THE UNIVERSITY OF MANITOBA

A HISTORY OF THE EDUCATION OF SELECTED HEALTH PROFESSIONS IN MANITOBA

By

HUGO PETERS

A Thesis

Submitted to the Faculty of Graduate Studies

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ABSTRACT

The purpose of this study was to trace the history of the education of certain health professions in Manitoba. Selected for treatment were the following professions: physicians and surgeons, dentists and dental hygienists, registered nurses, physiotherapists, pharmacists, optometrists and chiropractic.

The investigation spanned the period from 1870 to 1970 and restricted itself primarily to undergraduate level training. The major questions which the study addressed itself to were:

1. What was the early background to the profession's training?
2. How have educational requirements been regulated in Manitoba?
3. What circumstances led to or prevented the establishment of the respective training institutions in Manitoba?
4. How did the programmes offered in those institutions evolve to their present configuration?
5. What interactions developed among society, profession, and training institution?

Legislative records, archival documents, and personal interviews were the tools most extensively employed in the study.

Conclusions derived from the investigation were that there becomes apparent a marked similarity in the sequential development of the various training programmes, that each professional group exhibits

a close identification with its training institution, and that the majority of Manitoba's programmes display strong British roots. The major conclusion reached was that a great variety of political, economic and social factors mold the direction of professional education.

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Without the kind cooperation of librarians, faculty, practitioners, and professional organizations in the various professional areas, the study would have been most difficult. The writer wishes to acknowledge in particular Miss Audrey M. Kerr of the medical library, Mrs. Doris Pritchard of the dental library and Dr. J. C. Wilt of the Provincial Laboratory.

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CHAPTER I

INTRODUCTION

PURPOSE OF THE STUDY

The purpose of the study is to present an analytical account of the history of the education of the health professions in Manitoba from earliest times to 1970.

SIGNIFICANCE OF THE STUDY

While there have been many articles written on specific aspects of medical and para-medical education, there has as yet been no systematic attempt to trace the development of this professional education in a comprehensive and analytical manner. The study, then, is intended to fill that void. A systematic, analytical and comprehensive approach will make it possible to observe characteristics, trends and patterns in the development of professional education; to assess the effect of its evolution on society and its reaction to social pressures; and to assess the present relationship of professional education to society and governments. In addition, the investigation will probe the relationship between the various professional organizations and their respective training institutions, noting the degree of control, co-operation, independence or dissonance, as the case may be, between the two. The study has the value common to all historical studies, a value which stems from the fact that the present can only be thoroughly understood when viewed through a knowledge of the past.

LIMITATIONS OF THE STUDY

The historic period concentrated on in this investigation will be from 1870 to 1970 - the first one hundred years of Manitoba's existence as a province. Two exceptions to a strict observance of those limits will occur. In the case of each profession, a brief summary of significant events or trends in their education prior to 1870 will precede a discussion of the 1870 - 1970 period. In the case of a few professions, it will also be necessary to move beyond 1970 in order to avoid truncating certain developments which began earlier and reached their conclusion after 1970.

The "health professions" considered in this study are also limited by selection. "Health professions" referred to are not limited to a narrow definition which might suggest only physicians and surgeons; rather the paper concerns itself with those professional groups which have been established as such by provincial legislation, and which have played a significant role in the delivery of health care and service in the province. The first four, medicine, nursing, dentistry, and pharmacy were selected for their major continuous contribution from the outset. Nursing, although recognized later as a professional group, has continuously been a part of "health care" in the province. Recognizing that this selection emphasizes long established professions, physiotherapy is included as an example of a more recently established group. Optometry and chiropractic are included as examples of professions whose status as "health professions" has not always been clearly accepted by other professions or even in the eyes of the public.

The third limitation of this study concerns itself not with the time span, nor the selection of professions to be included; rather, it is based on the scope of each individual section. This investigation will concern itself primarily with the training required or provided for entry into the profession. The education referred to is therefore the more systematic, basic programme common to all practitioners, although it includes both theoretical and practical training. While not excluding all references to post graduate or ongoing professional development, the emphasis will be on education prior to practice.

REVIEW OF RELATED LITERATURE

An examination of available sources uncovered no publications directly related to the proposed study, and only a small number of limited relevance. The sources consulted were Harris, "A Bibliography of Higher Education in Canada"[1], "Select Bibliography in Higher Education"[2], as well as the listing of theses held in the Education Library, University of Manitoba.

There appear to be no theses at the masters or doctoral level related to this investigation. Among more general publications a number make reference to the education of one or more of the medical professions in a chapter which supports a more general thesis. A few devote themselves more completely to professional education, often not in direct reference to Manitoba. Selected for review are works by Macdermot[3], McDougall[4], Mitchell[5], Mussallen[6], and Paynter[7].

In tracing the medical history of Canada, Macdermot includes some material on medical education. As with numerous other publications, Manitoba, a younger and less populous province, does not

feature highly. A case in point would be chapter four, "Historical Notes on Canadian Medical Schools", where the medical faculty at the University of Manitoba receives a one page treatment. This covers only the most outstanding developments and personalities surrounding the establishment of the medical college and subsequent major revisions in the curriculum.

Chapter five deals specifically with medical training. Macdermot traces the European roots of North American medicine. This is followed by an analysis of how the Flexner report of 1910 pressured North American medical institutions toward a firmer scientific base. After examining the difficulties created by the two World Wars, he moves to the 1950's outlining developing tensions between specialization and general education, basic sciences and clinical training, practice and research. He ends the chapter by outlining new developments in psychiatry, public health and preventative medicine, and how these will affect medical education.

Except for a brief mention in chapter four, Manitoba is absent from Macdermot's treatment. However, because medical discoveries, trends, and patterns reach across provincial boundaries, and because Manitoba's limited resources have, more often than not, forced it to be a follower rather than a leader, it can be inferred that Macdermot's comments on Canadian medicine have application to Manitoba as well. To that extent Macdermot's history has relevance to this study.

The History of Pharmacy in Manitoba is very different in purpose and style. Rather than outlining issues and developments in pharmacy generally, this book is a detailed compendium of

personalities and events. As such it provides an accurate framework for the discussion of pharmacy and pharmaceutical education in Manitoba.

After a brief account of Manitoba's early history, and scant references to early pharmacy, a short chapter is devoted specifically to "pharmaceutical education". It records systematically and chronologically most major events: the beginning of the Manitoba College of Pharmacy in 1899, major changes in course offerings and degrees conferred, the changing status of the college from an independent school to a school with university affiliation, to a "school of pharmacy" of the University of Manitoba in 1951.

The remainder and majority of the book concentrates on the retail and wholesale drug industry in Manitoba. Subsequent chapters outline the establishment of individual pharmacies in Winnipeg, in the suburbs, and in rural Manitoba. Finally, a number of biographical sketches are included.

While this account is specific to Manitoba and in part to pharmaceutical education, its brevity of treatment and lack of analytical comment leave a large segment of the field open to further investigation. The framework is there, by way of specific dates, places and persons, and these will form a useful foundation for the issues to be investigated in this study.

Mitchell's Medicine in Manitoba, while more informative, is similar in style of presentation. At times it deals with the general history of Manitoba, at times more directly with medicine. Those portions devoted to medicine concentrate heavily on the personalities involved.

After brief sections on Indian medicine, the early Hudson's Bay Company era, and the story of the Selkirk settlers, he moves on to short descriptions of the life and work of various physicians who came to the Red River Colony. While the tasks, problems, and accomplishments vary, Mitchell continues this piecemeal-type description of important personalities through to 1870 when Manitoba achieved provincial status. Even in the chapter entitled, "Manitoba's Medical School", after one page of general information, he reverts to short biographies, now of the first teachers. The book is concluded by a series of chapters having nothing to do with medicine. They categorize other achievements of Manitoba physicians as naturalists, authors, sportsmen, etc.

While the book says little about medical education in Manitoba it is a valuable backdrop to such an investigation. The biographical sketches often mention the basic facts concerning the nature and location of training each particular Manitoba doctor had received. By relating these men's accomplishments to the conditions under which they worked, one has somewhat of a context into which to fit the whole evolution of educational programmes and facilities.

Ms. Mussallen has produced three reports on Canadian nursing and nursing education. Her first report in 1960 entitled Spotlight on Nursing Education was a lead-in to A Path to Equality (1964), the report cited here. This was subsequently revised and published as Nursing Education in Canada published by The Queen's Printer in 1965.

These reports echo the same themes: remove nursing education programmes from the exclusive control of hospital boards, and place them under the aegis of general educational institutions. After

introductory material, Ms. Mussallen briefly reviews the general development of nursing education in Canada. She does this in broad philosophical strokes, developing the theme that there have been the rationale and the suggestion to institute the changes referred to above since the 1930's, but that nothing had been acted upon.

To develop and update the rationale, she outlines the projected health needs of Canadians, and the changes in organization, administration, and financing necessary to meed these needs. This leads to what she wishes to say about nursing education. Having identified the need for different levels of nurse practitioners, from the bedside care nurse to the supervisory and prescriptive nurse, the report proposes the nursing programmes needed to produce these professionals. The recommendation that, over a period of time, nursing education be removed from the hospitals and relegated to the community colleges and universities form her conclusion.

Because the report was prepared for the Canadian Nurses' Association, and reads like a position paper, its historical content is incidental. Historical data were used as a basis for developing a rationale for the main thesis which was not historical in nature.

Although Ms. Mussallen's study does not trace the specific institutions and historical developments in Manitoba, its relatedness to this study lies in the fact that many trends and patterns dealt with in the report were common to all the states and provinces in North America. Certainly the report has influenced the direction of nurses' training in Manitoba.

The final publication to be included in this review relates to dentistry. The report, Concerning the Establishment of a School

of Dentistry in Manitoba, was prepared in 1956 at the request of the Manitoba government as a preliminary step to the establishment of a dental school. While much of it deals in practical issues such as cost and design plans, the writer indicates in some detail what he thinks is an appropriate philosophy of dental education. His main contention is that dental education has focussed too narrowly on remedial work and has neglected any emphasis on preventative medicine, continuing education, and research.

Dr. Paynter begins by detailing the provinces' dental needs, stating that of the three major forms of dental disease, (caries, periodontal, and malocclusia) only caries are being looked at seriously. Even here, only thirty-five percent of the population is being served. He concludes that Manitoba is suffering a severe shortage of dentists which will become more acute with time.

The report recommends four steps to be taken: increase dental research, expand dental public health programs, produce more qualified dentists, and train more auxiliary personnel.

The remainder of the report speaks of the kind of instruction programmes needed, the type of staff needed and how they might be acquired. Organizational matters and curricular matters are dealt with last. The recommended curriculum is patterned on the requirements of the Canadian Dental Association and existing dental colleges. Dr. Paynter concludes by recommending that Manitoba Schools of Dentistry and Dental Hygiene be established as soon as possible.

While the report limits its main content to a very specific time and concern, it is an appropriate point of departure.

Information about the impetus, philosophy and limitations surrounding the beginnings of the school allow this study to trace changes and subsequent developments more accurately.

METHODOLOGY

Historical methodology was employed throughout this study, the writer viewing the work of the historian as extending beyond the mere recording of events to include the making of analytical and value judgments.

SOURCES OF DATA

The data will, by nature of the study, derive from a variety of sources. The legislative framework for the professions and the professional schools will be taken from the Statutes of Manitoba.

Information for the pre-1870 period will come mainly from two sources: the minutes and journals kept by the Order of Grey Nuns in St. Boniface, as well as the personal comments of Mr. LeTournier, curator of the St. Boniface Museum and Sister De Moissec of the Order, will provide background for the St. Boniface side of the river. For the Fort Garry settlement the basic sources will be the "Hudson's Bay Record Society" books including the post journals, account books, district reports, and correspondence.

Sources for the more specific educational history of each profession will be of three types: a general framework will derive from the histories of the professions as for example The History of Pharmacy in Manitoba 1878 - 1953 or A History of Dentistry in Canada. More specific detail will be obtained from journals of the medical professions such as the Canadian Dental Association Journal, or the

Canadian Medical Association Journal; from the minutes and annual reports of the training institutions; from the annual catalogues of each faculty; from statistics and annual reports of the Government of Manitoba.

Finally, of great assistance, particularly for the more recent years approaching 1970, will be the human resources - knowledgeable and concerned individuals such as Dr. J. W. Neilson, former dean of the faculty of dentistry or Dr. J. R. Murray of the faculty of pharmacy.

ORGANIZATION OF THE STUDY

Following the introduction, Chapter II, on the Red River settlement prior to 1870, will attempt to provide the backdrop for subsequent sections. It will investigate the qualifications and training possessed by medical persons in the settlements on both sides of the Red River. More importantly, it will try to isolate the beginnings of medical training indigenous to the province, upon which the various professions, once established by statute, could build.

Chapters III to IX will have a similar format and intent. For each profession icluded, the study will trace the training programmes, beginning, where necessary, with the training received outside Manitoba, and proceeding to the establishment of an educational programme in the province, and its evolution to 1970. In each case the study will attempt to show how this progression was related to the social, economic, and political conditions of the time. Furthermore, the attitudes of each professional group to its training

institution will be noted to determine whether or not its expectations were being met.

Chapter X will point out characteristic patterns emerging within or between the different professional groups and the evolution of their education from 1870 to 1970. Any apparent trends will be noted, including trends which may extend beyond 1970. The chapter will close with the writer's final thoughts and overall conclusions on the subject.

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CHAPTER II

MEDICAL SERVICES AND TRAINING IN THE RED RIVER SETTLEMENT

The healing arts are as universal as sickness and disease; thus it was not the Europeans who first brought "medicine" to Manitoba. The natives in all parts of Canada had their medical men, as well as a heritage of remedies for their most common maladies. As with modern medicine, theirs was a combination of the art and the science of healing.

The "art" of healing was wrapped up in the religious side of the medicine man. His authority and ability to heal were rooted in the mythical contact he maintained with powers greater and wider than man. For this reason the medicine man's first training was religious;

> ...the candidate who wishes to be a medicine man must undergo a long and rigorous training to try his powers of endurance and to see if the spirits will reveal themselves to him[1]

No doubt the awe, respect and even fear which the medicine man could command in his clients became a powerful adjunct to any physical remedies he might prescribe in the whole process of making a sick person well. Today's medical doctors, via a carefully orchestrated combination of mysterious schedules, referrals, technical data, professional jargon and illegible prescriptions also convey the impression that the physician has one foot in

another world in which it would be inadvisable or even dangerous for the layman to meddle. Properly wielded, such an aura of ability and authority can contribute much to healing, since so many of our illnesses lack a purely physical basis. Through a combination of personality and religious training, the Indian medicine man was a master at creating such an aura. His position of esteem, along with his particular collection of rituals and incantations, could help to dispel the fears and doubts that underlay many of the illnesses, in a fashion similar to today's practice.

This fact is elucidated by the recollections of an older member of the Saulteaux tribe of eastern Manitoba. He distinctly remembered the significance of the arrangements of rocks, known to his people as "medicine rocks". In his younger days, the rocks, piled into symbolic shapes and patterns, were "out of bounds", and no ordinary member of the band would venture to those sacred places. Only the medicine men would visit those places on ceremonial occasions when they made the trek to "get medicine from the rocks".[2] Today one of these formations near Lake Nutimik is open to the public as an historic site.

The scientific side of Indian medicine developed through long experience and careful transmission from one generation to the next. Most of these practical remedies were based on natural materials available in the immediate locale. The varying lifestyles of Indian groups across Canada reflected their varied habitat. Similarly, medical cures and remedies varied greatly from region to region. Even diseases were to some extent indigenous to the area in which the people lived. Unfortunately, the close relationship between

the habitat, the illnesses, and the cures meant that the natives' medical skills proved completely ineffective against white man's diseases such as tuberculosis. It also meant that Europeans generally underestimated the level of Indian medical knowledge and skill.

Two instances, however, show that Indian medicine was quite ingenious. Both the French explorers on the east coast and the British traders of the Hudson's Bay Company were cured of their scurvy by a concoction often referred to as "spruce beer", made from the bark of the juniper tree.[3] Secondly, the Plains Indians of southern Alberta developed antiseptics from certain fungi found in substantial pockets below ground surface. To emphasize the fact that the natives of Canada had developed an arsenal of cures, reference may be made to the array of medicinal sources mentioned by Ross Mitchell: yellow pond lily, spruce, balsam, willow, honeysuckle, juniper, Labrador tea, wild mint and snake root or Seneca[4].

The close association between religious and medical training was, of course, not unique to the natives of Canada. The medical history of western civilization as a whole can be traced back to a time when healing was the domain of the priest. With Hippocrates, however, began the separation of the two. This transition from viewing illness and health from a spiritual or superstitious perspective rather than a physical one came very gradually. Early medical training in Europe and America continued the models of earlier religio-medical training; this was the preceptor system in which the novice learned directly from a senior.

> The priesthood had been trained "by precept and example" in the temple, and this system of apprenticeship continued in the newly separated profession of medicine.[5]

The "preceptorship" of itself was unique to neither religion nor medicine. That the former methodology survived a somewhat revolutionary shift in the basic assumptions underlying medicine is of greater note. A new philosophy frequently demands a new vehicle if for no other reason than to break old associations.

Flexner, in his 1910 report on medical education in the United States and Canada, divided the typical apprenticeship into three stages of service - the menial, the pharmaceutical, and the professional.[6] In the first stage the apprentice might occasionally observe, but most of the time he washed utensils, delivered medicines, and curried horses. Only after a period of such service would he be admitted to more serious training. This system, while it no doubt trained some good doctors and was a necessity at the time, led to great differences in ability, and too frequently was weighted in the direction of practicality, omitting the proper scientific basis for medicine.

Occasionally, successful apprentices possessing the fortuitous combination of outstanding ability and adequate means did "post graduate" work in Europe, where medical schools combined some rather thorough scientific teaching with supervised clinical experience. Because of the distance and cost, relatively few could obtain such training. This gave rise, in the United States, to the rapid spread of "proprietary schools". These institutions were privately owned and funded, designed to bring profits to their organizers. The result, as could be anticipated, was that they tended to give

rather abbreviated programmes, sometimes as short as ten or twenty weeks, with strong emphasis on lectures. The combination of short programme, didactic format, and negligible clinical experience, required only minimal facilities, and promoted a rapid turnover of students. These characteristics contributed to increased income for the proprietors. This development substituted shoddy theory for the earlier short-sighted practicality, and produced even more ignorant practitioners. Commenting in the Dalhousie Medical Journal, Dr. C. B. Stewart writes that the convenient exchange of a diploma for a fee was not uncommon. "In the early 1800's . . . less than ten percent of the physicians in the United States were graduates of medical schools, and more than eighty percent had never attended a lecture"[7].

Canada, fortunately, both because of its closer ties with Europe, and its later development, was spared the worst of this era. Most medical men practising in Canada either apprenticed here, or trained in Europe.

> ...the only medical training available in Canada before the medical schools came into being in 1823 was by the method of apprenticeship . . . a student was indentured, often beginning in boyhood, to a practitioner for a period of from three to seven years.[8]

Western Canada, because of its even later development, avoided almost all of the trends described so far. Although, no doubt, some medical services rendered early in Manitoba's history were provided by people who had trained as preceptors, this was the exception rather than the rule.

Beginning with Dr. Pierre Romieux who sailed on the Nonsuch in 1668, the earliest European medical people in western Canada were

the ship surgeons who accompanied Hudson's Bay Company vessels to the New World. These men practised their profession under the most difficult situations both on board ship and at the early trading posts. What training these men possessed had been obtained in the medical schools or universities of Europe, such as Leyden and Edinburgh. In many cases their training was quite limited. As pointed out by E. E. Rich:

> ...a surgeon in the eighteenth century was normally far different from the highly educated product of the medical schools whom the twentieth century would recognize as such. The surgeon, little removed from the barber - surgeon from whom he had descended, would take his qualifications from "Surgeon's Hall", and would be the sort of partly educated, forthright, servant of whom the company was so much in need.[9]

Medical training and medical care in general are difficult to probe in this era for a number of reasons. To the Hudson's Bay Company, surgeons were valued servants, and employee health was vital, but only insofar as these contributed to the success of the business. It was a fur trading company, not a health organization, and therefore, it was the business transaction, not the surgeon's efforts, that were carefully documented.

> The surgeons are there, the medicaments are bought and shipped out. But the documents were maintained by fur traders for fur traders; their purpose was to balance the books, not to document a book.[10]

Furthermore, medical matters were often shunned by the hardy, independent traders and pioneers. Their life was robust, usually healthy. In their travels and frequent isolation they had to depend more on their own endurance and ingenuity than on the services of the post surgeon. Thus, while few were as cynical as the trader at Rainy Lake who commented that "Fort William . . . was the only unhealthy post which the Northwest Company had, . . .

indeed, it was the only post where they had an Apothecary," many reflected an indifference to medical matters, almost as marked as the stoicism of the Indians.[11]

A third factor contributing to this silence on health and medicine was the fact that the first medical doctors, both in the Hudson's Bay Company and later in the Selkirk settlement, were often the only people with any degree of general or professional education. Their pursuits were thus seldom restricted to medical work. When they were not fighting an epidemic or handling an emergency, their other skills were often in demand. The early surgeons were the first naturalists and geologists. They became leading citizens in the settlements and got involved in the administration of justice, and in the political as well as the social and economic life of their community. Medicine was not thought of as an exclusive occupation in early Manitoba communities. Preventive medicine and research were minimal. Thus, if the surgeon's medical services were not in demand at the moment, he was often into other things, as is borne out in the writings of a descendant of Dr. John Bunn: "There remains comparatively little record of Dr. Bunn's professional career" but "the existing records have much to say of Dr. Bunn's public life."[12]

While the general dearth of documented information about medical services and training in this early period presents some difficulties, there is much to be deduced and inferred from a closer look at the personalities who were involved. Included below are glimpses of some of those who were part of the Red River colony prior to 1870.

The first medical personnel in the settlement at the forks were employees of the Hudson's Bay Company. Because the stay of these men was often short, the colony was periodically without a doctor. Dr. James White, an Edinburgh graduate, arrived in 1814 and practised for two years, at the end of which time he was killed at Seven Oaks. Dr. Cuddie, who arrived two years before the rival fur trading companies amalgamated, stayed on until 1823. A memorandum directed to Captain R. H. Pelly, incoming governor of the colony, not only indicated Dr. Cuddie's salary, but also shows that a crude form of medicare existed even at that time:

> Mr. Cuddie will remain another year as surgeon at Red River if he accepts the terms offered to him, - one hundred and fifty pounds per annum as salary and an allowance of fifty pounds for his board and lodging - to find his own medicine and to have benefit of his practice - it being understood that he is to attend the poor who cannot pay him.[13]

While some of these early doctors had much of their time and effort consumed in fighting epidemics of influenza and smallpox, the lot of Dr. Julian Richard Hamlyn who arrived in 1831 seems to have been pleasantly different. Thomas Simpson in a letter to Donald Ross enters this comment:

> ...the settlement has been extraordinarily prolific in births this season, and sickness and mortality are very rare. Dr. Hamlyn, however, seems to find plenty of employment. He has two fine horses and is continually galloping about.[14]

Of the nine or ten doctors connected with the Red River settlement's first 25 years, the first three were ship surgeons who returned immediately after the crossing. The fourth died of ship fever. The next two, White and Williamson were killed at Seven Oak. Todd became a trader in the Swan River district. Hamlyn and Hendry remained for a longer time. All these physician - surgeons had been trained in Europe.

The first native Manitoban to enter the medical profession began practice at Red River in 1824. Dr. John Bunn, born in 1802 and raised at York Factory, spent most of his childhood and youth studying in Europe. He left his parents' home at York Factory at the age of nine and spent the next ten years at Edinburgh. From 1817 to 1819 he was enrolled as a medical student at the University of Edinburgh. In 1819, at the age of seventeen, he accepted a position as company surgeon at Moose Factory on James Bay. In 1824 he moved to Red River to begin a private practice. In 1832, after returning to Edinburgh for a further year of studies, he became a "Licentiate of the Royal College of Physicians and Surgeons of Edinburgh", having the right to full practice in any jurisdiction recognizing that body's examinations. He remained in Red River till his death in 1861, becoming a prominent citizen who also served on the Council of Assiniboia.

Medical services on the St. Boniface side of the forks had their start in 1844. Four Grey Nuns under the leadership of Sister LaGrave made the arduous journey from eastern Canada, in response to an earlier request by Bishop Provencher. Although the Grey Nuns were primarily a teaching order, all four had had some basic training in Montreal in caring for the sick. As pointed out by Sister de Moissec, it was the human needs around them, not their training, that took the order into the field of medical care in St. Boniface. Before they organized their first hospital in 1871, their efforts were channeled into visiting and caring for patients in their homes.

Their clientele was all-inclusive indeed! Care was extended to all in need, regardless of race, status, religious affiliation,

or place of residence; a sick Indian child, an injured construction worker, and, in particular, the aged were their wards. When the Wolseley regiment arrived on August 24, 1870, many of the men were ill. A daily trip to Lower Fort Garry from St. Boniface was not too much for the sisters. During a widespread typhoid fever epidemic, Sister Laurent spent seventeen days in Gretna alone; a smallpox vaccination program took Sister Meilleur as far as St. Anne. By 1854, after only ten years in the colony, they had already logged six thousand house calls.[15]

One of the first doctors practising in Red River who had not been trained in Europe was Dr. John Christian Schultz who arrived in the settlement in 1861. The exact nature and extent of Schultz' training have always remained in question. Dr. Murray Campbell writing for the Historical and Scientific Society of Manitoba indicated that when Dr. Ross Mitchell inquired after Dr. Schultz' qualifications, he was advised by Queen's University that, although Schultz had attended, he had taken no examinations. Campbell then continued by affirming that later investigations ascertained that Dr. Schultz had been "graduated an M.D. at Victoria University in 1861".[16] In any case, his medical career was overshadowed by many other enterprises and controversies in which he became involved. Aside from his role in Manitoba's entry into confederation, he owned a pharmacy and general store at the corner of Portage and Main, and made money in furs, in land, and in telegraph and railway companies. An amazing person he must have been! Aside from having a good reputation as a surgeon, "it would appear he practised good medicine, and held the first out of door (charity) clinic, when he

treated the poor . . . He was elected a Fellow of the Royal Society in 1894 on the basis of an extensive botanical study he had made in the 1860's."[17] Schultz later became a member of the Board of Governors of the Manitoba Medical Board. Another doctor trained in Toronto was Dr. James Spencer Lynch who arrived in Winnipeg in 1868.

