

The Romance of Medicine in Canada

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Four Centuries of Medical History in Canada

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THE FIRST CANADIAN PRESCRIPTION

THE COMPANY OF JACQUES CARTIER SPENT THE WINTER OF 1535-1536 ON THE RIVER ST. CHARLES AT QUEBEC. DURING THEIR STAY THEY SUFFERED SEVERELY FROM SCURVY. AN INDIAN TOLD CARTIER OF THE NATIVE REMEDY—HEMLOCK TWIGS AND BARK BOILED, THE LIQUOR TO BE DRUNK AND THE DREGS USED AS A POULTICE FOR THE SWELLING AND INFLAMMATION CAUSED BY THE DISEASE.

FOREWORD

TO THOSE who are interested in the history of Canada and the part played by disease in colonization and development, *The Romance of Medicine in Canada*, so replete with stirring drama, will prove to be not only a storehouse of historical information but a fascinating story as well. The author follows the trail of disease from the earliest days when it decimated the Indians, through the French occupation and that of the British up to the present time. He has brought to life characters, both medical and lay, who left a lasting imprint upon the history of the country. Disease ranked with war as the great scourge of early Canada and was one of the most destructive forces encountered. The author paints a picture of the diseases that decimated Indians, French and English and the dominating part played by them in the wars for possession of the North American Continent. He tells the story of the pioneers of Canadian medicine, the French surgeons and those British surgeons who came to Canada with the troops and loyalists. *The Romance of Medicine in Canada* is a concise yet complete presentation of all that appertains to the development of medicine in this country. The determination and courage of the pioneers of medicine as set forth in *The Romance of Medicine in Canada* cannot but prove to be an inspiration to the medical profession of the present day and to all those who are interested in the welfare of humanity. I commend it to the general reader as a well-told tale of absorbing interest.

IAN MACKENZIE.

INTRODUCTION

TO KINGS AND QUEENS with their diadems and crowns exploration owes little. Ferdinand and Isabella were moved by no wish to add new lands to their possessions for the benefit of their subjects; no desire to improve the lot of their people when, after much persuasion, they gave financial aid to Columbus. They were actuated only by vanity and greed. With the eye of imagination they saw themselves monarchs of a vast empire with the gold and jewels of newly discovered lands poured out at their feet. They could not conceive of the grandeur of the venture of Columbus "more stupendous than those which heaven has permitted any other mortal to achieve." The King of France had little interest in the discovery of new lands to add to his domain. He showed only disappointment when the jewels brought from Canada proved to be worthless baubles.

To Verrazano, the Cabots, Cartier, Champlain, La Salle and La Vérendrye, and to those explorers of a later day, Fraser, Thompson, Mackenzie, Hearne and others, Canada pays tribute. They were moved by no base desire for personal gain. Within them burned the zeal to discover new lands and to further the lot of humanity. Following fast in the footsteps of the explorers came the priest to bring the light of Christianity to the savage; the teaching orders to enlighten the untutored minds of the children of the forest that they might read the beautiful story of Christ; and the nursing sister and physician to minister to their bodies. To these and the churches of various denominations we owe the foundation of many of our

universities and medical schools. They fostered the arts and the sciences which have contributed so much to the high standards of Canadian life.

The story of medicine as it unfolds brings to mind heroic days when the history of the country was being written. It recalls the wars between English and French for possession of the country, the rivalries between races, creeds and political factions, the courage, cowardice, friendships, hatreds, greed and exploitation which give us our pattern of history.

Medicine has given us in Canada many great men who have won world-wide renown and many more unheard of beyond their own small sphere who devoted their lives to the welfare of the people. In the field of medicine and surgery, in the liberal arts, and in the field of statesmanship, Canadian physicians have excelled. It is not possible within the pages of this small volume to recount the lives of all of these men. Rather it is the intention to paint a picture of the development of medicine in a young country harassed by wars and disease in order that physicians of this day, in contemplating the difficulties and achievements of the past, may better appreciate the contributions that pioneers in the field of medicine have made to this great country.

The primary object of writing *The Romance of Medicine in Canada* is to bring to the attention of the student of history and the general reader the part played by disease in controlling the destiny of Canada. Few are aware that disease played a major role in the wars between France and England for the mastery of the North American continent and was the deciding factor in many engagements. Across the page of Canadian history disease stalked as a sinister figure bringing to naught the best laid plans of French and English. It ravaged friend and foe alike, sparing neither victor nor vanquished. Repeatedly, it decimated

the population and seriously retarded the development of the country. No one who has not taken full account of the diseases which afflicted this country and of the efforts to stay their ravages knows the full history of Canada. Apart from this, the history of the conquest of disease in Canada is an absorbing story so filled with stirring incident that the word "Romance" best describes it.

Although the student has access to numerous documents dealing with certain phases of history, the publication in concise form of the part played by disease in the development of the country under French and British will meet a long felt need by those interested in the story of Canada.

Some years ago the writer published *Four Centuries of Medical History in Canada* but the cost made it prohibitive. The name appealed to the medical profession only and the public had little or no access to it although, apart from medical facts, it contained much of history and story. To bring this material to the student of history and the reading public in a concise and inexpensive form, much of it has been incorporated in *The Romance of Medicine in Canada*.

The courtesy of the publishers for permission to use the material contained in *Four Centuries of Medical History in Canada* and the collaboration of Miss M. B. Van Dusen in preparing the material for *The Romance of Medicine in Canada* are acknowledged.

J. J. H.

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The Romance of Medicine in Canada

CHAPTER I

Diseases of the Indians of Canada

THERE is nothing so fascinating to the student of history as delving in the rich soil of the storied past searching for that elusive, undiscovered fact that lies hidden in some long-forgotten musty tome.

Unhistoried as smokes that rise
From happy hearths, and sights elude
In kindred blue of morning skies.

In such manner has much of the past been brought to light.

The Jesuit Relations tell the story of early medicine in Canada, day by day, week by week, month by month, and it is revealed in the registers of the Sisters' Hospitals at Quebec and Montreal year by year. From these and from faded, time-worn documents, reports of the Governors and Intendants, carried across the seas in the ships of the King, thumbed by King and courtiers whose interest in the New World was purely material, much of the story of medicine that unfolds in the pages that follow has been gleaned. The story of medicine in Canada is written in the wars that were constantly waged by England and France for possession of the continent and in the lives of the actors who played a part great or small. Everywhere, and in every event, there is to be found some statement or fact relating to Canadian medicine.

Few people associate disease with the history of Canada, yet it played an important part in guiding, if not controlling, the destiny of the country, and, had it not been for disease that plagued the French settlers from the time of their arrival in the country, it is doubtful whether Canada would have become a British possession. This fact will become evident as the story of medicine unfolds. To elicit the facts, one need only turn back the pages of the numerous volumes that cover the history of the country for a period of four hundred years and study the many documents that lie buried in Canadian archives.

Four centuries ago Canada was but a dream of the explorer. The world was a small one and the outlook circumscribed. Little exploring had been done and few discoveries made. While a number of explorers had visited Canada following the brilliant discoveries of Columbus, it remained for Cartier to penetrate the country. On his second voyage to Canada, he visited the Indian village of Hochelaga, which occupied a site at the foot of Mount Royal. Here is an interesting account of his meeting with Agouhanna, the Indian Chief, which gives us a picture of the physical state of the Indians; it is the first record of disease in Canada:

This Agouhanna, who was some fifty years of age, was in no way better dressed than the other Indians except that he wore about his head for a crown a red band made of hedgehog's skin. This Chief was completely paralyzed and deprived of the use of his limbs. When he had saluted the Captain (meaning Cartier) and his men, by making signs which clearly meant that they were very welcome, he showed them his arms and legs, beckoning Cartier to be good enough to touch them, as if he thereby expected to be cured and healed. On this Cartier set about rubbing his arms and legs with his hands. Thereupon Agouhanna took the band of cloth he was wearing as a crown and presented it to Cartier. And at once many sick persons, some blind, others with but one eye, others lame or impotent and

others again so extremely old that their eyelids hung down on their cheeks, were brought in and set down near Cartier, in order that he might lay his hands upon them, so that one would have thought Christ had come down to earth to heal them.

We picture the Indians as a stalwart race, living the life of the open, fishing, hunting, and altogether free from the ills of mankind, but the truth is that the Indians suffered from many of the ordinary ailments to which mankind is heir. Amerigo Vespucci, in an account of his first voyage to America, tells us that the Indians were "vitiating in the phlegm"—possibly he refers to tuberculosis—"and in the blood" because of their food, which consisted chiefly of herbs, roots, fruit and fish. "They have no wheat," he says, "or other grains." The Canadian Indian often suffered from scurvy—a veritable plague among them. It occurred chiefly during the winter months when storms and heavy snow made hunting and fishing impossible and when there was a shortage of dried corn, roots and herbs. Their treatment of the disease, which was most efficacious, consisted of a brew of the bark and leaves of the "annedda," a species of spruce or hemlock.

When the French reached Canada they found that the Indians were possessed of a knowledge of medicine and surgery that was in some respects the equal of their own. In their application of the medicinal properties of roots and herbs, they were probably superior to the French physicians. They had remedies for each and every need, expectorants, emetics, purgatives, astringents—even emenagogues. Their medicine man was only a concession to superstition and not the curator of their medical knowledge. Their system of medicine was an unwritten one that was handed down from generation to generation and, in spite of the manifold defects of such a system, was surprisingly complete. In the hands of the women of the tribe was

placed the treatment and care of the sick. They also acted as accoucheurs. In this regard an early writer tells us:

As soon as a woman believed herself pregnant, she must acquaint her husband who never had to do with her again, but this is not generally observed by all. When the wife is near being delivered, she leaves the hut and goes away into the wood, at some distance from it, with another woman to assist her and the business is soon over. The woman delivered gives her assistant the knife which cut the navel string, and that is all her reward. The new-born babe is immediately washed, whether it be in winter or summer. The first nourishment it takes is the oil of some fish, or melted tallow of some beast; the infant is made to swallow it, and after, it has nothing but the mother's milk.

The following extraordinary method of resuscitating the drowned is worthy of repeating:

They are often exposed to be drowned because their slight canoes, made of bark, are so subject to upset. Those who have the good fortune to get ashore make all possible speed to take up the rest that are still remaining in the water; then they fill the paunch of some beast or a large and long gut, which are their usual vessels for keeping of the oyl made of any fish, with the smoke of tobacco and having ty'd up one end very close they apply to the other a tobacco pipe the end whereof they put in the fundament of the drowned person and pressing the aforesaid gut, drive the smoke through that pipe into his body; then they hang him up by the feet in the next tree and generally have the satisfaction to see that the clister of smoke makes them cast up all the water they have swallowed and brings them to life again.

It was only when the Indians became infected with the diseases of the white man that their system of medicine broke down. This was especially true of their treatment of smallpox. This disease they treated by the sweat bath and plunge into cold water, with the result that many deaths ensued. There were two ways of producing the sweat: one by scooping out a hole about a foot deep in the sand and about the length of the body, surrounding it with

heated stones and covering the person placed therein with resinous branches; the other, by making a small hut or wigwam in which was placed a bucket of water into which heated stones were thrown. One of the early Jesuit missionaries tells us that the Canadian Indian made his sweat-box in the following way:

They make a pit in the ground of their own length, both sides whereof they line with stones made almost red hot, then lay a bed of branches of the fir tree at the bottom and lye on it at their full length; after which they are covered with more branches of the same sort, which heat, and being of a bituminous nature make a thick smoke and thus in a short time they are in a thorough sweat, and continue so long as they think fit; but what I most admired was that those sweating pits were always made on the bank of a lake or river and that the savages as soon as they came out reeking with wet threw themselves into the water and thus they are immediately cured by such contrary extremes.

Whether they suffered from venereal disease before the coming of the white man is unknown. No mention is made of venereal diseases among them by the early French writers, notably the Jesuits who wrote so minutely of their habits and customs. However, Kalm, in an account of his travels in Canada, published in 1770, tells us:

The venereal disease syphilis is common here. The Indians are likewise infected with it; and many of them have had it; and some still have it; but they likewise are perfectly possessed of the art of curing it. There are examples of Frenchmen and Indians infected all over the body with the disease, who have been radically and perfectly cured by the Indians within five or six months. The French have not been able to find this remedy out; though they know that the Indians employ no mercury, but that their chief remedies are roots, which are unknown to the French. I have afterwards heard what these plants were, and have given an account of them at length to the Royal Swedish Academy of Sciences.

The plant described by Kalm was *Stillingia hepatica*. This reputed cure was in all probability the one used by the

Indians, for John Bartram described this remedy and said that he "had the information from Kalm who had it from Colonel Johnson, who was told it by the Indians." In all probability the Indians were infected as early as 1536, as some of Cartier's crew suffered from syphilis at that time. They also were affected with gonorrhœa which they undoubtedly acquired from the whites and treated with a decoction of the prickly ash.

Prior to the coming of the French, the infectious diseases from which the Indians suffered were not many, and there is little doubt that such diseases as measles, scarlet fever, diphtheria, chicken-pox, smallpox, typhus, typhoid, malaria and yellow fever, as well as tuberculosis, were importations. Their diseases were those due to exposure to the weather, hardship, famine and injury. Diseases of the eye due to prolonged irritation by the smoke of their houses, in which there were no chimneys but only a hole in the roof, were extremely common and frequently led to blindness.

They had some knowledge of surgery. Contused wounds and bruises were treated by the application of cold water from springs and streams in the form of a compress. The bark of the slippery elm and basswood and the resinous bark of the tamarack were applied to running sores. Ulcers were treated with a decoction of the underbark and the juice of the juniper berry. It is said that they reduced dislocations by the application of force and by a rotatory or twisting method. Among the several tribes were found skilled bone-setters, who cleverly reduced and carefully set fractures of the bones. Splints of cedar or broom were applied and ingeniously padded by the squaws with leaves or grass and the limb bound with the soft, pliable branches of the young birch. Their treatment of fracture, as described by one of the early missionaries, merits recital:

If they happen to break an arm or a leg, they set the bone again expertly and make great bolsters or pads of moss which

they cover with resin. This they place about the broken limb, covering all with the bark of the birch tree because it is pliable and easily takes the shape of the part; nor do they omit splinting, and to keep all tight, they take long pieces of thinner bark and make a proper bandage; then they place the patient on a bed of moss, and this method never fails.

Amputations were performed at the joints with knives of flint or jasper, spouting vessels seared, and hemorrhage arrested with stones heated to redness.

Like the white man, the Indian suffered from mental diseases. Reference to mental disorders, both real and feigned, as well as to epilepsy, are found. Here is one:

The nature of the savage is patient, liberal, hospitable but importunate, visionary, childish, licentious, proud, lazy. They have among them many fools or rather lunatics and insane people.

To insanity the Indians gave the name "ononhaioia" or "turning the brain upside down." That the Indian was shrewd enough to recognize the value of malingering as a means of making an easy living was evident to the early settlers, and in this regard one of the missionaries tells us that in going through the country he found Indians who played the part of the insane with all possible extravagances, who took extreme liberties and were suffered to do as they pleased for fear of offending their familiar demon. "They take the embers from the fire," he says, "and scatter them around; they break and shatter what they encounter as if they were raving, although, for the most part, they are as self-controlled as normal individuals."

In writing of the mental aberrations of the Indians, a writer of the period narrates the following:

One of the prominent young men of the village, acting the madman, encountered a spectre or demon with whom he had some words, and this meeting so deranged him that he fell down

and actually became insane. The remedy was to promptly kill two dogs, one of which he held specially dear, of which a feast was made. In consequence, he became better and finally recovered his senses.

Another treatment that was undoubtedly very effective was to fasten a looped rope to the neck and foot of the insane person. The leg was then drawn up to the body and the rope tightened in such a manner that when the individual stretched his legs he automatically tightened the noose around his neck and strangled himself.

We are told that there is little insanity among the Chinese and, in fact, it is so rare that the insane person is held in reverence. This was much the case with the Indians.

The arrival of the white man brought to the Indians new and to them unknown diseases that swept through them like a devastating flame. None took a greater toll of life than smallpox. Who has not gloried in the courage of Pocahontas, the Indian maiden who saved the life of Captain John Smith! She married John Rolfe, a young Englishman, and visited England with him. There, she was presented at Court and received everywhere with the greatest kindness and respect and shown the courtesy extended only to persons of the highest rank. The English vied with one another in honouring her. Rolfe was appointed Secretary and Recorder General of Virginia and she set out with him aboard ship for America. Becoming suddenly ill, she died of smallpox—a tragic ending to so fine a character!

On returning from his first voyage to Canada, Cartier picked up two Indians in the Gulf of St. Lawrence and took them with him to France. While there, they died of smallpox.

The almost complete disappearance of the Lucayan Indians of Mexico was due to smallpox. The disease was

brought to that country in 1520 by Spanish troops. Of the Indians who contracted it, three and a half million died.

But what effect did this disease have upon the Canadian Indians who are so much nearer to us? Let us see what Jesuit missionaries who spent their lives among them have to say. The Jesuits were men of culture who, as Parkman tells us, to win the Indians to Christianity gave up home, friends and comfort to brave the cold, wet and misery of an Indian village with its squalour, bad and scanty food, and with the prospect ever in the background of death by the most excruciating torture. Their ability was high, and there is an old Canadian saying that "you can cut out a Récollet with a hatchet, a Parish Priest with a chisel, but for a Jesuit you need the pencil of an artist."

Le Jeune in his *Relation* of the year 1635 tells us in that year smallpox was so universal among the Indians that he did not know of one who escaped it, and he goes on to say:

All of these poor people have been much inconvenienced by it, particularly during the autumn, as much in their fishing as in their harvesting. Many crops are lying beneath the snow; a large number of persons are dead; there are still some who have recovered. This sickness began with a violent fever that was followed by a sort of measles or smallpox, different however from that common in France, accompanied in several cases by blindness for some days, or by dimness of sight, and terminated at length by diarrhoea which has carried off many and is still bringing many to the grave.

The experience of the Jesuits with the Algonquin tribe was unsatisfactory, and they established in the neighbourhood of Georgian Bay, a mission among the Hurons, who seemed to offer more hopeful material than the Algonquins. Soon after they established their mission among the Hurons, smallpox, brought from the lower St. Lawrence, broke out and decimated them. The disease was ascribed

to the "medicine" of the black-robos. The contagion increased as autumn advanced; and when winter came, far from ceasing as the priests had hoped, its ravages were appalling. Terror was universal. The season of Huron festivity was turned to a season of mourning, and such was the despondency and dismay, that suicides became frequent. The Jesuits, singly or in pairs, journeyed in the depth of winter from village to village, ministering to the sick, and seeking to commend their religious teaching by their efforts to relieve bodily distress. No house was left unvisited. As the missionary, physician at once to body and soul, entered one of these smoky dens, he saw the inmates, their heads muffled in their robes of skin, seated around the fires in silent dejection. Everywhere was heard the wail of the sick and dying, and "on or under the platforms at the sides of the house crouched squalid men and women, in all the stages of the distemper."

The Indians, believing that the disease was given them by the Jesuits, resolved upon their massacre. In his *Relation* of the year 1637, Le Jeune gives us the following striking description:

Let us come to the disease, which, having put everything in desolation, gave us much exercise, but was also an occasion of much consolation to us, God having given us scarcely any other harvest from that quarter. It was upon the return from the journey which the Hurons had made to "Kébec" that it started in the country—our Hurons, while again on their way up here, having thoughtlessly mixed with the Algonquins, whom they met on the route, most of whom were infected with smallpox. The first Huron who introduced it came ashore at the foot of our house, newly built on the bank of a lake—being carried thence to his own village, about a league distant from us, he straightaway died.

Without being a great prophet one could assure one's self that the evil would soon be spread abroad through all these regions; for the Hurons—no matter what plague or contagion they may have—live in the midst of their sick, in the same indifference,

and community of all things as if they were in perfect health. In fact, in a few days, almost all of those in the cabin of the deceased found themselves infected; then the evil spread from house to house, from village to village, and finally became scattered throughout the country.

The villages nearer to our new house having been the first ones attacked, and most afflicted, the devil did not fail to seize his opportunity for re-awakening all the old imaginations, and causing the former complaints of us, and of our sojourn in these quarters, to be renewed; as if it were the sole cause of all their misfortunes and especially of the sick. They no longer speak of aught else, they cry aloud that the French must be massacred. These barbarians animate one another to that effect; the death of their nearest relatives takes away their reason, and increases their rage against us so strongly in each village that the best informed can hardly believe that we can survive so horrible a storm. They observed with some sort of reason that since our arrival in these lands those who had been the nearest to us happened to be the most ruined by the disease, and that whole villages of those who had received us now appeared utterly exterminated; and certainly they said, the same would be the fate of all the others if the course of this misfortune were not stopped by the massacre of those who were the cause of it.

This was a common opinion not only in private conversation but in the general councils held on this account, where the plurality of votes went for our deaths—there being only a few elders who thought they greatly obliged us by resolving on banishment. What powerfully confirmed this false imagination was that at the same time, they saw us dispersed throughout the country—seeking all sorts of ways to enter the cabins, instructing and baptising those most ill with a care they had never seen. No doubt they said, it must needs be that we had a secret understanding with the disease, (for they believe that it is a demon), since we alone were all full of life and health although we constantly breathed nothing but a totally infected air—staying whole days close by the side of the most foul smelling patients, for whom everyone felt horror; no doubt we carried the trouble with us since wherever we set foot death or disease followed us.

