages were only available on prescription and this was an important source of revenue for pharmacists over several decades.

Sports and sport clubs were popular in this era, particularly curling, yachting, hunting, lawn tennis, and golf. These were mostly for the wealthier class with the exclusion of minorities and some religious groups. Among the working and farming class there was little time or money for sport. There was enough time, however, for team sports such as baseball, football, hockey, and lacrosse. As the team sports grew the standardization of rules led to larger sport organization and competition across towns, regions, and even national competition.

In 1909 the first Grey Cup was donated by Governor General Earl Grey for intercollegiate football. A game adapted from rugby with the oval ball and similar rules. The University of Toronto defeated Toronto Parkdale in the first Grey Cup competition. The Intercollegiate Football League grew from a few Ontario universities to Ontario and Western Canada then, over time, it became a professional league eventually changing its name. Dr. Whit Matthews, head of the pharmacy programs of Alberta and B.C., served on the boards of directors for the Edmonton Eskimos and British Columbia Lions. He played a major role in having the B.C. Lions accepted into the Canadian Football League using his friendship with Walter Sprague of Sprague Drugs who was the President of the league.

Baseball, an inexpensive game, became extremely popular both for participation and for watching. From the 1870's onwards the game became more established with competitions in and between most towns. This continued until the Second World War. Lacrosse was seen as the national game and from the time of Confederation there were serious competitions for the national championship. In 1914 Babe Ruth hit his first professional home run against the Toronto Maple Leafs and pitched a 9-0 game. Over this period the rules became more fixed and standard and the teams more professional. A national organization was formed in 1912 but the war ended

competition and it never reestablished itself.

Hockey had a long history dating back to 1875 in Montreal. The early teams were sponsored by companies with the hockey players working and playing, thereby receiving more money than the other workers. Most cities and towns had teams, increasingly professional, and there were national competitions. In 1894 the Stanley Cup was the emblem of national championship with Montreal, Quebec, and Ottawa being consistent winners. A French Canadian team, the Montreal Canadiens, was formed in 1909. In the same year the National Hockey League was formed with a few national teams. In 1912 artificial ice came into use expanding the spectator sport.

By 1912 most of the major sports in Canada had become professional and the players were able to make a living from sport alone. The war brought sport development to and end and after the war it took a while to reestablish the professional sport system.

Social organizations grew with urbanization. Social clubs, dance halls, roller skating rinks, amusement parks, and theatres were among the opportunities available to the middle class. Workers had their own social clubs usually linked to their trade or employment. These featured drink, food, accommodation, barbers, and laundry facilities. They were a refuge from the slums and workplace.

Medical and Pharmaceutical Advances

The twentieth century was an era of unprecedented population growth. World population almost quadrupled from 1.6 billion to 6.1 billion. The increase was almost entirely due to the health advances. Infectious diseases were reduced and the decline in infant mortality allowed children to grow into adults. While public health measures were important, the widespread use of new medication also made a major contribution. In the previous century population growth increased due to public health measures, better nutrition, and rising incomes.

In 1909 the leading causes of death in Canada were:

1. Pneumonia and influenza
2. Tuberculosis
3. Heart disease
5. Stroke

The first two were infectious diseases with no cure available. In 1910 Paul Erhlich discovered Salvarsan, an arsenic compound used to cure syphilis. This was a major discovery in that the common view at the time was that bacterial cells were similar to human cells and any substance that would kill bacterial cells would also kill human cells. Fortunately this was not the case and the beginning of anti-infective product research by firms began. Earlier, in 1900, Ciba introduced Vioform, an iodinated quinolone antiseptic product that prevented wounds from becoming infected. It was later used for a variety of skin conditions and to treat amoeba infections and as a trichomonacide. It was in use for almost 75 years.

Pharmaceutical firms that had been producing standard products in large quantities began to shift to patent specialities that would only be available from them and which would be better than

competitive products. Swiss firms in Basel (Hoffman-LaRoche, Ciba, Geigy, and Sandoz) began from the cloth industry in which chemical dyes derived from coal tar were discovered in 1856 created a thriving chemical industry. This approach led to the production of a huge number of standard pharmaceutical chemicals to treat most diseases in the 1890's with a separate organization and research focus beginning about 1917 (Ciba). This transition was slow as the large production of dyestuffs was lucrative and high volume whereas pharmaceuticals was a small specialty area with high risk. The early products were quite variable and it was not until qualitative research methods were developed that quality was achieved. Research groups began to be formed in the pharmaceutical companies and these provided employment for many pharmacists. In the early years of the century a number of Swiss, German, and United States firms established research groups to develop new products based on research advances. They also established links to universities and often provided bursaries to students to study pharmacology. Some of the leading researchers had links to pharmaceutical firms. This was particularly true of the Burroughs and Wellcome firm in Britain founded in 1880 by two pharmacy graduates of the Philadelphia College of Pharmacy. Using compressed tablets called "Tabloid" they produced a wide range of pharmaceuticals. Based on their success they established the Wellcome Physiological Research Laboratory in 1896 and developed a number of anti-toxins. They also created the Wellcome Chemical Research Laboratories for chemical products. Governmental restrictions slowed progress of physiological products, as they required the use of live animals, until 1901 but the laboratory was productive in conducting fundamental physiological research leading to the isolation and marketing of a number of biological products, seventeen vaccines against diseases such as cholera, typhoid, and influenza. These were separate from the chemical products. The antitoxins were a valuable contribution to the war effort. Research into tropical diseases was conducted in Khartoum from 1913 with antitoxin provided at no charge to explorers in Africa. These world wide research initiatives created an environment that has shaped pharmacy and the health care system to this day. In the process of doing so it has been commercially successful generating substantial profits. Unfortunately, these profits have also created an enormous number of experts on the pharmaceutical industry and drug prices that can expound at length on the topic as they appear not to be held back by any knowledge of the subject.