After 1870 there was a steady increase in the number of medical doctors who had received their training in eastern Canada rather than in Europe. This did not, however, constitute any major shift in the type of training received.

> "With the opening of the medical schools in Montreal and Toronto, good teaching soon developed under well trained men, usually military surgeons at first. The majority of these were Edinburgh trained, and brought with them the methods of teaching which that University had adopted from Leyden University . . . Edinburgh served as a model for practically all the early schools in North America. It certainly was the alma mater of many of their first professors".[18]

One note of interest is that no medical school in Canada at that time would admit a woman, so that when Dr. Charlotte W. Ross, longtime doctor at Whitemouth, Manitoba (1881-1910) wanted to begin her training in 1865, she was forced to go south, entering the Women's Medical College in Philadelphia.[19]

In summary then, of the pre 1870 period, the observation could be made that relatively few medical doctors in Manitoba had trained under the system of preceptorship. While auxiliary medical personnel, such as nurses, were all trained that way, most of the doctors had studied in Britain, the majority coming from the University of Edinburgh. This did not mean that these men were all fully qualified. No local authority appears to have exercised any scrutiny over who practised. While both the Hudson's Bay Company and the Council of Assiniboia were anxious that the settlement retain

suitable medical personnel, it was not until 1871, with the proclamation of the Manitoba Medical Act, that a doctor's qualifications were systematically reviewed before he could practise in the colony. Thus, some had completed only part of their training. Nevertheless, the training they received was grounded in institutions of sound educational and research practices. In the years leading up to 1870 most students from the Red River settlement attended the medical colleges of eastern Canada rather than taking the more expensive route to Europe. Many teachers in the medical schools of eastern Canada, and many medical practitioners, continued to arrive as immigrants from Great Britain.

This ongoing European, and, more specifically, British influence was, in all likelihood, more incidental than the result of forethought. Most of Canada's immigration prior to 1870 stemmed from Britain. Doctors already in Canada maintained personal and professional contact with their home country, keeping open the flow of ideas, and inducing colleagues to join them in their newly chosen country. It was fortuitous indeed, in light of the absence of any licensing regulations, that medical education and practice in this province were moulded by products of the reputable London and Edinburgh schools.

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CHAPTER III

THE EDUCATION OF PHYSICIANS AND SURGEONS 1870-1970

Prior to 1900

The earliest medical training in America began under the preceptor system. As described in the previous chapter, the more gifted or more financially fortunate students proceeded to Europe for further study. On their return, these, as well as immigrant doctors, would teach others on a more formal, albeit sporadic, basis. From detached courses given by some of these doctors evolved the first medical schools.[1] These earliest medical schools could be characterized in a number of ways: They were of a practical bent, attached to or housed within a hospital. They most often maintained a direct or indirect affiliation with a university in the vicinity. Finally, with few exceptions neither they, nor the professionals they graduated were subject to governmental regulation.

Next followed the era of the proprietary schools which saw their zenith in the last half of the nineteenth century. These were usually unrelated to an institute of higher learning and detached from any hospital where clinical training could be obtained. There were no laboratories, only lecture rooms. Examinations were brief, oral, secret, and plucked almost no one.[2] Even some previously well started schools were caught up in this trend and became detached from the universities. This turn of events served to point out the need for public regulation of such an important profession. Governments

in both the United States and Canada began to enact legislation which demanded certification or licensure prior to practice within that jurisdiction. Such legislation provided the means by which to regulate the practitioner's qualifications and, indirectly, the institution preparing those candidates.

Another development, combined with the increasingly bad reputation of these schools, brought this whole era to an end. Even while the proprietary schools, with their exclusively didactic style, were at their peak, medical discoveries themselves jumped ahead.

> Progress in chemical, biological and physical science was increasing the physician's resources, both diagnostic and remedial. Medicine, hitherto empirical, was beginning to develop a scientific basis and method.[3]

The stethoscope and microscope had been invented. These advances in themselves forced a training institute into more clinical training and laboratory work. Medicine was no longer a nicely packaged set of facts and techniques, but rather a dynamic field of work and study. This demanded longer courses and more elaborate facilities, and bankrupted many of the commercial schools. As standards improved in the remaining schools, they began to demand some standard for admission. Johns Hopkins, for instance, required a full degree for entrance as early as 1893.

Canada was spared.

> In Canada conditions have never become so badly demoralized as in the United States. There the best features of English clinical teaching had never been wholly forgotten. Convalescence from a relatively mild overindulgence in commercial medical schools set in earlier and is more nearly completed.[4]

This was Abram Flexner's conclusion after his 1911 tour of Canadian medical institutions.

Manitoba, early in its organized history, made moves to protect its populace from unqualified practitioners. In 1871 the first act establishing the "Provincial Medical Board of Manitoba" was passed. The "Board of Governors" was to meet three times a year to examine any candidates presenting themselves for examination. The act spelled out necessary qualifications in a person about to commence medical training or wishing to take examinations for licensing. This included specifications regarding the moral character of the applicant, the context and duration of his studies, his age, and the conditions under which his clinical training was to take place. All physicians already practising in the province, as well as new arrivals, were licensed without examination, provided they had trained anywhere in "Her Majesty's dominion".

Besides having the power to regulate the study of medicine, surgery, midwifery and pharmacy, the act also required every member of the profession to register in the books of the Board.[5]

This was followed in 1877 by the "Manitoba Medical Act" with some significant changes.[6] This legislation incorporated the medical profession of Manitoba as the "College of Physicians and Surgeons of Manitoba." The "Medical Board of Manitoba" established to administer the affairs of the College replaced the earlier "Provincial Medical Board of Manitoba". This body in turn appointed the examining board which was required to meet at least once a year. The Medical Board set rules and regulations for the examining board and could prescribe "the method, subject, time and place of examinations." The Medical Board was composed of practitioners only, while the examining board was to also include representatives from

any medical college in the province. Graduates of a school in a British colony were still admitted without an examination, but incoming medical people from other countries continued to be examined as a prerequisite for licensing. The Medical Board had complete control over medical curricula.

1877 was also the year in which the Roman Catholic, Anglican, and Presbyterian colleges joined to form the University of Manitoba. This, together with a whole series of events about to unfold in the young city, would provide the context for the establishment of the first medical college in the west. In 1873, Winnipeg had only 215 residents on the west side of the river. By 1880, this insignificant settlement was in convulsion. Anticipating the coming of the railway, Winnipeg experienced its first real estate boom. Quarter sections of land were sold for as much as $50 000. "It was an era of fantastic prosperity, of expansion and optimism; it is difficult or quite impossible to appreciate fully the electric atmosphere of those times."[7] The arrival of the railway in 1882 ushered in tremendous expansion of the population and services of the city. Winnipeg by this time was a "loose-jointed, gawky, boisterous, mud spattered city of 25,000 - - 25,000 men, women and children, only a handful of whom had lived ten years or more in the west."[8]

These years saw some dramatic changes in medicine as well. Prior to 1880 only thirty names were registered on the College of Physicians and Surgeons' register. The first of these had been Dr. James Cowan of Portage la Prairie who was registered in 1873 by the old "Provincial Medical Board of Manitoba." By March of 1883--a mere ten years later--the total stood at 106. Amid this phrenetic

growth and boom-town mentality entered a prospect that could have taken Manitoba medical education in a completely different direction. In 1883, a University of Toronto graduate, thought to have been W. H. B. Aikins, son of Manitoba's Lieutenant Governor, announced his plan to organize a proprietary medical school in Winnipeg to serve the city and the west.[9] He was being supported in this move by a group of doctors in eastern Canada.

This announcement drew immediate reaction from Manitoba practitioners. Under the leadership of Dr. James Kerr they moved quickly to block such an intrusion. Without any intention of immediately beginning instruction, they obtained a charter from the Manitoba Government to establish a medical school, effectively keeping out the commercial operation. The charter was granted finally in the "Manitoba Medical College Act" proclaimed in 1884, and allowed the corporation thereby established to conduct a "college for the teaching of the science and profession of medicine, surgery, and midwifery by the delivery of lectures or other methods chosen."[10] The corporation was empowered to obtain buildings, hire professors, set fees, etc. The college was given the option or the freedom to become affiliated with the University of Manitoba. Examinations leading to practice would still be under the control of the Medical Board, but students who had completed the medical college curriculum could present themselves for examination.

Then followed a most extraordinary development. Prospective students for whom the cost of going to eastern Canada was prohibitive, noting the incorporation of the medical college, exerted conclusive pressure to have it commence classes almost immediately.

The September 20 issue of the Manitoba Free Press carried an advertisement placed by one of these activists, calling on all prospective or interested students to meet at 8:00 P.M. in the Education office in the Bigg's Block.

The strong response and emphatic requests by this group of students led to a meeting of 80 to 90 physicians of the province a few days later to consider the urgent appeal. A comment from Dr. Kerr's inaugural address probably captured well the surprised reaction of all who followed these events:

> I believe it to be the first time in the history of medicine that the student requested that he should be supplied with teachers, instead of the teachers soliciting students to be taught.[11]

Thirteen of the doctors assembled were named a faculty. Classes began on November 21, 1883. "There were no buildings. There was no equipment. There was no money to pay salaries. There was just a faculty of thirteen young general practitioners and a school inspector who was to teach chemistry."[12] The first faculty had an average age of thirty years with the first dean, Dr. Kerr, being only thirty-four years of age.

Dr. Kerr's opening address contained a powerful assertion of the guiding principles under which the school was conceived, under which it began its operation, and by which the orientation of the college was determined:

> . . .first, that degrees would be granted solely by the University, and secondly, that the established practitioners of the province should be the founders of the college.[13]

This was a philosophy which was not only a sound one in view of the many shoddy institutions elsewhere on the continent, but also one

which reflected the reaction of the founders to the outside threat they had just averted.

If Kerr had definite ideas about the guiding principles, he also had some rather pointed notions on medical education. In his first lecture he said:

> It has become of late years very much the fashion for the practice of medicine to run toward specialities, and it is my duty to warn you against taking up this study too early in your career. The more general your knowledge of disease and the more thoroughly you have become acquainted with the principles of every means of physical diagnosis, the better qualified you will be to undertake any special department of practice. You must first become general practitioners before you become successful specialists.[14]

Mitchell comments further that "the school from its inception has been modelled on the lines of British Schools, particularly Edinburgh."[15] Such a comment would indicate that the school placed a strong emphasis on the study of anatomy and physiology.

Lectures were at first held in the local high school, the "Central Public School", at the corner of William and Ellen. The first practical work was done in the morgue of the Winnipeg General Hospital, a twenty bed facility which had been constructed in 1876 on land donated by Messrs. Bannatyne and McDermot.[16] Shortly, a small cottage on Isabel Street was obtained for lectures and some practical work. The first year even saw some lectures given in a church next door to the Isabel street cottage where the first anatomical dissections took place. Later that year ward teaching for clinical experience was expanded to the St. Boniface Hospital. The first building belonging to the medical college was erected in 1884 at the corner of Kate and McDermot.

What was medical training like in this new college? All the instructors had full time practices, taught only in the evenings, and received no salaries. The first class consisted of nine students, six of whom graduated three years later. "Students attended school from eight to nine o'clock in the morning, worked at their jobs from nine to four thirty, and returned to the school again to attend classes from four thirty to ten in the evening."[17] Specialization on the part of the faculty was rare. Doctors alternated in the subjects they taught.

> . . . in fact there was something of a game of musical chairs with the headships. One graduate of 1891, Dr. E. S. Popham, held five headships in six years; he became professor of Sanitary Science the same year, professor of Physiology in 1893, of Obstetrics in 1896, of Obstetrics and Children's Diseases in 1897, a lecturer in Medicine in 1892, and ended up as secretary of the faculty."[18]

Board and room was five dollars per week including laundry services. Tuition costs were $150.00 per year. For entrance, students had to have completed senior matriculation, and had to successfully write the entrance examinations. Each examination was three hours in length. There were ten papers in all, two in Latin, one in English, one in French, one in History, three in Mathematics, one in Natural Science, and one in either Greek, German or Physics.

With the completion of the first building in the summer of 1884, the college was justifiably proud of its new quarters. The 1884-85 college calendar elaborated.

> It gives ample accommodation for all Medical College purposes, there being two large and commodious lecture rooms; chemical and physiological laboratory, etc., while the dissecting room is very spacious and well lighted, and will be thoroughly equipped.[19]

While a miniscule place compared to present facilities, it was an amazing accomplishment for its time. The province was only fourteen years old; it was only a year since a charter for the college had been obtained, and the faculty entirely paid for the building and its equipment. This group of instructors were making few compromises in spite of the fact that Winnipeg was very much a pioneer settlement. The school thus got off to a strong start with well defined entrance requirements, qualified, enthusiastic staff, strong links with the young University of Manitoba, facilities allowing up-to-date studies, hospital connections where proper clinical training could be carried out, and a fee structure which in no way made it desirable for organizers to get involved for reasons of financial gain.

Although the college at first conducted lectures after hours only, it followed no disjointed curriculum. After first year, examinations were conducted in anatomy, physiology, chemistry and materia medica; after second year in surgery, anatomy, practical chemistry, jurisprudence, toxicology, and sanitary science; after third year in medicine, surgery, obstetrics, clinical medicine, and pathology. In the second year of operation clinical experience was expanded to include the Maternity Hospital and the Provincial Insane Asylum.

An indication of the firm guidelines surrounding the programme is immediately evident in the qualifications a candidate had to meet before he could sit for the final examination. As specified in the 1884-85 calendar, the student must be twenty-one years old. He must have pursued medical studies for four years. He must have

attended lectures for three sessions of six months each. He must have taken all the prescribed courses for a total of 1200 lectures. He must have attended eighteen months of practice at a hospital. He must have attended two sessions of clinical instruction in medicine and surgery at the bedside, and he must have had six months practice at a "lying-in" hospital and attended at least six labor cases.[20]

The graduation of its first successful candidates, six in all, in 1886 led to a change in the Provincial Medical Act. With this amendment the University of Manitoba was made the sole examining body in medicine in Manitoba, and any person who had passed these examinations could become a registered member of the College of Physicians and Surgeons upon payment of the fee.

The next few years of the college can be traced through a series of modifications and improvements in its programme. In 1888, the year that Dr. Kerr left for Washington and J. Wilford Good became the second dean, the course was extended from three to four years, each "year" being a six month session. Under Dr. Good's leadership from 1888 to 1898, the college developed close ties with the Provincial Bacteriological Laboratory. New lectureships in Bacteriology, Pathology and Histology were established.

The 1892-1893 calendar suggests other changes had taken place. No longer were classes conducted only in the evening. On the contrary, students were now full time day students attending classes from nine to twelve in the morning and afternoons from one to six o'clock on weekdays, and from nine to eleven and one to two o'clock on Saturdays. The enrolment during this year was close to

a hundred students. A few comments in the introduction to that calendar indicate that Winnipeg itself had continued to flourish: . . . "the college is most conveniently located, and is within a block of the electric street car railway now under construction. . "[21] The college's own facilities were lauded: "large lecture rooms, an abundant water supply, a system of hot air heating and ventilating, and electric lighting, secure the health and comfort of the students."[22] Clinical facilities by this time included the 150 bed Winnipeg General, the sixty bed St. Boniface and the Maternity Hospital with nineteen beds. As if to impress prospective students with the element of adventure inherent in the profession, or to justify the study of surgery, the calendar included this comment: "Winnipeg being the great railway and wholesale distributing centre for the province of Manitoba and the North West Territories, accidents requiring operations are of frequent occurrence."[23]

Fifty-eight doctors had been graduated by the spring of 1893. In 1894, the building was expanded by making improvements so the basement could be more fully used, and an extra storey added. In 1894, the curriculum was revised by extending the sessions from six to eight months each.

By 1900, medical education was thus firmly established in the province. The very forces which had brought about its establishment, however, also gave rise to a difficulty. The medical college had been established as a result of at least two stimuli, stimuli which contained a slight conflict of interest. A medical college in itself was necessary by the late nineteenth century because medicine was making new discoveries and refinements in its scientific

basis as well as in its mode of practice. The preceptor system was too haphazard to guarantee thoroughness of training, let alone keep up with each new advancement.

In 1878, Robert Koch isolated anthrax bacilli; other discoveries included typhoid bacilli by Eberth in 1880, pneumonia by Pasteur in 1881, tubercule bacilli by Koch in 1882, and diphtheria by Klebs in 1883. The first stimulus affecting the young school, therefore, was the rapidly changing nature of medicine itself--a field hitherto rooted in the practical relief of suffering, now finding its basis shifting toward the science of medicine.

On the other hand existed an equally powerful, but opposing stimulus. The bad reputation of proprietary schools in the U.S. and eastern Canada had made many sincere doctors very cautious about the teaching of "theory" without a great deal of practical clinical experience. Manitoba practitioners, along with numerous others of the British tradition, overreacted somewhat to the evils of detached theory by restricting their concept of medicine to the very practical aspects only. While their idea of medical training was much beyond the practicality of the preceptor's training, it failed to appreciate fully the revolutionary implications recent advancements in medical science had for medical training. Having narrowly averted a proprietary school in Manitoba, detached from a hospital, the founders concentrated on the clinical aspects. Wilt, commenting on the move made by local practitioners to block the proprietary school, states:

> This decision meant that the Manitoba Medical College was in the hands of a local group of practising physicians and it was quite natural for them to plan the college in close association

> with a downtown hospital. This close relationship has undoubtedly influenced the practical nature of the medical curriculum through the years.[24]

Achieving the optimum balance between theory and practice in a training institution is never easy. When emphases in programme are arrived at, in part, by reaction to outside factors, that proper balance becomes even more elusive. How did this manifest itself in the young medical college? Practical considerations usually overrode novel or recent procedures made possible by research. The school was tardy in introducing new emphases into its curriculum until some time after advancing research would warrant and encourage such change. Kerr's abhorrence of the specialist, who might be more inclined to follow research in his field, must have been shared by many of his colleagues. Not only was specialization of the faculty (in what they taught) rare; it was 1911 before the space in the medical college building was first differentiated into specific areas for each department.

This strong preference for a general clinical education was at once the college's strength and its weakness. Strength lay in the fact that it would be firmly tied to the long standing traditions of British medicine, not a shallow institution jumping at each new fad as it arrived on the scene. Weakness lay in the fact that the college would be unduly hesitant in integrating new scientific discoveries. For some time there was a strong reluctance to recognize its distinct need for the basic sciences, leading to the school's loss of its "A" rating in 1913. When they finally accepted the need for the sciences, there was a limited attempt to integrate the clinical and the scientific. Thus began a separation that would

last for three-quarters of a century. That separation dictated that new courses could be added onto the curriculum, but rarely was new material substituted for the old. Thus the course became longer and longer, and more and more inherently disjointed. The 1888 and 1895 expansions of the curriculum with longer days, more months, longer internships, and increased pre-medical requirements were mute testimony to a direction that had been established, and that was long to reign.

From 1900 to the Golden Jubilee

The pressure to establish a well defined basic science curriculum did not diminish; on the other hand, a well established pattern was not easily broken. The practice of training students by means of didactic lectures and clinical experience was well ingrained not only in Manitoba but also in many other parts of North America. As noted by Abram Flexner in his report soon after the turn of the century,

> . . . the student's part was, parrot-like, to absorb. His medical education consisted largely in getting by heart a prearranged system of correspondence--an array of symptoms so set off against a parallel array of doses that, if he noticed one, he had only to write down the other.[25]

Thus it was in smaller steps, bit by bit, that curricular changes leading to a scientific basis for medical studies were introduced.

It was under the deanship of H. H. Chown that in 1905 the University of Manitoba was persuaded to take over the instruction of the basic medical sciences, physiology, botany, chemistry and physics. This was the first time the basic sciences had been clearly recognized and separated from other courses. While this isolation was in the long term not the most beneficial (see below, page 62, for explanation), it indicated a recognition of the need for a scientific basis for medical training and clinical practice. The Manitoba institution had taken its first concrete step in this direction.

This assistance from the university freed the faculty, with the limited funds of the college, to turn their attention to other things such as improving clinical instruction. The course at this time was also extended to five years beyond senior matriculation. From the words of Dr. Gordon Fahrni who registered for medicine in September of 1906 one can easily infer the rather sharp distinction between basic sciences and clinical training created by the fact that they were taught on two different campuses,

> Four primary sciences were taught in the Manitoba University buildings on Broadway . . . Our curriculum for the first two years of medical school was designed to prepare us for the later study of diseases and their impact on people.[26]

A period of internship after medical studies was not mandatory for licensing at this time, and, according to comments by Dr. Fahrni, not a common occurrence. While some graduates interned for a year after medical school, most did not.

A 1903 amendment to the Medical Act, which would make Manitoba a part of a Dominion registry, added a further kink to medical education in Manitoba. Earlier in the year Dr. Neilson of the faculty had argued in favor of such a change. While the amendment would not have immediate and momentous consequences, in the long run it would allow the medical college to measure its performance relative to other Canadian medical schools. In return graduates would enjoy reciprocity of registration with other provinces that were part of the registry. All candidates from this time on would be required to write an examination for the Dominion Council. From this time on the school would have to train students in a way not only consistent with its own philosophy, but also in such a way that

graduates could fare well in the Dominion examination. Anticipating the separation between basic sciences and clinical training to take effect the following school term, an amendment to the Manitoba Medical College Act had been made in 1904. It stated that "graduates from other colleges shall only be registered [for studies at the Medical College] if the course of studies there was at least the equivalent of a similar course at the University of Manitoba."[27]

By 1906 the original building, built twenty-two years earlier, was becoming inadequate. As a result, the Medical College relocated from its founding site to its present location, the building being erected in the spot where the present new Chown building stands. This was also the year in which the University erected its first new science building on Broadway Avenue.

The three developments just described--affiliation with the dominion registry, clear designation of the basic sciences, and a new medical college building, bore fruit shortly. When in 1909 Abram Flexner and associates travelled the continent for the Carnegie Foundation to do an overall review of medicine and medical education in the United States and Canada, they also visited the Manitoba Medical College. The comments in Dr. Flexner's report were most positive. Of its laboratory facilities he said,

> The equipment is adequate to routine instruction, new, and steadily increasing. There is a beautifully kept collection of several hundred wet specimens. Appearances indicate a conscientious and intelligent employment of such resources as the school has had.[28]

His comment on clinical facilities:

> The excellent Winnipeg General Hospital of four hundred beds adjoins the school. The school faculty is practically the staff of the free wards. The relation between school and hospital is admirable. Students work freely in wards, clinical

> laboratory,operating rooms, obstetrical ward, etc. There is a good dispensary.[29]

Of its entrance requirements he merely stated, "The University Matriculation Examination or its equivalent."[30]

Lest the reader infer that Flexner was generally lenient in his evaluation, consider his critique of a college in Augusta, Georgia, made the same year. Of its entrance requirements he said "nominal"; regarding laboratory facilities,

> The school occupies a building which contains an exceedingly foul dissecting room, a meager equipment for elementary chemistry, a fair equipment for histology and pathology, and practically nothing for bacteriology. There is a small museum and a collection of several thousand books of mainly antiquarian interest.[31]

On clinical facilities he wrote,

> The city hospital adjoining, containing one hundred beds--less than half of them occupied at the time of inspection--offers most of the clinical facilities; the Lamar Hospital is also available, but is more than a mile off, though described in the official catalogue of the state university as "located only a short distance from the college." At the city hospital the students get no obstetrical work because "the cases mostly come at night and you can't get students"; at the Lamar Hospital they get none because "They are far too busy". There is no evidence anywhere of clinical laboratory work. It was learned that at the city hospital there had been "two post mortems in six years". There is a dispensary at the city hospital, but no records are kept.[32]

The college was thus rightfully proud of its "A" rating granted it in 1910 by the Carnegie Foundation. In 1911 the building was doubled in size. In 1911 the animal building was erected. An editorial in a 1911 issue of the Journal of the Canadian Medical Association echoed buoyant confidence, stressing that the college was not advertising for large enrolments, but rather was striving for efficiency and quality. It commented that basic science instruction had improved since the University took this over in 1905. It

expressed pride in the College's strong emphasis on clinical experience, made easy by the close proximity of the General Hospital.[33]

The 1911-1912 calendar indicated other positive developments. The Manitoba Medical College Students' Association and the Students' Athletic Association were part of college life by this time. The Winnipeg General by this time had four hundred beds, the St. Boniface three hundred and fifty. There was a closer association between the college and the university with formal cross registration of courses. Requirements of candidates for graduation had been increased to include twenty four months spent at a hospital, attendance at eight labor cases, and tickets proving attendance at seventy-five per cent of the lectures in each course.

World War I had a direct impact on the medical college. The skills of both instructors and senior students were very much in demand in Europe. Many entered the Services, depleting the school. This left large gaps in the programme, which, because of the greater specialization taking place by this time, other staff members could not always fill no matter how hard they worked. Monies were also restricted because of the national war effort.

The end of the war in 1918 brought no relief; in fact, it complicated matters. New research and methodology had evolved during the war. Many improved surgical techniques had been perfected in response to the many casualties. Insulin was discovered in 1921.