These tribes believe that we poison and bewitch them, carrying this so far that some of them no longer use the kettles of the French. They say that we have infected the waters, and

that the mists which issue thence kill them; that our houses are fatal to them; that we have with us a dead body which serves us as black magic; that, to kill their children, some Frenchmen penetrated the horrible depths of the woods, taking with them the picture of a little child which we had pricked with the points of an awl, and that therein lay the exact cause of their death. They go even further,—they attack our Saviour, Jesus Christ; for they publish that there is something, I know not what, in the little Tabernacle of our chapel, which causes them to die miserably.

In consequence of all these sayings, many had us in abomination; they expelled us from their cabins, and did not allow us to approach their sick, and especially children; not even to lay eyes on them—in a word we were dreaded as the greatest sorcerers on earth. Wherein truly it must be acknowledged that these poor people are in some sense excusable. For it has happened very often, and has been remarked more than a hundred times, that where we were most welcome, where we baptized most people, there it was in fact where they died the most; and, on the contrary, in the cabins to which we were denied entrance, although they were sometimes sick to extremity, at the end of a few days one saw every person prosperously cured.

The Indians ordered the mission clock to be stopped, saying that every time it struck it marked the death of a Huron. Even the weather-vane on the house of the priests was under suspicion, for they said whatever way it pointed it meant death to the sick. A painting in the Jesuit chapel representing the suffering of the damned excited them as “though the flames were the burning fever which devoured their dying, and the demons, monsters that held them in the throes of disease until they were dead.” Seeing that these charges might end in disaster to the mission, Father Brébeuf summoned a meeting of the chiefs. They met in council, twenty-eight villages being represented. The chiefs accused the priests of being sorcerers. Brébeuf explained to them that smallpox was a contagious disease and told them how it spread. They told him that

he was a liar and that he ought to be killed. The meeting lasted until midnight and when Brébeuf was leaving the tent an old warrior shouted: "If some one would split your head, none of us would regret it." An attempt was made to burn the cabin of the missionaries, and a band of young warriors met secretly and determined to kill them as soon as their elders had left for the autumn fishing.

The Indians were strengthened in their belief that the disease was due to the Jesuits by the tales of one of the servants of the Jesuits, Robert le Coq. The Indians maintained that this young Frenchman had told them the Jesuits were the cause of the disease, and that he had discovered their "mysteries and the most hidden secrets of their enchantments." "Some said that we nourished, in a retired place in our house, a certain serpent, and this was the disease. Others said it was a kind of toad all marked with pits. Others said that the disease was kept in an arquebus, and could be easily sent by this means wherever one wished."

However, while threats and a show of force were made by the Indians, there were no deaths—"for all these threats have had but little effect—we are alive and, thank God, are full of life and health. It is indeed true that the crosses have been stricken from above our houses; that people have entered our cabins, hatchet in hand, in order to deal some evil blow there; they have, it is said, awaited some of ours on the road, with the intention of killing them; the hatchet has been lifted above others, and the blow brought within a finger-length of their bare heads; the crucifixes which were carried to the sick have been violently snatched from us; blows from a club have been inflicted upon one of our missionaries, to prevent him conferring some baptisms."

Speaking of the antipathy of the Indians, who blamed

the Jesuits for giving them the disease, Father Ragueneau says:

In fact, on the round we have just made, we have found everywhere the cabins closed, and several who saw themselves surprised before they had contrived to anticipate our arrival, forthwith drove us out; others said that they were deaf; and even maliciously stopped their ears, for fear of hearing us; some acted as madmen and lunatics and exclaimed that they could not bear the sight of us; in a word they will not hear what they are not persuaded to do.

In St. Thérèse Father Ragueneau had a more fearful reception. He says:

A young man forcibly seizes the crucifix which I wear about my neck, takes a hatchet in his hand and says that positively I shall die. He lifts the hatchet directly above the middle of my head—then uncovered—and deals his blow so steadily that Father Chaumonot and I think to see at that moment what we have so long desired (martyrdom). I know not what stopped the blow, unless the greatness of my sins, but short of feeling the hatchet cleave a head in twain, one cannot see one's self closer to death. He is fain to repeat his stroke; a woman stops his arm and seizes him.

Le Jeune relates the following interesting incident, indicating that he had some knowledge of the way in which the disease is spread:

Our savages, especially the Christians, seeing that his Majesty had sent them clothes in the French fashion determined to send a little dress, such as is worn by savages, to Monseigneur the Dauphin. When they handed it to me they had the wit to say, it is not a present that we make him for his riches are far greater than ours; but it is a metawagan—a small toy to amuse his little son, who may perhaps take pleasure in seeing how our children are dressed. However as smallpox greatly prevails among our savages I do not know whether it is advisable to present it for fear that it may carry even the slightest contagion.

While accounts of smallpox among the Indians of Canada in those early days refer most frequently to the

regions about Quebec, Three Rivers and Lake Huron, mention is made of the fact that the disease had reached Tadoussac in the east and had spread as far west as Sault Ste. Marie. Quebec, Three Rivers and Tadoussac, on the St. Lawrence, were from the earliest days fur trading stations and a convenient place of assembly for the lower and eastern part of the country. They were, therefore, foci for the spread of infection.

Turning for a moment to the Indians of the South, we find that smallpox had appeared among the various tribes that inhabited the country from the Atlantic to the Mississippi and continued among them till a comparatively late period. The following interesting story is told of the Omahas who were once the most numerous and powerful race to inhabit the prairies and who were practically exterminated by smallpox in the year 1802:

In the hey-day of their pride and strength they considered themselves the finest and most perfect of all created beings. Their chief was the renowned Washing-guh-sah-ba, or Blackbird. He was one of the first of the Indians of the prairies to trade with the white men. It is said that when a trader arrived in his village he ordered all the goods to be brought to his lodge and there he chose for himself whatever he wished without offering any payment. Then he would summon his people to bring their furs and trade. He would not permit any of his people to dispute the price asked by the trader and in this way he enriched himself and the traders, and was very popular among the white people of the Missouri Valley. His people grew discontented at this form of treatment, and a crafty and unprincipled trader, to give the Blackbird full sway over them, revealed to him the poisonous properties of arsenic and furnished him with an ample supply of the drug. With this the Blackbird had full power of life and death and should one of his tribe displease him he prophesied his death and shortly brought

it about; thus verifying his prophecy. He was possessed of savage prowess and great skill as a warrior. On one occasion a party of Poncas made a foray into the lands of the Omahas, but the reception they met was so fierce that they were glad to sue for peace. In their extremity of fear they proffered an Indian maiden with whom the Blackbird immediately became enamoured. He took her for his bride, and peace was instantly declared. The story is told that in a fit of rage he slew his beautiful bride, then, in remorse, swore that he would never leave her side. He covered his head with his buffalo robe and sat down beside the corpse where he brooded in sorrow for three days. His people, fearing that he would starve to death, begged him to uncover his head, but he refused. Finally, one of his braves brought in a child and, laying it on the ground, placed the Blackbird's foot upon its neck to indicate that the chief was crushing his people. The heart of the Blackbird was touched by the appeal; he threw aside his robe and set aside his grief. During the epidemic of 1802 smallpox swept over the village bringing death and devastation in its wake. In a short while two-thirds of the village was swept away. The people became crazed and desperate in the face of so ruthless an enemy. Some burned the village as a last effort to stay the spread of the disease; others in despair put their wives and children to death that they might be spared the agonies of the dread visitation. At the height of the outbreak the Blackbird was struck down. His people did not desert him but drew around his bedside, and before dying he asked them to bury him astride his favourite horse on the summit of a promontory overlooking the valley of the Missouri, "that he might overlook his ancient domain, and behold the barks of the white men as they came up the river to trade with his people." His dying orders were obeyed. He was buried astride his favourite steed and a mound erected

over them. On the summit of the mound was placed a staff from which fluttered his banner and the scalps he had taken in battle.

From the year 1635, when smallpox first became epidemic among the Indians, until the time when only a remnant of the numerous tribes that once roamed the plains remained, the disease was almost always present among them. Whole tribes fled in terror to the open plains to escape its ravages. By the year 1700 it had spread over half the continent, leaving a trail of death and destruction, until the year 1807, when Jenner, the discoverer of vaccination, sent to the Five Nations Indians at Fort George smallpox vaccine with a publication of the Jennerian Society explaining vaccination. The Indians received the gift and, in their reply, wrote to Jenner the following touching letter:

Brother, Our Father has delivered to us the book you sent to instruct us how to use the discovery which the Great Spirit made to you, whereby the smallpox, that fatal enemy of our tribe, may be driven from the earth. We have deposited your book in the hands of a man of skill whom our Great Father employs to attend us when sick or wounded. We shall not fail to teach our children to speak the name of Jenner and to thank the Great Spirit for the bestowing upon him so much wisdom and so much benevolence. We send with this a belt and string of Wampum in token of our acceptance of your precious gift, and we beseech the Great Spirit to take care of you in this world, and in the land of spirits.

Vaccination came to the rescue of the Indians and saved them from extinction.

CHAPTER II

The Influence of Scurvy

FOLLOWING his visit to Hochelaga, Cartier, as we know, explored the country in the vicinity of the Island of Montreal and returned to Quebec. Before leaving on his voyage up the St. Lawrence he had instructed his men to build a fort at Cap Rouge. His return was somewhat leisurely and, when he arrived, the season was well advanced. There he found that many of his men were ill and the rest greatly alarmed because disease had broken out among them. They did not know the nature of the disease and believed it had been contracted from the Indians of the village of Stadaconé with whom they were in contact. There is an old time-worn document written by Cartier telling us of the event. Here is a literal translation of it:

In the month of December we were advised that the mortality had fallen upon the people of Stadaconé to such an extent that by their own confession more than fifty of them were dead. On account of this we forbade them our fort and from going about us but, in spite of having driven them away, the disease appeared among us in an extraordinary manner. Some lost substance, others lost their strength and could not stand on their feet, then the legs swelled, their sinews shrank and became black as coal and purple spots appeared upon the skin.

Cartier goes on to say that the swelling spread progressively from the ankles to the knees, thighs, shoulders, arms and neck, and that the gums became so diseased the teeth fell out. Then he continues:

With such infection did this sickness spread itself in our three ships that about the middle of February, out of 110 persons that we were, there were only ten whole so that one could not help the other—a most sad and pitiful case considering the place we were in.

The disease from which the Indians and Cartier's crews suffered was scurvy.

Fearing that the Indians might learn of their weakened state and kill them to gain their possessions, those who were able to do so made a display of activity to deceive them. They marched about their ships with their guns on their shoulders, although they could scarcely drag their legs after them; they hammered away incessantly in their fort and vessels to make it appear that all was well with them, but the Indians were not deceived; they knew of their dire distress but did not molest them. One by one they began to die and one by one the dead were buried in the snow. These were the first burials of white men in Canada.

But let us go on with what Cartier has to say about an autopsy on the body of one, Philippe Rougemont, who died of the disease.

He was found to have his heart white but diseased and more than a quart of blood about it. His liver was indifferent fair but his lungs were black and mortified. His blood was altogether shrunk about his heart . . . moreover, because one of his thighs was very black without, it was opened, but within it was whole and sound; that done as well as we could, he was buried.

This was the first autopsy performed in Canada. We do not know who performed the autopsy, but, as Cartier had with him as members of his crews Francoys Guitault, an apothecary, and Samson Ripault, a barber, we may safely attribute it to one or other or both. We can readily imagine that Cartier was an interested spectator.

As conditions became worse, recourse was had to prayer. Cartier put everyone to prayers and supplications. He had an image of the Virgin placed on a tree about a bow-shot distant from the fort, and issued instructions that on the following Sunday mass should be said at the spot and that all those who could walk, the sick as well as the sound, should march to the tree in procession singing the seven

psalms of David. But prayer was of little avail, the disease continued to ravage them and deaths continued to occur.

While out walking one day, Cartier, who was very observant, noticed that an Indian named Dom Agaya, who had been ill two weeks before, with, as Cartier says, "his knees swollen as big as the body of a two-year-old child," was now seemingly recovered. In order not to awaken any suspicion of their weak condition, Cartier guardedly asked him what remedy he had used to cure him. Dom Agaya told him that the Indian remedy for the disease was a brew of the bark and sap of a tree which the Indians called "annedda." He told him to steep the bark and leaves of this tree in boiling water and give the remedy to the sick every other day and put the dregs upon their legs. Cartier did this and all who drank it were cured but, before the remedy was obtained, twenty-five deaths had occurred.

In the month of April, 1542, Roberval sailed from France with some two hundred immigrants. These included a few adventurers, but were composed largely of condemned criminals, both men and women, from Paris, Toulouse and other cities. With this motley crew Roberval established a residence at Cartier's abandoned fort at Cap Rouge and spent the following winter there, about fifty of his people dying from famine and scurvy. The others fled the country, some of them falling into the hands of the Basques at Tadoussac. Thus ended the first attempt to colonize the country. It is interesting to note that the fort at Cap Rouge was the first establishment in Canada to be given an official name. On September 9, 1542, Roberval named it "France-Roy on the river France-Prime" in honour of Francis I, King of France.

In the year 1604, De Monts and Champlain entered the Bay of Fundy and discovered the beautiful harbour, now called Annapolis, to which they gave the name Port Royal. They named the St. John River, and at the mouth of the

Rivière des Étéchemins discovered an island to which was given the name St. Croix, a name which in later years was applied to the river itself. On the island there was little soil, and it was impossible to grow grain; in winter the island stream ran dry and fresh water had to be brought across the ice from the mainland. Scurvy broke out among those who wintered at St. Croix, with the result that of the seventy-nine who had landed in June, only forty-four were alive the following spring when they were rescued by Pontgravé, who was one of De Monts' lieutenants and who had followed De Monts from France.

The following year scurvy appeared among the men at Port Royal—when twelve out of a party of forty-five died—and the following year as well, although not so many were affected as during the first year.

Champlain, in speaking of scurvy in the year 1606, says:

We returned to our habitation where we found some of our people sick with mal de terre (scurvy) but not so grievously as on the island of St. Croix, since of forty-five that we were, there died twelve, of which number was the miner and five sick who were cured the following spring. Our surgeon named des Champs of Honfleur, a man expert in his art, opened some of the bodies to see if he might better recognize the cause of the disease which had not been done the preceding year. He found the parts of the bodies damaged as those which were opened on the island of St. Croix, and could not find a remedy to cure no more than the others.

There was much speculation as to the nature of the disease and there is a very interesting commentary regarding its cause in an old record, which is in part as follows:

Sieur de Champlain philosophizing upon this, attributes the cause of these diseases to dampness; inhaled by those who plough, spade and first live upon the ground which has never been exposed to the sun. His statements are plausible and not without examples; but they may be confronted by the fact that sailors who go to the coast only to fish and do not clear the land

at all, nor live upon it, often fall ill of this malady and especially the Bretons, for it seems to pick them out from all others.

Also, that we who were well, as I have said, worked a great deal in the soil and out in the open air; yet we scarcely knew what this evil was except I myself to a slight degree during the second winter when I became very much bloated from fever and extreme weakness; but my gums and lips were not affected and my illness passed off in ten or twelve days.

I believe it was a great benefit to us that our dwelling was not new and that the space around the settlement having been cleared for a long time, we had a free and pure circulation of air, and I believe that this is principally what Champlain meant.

I have heard others who argued differently and not without logic. They believed that living inactive during a long and gloomy winter like that of Canada had been the cause of the disease among the new inhabitants. Of all sieur de Monts people who wintered first at St. Croix, only eleven remained well. These were a jolly company of hunters who preferred rabbit hunting to the air of the fireside; skating on the ponds to turning over lazily in bed; making snowballs to bring down the game to sitting around the fire talking about Paris and its good cooks. Also, as to us who were always well at Port Royal, our poverty certainly relieved us of two great evils, that of excessive eating and drinking and laziness; for we always had good exercise of some kind and, on the other hand, our stomachs were never overloaded. I certainly believe that this medicine was of great benefit to us.

Jean Alfonse, Captain-Pilot of Francis I, says:

These are cold lands, and much subject to snow and to the disease of the legs (scurvy), because the subsoil is frozen to a depth of about two or three feet, and the top earth is only the decayed leaves of the trees and there is not any firm and frank soil.

Apparently no suspicion had entered the minds of any of them that faulty diet might be the cause of the disease.

During the winter following the founding of Quebec, 1608-1609, scurvy partook of the nature of an epidemic, ten dying and among them Bonnerme the surgeon. Champlain apparently had a mild attack of the disease for he

was quite ill that winter. In discussing the epidemic, Champlain remarked: "I am confident that, with good bread and fresh meat, a person would not be liable to it." Obviously, he began to have an inkling of the cause of the disease.

The discovery of James Bay by Captain James was merely an incident in the quest of the North-West Passage to the South Sea, yet it took its toll of lives. Captain James sailed from Bristol in the month of May, 1631, in the *Mary*, a seventy-ton vessel with a crew of twenty men and two boys, in quest of a north-west passage into the South Sea. He passed through Hudson Strait and thence reached the north-west portion of Hudson Bay. Working his way south by east, he entered the bay to which he gave his name. In October he reached Charlton Island and made preparation to winter there. The island was well wooded and a shelter was constructed for the crew. The winter was intensely severe and we read that by the end of December "the cold was so savage that it raised blisters on the men's faces as big as walnuts," and all the sack, vinegar, oil and other liquids were frozen solid within a yard of the fire of the "mansion house," the name given the shelter. They had plenty of provisions of a kind, but soon two-thirds of the company were down with scurvy. As Captain James writes:

If a man lay in bed for two whole days he never rose again. They were rubbed and washed each day to make supple their stiffening joints. Their teeth fell out, and the dead flesh about their gums and around the frost blisters was carefully cut away. . . . In the spring of the year the warmth of the sun caused a crop of vetches, one of the bean family, to sprout up near their hut, and the scurvy-stricken men were so rapidly restored to health that in June they were chewing salt beef again.

In the history of Montreal by M. Dollard de Casson, we note that it was a common thing to find the troops who

had recently arrived in the country from France affected with the scourge. It was the cause of a not inconsiderable mortality at Fort St. Anne (Lake Champlain) in the year 1667. M. Faillon says in his life of Mlle. Mance:

This disease which we call the mal de terre, lasts two or three months and keeps the sick for a period of eight days in an agony . . . and those who were affected spread so infectious a stink that, although they were enclosed in their cabins, this fetid odour was felt as far as the middle of the fort, so that no one save M. Dollard de Casson and the surgeon dared approach them.

The campaign against New France was greatly endangered by the prevalence of scurvy among the British. In referring to his troops, Amherst writes in his Journal for June 13, 1759, that they are hard at work at Quebec and Ticonderoga; that the garrison of the latter place is much afflicted with scurvy and that the daily ration of the troops consists of a pound and a half loaf of bread and a quarter of a pound of pork. It is quite conceivable that his men suffered from scurvy on such a diet!

In the year following the capture of Quebec, Murray wrote Amherst a letter dealing with the siege of Quebec by Levis, pleading for help in the following words:

We are very low, the scurvy makes terrible havoc; for God's sake send us up molasses and seeds which may produce vegetables. Whoever winters here again must be better provided . . . than we are. Our medicines are entirely expended.

Fortunately, Levis did not know to what extent disease had weakened the garrison at Quebec or he might have made a more determined effort to recapture the city.

The following account of a somewhat startling remedy for scurvy is found in the *Journal* of Captain Knox:

This morning I was an eye witness to burying a man alive, *mirabile dictu*, for the scurvy. To explain this matter, it must be observed that a pit was made in the ground and the patient

stood in it, with his head only above the level earth; then the mould was thrown in loose about him and there he remained for some hours; this I am told is to be repeated every day until his recovery is perfected.

A very drastic form of treatment and, if it did not cure, it at least helped to put the patient out of his misery with despatch.

In an extract of the standing orders of the year 1760 to the garrison and guards of Quebec, we find instructions to commanding officers to see that their men drank daily a decoction of spruce made according to the directions of the army surgeons. This is the identical remedy given to Cartier by the Indians of Stadaconé and prepared in exactly the same manner.

During the siege of Quebec by the Americans in 1775, so many American soldiers suffered from scurvy that the wards of the Quebec hospitals overflowed with them. The soldiers paid for their care with promissory notes which were never redeemed and which are still to be seen in the Hôtel-Dieu.

Scurvy appeared to have been the lot of early explorers not only in Canada but in other parts of this continent. The Virginian colonists, it will be recalled, left London on December 20, 1606, and departed for England on June 2, 1608. John Smith, in his *True Relation* of the events which transpired after their arrival, says:

And for Captaine Martin, albeit verie honest, and wishing the best good, yet so sicke and weake and myself so disgrac'd through others malice; through which disorder God (being angrie with us) plagued us with such famin and sickness that the living were scarce able to bury the dead; our want of sufficient and good victuals with continual watching, four or five each night at three bulwarkes being the chief cause; onely of sturgeon had we great store; whereon our men would so greedily surfeit, as it cost manye their lives; the Sack, Aqua Vitie (brandy) and other preservatives for our health being kept onely in the Presidents

hands, for his own diet and his few associates. Shortly after Captain Gosnold fell sicke and within three weeks died. Captain Ratcliffe being then also verie sicke and weake, and myself having also tasted of the extremitie thereof, but by God's assistance being well recovered, Kendall about this time, for divers reasons deposed from being of the Councell; and shortly after it pleased God (in our extremity) to move the Indians to bring in corne, ere it was half ripe, to refresh us when we rather expected they would destroy us; about the 10th of September there was about 46 of our men dead.