An important discovery that greatly improved the treatment of the wounded during the war was Dakin's Solution. Although similar chlorine preparations had been used to treat decomposing tissue in various situations, the less caustic Dakin's Solution was extremely effective and continued to be used for a very long time. It was used in Canadian hospitals in the 1950's. The solution consists of 0.5 to 0.6% sodium hypochloride.

Some pharmacists and wholesale firms also began their own manufacturing plants. In each province there were pharmacies that prepared products on a commercial scale and sold them in their region. David Bole in Winnipeg pulled together 18 wholesale firms in 1907 to form the National Drug Company which established a major chemical firm, the largest manufacturing plant, and a large factory for patent medicines and toiletries (there were few cosmetics at the time and women often used flour as a face powder).

At the turn of the century the vitamins were discovered (the term vitamin is derived from "vital

amine") beginning with thiamine and the water soluble vitamins. Later vitamins A, D, and K were discovered. The public was interested and knowledgeable about vitamins which provided a large and growing market for pharmaceutical firms and pharmacies. Although the indicated use for vitamins was deficiencies such as the neuritis of beriberi from thiamine deficiencies and rickets (deformed bones) from inadequate vitamin D, people began to take them as a dietary supplement often with the belief that they provided energy. This large market has continued to grow and the belief system that vitamins keep a person healthy has also flourished so that dietary supplements and health foods are now a major health market.

Until early in the 20th century pharmacies carried marijuana, heroin, and morphine and sold it without a prescription when they thought it would be useful. Many benefits were thought to accrue from the use of some of these products and also many problems. It was this situation that led pharmacists, as in B.C., to take action in 1908 - 1910 to protect the public by setting out new schedules to control the ingredients of Patent and Proprietary products as well as habit forming drugs. In this period there were a number of international conferences beginning in 1912 and agreements to standardize the regulation of narcotics. Canada initiated the Opium and Drug Act in 1906 based on some racist views. In the United States the Harrison Narcotic Act was passed in 1914.

The war disrupted the trade in pharmaceuticals. North America was largely dependent on European products, especially from Germany. The patents held by German firms were confiscated in Canada and the United States and sold to domestic firms. This is why we have, or had, two firms with the same names (Schering and Schering, Merck and Merck). The war also created a huge domestic market for drugs. One firm in the United States, S.B. Penick, began in 1914 as a merchant and miller of drugs from nearby fields in North Carolina. It rapidly expanded and became the largest supplier in the world for pharmaceutical and allied uses, especially of codeine and morphine in 1960. It was then purchased and underwent many changes but continues to manufacture active ingredients in New Jersey.

Pharmacy Education and Pharmacy Organizations.

Pharmacy education continued to develop in Canada. In 1905 Laval University in Montreal began a pharmacy program taught in French. This later became the University of Montreal in 1919 and it continued the pharmacy program. The Montreal College of Pharmacy offered instruction from 1864 to 1918 when the program was transferred to McGill University. Unfortunately, in 1925 the program at McGill was discontinued. In Nova Scotia the Nova Scotia Pharmaceutical Society initiated the establishment of a College of Pharmacy in 1911 in conjunction with Dalhousie University. Additional sponsorship from the New Brunswick Pharmaceutical Society in 1917 resulted in the formation of the Maritime College of Pharmacy in Halifax. Saskatchewan and Alberta began pharmacy programs in their universities in 1913. British Columbia continued their apprenticeship program with a certificate as Certified Clerk after two years and after two more a Licentiate in Pharmacy. Articles were published in the B.C. Pharmaceutical Record to broaden the education of apprentices. To assist pharmacists returning from the war, examination after one year of apprenticeship was allowed. Private schools began in 1920 to teach pharmacy students in order to prepare them for examination. The University of British Columbia offered courses through its Extension Department and later established a

Pharmacy Program in 1946 under Dean E.L. Woods. This came about only when substantial funding was offered by G.T. Cunningham, owner of a chain of pharmacies, and by the B.C. Pharmaceutical Association.

The Newfoundland Pharmaceutical Association was formed in 1910. Alberta and Saskatchewan formed associations in 1911 and were removed from the jurisdiction of the Northwest Pharmaceutical Act of 1892. (British Columbia had a Pharmacy Act in 1891).