Precisely at the time when the college should be making changes to incorporate these improvements, it was in the throes of

post-war reorganization. The return of staff was, of course, welcome. The flood of students, however, was overwhelmingly greater. Not only did many senior students wish to return and complete their training, but many others, who had postponed entering due to the war, registered at this time. Finally, there was the usual group of applicants who had just achieved their matriculation standing. In view of these difficulties, it is truly amazing that the many improvements and new developments which took place in the immediate post war years ever occurred.

Just prior to the end of the war, in the fall of 1917, the medical college had become a faculty of the University of Manitoba, finally removing the financial burden of running the college from the faculty members. With the reorganization, Dean Prowse was able to bring the basic sciences department back to the college. This solved two problems: first, the basic sciences as taught by the University were taught in general terms, whereas, if they were taught at the college, they would be focussed more specifically in the direction of medicine. Secondly, students who had been finding the first year of clinical medicine extremely difficult, now found the transition from basic science to clinical instruction less traumatic.

With the college becoming the medical faculty, all assets, valued at $750,000. were turned over to the University. The actual deeding of property and equipment to the University of Manitoba was transacted in 1918. To strengthen the formal link between the faculty and the University proper, Dr. H. H. Chown, who had been the dean up to this time, was appointed to the University's Board of Governors.

Events of the next few years fell into place like a series of tumbling dominoes. The reorganization of 1917 was intended to facilitate a better curricular programme. This change, in turn, would shortly demand better and larger facilities. This required money. Money became available, but only on the condition that further improvements and fiscal reorganizations were to be made within the province. Thus more changes were made. The result was a rapid improvement in facilities, staffing, and programme which seems as daring as the unlikely beginnings of the college in the first place.

Just at the time that Dean Prowse needed large sums of money to expand building space to accommodate the basic science section now returning,

> John D. Rockefeller announced his gift of one hundred million dollars to improve medical education on the continent. Dr. Prowse moved quickly to invite representatives of the Rockefeller Foundation to visit the school.[34]

As a result, a study of the school was conducted by Foundation officials and the "Council on Medical Education of the American Medical Association". "Foundation officials were sufficiently impressed to make a gift of $500,000 to the University, the interest to be used for the annual budget of the Faculty of Medicine."[35] However, there were numerous strings attached: one of the conditions was that the Provincial Government was supposed to spend $400,000 on new buildings to house the basic science departments. Secondly, they expected the government to increase the annual operating budget of the faculty to allow for more fulltime teachers.

On June 20, 1920, based on the recommendation made by the visiting "Council on Medical Education", the medical faculty

recommended a number of changes in programme and curriculum: First, entrance requirements should be increased to one year of university training beyond senior matriculation. This was carried out in 1922. Secondly, the undergraduate curriculum was to be completed in four years until such time as an intern year became adopted as a requirement. This requirement came into effect in 1923. Further, a definite percentage of the total marks determining the standing of the student was to be assigned for class work. Effective in the 1921-1922 session the total session excluding examinations was to be at least thirty-three weeks. In order to cope with the rapidly increasing numbers, there was to be made available increased building space for laboratories as well as the necessary equipment. Two other recommendations were that the number of staff in pathology be increased by one, in anatomy by one and a half, in bacteriology by one, and that physiology and biochemistry have at least a total of three, and that the Grace and Misericordia hospitals be requested to institute obstetrical clinics so that students could receive better training in this field.

The provincial government, anxious that the medical faculty receive the gift, agreed to comply with the terms attached thereto. The new basic sciences buildings were completed in two stages, the first in 1921, the second in 1922. The college of Physicians and Surgeons had donated their entire library to the faculty in 1920. With these rather noteworthy improvements in programme and facilities, the school regained its "A" rating which had lapsed in 1913.

During the 1920's, considerable efforts were made to reduce the amount of time devoted to anatomy and physiology which took up

a disproportionate share of the first two years. Biochemistry and psychiatry were also demanding a place. The aim, of course, was to prevent the amount of material thrown at the students from mushrooming to unmanageable proportions.

Dr. Alvin Mathers, the first graduate of the school to become its dean, assumed that position in 1931. This year was the first to see restrictions placed on enrolment. This had come as a result of numerous concerns: one was that the science pre-medical years were too easy and led to large enrolments in the first year of medicine with an accompanying high failure rate. This was wasteful both of money and of the students' time. Secondly, the proper supervision of intern students in hospitals away from Winnipeg was not very practical; thus there was some pressure to reduce enrolment so that all could be accommodated in Winnipeg hospitals. Finally there was also fear that the local area would become saturated with doctors. So, for the first time, enrolment of first year students was limited to sixty. Under the leadership of Dr. Mathers, the school also strengthened its programme of clinical teaching by alloting more time in hospitals to fourth year students.

The five years leading up to the school's fiftieth anniversary in 1933 and its postponed celebration in 1934, drew a lot of reminiscing, some justifiable, some probably unrealistically positive. It seems clear, however, from the rather lengthy description of facilities and equipment by J. C. B. Grant of the department of anatomy, that the school had made considerable progress toward making the study of medicine a scientific undertaking. He wrote that the college appeared to have considerable facilities for 1928,

such as histology, neurology, embryology and pathology labs, a combined lantern and epidiascope, microprojector, hundreds of wall charts, eighteen microscopes, a dissecting microscope, two camera lucida, drawing apparatus, pantograph, Edinger apparatus for reconstruction work, injection apparatus, anthropological instruments, Minot, Cambridge rocker, celloidin and freezing microtomes, electric lights over the dissecting tables, lecture theatre, and many displays of bones and embryology casts.[36]

A 1933 Winnipeg Free Press review of "Fifty Years of Medical Education" pointed out two milestones achieved by the school. " . . . our medical college has been a pioneer in providing clinical instruction in psychopathic work. Only one other school in Canada has a psychopathic hospital available to its students".[37] Furthermore it lauded the high standards and enviable reputation the college enjoyed, attributing its success to the stringency with which it selected its candidates for entrance.

> The quality of its graduates is very largely due to the intimate and direct connection between faculty and student which is only possible in a college of rigorously limited numbers. Manitoba's selection of the students to whom it gives a medical education is more strict and careful than any in Canada. To that extent it conserves and concentrates its influence toward the attaining of high ideals.[38]

As indicated earlier, it was not only the aspiration to a high ideal, but also practical considerations that led to this restriction on enrolment.

Such glowing comments, especially in the local paper, might be open to doubt were they not supported by more definitive remarks of the same period. The Manitoba Medical Review made this observation:

> Since the establishment of the Dominion Council examination, the results have shown that graduates from the school stand higher than average among graduates taking these examinations. In most years since the War, the proportion of successes among graduates of the Manitoba Medical College in The Dominion Council examinations has been either highest or second highest among the various universities in Canada.[39]

While the profession could allow itself good feelings about its medical school, it had cause to be vigilant in other matters. Among major concerns of the Manitoba Medical Association during the thirties was the repeated challenge of other groups to become licenced in some special area of medicine. Under the leadership of the then president, Dr. Gordon Fahrni, a committee was set up to study and lobby against such efforts. In reference to the repeated efforts of chiropractors in the province to obtain legal recognition, Dr. Fahrni commented,

> Each year some group of irregular practitioners would sponsor a bill for legal recognition and bring it up before the provincial legislature. It was the committee's job to see that the M.L.A.'s were informed on the subject.[40]

"Informed" in this context no doubt meant "informed as to how the medical doctors felt about it."

From 1900 to 1933 it can be noted that the trend to extend the overall course continued. The basic sciences were strengthened when they returned to the college in 1918. The entrance requirements were increased by one year. A one year internship became mandatory in 1923. Courses in the medical programme itself were streamlined to accept biochemistry and psychiatry and to free more time for additional clinical practice during the fourth year. It does not appear that the course was a light one. Part of this was inevitable as a result of increased medical knowledge. Some of the expansion

was the result of the continuing failure to integrate as efficiently as possible the scientific and clinical fields.

It may also be noted that the preoccupation of the college and the media with its reputation as an institution suggested that the school until this time remained clearly within its Edinburgh or "Old World" tradition. The college, and indeed the profession, were seen as entities in themselves with a collective self-interest. The concept of a public educational institution existing for the benefit of the greatest number of citizens of the area was foreign, and for understandable reasons. The school had belonged to the faculty until 1918. The right of all citizens to have access to medical services was unheard of. It is also an acknowledged and unfortunate fact that the stringent requirements for entrance to the faculty referred to earlier were not based on ability only. The Jewish people, for example, were systematically barred. Commendable, nevertheless, is the fact that the school maintained enviable standards when other institutions with the same philosophical bent did not achieve these. It is also of note that, while practical considerations forced the school to limit enrolment in 1931, the move was quite consistent with an elitist institution and probably did contribute to its high standards. The school made good use of limited financial resources.

1933 to 1958: Depression, War, and Joe Doupe

The ten years following 1933 were essentially lost years. The one year postponement of the Fiftieth Jubilee celebration from 1933 to 1934 was indicative of the times. Financial constraints were severe. Governments were completely consumed in trying to cope with immediate fiscal and unemployment difficulties, not to mention the effects of the extreme drought on the prairies. With so many of their clients unable to pay, doctors were hardly able to remain financially afloat. During these years it was a matter of hanging on, not of making new, creative, adventurous moves.

Minor changes, however, did occur. The 1939-40 school year saw a drastic decline in first year failures--from a usual forty per cent in earlier years to fourteen per cent. Also in this year the duplication of writing both local and dominion examinations was eliminated. Instead students would be evaluated by their overall personal and academic record to that point, on their clinical examination, and from their writing of the Dominion Medical Council examination in the current year.

If the thirties signified standstill, the first five years of the forties meant reversals. The effects of this war were much more pronounced than those of the first. By 1940-41 the college had lost twenty-five per cent of its teaching staff. In 1941-42 almost half of the graduating class entered the forces. Dean Mathers indicated that "the most serious impediment to research is

sufficient staff. With teaching duties so heavy, little time for research remains."[41]

Then followed a development which caused great disruption in the life and programme of the faculty, with very limited gains. The great demand for medical personnel in Europe led some people to believe that something should be done to speed up the graduation of medical students. The plan was to eliminate vacation time, increase government support to compensate for students' reduced time to earn, and thus reduce the time from start to graduation. Wrote Dean Mathers,

> This year (1942-43) was one of great trial and greatly increased work for everyone. It was the first year in which the acceleration of course deemed necessary to meet increased demands of the Services, was embarked upon. With instructional staff reduced by approximately thirty-two per cent, greatly increased teaching responsibilities had to be assumed and, in spite of strenuous efforts to prevent it, it seems likely that some deterioration of standards will have resulted.[42]

Many lecturers were appointed during these years. More would have been needed, were it not for the fact that students also departed prematurely. In the 1942-1943 season almost all fourth and fifth year students except those with physical disabilities were given leave to enlist and return to complete their studies later.

The disruption of the war had a particularly severe effect on clinical training. There were few senior interns and residents left in the hospitals to teach or arrange clinical sessions for students. In addition, another curious change took place. With the increased prosperity brought on by the war, patients could afford to pay more, and stayed away from the public teaching wards--further reducing the possibilities for clinical exposure for students. The accelerated programme did not work very well and was abandoned in

in 1943. Any students who had completed their courses and examinations continued to enlist immediately. At the May 12, 1944 graduation almost half of the students were graduated in absentia.

In spite of the almost insurmountable difficulties experienced during the depression and war, research had appeared on the scene. This was no luxury or option. Medicine had reached a level of sophistication which demanded more than a scientific basis. It was not enough to deliver lectures based on research done by other institutions which were pursuing new frontiers at the growing edge of medical knowledge. By this time, if a medical faculty wished to stay "in the running", it had not only to communicate the latest findings of research to its students, but also to inculcate in the student the concept that continued investigative thinking was of prime importance to competent practice.

As usual the objective preceded the implementation, and the first stages of implementation seemed like very miniscule achievements. Mathers had unhappily noted the lack of research in his 1941-1942 dean's report. An anonymous writer in a 1966 article commented that "since 1940 the objectives of the Faculty of Medicine have been to build up a strong research programme . . ." Perhaps the most significant comment made by this author was his final one, "Because of increasingly generous financial support from the Government of Manitoba, all these objectives have been made possible."[43] Increase there certainly had been. In 1935 the college had exactly one registered graduate student and its total expenditure on research was one thousand dollars. By 1955 this had increased to ten registered graduate students and an expenditure for research of $122,000.

Medical education after World War II without a discussion of Joe Doupe would indeed be incomplete. As stated by Dr. L. G. Bell, "As a teacher, Joe belonged to that rare group of academic personalities whose very presence on a Faculty of Medicine lends character to the entire school."[44]

Dr. Doupe graduated from the Faculty in 1934, and after further work in neurology (London), physiology (University of Pennsylvania) and medical research (University of Toronto), applied for the position of Director of the Department of Medical Research at the Manitoba Faculty on January 9, 1946. His work over the succeeding years had a profound influence on both research and medical education. Both were transformed and elevated by his integration of the two.

Research, in his opinion, was not the "frosting on the cake", as it had been treated hitherto, whereby some individuals, detached from the undergraduate programme, conducted research purely in the interest of medical knowledge, when time and funds were available. The closer integration he had in mind became apparent in a comment he made soon after his arrival in 1946;

> . . . althouth the training of students may be excellent in practical and theoretical fields it is defective in that it fails to develop a spirit of either enquiry or of scientific criticism. There can be no doubt of the educational value of including in the environment of the student an element of research. The acquaintanceship will provide a rational basis on which a student could elect a research career . . .[45]

Doupe was the first man in the history of the faculty to attack head-on the unhappy segregation of basic and clinical sciences. Too often these two aspects of medical education had been treated as self contained entities. Reinforced by the lack of

regular communication between science and clinical instructors, the two emphases had failed to complement each other or to provide a single, integrated body of knowledge. Dr. Doupe had the mental capabilities and the force of personality to shake up the status quo. While the problem was not entirely solved at the time, the old regime would never again hold the same sway. As a prelude to a discussion of Dr. Doupe's work in the Department of Physiology, Dr. Arnold Naimark, present dean of the faculty, remarked that the physiology department was much like the others;

> It was the usual blend of didactic lectures and laboratory exercises given in the first year of the medical curriculum. There was little if any attempt made to relate physiological material to the subsequent course. The relationship between basic sciences and clinical medicine, if it existed at that time, was highly tenuous.[46]

What did Doupe do to change the status quo? He began within the existing framework of lectures and laboratories. However, instead of delivering information by lecture, he gave students mimeographed notes and the lecture periods were spent in critical assessment of the underlying theories. The laboratory sessions, he felt, were unsuccessful in delivering information and were too poorly structured and controlled to inculcate proper research attitudes. Therefore he reduced the amount of laboratory work and instead organized students into tutorial groups. In these sessions he would concentrate on thought processes using a limited topic and his "parry and probe" style of questioning to force students to think critically. In 1950 Dr. Doupe introduced a new slant to these sessions. Each student was required to do a research project on a limited topic that would give him opportunity to do an intensive investigation, applying the critical and analytical thinking of the

basic sciences to a research situation. The student then presented his report to the tutorial group and was "subjected to the critical grilling of his fellow students--led, of course, by Joe himself."[47]

Dr. Doupe's passion was that students not memorize, but understand. He pursued this relentlessly, to the brink of unpopularity. He complained about the students' inability to make appropriate correlations.

> As a result of this they are unable to assess their grasp of the subject because they cannot see whether or not the idea is reasonable in the light of other information and ideas. These are the students who protest when they are given low marks because they can frequently repeat factual specific information from books and therefore by their definition of learning--know the subject. I can usually demonstrate to them why they have been given low grades, but the question is how can I help them think more clearly?[48]

In 1948 Dr. Doupe became professor and head of the Department of Physiology and Medical Research. In 1950 he set up his famous B. Sc. (Med.) course. In this programme students who had shown outstanding ability would for the duration of two summers pursue a "discrete and formal research project". It quickly became a very popular option and as always was presented and defended before a panel of critics. While sessions in which students had to defend their project could be tense and trying, Doupe's cutting wit and humor kept them lively and on an intellectual plane. His witty and logical mind is well illustrated in a letter of his to the Winnipeg General Hospital. Before proceeding to his request for more research facilities he included this vignette: ". . . no doubt in your opinion as in mine, the General Hospital is a superior institution. Nevertheless, it would be well if we could find some evidence to support this belief . . ."[49]

A second rather significant change in undergraduate training introduced by Doupe was a course known as "clinical science". For this course he enlisted the skills of many departments into a superbly integrated exercise in the application of the basic sciences to the clinical disciplines. The Department of Biochemistry joined this venture in 1954, leading to increasing integration of the various departments as they co-operated on these research projects and later also in systems teaching. Dean L. G. Bell summarized his comments by describing Joe Doupe as ". . . one who was an exacting scientist, a superlative teacher, and a most complex and memorable personality."[50] Doupe probably best characterized his own philosophy when he was quoted as saying, "you don't have to know all the facts--but you sure as hell have to know what to do with them."[51]

Doupe's influence on medical education was outstanding. Not only did the research component of undergraduate training grow by leaps and bounds, but also the long awaited integration between basic and clinical sciences had been launched. His achievement in this area can easily be seen as the direct forerunner to the overall curriculum revision of the late sixties. Said Dean Mathers already in his 1947-48 annual report, " . . . the direct product of research has not been the only gain. It is quite evident that the investigative attitude of students and graduates has been stimulated."[52] The faculty would never again produce the same breed of physicians!

The school was also expanding. An increased number of students was admitted in 1947, creating an even worse shortage of space. In 1951 architects were appointed and in 1954 provincial

grants for construction were approved to finance an expansion. The addition of a new building as well as numerous renovations carried out in the older buildings were completed in 1958. The new building would house the library which by this time contained 18,000 volumes. It also contained a doctor's reading room, auditorium and examination hall, additional laboratories and classrooms, cafeteria, and common rooms for faculty and students.

Ironically, it was at the same time in the mid fifties that the number of students applying to enter the school declined. During the thirties and early forties there had been a great surplus of applicants, resulting in stiffer entrance requirements and declining failure rates in first year medicine. Now the opposite was the case. In 1954-55, due to fewer applications, the entrance requirements were lowered and the first year failure rate jumped to twenty-two per cent from the previous years' twelve per cent. By 1958 the situation was so serious that only fifty-one of the sixty applicants who had been selected arrived to attend the freshman session.

Meanwhile, changes in the curriculum continued to be made. The entrance requirements had been reviewed and revised from 1948-1951.

> During this period, admission requirements to the Faculty have been under careful and prolonged discussion, as a result of which a broadened and liberalized course of study covering three years from Grade XI was finally agreed upon. This change is in keeping with the view now generally held among medical education that a liberalized preparation for Medicine provides some safeguard against the almost inevitable narrowing influence of the medical course itself.[53]

Changes were also introduced in the years from 1950 to 1953 to reduce the number of didactic lectures and to increase the amount of time spent by senior students as clinical clerks in the hospitals under

close supervision of the members of the teaching staff. In the 1955-56 year students received their degrees after four years of medicine. The intern year which followed was then overseen by the College of Physicians and Surgeons and the student would not become licensed with the College until the internship had been satisfactorily completed.

Dr. Jim Morrison, present registrar of the College of Physicians and Surgeons, expresses the opinion that prior to 1955 when the student did not graduate until he had completed his internship and even in the years immediately following, the internship was not taken seriously by the Faculty of Medicine and was more or less left in the hands of the hospitals.[54] The result was that many interns became inexpensive help for the hospital, with the educational aspects shuffled into the background. Since that time, partly because internships have been technically under the aegis of the College, and partly because so many students immediately pursued post-graduate studies instead of completing only a one year internship, the faculty has become very much involved in making the internship a very significant educational experience. Students are now placed on a rotation of wards and must be guaranteed access to an adequate medical library at all hours; all in all every effort is being made to assure that the internship is basically a time of learning and not slanted toward the service that person might render the hospital. Hospitals' internship programmes must be approved by the College of Physicians and Surgeons and since the late sixties are reviewed every four years to ascertain a satisfactory level and variety of experience for the intern. These improvements were to a

considerable extent facilitated by the evolution of the "geographic full time" physician who taught in the faculty, did research, and maintained a small private clientele concurrently.

The period from 1934 to 1958 had seen difficult years and good years. Research had become firmly established with concomitant benefits of not only placing the institution in the mainstream of world medical education, but also of demonstrably impressing the undergraduate student with the nature of medicine itself--not a static body of knowledge, but an ever changing quest for better technique and understanding. This fact was soon to bring an old problem to the level where it would have to be confronted. While innumerable changes in programme had been made over the years, its basic format had changed little since the 1920's when the scientific basis for medicine had clearly been established. The pre-medical entrance requirements had been increased, the course crammed fuller and fuller of detail as new fields pushed in, and clinical experience lengthened in an attempt to maintain some balance between theory and practical training.

Dr. Wilt in an interview outlined three basic weaknesses in this system which he designated "the old Flexner system":[55] the course was unduly heavy because of expanding knowledge and the teachers were basic science specialists, Ph. D.'s, whose teaching was very fundamental, detailed and quite removed from medical practice. If the medical student could survive this cram course he was next catapulted into the clinical end of his training where his instructors and he ignored the sciences and got down to the old medical three-step of symptom leading to diagnosis leading to

prescription of treatment. All these associations were too much programmed or memorized. Because of this dichotomy, a doctor going out to practice had acquired neither the scientific basis nor the methodology for keeping up to date with changes that were taking place even as he graduated. That this style would soon come crashing down was harbingered in this comment back in 1953:

> Undergraduate medical education must provide a solid foundation for the future physician's development. It should not aim at presenting the complete, detailed, systematic body of knowledge concerning each and every medical and related discipline. Rather, it must provide the setting in which the student can learn fundamental principles applicable to the whole body of medical knowledge, establish habits of reasoned and critical judgment of evidence and experience, and develop an ability to use these principles and judgments wisely in solving problems of health and disease.[56]

Dr. Doupe's innovations had represented initial steps in this direction; however, while inroads had been made and cracks in the system were showing, more thoroughgoing, overall restructuring remained to be done.

The school had also shifted from its one-time emphasis on turning out general practitioners. The expansion of knowledge and the emphasis on research had meant a basic change from the attitudes regarding specialization expressed by the first dean Dr. Kerr. Les Hershfield viewed that change as follows:

> At one time in my student days (1921ff) it was possible for a good student to know and encompass much of medical knowledge and to work in many fields. Today, in view of the vastness of fields of medicine, that is impossible and thus graduates in medicine must of necessity be specialists in restricted fields.[57]

1958-1970: The Recent Past

The early sixties were a time of great ferment in medical education as in many other fields. This did not mean, however, that a host of "new" things appeared de novo. To a greater extent one must view the events of the sixties as the culmination of a long series of events or as the surfacing of trends long in the brew.

As usual, there were outwardly observable changes. The lack of applicants of the mid fifties saw a turnaround. Sixty-nine students were admitted to the first year programme in 1959, seventy-three in 1963, and seventy-five in 1964. 1962 to 1965 had also witnessed the construction of the new Chown Building, replacing the original medical college building built on that site in 1906. While changes in student numbers and improved facilities had their effects, the heart and essence of medical education was being buffeted, shaped and propelled by much more powerful, albeit less obvious, forces. The events of the later sixties at the Faculty of Medicine cannot be understood without a closer look at some of these deeper currents in the stream of time.

Prior to this time, medical students' clinical experience was obtained almost exclusively on the so-called "free wards". These were designated wards in teaching hospitals such as the Winnipeg General or the St. Boniface, reserved for the use of practitioners from the Faculty of Medicine. The patients assigned to these wards

were almost invariably those who were unable to bear the cost of medical care. Their hospital stay was paid for by the municipalities they came from, while the physician's services were rendered free of charge. Teachers and students in the faculty attended to these wards. The arrangement, as long as there were sufficient numbers of indigent patients, of course ensured satisfactory opportunity for clinical experience. But, as mentioned earlier in this paper, this system was showing signs of breakdown already during World War II. It continued to disintegrate with the increased prosperity of the fifties.

By 1960 there were enough prepaid medical insurance plans in use that the old "free ward" arrangement proved unsatisfactory. The Riley Commission was appointed in the same year to study ways in which an acceptable standard of clinical teaching could be maintained under these new conditions. The study, headed by Harold J. Riley, Q.C., was published in 1962. It concluded that three aspects of the free ward clinical department were wanting--the total number of patients, the proper cross section of age in the patients, and the desired variety of cases.

> Nevertheless, it is agreed that the number of patients is inadequate, especially on those services engaged in teaching the various surgical specialities. This is particularly so because of the increase in the number of trainees in the field of general surgery. Furthermore, the relatively advanced age of the majority of available patients has led to a restriction in the variety of diseases encountered.[58]

After considering the expensive option of a new "University Hospital", the commission recommended an alternate solution--the establishment of "University Units" in existing teaching hospitals. Each "Unit" would consist of: an "inpatient unit" consisting of

certain wards in the hospital so designated, a university "out patient clinic" and a "clinical investigative unit".

> These units would be for the exclusive use of clinical staff, trainees, clerks, and should be at least as attractive as other wards so that patients would be happy to be in those wards rather than other wards.[59]

In addition to lower cost than a new hospital, the implementation of these units was seen to have other advantages. It would maintain the traditional close association between the medical college and the hospitals which had operated to their mutual advantage for three quarters of a century. Furthermore, it would keep hospital administrators and physicians in private practice aware of, and in contact with, modern treatment as it was continually developed in the faculty.