Scurvy broke out among the pilgrims after their arrival in New England in the year 1621, during their explorations of the coast to find a suitable place to establish a colony, as we find in the following account of their troubles:

In these hard and difficult beginnings they found some discontents and murmurings arise amongst some, and mutinous speeches and carriages in others, but they were soone quelled and overcome by the wisdome, patience and just and equall carriage of things by the Govr. and better part which clave faithfully together in the maine.

But that which was most sad and lamentable was that in two or three moneths time half of their company dyed, espetically in January and February, being the depth of winter and wanting houses and other comforts; being infected with the scurvie and other diseases which this long vioage and their inacomodate condition had brought upon them; so as ther dyed sometimes two or three of a day in the aforesaid time; that of 150 and odd persons, scarce 50 remained.

In the nineteenth century the prevalence of scurvy in Canada diminished markedly due to a knowledge of the causative factors. During the past century its presence was associated chiefly with lumber camps. A continuous diet of bacon, beans and coffee, with an absence of fresh vegetables, a condition met with in nearly all lumber camps during the winter months when cutting operations were being carried out, favoured its existence. Today, the

disease is recognized before it has progressed very far, and the type of case seen by the early settlers is a thing of the past. Moreover, the part played by vitamin "C" in relation to scurvy has become an important factor in the prevention of the disease.

CHAPTER III

Part Played by Disease in Colonial Wars

AS THE Indians played so important a part in the wars between New England and New France for possession of the country, there was great rivalry between English and French for their friendship. There was also keen competition for the control of the fur trade and, as contact with the Indians was an important factor in maintaining their friendship, both vied with one another in inducing them to frequent their trading posts. Knowing the inordinate love of the Indians for brandy and rum, both kept them well supplied with these beverages with the result that the Indians frequently became completely demoralized, neglected and abused their families, and trading posts were often the scene of debauchery and bloodshed.

Laval, the first Bishop of Quebec, realizing the injury the traffic in brandy was doing the Indians, placed a ban on it. Unable to obtain brandy from the French, the Indians took their furs to the English trading posts where rum was available. This lessened their contacts with the Indians and threatened to ruin the fur trade for the French. Frontenac, the Governor, more commercially minded than the Bishop, opposed his action and a bitter dispute arose, which was a factor in the recall of Frontenac to France. English traders, like their French rivals in the game of barter, had no scruples in carrying on the demoralizing traffic in rum and, in fact, Benjamin Franklin wrote that he was convinced "rum was created by the Almighty to kill off the Indians and bring the land into the possession of the white race."

Both English and French took advantage of the

jealousy and animosity that existed among the various tribes, using one against the other to their own advantage. The French were obliged to fight two foes—the English and Iroquois who joined forces to defeat them. We know that Champlain earned the animosity of the Iroquois by aiding their enemies, the Algonquins and Hurons. The Iroquois were the most implacable enemies of the French, and the English were not loath to take advantage of this hatred.

During the latter part of the seventeenth and early part of the eighteenth century, English and French were almost constantly at war. The English, jealous of the fact that the French had settlements on both great waterways—the St. Lawrence and the Mississippi—thus controlling the trade of the country, incited the Indians in their attacks upon the French. The French wished to obtain possession of the Ohio to link up the Mississippi and St. Lawrence and dominate the trade of the entire country. The English, on the other hand, who were primarily traders, wished not only to drive the French from the Mississippi and prevent them from establishing forts on the Ohio, but to obtain for themselves the trade of the whole country. This rivalry frequently led to war.

But, there was one enemy of both of which neither took cognizance—the hidden enemy that repeatedly stepped in and took control, stopping troops on the march, snatching victory from the outstretched hand and abruptly bringing wars to an end, a ruthless foe that spared neither victor nor vanquished—disease. A few incidents will suffice to show that it counted more than all the troops in the field, more than the most cunningly laid plans of English and French. It was the deciding factor in many engagements. On some occasions it helped save the French, and on others it came to the rescue of the English, but it was never a friend of the Indians.

Although the chief occupations of the people of New England and New France were trading, hunting and agriculture, one of the chief pursuits was war. Voyageurs and traders journeyed back and forth among the Indians; spies passed to and fro between both countries, and these interminglings coupled with war kept disease alive, so that English and French suffered in turn and together.

As an example of the part played by disease in helping to save New France on one occasion at least, let me refer to the attempt of the New Englanders to take the country in 1690. Having captured Acadia, they planned to lay siege to Montreal and Quebec. A force of two thousand New England troops and fifteen hundred Indians proceeded overland by way of Lake Champlain to attack Montreal whilst a fleet of vessels with an invading force of two thousand men sailed to attack Quebec. The fleet was under Sir William Phips. He landed his men at Beauport and attacked, but met with strong resistance. Finally, smallpox broke out among his men and, amid defeat and gloomy depression, he sailed away. Smallpox also broke out among the land forces proceeding to Montreal and they were forced to disband. Chevalier de Callières refers to this in a letter to de Seignelay, in which he says: "Smallpox broke out among their land forces and destroyed from four to five hundred men on the march." Historians have paid little attention to the part played by disease in influencing the destiny of the country, yet here is an incident that shows how important a factor it really was. On this occasion disease had helped save New France.

During the summer of 1746 the French at Quebec sent a force of seventeen hundred Frenchmen and Indians, under de Ramezay, to retake Louisburg and Annapolis, which were held by the English. They were to join forces at Chebucto with the most powerful fleet ever sent out from France. It comprised half the French Navy and carried thirty-one

hundred and fifty troops with d'Anville in command. His orders were to take and garrison Louisburg and Annapolis, destroy Boston, range along the coast doing as much damage as possible and visit the West India Islands. This fleet, after a perilous and protracted voyage during which some of the vessels were lost off Cape Sable, arrived ninety days after sailing from France. From the time they left France until they arrived, they lost twelve hundred and seventy men through disease and shipwreck. Meanwhile, de Ramezay and his men, who had arrived at Chebucto, grew tired of waiting for the fleet and returned to Quebec. On the arrival of the fleet, a messenger was sent after them and about four hundred were overtaken. They returned to Chebucto and found that eleven hundred and thirty of d'Anville's troops had died of disease since arrival. The Micmac Indians, who flocked to the camp for supplies, arms and ammunition, became infected and the disease spread so extensively among them that a third of the whole tribe perished. This ended the attempt to retake Louisburg and Annapolis. Disease on this occasion saved both for the English. D'Anville died in Halifax and his Vice-Admiral committed suicide.

Let me give you a further example of the part played by disease in the wars between English and French. I said that disease was never a friend of the Indians and here is an indication of it. In the year 1757, Montcalm, with a force of six thousand French and two thousand Indians, attacked Fort William Henry. War had broken out between France and England and the British had planned a comprehensive campaign against New France. Montcalm vowed to save New France or perish in the attempt, and he was as good as his word. At Fort William Henry there were twenty-five hundred British under Munro; the fort was small and insanitary and smallpox was raging. Montcalm's Indians butchered the English soldiers after they

had ceded and were leaving the fort, plundered and looted it, although, as we know, Montcalm tried to stop them at the risk of his life. Retribution overtook the Indians. Smallpox broke out and literally exterminated them. This is referred to in an interesting letter from Montcalm to de Paulmy, in which he discusses the belief of the Indians, freely expressed in their councils, that the English had deliberately infected them with smallpox. Here is an extract from Montcalm's letter:

Fortunately they (the Indians) had frequently declared in the different councils held at Michilimackinac and Detroit that the English had thrown that medicine (smallpox) on the Indians which they might have turned aside if they had been willing to believe the French General and not plunder the baggage of the English.

Whether or not deliberate attempts were made to give the Indians smallpox, we do not know, but at a later date Amherst wrote Colonel Bouquet breathing his contempt of the Indians and berating him for wasting cannon shot on them. There is a postscript to his letter: "Could it not be contrived to send the smallpox among those disaffected Indians?" There is also a postscript to an endorsed copy of a reply from Bouquet to Amherst, dated July, 1763: "I will try to inoculate them with some blankets that may fall in their hands and take care not to get the disease myself." In spite of these letters, there is no evidence to show that the English actually attempted to infect the Indians with smallpox at any time. No doubt both Amherst and Bouquet, enraged over the fact that the Algonquins with the Wyandots and Senecas under Pontiac had gone on the rampage, captured a number of forts and spread terror in their wake, destroying harvests and butchering women and children, felt that no treatment meted out to these marauders could be too severe.

After the fall of Fort William Henry, Montcalm sent a

number of prisoners to Halifax by sea. Smallpox broke out on the vessel and Montcalm was accused of trying to introduce smallpox into that city. Montcalm's desire to return his prisoners to their home was not accepted in the best spirit, so we see that French, as well as English, were accused of deliberately spreading smallpox.

Disease is impartial and no respecter of persons. It is rapacious, sparing neither friend nor foe. If it stepped in between English and French to call a truce to their wars, it did the same for the Indians. For example, in 1736, smallpox, which was brought from Hudson Bay, broke out among the Monsoni, Crees and Assiniboines when they were marching on the Sioux, who had massacred the French at the Catholic Mission on Lake Pepin. The story of this massacre is as follows:

In the spring of 1736 provisions were at a premium at Fort St. Charles, Lake of the Woods. The commander of the fort, La Vérendrye, was obliged to despatch three canoes to Michilimackinac, his nearest base of operations, for supplies. Father Aulneau, the Jesuit missionary, made up his mind to make the journey to Michilimackinac with them. They left on June 8, 1736, in canoes manned by nineteen voyageurs, following in the wake of five other French employees who had left for the same destination on the third of the same month. This party of five on the following day came in sight of thirty war canoes manned by ninety or a hundred Sioux warriors who at once captured, bound and prepared to torture them, claiming that the French had fired on them. The French denied this, saying that the firing had been done by a party of Crees who had five or six tepees near the French fort. The Sioux released the French after taking away their arms and ammunition, and set out for the tepees of the Crees. They were unable to find the Crees, and returned to wreak vengeance upon the French for their apparent deception, only to find that

they had decamped. Meanwhile, Father Aulneau and the others had encamped on an island about twenty miles south of Fort St. Charles. The Sioux, who were now thirsting for blood, found them there and massacred them. On September 16, 1736, a Sioux chief went to Fort Beauharnois. It was noticed that he had a silver seal suspended from his ear, which on examination proved to be that of Father Aulneau. The French commander, Le Gardeur de Saint-Pierre, became enraged and tore it off with part of the Indian's ear. Shortly thereafter the Sioux burned the fort of a tribe allied to the French, tore up and burned the fence of the Catholic Mission on Lake Pepin. The Crees and the Monsoni, to the number of two hundred and fifty warriors, determined to avenge the French, set out for the land of the Sioux. At the same time, about eight hundred Assiniboines took to the warpath with the same object in view. The outbreak of smallpox among them paralyzed their movements and ended their quest for vengeance.

Enmity was just as bitter between Indian tribes as between English and French. The Snakes and the Piegans were not particularly fond of one another, thus, when the Piegans espied a Snake camp one evening at dusk, they decided they would have a good rest, get up bright and early in the morning and massacre the Snakes before breakfast; here is an account of it by a Piegan who was present at the attack:

Next morning at the break of day we attacked the tents and entered for the fight, but our war whoop instantly stopped, our eyes were appalled with terror; there was no one to fight with but the dead and dying, each a mass of corruption. We did not touch them but left the tents and held council on what was to be done. We all thought the Bad Spirit had made himself master of the camp and had destroyed them. It was agreed to take the best of the tents and any other plunder that was clean and good, which we did, and also the horses they had.

They also took the disease with them and, as the Piegan said, "When at length it left us and we moved about to find our people, it was no longer with the song and the dance, but with tears and shrieks and howlings of despair for those who would never return to us."

And so disease intervened on many occasions, ending wars between English, French and Indians. It was the friend of none but the foe of all, as it is today.

An interesting light is thrown upon the part played by disease in relation to war by a letter from Doreil to de Paulmy, dated October 25, 1757, in which he writes:

All the scourges are at one and the same time afflicting this poor country, which is on the eve of being itself destroyed, if measures as prompt as they are just are not adopted for its relief, for upon the troubles of war has supervened an epidemic disease introduced by the ships that brought the soldiers. It has created great ravages and we are apprehensive of the consequences.

He referred to the epidemic of smallpox of that and the two preceding years. In the same year, 1757, two years before Wolfe was hammering at the gates of Quebec, Montcalm gives the number of smallpox victims in Quebec hospitals as twenty-five hundred, of whom a fifth died. War had broken out between England and France in 1756 and extensive preparations were made by the English to take New France. Doreil's letter shows he realized that disease and war might mean the downfall of New France. Two years later his fears were realized—Quebec had fallen to the English.

At the time of the Conquest, the French mustered ten thousand men to the defence of Quebec. Had not disease decimated the population of New France from the earliest days, the natural increase in population would have made

it possible for the French to place twice that number in the field and the result of the conflict of 1759 might have been different.

Smallpox was no mean factor in adding to the defeat of the Americans before Quebec in 1775. It will be recalled that on the night of December 31, 1775, the Americans under Arnold and Montgomery attacked Quebec, only to be repulsed. Montgomery was killed by a sentry, and his men fled in confusion. Arnold, who had attacked Lower Town, was driven back and many of his men captured. Throughout the winter the siege continued. The troops became disaffected, and finally smallpox, which had appeared among them, broke down their morale and, in the following spring, the arrival of a British fleet put them to flight.

It is clear, therefore, that disease played a major part in the wars for control of the continent and on numerous occasions was a factor in deciding the destiny of the country.

CHAPTER IV

Epidemic Diseases Among Settlers

THE DISEASES which caused the greatest ravages in New France were those introduced by ships and, largely, by those of the King of France which carried troops to Quebec to take part in the wars with the New Englanders and the Indians. They were chiefly typhus and smallpox.

In those days most of the people of the city of Quebec lived in close proximity to the harbour and were, therefore, directly exposed to infection introduced by shipping. Quebec was a port of no little importance and the flags of many nations could be seen flying on the vessels in the harbour. The trade with France and Italy, Spain and the West Indies was fairly extensive, and the sight of so many ships of different nations was an inspiring one. Barques, brigs, brigantines, barquentines—words now almost forgotten—were to be seen lying at the wharves and in the stream. It was not uncommon to see a flotilla of full-rigged ships sailing into the harbour on an easterly wind and a rising tide. Although the arrival of the King's ships was looked forward to with the joy of anticipation of news from France, of seeing new faces and meeting old friends, the pleasure was always tinged with fear—fear that their arrival might signify the introduction of disease and bring disaster to the colony. Again and again these ships brought ship fevers which spread throughout the country causing great havoc.

That all of the diseases which occurred in ships coming to Canada from France, and which on occasions spread to the inhabitants of the city of Quebec, were typhus and smallpox seems doubtful. It is quite possible that some of them were plague or yellow fever, for some of the ships

which brought passengers and troops from France to Canada made voyages to the West Indies where yellow fever was endemic. Boyce, in speaking of yellow fever on ships, says that "yellow fever broke out in many instances on the departure of ships from a northern port," which he explains by the ship having previously come from some yellow fever port, such as from the West Indies. Frigates, he says, were especially prone to foster yellow fever, and the naval medical records teem with innumerable instances of the occurrence of that disease on board. Yellow fever was ship fever of the eighteenth and nineteenth centuries, and "ship fever" or "yellow Jack" were the popular names for it. There have been a number of outbreaks of yellow fever in the French ports; for example, Marseilles, Brest and Saint Nazaire, which were ports of departure for ships coming to Canada. This was also true of plague.

Typhus fever was epidemic in Canada for the first time, so far as can be ascertained, in the year 1659. It was brought to Quebec in that year by a vessel called the *Saint André*. The passenger list comprised three nuns, two priests, and one hundred and thirty French immigrants bound for Quebec and Montreal. Among the passengers was Jeanne Mance, the foundress of the Hôtel-Dieu at Montreal, who was returning from France where she had gone for surgical treatment. Typhus broke out during the voyage; ten of the passengers died and were buried at sea, and four were landed at Quebec sick. The disease spread rapidly among the inhabitants and there were many deaths.

Sœur Françoise Juchereau, historian of the Hôtel-Dieu, writing of the arrival of Mgr. de Laval in Quebec on June 16, 1659, says:

The last vessels of the season were infected with malignant and contagious diseases. There were on board two hundred

passengers all of whom had been ill. Eight died at sea and others on shore. Almost the whole country was infected and the hospital was filled with sick. Mgr. de Laval was continually among them to serve them and make their beds.

Mère Marie l'Incarnation, the foundress of the Ursuline Convent at Quebec, in a letter to her son, dated Quebec, August 18, 1664, writes:

During the past year there were no diseases except those which were brought us by the vessels of the King. There died about a hundred of those who disembarked.

On September 14, 1665, a flotilla of ships bearing de Tracy's troops arrived at Quebec. We read in the *History of the Hôtel-Dieu* that "as soon as the vessels were moored at Quebec there disembarked so great a number of sick that there came to us on the same day one hundred and thirty which obliged us to redouble our care." One of the ships, *La Justice*, arrived with more than one hundred sick on board, most of whom were placed in the hospital, some in wards, others in the church; many of them died.

In the year 1685 typhus was again found aboard ship and, as the chronicler says:

There were so many sick in this ship that soon the wards, the chapel, the barns, the chicken-run and all the hospital grounds, wherever a place could be found for them—even tents were put up in the yard—were filled. We redoubled our efforts to serve them and they had great need of our help—fevers, terrible and burning, delirium and much scurvy. There came into our hospital more than three hundred sick; the women's ward was filled with officers of quality. At the beginning twenty died—we took them in half dead. We had many remedies to help them of which the best was to bleed them at the temple and we saved many in that way who gave no appearance of cure and who the day after the bleeding were wonderfully improved. We sent them away perfectly cured and most thankful for our trouble.

In the same year, 1685, the Intendant, de Meulles, writing on September 28th to the Minister, gives the following account of an outbreak of fever in Quebec City:

The arrival of two of His Majesty's ships caused a great disorder in Canada. Those who were on board were nearly all attacked by a contagious disease which spread to the greater part of the inhabitants who deemed it their duty to go to their assistance. You will see from the list I sent you how many officers, soldiers and sailors are dead. The disease is so dangerous that most of the masters of schooners I was obliged to send them are dead; a third of those who were sent to hospitals are already dead although they had the best of care.

It has been suggested that some of the epidemics which occurred from time to time in Quebec, notably those of 1710, 1718 and 1740, were plague, but the description of the diseases of those days is so vague that we are often left in doubt as to their true nature. Nevertheless, there seems little doubt that cases of true plague have been treated in Quebec hospitals and, as an indication of it, Juchereau writes in the quaint language of that day of a Mademoiselle de Lornpré, who became a nursing sister in 1648:

It was at Nantes in the Chapel of "Our Lady of All Joy" that our brave novice took her vows; she was obliged to proceed to La Rochelle where she embarked but she was scarcely on board before the Cross which had made so strong an impression on her heart was laid upon her body in the form of a contagious disease that nearly caused her death. It was a continuous and burning fever, the most violent in the world with a girdle all around her body composed of eleven plague boils and the plague itself.

And again, in describing the death of one of the sisters during the epidemic of *Mal de Siam* (yellow fever) in 1710, which proved so disastrous, she says:

With a burning fever she had a charbon (plague bubo). Through modesty she hid the condition for some time.

Plague was epidemic in Marseilles and Toulon in 1720 and 1721, and Vaudreuil, the Governor, fearing the disease might be introduced into the country through shipping, issued instructions that all vessels proceeding to Quebec undergo quarantine inspection on arrival at Isle-aux-Coudres, in the St. Lawrence. Masters of vessels were obliged to indicate their arrival by firing a cannon at intervals of a quarter of an hour. If they did not have a cannon, they might fire an arquebus. Those who failed to comply with the quarantine regulation were flogged. Before being allowed to proceed on their journey, passengers and crews were examined by Quebec doctors. The result was that plague does not appear to have found its way into the country at that time, although there seems to be a reference to it among the Indians as indicated by the Reverend Father Laure in his *Relation* of the Saguenay of that year. Speaking of the sickness among the Indians, he tells us:

The savages attributed this species of contagion to the goods; and although we tried to undeceive them, there is, nevertheless, some probability that they were slightly contaminated by the plague of Marseilles. For merely on opening the bales, the clerk and some of his servants were quickly attacked by fever; and there were hardly any savages ill, except those who came to buy clothes. Moreover, some were so furious that they had to be tied. A woman in her delirium struck me a blow that made me "see a hundred candles" as the saying is. Then, according to the custom of the savages, they were tied on their beds with their feet and hands bound to four stakes driven into the ground. As I had only a few emetics and could not attend to all, I gave a portion of them to some persons who are still living. The fear of death alone evidently killed one, in especial. He was a robust and strong man about fifty years of age. The fever attacked him only an hour before his death. Only one man and one woman fled from their true happiness, by withdrawing, in spite of my entreaties, into the woods, where they died without any assistance.