In 1907 the Canadian Pharmaceutical Association was formed. It came about due to lack of representation of important issues such as tax legislation that pharmacists found oppressive. To create a way of lobbying government a progressive group of pharmacists from across Canada under the leadership of G.A. Burbidge, Dean of Pharmacy, of Nova Scotia and George Gibbard, editor of the Canadian Pharmaceutical Journal, the founding members. George Gibbard was the first president.

At the first annual conference held in Toronto, 1908, the Canadian Pharmaceutical Association formed five committees to deal with issues. One committee was to study educational standards amongst provinces with a view to adopting a uniform standard and establishing a national Board of Examiners (it was about 1970-80 that common academic standards were reached; the Pharmacy Examining Board of Canada legislation was passed in 1963). At the time the Canadian Pharmaceutical Association was founded the major concerns of pharmacists were: 25% of pharmacies were owned by physicians, Sunday closing of pharmacies, prevalence of quack remedies, replacement of compounded products by proprietary medicines, and worst of all, the threat of cut rate pricing policies. While there was some cost cutting in Canada, the profession was stimulated to take action by the situation in the United States. Pharmacies in the United States were seen to be virtually small department stores stressing the sale of patent medicines and having only a small dispensary with a pharmacist. To some extent this situation has now come to pass in Canada.

There were some early successes. The Canadian Pharmaceutical Association was responsible for recommending changes to the Patent Medicine Bill in 1908 and making it more practical from a pharmacy perspective. The Association was a major influence in establishing the Anti-Cocaine Bill in Ontario that restricted the sale of cocaine to pharmacies. This legislation was then enacted in other provinces and incorporated into federal legislation. In the discussions of the association, the conflict between commercial and professional interests was identified and attempts made to clarify the role of the pharmacist in society.

The second national conference was held in Banff in 1909. It dealt with price-cutting, education, and the Canadian Formulary (a standardized list of formulae that the pharmacist would prepare on prescription and which physicians were encouraged to prescribe). For many years, until the early 1950's, the Canadian Formulary was an important project for the Canadian Pharmaceutical Association as it set out standardized formulae that were pharmaceutically stable, elegant, and therapeutically accepted. In maintaining this formulary the association engaged the staff of the pharmacy schools. The last edition of the Canadian Formulary was issued in 1949.

The following year J.P. Remington of the Philadelphia College of Pharmacy, a leader in U.S. pharmacy education, addressed the Canadian Pharmaceutical Association conference on "Pharmacy Today" as part of the continuing endeavor to improve professional activities and public perception. There was a resolution passed to tighten narcotic regulations.

At the 1912 conference it was recommended that the association publish a magazine and that the association manufacture and control a line of medicinal and toiletry items as in Britain. This led to a decision to endorse the products of Drug Trading Co. At the time Drug Trading (DT) was owned by some 200 pharmacists in Ontario. Under the agreement, the election of members to the DT Board was subject to approval of the Canadian Pharmaceutical Association.

There were no meetings of the Canadian Pharmaceutical Association during the Great War. The justification for this was given by the editor of the Journal, "Patriotism justifies postponement. The social features of the convention are not a minor factor, and with the Old Motherland fighting for the integrity of empire…social functions and entertainment should find no place in our community or fraternal life."

The War resulted in shortages of medicinal products as many had been imported from Germany. These shortages prompted a rapid expansion of Canada's pharmaceutical research and manufacturing capacities. Some pharmacy schools developed medicinal plant gardens to obtain medicinal products such as digitalis.

After the War, the 1919 national pharmacy conference was held in Winnipeg and a Committee of Commercial Interests formed. The role of the Canadian Pharmaceutical Association in lobbying the federal government was confirmed. In this they were successful in obtaining a reduction in the Excise tax on alcohol used in dispensing. As this was quite a large tax it represented a substantial saving to pharmacists. They also agreed to a national pricing code - PHARMOCIST, representing the numbers 1 to 0. This was used on prescriptions with the price charged on the prescription in code. In this case a prescription selling at $2.95 would have the code HSM. In the 1950's the use of this code was proscribed by the federal government (Restrictive Trade Practices Commission).

References

Canadian Pharmacists Association. *1907-2007: 100 Years of Leadership*. Ottawa: Canadian Pharmacists Association, 2007.

Gray, James. *Booze: The Impact of Whisky on the Prairie West*. Toronto: Macmillan of Canada, 1972.

Locock, R.A. "Dakin's Solution". Canadian Pharmaceutical Journal, February 1959 and April 1960.

Martin, A.M. *Pharmacy in Canada*. Vancouver: 1955.

Morrison, J.H. and J. Moreira, eds. *Tempered by Rum: Rum in the History of the Maritime Provinces*. Ports Lake, NS: Pottersfield Press, 1988.

Morton, Desmond. *A Military History of Canada*. 4th ed. Toronto: McClelland & Stewart, 1999.

Raison, A.V. *A Brief History of Pharmacy in Canada.* Toronto: Canadian Pharmaceutical Association, 1967.