The implementation of these recommendations came none too soon with national medicare plans just around the corner. The establishment of these "units" provided a more balanced clinical experience for medical students and also led to the employment of more "geographic full time" instructors--a new breed of faculty who had a limited practice at the school or nearby, did research and taught on the clinical wards. As described in the Commission report these staff are:

> . . . faculty members whose entire professional output, during the hours or days of the assignment, is obligated to the University, and who are reimbursed on this basis and who are geographically situated within the confines of the University or its teaching hospitals.[60]

Another new state of affairs brought about by prepaid medical plans was the sudden surge in patient numbers. On the subject of medical education and recruitment, the Hall Commission, appointed in 1961 to inquire into the existing facilities and the future need

for health services in Canada, stated in its report:

> the commission's chief concern with medical education is the capacity of the medical schools in Canada to graduate a sufficient supply of well qualified physicians to meet the expanding demands resulting from an increasing population and a doubling of the number of persons who will have their health services prepaid through extension of prepayment to the entire population as well as to meet Canada's increasing international obligations to train professional health personnel for developing nations.[61]

Noting that in 1959 in Manitoba, sixty-three per cent of new doctor registrants had been trained outside the country, the Hall Commission urged the faculty to carefully check out applications in order to reduce wastage due to failure or attrition.[62]

Since the late forties when research emerged in the Manitoba institution, it had expanded favorably, leading to a danger of a different sort. Research had been vigorously promoted and had even become prestigious. A school's or department's success was often measured by the number and magnitude of research grants it could attract. Instructors apparently found the research alternative attractive. Thus, Dr. D. H. T. Thorlakson at one point urged the university to

> . . . ensure that the teacher remain with the student, and that he does not become cloistered in a research laboratory. . . . some full time teachers find it inconvenient or tedious to leave their laboratories in order to teach and others have little interest in clinical practice.[63]

Thus, while the faculty earlier had felt pressure to catch up in its research efforts, it was now being cautioned to keep the research component in its proper place.

Another stirring of the times was the marked change in the way patients viewed the doctor. Prior to 1950, the general population was sufficiently uninformed of or unconcerned with health and

medical practice that they held the physician in unquestioning esteem. That was past. The new generation of patient had to be convinced and won by the doctor. This patient was personally interested in his condition, and not as easily impressed. He wanted to know why certain procedures or drugs were being prescribed. "Previously all that the patient required of the doctor was an authoritarian statement, but now, because of his informed interest, the patient demands a satisfactory explanation".64

This placed new demands on the profession and meant that the student's medical education had to prepare him to not only be able to diagnose the patient's medical problem, but further to be able to relate to that person, and communicate its meaning to the patient in such a way as to inspire confidence. If he could not, the cure would be slow or even ineffective. The new doctor had to be able to enlist the patient in working toward his own recovery. This required a type of training which in a way reverted to an earlier day when the student's training was not exclusively scientific or professional, but contained a healthy dose of liberal arts.

The rapid expansion of medical and scientific knowledge which had earlier encouraged specialization, had become by the sixties, a stimulus for almost the opposite. While many graduates continued to specialize, it was precisely the narrowness of their various specialties, and the proliferation of paramedical and technical vocations in medicine, that created a strong demand for the general practitioner. Patient treatment, particularly in larger hospitals, had become an affair that no one individual could perform. Instead, it was rapidly becoming a team approach requiring the

co-operation of various specialists, paramedics and technicians. There was an urgent need to have a "G. P." who would not only make the initial diagnosis, but later would also co-ordinate and prescribe the programme of the other team members as it concerned that patient. The team approach had become a necessity as a result of the knowledge explosion and the high cost of training a doctor. At the same time a physician trained in a narrow specialty would be unsuited to such a co-ordinating function. In fact, an initial diagnosis by a specialist, could be dangerous in view of his unfamiliarity with the larger medical field.

> The old general practitioner became the new principal physician, co-ordinating the activities of several specialists and paramedical workers, maintaining personal contact with the patient, acting as administrator and communications nucleus.[65]

The most pressing issue of the sixties was an old concern grown to monstrous proportions. A most poignant criticism of the existing style of medical education came in a British publication, A New Look at Medical Education. The stunning parallel of their situation to that at the University of Manitoba Medical Faculty should not be surprising. The Manitoba Medical College grew out of the philosophical hotbed of the Edinburgh and London Schools. Both the British and the Manitoba schools had reached a critical juncture in medical education that would require more than "band-aid remedies".

> We have inherited a rigid authoritarian system of medical education, with teaching attitudes more appropriate to the Victorian era. The system has been expanded with facts until it can take no more, it has been modified and lengthened repeatedly, and it has met the demand of every specialty for more teaching time while few are willing to accept any reduction. The number of teaching hours allocated to a department or a specialty has been used as a criterion of its prestige and importance. In the face of these warring factions the comprehensive plan for a balanced curriculum has been lost. As the whole system is obsolete it requires a long-needed, radical overhaul.[66]

Other comments elucidate this opinion;

> Because each pre-clinical department presses for its subject to be treated as a separate discipline, the student is left to find out for himself the relevance of each subject to medicine.[67]

It is doubtful that the Manitoba situation was as drastic as put by Anderson and Roberts in describing the British scene. But in many ways it was hardly foreign at all, and it certainly was not a problem of recent vintage. The MacFarlane Commission report of 1965, referring to medical curricula of the past two decades entered this comment:

> The total amount of information placed before the medical student of today is truly appalling. New facts and theories are presented for his mental digestion hour after hour, day after day, and some of them with very little sauce.[68]

It was in an attempt to solve this overwhelming problem and also to respond to the many other concerns just cited that the Faculty of Medicine appointed a committee to study a major revision of curricula in the autumn of 1964.

After an interim report, the curriculum revision committee submitted its final report in April, 1968. With few modifications, it was adopted. The philosophy underlying the new curriculum was rather well outlined. Basically, the graduate of the new course was to be a person who had mastered both the "scientific method", --the tool by which to maintain hold of the medical aspect of his work--and the ability to deal with people in such a way that the whole person would be treated rather than just a narrow medical problem.

> To teach medicine as a coherent meaningful whole rather than a series of unrelated disciplines and to give the student from the beginning of his medical education a feeling for the central purpose in medicine, to deal helpfully with patients[69] was one expression of that goal. The 1972-73 University calendar stated that: "The student is expected to acquire and develop the

> ability to think clearly about medical problems and must, for the rest of his professional life, apply this capacity to whatever branch of medicine he enters."[70]

Achieving these goals required major changes in the curriculum, both in its content and its organization. In order to produce a graduate who could think independently, make creative decisions on novel problems, and relate well to the patient, the new curriculum called for a fourth year almost entirely devoted to clinical work under full time clinical instructors. It also required that during the last twenty-four weeks of the third year a student would pursue a major and minor elective, doing independent research leading to a thesis. Opening up these large blocks of time during the last two years, and at the same time driving the student far enough into the basic sciences so that he had a basis, both for meaningful clinical work and for planning his elective and research programmes, required some drastic streamlining in the first two years. A number of changes were introduced.

The course material would no longer be presented in an isolated fashion within each department. Instead the scientific and clinical course material would be taught by systems, a "system" being one area of medical concern, as for example, respiration. Each science and clinical department connected with a system would contribute its specialized viewpoint in order to form a balanced, integrated body of knowledge on that topic. The systems were sequenced in such a way that one logically prepared for and led into the next.

> At each stage the student is provided with the "core" material, which lies in the mainstream of modern medical science and which is necessary for the understanding of the next stage in the progression to graduation.[71]

A further comment from the same source outlines the application sought for,

> Throughout the course of study, in the laboratory, in the clinic, or in examinations, the student is encouraged to synthesize and use the relevant information, regardless of the discipline in which it originates, in order to solve problems and to view the patient as an integral part of his society, his family, and his work situation.[72]

The new style placed terrific strain on the faculty. It cut sharply into departmental prestige, required a great deal of co-ordination in order to avoid overlap, to apply all disciplines to a particular system and to show clearly how each science applied. "The instructors, whatever their departmental affiliation, are dedicated to ensuring that their individual contribution to the teaching program is relevant to the student's overall development as a physician."[73] This was quite a change from the days when the basic science professors presented their specialties in an isolated, almost competitive fashion, expecting that the student would somehow relate this to the medical cases before him in his clinical work. In addition the material was to come across in such a way that the student would develop a spirit of scholarship, inculcating in him the desire to pursue knowledge and continue to learn after graduation. The increased demands on the basic science instructors were, however, not as great as on the clinical supervisors. The science instructors at least felt a reduction of load in that the time allotted them was reduced.

The clinical instructors were receiving students who had not mastered as much specific knowledge as had earlier third year students. They too were to augment the integrative approach and continue to emphasize scientific principles in their clinical teaching.

They had students under their supervision for the entire fourth year. In addition, they were often supervising thesis projects and participating in the ongoing evaluation now being made of every student.

The new curriculum, an integrated science--clinical programme for the first two and a half years followed by one and a half years of clinical and research work, sent ripples throughout the system. First, pre-medical requirements were revised to include senior matriculation, plus ten courses in the faculties of Arts or Science including biology, chemistry, mathematics, and a social or behavioral science. Students were also advised to plan their pre-medical courses in such a way that, should they not be accepted into medical school, they could go on to complete another degree programme.

The first three years of the medical curriculum were lengthened from thirty-two to thirty-six weeks and the fourth year was increased to forty-eight weeks. The first eighty-four weeks, phase I, composed the "Core Curriculum"--the sciences, followed by phase II, the "Clinical Core and Correlative Program" which was divided into eight blocks of six weeks each for systems teaching. After the first year, students also had to attend "conjoint" sessions each Saturday morning. These usually consisted of special lectures or demonstrations. Finally, phase III, the last twenty-four weeks of the third year were devoted to the two electives, one leading to a thesis. All of the fourth year was left for the "Clinical Clerkship".

Examinations were to be conducted after the first year and after the completion of phase I and phase II, with sixty per cent

of course marks based on ongoing evaluation. After year III students would write a candidacy examination--comprehensive and interdisciplinary, involving all departments and covering all courses including those which were not examined separately. The electives would be evaluated on the basis of reports from supervisors and the submitted thesis. After year IV students would sit for their final examinations set by the Medical Council of Canada and designed to test their clinical training. Internships which followed were under the supervision of the College of Physicians and Surgeons. A one year internship led to a Doctor of Medicine degree. Since the programme was introduced, roughly seventy-five per cent of graduates have pursued an additional four years of postgraduate work in a specialty. The St. Boniface hospital also offers a two year programme leading to a "Family Practice" specialty.

The new curriculum, because of its emphasis on small groups, greatly improved student-teacher relationships in the opinion of Dr. J. Wilt.[74] Admitting that actual knowledge is light in some areas such as anatomy and pathology, he feels that students get an overall superior training that will lead them into a style of practice in which they will keep abreast of new developments. Dr. Jim Morrison, registrar for the College of Physicians and Surgeons, also expresses satisfaction that the quality of graduates is high, and that the course is a stiff challenge.[75] He also comments that one cannot compare the new curriculum with the former one in that, even if it was adequate to its time, society and medicine keep changing so much that reviews and revisions are not a matter of choice but rather the only appropriate response.

Dr. Wilt's confidence that the 1968 curriculum was a significant move in the right direction is not shared by all. Dr. Francis Matthewson, long time member of the faculty, feels that the new curriculum is not as personal nor as effective.[76] While he sees weakness in earlier medical training (his own) with its over-emphasis on memory work in anatomy, he points to two shortcomings in the present curriculum: first, there is insufficient contact between clinician, student and patient. Secondly, he is disturbed by the fact that on a recent visit to a major training institute in Boston, he discovered that they had discarded the type of curriculum currently in use in Manitoba and had returned to a curriculum which once more clearly emphasized the sciences prior to clinical training.

This last concern is echoed by Dr. James Rennie of the Manitoba Clinic and formerly a part time clinical instructor at the faculty.[77] He outlines that the older curricula were based on the Scottish anatomical medical schools. While admitting that first year anatomy courses during his training were almost inhumanly heavy (he graduated in 1934), he notes that now physicians receive less anatomical instruction than physiotherapists. "We have substituted in the place of too much anatomy, a heavy American emphasis on medicine and physiology."[78] Dr. Rennie feels that both are valid and powerful schools of medicine, but again points out that the system that has been adopted here, has been discarded in numerous American colleges which are returning to a more subject-oriented, didactic programme. Another interesting observation made by Dr. Rennie was that many fluctuations in programme are not so much the product of advance planning as they are caused by changes in

personnel. A Dr. Doupe, because of his personal skills in that direction, greatly popularized the seminar. An extremely effective lecturer in the school, however, can rekindle people's faith in a more didactic style.

Furthermore, Dr. Rennie points out that there are few short cuts for overcoming the "knowledge explosion". He reminds one that the efficiency sought for in systems teaching has not always materialized. While earlier clinical experience is good, he notes that the less intensive scientific background possessed by the student at that point simply means that he cannot assume as responsible a role in his clinical programme. The result is that he is almost forced to study further before practising.

One must conclude that the nature of medical education is subject to a whole battery of gentle influences and powerful pressures. Being a country of later development and smaller number of people, we cannot for a moment avoid outside influences --earlier British, recently more American. The evolution of Manitoba's medical education programmes, also, can hardly be characterized as unique. While the audacious beginnings of the 1880's, the aggressive expansion of the 1920's, and the progressive developments of the 1950's gave the school a temporary distinction, its overall frame of reference was world wide. Medicine in the century from 1870 to 1970 moved from the practical to the scientific to an emphasis on research and specialization. Manitoba shared this timetable with other Canadian and American institutions. Aside from developments within medicine itself, financial constraints, personnel turnover, changing public attitudes to health and health care,

changing government positions on education and health, the socialization of all institutions, war and famine, peace and prosperity all played their part in determining the scope and direction of medical education.

Regretably, because of the length of training, costs, and the size of such educational institutions, even when attitudes are open to new ideas, change and adaptation too often are effected just when conditions demanding those adjustments are already dissipating. Such is the nature of a dynamic society.

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CHAPTER IV

THE EDUCATION OF DENTISTS AND DENTAL HYGIENISTS 1870-1970

Dentistry, like so many other professions in Canada, developed through an eclectic process. Like medicine, some attitudes and practices could easily be traced to British roots. Dentistry, however, because of its later development, has been much more greatly subject to American influence. The Canadian aptitude for importing American practices did not become pronounced until the twentieth century. Because medicine by then was much more established than dentistry in this country, the eclectic mix in dentistry has a stronger American component than in medicine and other more long established professions.

Historically, the earliest dental operations were performed by barbers who were also known to have performed minor surgery of other types. Understandably such attention would only be sought by a client with severe pain or no other hope. Dentistry did not emerge as a separate vocation until about four hundred years ago; the first textbook in the field was written in 1530.[1] In Britain, dental hospitals for the poor were established some time before dental training institutes came into being. Because these provided a place in which aspiring dentists could gain experience and semi-formalized instruction from senior practitioners, the establishment of a formal dental school in England came eighteen years

later than in the United States where the first dental school was established in 1840 in Baltimore.

The modern profession of dentistry has developed in the last one hundred and fifty years. Although Britain's first dental school was opened in 1858, no dental act requiring licensing came in until 1878, just a few years before Manitoba's Act. The British tradition emphasized a basic medical training, their dental schools often being connected to a University. In the American states the first dental society meeting was held in the year 1834, followed by the establishment of the first school six years later. The American schools of dentistry paralleled their earlier medical colleges; they were often private schools, run on a profit basis and emphasizing the practical, technical or operational type of dentistry.

Prior to the establishment of dental schools or dental hospitals, the only way to obtain training was for a "student" to enter an indentureship by which he would commit his assistance and service to a senior practitioner in return for the opportunity to learn the trade. This also applied in Canada. As with any apprentice programme, it was only as good as the individuals cared to make it. Donald Gullett in his review of Canadian dentistry states that

> . . . indentureship training was subject to many abuses and served to multiply the existing problems in many respects. The better practitioners took great care both in selecting a student and training him, but other dentists, greater in number, simply used indentured students to their own advantage.[2]

Thus it was a welcome move when, two years after Confederation, the first Canadian school was established in Toronto. It was a difficult beginning. Its sponsor, the Royal College of Dental Surgeons of Ontario, had only been organized the year before.

Apparently the group was unprepared for such a responsibility, or their move had been premature. A year later the school foundered. It was another five years before it reopened, this time under different control. The new organizational structure placed full financial and administrative responsibility on the faculty under the leadership of Dr. J. B. Wilmott.

Formal dental education in Canada began as a two year programme, then expanded to three and four years of professional training.[3] A certain period of apprenticeship continued to be a requirement. At first students had not always completed senior matriculation when they started their training.

Regulation of the dental profession followed soon after Confederation. The first dental act to be passed in the young country received approval in Ontario in 1868. The College established by this Act was to teach and license, requiring a minimum of five years' practice for licensing in the case of dentists already in business. A similar pattern repeated itself across the country on a somewhat varied time scale. First, a province would form a legal dental body composed of those who were, and had been, practising in the province for a certain length of time. Then followed the enforcement of specific entrance, training and indentureship requirements for new candidates seeking licenses. Finally, in some provinces, dental colleges were established.

Canadian dental schools developed as an amalgam between the American and British styles and, according to a 1915 article in the Dominion Dental Journal, also had a touch of the French influence.

> Out of a union of the three sources mentioned is rapidly developing a Canadian dentistry having distinct characteristics.

> In methods of technique and office management the Canadian dentist cannot be distinguished from his American confrere, but in education there is much of the British methods followed. The preceptor method obtaining in Great Britain prevailed longer in Canada than in the United States, and is in vogue still in some of the provinces where dental schools do not exist. There is more reliance in the early education of the dental student and the time spent in study than upon a quick acquirement of technical procedures. The French have influenced dental education in artistic and professional aspects.[4]

At first the school in Toronto, where many of Manitoba's early dentists trained, consisted of two winter terms of lectures. Candidates had to pass intermediate and final examinations with at least a year in between. All practical training was obtained by indenturing with a registered practitioner. By 1902 the course had been extended to four years and students spent the time in between the seven month winter lecture sessions with a preceptor. In 1910 the preceptor requirement was dropped for students in the first two years of the course.

Elsewhere in Canada dental colleges were established in Montreal in 1892, in Halifax in 1908 and in Edmonton in 1919. The Maritime Dental College in Halifax was the first school to become a University faculty when it became part of Dalhousie University in 1912.

Dentistry in Manitoba can be traced back to 1863 with the arrival of a Mr. W. H. Bown. Like his cohort, Dr. J. C. Schultz, Bown was better known for his other capers than for his professional contribution to the colony. The two were similarly enterprising, engaging in fur trading and gold mining ventures. Bown was also known to be an intense patriot who got himself temporarily jailed by Riel for his vigorous espousal of the Canadian cause in the Red River community. In his dental history Gullett conceded this man the

distinction of being "the first dentist in the area, and the first between southern Ontario and the Rocky Mountains."[5]

The first dentist to establish a regular practice in Manitoba was James L. Benson. He arrived in 1877. The records clearly document his qualifications. Benson

> as a young man . . . had gone west with the Wolseley expedition at the time of the Red River revellion in 1870, but had returned to his birth place of Peterborough, Ontario, and then indentured with Jacob Neelands at Lindsay. In the latter 1870's, he moved west and established practice at Winnipeg, where he remained until his death in 1926.[6]

Dr. Benson had been graduated from the dental college in Toronto and worked hard to establish the Manitoba Dental Association, of which he became the first President.

After 1883, the duration and quality of dental training required for practice in Manitoba was governed by the "Dental Act" passed that year. It required that all dentists practising in the province become licensed. Anyone who had been practising at least six months could become registered. The Act also made provision for the election of a board of directors who had the power to determine curriculum, examinations, length of articling and fees. It began by setting annual preliminary examinations which a candidate had to complete successfully before embarking on an indentureship. Thus, while Manitoba did not have its own dental college, it had control over the qualifications of all members of the Manitoba Dental Association. While students had to go out of the province to fulfill the formal lecture portion of their training requirements, they often received their practical training in Manitoba through indenturing within the province.

> In all provinces indentureship with a registered dentist was originally the only form of training. When dental education became available, attendance at the sessions of a school really became part of the indentureship term. The student still had to sign an indenture contract with a registered dentist for a stated term of years, and during those years he was required to attend sessions of the school in order to qualify for the licensure examination.[7]

As it became feasible, the standards of required training were raised either through bylaws or amendments to the Act. Elsey in his History of the Manitoba Dental Association comments that

> by Bylaws of 1885 the Indenture requirements were matriculation or second class teacher's certificate with Latin, evidence of good character, and a fee of ten dollars. The Indenture period was two and a half years. The registration fee was forty dollars and yearly membership dues two dollars.[8]

In 1893 the indentureship was increased to four years minus the time spent at a dental college.

Dentistry, from the outset, paid deference to medicine. The 1883 act specified that a physician or a surgeon could register as a dentist simply by passing exams in operative and mechanical dentistry. Since medical students received at least as thorough a background in such disciplines as chemistry, physiology, materia medica and therapeutics, as did dental students, the clause was logical enough.

Regulation of the profession required some effort at first. Apparently quite a number of practitioners were prosecuted for non-compliance with the act during the first twenty years after 1883.[9] This may have been a contributing factor to the slow expansion in numbers of dentists. Ten years after the act was passed, only sixteen members were registered--not an oversupply! By 1906 this had increased to forty-three.

The absence of a dental college in Manitoba until the late fifties certainly was not due to the fact that no one had thought of it earlier, or that the lack of one did not create difficulties. Co-ordinating Manitoba's requirements with the demands of out-of-province colleges, keeping abreast of standards being established elsewhere, and assuring an adequate supply of dentists were overall provincial concerns, not to mention the inconvenience and expense to the student of having to travel to more distant cities for his training. Thus it was that discussions about setting up a dental college in Manitoba began at an early date. A minute from an 1896 meeting of the dental association empowered the secretary "to interview the faculty of the Manitoba Medical College with the view to establishing a course of lectures in Dentistry."[10] This initial probe was followed up in a number of ways, so much so that one might speculate that with only a minor quirk of history, Manitoba could have had a dental college as early as 1915.

By 1910 discussion had progressed to the point where both the University of Manitoba and the dental association had appointed committees to discuss with each other the establishment of a dental department. In the same year the Manitoba Dental Association passed a motion to "ask the University to appoint a Faculty of Dentistry and that the Committee [from the dental association] be empowered to draft a skeleton curriculum to present to the University Committee."[11] In retrospect an editorial statement in a 1911 Dominion Dental Journal seems wildly optimistic.

> The dental profession of Manitoba are in close touch with the University Council, and each body has appointed a committee of conference, which will meet to discuss the establishment of a dental department. It is expected that such a department will

> be established as soon as the University is organized under government control.[12]

Others apparently also felt that this was more than a remote possibility. The provincial government in its 1916 amendments had included a change in the Dental Act by which the board of directors of the Manitoba Dental Association was given the authorization to establish a school of dentistry, either on its own or together with the University of Manitoba.[13] Dr. George Bush, president of the Manitoba Dental Association in 1919, felt that the University "should be urged to get a college [of dentistry] going by next fall."[14]

The immediate post war years seemed to hold the necessary golden opportunity to bring this dream to fruition. The medical college was in the midst of major expansion and upgrading, thanks to the Rockefeller grants and provincial support. The dislocation and hardships of the war were past; no one could look ahead to the world depression and second war that would follow. In the golden interlude between these catastrophic times, it is not surprising that Dean Prowse of the medical faculty should include this optimistic note:

> The University has recently been visited by representatives of the Carnegie Foundation. Among the suggestions of these visitors was that of the establishment of a school of dentistry by the University. That a dental school in Western Canada is due or overdue is a principle upon which the dental profession is practically unanimously agreed. That Winnipeg should be the home of such a school also admits of no dispute. The cost of the clinical plant would appear to be the greatest obstacle, but the problem is surely not an insoluble one.[15]

In view of the fact that finances are always a consideration, it almost seems to be a cruel turn of fate that the college was not established at this time. A blow for the Dental Association it must have been. The failure of the school to materialize in the twenties, followed by the depressing thirties and turbulent forties postponed

serious discussion of a dental college until the fifties. However, until 1955 it was merely a series of dashed hopes. In 1945 the Winnipeg Dental Association asked the Manitoba body to investigate the feasibility of establishing a dental school in Winnipeg. In 1946 the provincial organization appointed a committee of three to interview the Minister of Health, the University and the Dean of Medicine regarding the establishment of a dental college. Four years later Dr. Riley reported on an interview with the President of the University, stating that the lack of financial support from the Government dimmed any hopes for a dental school at the time.[16]

The eventual establishment of a dental college came in the late 1950's when improved economic conditions in the province made it financially possible; the pressing need for such an institute constituted the other side of the coin. The supply of dentists in the province had increased numerically, but not at a rapid enough rate to keep up with the expanding population. From a registered membership of forty-three in 1906 the numbers had grown steadily to 166 in 1919 and to 254 in 1928. The next decade saw little expansion with a gain of only nine members by 1938. During the war dental services became even more difficult to obtain in the province. By 1941 the membership stood at 264, but nineteen out of 244 practising members were in the armed services. By 1949 the membership had dropped by fifteen to 249.

By the mid fifties, the unsatisfactory level of dental services had reached critical proportions, forcing the issue into the political arena. While an opposition member's point of view is undoubtedly not without bias, the comments made by Mr. M. A. Gray

(C.C.F., Winnipeg North) in February, 1955, certainly paint a picture of serious proportions. As reported in the Winnipeg Free Press, Manitoba was losing dentists faster by death and retirement than were being replaced by new registrants.[17] As a result, while the ratio of dentists to population had been 1:2957 in 1952, it had worsened to 1:3300 by 1955. Furthermore, the Manitoba ratio compared most unfavorably to the Canadian average of one dentist for every 2875 people. The prospects for immediate improvement were not evident. Only seven new dentists would be taking up practice in the next year. Gray therefore argued that because most Manitobans who trained elsewhere did not return to practise in Manitoba, it was useless simply to increase the bursaries to students studying outside the province as had been attempted in earlier years. Rather, he suggested that because the medical college was expanding at this time, the costs of establishing a dental college at the same time would constitute a lower expenditure than if it were done at a different time.