It must not be assumed that the year 1720, when quarantine was imposed for the first time, was the first occasion upon which doctors boarded ships to ascertain the health of passenger and crew, for previous to this it was customary for doctors to board vessels at Quebec if it was thought there was contagious disease on board.

In the year 1710, an unknown disease was brought to Quebec by a vessel from the West Indies called the *Belle Brune*. Plague was suspected but the symptoms did not conform to that disease. There was much speculation as to its nature and the Quebec doctors, no doubt influenced by the fact that the vessel had come from the West Indies, concluded that it was *Mal de Siam*, the disease of Siam, a name formerly given to yellow fever which it was thought originated in Siam and had been carried to the West Indies from that country. In speaking of this disease, the historian of the Hôtel-Dieu tells us that she had never seen so many sick in the hospitals as at that time and all became as black as coal as soon as they were dead. There seems little doubt that the disease was yellow fever.

As an indication of the conditions that prevailed on board vessels in those days, we find an interesting letter written by a Jesuit, Father Nau, describing his voyage to Quebec in 1734, which reads in part:

On May 29, 1734, we embarked in the *Rubis* commanded by M. le Chevalier de Chaon, and we lay two days in the stream awaiting fair winds. These two days sufficed to give us an idea of the weariness of the journey. Even the sight of the Ste. Barbe (gun-room of the ship) where we were obliged to sleep during the passage disconcerted us—myself the first. It is a large room, as big as the Rhetoric at Bordeaux, where one sees suspended a double row of frames which were to serve as beds for the passengers; for passengers, lesser officers and canoneers. We were squeezed into this dark place like sardines in a box. We could not get to bed without bumping head and limbs twenty times. Decency did not permit us to undress. Our clothing bruised our

backs. The rolling racked our frames and threw us into a heap. One time I was thrown on top of a poor Canadian officer whom I had taken under my charge as a nonentity.

Our Bishop Mgr. Dosquet, 4th bishop of Quebec, who lost his passage at La Rochelle embarked with us. He brought a dozen abbots (beggars) whom he picked up on the streets of Paris and at the doors of the churches; most of them ignorant and without education, who believed it their duty to insult everyone, who quarreled among themselves continually, and who dared even to attack the officers of the vessel; they should have been placed in irons without any consideration for the prelate. We avoided these people as much as we could and tried to make a group apart, with three priests of St. Sulpice, men of mind and of great piety.

Messrs. the officers had given us as much attention as possible and as we were recommended to them by Monsieur de Maurepas, they made a great difference between us and the following of the bishop.

The prelate understood that they were right—further disagreeable things, vermin and infection.

We had on board about a hundred soldiers of a new levy, each one of whom carried with him an entire Regiment of Picardy. In less than eight days these famished Picards spread everywhere; no one was exempt from their bites; neither the bishop nor the captain. Each time we left the 'tweendecks we found ourselves covered with vermin. I found them even in my shoes. Other swarms of lice and sources of infection were twenty-four false salt manufacturers (salt smugglers) who had languished a year in prisons. These wretches would have moved the most barbarous Turks to pity. They were half naked, covered with ulcers and some of them eaten alive with maggots. We clubbed together and took up a collection to buy shirts for them from the sailors who had an oversupply. Our help did not prevent them from spreading a species of plague (typhus) in the ship of which all were attacked and which killed twenty men at a time; so that the officers and the passengers were obliged to take the place of the sailors.

The voyage lasted eighty days; one of the longest voyages made from France to Canada.

Here is an account of the arrival of a vessel in Montreal in the same year:

There arrived in Montreal, in the year 1734, one of the King's ships of which all of the crew were attacked with a pestilential disease. A soldier carried into the ward communicated the infection to the nursing sisters. In the course of a few days seven or eight of them were attacked. The disease manifested itself by "pains so violent and symptoms so dreadful" that according to observers one had to see the sufferers to form a just opinion of it. The doctors said themselves that they had never seen anything like it. "The faces of the sick swelled up in a strange and monstrous manner and became altogether unrecognizable. Sister Gay, the fifth sister attacked by the disease, had the right side enormously swollen and as black as coal and then began to waste away in such a way that the flesh of her arm and hand was as though melted and even her bones seemed to notably shrink."

This terrible disease was unaffected by any remedy and one after the other nine sisters fell victims to it. Besides these nine, many other sisters were attacked by the disease and some of these suffered for twenty, thirty, or forty days in agony. All those who were attacked died, and it was feared that all the nursing sisters would become victims of it.

On August 8, 1740, we read that "there arrived at Quebec Monseigneur de Lauberivière on a vessel infested with plague, and the crew were in so deplorable a state that scarcely an arm could be found to manœuvre the vessel." The ship was the *Rubis*, which sailed from La Rochelle for Quebec on June 10, 1740. In addition to Mgr. de Lauberivière there were a number of priests and a considerable number of passengers. Shortly after it had left the shores of France, disease broke out among the passengers and crew. "It was a continuous fever accompanied with violent headache." At the time of her arrival at Pot-à-l'eau-de-vie (Brandy Pot), on July 27th, more than one hundred and sixty were sick. The crew was so weakened that the captain, M. de La Saussaye, was obliged to send a

small boat to Quebec to ask the Intendant to send him fifty of the best sailors in Quebec to enable the *Rubis* to continue her voyage. The Intendant Hocquart made haste to comply with his request and a few days afterwards two vessels filled with pilots and workmen came to the assistance of the *Rubis*; one of these vessels remained with the *Rubis* and the other took the greater number of the sick to Quebec for admission to the Hôtel-Dieu. Sister Saint-Hélène, writing of their arrival, says:

I have never seen so many sick, the halls, kitchens, parlors, everywhere is filled with sick and we can scarcely pass between the beds; all become as black as niggers as soon as they are dead. The surgeon of the *Rubis* was François Pomier; the assistant surgeon, Monsieur Chevalier. M. Nicolas le Clerc, the surgeon of the *Minerva*, also gave aid. M. Paul Lajus, who gave assistance, died. He was twenty-five years of age.

There were two hundred and forty-one admitted to the hospital of whom twenty-eight died. It is very questionable if the disease was plague, as we would expect a higher death rate. One is rather inclined to think of influenza. The low death rate leaves the impression that the sick were pretty well cared for in the Hôtel-Dieu in those days. Our modern hospitals could scarcely show a better record.

During the summer season of 1756, six vessels of the King arrived on which there were a great many sick, and in the history of l'Hôpital Général we read that "Father Floque was the chaplain of the *Leopard*, one of the King's vessels which was the most infected with plague." And again, "the vessel, the *Leopard*, arrived plagued with a disease more serious inasmuch as it became epidemic." To destroy the source of infection the military authorities set fire to the vessel and let it founder in the harbour. The disease continued until February, 1757. Some of the soldiers from this ship proceeded to Montreal where they fell ill and were admitted into l'Hôpital Général. The

disease spread throughout the hospital and the city, causing many deaths. The symptoms described in the history of l'Hôpital Général—agonizing pain, faces swollen and unrecognizable, death in four or five days—rather lead one to think of hemorrhagic smallpox. The evidence, however, is incomplete, and final conclusions of the nature of this disease cannot be drawn. One of those who died during this epidemic was Doctor Gaultier.

No disease caused greater ravages among the inhabitants of Quebec than smallpox. It was repeatedly introduced by shipping from the earliest days and recurred in epidemic form at frequent intervals. In the year 1702 it was brought to Quebec by an Indian and spread so rapidly that of a population of nine thousand, three thousand died.

An interesting incident is related in connection with this epidemic. A number of the Sisters of the Hôtel-Dieu who contracted the disease died and were buried in the Sisters' cemetery. Twenty-five years later the bodies were exhumed for interment in a new cemetery. One may judge of the excitement that prevailed when it was found that the bodies of three of the Sisters were in a perfect state of preservation, just as they were the day they were buried twenty-five years before. Their shrouds were intact and, as one observer said: "The blood appeared to be coursing through their veins as in life." This was attributed to a miracle and the excitement was so great that it was considered advisable to hold a court of inquiry. The object of the inquiry was merely to ascertain the facts so no conclusions were drawn. It is difficult to understand how the bodies had remained whole in view of the fact that they were covered with lime at the time of the burial to consume them. The probable cause of the preservation of the bodies was the fact that unslaked lime was used and so acted as a preservative rather than as a consuming agent.

Smallpox was at its height in Quebec in 1733 and in

that year was introduced into Greenland by missionaries with disastrous results to the inhabitants. Beauharnois in a letter to Hocquart, written on October 14, 1733, dealing with the epidemic of that year, tells him that the smallpox which afflicted the country since the end of the autumn of 1732 carried off two thousand persons from the colony, exhausted the resources of everyone and caused the suspension of all work. In other words, when disease became epidemic, all activities ceased except caring for the sick and burying the dead.

Smallpox was epidemic in the year 1755-1756 and, to add to the misfortunes of the colony, the Hôtel-Dieu Hospital at Quebec was consumed by flames and there was little accommodation for the sick.

About the year 1764 inoculation with smallpox was introduced as a preventive of the disease. It was thought that a person inoculated with a small quantity of smallpox would have a light attack and thus be protected from one more severe, but it did not always work out that way, as some of those who were inoculated died. Haldimand, the Governor, expressed himself as having no objection to it provided the people wanted it, but he was strongly opposed to its use among the Indians, as the following letter indicates:

His Excellency, the Commander-in-Chief, having learned that Mr. Gill, Mate of the General Hospital, has been so imprudent as to take from Montreal to Carleton Island Smallpox matter for the purpose of inoculation, I am directed to signify to you His Excellency's positive command, that he may not be permitted to make use of it, but that it may be taken from him and that you will yourself see it buried so deep under ground as to prevent a possibility of its having any effect—and if, unfortunately, any use should have been made of it before you receive this, His Excellency desires you will send the Parties infected to the most remote part of the Island with a Guard to prevent all communication with them—for should the disease get among the Indians

the consequence to them and to the King's Service would be very fatal. In all events the Intention must be carefully concealed from the Indians for should the Infection by any Accident make its way from Hence to them it would infallibly be attributed to that cause.

There is rather an interesting letter published in *La Gazette de Québec*, Thursday, July 11, 1765, dealing with the subject of inoculation with smallpox, which is worth quoting:

Gentlemen,

Charon's boat being ready to leave for the other world, I was informed too late to have the time before my precipitated departure to make you the recital of a peculiar adventure which happened to me in your country during my unfortunate sojourn there, in order to give proper notice of same to the public: I loved desperately an amiable young lady who returned my love; as we were on the point of being united together by conjugal ties, she wished in spite of my loving objections to be inoculated; wishing to follow the same lot as she, I had someone do the same thing to me: The most beautiful hopes were favoring us at the beginning; but all of a sudden through misfortune and events which man cannot foresee, the Fates cut the thread of our days, and the tomb terminated our love: Having arrived at the same time at the Elysian Fields we tasted perfect happiness; but as the Faculty of Medicine were holding pre-nuptial celebrations which were presided over by the famous Doctors Hypocrates and Esculapius, assisted by other modern Doctors, such as Silva and Dumoulin, having learned the object of our sojourn, invited us to assist at their learned discourses, in order to prove that the new method of the physicians and surgeons of your country of treating the smallpox patients, and of making inoculation or insertion of smallpox to others who have not got it, is contrary to the ancient laws of the Faculty of Medicine: That they should before doing such operation, and before giving any remedies, know perfectly the temperaments, the quality of the blood and of the humors of the different persons, and adopt the most favorable time for making the insertion. This is the reason why the Elysian Fields are filled with inoculated smallpox victims; and never before so many as during the past year. This is why I

thought it proper to profit by the occasion of this Celestial Messenger to inform you of the above, in order that in the future wise measures should be taken concerning this subject, always having at heart the interest of my co-citizens and most particularly others of your town.

I remain, Gentlemen,

The most humble soul,

THE INOCULATED.

The practice of inoculation with smallpox was abolished by Act of Parliament in 1853. Vaccination with cow-pox was introduced in Canada in 1802 by Dr. Bond of Yarmouth and at about the same time by Colonel Landman, an army officer at Quebec. This procedure had the effect of controlling outbreaks of the disease.

CHAPTER V

Medicine Under the French Régime

THE FIRST surgeons to practise in Canada were physicians, pharmacists and surgeons at one and the same time. They treated disease, prepared the remedies and operated on the injured. "Surgeon" was more or less a courtesy title as most of them did not possess surgical degrees. Abbé Faillon tells us:

If they were called surgeons, it was because in a country where we were constantly exposed to fall into the hands of the Iroquois, as at Montreal, of whom all the first colonists were killed, the art of surgery was of necessity more pressing and more frequently in demand. . . . The first surgeons of New France were not remarkable in their profession but toward the end of the seventeenth century and during the eighteenth the level of the profession was high.

As surgical practice was limited mainly to the extraction of teeth, blood letting and opening boils and abscesses, the income of many surgeons was small and it became necessary for them to engage in other occupations, such as fishing, hunting, farming, fur trading and store-keeping.

In the early days the doctors of New France belonged chiefly to a class known as barber-surgeons. In other words, they were barbers who performed minor surgical operations. The present-day barber pole has come down to us from the days of the barber-surgeons, the red colour for the blood and the white for the bandage. The fraternity of barber-surgeons was sanctioned in France by Royal assent in 1613. It was not obligatory to be apprenticed to a surgeon nor to obtain medical degrees; it sufficed to have settled in the country to enjoy the privilege of practising any of the

professions, as the King decreed, when establishing the Company of the Hundred Associates, that any artisan who went to New France would be considered a master of his work and could open a shop of his own. It is interesting to note that Cardinal Grimaldy, Archbishop of Aix, issued an Ordinance to the effect that surgeons and barbers who cut hair and shaved their clients on Sundays and holy days would not be given absolution unless they promised to discontinue the practice and that this Ordinance was authorized and adopted in the Province of Quebec.

The honour of being the first surgeon to practise surgery in Canada has been accorded Deschamps of Honfleur, whose name has been mentioned in connection with the epidemic of scurvy at Port Royal. Associated with him at Port Royal was Maître Estienne, an apothecary. There were undoubtedly surgeons who visited Canada before Deschamps' time as the law of France required that each ship taking a long journey must carry a ship surgeon. Many of these ships engaged in trade with the Indians in the eastern part of the country and some of them reached as far as Tadoussac at the mouth of the Saguenay. Among them was Jehan de Brouet who, as surgeon to Chauvin's fleet, reached Tadoussac in the year 1600. It is still the custom for ships coming from France for the purpose of fishing off the Banks to carry surgeons under the old French law.

One of the earliest surgeons to visit the country was Daniel Hay, who was with Poutrincourt on his journey of exploration along the coast. He helped organize the *Ordre du Bon Temps* at Port Royal, a society devoted to good cheer, the by-laws of which were approved by Champlain.

Apothecary Louis Hébert, who was the first settler in Quebec, was a contemporary of Hay. Hébert was the son of a Parisian apothecary who followed in the professional

footsteps of his father. He made a voyage to France but returned to Port Royal in 1613, where he endeavoured to establish himself. When Port Royal was abandoned, he again proceeded to France, where he met Champlain who induced him to return and settle in Quebec. As we know, it was largely owing to the persistence of Hébert that the French settled permanently in Canada.

Bonnerme was probably the first surgeon to visit Quebec as he came from France with Champlain and was present at the founding of Quebec in the year 1608. He narrowly escaped hanging for being implicated in a plot with members of Champlain's crew against the life of Champlain. The object of the plot was to get rid of Champlain, and it was thought that this could be best accomplished by seizing the fort, making Champlain prisoner, and turning him over to the Basques or Spaniards who were at Tadoussac. It would appear that various ways of putting Champlain to death were discussed by the conspirators. We find that "they decided to put Champlain to death by means of poison; then by a train of powder; but the apothecary, to whom a request was made for the poison, disclosed the fact." Champlain says they thought of one other way to kill him, namely, "to give a false alarm and stab him as soon as he appeared outside his quarters." "I had six pairs of handcuffs made," says Champlain, "one for our surgeon Bonnerme, one for another called La Taille whom the four conspirators had accused." Bonnerme was seized with the ring-leader, Jean Duval, handcuffed and thrown into the hold of a vessel lying in the stream opposite Quebec. Champlain acted as judge and conducted the examination in the presence of the captain, mate and others. As a result of the examination Bonnerme and La Taille were able to prove their innocence and were released, but Jean Duval, the leader, confessed his crime and was hanged at Quebec. His head was stuck on a pike and exposed in the

most prominent place in the fort. Bonnerme died in Quebec of scurvy in the winter of 1608-1609.

When Champlain was wounded during the Iroquois campaign in the year 1610, a surgeon named Boyer of Rouen dressed his wounds. He has the distinction of being the first military surgeon in the country.

Surgeon Adrien Duchesne settled in Quebec in 1618. When Champlain surrendered the fort to Kirke, Duchesne remained and practised his profession under the British regime. In 1635 he received a grant of land from the Crown and later transferred it to Abraham Martin, after whom the Plains of Abraham were named. His practice extended from Quebec to the post at Three Rivers. After the taking of the city by Kirke, a surgeon, André Daniel, one of the Hundred Associates, was sent to London to discuss the restitution of Canada and Acadia to France. He returned with despatches by which Charles I indicated his willingness to restore Canada to France.

From the year 1629 to 1663, in the space of thirty-odd years, the names of twenty-two surgeons and apothecaries are found in the Quebec registers. One of the most noteworthy was Robert Giffard, a native of Montagne au Perche in France, who was born in 1587 and came to Quebec in 1627 in the capacity of surgeon to the Company of the Hundred Associates. He was the first physician of the Hôtel-Dieu of Quebec. While returning from a voyage to France, he was taken prisoner by the English in the Gulf of St. Lawrence, but as they did not have sufficient accommodation in their vessels, he, with a number of others, was put ashore at St. Pierre. Here the Basques gave them a small boat and some biscuits and commanded them to leave within an hour under pain of death. They left as ordered and two days later arrived at the Isles des Plaisance where they found some ships about to set sail for France. They were taken aboard and returned to France. He

brought his family to Quebec in 1634. Appointed as physician to the King, he was also made a member of the Sovereign Council from the time of its formation in 1648. He died at Quebec on April 14, 1668. Although a physician, Giffard was primarily a colonist and was one of the most prosperous of the early settlers. For his services to the Company of the Hundred Associates, he was given the Seignory of Beauport, which carried with it the title of nobility, the first conferred upon a Canadian settler. A manor house built by him was used as headquarters by Montcalm in 1759.

The Jesuits brought surgeons to Canada and among them were Simon Baron and René Goupil. Baron was with the Jesuits at Cape Breton Island in 1631 and three years later accompanied the missionaries to the Huron country. He is mentioned as practising his profession at Three Rivers in the years 1637, 1658 and 1664. Goupil had a smattering of surgery and was of great help to the missionaries in treating the sick and wounded. While prisoner of the Mohawks, with Father Jogues, he was killed for having made the sign of the Cross on a child in baptism. He died at the feet of Jogues.

One of the best known of the barber-surgeons was Jean Madry, who began practice in Quebec in the year 1653. During a visit to France he was given a degree in surgery by the King, with power to establish the practice of surgery in all parts of Canada. It was he who introduced the system of surgical apprenticeships in New France. His death occurred through drowning in 1669. Following the death of Madry, Jean Demosny succeeded officially to the office of Deputy of the Chief Barber-Surgeon of the King and continued the system of barber-surgeon apprenticeship. At this time there were a number of barber-surgeons, contemporaries of Madry, but it would be unprofitable to

list them in this volume. Their names may be found in the records of pioneer physicians in Canadian archives.

As time went on, the status of surgeons improved and one of them, Sarrazin, who studied in France, became famous for his knowledge of anatomy and surgery. He was made a member of the Royal Academy of Sciences of France and was commissioned to undertake a study of the flora and fauna of Canada. A yearly allowance was made him by the King of France. We are told that Sarrazin operated in cases of cancer and that he performed many difficult operations. To the maple tree he gave the following description:

Acer sacchari ferum fructi minori, the sap is sweet but in order that it may be sweet it is necessary that at the time of drawing it off, the foot of the tree be covered with snow and some should be brought to it if there is not any there; that the snow should be melted by the sun and not by warm air; that there should be freezing the night before.

He made known the curative properties of *Sarracenia Canadensis*, or pitcher plant, which was formerly used in the treatment of smallpox. The celebrated naturalist, Kalm, in his history of his voyage to America, refers to Sarrazin. He tells us he had great knowledge of medicine, anatomy and other sciences and mentions the fact that he died at Quebec in 1734 of a malignant fever, which he contracted at the hospital caring for the sick.

An outstanding physician of that time was Jean François Gaultier, born in the year 1708 or 1711. He was appointed King's physician for Canada in the year 1741. Versed in the law, which he had studied under Procurator-General Verrier, he was made a member of the Superior Council. He was familiar with the use of thermometers and other scientific instruments such as the astronomical pendulum and telescope with which he and Father Bonçeau made useful observations. Greatly interested in botany,

he discovered the wintergreen plant, *Gaultheria Procumbens*, still used in the practice of medicine. Instructions were given him by the Marquis de la Galissonnière to prepare a list of plants and trees of North America and to forward to him grains, roots and minerals. Gaultier died in 1756 presumably of hemorrhagic smallpox which was contracted in the course of duty as physician to the Hôtel-Dieu of Quebec.

The name of the first surgeon to practise in the city of Montreal is not definitely known. The name of Goudeau is put forward as the first practitioner and this would appear to be supported by the fact that his name is found in the oldest known notarial document in that city, but it also seems that Jean Pouppe, who delivered the first children of settlers in that city, was in Montreal in the year 1643, one year after the city was founded by Maisonneuve so that it is possible he was the first surgeon to practise in that city.

In the year 1649, the Hundred Associates of Montreal made a regulation that the surgeon of the Hôtel-Dieu would give his services free of charge to all of the inhabitants of the Island of Montreal—French and Indians. This was not as big an undertaking as would seem on the surface as there were few French and the Indians did not take kindly to the ministrations of the white man—especially the Iroquois.

Étienne Bouchard took up the practice of medicine in Montreal in 1653, being engaged for a period of five years, but he remained for nearly a quarter of a century. In the following year he made a contract with the principal inhabitants of the city of Montreal to treat each contracting party and his family for one dollar a year—certain diseases excepted. Bouchard anticipated health insurance in Canada by about three hundred years.

Another surgeon who practised medicine in Montreal

at this time was Louis Chartier. He was one of those who loaned money to Dollard des Ormeaux when he was organizing his expedition against the Iroquois who threatened to destroy the city of Montreal. His death occurred through drowning while helping to defend the city against these enemies of the French. Two other surgeons who helped fight the Iroquois at a later date (1690) in defence of the city were Antoine Chaudillon and Jean Jallot. They were two of a band of twenty-five Frenchmen who went out to intercept the Iroquois. Jallot was killed and Chaudillon wounded.

Among the surgeons of the Hôtel-Dieu at Montreal in those days were Jean Gaillard, who arrived in that city in 1661 and who succeeded Étienne Bouchard, and the Abbé Gabriel Souart who had studied medicine and received authority from the Pope to care for the sick when necessary.

In the year 1667 are found the names of Surgeons René Sauvageau and Jean Rouxcel, who practised in partnership, which included their furniture, victuals, merchandise, skins, fruits of the earth, surgical instruments, drugs and the product of their labour and industry.

Antoine Forestier and Martinet de Fonblanche, surgeons of the Hôtel-Dieu, Montreal, were appointed by an Act of July 13, 1681, by which they pledged themselves "to serve the said hospital, to care for and doctor all the sick—to attend by quarter—of three months in three months, to visit the sick with assiduity during the seven hours of the morning each day and other hours if necessary, one to be called during the absence of the other . . . remuneration of 75 *livres* each, drugs to be furnished by the hospital."

Others who practised in Montreal at this time were Jean Laplanche and Michel de Sirsée. The latter bought a forty-arpent farm in 1677 from Jean Raynaud for 1,125 *livres* and, in addition, agreed to pay thirty *livres* pin money to Dame Raynaud and give three years of surgical service

for barbering and bleeding to Raynaud, his wife and children. He is also referred to as "Michel de Sirçay, surgeon and valet-de-chambre to Mgr. the Governor Perrot."

That all was not sunshine for the quasi surgeons would appear to be indicated by the following incident: On March 9, 1699, René Gachet, who practised surgery in the city of Montreal, laid a complaint against M. d'Ailleboust des Musseaux, stating that being in front of his shop on the Place d'Armes at six o'clock in the evening, Musseaux without reason "maltreated him with blows of the fist and feet and also struck him with a piece of wood and wished even to draw his sword against him." Possibly Musseaux was not pleased with the type of surgical treatment he had received from the good doctor.

An interesting member of the profession in those early days in Montreal was Timothy Sullivan, who practised medicine in that city from 1724 to 1749, where he seems to have been known as Sullivan, Silvin and Silvain. It is said that he did some soldiering under the Spaniards before finding his way to Montreal. In January, 1720, he married Mme. d'Youville (née Marie-Renée Gauthier), widow of Christopher Dufrost de Lajemmerais. She was the daughter of René Gauthier de Varennes, Governor of Three Rivers, and of Marie-Ursule Boucher, the granddaughter of the patriarch Pierre Boucher, and the sister of the illustrious discoverer of the Rocky Mountains, Pierre Gauthier de la Vérendrye. Marie was a member of one of the most important families of the colony and mother of the foundress of the Grey Nuns. Her husband signed his name "Timothy Sullivan" at the registration of their marriage. He wished to practise medicine in Montreal but to do so he required the authority of the King. A petition was addressed to the King requesting authority for Sullivan to practise in the Province of Quebec as the

only other physician then practising in the country was Sarrazin. The petition was fostered by Governor de Vaudreuil, with the result that in March, 1724, a "brevet" was accorded to Timothée Sylvain of Ireland by Louis XV "to practise medicine on the Island of Montreal under the orders of Sieur Sarrazin, King's physician at Quebec."

The story is told that Jean Lacoste, a practitioner of Montreal, who had been found guilty in 1744 of forging a five-*livre* note, of the value of about one dollar, was condemned to death for his offence. The sentence was commuted on appeal to the Sovereign Council and, as punishment, he was condemned to be conducted naked through the town of Ville Marie (Montreal), lashed at its four corners, branded on the face and then despatched by the first ship sailing for France to serve there as a galley slave for life. Another physician who suffered almost the same fate as Lacoste was Pierre Malidor, who was one of Jean Martinet's apprentices. He was found guilty of forging notes. In addition to being flogged and conducted naked through the town, he was obliged to restore the amount of the forged notes to the value of four *livres* each, approximately eight dollars and eighty cents, pay a fine of ten *livres*, be banished from the city of Quebec and do forced labour for anyone who required his services at a distance of not less than sixty lieus for a period of three years. He was to be kept in gaol for that time except when wanted for such labour. The punishment meted out to these men for so comparatively trivial an offence was harsh according to present-day standards. It is reminiscent of the days of Bloody Judge Jeffreys.

One of the well-known surgeons of Quebec was Thimothée Roussel, whose name is associated with the "Golden Dog," of Quebec. Most of us are familiar with the story of the "Golden Dog," which centres around a quarrel between Begon, the Intendant, and Philibert, the

merchant. Begon's position gave him the advantage in the quarrel and it is said that Philibert, unable to obtain redress for his injuries, imaginary or real, covertly expressed his detestation of Begon and desire for revenge by inserting in the wall of his house an image of a golden dog, which bore the inscription:

Je suis un chien qui ronge l'os
En rongeant je prend mon repos
Un temps viendra qui n'est pas venu
Que je morderay qui m'aura mordu.

Begon was deeply insulted and hired an assassin, who killed Philibert. According to the story, Philibert's brother followed the murderer to Pondicherry, where he slew him. It seems rather too bad to spoil so interesting a tale, but, as a matter of fact, the house occupied by the merchant Philibert was built by Roussel and it was he who inserted the golden dog in the wall of the house and not the merchant Philibert. Roussel had come to Quebec from Montpellier, near the town of Pezenas, where there was an image of a golden dog set in the wall of a house. He had a replica made which he placed in the wall of his house in Quebec. He sold his house to the merchant Philibert and so the golden dog bore no relationship to the quarrel, imaginary or real, between Begon and Philibert. Roussel died of influenza during the epidemic of the year 1700 which carried off so many people.

One of the French surgeons of Quebec who came to Canada in 1757 was Philippe Louis Badelard, who investigated the Mal Baie disease. He was surgeon to the French troops and was present at the battle of the Plains of Abraham, where he was made prisoner by a Scotch Highlander named Fraser. It is said the meeting of Badelard and Fraser during the battle occurred in the following way: Badelard, seeing that the French were routed, turned to

flee, when he found himself face to face with Fraser; Badelard threatened him with his revolver but Fraser brushed it aside and made him prisoner. Both became life-long friends. After peace was declared, Badelard practised in Quebec and Fraser opened a school there.

During the siege of Quebec, hospitals for the British were established on the Island of Orleans by Surgeon Robert Adair, while the French troops were cared for by André Arnoux, a native of Rochfort and surgeon-major in the French Army. His brother Joseph, who was an apothecary, dressed Montcalm's wounds and it was at the residence of André on St. Louis Street that Montcalm died. The statement has often been made that it was André Arnoux who dressed Montcalm's wounds but André was at Bourlamaque, Isle aux Nois, on September 13, 1759, when Montcalm died.

Space does not permit a more detailed account of the surgeons of early Canada but it will be seen that during the French régime the country was fairly well supplied with surgeons and among them were a few men of high professional standing.

CHAPTER VI

Foundation of Hospitals

THE HOSPITAL is an expression of Christianity. With the dawning of the era of Christianity there arose the desire for the accomplishment of good works, and this found ready expression in the care of the sick and needy, who abounded in every locality. The early Religious, imbued with an ardent zeal to carry out the teaching of the Master, sought out the sick, nursed them in their homes and, at times, brought them to their own homes and institutions where they cared for them; and from these individual efforts there gradually evolved the hospital.

Beginning in Rome and its vicinity, the care of the sick in institutions spread to other Christian countries, and we find that in France, at the time of the colonization of Canada, hospitalization had probably been brought to a higher state of perfection than in any other European country. Most of the large cities of France had hospitals. Among the most notable were: The Hôtel-Dieu of Lyons, founded in the year 542 A.D. by Childebert I, the son of Clovis and his wife Ultrogotha, which eventually developed into one of the largest and most complete of French hospitals; the Hôtel-Dieu of Paris, established in 650 or 651 A.D.; the hospital at Beaune, one of the most magnificent in Europe, founded by Nicolas Rolin, Chancellor of the Duke of Burgundy, in 1443, which still retains much of its former beauty; the hospital at Châlon-sur-Saône, equally magnificent, of which we are told that in winter delicate perfumes permeated the wards and in summer baskets of growing plants hung from the ceilings, the buildings being laid out in the centre of extensive gardens through which there coursed a stream with little bridges

crossing it here and there; the Salpêtrière, which housed five thousand poor and insane women and girls, and contained three infirmaries; the St. Louis outside the city of Paris; La Charité, which was one of the best Paris hospitals; and l'Hôpital des Petites Maisons.

Little wonder then that, with such a background, the French should have been burning with zeal to establish in Canada a hospital for the care of the sick Indians who were reported to be dying by thousands from disease. They were anxious, as well, to emulate the example of the Spaniards who under Cortes had built, about the year 1524, the hospital of the Immaculate Conception, which still stands in the city of Mexico, and was erected on the site where Cortes and his followers first met Montezuma and his chieftains.

The French had scarcely settled in Quebec before the need for a hospital became apparent and, to meet this need, the Hôtel-Dieu Hospital of Quebec was established. The Duchess d'Aiguillon, a niece of Cardinal Richelieu and a great lady of the Court of Louis XIII, had read the Jesuit *Relations* and appeal of Father Le Jeune for the establishment of a hospital in Quebec and, hearkening to the appeal, decided to provide money for the purpose. On August 16, 1637, a contract was made between her and the Hospitalières of l'Hôtel-Dieu de Dieppe, in Normandy, to build a hospital at Quebec. She obtained the money by a lien "taken on the coaches and carriages of Soissons, on condition that the hospital would be dedicated to the death and precious blood of the Son of God spilled for the salvation of the human race." The first nurses, three in number, to whom was assigned the building of the hospital, arrived in Quebec on August 1, 1639. "They commenced their work," says Juchereau, "in a nice enough house which belonged to the Company of the Hundred Associates and which was loaned by the Governor, M. de Montmagny."

The house consisted of four rooms and two closets. The only furniture was a table, or rather a plank supported by four posts, and two benches of the same nature. There were no beds and the sisters were obliged to beg a few branches of trees to make one. These they found so full of caterpillars that they were covered with them.

It was impossible to accommodate all the sick, nor was there enough linen and other hospital supplies so that the sisters were obliged to use their own personal linen for bandages. Blankets and sheets were torn up for the same purpose. Cabins, fashioned like those of the Indians, were hastily constructed to accommodate the overflow of the sick. The Jesuit chronicler of the event tells us:

Instead of taking a little rest and refreshing themselves after the great discomforts they had suffered upon the sea, they found themselves so burdened and occupied that we had fear of losing them and their hospital at its very birth. The sick came from all directions in such numbers; their stench was so insupportable; the heat so great, the fresh food so scarce and so poor in a country so new and strange, that I do not know how these good sisters, who had not even leisure in which to take a little sleep, endured all these hardships.

Smallpox was epidemic among the Indians at this time and they quickly filled the hospital, but the mortality was so great they called it the "House of Death" and gave it a wide berth. Nevertheless, realizing after a time that there were just as many deaths among them in their own cabins and in the woods where they fled the scourge and that there were innumerable deaths from the disease among their brethren of Tadoussac, the Saguenay and Three Rivers, they again sent their sick to the hospital. The Iroquois, Hurons, Ottawas and all other nations sent their sick there and, although many of them died on the way, it was continually filled to overflowing. When hunting-time came, the infants, the old and infirm were left to the care of the

sisters while the hunters went off to the woods, and, as the historian says, "they were not forced to kill the weaker members of the tribe who could not keep pace with them on the journey."

By a new contract made on January 31, 1640, Madame d'Aiguillon promised an additional sum of 40,000 *livres* for the hospital. Meanwhile, the building of a hospital at Sillery was begun.

The incursion of the Iroquois often drove the Hurons from their villages to Sillery, where they threw themselves upon the tender mercies of the sisters who gave them so much assistance that they themselves were often reduced to actual want. As these incursions of the Iroquois increased, the Hurons asked that the French build houses for them in the French fashion, for they believed they could better withstand a siege. A number were thus built and furnished by the sisters.

In the year 1642 the menace of the Iroquois grew more threatening. The sisters prepared to withdraw from Sillery to Quebec, and with that object in view hurriedly set about the construction of a hospital in that town. Soldiers were sent from the fort to protect the sisters at Sillery and, finally, the Governor was obliged to withdraw even these. Although loath to leave, the sisters in the end withdrew to Quebec, where they took up their residence in an abandoned house on the river bank. They quitted Sillery for Quebec on May 29, 1644, after having lived there about four years.

The spiritual attendants at the hospital at Sillery were Brébeuf and Jogues, and the surgeon, Goupil; all three were subsequently put to death by the Iroquois. One of the nurses was Mary Irwin, a young Scottish girl of noble birth and a relative of Mary Queen of Scots. She came to Canada with the hospital nuns of Dieppe. She was known as Mère Marie Irouin.

Each year the hospital was improved or enlarged to meet the ever-growing demands made upon it. With the increase in population, there was an accompanying increase in the number of sick who required hospital care. Unfortunately, the hospital was destroyed by fire in 1755 and Mère Marie Anne de la Joue lost her life in the conflagration. The patients were removed to l'Hôpital Général. It was rebuilt and ready for occupation in 1757. Two years afterwards, 1759, the sisters were driven out during the siege of Quebec as the hospital was exposed to the enemy fire. They retired to l'Hôpital Général, five of them remaining to guard the hospital. These became quite inured to the bombs and whistling bullets and bravely remained on guard. During the siege fifteen bombs fell on the buildings and so many cannon balls had fallen within the grounds that the place was a ruin. Their storehouses were demolished and their trees destroyed. Their cattle, of which there were seventy head, were lost, and the distress was very great. In this period of anxiety they were greatly aided through the kindness and generosity of Murray. During the campaign the British took over the wards, only a few patients being admitted.

Following the surrender of Quebec, one of the officers describes the hospital in the following words:

Each patient has his bed with curtains allotted to him. Every sick or wounded officer has an apartment to himself, and is attended by one of these religious Sisters, who in general are young, handsome, courteous, rigidly reserved and very respectful. Their office of nursing the sick furnished them with opportunities of taking great liberties if they are so disposed; but I never heard any of them charged with the least levity.

The British continued to occupy the hospital, for which they paid rent, until the year 1784, when it was relinquished for the use of the public.

The history of the Hôtel-Dieu from the time of its inception is truly heroic; there is no more glorious a page in the history of human sacrifice. All diseases were indiscriminately admitted to the hospital and scurvy, typhus, smallpox, infectious and non-infectious diseases were treated side by side. Little was known of preventive methods and few precautions, if any, apart from a meticulous regard for cleanliness, were taken to prevent the spread of infection. The almost continuous wars with the Indians and with the English brought an influx of troops from France each year, and with them typhus, smallpox and other diseases.

As we have seen, the colony was devastated by typhus or smallpox, again and again, following the arrival of the King's ships and, on each occasion, a toll of nursing sisters was taken. To join the order of nursing sisters in those days meant almost certain death, yet the ranks were always filled. Added to the horrors of disease, there was at all times the menace of the Iroquois. Each week bore witness to scalping parties and prisoners burned at the stake. Raids, mutilations, women and children tortured, skinned and burned alive were a frequent occurrence. These atrocities were avenged by the French with almost equal ferocity. The hospital was often menaced by the Indians and by the English in their efforts to capture the city, yet through it all the sisters never failed in their duty and the hospital was always open to friend and foe alike.

Since those early days, the Hôtel-Dieu has continued to minister to the sick. It has been enlarged and improved on numerous occasions, and today occupies a large and modern structure.

As the demand for hospital accommodation increased, l'Hôpital Général was built at Quebec. It was founded in the year 1692 by Bishop St. Vallier for the care of the needy sick of both sexes. The hospital was placed in

charge of the Sisters of the Order of St. Augustin. At a later date the scope of the hospital was expanded to include the care of the insane.

We know very little about the prevalence of insanity in the French colony. The only sources of information are Champlain's *Narratives* published in 1619 and 1632; the Récollet Father Segard's *Histoire du Canada*, which appeared in 1634, and the *Jesuit Relations*, but these throw little light on the subject of the insane or their care. The *Relations* mention but one case of insanity among the early settlers, which is reported in the following words:

In this month (December) Barbe Halé was brought from Beauport. She had been possessed with a demon of lunacy for five or six months, but only at intervals.

This meagre account is supplemented thus by Marie de l'Incarnation:

It seems that there was a certain miller who was adjudged by the Church an apostate and a magician. He, by his diabolical arts, had bewitched a girl and persuaded her to marry him. The proof of his intercourse with the devil was that the poor hysterical girl declared that he visited her by day and by night, after demons had appeared to frighten her.

The Bishop sent a Jesuit to exorcise the devil but, apparently, the Jesuit realized that the girl was ill and placed her under the charge of the Hôtel-Dieu nuns. Her sweetheart was put in prison.

The treatment of the insane did not appear to differ from that of other countries at the same period. Some were cared for by their friends, others were suffered to roam about at will, and apparently only those who were considered dangerous were placed in custody.

The history of L'Hôpital Général parallels that of the Hôtel-Dieu of Quebec. During the siege of Quebec in 1759, there were over one thousand English and French wounded

soldiers in the hospital where both were attended with the same kindly care. Beds were put up in the church and chapel, only a small part of the choir being reserved for divine service. What annoyed the sisters even more than the terrors of the siege was the fact that the English soldiers occupying beds in the church would talk during Mass. The hospital was under the protection of Lord Dorchester during the siege of Quebec in 1775 and a black flag was flown as an indication of such protection.

L'Hôpital Général continued in existence without a break for many years, but latterly has ceased to serve as a general hospital and is used as a home for aged men and women.

In the year 1640, Jérôme de la Dauversière, Lieutenant-General of the Presidial—Inferior Court of Judicature—in La Flèche, Anjou, joined hands with the founder of the Seminary of St. Sulpice, Mr. Olier, and other members of the Court, to form an association known as “Messieurs et Dames de la Société de Notre Dame de Montréal pour la Conversion des Sauvages de la Nouvelle France.” The object of the Association was to acquire the island of Montreal and make it a centre for the education and Christianization of the Indians. Madame de Bullion contributed forty-two thousand *livres* for the purpose of endowing a hospital in the proposed new settlement.

On May 17, 1642, the first colonists to the number of forty, led by Maisonneuve, landed on the island of Montreal at a point later known as Pointe-à-Callières, and among them was Mlle. Mance, who had proceeded to Canada to establish the hospital at Montreal. The first hospital, l'Hôtel-Dieu, was opened on October 8, 1644. Situated on the river bank, it consisted of two wards for the sick, a kitchen, apartments for the servants and a room for Mlle. Mance.

There was immediate need of the hospital for, as soon

as the Iroquois became aware of the presence of the French, they made a raid upon the young colony and the wounded soon found their way into the wards. These encounters were repeated and put an end to only by the heroic Dollard and his band of intrepid Frenchmen.