The dental college issue would not die this time. One year later the Free Press reported further debate in the legislature. This time Gurnay Evans (Progressive Conservative, Winnipeg South) confirmed earlier gloomy reports. He reported a dentist to population ratio of 1:3800. He further contended that "a dental college here would enable research and post graduate work to be carried on by young practising dentists."[18] Another member, Mr. Hillhouse, reported that the Manitoba Dental Association was strongly in favor of a college to the point where it had formed a pool of one hundred trained dentists, willing to instruct at no cost to the province. While this had the ring of a generous offer, one might have questioned

their ability to implement such a proposal without contributing to a serious further deterioration in the availability of dental services.

As a result, the government, at last, in February of 1956, ordered an investigation, and appointed Dr. K. J. Paynter of the University of Toronto to prepare a report concerning the establishment of a school of dentistry in Manitoba. Dr. Paynter's report, submitted in August of the same year not only confirmed some earlier indicated needs for a dental college, but also added others.[19] He pointed out that the ratio of dentists to population had worsened in many parts of Canada due to the fact that no new training facilities had been added since 1926. However, Manitoba's situation had deteriorated more than most other provinces with only eleven dentists having been added in the seventeen years from 1938 to 1955. By 1956 Manitoba's share of students registered in Canadian dental colleges had dropped to three per cent. To appreciate fully the shortage of dentists one also had to note that the distribution of practitioners was highly uneven. While the ratio was one dentist to 1964 people in urban areas, rural areas had only one dentist for every 9432 people. Small wonder that Dr. Paynter concluded that the need for a college in the province was very real.

The kind of dental college that was recommended and finally established in 1959 was not so much a unique creation as it was an attempt to put together the best philosophy and technique from existing institutions in such a way that the final package would also suit the needs and financial capabilities of the province. I. MacLaren Thompson's remarks in a 1958 publication illustrate just one facet

of this. He made the point that, because the dental college was starting seventy-five years later than the medical college, it was immediately government supported and associated with the University, unlike the medical college or earlier dental schools which started as independent entities operated by the physicians, surgeons, or dentists concerned.

Dr. Paynter, in his report, recommended five basic objectives for the new faculty: that it prepare individuals for the practice of dentistry as it currently existed, including basic science and clinical training; that it direct the student to the whole field of preventive dentistry and public health; that it prepare the student to take his place as a community leader and stimulate him to continue his professional development; that the school also train ancillary personnel whose work would be co-ordinated with that of the dentist; and that the school carry on research.[20]

Under "proposed Organization of a Dental School in Manitoba", Dr. Paynter recommended that the school operate in close conjunction with the Faculty of Medicine. To facilitate this he recommended the site just west of the medical school on Bannatyne Avenue. He suggested that they aim for an undergraduate class of thirty students; that the library and the teaching of the biological sciences be co-ordinated with the medical college.[21]

The recommended admission requirements called for junior matriculation plus two years in the faculty of arts or science.

After the submission of Dr. Paynter's report, events followed one upon another with almost strange haste after a half century's postponement. In June of 1957 Dr. J. W. Neilson was appointed dean

of the newly created faculty. Funds for the erection of a building next to the medical college, as well as for its operation, were allocated by the provincial government in the same year. Plans for the new structure were ready by fall with completion of the same projected for September, 1959. The aim was to start classes as soon as possible.

Immediately after his appointment, Dr. Neilson proceeded to visit many other dental schools with a view to plan the best possible facility. Sod turning for the new building took place in July, 1958. Because of the pressing need for dental graduates, the University accepted a first class in September of 1958, with classroom and laboratory space provided in the medical college. These arrangements were to quite an extent the doing of Dr. Doupe, head of the physiology department, who also arranged office space for the faculty. The completed building, formally opened in March, 1960, had facilities adequate for the time. It was a two storey building with sixty chairs. There were separate clinics for oral surgery, oral diagnosis, and children's dentistry. One entire floor was reserved for research.

The opening and first decade of the college's operation were not without problems. The first two years were particularly difficult. To begin with the college began in temporary, cramped quarters. Then also, because of the general shortage of dentists in the province and the non-competitive salaries being offered by the University, it was difficult to assemble a high calibre staff. Dr. Neilson was actually successful in attracting a fairly well qualified staff in the short time available. Nevertheless, it would take some time for the faculty members to become a working unit.

More serious were the difficulties encountered in attracting qualified students. This was a Canada-wide problem in the fifties. Many highly talented students were opting for higher paying vocations in commerce and industry. Because of the hurried start, only twenty-one students were admitted to the undergraduate programme in the fall of 1958. Perhaps this was just as well since they were working in temporary, borrowed space. The new building was only ready for partial occupancy in September of 1959. The difficulty of attracting talented students continued the next year. Dean Neilson in his year end report for 1959-60 cites, as an example, the following statistics: of ninety-two applicants, only thirty-eight were accepted. Of those, only twenty-four actually registered. One of the rejected applicants had an overall average of forty-four per cent and twenty-one failures in his pre dental years. Needless to say, with such a limited selection of applicants, the failure rate in first year dentistry was very high. Of the twenty-one students who registered for the first class, fifteen were graduated four years later. The first years thus saw the school operating below capacity, in spite of the strong need for more dentists in the province--all because of a lack of qualified undergraduate applicants.

A more deep seated problem lay with the curriculum itself. By patterning its course of studies after older traditional colleges, the young faculty had inherited old pitfalls which it hardly needed in these early years. One of these difficulties paralleled that of the faculty of medicine--the curriculum was cluttered with immense detail. This had already been pointed out by Ellis as early as 1949. Writing in the Journal of the Canadian Dental Association he commented

that "the curriculum in most dental schools is now overcrowded. It is unthinkable to attempt to superimpose new requirements on top of the curriculum today".[22] By 1965 the same man whose report eight years earlier had been instrumental in the establishment of the faculty was asserting that "dental school curricula on the continent have remained relatively unchanged for thirty years",[23] and further that, "the schools are caught between a curriculum already overcrowded with assignments and a reluctance to lengthen the dental course. Major changes are required".[24]

Of more consequence was a curricular imbalance more peculiar to dentistry. This was the tendency to bog down in mechanical operations training. Dr. Paynter had referred to this already in his 1956 report:

> "Medical and dental teaching consequently must be directed towards education rather than training . . . It is true that in dentistry, perhaps more than in any other professional field, 'training' in certain mechanical aspects of the subject is necessary, but such training should not be allowed to overshadow the other and more fundamental purpose of the school".[25]

He reiterated this theme in his 1965 report to the Royal Commission on Health Services;

> There is constant conflict between two purposes in dental education--to develop the mind and vision of students and to gain technical skill and clinical knowledge.[26]

Further, he stated,

> The dental curriculum seldom provides sufficient academic background for the dental graduate seeking advanced training not to be handicapped by an inadequate basic science experience.[27]

Dean Neilson in a 1965 article in the Canadian Journal hinted at the same problem in a rather modest way--the traditional curriculum at the faculty is "sometimes criticized for being too 'operation

centered' and not enough 'patient centered'."[28] The general concurrence that change was needed led to the appointment of a curriculum review committee in 1964, six years after the school opened.

Another distressing situation, not so much a fault of the faculty as of the Manitoba dental profession was the complete failure of continuing education. Local practitioners all too often failed to patronize the "refresher courses" being offered. Paynter, somewhat critical of his own professional group, had let it be heard that dentists were not great ones for post graduate education. He, in fact, felt that they had ignored the sociological changes of the previous thirty years and "continued to do their old thing".[29] Dean Neilson in the same year (1965) mentioned the mixed feeling with which the faculty approached some of its special seminars, saying that attendance at their "continuing education" sessions had been embarrassingly poor on the part of the profession even when highly qualified people were brought in.

Dr. Paynter in his 1965 report summarized some of his observations on dental education by identifying three reasons why curricular changes were needed in most Canadian dental schools.[30] Firstly, the dental curriculum was too overcrowded with assignments; there was too little time for thought and independent research. Secondly, dental education was doing little to prepare candidates for societal trends such as the use of dental hygienists and government denticare or public health programmes. He found it strangely inappropriate that "hygienists get more instruction in sociology than do dental students".[31] Thirdly, the undergraduate programme did not cover enough specialty areas, forcing too great a proportion of

graduates to specialize before they could practise competently. To provide correctives to these situations as well as maintain what was necessary in the current curriculum, Paynter concluded that

> either the university course must be extended or the schools must be relieved of their responsibility for providing the facilities, opportunities and supervision of the repetitive clinical performance required for licensure.[32]

Ultimately Paynter argued against a course extension, recommending rather that the government establish dental clinics or hospitals in which dental students could intern for a year. This would not only leave the university course less encumbered in its establishing of the scientific basis for dental practice, but also, at the same time, give the dental student a more varied and practical experience than he was receiving under the existing system. In Manitoba this was adopted in the seventies.

Dr. Neilson's annual reports indicate that the problem of unqualified applicants lessened, 1964 being the first year in which there were more well-qualified applicants than they could accept. The 1968-69 school year saw both the completion of the third floor addition as well as the submission of the curriculum committee report. By the '69-'70 school year serious discussions were being held about changing the curriculum to a longer three year Core Curriculum plus a fourth year of electives and total patient care work. This same school year, only ten years after the school had been formally opened, evoked remarks from the dean that there was "obsolescence evident in the faculty's clinical space and equipment, students training with dental chairs and units that are no longer being produced."[33]

In medicine it had in most instances been clearly established, in practice as well as by law, that related and auxiliary professions came under the direct supervision of the doctors of medicine. The ongoing struggle between medical doctors and chiropractors was the glaring exception. The same issue confronted dentistry. While the dental profession itself had been regulated by provincial statute from 1883 on, and after a time all dentists complied with such regulations, other groups challenged the system.

Most emphatic in this challenge were the denturists or dental technicians, who engaged in the production of dental plates. By the 1950's this group was capturing a significant proportion of the business to be had in this field. This group's arrival on the scene was not surprising. The abolition of the indentureship programmes during the 1920's had left too much routine work to highly qualified and busy dentists of whom there was a shortage in any case. The even greater shortage of dental services during and immediately after the war had provided the opening for such a group. There was clearly a demand for their services.

Dentists argued that these developments constituted a threat to public dental health in that these people did not have the expertise to diagnose whether plates or bridges were needed, or whether the problem lay with a more basic cause which should be treated first. The denturists, on the other hand, argued that they were doing an excellent job of a particular specialty at a much more reasonable cost than the dentists. To a considerable extent they had public support in their contention that the dental profession

was simply protecting its own self-interest, not the public, in arguing against the services of denturists.

The attempts of the "Association of Dental Technicians in Manitoba" to have their profession recognized by legal statute brought the controversy into the legislature, but even there a clear resolution was not forthcoming. The opposition parties, particularly the C.C.F., argued that denturists should be licensed, as theirs was a legitimate service and there was no need to provide more artificial protection for the dentists. All came to nothing. A bill introduced in the 1959 session allowing "dentists to control clinical technicians who would manufacture and repair dentures, artificial teeth, bridges and fixtures"[34] was deferred to the next session because of the protests of the opposition and the "Association of Dental Technicians". Dr. Paynter, in his 1957 report, also recognized this issue. He too felt that these groups were not highly trained enough to operate independently, and strongly recommended that the dental college train denturists to work under the supervision of dentists "so that the pressure to legalize" on their part did not become so great.[35]

Already in 1955, T. P. Hillhouse (Liberal, St. Andrews) had contended that the province should assure dentists protection from such "unqualified people" prior to considering the establishment of a dental college at great public expense. The denturists were eventually successful in their efforts and became legally recognized in 1970 as the "Association of Dental Mechanics". Denturists performing similar tasks in laboratories under the supervision of dentists

remained a part of the earlier organization, the "Association of Dental Technicians".

A 1948 amendment to the Dental Act had made provision for a slightly different ancillary group known as dental hygienists who could engage in the services of "cleaning and polishing teeth and the giving of instructions and demonstrations in oral hygiene and mouth care".[36] John Christianson (Progressive Conservative, Portage la Prairie) introduced a bill in 1960 essentially calling for implementation of that provision and requiring that they have two years training at the dental college and be under the direct supervision of the dentists who would diagnose and prescribe. He argued that the addition of this group would free dentists of some routine tasks, and thus, in view of the shortage of dentists in Manitoba, improve the overall delivery of dental care. A. R. Paulley (C.C.F. House Leader) argued that it gave too much power to the dental profession. The bill went to committee for further study.

Actually, Paynter, in his 1957 report, had recommended that if a dental college were established, such a programme should be launched immediately. The first such course in dental hygiene had been introduced in Toronto in 1951. In Manitoba a two year programme of studies was authorized to begin in the fall of 1963. Twelve students enrolled for the first class. Thirty-one were registered in the 1967-68 school year.

The history of dental education in Manitoba is not a story of smooth evolution, but rather one of a retarded beginning, followed by a jerky start up. Only in the seventies is dental education beginning to take on a smoother development.

Unlike medicine, formal dental education did not get started in the daring and boisterous late 1800's in Winnipeg. The next juncture at which one might have expected a dental college was in the golden twenties. The dentists, however, did not hazard it on their own as had the doctors in the 1880's. Instead they hoped to persuade the university and the provincial government to move in that direction, but public institutions are slower to respond and dental care seemingly was not a high enough priority in the public's eyes at the time. Nothing materialized. The two decades that followed were ones of hardship and so the local training of dentists waited until the fifties--thus, the retarded beginnings.

The jerky start-up began with the haste surrounding the initial establishment of the faculty. In the mid-fifties the politicians perceived a crisis in dental services. Perhaps it was a realistic fear. The core of Manitoba dentists up to that time had been made up of a group who had taken their training at the University of Toronto after World War I and had migrated to Winnipeg en masse in the years from 1922-1924. Few new additions arrived after that and by the 1950's these dentists were looking to retirement.

The hurried start up was not disorganized. Careful planning went into all aspects including facilities and curriculum. However, this planning was based on existing programmes in existing institutions. The school, rather than capitalizing on its opportunity to become a vanguard in its field, imported the same limitations of tradition and design with which older institutions have always had to contend.

Compounding the problem above was the fact that the late fifties and early sixties saw a revolution in dental technology and equipment, the most outstanding being the high speed drill. By the time the school was built it was, therefore, the proud possessor of shiny, newly delivered equipment which would be obsolete in a few short years. The school, as a result, inherited the problems of "age" long before it gained experience. Only in the late sixties and seventies has the faculty wrestled its way out from under these growing pains.

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CHAPTER V

THE EDUCATION OF REGISTERED NURSES

Observation of a team of doctors and nurses functioning in an operating room or other medical setting easily leads to the impression that the two professions have always worked together. Such is not the case. Nursing as an identifiable role is only a century or two old while that of the physician goes back for hundreds of years. The physician is the person who historically has symbolized the whole field of healing. The nursing profession, while in the same field, has its history much more intimately entwined in the evolution of hospitals than in any formal association with the doctors.

Diseased and afflicted people have required and have received nursing care long before the time of the "nurse". Originally, however, nursing simply meant that someone else in the home would care for the ill to the extent that they were disabled or uncomfortable or needing attention. The more fortunate would also receive visits from a physician and thus nursing care sometimes included some procedure prescribed by the doctor.

> During the Middle Ages, nursing needs were met by a group of uneducated or untrained women, by members of the family, or by religious or military groups whose prime function was not nursing.[1]

Thus, a nurse was not a member of a profession, but rather a person functioning in that capacity for a shorter or longer period of time, but usually on a temporary basis.

The nursing profession as we know it originated in the industrial revolution. When the invention of larger machines drew industry from the cottages into the factory, the population became concentrated in these centres of manufacturing. In these primitive factories or in the crowded tenements in which these workers lived, disease was a much greater threat than in a more isolated rural setting. The necessity of segregating the sick spurred the trend to institutionalize care of the sick - hence the establishment of many hospitals. This created a new dilemma. Ongoing patient care never had been a function of the physician; each family could not care for its own in this setting. Who would care for the sick? The "nurse", thus, become a new, albeit lowly, specialist in health care. Working conditions in these institutions were dismal--hospitals were poorly lit, unsanitary and crude. Any self respecting woman would not be seen in such a place. Nurses, therefore, often were the very poor girls with no training of any sort, and thus no other options for employment.

It is not surprising that the parents of Florence Nightingale, recognizing their daughter's sustained interest in nursing, did everything they could to discourage her inclination. Nursing was, indeed, a vocation of low reputation. Despite parental opposition, Florence's position of means, high connections, and travel opportunities, combined with her patient perseverence, allowed her to collect, in a piecemeal way what was, for her day, a considerable store of well based knowledge about nursing. During the Crimean War, battling severe odds of crude conditions and lack of co-operation, she had the opportunity to demonstrate the value of good administration

and formalized instruction. She and the nurses she trained had a noteworthy impact on the overall military effort.

The significance of her work, however, lay not in those accomplishments for themselves, but rather in the new concept of nursing which she espoused and to which she lent prestige. In her history of the profession, Grace Deloughery makes this point:

> The concept of nursing as an economic, independent, and secular vocation, an art requiring intelligence and technical skill as well as devotion and moral purpose, was first developed by Florence Nightingale.[2]

Further, Florence Nightingale was one of the first in the Protestant, English-speaking world to insist that nursing was not merely an intuitive work, but one that required the best in training and organization.

From today's vantage point, including the Manitoba context, the Nightingale phenomenon also introduced characteristics to nursing that became "millstones around the neck". During the Crimean War, her nurses were strictly instructed not to extend nursing care except when requested by medical officers and to take orders regarding patients from doctors only. This military chain of command was firmly built into Miss Nightingale's later training schools in which mold most North American schools were cast. It has remained for a longer time and to a much greater extent than was necessary for good training. Furthermore, in an attempt to protect nurses from the slander and suggestions of immorality to which nurses of that time were subject, Nightingale insisted that "nurses should live in 'homes' fit to form their moral lives and discipline".[3] This tradition, also, has persisted in the form of nurses' residences which till very recently exercised a great deal of social control

over nurse trainees. Nursing and nurses' training were thus clearly cast into a submissive military stance, the 'homes' often resembling barracks more than homes.

> While providing for more education for nurses, she [Nightingale] failed to provide for additional independence of thought that the education produced. Her training emphasized the submissive role and did not make clear a new relationship with physicians, which would result from the improved educational preparation for nurses of which she was the proponent.[4]

These developments in far away England in the 1800's are most poignant in that many of the struggles for change in nursing education, even today, are an attempt to escape some of the trends set by Nightingale and her colleagues.

In North America, as in Europe, nursing was traditionally not a specialized occupation. The Grey Nuns did a great deal of nursing in Montreal and Quebec City. While their ongoing effort produced considerable expertise for its time, the commitment of the sisters was not to nursing in itself as much as to the overall work of the church. One of the earliest organizations on the continent more specifically devoted to the profession was the "Nurse Society of Philadelphia" founded in 1839. Concentrating primarily on in-home care, candidates received a short course in maternity nursing and had to assist in six cases before they could receive "certificates of approbation" and become eligible for private duty.[5]

Canada's pioneer school of nursing was begun in 1873 in the small General and Marine Hospital at St. Catharines, Ontario. The initial impetus was provided by a Dr. Theophilus Mack who liked what he had seen and heard about the Nightingale system of nursing schools. As early as 1864 he had expressed interest in attaching such a school to the hospital, and in 1873 he sent a Miss Money to study the new

system in England.[6] She returned later the same year to establish the school. This was followed shortly by a school at the Toronto General Hospital (1881) and the first one in western Canada at the Winnipeg General Hospital (1887).[7]

The following description of early nurses' training programmes at the Winnipeg General--Manitoba's largest school, and at the Portage la Prairie General--a small training school which has since been closed, will serve to illustrate not only what training was like, but also to explain why such schools rapidly proliferated across the province.

While the training school at the Winnipeg General officially opened on November 1, 1887, the hospital had already begun teaching in 1884. Applicants had to be seventeen to thirty-four years of age. Initially they were accepted only as probationers. During the first month the medical superintendent and matron would observe to satisfy themselves concerning the fitness of the applicant. "Fitness" referred to the girl's physical stamina--an important asset in view of the strenuous manual work required of the nurses of that day. Examinations in reading, writing, simple arithmetic and sewing were also administered during the probationary period. If, after one month, they were satisfied that the applicant was suited to nursing, the pupil nurse would be required to sign a pledge, agreeing to stay two years and obey the rules of the School and the Hospital. In return, hospital policy stated that

> During the course of training, regular lectures will be delivered and practical instruction given in the wards and at the bedside. Practical instruction in cooking for the sick will also be given.[8]

The "practical instruction" and "regular lectures" were a far cry from what such a phrase would imply today. There was no hint of preliminary instructions or a period of observation; nurses in training began work on the ward the very first day. Mrs. Roberta McDonald, who began her training in 1924 at Portage la Prairie lends weight to that statement.[9] She relates how on the first day she reported for work at 7:00 A.M. and was told to accompany the head nurse to a bedside where she was shown how to bathe a patient who had just had an appendectomy. After one such demonstration she was handed the basin and towel and instructed to do likewise for the next patient, and the next, and the next. She spent the entire morning at that task with the head nurse stopping in only occasionally to check on how she was making out--a quick way to check out the candidate's physical fitness, not to mention her psychological make up.

Back in 1886 Mary Ellen Birtles wrote about her "learning nursing" at the Winnipeg General:

> Our training was altogether practical, sometimes we got a little clinical instruction from the doctor on his rounds--Dr. Eberts was particularly good in that respect. But we were fortunate in finding some books in a second hand bookstore, on anatomy and physiology; from these we studied, together with a book on nursing by Florence Nightingale.[10]

The first official class at the Winnipeg General began in 1887 with six student nurses. They received lectures once or twice a week. Lectures were given in the sitting room of the nurses' residence. Nurses in training were also sent out to private homes to care for the sick, with the result that they worked at rather routine tasks for weeks on end with no supervision or instruction. In the hospital

> Heavy demands of the wards made it impossible for all students to attend their weekly lecture and it was always arranged that some students would choose to take very full notes and read them to the assembled group of less fortunate. Lectures came under the category of privileges like 'hours off duty' to be granted 'hospital duties permitting'.[11]

The hours of work were long and holidays few and far between. Roberta McDonald relates that she worked twelve hours a day, did not receive one Christmas leave in the three years, and had only three weeks of holiday per year.

The early schools of nursing in Manitoba and for that matter in North America were neither "Nightingale" nor "schools" in the true sense of those terms. Florence Nightingale had had an overriding concern for the educational experiences of girls in training and relatively little concern about ensuring an immediate supply of workers in hospitals. She worked to elevate the status of the profession and its requirements of trainees. The hospitals, in the next 50 years, adopted from the Nightingale schools the military-like discipline and the demand for unquestioning allegiance. Unlike Florence Nightingale, they failed to temper those characteristics with the concern for proper education. They were also not "schools" in the sense that the hospitals unashamedly depended on nurses in training to do most of the work on the wards.

> From the outset the aims of the hospital were in conflict with the aims of the School of Nursing. The nature of the development of the schools and of the learning experiences they offered indicated that their purpose was to provide charitable service rather than education. Students were admitted to the school and immediately assigned to the wards as workers. Teaching was incidental.[12]

That this arrangement was taken for granted by the hospitals and the trainees becomes particularly clear from the Annual Reports of the Board of Directors of the Portage la Prairie General Hospital.[13]

The school of nursing had been established there in 1899. The report of 1901 points out that the establishment of the school had been a wise move because "Nurses in training are now in good demand for outside work when their services can be spared from the hospital; the revenue from this source amounted to $273.38 during the year".[14] The 1913 report comments that "The Lady Superintendent has been successful in securing six probationers to maintain the required number of nurses on staff".[15] Each report, even in the 1920's and 1930's concludes its summary of the activities of the school of nursing with the statement, "An ample number of probationers are available to keep the staff up to full strength".[16] In 1929 the Portage hospital nursing staff of twenty-one was made up of the Lady Superintendent, two head nurses, a night supervisor and seventeen pupil nurses. The Winnipeg General had a similar ratio in 1898 with three graduate nurses, twenty-eight pupils and three probationers making up the entire nursing staff.

Thus the struggles in nursing education, unlike dentistry, have not revolved around obtaining a Manitoba training centre. Communities around the province quickly saw that by establishing schools of nursing in local hospitals, they could afford to maintain the hospital. By 1910 schools existed in Brandon, Morden, Dauphin, St. Boniface, Portage la Prairie, Winnipeg General, and at the Children's Hospital.

What was the curricular material in these first schools? The 1897 curriculum of the Winnipeg General school offered a fairly complete selection of basic science as well as practical subjects.[17] The first year courses included the following: 1. the making of

beds and changing of linen while the patient was in bed.

2. management of the helpless patients; moving, changing, giving baths in bed, preventing bed sores and managing position.

3. administration of enemata and use of the catheter.

4. the preparation and application of fomentations, poultices and surgical dressings, the dressing of blisters, burns, sores and wounds.

5. the application of leaches and subsequent treatment.

6. Instruction in writing clinical reports; the state of the secretions, expectorations, pulse, temperature of the body; skin, appetite, intelligence, breathing, sleeping, condition of wounds, eruptions, effect of diet, stimulants and medicines and the management of convalescents. 7. Bandaging and making bandages. 8. Ventilation without chilling the patient.

While many of the comments thus far wreak of exploitation, one must take care to place these happenings in the context of the times. Economically, the options open to Manitobans at the time were to offer the type of training that was common or to have none at all. The education of women as economically independent persons was unheard of. Comments Roberta McDonald, "Of course we were exploited, but I didn't feel exploited at the time, and for me it was a way to get into a profession I had always wanted to be a part of".[18] Before the 1920's medicine was not practised on a very advanced scientific basis. Much of what a nurse was expected to do and know as a full fledged, practising professional was practical, bedside care with limited scientific procedure. Why would their training not reflect this?