One of the earliest French documents which might be considered somewhat in the nature of a death certificate is that contained in the report of the exploit of Dollard:

June 3, (16....). We have received news by a Huron who escaped from the Iroquois who took him prisoner during the battle which took place eight days (ago) between the said Iroquois who numbered eight hundred, and seventeen French of this habitation and four Algonquins and about forty Hurons, at the foot of the Long Sault, that thirteen of our French had been killed and four taken prisoner, whom we are informed by the Hurons escaped after being cruelly burned by the Iroquois in their country. The names of the said French dead were Adam Daulat, commandant, aged 29 years; Jacques Brassier, 29 years; Jean Tavernier dit Lalochetière, armorer, 28 years; Nicolas Tiblement, locksmith, 25 years; Laurent Hébert dit la Rivière, 27 years; Alonice de Lestre, lime worker, 31 years; Nicolas Josselin, 29 years; Robert Jurie, 24 years. We have learned that the following were saved by the Dutch and returned to France: Jacques Boisseau, 23 years; Louis Martin, 21 years; Christophe Auger dit des Jardins, 26 years; Estienne Robin dit les Forges, 27 years; Jean Valets, 27 years; René Doucin, 30 years; Jean Le Compte, 26 years; Simon Grivet, 25 years; François Crusson dit Pilote, 24 years.

The Iroquois were successful in practically wiping out the Hurons in the year 1650, and in the following year they made so desperate an attempt to destroy the new colony that the hospital was abandoned by its defenders. Finally, the menace of the Iroquois became so great that Maison-neuve found it necessary to proceed to France for assistance in defending the settlement.

From the time the hospital was established, it was nearly always filled with sick, owing to the incessant

attacks of the Iroquois. Each time any of the inhabitants was attacked by them, the bell of the Hôtel-Dieu was tolled and the inhabitants of the town came running to the defence. The sisters tolled the bell so that no man might be detained from the fight. From the spot where the hospital stood, they usually were able to see the battle that was being waged. Work in the fields was extremely dangerous and the inhabitants were often quite unable to till their fields and were frequently obliged to subsist on provisions obtained from Quebec. The sisters were often menaced by the Iroquois, who prowled about the hospital or hid in ambush close by waiting to seize any one of them whose duty led her outside.

Following the capture of the city of Montreal in 1760, Amherst visited the hospital. He congratulated the sisters on their zeal and charity and later sent them a present of two hundred crowns with two dozen Madeira wine as a recognition of the care they had given his sick soldiers.

Later, Carleton, for some unknown reason, issued a command to the Superior of the Nursing Sisters, in 1768, that no novice under the age of thirty years was to be admitted into the Nursing Order and that no one was to be received as a member of the Order unless certified by him. This command, which would undoubtedly have destroyed the Nursing Order, was revoked by him two years later.

Following the Conquest, the hospital endured many hardships and it was extremely difficult for the sisters to maintain it through lack of funds. The British helped them to some extent by providing foodstuffs and other supplies. These, together with minor industries created by the sisters, such as the establishment of a bakery, sewing, gilding ornaments and other activities, were their sole means of support for some time.

From those early days, l'Hôtel-Dieu of Montreal has continued an uninterrupted existence and has ministered

to the care of the sick with the same zeal as the founders.

Among the hospitals established under the French régime, in addition to those already mentioned, were St. Jean de Dieu at Port Royal, the date of the foundation of which is unknown but which was one of the very earliest hospitals of the country; l'Hôpital Général de Montréal, whose construction was begun in 1692; the Hôtel-Dieu at Three Rivers founded in 1697; and Hôpital du Roy at Louisburg, founded by five lay brothers apparently in 1724, although the year 1716 is also given as the date of origin.

Under the British régime, the creation of hospitals kept pace with the development of the country and today from coast to coast are to be found palatial hospitals which provide all modern facilities for the treatment and care of the sick. These are so well known that it is unnecessary to expatiate upon them.

CHAPTER VII

Epidemics After the Conquest

FOR SOME TIME after the British occupation little was done to enforce existing regulations to conserve the health of the people, nor was a great deal known of the prevalence of disease, as records were only indifferently kept, but we know that there was a progressive decrease in the number and extent of outbreaks of the contagious diseases from which the French suffered since the colony was established. Nevertheless, smallpox continued to occur in epidemic form from time to time, as in the year 1769 in Quebec, 1775 in Halifax, 1783 in Quebec and 1801 in Nova Scotia. The introduction of vaccination in 1802 was the first effective step taken to control this disease but it was many years before vaccination was adopted generally and occasionally outbreaks occurred. It was epidemic in Halifax in 1814 and 1827, in Quebec in 1842, and in Montreal and Quebec in 1870. These outbreaks culminated in the great epidemic of Montreal in 1885, since which time the occurrence of smallpox has been less frequent and less severe clinically.

There were, however, other diseases which caused concern and, among them, the *Mal de Mal Baie*, also known as *Mal de la Baie St.-Paul*. About the year 1773 the attention of the Government of Lower Canada was called to the increasing ravages of a disease which had originated at Mal Baie (Murray Bay) and spread to other parts of the province. It was said that the disease was brought to Mal Baie by a detachment of Scotch troops who were sent there on active service, but no evidence has been adduced to substantiate this supposition. The resemblance of the disease to syphilis led the sufferers, who were aware of the

resemblance, to conceal their symptoms and trust to home remedies for relief and, as they were ineffective, the disease spread throughout the community. Realizing the extent of the ravages of the disease, Carleton sent a surgeon's mate, Mr. Dan, of the 7th Regiment, to Mal Baie in the year 1775 with instructions to study it and administer treatment. This officer was recalled to Quebec owing to the invasion of the country by the Americans and died in the following year. Carleton then appointed Surgeon Badelard to continue the investigation undertaken by Mr. Dan. He diagnosed the disease as syphilis and treated it with mercury in the form of powders, pills and inunctions. The treatment was given for a period of only two weeks when he considered his patients cured.

In the month of September, 1782, Surgeons Blake, Sym, Selby and Robert addressed a letter to the Grand Jury of Montreal calling attention to the disease and suggesting the appointment of a committee of surgeons for its control, stating that it was general in every parish in the district. The Grand Jury of Montreal conveyed the recommendation to His Majesty's Commissioners with the request that money and remedies be provided for treatment by competent men. The matter was discussed by the Legislative Council, who placed it before the Governor, suggesting that a list be obtained of those infected in the different parishes and that measures be taken by the Government to arrest the evil. At the request of the Government, the Roman Catholic Bishop, Rev. J. Oliver Briand, addressed a letter to the clergy on the subject and sent them copies of a printed circular describing the disease and the method of cure. Two years later, a letter was forwarded by the Bishop of Quebec, Louis Philippe Mariaudeau d'Esglis, to parish priests, in which he advised that remedies would be forwarded to them for distribution "*in different parts of your parish so that the sick who wish to be unknown can have*

recourse to them." He advised them that a physician chosen by the authorities would visit the sick in each of the parishes and instructed the priests to exhort the people to wipe out the disease "so easy to extirpate at its commencement but so deadly in its effects; so injurious to commerce and society; so much to be feared by those who travel; so dangerous in certain functions of the ministry." He exhorted them "to bring in the sick and to oblige them to declare their sickness of which *the results may be so deadly to their posterity.*"

The investigation begun by Carleton was continued by Haldimand; and his successor, Hamilton, appointed Dr. Bowman to go through the country parishes and take means to extirpate the disease. Bowman in the course of the following summer visited most of the parishes in the province and in almost all of them found infected persons. The next year he repeated his visit. He claimed to have supplied a total number of 6,440 people with medicine, of whom 1,786 were reputed to have been cured. A bill for £2,500 was submitted by him but, as there appeared some reason to doubt the number to whom he supplied remedies, an investigation was held. Whether or not Bowman had exaggerated the number of cases he had treated, the reports of the clergy indicated that the disease was widespread.

Blake, in discussing the disease, said that it was supposed to be the same as that which infected part of the Highlands of Scotland under the name of Sibbens or Sivvens and that the inhabitants of Mal Baie believed it was introduced by a Scotch pilot who spent a winter among them. Hence, they called it Mal Écossais. In other parts of Canada, people thought it was brought into the country many years previously by an Indian tribe, the Juestrecrux. Blake showed that the disease was communicated in a manner quite different to that in which syphilis is usually acquired. In most cases the primary lesion of the disease

appeared on the lips, mouth and throat, indicating indirect infection. He pointed out that the Canadians "make use of the same cups and drink from the same bucket; they frequently borrow each other's pipe to smook with; they chew the food for their infants and spit it in their mouths." These habits undoubtedly were the cause of the disease becoming so prevalent. However, there is no doubt it was syphilis and transmitted extragenitally in the majority of cases.

In reading numerous records of the disease, one is struck by the fact that over-dosing with mercury was quite common. Undoubtedly the mouth conditions were aggravated by mercury and in some cases mercurialism was mistaken for the disease. Old syphilographers were much more familiar with mercurial poisoning than we are today. In this regard the following quotation from Cooper's *Dictionary of Practical Surgery* for the year 1830 is an indication of the confusion in diagnosis that may be caused by over-dosing with mercury:

Mr. Hunter takes notice of sloughs which occur in the tonsils from the effects of mercury in the throat, and are apt to be mistaken for venereal complaints . . . he had seen mercury which was exhibited for a supposed venereal ulcer on the tonsils produce a mortification of those glands and the patient was nearly destroyed.

It is worthy of note that there was a similar outbreak of syphilis in New England in 1646, to which the following reference is found in John Winthrop's *Diary*:

There fell out a loathsome disease at Boston, which raised a scandal upon town and county though without just cause.

Strangely enough, we find no reference to leprosy in the French colony, although it is known that many of the settlers in Acadia had come from St. Malo, a leprous district in France. It was not until the year 1815 that

attention was called to the first case in the person of a French-Canadian woman, Ursule Benoit, who lived at Tracadie and whose paternal grandfather came from St. Malo.

Tradition has it that the disease was introduced into Tracadie by two Norwegian sailors of the ship *La Florida* who deserted and walked to Tracadie, where they stayed at the home of the Benois. It is said that both were in an advanced stage of leprosy, and that Ursule acquired the disease by washing their clothes, but this seems hardly likely. Although she was the first leper recognized as such, there is some evidence to indicate that the disease was present among the Acadians in the Tracadie district at an earlier date, for it is said that leprosy was carried to Louisiana by the Acadians who were driven out of Acadia by the British in the year 1755, sixty years before Mrs. Benoit was found to be suffering from it.

The story is told that when Ursule Benoit died, her coffin was borne on the shoulders of pall-bearers to the church and the grave, and that the weight and moisture which oozed from the coffin caused an abrasion on the shoulder of Francis Soney, one of the pall-bearers. Although he washed his shoulder and changed his linen after the funeral, he became infected and died of the disease eleven years later. We are told that, some time before his death, he slept at the home of the Lavoie family in Nigaouck, about twenty miles south of Tracadie, and that Marie Lavoie, who washed the sheets of the bed on which Francis had slept, became leprous and died of the disease.

The question arose as to whether the disease was correctly diagnosed as leprosy and it was suggested that it was the Mal Baie disease, but syphilis was excluded by the physicians who studied the cases and it was definitely diagnosed as leprosy.

To prevent the spread of the disease, a lazaretto was

opened at Sheldrake Island for the care of the lepers in 1844, and within a year twenty lepers found a home there. This lazaretto was destroyed by fire in the following year and, in 1849, a new lazaretto built at Tracadie. By the year 1851 thirty-seven lepers had been brought to that lazaretto from the province. Dr. Nicholson, who was appointed in the year 1861 as Superintendent of the lazaretto, in describing the treatment of lepers at that time, says:

Lepers were hunted like wild beasts, dragged from their hiding places, handcuffed and thrown into what was a cheerless prison surrounded by a wall twelve feet high with a row of long iron spikes on the top to prevent escape.

Nicholson took down the wall, provided medical treatment and improved the lot of the lepers very greatly.

In New Brunswick, there have been lepers of French, English, Irish and Scotch descent and of mixed origin. There have been cases of leprosy among the descendants of immigrants from the Hebrides who arrived in Cape Breton about the year 1810, but, as they were segregated in their own homes voluntarily, the disease was stamped out.

To continue the story of epidemics, we must now pass to the year 1832 when, for the first time in history, cholera was introduced into Canada with disastrous results. The British Government informed Canadian authorities in 1831 that cholera was epidemic in England and Ireland and suggested that steps be taken to prevent its introduction into Canada by immigrants from those countries. The Bishop of Quebec, who was advised of the danger, instructed his parish priests to notify the parishioners to avoid contact with ships lest they acquire the disease.

In anticipation of the possibility of its introduction by means of ships, a quarantine station was established at Grosse Isle, in the St. Lawrence, about thirty miles below

Quebec, where all vessels proceeding to Quebec were obliged to undergo quarantine and, in addition, a Health Committee was created in Quebec, composed of Doctors Morrin, Parent and Perrault, to take measures to prevent the entry of the disease but, in spite of these precautions, cholera was introduced by ships from England and Ireland in the following year and spread throughout the whole country, taking a large toll of life. In that year fifty-one thousand seven hundred immigrants arrived at the port of Quebec, and in the cities whence these immigrants came cholera was epidemic. The disease broke out in the immigrant ships on their way across the Atlantic and there were many burials at sea. It was carried to Montreal, where there was great loss of life, thence throughout the whole country and, finally, from Canada to the United States. The inhabitants of Quebec became panic-stricken and left that city in great numbers. As existing hospitals could not accommodate the ill, tents were pitched on the Plains of Abraham to take care of the overflow and temporary hospitals erected. The disease was prevalent during the entire summer of 1832 and ceased only with the approach of cold weather.

In an appendix to a sermon by Rev. G. L. Mountain, we get a running picture of the life of the inhabitants during those calamitous days:

Women were met at the doors bewailing their affliction, who had come too late to take a last look at their husbands while alive; parents or children were surrounding the death-beds of those dear to them; patients were, some clamouring in vain for assistance, some moaning in the extremity of languor, some shrieking or shouting under the sharp action of the cramps. The clergy in passing through some quarters of the town to visit the sick were assailed sometimes by importunate competitors for their services. One after another the schools were closed. The conveyance of bodies to the burial grounds in open carts piled up with coffins continued after the Board of Health had

provided covered vehicles for this purpose. One saw in many parts of the town signs, "Coffins made here." The disease raged with great violence in the Parish of St. Roch.

Bender, in his *History of Old and New Canada*, in speaking of the epidemic of cholera in 1832, says:

In 1832 Quebec was visited by that dreadful disease known as Asiatic cholera, the name of which alone sends a shudder through most hearts. Starting at the eastern seaports of the Dominion, its course westwards was rapid, appalling and deadly, no human means or appliances seeming capable of even diminishing its progress or mitigating its violence. Not the least stricken of its awful paths was the St. Lawrence valley, along which the graves of the victims could be counted by the thousand. "Grave" is, in fact, too sacred a name to assign to the horrible pits at Grosse Isle below Quebec, and elsewhere, in which the remains of those victims were cast in haste and dismay. . . . The daily sights witnessed were of the most harrowing kind. At all hours of the day hearses and open carts, often containing five and six coffins piled one upon the other, could be seen slowly driving through the streets towards the "Cholera Burying Ground" in St. Louis Street, with occasionally one or two mourners following, but oftener none. . . . Many sought safety in flight, but often only to die elsewhere, having lurking within them the germs of the disease; and in this way the infection was spread from place to place. What to do to arrest or at least to some extent diminish its violence was the all-absorbing problem of the day.

In the presence of such havoc among the people and such widespread suffering and distress, no one could be indifferent, no one feel secure; all sighed for that remedy and protection which medical science was utterly unable to supply. Able, zealous and humane physicians did their utmost, unquestionably, to stay the progress of the fell destroyer, to rescue the people from what the Psalmist so pathetically describes as "the pestilence that walketh in darkness, and the destruction that wasteth at noon-day,"—but sanitary laws were not understood, and the professional experience of physicians was sadly inadequate to the difficult task. . . . The interments of those who died of cholera during the day were made regularly each night at seven o'clock. . . . All hours of the day the funeral wagons

moved towards this necropolis, but at night the procession was tumultuous, a veritable race to the tombs similar to the dances of death painted or sculptured on the monuments of the middle ages.

Political issue was made of the cholera outbreak by the enemies of the Government at this time. The Governor, Lord Aylmer, and his entourage were denounced before the public as the first cause of the ravages of the dread scourge. "It was," they declared, "their culpable negligence or their guilty subservience to the merchants of Montreal, who opposed the preventive measure of a quarantine, that left the country unprotected against the entrance of the disease." The disease lasted from June 9th to September 1st, during which it killed, it is said, at least six thousand people.

Cholera reappeared in 1834, being again introduced by immigrant ships. On the reappearance of the disease at that time, the National Party again blamed Lord Aylmer for the outbreak, saying that it was he who allowed it into the country by refusing to close the St. Lawrence to shipping, and that he enticed sick mariners to come to the country in order to decimate the ranks of the French Canadians. The disease in that year raged with a violence equal to, if not greater than, that in 1832.

It broke out in May, 1849, entering Canada by way of Kingston. It was epidemic in the United States at that time.

In 1851 there was an epidemic of cholera which was confined largely to the city of Quebec, being brought from the United States. There was a recurrence in 1852, the first victim being a man who worked on the ship *Advance* from New York. In the year 1854 cholera again found its way into Canada by way of Quebec. That was the last of the cholera epidemics. Cases have been found on board ship at later times but the disease did not become epidemic.

The year 1847, which was destined to become known as the year of the great typhus epidemic, saw one hundred thousand emigrants from England, Scotland and Ireland bound for Canada. One-half of them were natives of Ireland who had fled the country following the famine of that year. More than twenty thousand died, of whom over five thousand were buried at sea.

We can picture conditions on board the typhus ships from the following description:

The food is generally unselected and seldom sufficiently well cooked. The supply of water, hardly enough for cooking and drinking, does not allow for washing. In many ships the filthy beds teeming with abominations are never required to be brought on deck and aired. The narrow space between the sleeping berths and piles of boxes is never washed or scraped but breeds a damp and fetid stench until the day before arrival in quarantine when all hands are required to scrub up and put on a fair face for the Doctor and Government Inspector.

As for the dead who were not buried at sea, they were taken from the pest ships and corded like firewood on the beach to await burial. In many instances the corpses were carried out of the foul-smelling holds or they were dragged with boathooks out of them by sailors and others who had to be paid a sovereign each. On deck a rope was placed around the emaciated form of the Irish peasant father, mother, wife and husband, sister and brother. The rope was hoisted and with their heads and naked limbs dangling for a moment in mid-air, with the wealth of hair of the Irish maiden, or young Irish matron, or the silvered locks of the old Irish grandmother floating in the breeze, they were finally lowered over the ship's side into the boat, rowed to the island and left on the rocks until such time as they were coffined. The dead were buried in trenches.

The only additional accommodation provided at the Quarantine Station, Grosse Isle, in the St. Lawrence to meet the influx of thousands of sick was the purchase of fifty bedsteads, double the usual quantity of straw and the erection of a shed. The total accommodation was two

hundred beds. As the number of cases increased and it became impossible to obtain nurses, prisoners in the Quebec jail were given their freedom to nurse the sick as best they could. Four doctors, six priests and twenty-six attendants died at the quarantine station. Shipwreck was added to complete the sorrows of these people, as three vessels bringing immigrants to Quebec were wrecked with the loss of hundreds of lives.

We are apt to look upon influenza as a disease of modern civilization, yet there were many outbreaks in Canada in the early days. French and Indians suffered from it repeatedly and it was epidemic in Quebec in 1826. A report of the epidemic is contained in the *Quebec Gazette* of April 6th of that year, to which it is referred in the following words:

The influenza has just been felt and is spreading with alarming rapidity. It is the most remarkable epidemic that we have observed at Quebec, for it may be said one-half the population is affected.

The disease appeared at regular intervals and there are many records of it, but the year 1918 eclipsed all previous records, causing thirty thousand deaths in Canada. Like many other diseases, it was introduced by shipping and spread throughout the whole country, at least one-sixth of the population being affected.

That was the last of the great epidemics that swept across the country.

CHAPTER VIII

Medicine Under British Régime

AS WE HAVE SEEN, New France was fairly well supplied with surgeons, a few of whom were men of high professional standing. They were undoubtedly as good as were to be found in any country of that time, but there were many others who had little or no training in the profession of medicine and who were a menace to their patients. It was to control these irregular practitioners that Bigot passed a Bill in 1750 making it compulsory for all those who wished to practise medicine to undergo an examination before the King's doctor at Quebec in the presence of the Lieutenant-General of the Prevostship. But laws, unless impartially enforced, cannot accomplish all that is desired. Favouritism and bribery were often used to obtain Letters Patent from the King to practise medicine. This did not improve the situation. Following the Conquest, laws governing the practice of medicine were in abeyance, the result being that in many districts men, calling themselves doctors, although totally unskilled in the art of medicine and frequently devoid of the most elementary education, took up the healing art. Perhaps there is no better indication of the abuses of the practice of medicine of that time than is to be found in a letter of Blake, surgeon of the 34th Regiment, who had come to Quebec with the troops, to the Committee of His Majesty's Council on Population, in which he deploras the fact that so many inexperienced and illiterate men were engaged in the practice of medicine and surgery. In his letter he quotes a number of instances indicating the appalling lack of medical knowledge of men who masqueraded as physicians. He tells us that on one occasion a doctor's bill was sent him

by the Court of Common Pleas for adjustment and, in order to evaluate the services rendered, he interviewed the physician whose account was under consideration. Questioned as to the remedies used, the physician informed Blake he had prescribed two ounces of "Mercurius Dulcis." Blake expresses the belief that this man had killed more Canadians than did the Americans in the War of 1775. Another incident referred to in his letter relates to midwifery. In a case of childbirth, a doctor, finding that the head of the child had been delivered but that the shoulders had caught at the pelvic opening, cut off the child's head and threw it into a bucket. The father declared that his child's head appeared to him like St. John the Baptist's in a fiery cauldron. Blake says he could give many instances of murder being perpetrated with impunity by impostors.