While minimal instruction and lack of supervision are signs that education was a low priority in the early schools of nursing, one must not conclude that the learning was minimal. Trainees were immediately confronted with responsibility; some of these demands today may appear to have been beyond their ability, and might even appear to have endangered the patient; nevertheless, it was an effective way to learn. Nurses trained in Manitoba's smallest hospitals were welcomed and performed well in larger Canadian and American hospitals where they often found themselves taking employment. Two examples from the Portage school illustrate the fact that candidates learned to function independently and accept responsibility. In 1903 a Miss Garrioch was the only probationer able to write her final examination. She did well "and in consequence therof [the directors] were very pleased to appoint her head nurse of the institution . . . "[19] The next year, when the Lady Superintendent, Miss Fahrner became ill, Miss Garrioch not only worked as head nurse, but also served as the acting Lady Superintendent for long periods. A second example comes once more from the experiences of Mrs. McDonald. In the last six months of her three year programme, she acted as night supervisor, in charge of the entire hospital during those hours. While early nurses' training neglected to provide as thorough a theoretical base as might have been desirable, it was strong in developing a willingness to learn and accept responsibility, as well as in inculcating a strong sense of duty. Thus, what is deserving of criticism in nursing education is not its beginnings so much as the fact that the system was perpetuated forty years beyond its time.

Many reviews on nursing education written over the past half century understandably express an impatience that so little changed in the basic assumptions underlying training programmes. However, it was the step by step changes, adding up to major shifts over the decades that eventually forced a complete revision of these basics. What were some of the stepping stones to more fundamental changes?

In the Winnipeg General a step ahead came in 1892. Only fifteen new students enrolled. The high demand for their services in the hospital necessitated the suspension of private home service by student nurses. That service was never reinstituted. In 1894 the training period was lengthened from two to three years. At the end of the training period candidates had to successfully complete a series of oral and written examinations. In the same year Lady Superintendent Elizabeth Holland reported giving tri-weekly classes.[20] In 1900 a classroom, albeit somewhat makeshift, was set up in the basement of the hospital. A diet kitchen to facilitate practical instruction in dietetics was set up that year also. 1903 was the first year in which the programme specified the minimum hours of instruction time--a total of fifty-one hours in each of the three years. Between afternoon lectures from the Lady Superintendent and evening lectures from the medical staff, this minimum was exceeded, the total theoretical instruction for the three years amounting to about 120 hours plus bedside demonstrations and informal teaching done individually on the wards. In 1907 instruction in theory was for the first time assigned to a full time qualified teacher. New hospital policy in 1910 reversed the older order of learning practical

skills before being taught theory. Nurses in training were to receive instruction and demonstrations for the first six months before being assigned to ward duty.[21]

Lest one conclude that this rapidly improving set of conditions prevailed throughout the province, it is important to note that each hospital had complete autonomy over its school. The Winnipeg General school, being Manitoba's largest, was often decades ahead in implementing changes in programme or facilities.

As had been experienced in other times and places, improvements in conditions for the downtrodden not only inspired gratitude, but also raised expectations. In 1904 the Alumnae Association of the Winnipeg General Nurses had drawn up a constitution. By 1907 they were petitioning the government for statutory registration of nurses. In 1913 an Act incorporating the "Manitoba Association of Graduate Nurses", usually referred to as M.A.G.N., was passed. Among other items, the act specified requirements for entrance into a training programme, spelled out in general terms the areas of study to be covered and the length of the programme, and required that training hospitals have a minimum daily average of five patients. On the subject of examinations it outlined that "all examinations and matters pertaining thereto under the Act shall be conducted by and under the Council of the University of Manitoba, who shall set examinations therefore".[22] While the legislation in most ways merely recognized an existing state of affairs, it was a major achievement not only in that now the ultimate status of a nurse existed apart from the hospital to which she was attached, but also in the subsequent possibilities thereby introduced.

The first tangible move made on the basis of the Act was a meeting held late in the same year between the Executive Board of the Manitoba Association of Graduate Nurses and a committee from the University Board of Studies. "They decided that examinations on the subjects set out by the Bill should include oral and practical tests as well as written ones".[23] In September, 1914, fifty-nine nurses wrote the first Manitoba Registration examinations. Registration legislation also led to a push for standard textbooks, percentage requirements for a "pass", and some investigation into the length of formal training given by a particular hospital. As stated by B. Fines in her history of the nurses' association, "Registration meant legal recognition of the nursing profession, and the establishment of uniform qualifications for graduates of all the varied and diversified training schools which existed".[24] No longer were the hospitals a law unto themselves in their training and use of nurses.

Almost from the beginning the aim of the Manitoba Association of Graduate Nurses was to have the control of nursing education placed in the hands of an educational institution such as the University and taken out of the hands of the hospitals. While this ultimate end was not achieved until the establishment of the University School of Nursing in 1963, the provisions of the Act, its amendments and the regulations attached to it, functioned to impose limitations and guidelines on the hospital schools. The history of evolution of nursing education from 1920 to 1960 is therefore one of successive changes in legislation and regulation setting out the parameters within which the hospital schools of nursing had to work as well as conditions they had to meet to remain a recognized school.

In many ways nurses, directors of nursing schools, and hospital administrators made decisions and effected changes representing progress. In 1918 the Board of Trustees of the Winnipeg General asked that necessary changes be implemented to bring the school in line with the curriculum and standards accepted by the Canadian Association of Trained Nurses.[25] The reduction of a trainee's working day from ten or twelve hours to eight hours was just one concrete change brought about by this implementation. By 1921 the Winnipeg General had 250 students and in co-operation with the municipal hospitals was offering courses in communicable diseases. The large number of trainees was particularly welcome because of the severe shortage of nurses during and immediately after the war. Under Mary Martin, who became the new superintendent in 1922, the military style was toned down. Her aim was to improve atmosphere, working hours, and standards to the point where the school would be recognized as a Department of Nursing in the University.

Responding to the rapid expansion of medical science between 1900 and 1920, the instruction in the school was incorporating much more of the basic sciences.

> By 1925 a total of 616 hours of formal teaching was given and among the new subjects that had gradually been added to the curriculum were elementary psychology, elements of pathology, and an introduction to public health nursing.[26]

By 1928 the Winnipeg General had a teaching staff of two full time and three part time instructors. A course in elementary chemistry was added in that year and library facilities were greatly improved.

1928 was also the year in which the Nursing Education Committee of the M.A.G.N. produced a minimum curriculum, "a guide in planning courses of study", and sent it to all hospitals with

training schools in the province. While the Association lacked the power to require hospitals to meet the guide's specifications, it gives an idea of the short term goals of that day. It specified as requirements well lighted classrooms, good sized blackboards, one or more laboratories, a demonstration room, and a library with modern books and current nursing journals. It recommended that each hospital staff include a superintendent of nurses, an assistant and a night supervisor. Students were to be at least nineteen years old and have a minimum grade ten standing to be eligible to enter a school of nursing. Included with the Guide was a listing of subjects to be covered along with the minimum hours of instruction in each. Finally, it contained a list of suggested text and reference books.[27]

Mary Martin's aspirations to have her school recognized by the University was not mere talk. In 1929 the Winnipeg General School raised its entrance requirements to a minimum of Grade XI and increased the scope of its programme by adding pediatric experience at the Children's Hospital. Attempts later that year to establish a formal connection with the University, however, were rebuffed, to the great disappointment of the school.

The financial constraints of the depression and World War II meant that nurses and their institutions, like everyone else, found themselves retrenching. By 1933 the student enrolment at the Winnipeg General had dropped from 250 twelve years earlier to 145. Pressure for hospitals to reduce their dependence on nurses in training as a work force came in a different context now. As reported by B. Fines,

> Training schools were graduating nurses in large numbers, but the new graduates could not find work. A spokesman from The Farm Women's Association got on the radio and suggested that

> smaller hospitals should cease training students and employ those who had already graduated.[28]

The nurses' association renamed the "Manitoba Association of Registered Nurses" (M.A.R.N.) in 1932, had its own stop-gap plan to keep newly graduated students off the employment list. "Courses of three-month duration in laboratory work, x-ray, dietetics, and hospital management were to be given".[29]

In 1932 the Weir Report based on studies done by Dr. George Weir on nursing and nursing education in Canada from November, 1929 to July, 1931, was released.[30] The timing was unfortunate in that the depression was just tightening its grip on the country. The rather intensive study with many far-sighted recommendations became a classic--often referred to, but rarely acted upon. How did this investigation view nursing education of the time?

Professor Weir leaves no doubt in one's mind that nursing education in Canada was inexcusably wanting. Much of his report is spent in documenting the "overworked" condition of trainees, the lack of proper instruction, and the harmful effects of the apprenticeship system. His studies showed that the hours of work on wards were so demanding that students were physically unable to benefit from the lectures which were being given. Overall, students were found to be doing an average of 3.3 hours of house maid's work out of nine hours on duty, including such tasks as scrubbing, polishing, sweeping and dusting. In one school students worked 12 1/2 hours per day with 1 1/2 hours off. On every fifth day students worked 22 1/2 out of 24 hours with only the remaining 1 1/2 hours for rest. Most trainees had only a Grade VI to Grade VIII background. Weir concludes:

> No mechanical drudgery could be better adapted to transform the zealous and ambitious student nurse into a sort of household serf and to defeat the real ends of sound education . . . according to the weight of medical evidence, the product of such hybrid training is frequently less than half a skilled nurse and more than half a uniformed domestic servant or bedside attendant.[31]

The study found that many lectures given were not useful to a nurse's education, that many doctors or lady superintendents were poor lecturers who paid little attention to well known pedagogical principles, and that many lectures were cancelled due to surgery or other commitments of the physician.

More generally Weir attacked the basic idea of trying to continue to train nurses on the apprenticeship model. He contended that all the arguments used to defend the system had also been voiced when law, medicine, and education had abandoned that approach in favor of training removed from the employing agencies.

> The apprenticeship system of training nurses, in its present form . . . is doomed. To argue otherwise is to assume that nursing education is different from other types of education, as if a new psychology of education applied to the student nurse alone . . . [32]

The study advanced a multitude of recommendations concerning all aspects of programme such as size of hospital, education of instructors, hours of duty for trainees, and minimum entrance requirements. The most fundamental threat to the existing order, however, was the following:

> The main recommendations of the Canadian survey were to change the system of nursing education by removing nursing schools from hospital control and to bring the education of nurses into the general educational programme of each province.[33]

That recommendation, even in 1932, was no novel idea. Dr. Richard Beard of the University of Minnesota, after visiting Manitoba in 1922, wrote a letter to President J. A. MacLean, of the University

of Manitoba, in which he said he was "greatly hoping that the University of Manitoba would accept the responsibility before long of organizing a University School of Nursing".[34] He envisioned the school as being removed from the control of hospitals, with the teachers being University faculty members and the conditions required for graduation being strictly in the hands of the University.

As stated earlier, the publishing of the Weir report came at an unfortunate time. Most institutions in the province lacked the means to implement such recommendations and even if they did not, it was easy to claim such disability during hard times.

Concerning the mediocre teaching being provided by smaller hospitals, a study conducted by Gertrude Hall under the auspices of the M.A.R.N. in 1939, showed that little had changed.[35] It revealed that not one of the hospital teaching schools in Manitoba had its own science laboratory. Five schools were in hospitals averaging only thirteen to thirty-five patients a day, thus limiting the variety of clinical experience. The basic sciences such as anatomy, physiology, chemistry and bacteriology were not adequately taught, mainly because many instructors had no training; only one instructor in the province had a Bachelor of Science degree. One school taught classes in the dining room; one had no blackboard. Only one hospital had a diet kitchen. In seventy-five percent of the hospital schools, students worked from 54-70 hours per week. As late as 1960, Helen Mussallem, while conducting her Canada-wide study for the Hall Commission, concluded that if the recommended criteria set out by Weir in 1932 for accrediting schools of nursing were uniformly applied, 84 per cent of the schools surveyed in Canada would not have qualified.[36]

Pressure for the smaller hospitals to close their schools mounted quickly after M.A.R.N.'s 1939 study. The first confrontation occurred in 1941 at the Souris hospital with M.A.R.N. recommending that their students not be allowed to write the registration examinations. The recommendation was not acted upon, ending the minor skirmish. Problems for small hospitals, however, were only beginning. The war accelerated advances in medical and hospital techniques and procedures. After 1940 it was becoming obvious even to hospital administrators that they could no longer train without qualified instructors and a more varied clinical experience for their students. Some small hospitals moved quickly to affiliate with larger ones in order to provide a well rounded programme. The real problem, however, lay in the severe shortage of qualified instructors. Because there was no University programme to train instructors at the post graduate level, there were too few people to go around, and small institutions found themselves unable to compete for teachers. The comments of A. H. McLean, hospital administrator at the Portage hospital, writing in reply to local critics, could probably have been repeated in many smaller Manitoba centers.

> Speaking on the school of nursing he said, "not only could we not keep pace with the changes in development in nursing education, but we could not even carry on in the manner in which we were carrying on in the past! The board had no option, but to close the school as it couldn't get instructors "said Mr. McLean. The students themselves were concerned over the situation as they didn't feel the hospital was able to give them proper training. The closing of the school [in 1951] was the only option.[37]

The Portage School was not the only one to close; Morden and Selkirk terminated their programmes in 1943, Souris in 1944, and The Pas in 1954.

While closing small training schools eliminated those problems, in some ways it only shifted the focus. The number of applicants seeking entrance to training programmes in the larger hospital schools rose quickly. These institutions also labored under a shortage of qualified instructors. What was being done to remedy this? Certainly, Manitoba found itself in somewhat of a rear guard position. The Vancouver Hospital School of Nursing together with the University of British Columbia had offered the first five year nursing programme as early as 1919. The University of Toronto opened a course for nurses in 1925. In Manitoba the first small move had been made in 1938 when the University of Manitoba offered its facilities to M.A.R.N. to set up a post graduate summer course. In 1943 the University itself offered the first one year post basic course of studies in nursing. The continuance of this programme was not at all secure. Each year it was reviewed and given temporary reprieve for another year. Finally, in 1952 the School of Nursing offering these courses at the campus was made an integral part of the University. In the same year it first offered two different one-year certificate programmes. Both were post-diploma programmes of ten month duration, one leading to a "certificate in public health nursing", the other to a "certificate in teaching and supervision". Not until 1963 did the University School of Nursing offer a full baccalaureate programme. Of necessity entrance requirements for the School of Nursing were then brought into line with other faculties; students had to be seventeen years of age and have achieved junior matriculation.

While the 1913 Act and its subsequent ammendments specified a certain minimum level of standardization of nursing education in the province, there was considerable latitude in actual practice.

> The quality or degree of excellence of the programme depended on the hospital's teaching and clinical resources, the goals of the programme depended on the hospital's institutional needs, and the philosophy upon the set of beliefs and assumptions congruent with and stemming from the unique small society.[38]

Over the decades, numerous steps toward a standardized course were taken. In the United States a standard curriculum for schools of nursing had already been published in 1917.[39] The Canadian Nurses' Association published its first curriculum guide in 1936.[40] Although a number of schools followed this guide, adherence to it was optional and registration did not hinge on how closely the standard guide was followed. A 1954 amendment to the Nurses' Act closed this gap by establishing a joint University and M.A.R.N. committee which would accredit schools of nursing, assuring that all essential areas of theory and clinical training would be covered in each school.[41] By 1959 seven schools, all accredited, remained in Manitoba, with only two being outside the city of Winnipeg. This compared to sixteen schools which had been operating in 1939.

The late 1950's and early 1960's saw attention focusing on an aspect of diploma training which had remained unchanged since the turn of the century--the three year duration of the programme. Much of the criticism of the three year course was directed at the fact that a high proportion of the three years' training period was taken up in service to the hospital rather than in learning. A study done in Saskatchewan "found that the educational preparation of the student

nurse took only fourteen months". The other twenty months "students rendered service to their respective hospitals . . . These students, through their service activities, defrayed an average of 85 per cent of the gross cost of their education and maintenance".[42] The Hall Commission report of 1964, in a similar vein, stated "The period of training is unnecessarily long. A three year programme, in which two thirds of all formal instruction is given in the first year, is obviously oriented to some purpose other than education".[43] Previous to the 1950's, the only option open to many students was to offset the cost of their training by way of such services. With increasing prosperity in the post war period many students could afford to pay for their education, at least in part, and, the nursing profession saw the lengthy training period as an onerous requirement. "Our system of education--of semi apprenticeship--is in much the same position as it was sixty years ago".[44]

This ideological stimulus was much reinforced by a more practical concern - the serious shortage of nurses. While the thirties had also seen such shortages, the 1950's were different. The economy could provide the finances to hire an increased workforce of trained graduates. Governments, aware of statistics reporting that, in 1952, on the Canadian average one public health nurse served 5200 people, began to hire nurses to strengthen public health care. Prepaid health care plans became increasingly common in the same decade and this encouraged a rapid increase in the frequency and duration of hospital stays--again requiring more nurses. At the same time many small schools of nursing were closing, leaving the entire task of training to the seven larger schools remaining.

These factors in concert produced a shortage of sufficient note to make it a public issue. The idea of reducing the length of training from three to two years was discussed in the legislature as early as 1953. Assuring an adequate supply of nurses became even more of a government responsibility after 1959 with the inauguration of the compulsory hospital plan in Manitoba.

One of the first experiments in Canada in reducing the length of the training programme was at the Metropolitan School of Nursing, Windsor, Ontario, in 1952. The chief objectives were:

> to establish nursing schools as educational institutions in their own right, and to demonstrate that a skilled clinical nurse could be prepared in less than three years if the school were given control of the students' time.[45]

The report at the end of the experiment included a summary statement which said "nurses can be trained as satisfactorily in two years as in three under better conditions, but the training must be paid for in money instead of in services".[46]

For once, political and practical considerations crossed paths. Legislators and hospital administrators alike could not ignore such a ready-made experiment. The solution was irresistible. The first institution to embrace the shortened curriculum was the Victoria General Hospital. That was in 1968. Others quickly followed suit and a few short years later all remaining nurses' training programmes in the province had changed to the two year session. During the same period, two more hospitals closed their training schools. Children's Hospital phased out their programme in 1967. Victoria Hospital graduated its last class in 1971.

The amazing rapidity of the transition to a shortened training period for clinical nurses could be attributed to the

fact that the change was not welcomed exclusively because of a desire to streamline the production of graduate nurses. Aside from political and practical advantages, the change also served the interests of the profession. The implications the shortened length would have for the very nature of nurses' training could not have escaped the officers of M.A.R.N. Preparing a nurse for professional duty in a course reduced to two thirds its original length could only mean a reduction in the service component of that training. It was one more step to complete freedom from a system that in many subtle ways had bound nurses to the hospital.

Reaction to the abbreviated course was anything but uniform, even within the profession itself. Some clearly saw it as a victory. The comments of Betty Ulberg and Hilda Mazerall, both former M.A.R.N. presidents, illustrate the reservation of others. While Mrs. Ulberg granted that "nurses coming out of the two year programme have a good background; they know their stuff"[47], she pointed out that the former programme produced equally competent nurses and, in addition, contained a desirable feature absent in the new shortened programme. The third year in the older programme gave nurses additional time to work in a variety of fields, somewhat like an internship, allowing a graduating nurse to make a more intelligent choice when contemplating a field in which to seek employment. The two year graduate has a more limited basis on which to make that decision, given the reduced clinical exposure during training. Mrs. Mazerall's criticisms go further; she feels the two year programmes over emphasize theory, that nurses are given insufficient clinical experience, and that the clinical training they receive lacks the scope and precision necessary for competent practice upon graduation.[48]

After 1963, with the University's offering its degree programme, an avenue of training completely independent of the hospitals was available to high school graduates. Seven years later the first programme at the technical or diploma level became available in an institution whose function was strictly educational. Students not wishing to study at the baccalaureate level could enrol in the registered nurses' course at Red River Community College.

The result was that after 1960, in contrast to the previous ninety years, "registered nurses" were being trained at two different levels. The University programme was labelled a "professional" training providing a wide base of scientific knowledge, emphasizing critical analysis. The programme was designed to prepare nurses to function more independently than diploma nurses, whether in teaching, post graduate research, institutional service, government service, or administration. This programme qualified the graduate for a "Bachelor of Science in Nursing" degree. It is today offered only at the University of Manitoba. The "technical" programme offered at the hospitals and at Red River Community College does not offer the same theoretical depth, but places greater emphasis on the skillful practice of nursing measures and delegated techniques, aiming at direct patient care. It is today offered at Red River Community College, the Health Sciences Centre and at the St. Boniface, Brandon, Grace, and Misericordia hospitals. The programme leads to a "Diploma of Nursing". A more philosophical statement of the distinction between the two types of schools is contained in Nursing Education: Challenge and Change, a report produced by M.A.R.N. in 1976.

> Traditional nursing education, the hospital apprenticeship system prepared practitioners to function in a dependent role in an institutional setting. The classic curriculum of these educational programmes ordered content directly on the medical model, and practice was organized according to the hospital ward patient classification system. The major focus in such traditional nursing education programmes was the provision of care in episodes of illness, with only limited concern for health care directed toward increasing the patient's ability to prevent illness and increase his level of health. Health needs in contrast to illness needs, have been considered primarily in University nursing education, and only the baccalaureate graduate has the depth of preparation in providing such services.[49]

The provision of nursing education in a general educational setting, outside the domain of the hospital, is from a certain perspective so logical a step forward that one might have expected ready acceptance and quick implementation. In reality, however, it was long in coming, and fiercely debated. Marie Loyer writing in the Canadian Nurse outlines why the hospital diploma programmes were unsatisfactory. Her main point is that the system was "not an economic or effective way of educating professionals for leadership".[50] Backing this up she explains that the old diploma system placed too much emphasis on the finished product--a nurse capable of performing certain tasks or procedures with great skill. Because such a nurse had received a rather limited scientific base, it meant that she was in an unfavorable position to adapt to new technology and new procedures rapidly appearing on the medical scene. Furthermore, she argues that in any case the nurse is being displaced at the bedside by other specialists and technology. Because the role of the registered nurse has changed, "trying to say the nurse provides 'personal care' to the patient is mere lip service when the patient is being submerged by the depersonalizing effect of modern techniques and medical specialization".[51] She feels that because

the general educational institute is less wrapped up in the short term exigencies of hospital care, it will do a better job of preparing a capable, adaptable nurse who can function in the dynamic milieu of modern medicine.

Such a viewpoint is not without its opponents. Hospital administrators, understandably, might have a different point of view. Below are the comments of one: Hospital training schools encourage and produce nurses with a proper nurse-patient relationship. If nursing education takes place away from the hospitals, the human element fades, the commitment to the patient subsides, and technical and scientific aspects become paramount. Secondly, training institutes not directly attached to the workplace become detached from reality and often teach ideas and skills already out of use in the hospitals. They are incapable of incorporating new and modern care methods as they come along. Furthermore, nursing is one of many medical professions which function in the hospital setting. To train in that setting is much more realistic than isolating one profession outside. His final comment, while based on a vestige of truth, appears so blatantly sexist, one would not think it was written as recently as 1966; "Many nurses get married and leave the profession. The more expensive University education cannot be expended on ordinary nurses but should be reserved for post graduate work".[52] It reminds one of the old reference to nurses as a "migrating mass of maidens meditating matrimony".

No doubt, the transition of nursing education from the hospitals to general educational institutions will not proceed without the pains of change. The majority of Manitoba's nurses are

hospital trained. They have a stake in their own past. Conversely, it is the graduates of the University programmes who view their profession from a broader perspective and who also are more vocal and political in expressing their views. These differences have already exerted considerable strain on M.A.R.N. Hilda Mazerall feels, aside from the internal stresses, that transferring the responsibilities from the hospitals to the University or the Department of Education will not improve the quality of training, and certainly will mean that the nurses will lose control of their profession.[53]

Should all of Manitoba's nursing schools achieve a status independent of the hospitals, Manitoba, would not be ahead in the field--Quebec, Ontario, and British Columbia have their nursing education entirely separated from the hospitals, while Saskatchewan and New Brunswick have progressed further in that direction than Manitoba. In spite of the controversy surrounding that trend, it seems to be a logical one in a number of respects. Most other professions have moved away from apprenticeship-type training with its tendency to exploitation. Nursing itself in the last seventy-five years of its history is the story of slow but unswerving progress in shaking off those aspects of the Nightingale schools which kept the profession in perpetual subservience and even bondage to the hospitals, the physicians, and the patients.

In all, it becomes most apparent that, quite apart from the aspirations of nurses themselves, the economic fortunes of a province, the political kaleidescope, and society's attitudes to a profession, in this case a profession traditionally of women, all have played a substantial role in shaping the destiny of nursing education.

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CHAPTER VI

THE EDUCATION OF PHYSIOTHERAPISTS

A cursory overview might suggest that physiotherapists are newcomers to the general field of medicine. The opening of Manitoba's first school of physiotherapy in 1960 would reinforce such thinking. As with all medically related skills, however, one need not probe very deeply before it becomes apparent that the skill or practice is rooted in the distant past. The use of massage or exercise to relieve and rehabilitate is a very old practice. Efforts to systematize training in this field, however, are more recent. In England the first formalized training was given by such notables as Rosalind Paget and Annie Manley in the late 1800's.[1]

Physiotherapy has unique roots. Most medical professions as they are practised in Canada can be traced back to central western Europe--Britain, France, and Prussia. Canadian physiotherapy, molded in the British tradition, shares this west European background. However, the British profession assigns considerable credit for its development to Scandinavian countries, particularly Sweden. Jane Wicksteed, documenting the history of the Chartered Society of Physiotherapy in Britain explains a dramatic late nineteenth century upswing in the popularity of massage and physical exercise in that country with the comment:

> The revival of massage and medical rubbing was largely due to the migration to this country of a considerable number of

> Swedish men and women trained in massage and educational and remedial gymnastics at the Central Institute of Stockholm. These Swedes were usually well trained, well educated, competent, robust, and vigorous . . . [2]

Her comment not only points to the Swedish roots of the profession, but also to the two streams out of which modern physiotherapy developed--the tradition of massage and the tradition of remedial physical training. England in the late 1800's had its own unenviable tradition. The popularity of massage and Turkish Baths had attracted many ill trained charlatans who spoiled the reputation of more qualified masseuses. Through the efforts of serious minded British practitioners and trained Swedish immigrants, great progress was made in upgrading the profession. This led to the incorporation of the Society For Trained Masseuses in 1895.[3] This group insisted that its members pass a standard examination for registration, and enforced a code of behavior on its members. The merger of this group with the Institute of Massage and Remedial Gymnastics in 1920 established the Chartered Society of Massage and Medical Gymnasts later renamed the Chartered Society of Physiotherapists.[4] In addition to setting standards for registration and practice, this group also organized training courses and training schools throughout Britain. Almost all of the early physiotherapists in Canada were trained in these schools.