The practice of medicine under the British régime began with the advent of British surgeons who had come to Canada with the troops and had engaged in the practice of their profession. They were capable, well-trained men, the product of the best of the British medical schools. Among them were Blake; Latham, surgeon to the King's Regiment of Foot; Bowman, assistant surgeon to the military hospital at Quebec; Mabane, who came to Quebec following the British occupation; and Nooth, military surgeon with Dorchester.

To Latham is attributed the introduction of smallpox inoculation at Quebec in 1768, although a letter published in the *Quebec Gazette* in 1765 indicates that inoculation with smallpox had been adopted as early as 1764. As has been pointed out, the practice was abolished by Act of Parliament in 1853 as it was considered too hazardous.

Bowman came to Quebec with the British army as an assistant surgeon and practised there until he died in 1787. His salary as assistant surgeon to the military hospital at Quebec was seven and one-half shillings a day. During

the last few years of his life he was engaged as physician to the Hôtel-Dieu, Quebec. He is best known for his work in connection with the *Mal de Mal Baie*.

Mabane, born at Edinburgh in 1734, was present at the battle of the Plains of Abraham as a surgeon's mate. Although he knew nothing of law, he was appointed Judge of the Common Pleas when it was established by Murray in 1764, and served in that capacity until his judgeship was revoked by Carleton two years later. He was a member of the Council for a number of years and helped mould the policy of certain of the Governors. He was dismissed from the Council by Carleton. The English party in Quebec found in him a stern opponent in their efforts to mitigate the rigours of the Quebec Act. He was one of the founders of the Quebec Library Association and for many years was a great personal friend of Haldimand.

Nooth, who came to Canada as military surgeon with Dorchester in 1786, was a member of the Royal Society and was recognized in his day as the most outstanding physician of Quebec. His appointment as Superintendent of the English and Foreign hospitals of the province met with general approval, a position he filled with distinction. On the death of Bowman, he was instructed to study the Mal Baie disease. His death occurred at Bath, England, in 1828.

As French laws governing the practice of medicine ceased to function following the advent of the British, quacks and charlatans exploited the public. To remedy this situation, a Medical Act was passed in 1788 which prohibited any person from practising physic, surgery or midwifery in the towns of Quebec and Montreal or their suburbs without obtaining a license from the Government or the Commander in Chief of the province. Penalties were imposed, a provision being made that surgeons in the Army and Navy were not obliged to have a license. To obtain a

medical certificate it was necessary to be twenty-one years of age and to have served an apprenticeship of five years with a practising physician in the province. The physicians of the district of Quebec and Montreal were appointed as examiners.

One of the first to obtain a license under the Act was La Terrière, a graduate of the University of Cambridge. The examiners were Doctors Foot, Fisher, Oliva and Lajust. La Terrière objected to the manner in which some of the questions were put to him by Fisher, saying that he understood the purport of the questions and had his answers ready but wished to have the questions submitted according to the rules of science. Fisher told him that, as he understood them, he could put the questions to himself in any way he wished. Oliva facetiously asked him the difference between a sick person in a book and a sick person in bed. La Terrière answered that the difference was the same as that between theory and practice. Not an unintelligent reply! La Terrière's remarks when he was advised that he had passed successfully are amusing. He says:

I thanked them all and, at the door, the assistants complimented me and shook hands with me. I called on my friends throughout the city with much gratification because it was generally known that I had passed with honour to myself and those who had graduated me, and all warmly complimented me.

Twenty-five years had elapsed from the time of the Treaty of Paris to the passage of the Medical Act of 1788 and during this period the control over the practice of medicine was only nominal. As the only way one could acquire a knowledge of medicine in the country was through apprenticeship, one may readily imagine that the practice of medicine was not of a high standard.

Until the year 1822 when Dr. Stephenson, taking

advantage of the teaching facilities afforded by the Montreal General Hospital, obtained permission from the hospital authorities to lecture in anatomy, surgery and physiology, there were no medical schools in the country. Associated with Stephenson as lecturers were Doctors Robertson, Caldwell and Holmes. Lord Dalhousie authorized the foundation of a medical school by these men and, in 1824, they established the Montreal Medical Institution at 20 St. James Street, Montreal, subsequently absorbed by the Medical Faculty of McGill University.

Dr. Stephenson was a native of Montreal. His father began business in Quebec City one year after the Conquest. Stephenson obtained his preliminary education at Le Collège de Montréal and studied in Edinburgh. Records of the Montreal General Hospital indicate that the honour of originating the Medical Institution belongs to Stephenson.

Robertson, who was the first lecturer on the subject of midwifery and diseases of women and children in the Montreal Medical Institution, was descended from a Perthshire family. After graduating in Edinburgh, he joined the 49th Regiment as assistant surgeon at Cape Breton Island in 1806, and was transferred to the 41st Regiment serving through the War of 1812. He was at the storming of Fort Niagara and, on the declaration of peace in 1815, settled in Montreal. Here, he was appointed to the chair of medicine following the death of Dr. Caldwell and held that position until his death on July 18, 1844.

Caldwell was born in Ayrshire, Scotland, in 1782, and studied at Edinburgh. As surgeon to the 13th Regiment of Dragoons he served in the Peninsular War on Lord Aylmer's staff. He died of typhus at the age of forty-eight years.

Holmes, Professor of Medicine and Anatomy, was born in Cadiz, his parents being prisoners of war following the capture of their ship by a French frigate. He arrived in

Canada in 1801, became a pupil of Arnaldi in 1811, and subsequently completed his studies in Edinburgh and Paris, where he obtained the degree of M.R.C.S., returning to Canada in 1819, where he entered into partnership with Arnaldi.

About the time that the Montreal Medical Institution was established, Doctors Rolph and Duncombe were contemplating the establishment of a medical school in Ontario. In 1824 an advertisement appeared in William Lyon MacKenzie's newspaper, *The Colonial Advocate*, that a medical school was opened at St. Thomas in the Talbot settlement under the direction of Dr. Charles Duncombe. The effort to establish a medical school did not meet with much success, as the school is said to have been in existence for only two years. We are told that during the first session twelve students were registered and that Rolph and Duncombe as active supporters of William Lyon MacKenzie lost the favour of Talbot, who sponsored the school, and were forced to abandon the project at the end of the second term.

Duncombe was one of three brothers, all of whom were physicians. He passed his medical examination before the Medical Board on October 5, 1819, and later became a member of the Board. In 1825 he was appointed surgeon to the 2nd Middlesex Militia and became a member of the Legislature for Oxford in 1834. In 1837 the Government offered a reward of £500 for his apprehension and capture for the part he played in the rebellion.

One of the most celebrated of Ontario physicians was John Rolph, politician, member of the Bar and lecturer in medicine. As a lecturer he was outstanding. Born at Thornbury, Gloucestershire, in 1793, he made his studies in England and came to Canada in 1812. Proceeding to Canada by way of the United States, he was suspected of being a spy by the American authorities, detained, and

allowed to continue his journey only after the Battle of Queenston Heights. Returning to England, he studied medicine and law concurrently at Cambridge. Back to Canada in the year 1821, he was called to the Bar of Upper Canada. He practised in the township of Charlotteville, County of Norfolk, where he became a favourite among all. It is said that he even studied divinity and applied for Orders. In 1823 he was a public school trustee and a member of the Board of Education, and in the elections of 1824 was returned by the Reformers for Middlesex. He gave up his legal practice in 1832 and devoted his entire time to the practice of medicine. Finally, at the request of a number of people, he established a private medical class and lectured to a small number of students. Urged by the Lieutenant-Governor to found a permanent medical college, he was unable to comply. In the year of the rebellion, 1837, Rolph took part in the uprising, and it is said a plan was conceived which had as its object the seizure of the arms in the City Hall, imprisonment of the chief officials and establishment of a Provisional Government with Rolph as Governor. After the failure of MacKenzie's attempt to take Toronto and the arrest of Dr. Morrison on suspicion, Rolph was obliged to seek safety in flight to the United States, where he remained for a period of five years. He returned when amnesty was granted in 1843. It was after his return that Rolph's School was started. Rolph became a member of the Hinck's Parliament and continued a member until 1854. He died at Mitchell on October 19, 1870, at the age of eighty-three years.

In quick succession there appeared the Medical Faculty of King's College, Toronto, in 1842; L'École de Médecine et de Chirurgie de Montréal in 1843, which was merged with the Medical Faculty of Laval in 1891 and later became L'Université de Montréal; the Incorporated School of Medicine of the city of Quebec in 1847, which was

succeeded by the Medical Faculty of Laval University of Quebec in 1852; the Upper Canada School of Doctors Hodder and Bovell in 1850, afterwards the Medical Faculty of Trinity; the proprietary schools beginning in 1853 and continuing until 1887 when the Faculty of Medicine of the University of Toronto was organized. The St. Lawrence School of Medicine, Montreal, was founded in 1851, Queen's of Kingston in 1854, and the Medical Faculty of Dalhousie in 1867. In relatively quick succession came Bishop's College, Montreal, in 1871; the London Medical School in 1881; the Medical College for Women, Toronto, in 1883; and the Manitoba Medical School in the same year. Since then medical schools have been established in Alberta and Saskatchewan.

The following description of the life of the medical students of those days is given us by Dr. D. C. MacCallum, who was a student at McGill in the year 1850:

A large proportion of the students were men verging on, or who had passed, middle age. Indeed, several of them were married men and the heads of families. There was sufficient of the youthful, however, to keep things lively. "Footing Suppers," practical jokes and "special country excursions to secure material for practical anatomy" were of frequent occurrence. The last, involving as it did a certain amount of danger, commended itself particularly to the daring spirits of the class, who were always ready to organize and lead an excursion having that object in view. These excursions were not at all times successful, and the participants in them were sometimes thwarted in their attempts and had to beat a precipitate retreat to save themselves from serious threatened injury. They contributed, moreover, to the unpopularity of the medical students. "Footing Suppers" were functions of the simplest and most unpretentious character. Each new matriculant was expected, although many failed to conform to the arrangement, to select an evening on which to entertain his fellow students, the entertainment consisting generally in furnishing biscuits and beer—the old, time-endorsed "cakes and ale." In partaking of these, smoking, relating humorous stories, chaffing each other, and singing

rousing songs, the evening usually passed with much bonhomie. But sometimes they were rather boisterous, or, at least, noisy and exciting. . . .

Dissections and demonstrations were made only at stated times during the morning and afternoon of the day. There evidently existed a marked disinclination on the part of both demonstrator and student to work at night in the highest storey of the lonely building, far removed from other dwellings, imperfectly heated, and lighted by candles, the light being barely sufficient to render the surrounding darkness visible. Having occupied for two seasons the position of Prosector to the Professor of Anatomy, I had to prepare, during the greater part of the session, the dissections of the parts which were to be the subject of the Professor's lecture on the following day. This necessitated my passing several hours, usually from nine to twelve o'clock at night, in the dismal, foul-smelling dissecting room, my only company being several partially dissected subjects, and numerous rats which kept up a lively racket coursing over and below the floor, and within the walls of the room. Their piercing and vicious shrieks as they fought together, the thumping caused by their bodies coming into forcible contact with the floor and walls, and the rattling produced by their rush over loose bones, furnished a variety of sounds that would have been highly creditable to any old-fashioned haunted house. I must acknowledge that the eeriness of my surroundings was such that I sometimes contemplated a retreat, and was prevented from carrying it into effect only by a sense of duty and a keen dislike to being chaffed by my fellow-students for having cowardly deserted my work.

The examinations for the degree of the University were conducted orally, ten minutes being allowed to each examiner. The janitor, supplied with a watch and a large bell, was placed in the hall outside the door of the library, the room in which the examinations took place. At the expiration of each ten minutes he rang the bell, and the candidates went from one examiner to another. This was repeated until the student had completed the round of examining professors. Immediately on the termination of the examinations, the professors met and decided then and there the fate of the candidates. The latter, in the meantime, waited in the College in a rather painful state of suspense. They were summoned separately before the Professors, and the result, favourable or unfavourable, was in each case made known to the individual.

In Upper Canada, the first English physicians to practise medicine were British surgeons who had retired from service. Only a few came direct from the Old Country to practise. The United Empire Loyalists who settled in Upper Canada in 1784 were dependent for medical treatment upon the garrison surgeons at Kingston, Niagara and Detroit. Settlements were made along the St. Lawrence by disbanded soldiers, among whom were a few surgeons and hospital mates who had been attached to various corps. Their names are found in the United Empire Loyalist List. Included in the List were Jones, surgeon's mate of the Royal Rangers; Sparham, hospital mate; Stuart, surgeon's mate; and Walker, surgeon. After Upper Canada was made a province, the Executive Council added other names to the List from time to time and among them we find that of Blake, whose name has been previously mentioned.

A year prior to the creation of the U. E. List, steps were taken to raise the standard of medical practice in Canada and an enactment was passed governing the practice of medicine, but an enactment alone could not raise the standard, for we find that as late as 1812:

Many of the physicians of Ontario were totally ignorant of anatomy, chemistry and botany; many knew nothing of classical learning or general science. . . . Their gross ignorance appears in the medicines they use . . . they cure all diseases with two specifics, opium and mercury. . . . Letters of physicians of the time show ignorance of the English language and inability to spell the simplest words.

Steps were taken in 1795 to improve the situation in Ontario by the passage of an Act to regulate the practice of physic and surgery, and in 1815 by an Act to license practitioners in these subjects. The *Kingston Gazette* of that time contained an appeal to the public and Parliament against quacks who "without one ray of science presume to

thrust the created into the presence of the Creator." In 1826, Dr. Strachan, in a letter to Sir Peregrine Maitland, states that "in regard to the profession of medicine, it is melancholy to think that three-fourths of the present practitioners have been educated or attended lectures in the United States. . . . But in this colony there is no provision whatever for obtaining medical knowledge, and those who make choice of that profession must go to a foreign country to acquire it."

The Act passed in 1815 was superseded by that of 1818. This Act licensed physicians and authorized the formation of a Board of Examiners. Among the members of the Board in 1821 were Macaulay, Widmer, Lyons and Powell. The first-named, a native of Scotland, was surgeon to the 33rd Regiment and later to the Queen's Rangers, but little more is known of his life and medical practice. It is said that no more skilful surgeon ever held a place in the ranks of the Canadian medical profession than Christopher Widmer, and his skill as a diagnostician was equally high. He was a Fellow of the Royal College of Surgeons and staff surgeon to the 14th Light Dragoons, as well as a member of the University of King's College and the Legislative Council of Upper Canada. Biographers have little to say of Lyons other than that subsequent to his membership on the Board he was appointed Military Staff Surgeon quartered at Quebec. Powell was an Englishman who studied medicine at Guy's Hospital and, after arrival, practised in Montreal until the autumn of 1812. There he was known as "le petit docteur avec les lunettes d'or." Later, he left Montreal for York. He became surgeon of the Incorporated Militia at Chippewa and, subsequently, Clerk and Principal of the House of Assembly and was made Judge of the Home District Court in 1820. He died at Guelph in 1854.

The first person to receive a certificate to practise

medicine in Upper Canada was John Gilchrist of Hamilton, in the District of Newcastle. He was the eldest of four brothers, all of whom practised medicine in Upper Canada and each of whom erected an identical house copied from the dwelling of a favourite teacher at the Medical School where they studied. In addition to practising the medical profession, he farmed and conducted a saw and grist mill and was one of twelve persons arrested in the Newcastle District for sympathizing with rebels during the Mackenzie Rebellion.

William Dunlop, who practised at this time, is best known for his extraordinary will. He left some of his property to two sisters—one “because she is married to a minister whom (God help him!) she henpecks” and the other “because she is an old maid and not market-rife.” To the eldest son of old John, as the representative of the family, he gave his silver tankard, which he would have given to old John himself except for the fact that “he would melt it down to make temperance medals and that would be a sacrilege.” In bequeathing his Bible to his sister Jenny, he added the comment, “When she knows as much of the spirit of it as she does of the letter, she will be another guise—Christian than she is.” His late brother’s watch he willed to his brother Sandy, “exhorting him at the same time to give up Whiggery, radicalism, and all other sins that do most easily beset him,” and to his brother Alan went “my big silver snuff-box as I am informed he is rather a decent Christian, with a swag belly and a jolly face.” To Parson — he gave “the snuff-box I got from the Sarnia Militia as a small token of my gratitude for the service he has done the family in taking a sister that no man of taste would have taken,” and his silver cup with a sovereign in it to his sister Janet “because she is an old maid and pious, and therefore will necessarily take to horning, and also my gran’ma’s snuff-mull, as it looks

decent to see an old woman taking snuff." He died on June 29, 1848.

The Ontario physicians of those early days experienced many hardships. Theirs was the era of the pre-horse and buggy days. "They were not strangers to the saddle on lonely trips through the sparsely settled country over bush roads that were well-nigh impassable. They hewed the way and laid the foundations for today. They were paid seldom in the coin of the realm, most often in the product of the soil and often the best the early settler had to offer was his heartfelt thanks." As opportunity afforded for medical study, the more populated districts, villages and towns became fairly well supplied with physicians, but the sparsely settled areas were totally devoid of them. As to remuneration, although fees were low, it appears that doctors did not do so badly. It is related of one physician who had emigrated to Canada and had purchased a farm near Niagara Falls "that he had fallen into a practice which would realize him eleven hundred pounds a year—he did not expect to be paid, however, altogether in money."

In Nova Scotia, Annapolis Royal had its medical men and the Acadians appear to have been well provided with physicians from the earliest days. As was the case in Upper and Lower Canada, the first English-speaking physicians in Nova Scotia were army surgeons. Dr. William Skene was the first English-speaking physician at Annapolis Royal, where he was garrison surgeon. It is thought he came out with Nicholson and his troops in 1710. After Halifax was founded in the year 1749, Cornwallis sailed for Chebucto Bay with a large number of immigrants, among whom were a number of surgeons. Three years afterwards a list of those who settled in the city of Halifax was prepared, which contains the names of three surgeons. At the siege of Louisburg in 1745, Dr. Prescott acted as both surgeon and captain of engineers.

During the years 1775 to 1800 the Loyalists came to Nova Scotia and with them a large number of medical men, most of whom had been members of the British or Colonial forces. One of the best known of the early practitioners of Nova Scotia was Dr. Joseph Norman Bond, who settled at Shelburne, and is said to have been the first physician in Canada to use cow-pox vaccine.

In the early days of Nova Scotia there were many illiterate and unscrupulous practitioners, some of whom were granted diplomas in the Western States solely on the payment of one hundred to one hundred and fifty dollars. The system of medical apprenticeship was continued there until a comparatively late period. For example, in 1838, an indenture of an apprenticeship was drawn up between Daniel McNeill Parker and William Bruce Almon, of Halifax. A perusal of the indenture elicits some interesting information. It is laid down that the aforesaid Parker "shall serve after the manner of such an apprentice, his (Dr. Almon's) secrets conceal, his lawful and reasonable commands, everywhere, readily perform and obey . . . that he shall not frequent taverns or alehouses or play at any unlawful games or contract matrimony, etc."

The Loyalists who came to New Brunswick in 1783 brought a handful of medical men with them. One of them, Dr. Samuel Moore, performed an autopsy on a coloured man in the year 1784. Here is his report:

Sir: Agreeable to your request I examined the black man's head. I am perfectly satisfied he was murdered. After examining where the fork perforated the temporal bone of the skull, I sawed off the arch of the head and found the ventricles of the brain everywhere impacted with matter. The symptoms before death were also very obvious. All the jury were spectators.

Your serv't

SAM'L MOORE.

October 6, 1784

GEORGE LEONARD, ESQ.

The murder in which the black man figured was the first following the landing of the Loyalists. Nancy Mosley was accused of the murder, found guilty of manslaughter and ordered to be branded with the letter "M" in the brawn of the thumb and discharged. Things were done with despatch in those days!

In Prince Edward Island, in so far as it is possible to ascertain, the first English-speaking physician was Roderick MacDonald, a native of Invernesshire, Scotland, and a member of the Clan Ronald. A graduate of Edinburgh University, he arrived in Prince Edward Island in 1772. In 1798 we find the names of two physicians, Gordon and Nicholson, and in 1802 Dr. Benjamin de St. Croix, who was surgeon general to the military forces. From the earliest days Prince Edward Island seems to have had a number of highly qualified physicians. Among them we find many graduates of Edinburgh, Glasgow and Dublin.

It is thought that Charles Doullon Desmarests was the first physician to enter the North-West Territories (Lake Superior), where he was employed by Chevalier de la Corne, who was engaged in the fur trade, for a period of three years beginning June 23, 1753.

George Holdsworth was the surgeon at York Factory and acted in the same capacity at Red River Settlement in 1813. He became a member of Miles Macdonell's Council in 1814.