As stated in the legislation establishing the Association of Physiotherapists of Manitoba,

> "Physiotherapy" means physical therapy, and includes the science and art of training sick and disabled persons in order to enable them to regain the maximum function of which they are capable by the use in any suitable medium of remedial exercises, massage and manipulation and by radiant, mechanical, or electrical energy.[5]

Today medicine recognizes and utilizes this rehabilitative function as an integral part of its treatment. Initially, however, the stimuli to train people for this field in Canada came at critical junctures when the necessity to assist large numbers of crippled or otherwise disabled persons to regain their useful functions was most apparent. The first such situation surfaced in the wake of the Great War. At the beginning of the war Canada only had "a handful of isolated, well trained masseuses, and medical gymnasts, mostly from British and Swedish institutions".[6] By 1916 wounded soldiers were returning in such numbers that the pressing need for the rehabilitive services of physiotherapists became most obvious to the doctors.

The first formal courses in physiotherapy had been established in the McGill School of Physical Education just prior to the war. The influx of maimed and wounded veterans led to the second. The Military Hospitals Commission organized a physiotherapy training centre called the Military School of Orthopaedic Surgery and Physical Therapy at Toronto in January, 1917.[7] Graduates of the school most often referred to it as "Hart House". Operating only till 1919, the school trained about 250 people to meet the immediate needs. The six month course was divided into four parts: massage, muscle functions training, occupational therapy and gymnastics.

The First World War with its large number of surviving casualties thus became a tremendous stimulus to therapy. While "Hart House" graduates had been trained in a hurried, emergency fashion, it increased the number of physiotherapists. Their feeling of common purpose led in 1920 to the formation of the Canadian Association of Massage and Remedial Gymnastics, renamed the Canadian Physiotherapy

Association in 1935.[8] The temporary crisis of the war catapulted physiotherapy onto the medical scene. The long term rehabilitation necessary for men who had suffered serious injury or amputation provided the ongoing demand for its services. This gave the profession time to demonstrate its usefulness in more than short term emergency situations. In 1929 the University of Toronto established a permanent course in physiotherapy. Students received instruction in theory, observed demonstrations, obtained clinical experience and interned two months between and six months after the two year course. Graduates of this school were the people who later pioneered the other Canadian schools, including Manitoba's.

In Manitoba, official recognition of the profession came in 1957. An informal association of physiotherapists had developed in the province in the mid forties. This group succeeded in getting a bill introduced in the legislature in 1948, but that bill died with second reading. In 1955 the Manitoba and Canadian Associations co-operated to engage a lawyer to draft a private member's bill.[9] Mr. Hillhouse, a member of the Campbell Liberal government agreed to sponsor the bill. It was introduced in 1956 and piloted to a successful conclusion in 1957.

The establishment of Manitoba's School of Physiotherapy might be characterized as an easy process. While it required persistent effort on the part of concerned individuals for a dozen years to bring the institution into being, its proponents never had to face violent criticism, wait through depression and war, or suffer a repeating series of "put downs". This was due in part to the fact that their efforts were usually supported by a selection of informed

physicians who appreciated their work. It was assisted by the Canadian tradition of attaching these schools to universities as had happened at the University of Toronto in 1929, at McGill in 1943, at the University of Montreal and the University of Alberta in 1954. In Manitoba the road had also been smoothed by a number of solid individuals whose record of reputable service had made its impression on the community.

The first of these was Mrs. Helen Ross who worked as a physiotherapist in the Children's Hospital from 1920 to 1945. Mrs. Ross had received her training in Britain and was the first physiotherapist in Manitoba who qualified for recognition with the national organization. Her work was much respected by the medical staff, particularly the powerful anatomy department under the leadership of Dr. Thompson. These doctors later supported the establishment of the school.

The second person who had established a reputation both as a physiotherapist and as an educator long before 1960 was Miss Marjorie Spence. After being graduated from a Bachelor of Arts programme at the University of Manitoba, she took her basic physiotherapy training at the University of Toronto from 1936 to 1938. She worked together with Mrs. Ross in Winnipeg until joining the armed forces during the second World War. This war once more demonstrated the value of the physiotherapist in restoring health and in overcoming disabilities. Moreover, it gave Miss Spence scope for her outstanding ability to organize others in such efforts. After her discharge from the forces in 1944 she worked in the capacity of a cross-Canada consultant in physiotherapy for the Department of

Veterans Affairs until 1948. In that year she obtained a grant to return to her alma mater for postgraduate studies in the teaching of physiotherapy. She taught at the University of Toronto for six years, assisted in the establishment of the school at the University of Montreal in 1954 and returned to Manitoba in 1959 to play her part in developing plans to establish the school here.[10]

The third person instrumental in establishing the Manitoba school entered the scene on the eve of the third crisis which acted as a stimulus to physiotherapy--the polio epidemic of 1952-1953. Largely centered in Manitoba, the crippling epidemic swept most southern Manitoba communities during the first year, and became more widespread in 1953. Miss Josephine Stackhayden had immigrated to Canada from England in 1951 and was working at the Cerebral Palsy Centre in the Children's Hospital. There were only twenty physiotherapists in the province at the outbreak of the epidemic. The critical need to assist victims in regaining their respiratory, neurological and muscular functions called for extraordinary measures and more manpower. Contingents of physiotherapists were flown in from England for service periods of six months. Miss Stackhayden co-ordinated the efforts of physiotherapists province wide, and was particularly active in involving lay people in rehabilitative procedures. Anticipating the establishment of a school in Winnipeg, she proceeded to take her training in physiotherapy teaching from 1956 to 1958, also at the University of Toronto.

The demonstrated value of physiotherapy locally during the polio epidemic had resulted in a government commitment to establish a school in the province. The end of the epidemic reduced the

pressure to proceed. The uninformed public and perhaps even segments of the medical profession still relegated the usefulness of the physiotherapist to an emergency. Some doctors also needed more convincing that the services of a physiotherapist would not intrude into their domain. This accounted for the wavering indecision from 1954 to 1960.

Acting on its earlier promise, the provincial government authorized the funding for a school in 1956; it left the actual organization of the institution in the hands of the University. The Manitoba branch of the Canadian Physiotherapy Association had been pressing for a school since 1951, advising that it be a three year programme. While the provincial government had hoped that the school would open in 1958, the University, and especially the medical college under whose auspices the school would be organized, were not convinced of the need for a university education for physiotherapists. It was at this point that the record of service and enforced standards demanded by the Association bore fruit. A group of medical doctors, influential on the medical staff, and cognizant of the value of properly trained physiotherapists, joined them in their efforts. This was most effective in obtaining the necessary co-operation for the school to become a reality.

Some compromises were made and in the autumn of 1960 the school opened in a single room in the nurses' residence of the Children's Hospital. The programme offered was a two year diploma course followed by a six month internship, one month review and final examinations.[11] Fifteen students entered in the first year. First year courses included anatomy, physiology, psychology, medicine and

surgery, treatment by physical means--theory and application, and electrotherapy. Second year courses were similar to first year, at an advanced level; psychiatry was an addition. General medical courses were taught by members of the faculty of medicine while courses specific to physiotherapy were taught by the only two staff members, Miss Spence and Miss Stackhayden. Senior matriculation was required for entrance. The emphasis in the first year was practical (in which students practised on each other) as well as academic. The second year added actual clinical exposure. After second year examinations, students spent three months in one location and three months in another, anywhere in Canada, interning under a licensed member of the Canadian Physiotherapy Association. Students then returned to the school for a one month review followed by a comprehensive final examination.

According to Miss Stackhayden, the two and one half year course exercised somewhat of a hardship on students and staff. Because the requirements necessary to meet standards set out by the Canadian organization were based on a full three year course, the slightly shorter Manitoba programme was overloaded with material.[12] This difficulty was relieved when in 1964 the course was expanded to a full three years. In 1966 a fourth year was added. The last year was not mandatory for licensing but rather was seen as a post graduate opportunity for physiotherapists who had practised at least two years to return for further studies. Courses offered included advanced anatomy, administration and statistics, plus options in Arts and Science.

The most recent updating of the physiotherapists' education occurred in 1976 with the introduction of a four year baccalaureate programme replacing the diploma course.[13] Students in their first year must complete a first year University programme with a minimum of five full courses including three required and two optional subjects. The required courses are psychology, sociology, and biology. The last three years are basically the same as the former diploma course, but restructured for more effective learning. Parallel with course revisions in medicine, the new three year professional course of studies is organized on a "systems" basis allowing considerable interdisciplinary input into each of the three areas of study. These are: musculoskeletal, neurosciences and cardio-respiratory. Basic science courses such as anatomy, physiology and pathology are integrated into the three systems along with professional studies. Each learning system is separated by seven to nine weeks of clinical experience on a full time basis. The baccalaureate programme was organized for its inherent value as well as to meet the projected requirements of the Canadian Physiotherapy Association which indicates that by 1980 all practitioners wishing to be recognized within the national body will need a degree.[14]

In 1962 the school moved from the Children's Hospital to its present quarters. Today classes are held in the old basic sciences building of the medical faculty, the new basic sciences building and on the third floor of the Rehabilitation Centre. Staff has increased in number from the original two to six full-time and two part-time instructors in the 1977-78 school year. Total student enrolment in physiotherapy reached 78 in the same year. Membership in the

Manitoba Association grew as a result. In 1951 there were only twenty members in the province; the Winnipeg General Hospital had only one full time and one part time physiotherapist in the 800 bed facility. By 1957 total provincial membership had grown to 54. In the next ten years the number doubled once more to 107.

While the advent of a school of physiotherapy was much later in Manitoba than in Ontario, and while physiotherapy as such has taken some time to win acceptance as one of the arms of medical care, the provision of a training facility followed quickly on the heels of the profession's reaching a certain maturity in the province. As soon as the need for physiotherapy was clear, and as soon as their numbers began to grow, in fact, a mere three years after the proclamation of the Manitoba Physiotherapy Act, the province already had a school. Only sixteen years later it had progressed from offering a diploma course to providing a full baccalaureate programme.

Some reasons for this success story have already been cited. The three crises in 1914-1918, 1939-1945 and 1951-1952 emphasized the need for the profession's services in a dramatic manner, and commanded the attention of both government and the supporting public. The calibre of leadership in Manitoba had been of the first order, recognized by politicians, public and professionals alike. Lastly, true to its own British heritage, the profession in Manitoba sought acceptance from medical people before rushing ahead, disciplining itself not to act outside the advice of a physician. Physiotherapists thus pursued goals within a well defined, delimited field. This elicited minimum reaction or resistance from other groups who might

see them as a threat to their own place in medicine. Today the school is strong, and, considering their recent arrival on the scene, physiotherapists are well accepted members of the health team.

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CHAPTER VII

THE EDUCATION OF PHARMACISTS

The beginnings of pharmacy are virtually impossible to trace; the earliest forerunner of the modern pharmacist was not the apothecary, but a physician-surgeon-pharmacist-dentist-priest-a medical man. As the middle ages approached, a faint specialization became detectable. An individual would choose for himself a field in greater demand or more to his liking. The "drug" business fell more and more to either of two types. Physicians still produced their own medicaments and issued them to their patients directly. "In addition, drugs were prepared and sold by itinerant or stationary merchants whose knowledge and honesty were often more than doubtful".[1] To this day the pharmacist finds his energies being channeled in both these directions--professional service and entrepreneurial skill.

Evidence indicates that even the dual functions of physician and pharmacist parted ways long before modern times. In 1240

> an edict of the Emperor Frederick II separated pharmacy from medicine within the Kingdom of the Two Sicilies and set an example which gradually has been followed in the whole Western World. From that time on pharmacy became a branch rather than an adjunct of medicine . . . [2]

The need for public control over the activities of drug dispensers did not arise because of the activities of the physician-pharmacist. Rather it was a response to the unscrupulous practices

of the retailers. A notable step towards control was a charter granted to the London apothecaries in 1617 creating the Society of the Art and Mystery of the Apothecaries of the City of London.[3] The charter made it illegal for non members to produce or sell drug products. The reason for the new charter was clearly specified: too many individuals were mixing up "unwholesome, hurtful, deceitful, corrupt and dangerous medicines, to the great peril and daily hazard of the lives of our subjects".[4]

In Canada it is apparent that the trade was controlled from earliest times. The Hudson's Bay Company "required every trader who sold drugs to take out a permit".[5] This was strictly a regulatory measure as no fee was required. More formal regulation began with the passing of the Ontario College of Pharmacy Act in 1871. In the same year the regulation of drug sales in Manitoba was covered in the Act establishing the Provincial Medical Board of Manitoba. In 1878 a separate Act incorporated the Manitoba Pharmaceutical Association which has overseen the activities of pharmacists since that time.

The first pharmacist of European tradition to practise in Canada was Louis Hebert of New France. Prior to this, of course, the natives of Canada made considerable use of natural remedies and cures.

> Manitoba's first pharmacists were the Indian medicine men who, by trial and error and knowledge of the vegetable-animal world available, were able to survive the rigorous climate and the uncertain food supplies.[6]

It is interesting to note that the first person known to have dispensed drugs at Red River was a Metis, Cuthbert Grant. He utilized both his Scottish and Indian background in this regard. On the one hand Grant had apparently received some medical training in Britain during the time he had been sent there for his education.[7] On the other, Margaret

Complin notes that "he also had an extensive knowledge of the medicinal virtue of native herbs".[8] It is clear from his correspondence that, between 1825 and his death in 1854, Grant ordered drugs from Great Britain through a Dr. Gillespie, medical officer at York Factory.[9] He maintained a well stocked medicine chest from which he dispensed on numerous occasions. In the more recent past, around 1868, Dr. John C. Schultz established a trading business near Fort Garry including a considerable stock of drugs. As J. Laurie Johnston, writing for the centenary of the pharmaceutical association so aptly stated, Dr. Schultz

> also had his fingers in the pharmacy pie. He was a "dispensing doctor", supplying tinctures, ointments et al to the community from the stock of drugs he maintained and replenished as required from the East.[10]

In the early seventies he sold the pharmaceutical branch of his business to a Mr. James Stewart who a few years later became the first pharmacist to be licensed under the Manitoba Act, and the first secretary of the newly formed Manitoba Association.

Pharmaceutical education, while it later had to respond to governmental regulation, for the most part has always reflected the state of the trade itself. Among Manitoba's natives the education of the pharmacist was the education of the medicine man himself.

> Like pharmacists of later years, they held to a certain mystery and kept their secrets hidden from the lay man. They served apprenticeships and candidates who could survive the training were articled into the craft.[11]

This style of training was not far different from that of the Europeans on the continent in the early 1800's.

> At that time pharmacy in America was considered, by most of those active in this field and by the majority of physicians, as an art that did not require theoretic knowledge; it could best be learned by practice, "by daily handling and preparing the remedies in common use".[12]

In Canada, this philosophy continued to hold sway for some time and for good reason:

> The education of pharmacists prior to Confederation was informal and the training followed the master-apprenticeship system of qualifying for the handling and dispensing of drugs. The pharmacist carried in his dispensary only a small number of medicines and the prescription demanded only a limited knowledge of mixing and compounding techniques. The training then was designed for this type of practice.[13]

The first formal instruction in pharmacy in the United States was given in the Philadelphia College of Pharmacy, established in 1821. In line with the American tradition of the times, it was a private school, financed entirely by the fees students paid. The first Canadian school began in Toronto in April, 1882. In typical Canadian manner it was operated by the professional association in that province. The opening of the school did not represent an abrupt change in pharmaceutical training. The three month course was designed merely to supplement a training programme based largely on an apprenticeship. For better or worse this was a strongly ingrained trend in pharmacy. Apprenticeship, in Manitoba, remained a condition for licensure until 1957.

The requirement by provincial pharmaceutical associations in the last quarter of the nineteenth century that candidates acquire some formal training in addition to apprenticeship experience was not simply an outgrowth of an organization's inflated sense of self-importance. Medical science, while nowhere near its full stride, had taken significant steps forward. Some theoretical background had become necessary.

The Manitoba Act of 1878 spelled out in considerable detail what steps a candidate had to take in order to become licensed.[14] First, he had to be of a good moral character and had to pass a preliminary examination in arithmetic, Latin and English or French. This

qualified him for an apprenticeship. After two years in that capacity he could sit for the "minor" examination. Successful completion made him a "certified clerk". Two more years of service in a drugstore and successful completion of the "major" examination made the person a "Licentiate Pharmaceutical Chemist". Upon producing evidence that he had attended two lecture courses in chemistry, two in materia medica and one in botany, he could then become licensed to practise in the province. The legislation was quite demanding for its day. In view of the absence of any provision for instruction until 1889, it seems unlikely that candidates were held to the letter of the law immediately after 1878.

In April, 1889 "Professor Kenrick of St. John's College, Winnipeg, was engaged to teach chemistry to six students".[15] Thus began formal instruction in pharmacy in Manitoba. In September of the same year the already six year old Manitoba Medical College agreed to admit pharmacy students to "such lectures as pertained to pharmaceutical education".[16] This arrangement held until 1894. In that year the pharmaceutical association became more involved, arranging its own course of lectures and conducting them in separate quarters within the medical college.

Five years later the Manitoba Pharmaceutical Association embarked on a venture reminiscent of the medical profession's move of 1883. Entirely from funds raised within the profession, "property was purchased at 422 Notre Dame Avenue and in 1899, the Manitoba College of Pharmacy was erected on that site".[17] H. E. Bletcher was appointed the first "principal"--a somewhat curious designation since it was twenty-two years later before he was joined by a second staff

member. That the Association was proud of its quarters showed clearly in the annual announcement of the Manitoba College of Pharmacy for the year 1901-1902;

> The Manitoba College of Pharmacy, No. 422 Notre Dame Ave., Winnipeg, was erected and equipped in 1899, by the Pharmaceutical Association of Manitoba, for the purpose of enabling apprentices and certified clerks to acquire a sound knowledge of the principles of the sciences underlying the Art of Pharmacy, and to give students facility in applying these principles".[18]

In lauding the building itself the catalogue detailed that the new structure contained "a well fitted lecture room, and a laboratory with the necessary preparation rooms, together with waiting room, workshop, store rooms, lavatory, etc."[19] A Manitoba Free Press reporter, after having been toured through the new college reciprocated with an appropriately complimentary headline in the February 5, 1900 issue of the paper: "Druggists of the Province have built and equipped a college second to none in the Dominion".[20]

The course of studies in the new college was well designed to fulfill the requirements of the Pharmaceutical Act. As explained by Dr. D. McDougall in his history, "At the beginning of the century the courses offered were of short duration and designed to supplement the practical training received during a lengthy apprenticeship".[21] The programme was divided into the "minor" course, taught from September 1 to Christmas and the "major" course, in session from January 4 to April 30 with examinations after each session. Fees in the 1899-1900 session were thirty dollars for the minor course and forty-five for the major.

Pharmaceutical education in Manitoba has not displayed the lag of adaptation followed by drastic curricular overhauls seen in

some health professions. In contrast, the changes in programme at numerous times from 1900 to 1970 appear as reasonable, rational responses to changing conditions in the profession, effected with little undue controversy. The Manitoba Pharmaceutical Association, which had responsibility for the college, was quick to seek University affiliation for its professional school. A resolution adopted at its annual meeting, held in February, 1902, called for the appointment of a committee to present such a proposal to the Council of the University.[22] This was favorably received by the University. Formal affiliation followed later the same year. Instruction continued to be given at the College of Pharmacy building on Notre Dame Avenue.

In 1905, the University, which at this time was purely a degree granting institution, established the first undergraduate degree in Pharmacy. Students who fulfilled certain conditions over and above the diploma course necessary for licensing, would be granted a Bachelor of Pharmacy degree. The additional requirements included passing a matriculation examination and the successful writing of University examinations in botany, theoretical and practical chemistry, physics, materia medica and toxicology, theory and practice of pharmacy, including interpretation of prescriptions and dispensing.[23] While not many students pursued the degree, it cleared the way for advanced studies early in the profession's Manitoba history. Principal Bletcher was the first to earn the degree in 1908.

In 1906 the association tightened its requirements for becoming a "certified apprentice". Earlier, a preliminary examination tested the student's proficiency in specified subjects. Now the regulations required that all candidates possess a certificate stating

they had passed Part I of the Arts Matriculation of the University of Manitoba or a Manitoba third-class non-professional teacher's certificate.

While formal demands were increasing, the bulk of a pharmacist's training still consisted of the lengthy four year apprenticeship in a retail drugstore--and this was no glorious educational experience. In common with most apprenticeships, it consisted of a good measure of routine errand work, and a lean measure of learning experiences. As recalled by Mr. Joseph Wilder who apprenticed from 1913-1916 there was a lot of cleaning, dusting, scrubbing, delivery and general labor involved.[24] Although the association encouraged apprentices to study from suggested textbooks such as "Squire's Companion" and "Remington's Practice of Pharmacy" to complement their practical experience, the days were long and few apprentices found the time or energy to attempt such correlation. Mr. Wilder feels that the apprenticeship taught him a good deal more about managing a business than it enlightened him in matters pharmaceutical. Thus, for him, the apprenticeship was to some extent the stepping stone to the school of pharmacy which he could not circumvent.

> An apprentice who lasted the four years would have learned something about the contents of the dispensary and might have been allowed to fill the occasional prescription. But learning during the apprenticeship was a hit and miss experience . . . I was told to watch for incompatibilities when filling prescriptions, but never what these incompatibilities were or how to find them.[25]

Loosely supervised as the apprenticeship programmes were, one must add that great variety existed. Some pharmacists selected their candidates carefully and taught them much. Mr. Wes D. G. Runions, pharmacist, co-founder of the Winnipeg Druggists Athletic

Association and long time registrar of United College (which later became the University of Winnipeg), expressed satisfaction that his two year apprenticeship under Mr. Roy Walker from 1920 to 1922 had served a good purpose. He had been given much opportunity to learn the trade including the careful weighing of components, rolling pills, filling capsules and the mixing of ointments, not to mention the business experience.[26] Mr. R. Mitchell who apprenticed with McKnight's Drug Store in the 1920's found his time there a most valuable learning experience, even if not "educational" each hour of each day.[27] He, however, also pointed out that evils existed in the system. Pharmacists were known to take on two or three apprentices, some without any wages, thus getting all their chores done gratis. For this reason the association later specified that any establishment wishing to take on apprentices had to do so on a one to one ratio--one licensed pharmacist for each apprentice on the premises.

Significant changes in pharmaceutical education were introduced in the 1914-1915 school year. It was in this year that the University became a teaching centre. In this connection the University and the Pharmaceutical Association had reached an agreement whereby the University would establish a department of pharmacy and assume responsibility for teaching and examining while the association would continue to supervise the apprenticeships.[28] At this point the Manitoba College of Pharmacy ceased to exist as a separate institution. "The property and the equipment of the College was turned over to the University by the Association".[29] Principal Bletcher, who was still teaching all courses in the Pharmacy programme himself, was appointed the department's first professor.

Connected with these administrative changes was a revision of the course. The Bachelor of Pharmacy degree was still available to students wishing to complete the additional requirements. The diploma course, however, was extended to two years. Because the student's time in formal course work counted as part of his four year apprenticeship agreement, it effectively reduced the period of indentureship in the drug store. Sixteen students entered this new programme in its first year. Professional and laboratory instruction continued to be given at the Notre Dame Avenue college building, while the science courses were taught on the newly established campus at the University of Manitoba on Broadway Avenue. In years to come, this arrangement, with students and professors alike having to move from one location to another, caused considerable inconvenience, especially in winter. Regarding this integration of pharmaceutical education with the University, a 1966 Canadian Pharmaceutical Journal commented, "As far as can be determined, Manitoba was the first in the British Commonwealth to effect such an affiliation".[30]

In 1920 a new degree programme replaced the former "Bachelor of Pharmacy" degree. The new degree of "Bachelor of Science in Pharmacy" required two years of training beyond the diploma course. The next year saw the addition of the department's second instructor, Mr. Douglas McDougall. Attendance had dropped off sharply during the war; in the fall of 1918 only three students had entered the first year of the diploma course. The end of the war saw a rapid increase in attendance (twenty-eight first year students) swollen by students who had taken their first year, joined the forces, and were returning to complete their training. This brought about the need for an

additional instructor. Lectures were given in the Science Building standing where Memorial Park is located today; laboratory work continued to be done at the Notre Dame site until 1932 when new laboratory accommodation became available on campus. The old College of Pharmacy building was subsequently sold to the brush manufacturing company which has occupied the building to this day.

By 1930 need for change in the programme was once more making itself felt. All that had changed since 1915 was that after 1920 students entering the diploma programme had to have a junior matriculation standing. However, the rapid shift toward the basic sciences in medicine which had taken place since 1880, and which had been incorporated into the new medical college curriculum of the early twenties, was demanding updating in pharmaceutical education as well. Professor Bletcher was well aware of these pressures. Already in his 1928-1929 year end report to the President of the University he noted that numerous American colleges were moving toward a four year programme beginning in 1932. He urged that the University expand its course to a three year programme very soon. Further rationale for this stated need came in his 1936-1937 report:

> Steady advances in the application of science to medicine make it insistent that education in pharmacy, a branch of medicine, be kept at least parallel with advances in medical science. New remedies and new methods in the preparation of older remedies, recent highly elaborated details in methods of assay, correction of faulty technique in present methods of analysis must all be noted and embodied in the instructional work.[31]

In 1936 a committee was appointed to consider overall course revisions.