Doctor, afterwards Sir John Schultz, who was one of the founders of Winnipeg, was born in Ontario in 1841 and, after some experience as a sailor, visited the North-West in the year 1860. Of an enterprising character, he engaged in the fur trade, drug business and other activities and is said to have built the first house in Winnipeg. During his leisure hours, he occupied himself with the study of medicine and became so interested that he entered Queen's

and graduated in 1862. Returning to Fort Garry, he established himself in practice. At the time of the Rebellion in the Red River Settlement, he was made prisoner for his loyalty to Britain. Escaping from prison, he made his way on foot to the seat of government to report the uprising. In 1872 he became a member of the Dominion Parliament for the County of Lisgar and in 1883 was made a senator. He was instrumental in organizing many important enterprises and among them the North-West Trading Company and the Great North-West Telegraph. His death occurred at Monterey, Mexico, in 1896.

Among the early practitioners in Winnipeg was Dr. C. J. Bird, who, as Speaker of the Assembly, became very unpopular through a ruling which retarded incorporation of the city of Winnipeg. His action so annoyed his opponents that, on pretext of a professional call, he was decoyed from his residence and a pail of hot tar thrown over his face. He was a member of the Provisional Government and Speaker of the Assembly of Assiniboia.

Dr. O'Donnell commenced practice in Winnipeg shortly after the rebellion. He was a prisoner of Riel and was liberated by him for the purpose of attending his patients. He was a member of the Legislative Council of Manitoba.

In British Columbia, one of the first physicians was William Fraser Tolmie, who was born at Inverness, Scotland, and graduated in Glasgow. Following a post-graduate course in Paris, he came to Fort Vancouver, Oregon, via Cape Horn, in the year 1833, and joined the Hudson's Bay Company as doctor and clerk, subsequently becoming chief factor. He took up permanent residence in Victoria in 1858 and was made a member of the Legislative Assembly. He was attached to the exploratory expedition under Peter Skene Ogden along the north-west coast as far as the Russian boundary. In conjunction with

Dr. G. M. Dawson, he compiled a dictionary of the Haida language. He died at Cloverdale, Victoria, on December 8, 1886.

Another of the pioneer physicians of British Columbia was John Sebastian Helmcken, an Englishman who came to British Columbia as an employee of the Hudson's Bay Company. He was Speaker of the Legislative Assembly until the admission of the colony into the Dominion in 1871 and was one of the delegates to Ottawa to support the terms of union.

Among others who practised in British Columbia in the early days may be mentioned James Trimble, who was Speaker of the Legislative Assembly; Powell Wood, who in addition to being a member of the Assembly was Commissioner of Indian Affairs; Thomas Robert McInnes, a member of the Legislature for New Westminster, senator and Lieutenant-Governor; and George Lawson Milne, who came to British Columbia in 1880 and was Health Officer for Victoria, Registrar and Secretary of the Medical Board and also a member of the Legislature. At a later time we find Henry Esson Young, who was Provincial Secretary and Minister of Education and at the time of his death Provincial Health Officer, and J. D. MacLean, who, subsequent to his graduation from McGill in 1905, practised his profession in British Columbia for a number of years and whose ability in the political field won recognition by his nomination as Premier of the province.

No story of medicine in Canada would be complete without a reference to Dr. James Barry, a woman who successfully concealed her sex during her entire lifetime. James Barry, M.D., a year after graduating from Edinburgh University in 1813, entered the military service as a hospital mate and was promoted to assistant surgeon the year of the Battle of Waterloo. In 1827 she was a staff surgeon stationed at the Cape of Good Hope and, later,

was at Jamaica, St. Helena, Antigua, Barbados, Trinidad, the Crimea and Balaclava. Appointed Inspector-General of Military Hospitals of Canada on September 25, 1857, she lived both in Montreal and Quebec. It is claimed that she showed signal bravery upon a number of occasions during her army service. It is related that Surgeon-General Sir Thomas Longmore discovered her sex when treating her for an illness but was sworn to secrecy. It was only after her death that her sex was proclaimed. Contrary to the impression created by her life as a man, she was of small stature and feminine in appearance.

It is clear that during both French and British régimes there were capable physicians and surgeons who ministered to the needs of the people and that serious consideration was given to the development and control of the practice of medicine under both. True, medical schools did not arise until a comparatively late time, but this was to be expected in a country that was more or less disturbed for a period of years both before and after the Conquest. The rapid development of medicine and surgery which took place during the nineteenth and twentieth centuries placed Canada in the forefront of medical progress. Her position in this respect is an enviable one.

CHAPTER IX

Medicine, Surgery and Public Health

THE PRACTICE of medicine under the French régime consisted largely of sweating, purging and bleeding. Records of Quebec hospitals indicate that recourse was had to bleeding in practically all fevers and, as Sœur François Juchereau tells us, with good effect. The practice was continued until a comparatively recent date. Worthington, in his *Reminiscences of Student Life and Practice*, published in 1897, says, "forty years ago, or maybe even less, a medical man would as soon have dreamed of going to church without his prayer-book, or going to bed without saying his prayers, as of going out on his daily round of duty without his lancet-case in his pocket. It was considered the correct thing to be bled at least every spring. A man walked into the doctor, saying as he did so, 'I want to be bled, please.' Bandages and basins were always at hand and, when a good quart crockery bowl was nearly filled, the man, if the operator showed signs of stopping the flow, would say, 'Oh, don't be afraid, let it run, Sir, I haven't been bled for a good while.'"

Little distinction was made between diseases as the science of differential diagnosis, as understood today, was unknown and, as it was forbidden to state the cause of death on the certificate of death lest the family be stigmatized should death have been due to insanity, alcoholism, or other blame-worthy cause, not much is known of the diseases from which the people suffered, nor can an opinion be expressed regarding the general health of the populace as there is so little information available.

Remedies comprised roots, herbs and drugs, of which some were the product of alchemy rather than of chemistry,

and more often prescribed empirically than through a knowledge of their therapeutic properties.

A great stimulus to the development of medicine was the publication of the *Quebec Medical Journal* in January, 1826, and the creation of the Quebec Medical Society in the same year. Following these there was a rapid increase both in the number of medical journals and medical societies. The latter culminated in the establishment of the Canadian Medical Association, in the year of Confederation, which has contributed so much to the medical profession of Canada.

The age of specialization in Canada may be said to have begun when, in 1867, Dr. Richard Andrews Reeve, of Toronto, elected to confine his practice to ophthalmology and otology and became assistant surgeon to the Toronto Eye and Ear Infirmary. In 1872 he became ophthalmic and aural surgeon to the Toronto General Hospital and began to lecture on diseases of the eye and ear at the Toronto School of Medicine in 1873. In 1887 he was made Professor of Ophthalmology and Otology in Toronto University.

The first specialist in Montreal was Dr. Buller, who had been in charge of Moorfield's Eye Hospital in London and was induced in the year 1878 by Dr. Shepherd to come to Montreal as oculist and aurist to the Montreal General Hospital. Buller became known as one of the outstanding eye men of America.

Canada, quick to adopt the newer methods and always well abreast of the times, has contributed a number of illustrious graduates in medicine to other countries. Well-merited recognition has been accorded the medical profession of Canada by the American Medical Association through the election on different occasions of Canadians to the presidency of that organization. Dr. James Stewart, Dr. J. G. Adami and Dr. Alexander McPhedran were

distinguished Canadians so honoured. In 1925 the Nobel prize was awarded Doctors Banting and MacLeod; the second time only that this prize was awarded members of the medical profession. This was in recognition of their outstanding work on Insulin.

In the field of surgery, the early French surgeons were not unskilled, for the best of them had been trained in the methods of Ambroise Paré. They had some knowledge of anatomy and were not unskilled in the use of the primitive surgical instruments of that day. The practice of surgery consisted chiefly of the treatment of wounds, reduction of dislocations, bone-setting and amputations, but surgery of the internal organs was almost unknown. Prior to the advent of anæsthetics, great skill was developed in amputations, removal of tumors and reduction of dislocations as these operations depended for their success on the speed with which they were performed. It was considered that one minute was quite ample for an amputation, and the skill of the surgeon was judged largely by his speed and "the amount of blood on his frock coat."

In this respect, Worthington tells us that Douglas of Quebec was one of the most brilliant operators he had ever seen. Not only did he do his work quickly but well. He says:

I remember a poor fellow in the Marine and Emigrant Hospital at Quebec, who from frost bite was obliged to have both legs removed just above the knee. It was decided to have the double event come off at the same time—two legs—two operators—with the object of saving the patient as much as possible. From the instant the point of the knife entered, until the leg was on the floor, was one minute and forty-two seconds. The vessels were tied and the wound dressed in three minutes."

This operation was, of course, performed without an anæsthetic. It is obvious that operations of this type required great courage and faith on the part of patients and doctors.

Rapid progress was made in surgery following the introduction of anæsthetics and antiseptics. Ether appears to have been used for the first time in 1847. In that year Dr. Horace Nelson carried out experiments on animals, tried the ether on himself on a number of occasions, and assisted his father in removing a tumor weighing two pounds, the ether being administered by a Mr. Webster. Dr. Worthington performed an amputation in March of the same year. He describes the apparatus used for administering ether as follows:

A large ox-bladder, with a stop-cock attached, a mouthpiece made of thick leather covered with black silk and well padded round the edges, with a connecting long brass tube that had done service as an umbrella handle in many a shower, formed an apparatus that, though rude looking and bearing marks of having been got up in haste, presented withal a very business-like and, for the country, tolerably professional appearance. A couple of ounces of ether were poured into the bladder, which was then filled with air from a bellows. Not having time or ingenuity sufficient to construct a double valve, the objection to inhaling carbonic gas again into the lungs was done away with by simply allowing the patient, after a full inspiration from the bag, to expire through the nose for three or four times, when the nostrils were kept closed and the breathing confined to the bladder.

The operation was quite successful. Alternate inhalations of gas with air sufficed to keep up the effect of the ether, except at one time, when the patient had a "presentiment of pain" and gave the word to "pass the bottle."

Roddick, Stewart, Grasett and Malloch, who had spent some time with Lister, returned in 1877, bringing with them the Listerian method of antiseptics, and the adoption of antiseptic methods opened up a new era for the surgeons of Canada. Operations which were not before dreamed of were successfully carried out and major operations became the order of the day. Diseases of the gall bladder, kidney, intestines, and brain, which had been looked upon

previously as medical, were now treated surgically. The entire appearance of the operating room underwent a complete change. Where formerly was a shambles, there was now the utmost cleanliness and the beginnings of the operating room as we now know it. The surgeon bade farewell to the old top coat, and the snow-white gown made its appearance.

Modern nursing contributed materially to the advancement of surgery. The excellence of the Canadian nurse has often been commented upon, yet the modern nurse is of comparatively recent date, for it was only in the year 1873 that a modern system of training was introduced. In that year, through the influence of Dr. Mack, of the General and Marine Hospital of St. Catharines, Ontario, two trained nurses and five or six probationers were brought from England and, in the following year, a systematic scheme of instruction was put into effect. Instruction, in addition to bed-side nursing, included chemistry, sanitary science, popular physiology, anatomy and hygiene.

In the year 1875 the Committee of Management of the Montreal General Hospital took steps to improve their nursing system. Dr. F. J. Shepherd, in an address delivered to the Montreal General Hospital Nurses' Club, December, 1905, described the wards and nurses of the hospital as they were in 1867 in these words:

The wards were small and rather untidy, the nurses were Sarah Gamps. Good creatures and motherly souls, some—all uneducated. Many looked upon the wine (or brandy) when it was red. . . . In those days, it was with the greatest difficulty patients could be induced to go into a hospital. It was the popular belief that if they went they would never come out alive. . . . No records were kept. The clinical thermometer had not come into use; the patients had to look after themselves; fresh air was not thought necessary. Armies of rats disported themselves about the wards. . . . Instruments

were looked after by a man who assisted in the operating room and at post mortems in the dead house. Nothing was known of sepsis or antisepsis. Surgeons operated with dirty instruments and septic hands and wore coats which had been for years baptized with the blood of victims.

The effort to establish a modern system of nursing in the Montreal General was not successful at that time, but was brought to fruition in 1890 under the supervision of Miss Norah Livingstone, a graduate of the New York Hospital training school, who brought with her as assistants two graduates of the school. In the meantime, the Toronto General Hospital had inaugurated a system of training, and in the year 1883 the first graduate nurse was awarded her diploma. In the succeeding years there was a rapid development of modern nursing throughout the country.

In contrast to the rapid development in medicine and surgery, that in the field of public health was slow. Judged by present-day standards, not a great deal of thought was given to health and welfare under the French regime, but we find that as far back as 1667 a meeting was held in Quebec to consider the adoption of a standard of weight for bread and in 1706 laws were enacted for inspection of cattle before slaughter and of meat when offered for sale. Before killing an animal, the butcher was obliged to notify the King's officer appointed to inspect animals before slaughter, and meat was not permitted to be offered for sale unless accompanied by a certificate from a judge, seigneur, a military officer or priest that the meat was that of a healthy animal and not one accidentally drowned or poisoned. Other laws passed at about the same time had to do with the cleanliness of streets and houses, nor was the care of children wholly neglected for the King in 1748 set aside a sum of money for homeless children and provision was made to place them in good families until the age of eighteen years.

In 1775 Carleton passed an Ordinance authorizing the confiscation of tainted foodstuffs found in the markets of Quebec and Montreal.

When epidemics occurred, Boards of health of a temporary nature were hurriedly got together but there was no continuity of effort in the way of establishment of permanent Departments or Boards of health.

The average general death rate in the seventies was approximately thirty-seven per thousand of population and during epidemics it ran as high as fifty or more per thousand, as was the case in 1885 when smallpox prevailed in Montreal. From the year 1872 to 1880 the average annual number of deaths from smallpox in the city of Montreal was 580. In 1885 there were 3,164 deaths from the disease in that city, of which 2,717 were children. In looking over the mortality rates of that period, we find that in the Province of Quebec every twelfth death was due to tuberculosis. In that province scarlet fever was epidemic in 1889 and in 1893, and in the year 1895 there were 2,243 deaths from diphtheria, 687 from scarlet fever, 410 from typhoid and 159 from measles. The death rate from diphtheria was fifty per cent., scarlet fever twelve per cent., typhoid twenty per cent. and measles ten per cent. Cases of these four contagious diseases had occurred in the Province of Quebec during the year 1895 to the number of 12,366. The incidence of contagious diseases in other provinces was more or less comparable to that of the Province of Quebec.

If one strolls through any old burial ground in Canada and observes the age at which people of that period died, he will be struck by the great numbers who passed away in childhood, adolescence and young adult life. Very few lived to a ripe old age. These early deaths were caused by preventable diseases which have now been brought under

effective control. One of the most interesting epitaphs is to be found on a tombstone in a churchyard in Halifax. It reads:

William Glen died of synanche trachealis
9th May, 1827, aged 7½.

Ar. Glen died of synanche maligne
14th May, 1827, aged 4½.

Stranger—Whether has the disease or medical
omission clad meast in their last claitth?

Synanche trachealis and synanche maligne were the names by which diphtheria was known at that time and the comment is indicative of the helplessness of the physician of that day in treating diphtheria.

At the time of Confederation little was known of public health—in fact, the words “public health” were practically unknown and their significance unappreciated. Therefore, it is easily understood why the British North America Act of 1867 contains no reference to public health. The passage of a Public Health Act in the Province of Ontario in 1882 was the first step towards the establishment of permanent Boards or Departments of health. This Act, which created a provincial Board of health in Ontario, was the most important piece of public health legislation that had been passed in Canada up to that time. The other provinces were quick to realize the advantage of a permanent health organization and today every province in Canada has a Board or Department of health.

From the time of Confederation it became increasingly apparent that the subject of public health had been neglected by the Dominion. Health activities of the Dominion were divided among the Departments of Agriculture, Marine, Fisheries and Inland Revenue. The control of tuberculosis was the responsibility of the Department of Finance and the Conservation Commission. Nominally,

the National Council of Health under the wing of the Conservation Commission advised the federal and provincial governments on public health. The whole thing lacked co-ordination and was most ineffective. The Canadian Medical Association from the time of its inception passed numerous resolutions and memorialized the federal government for the creation of a Dominion Department of Health. At each session a motion was introduced in the House of Commons for a select committee on the subject of vital statistics and public health, and from year to year petitions were presented to the Government by public organizations, but the movement grew slowly and it was not until the year 1919 that a Federal Department of Health was established. This was merged with the Department of Soldiers' Civil Re-establishment to form the Department of Pensions and National Health in 1928.

Under the British North America Act, the Dominion was given jurisdiction in respect of quarantine and the establishment and maintenance of marine hospitals, while the provinces were assigned the establishment, maintenance and management of hospitals other than marine hospitals, asylums, charities and eleemosynary institutions. As a result, the activities of both Dominion and provinces were limited to narrowly defined functions. Since there was no conception of the words "public health" when the respective functions of the Dominion and provinces were being considered, it was not realized that there were many public health activities which were not contemplated. With the increase in knowledge of public health, it became obvious that the narrow limitations imposed by the Act both on the Dominion and provinces could not be adhered to always. The Dominion, therefore, assumed jurisdiction for public health problems exclusively national in character, as well as some others, notably the control of food and

drugs and the care of lepers, which are primarily a provincial responsibility but in view of their national aspect were best administered by the Dominion. By virtue of necessity, the provinces undertook the control of public health problems that were nearest at hand, such as the prevention of infectious diseases.

As time advanced, the relationship between the Dominion and the provinces became closer and, as the Dominion assumed some degree of responsibility for problems which though primarily provincial in character reacted nationally, such as child welfare, industrial hygiene, epidemiology and those already mentioned, the usefulness of the Federal Department of Health increased.

Voluntary associations contributed to the development of public health to a great extent. In 1875, in the city of Montreal, an effort was made to stimulate interest in public health by the creation of a Citizens' Public Health Association. At that time the annual death rate in Montreal was thirty-four per thousand. It was said to be one of the most unhealthy cities of the continent. This may be looked upon as the precursor of voluntary organizations which have accomplished so much and have so staunchly supported the officials of public health departments. Notable among these are the Canadian Tuberculosis Association, the Victorian Order of Nurses, the Canadian Red Cross, the Canadian Public Health Association, the Canadian National Committee for Mental Hygiene, the Health League of Canada, the Canadian Welfare Council, and the St. John Ambulance Association.

In 1893 it was proposed to build a home for consumptives in connection with the Toronto Home for Incurables but, on further consideration, a sanatorium in the Muskoka Lakes region, on Trudeau lines, was built instead. Perhaps no single achievement in public health excels that of the sanatorium movement. It is impossible to estimate the

amount of good that has been accomplished in the number of lives saved or prolonged through the establishment of tuberculosis sanatoria throughout Canada.

As time went on, public health underwent a marked change and took on new significance. Whereas only a few years ago its activities were confined to the control of communicable disease, it now envisages practically all diseases. Public health activities have been disseminated throughout the whole country. Urban areas have departments of health and rural areas have health units—departments of health in miniature. Health units, comparatively speaking a recent development, have extended very rapidly in the provinces and particularly in Quebec where their efficacy has been demonstrated by a marked decrease in the general death rate and especially in respect of tuberculosis. Since the establishment of health units in that province, the general death rate has fallen from 13.5 in 1926 to 10.4 in 1939.

The trend of public health is toward health insurance. The Province of British Columbia was the first to pass a Health Insurance Act. It was followed by the Province of Saskatchewan with the establishment of a Health Services Board whose object was to ascertain the needs of the people of Saskatchewan in respect of hospital, nursing, dental and other health services. A joint committee of the College of Physicians and Surgeons of the Province of Manitoba submitted a plan almost identical with that of the Province of Saskatchewan. Medical associations in Canada have uniformly recommended the establishment of some form of health insurance. The Dominion Government took an active interest and in 1928 instructed the Select Standing Committee on Industrial and International Relations to investigate and report on sickness and invalidity. Meetings of the Provincial Ministers of Health have been held to discuss the question and the subject has been debated in

the House of Commons on numerous occasions. The usefulness of health insurance has been established by voluntary health insurance associations.

The history of the public health movement in Canada is not without its record of self-sacrifice. From the time of the priests who went among the Indians caring for their physical and spiritual needs during epidemics, there was no shortage of physicians who were willing, if necessary, to sacrifice and who did sacrifice their lives in the control of epidemics and care of the sick. In 1834 Panet died of cholera and in 1837 Christie of typhus at Grosse Isle. During the typhus epidemic of 1847, Benson of Dublin, Pinet of Varennes, Malhiot of Vercheres, and Jameson of Montreal died of typhus at Grosse Isle in the performance of their duties. Collins succumbed to typhus at Partridge Island, N.B., in 1847, and Slayter, who volunteered in 1866 to go into quarantine with cholera patients who had arrived at Halifax that year, also forfeited his life. These were only a few of the many who died in the line of duty.

The road traversed from the days of the lance of the barber-surgeon to the scalpel of the plastic surgeon of the present day has been a long journey; a long journey from the fumbling methods of the early days to the scientific procedures of the present day; a long journey from the Quebec Hôtel-Dieu of 1639 with its splendid spirit of self-sacrifice to the palatial hospitals of the present day and their fine spirit of service; a long journey from the hesitation, doubt and fear with which the physician of former years faced an invasion of disease to the confidence and skill of the health officer of today in the presence of an epidemic—but a journey that has brought to mankind freedom from fear and suffering.

So ends the bloody business of the day.

—*The Odyssey of Homer.*