The introduction of major course changes to accommodate the demands of the day coincided with the country's return to relative

economic prosperity in the late thirties. Beginning in the autumn of 1940 both the two year diploma course and the former degree programme were superceded by a new three year university course leading to a Bachelor of Science in Pharmacy degree. Candidates entering the course had to have completed first year University or senior matriculation including at least Grade XI Latin, and Grade XII chemistry and physics. In addition the pharmaceutical association still required a full two year apprenticeship preceding formal studies at the University. With these somewhat major changes in the offing, it was fitting that Professor Bletcher, who had pioneered and piloted the school since 1899, retired one year earlier. Professor Douglas McDougall had become the new head of the department in 1939.

This new curriculum with minor internal revisions was followed for almost two decades. Under the leadership of Professor McDougall the department slowly expanded. A third staff member had been added in 1938. A fourth one joined them in 1946. Student numbers increased slowly but steadily after the expected fluctuations during and after the war. In the 1950-1951 school year, for example, the total registration stood at ninety-seven.

Women were a part of the student body almost from the beginning. The first female graduate in pharmacy was Margaret Woodhull who graduated in 1900. Thereafter women maintained a fairly continuous presence, albeit as a small minority. The first year class of 1945-1946, for example, had 24 male and five female registrants. From that time on, however, the proportion of women rose steadily so that by the late sixties they formed almost 50 per cent of the student body.

For the 1946-1947 year the Manitoba Pharmaceutical Association reduced its apprenticeship requirements to eighteen months, of which only the first twelve months had to be served consecutively before entering University. In 1949, in conjunction with the University's plans to consolidate all its departments on the Fort Garry campus, the Department of Pharmacy was moved and accommodated in two remodelled army huts at that site. In 1951, the status of the department was changed to that of a School of Pharmacy.

By the mid fifties it once more became evident that the fifteen year old curriculum was having difficulty accommodating advances in pharmaceutical science as well as shifting emphases in professional practice. The earliest pharmacists in the province had had to prepare all their own drugs from basic chemicals. "The pharmacist in the Red River Settlement prepared his own tinctures, decoctions, infusions, suppositories and pills. It was the era of compounding".[32] As the twentieth century progressed, the pharmacist was increasingly being relieved of this task by pharmaceutical laboratories which could produce the product more cheaply and to more exacting standards. With the scientific revolution of the early 1900's, the pharmacist's role had changed to one of dispensing, not compounding. He was kept busy keeping up with new products coming on the market, what their composition was, and what their uses were. To some extent the revised curriculum introduced in 1940 had reflected this shift.

Where pharmaceutical education felt the strain was with the tremendously rapid proliferation of products in commercial laboratories. The pharmacy graduate lacked a sufficiently broad science

background to assess the function and impact these drugs would have on his clients. While not unqualified, he had difficulty keeping abreast of new developments. This same dilemma was uncovered by the Hall Commission appointed in 1961 to inquire into current and future health needs and services in Canada. Its report of 1964 commented:

> The development of new drugs such as antibiotics, tranquilizers, antihistamines, steroid hormones, and other chemical agents, has imposed new tasks and responsibilities on pharmacy practitioners. Twenty-five years ago, about three quarters of the drugs and chemicals used in today's modern therapy were unknown. Formerly, the introduction of a new medicament was rare, whereas at present over 400 new preparations appear annually. To operate an efficient pharmacy today requires thousands of compounds and preparations. There is every indication that the discovery of new drugs and medicaments will continue unabated, because of the increased emphasis on research and the active search for remedies for cancer, mental diseases, cardiac conditions and other chronic diseases . . . the role of the pharmacist as a compounder has changed largely to one of the dispenser of complex drugs.[33]

The fact that some of the earlier tasks of the pharmacist were now performed for him did not lessen his need for a thorough training. What it did, however, was reduce the need for a great deal of compounding experience, ie. a drugstore apprenticeship, and increase the need for an expanded theoretical background. Thus, in 1957, the Manitoba Pharmaceutical Association discontinued its apprenticeship requirements for candidates. In the autumn of 1958 the University curriculum was expanded to four years of which the first year was almost entirely a pre-pharmacy science programme. In addition to the broadened science base, the new programme added a new feature to the final year. Students would be required to specialize to some extent in one of four fields: retail pharmacy, hospital

pharmacy, pharmaceutical chemistry, or pharmaceutics. A fifth specialty, pharmacognosy, was added in the 1963-64 academic year.

The somewhat primitive accommodation in the two army huts was a repeated subject for complaint in Dr. McDougall's annual reports to the President. He did not live to see this remedied. Dr. McDougall died suddenly in the same year that plans for a new pharmacy building were being drawn up (1959), and only weeks before his planned retirement. The new pharmacy building, furnished with the latest in modern equipment and facilities was completed in time for the 1963-64 school year. The school was now under the direction of Dr. J. R. Murray. In 1970 the school became a faculty of the University.

While the curriculum as constituted in 1958 has not been formally changed, it has been the subject of numerous enroute course corrections, again reflecting the changing profession. According to Dr. John Shaw, the specialization in fourth year was discontinued in the early seventies, mainly because of the difficulty in practical implementation, and partly because it was not seen as a high priority feature in an undergraduate programme.[34]

More important were those changes reflecting the new role which pharmacy was outlining for itself during the sixties. Dr. Shaw of the Faculty of Pharmacy outlined in an interview that, while few formal changes in curriculum have been introduced since 1958, a new emphasis has come to pervade the entire programme; this new thrust is in the direction of clinical pharmacy. He explained that the rapid proliferation of novel and powerful drug products has created the need for a pharmacist who does not merely dispense prescriptions,

but one who, beyond that, carefully monitors what happens subsequently. The thalidomide tragedies of the early sixties are a poignant case in point where the effects of the drug were not thoroughly understood. Shaw emphasized that the need for such a member of the health team is heightened by the fact that the physician cannot keep abreast of all aspects of medicine. Because his primary task is diagnosis, the physicians more and more need to consult with the pharmacist regarding what to prescribe in given situations. Thus pharmaceutical education today is no longer limiting itself to the chemistry of drugs, but is much more concerned with the patient--what a drug can do for him, and how it will affect him in total: in short, pharmacology. To emphasize this new role, students in their fourth year have a three week block assignment in a hospital where their entire time is spent in speaking to patients, assembling composite case histories of their drug use, and consulting with other members of the health team.

Dr. Shaw admits that this new role is by no means completely defined. Many physicians, fearing encroachment, are very hesitant to seek consultation with a pharmacist who considers himself a professional instead of a retailer. This fear is not entirely unfounded in view of the recommendations by pharmacists in a few United States centres that, once the physician has made the diagnosis, the pharmacist be called in to prescribe in cases where drug therapy is to be applied. Although Manitoba pharmacists would not support such a move, it is quite apparent that currently trained professionals are in a position to offer much more assistance in this field.

That this is the direction pharmacy is currently taking is confirmed in other quarters. The Hall Commission, appointed in 1961 to investigate the status of Canada's health needs and services, commented as follows in the second part of its report: "It has been suggested that a retail pharmacy today is becoming gradually a 'public information centre' and a pharmacist a 'consultant on drugs' for the community".[35] Walter Braun, pharmacist at the Grace Hospital in Winnipeg echoes the same ideas from the viewpoint of the practitioner.[36] He personally has dealt with patients who reach hospital with severe multiple drug interaction problems which frequently develope because a patient has been visiting more than one medical specialist concurrently. Braun maintains that the retail pharmacist of integrity today must do more than fill prescriptions. In order to protect the community's health he must maintain patient profiles and monitor his clients' use of drugs. He concedes that the pharmacists trained on earlier diploma programmes are unqualified for such a role and that only in the last ten years has pharmaceutical education in Manitoba begun to prepare students for such a role.

The difference in style and attitude between diploma graduates in long time retail situations and more recent graduates with a pharmacological bent is almost parallel with the divergent views of hospital trained and University trained nurses. The typical diploma graduate, who by this time also has many years of experience in dispensing, attaches less significance to theoretical breadth and depth and laments the lack of practical experience brought to the work place by the new graduate. This attitude is reflected in a comment made by R. Mitchell: "many of today's students are useless

at first because the only practical experience they get is in between their University years . . . the sequence of practical experience, then instruction in theory was the best".[37] More succinct is this comment by Mr. Joseph Wilder: "Pharmacy isn't a profession; most pharmacists today are overeducated and underused".[38]

In contrast to this are the graduates of the four year programme, who are becoming more influential in the affairs of the Association. They exude the wish and intent to carve out for themselves a more aggressive role than collecting utility bills and selling chocolates along with dispensing. They decry the resistance by older members to participate in the compulsory "continuing education units" (eight hours per year) now necessary for continued registration. They would concur with J. Laurie Johnston when he says, "His [the pharmacist's] basic function is clinical practice involving advising and consulting with the patient and the physician and monitoring ongoing drug therapy".[39]

While professional education frequently responds more slowly to new trends than does the practising profession, and occasionally runs ahead in the eyes of some practitioners, it appears that pharmaceutical education has managed to maintain a reasonably sensitive course, being neither too tardy nor too progressive. Evidence of the satisfactory quality of pharmaceutical education in Manitoba came in a concrete way in 1965, the first year in which pharmacy graduates could write a national examination.

> The University of Manitoba had more students writing than any other province, their pass rate was higher, and one of the Manitoba students, Miss Colleen Cahilty, received the highest marks in Canada on the examination.[40]

The result has been that the evolution of education in pharmacy maintained an even development, and, in view of available resources, served the profession and the community well.

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CHAPTER VIII

THE EDUCATION OF OPTOMETRISTS

An optometrist corrects certain defects of vision by means of properly fitted refractive lenses. The presence of optometrists as specialized professionals in our society is a fairly recent phenomenon. Interest in, investigation of, and experimentation in optical science, however, has gone on for several hundred years. In the thirteenth century Roger Bacon devoted some of his writing to optical science. The application of light refraction to spectacles developed soon after this. The fact that spectacle makers in France and the Netherlands were organized into guilds in the fourteenth century suggests that the production of simple lenses must have been fairly common by that time. Such artisan groups, even when not bound by law, would have shared their skills and therefore have produced a certain uniformity of service. The first external regulation of the industry seems to have come in 1629. Charles I of England in that year granted a charter of official recognition to "The Worshipful Company of Spectacle Makers".[1] Another notable development occurred in 1771 when Benjamin Franklin invented the bifocal lens. In spite of these many developments well back in history, the professional optometrist did not become a specialist until the late 1800's.

Prior to 1900 there was neither formal training nor any form of government regulation over the practice of optometry in North

America. The first legislation concerning optometry was enacted by the Minnesota state government in 1901. In Canada, contrary to the usual sequence whereby Ontario led and the other provinces followed, Manitoba and Quebec passed the country's first optometry acts in 1909. Manitoba's Act was entitled "An Act to Regulate the Practice of Optometry".[2] The statute called for the creation of a board of examiners made up of five practising optometrists who would examine and license any optometrists coming into the province. The same board could set further regulations to control the profession. The act also specified that after 1909 any candidate wishing to enter the profession had to be twenty-one years of age, have completed two years of high school, have been graduated from an approved school of optometry and have practised at least one year.

Before 1909, with few exceptions, optometrists had trained as apprentices, many having had no formal training. Today Canada has two centres for the training of optometrists. The first to be organized was L' Ecole d' Optometrie established in Montreal in 1910. Because its instruction was entirely in the French language, English speaking students from Manitoba either trained in the United States or in the United Kingdom. The situation for English speaking aspirants was improved in 1920 with the opening of a second training institution as a department of the Central Technical School in Toronto.[3] Students were required to have only a Grade X standing for entrance to the one-year course. Manitoba, in the meantime, also continued to depend on immigrating optometrists to satisfy this professional need.

In 1925 the Ontario Board of Examiners in Optometry took over responsibility for optometrical education, and established the College of Optometry. The entrance requirements were raised to Grade XII or an equivalent junior matriculation from another province, and the course was lengthened to two years. The basic science component of the course was provided by instruction at the University of Toronto. In 1936, entrance requirements were again raised--this time to Grade XIII or an equivalent senior matriculation. The programme was extended to three years. From 1920 to 1956 students received a "registered optometrist" diploma upon graduation. At first the diploma had little official status. What it provided for the graduate was the opportunity to sit for a provincial examination. Meanwhile, the College sought association with other optometric training institutions on the continent. In 1940 it became a charter member of the "Association of Schools and Colleges of Optometry".

In 1952 the College launched a new four year programme. Two years later the University of Toronto withdrew its arrangement to teach the basic sciences for the College. The College of Optometry reacted by reducing its own programme to a three year professional course, requiring entering students to have completed a pre-optometry year in science at a recognized university. It was found, however, that a general science programme did not prepare candidates for professional training as well as did a science programme tailored toward optometry. Thus, three years later in 1957, the College once more instructed the entire four year curriculum to entrants with a completed senior matriculation.

Beginning in 1956 the College conferred a "Doctor of Optometry" degree on graduating students. It was recognized as an undergraduate degree by all provincial associations. When the Ontario College became accredited by the Council on Education of the American Optometric Association in 1957, the degree enjoyed some additional status.

Optometric education in Canada changed considerably in response to the report of The Royal Commission on Health Care published in 1964. That Commission recommended that optometrical education be upgraded in the areas of anatomy, physiology, pathology and pharmacology and advised that "the present schools of optometry in Canada become affiliated with a University".[4] As a result L' Ecole d' Optometrie, the French school in Montreal, became affiliated with L' Universite de Montreal. It presently offers a four year professional course and requires applicants to have completed either a Bachelor of Arts degree or two years of science. Students completing the first two years of professional training receive a Bachelor of Science in Optometry (B.Sc.O.) degree. Those completing the four year programme receive a Licentiate of Science in Optometry (L.Sc.O.) degree.

The College of Optometry of Ontario relocated in 1948 and became a "School" within the faculty of science at the University of Waterloo. This school today requires a one-year science standing for entry to its four year professional programme. Graduating students receive a Doctor of Optometry degree. The preceding account of the Ontario College is included in some detail for the reason that the majority of optometrists practising in Manitoba are graduates

of that school. Of 63 optometrists currently registered in the province, only one is a graduate of the Quebec School.

The Manitoba statute governing the profession, as revised to 1972, specifies the following requirements for registration: the applicant must be twenty-one years of age, of good moral character, and a graduate of a college of optometry satisfactory to the Board of Examiners. Finally, he must successfully complete an examination as set out by the Board. The examining board is appointed by the Council of the Manitoba Optometric Society which in turn is elected by the registered membership. The requirements stated above vary little from the original act. Real control over qualifications is left in the hands of the members of the examining board who conduct the local examination and determine which colleges of optometry they consider acceptable.

Dr. Rod Small, a former officer of the Manitoba Optometric Society, indicated in an interview that today any graduate of a Canadian school is given a practical test only.[5] An immigrating candidate must undergo a written, oral and practical examination. Small is satisfied that the province has been adequately supplied with optometrists till quite recently. The future, however, will, in his opinion, demand at least one additional institution. The reasons for this lie both within and without Manitoba. The Ontario College, because it is funded primarily from within the province, has always given preference to Ontario applicants. In the late sixties this discriminated against candidates from other provinces to such an extent that the Manitoba government agreed to fund the cost of two student places at the College in order to be assured of

at least that number of candidates being accepted from this province.

The need for additional training facilities also arises from the tight supply of optometrists within Manitoba. Dr. E. J. Spearman of Killarney* expressed it this way in a letter to the writer dated August 28, 1978:

> I might mention that our approach to the University of Winnipeg was prompted by a critical need for another school of optometry in Canada. If such a school is not established within the next two years the sixty communities now being served by optometrists in Manitoba will be reduced to half that number by approximately 1987 due to the retirement of older optometrists in the intervening years.[6]

The increasing difficulty experienced by applicants from provinces other than Ontario in gaining entry to the Ontario College led to diligent efforts in the latter sixties by professional associations and governments of the four western provinces to establish a college in the west. As mentioned in Dr. Spearman's letter, the University of Winnipeg was one of the institutions approached on this matter. Dr. Duckworth, president of the University, confirmed that a letter from the Manitoba Optometric Society had been received early in 1971.[7] In April, 1971, at a meeting of the Planning and Development Board of the University, a committee of three was appointed to meet with representatives from the optometric association. Seemingly, the initial contacts indicated there was little purpose in pursuing such a move. While Dr. Duckworth was not involved at the time, he indicated that the University has turned down such approaches more than

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*Dr. Spearman was a member of the so-called "Western School Committee' in the early seventies. The writer's correspondence with Dr. Spearman was prompted by an interest in that Committee's efforts to establish a school of optometry in western Canada.

once on the grounds that it was not the institution's wish to attract professional schools to its campus, particularly not of a health profession. He continued by pointing out that all other professional schools related to health are part of the University of Manitoba. He also felt that the University of Winnipeg had no experience or expertise in health related professions. In short the University was not anxious to entertain such a proposal.

Dr. Herbert Moore, a Winnipeg optometrist, president of the Manitoba Optometric Society for five years during the 1950's, and presently a member of the Western School Committee confirmed the committee's attempts to discuss the matter with the University of Winnipeg.[8] He concurred that nothing beyond an initial contact was accomplished. He explained that, since 1971, the committee has directed its efforts toward establishing an affiliation with either the University of Victoria or the Calgary campus of the University of Alberta, now the University of Calgary. The committee concluded soon after their attempted contacts in this province that Manitoba institutions did not have the space nor the level of funding enjoyed by universities of other western provinces.

If existing schools of optometry have supplied Manitoba with an adequate number of practitioners to this time, have they also delivered the desired level of expertise? Questioned about the quality of professional service in the province, Dr. Small expressed satisfaction that the profession has been most diligent in living up to its mandate as outlined by the Act; he cited only one prosecution for non-compliance in recent years. It should be pointed out that in the case of the Manitoba Optometric Society, the functions of the

licencing body and the professional organization are vested in the same executive--a combination which might well result in the Association's pursuing a less diligent disciplinary role than if the two functions were executed under separate jurisdictions.

In the larger context Small noted that, because optometrists specialize in refractive techniques to correct visual problems, the medical profession, specifically the ophthalmologists, point out that optometrists are not properly qualified to make primary contact with the patient. While the optometrists resist such suggestions with the arguments that they are performing a useful service and that they refer patients with other than optical difficulties to an ophthalmologist, the Royal Commission on Health Services in its 1964 report supported the medical profession on this point. As evidence that schools of optometry did not provide adequate training in the recognition of pathological eye conditions, the report noted that, on an average, optometrists referred 4.4 per cent of their patients to an ophthalmologist; it then continued to say that "available data indicate the incidence of eye diseases, or diseases manifested in the eyes is around five per cent of the total population".[9] The strong implication is that such incidence would be much more frequent in the self selected group of people who seek the services of an optometrist. The debate between ophthalmologists and optometrists is most parallel to that between dentists and denturists.

Optometric training, thus, has always taken place outside Manitoba, and very likely will continue that way. The earliest practitioners in Manitoba could learn the art by way of apprenticeship training. After the 1909 legislation, formal training was a

requirement. Because of the absence of Canadian schools most optometrists received their training in the United States until the opening of the school in Toronto in 1920. Since that time aspiring candidates have relied almost exclusively on the Ontario school. The provincial government and the Manitoba Optometric Society are now jointly co-operating with governments and associations in the other three provinces concerned in efforts to establish a training facility in western Canada.

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CHAPTER IX

THE EDUCATION OF CHIROPRACTORS

Chiropractic is one branch of a group of three disciplines of health care which shun pharmacology and surgery as first options in restoring health. They are chiropractic, naturopathy, and osteopathy. Chiropractic means "the science and art of palpating and adjusting by hand only, the articulation of the human spinal column and other articulations".[1] The profession's beginnings are quite recent. While various types of "bonesetters" have existed for centuries, anything resembling a profession developed no sooner than the nineteenth century. During that century chiropractic, along with naturopathy and osteopathy, gained a measure of public acceptance in the United States and expanded steadily to become a significant component in the health care field.

In Canada this expansion never occurred. Canada had not shared the widespread incidence of proprietary schools as had the United States during the nineteenth century. Because early schools of chiropractic, osteopathy and naturopathy were all of this type, it was more difficult for them to find a favorable environment in this country than in the United States. Without indigenous training institution to act as "home base" the three professions remained in a state of disarray. The introduction of chiropractic, osteopathy and naturopathy into Canada occurred around 1900. Osteopathy and

naturopathy never gained a foothold; chiropractic fought an uphill battle for acceptance. The concerted opposition to chiropractic by the medical profession in every Canadian province not only severely retarded the development of the profession in this country, but also had a direct impact on the kind of training received by Canadian practitioners. To begin with, chiropractors were for some time unable to obtain legislation for their proper licensure. When such legislation was achieved, it varied considerably from province to province, depending on what could be obtained under the circumstances. The first occurred in Alberta in 1923, followed by British Columbia in 1934, Saskatchewan in 1943, Manitoba in 1945 and New Brunswick in 1958. Ontario chiropractors were covered by slightly different legislation in 1925 with the proclamation of the "Drugless Practitioner's Act".[2]

As a result, before 1950, Canada possessed a weak profession with a lack of uniformity in standards for practice, located alongside a much larger, expanding profession in the United States. Available chiropractic education prior to 1950 fell into two categories: training in small privately-owned establishments operating with little supervision, or training in an American college. Both avenues reflected the contemporary philosophy of the profession--that chiropractic was an alternative holistic approach to health--not a specialty within the broad field of medical science, but a superior, more natural option.

The first American college was The Palmer Chiropractic School established in 1895. This and other later colleges, while not presenting the sophisticated, scientific training they offer today,

quickly developed educational programmes of substance and were limited in scope only by their philosophy. This philosophy paralleled the philosophy of medicine prior to the Flexner report on medical education of 1910.[3] Such a philosophy rested on a narrow scientific base, attaching greater significance to the practical skills the trainee was accumulating. In chiropractic this meant a de-emphasis of the basic sciences and a strong emphasis on X-ray and manipulation. Dr. R. W. Rutherford, long-time Winnipeg chiropractor now residing at Lac du Bonnet, pointed out in an interview that the earliest American chiropractic schools were of greatly varying quality. He noted that, just as Flexner had recommended the closing of many medical colleges, so also the various other professional organizations had to take measures to close down those schools that were mere "diploma mills". The difference was that in chiropractic this process occurred twenty years later. By the 1930's, when Dr. Rutherford, Dr. Obie Baizley, Dr. Tony Isaacs, and other Manitoba veterans trekked south for their professional preparation, it appears that the colleges were on firm ground. While there was still an emphasis on clinical manipulative skills, the courses included a strong science component, the programmes were of three years' duration, and all schools required a grade twelve standing for entrance.

Canadian attempts did not fare so well. Several privately run schools existed in Ontario between 1908 and 1928. One of the earlier ones was the Canadian Chiropractic College established in 1913 in Hamilton. None of these private schools flourished. Manitoba had its own chiropractic college, spawned in the reckless

optimism of the twenties. It was a fairly short-lived primate venture, leaving behind little trace of its story. The Manitoba Chiropractor's Association, organized in 1945, is not in possession of any official record of the existence of such an institution. The Henderson Directory for the city of Winnipeg registers a "Royal Blue Chiropractic College" as a tenant in the Avenue Block, 265 Portage Avenue from 1922 to 1924.[4] For 1926 a "Manitoba School of Chiropractic" is registered as a tenant in the same building, but on a different floor. On first inquiry, most long-time Winnipeg chiropractors express curious surprise at the suggestion of such a school. Those who recall it seem to attach little import to the institution, regarding it as a fleeting private venture which failed. Fortunately, one of its graduates lives in Winnipeg.

Dr. Jim Davidson, a retired chiropractor, remembers well. He took his initial training in chiropractic at the "Royal Blue College of Chiropractic" from 1922 to 1925.[5] He was a member of the second class to enter its programme; two more classes followed him. The school was organized by a group of six or seven Winnipeg practitioners, a number of them with offices in the same building. Some of those associated with the school were Mr. Munro, Mr. Monk, Mr. Hopkinson, Miss Axford and Mr. Henderson.

The course consisted of three sessions of six months each, spread over three years. The programme placed a very heavy emphasis on anatomy, and while it sought to produce candidates skilled in manipulation, students spent more time studying theory then in doing practical work. The school operated from 1:00 P.M. to 10:00 P.M. with instructors coming at various times. All the teachers continued

their private practices. Teachers specialized in various fields such as muscles, blood vessels, nerves and bones. The school operated a clinic at no cost to the public. This provided ample opportunity for students' practical work. Dr. Davidson was one of a class of nineteen students all of whom had to have a Grade eleven standing to enter the school.

Was the school an institution of high quality? Davidson believes so. He insists that while it was in no way comparable to modern chiropractic colleges, it was better than average for its time. In support of this evaluation he cites that after receiving his diploma he went on to take further training at the "National School of Chiropractic" in Chicago, where, based on his Winnipeg training, he enjoyed an advantage over other students. He also found ready access to post-graduate training in New York. Dr. Davidson thus dismisses the suggestion that the school failed because of a lack of reputable instruction. He points out that by 1927, with many graduates staying in the city, there had developed a surplus of practitioners. This, in turn, led to a drop in enrolment which forced the school to close.

Dr. Davidson's positive assessment is not entirely confirmed by another retired local practitioner, Dr. Tony Isaacs. While not a graduate of the college, he worked for Dr. Munro, one of the principal figures in the school. Dr. Isaacs was not surprised at the "silence" about the school on the part of the association or individual chiropractors. His opinion, as shared in a recent interview, was that even if the instruction given at the college were of satisfactory quality, it represented an approach and a style from which

most Manitoba chiropractors today wish to dissociate themselves. The approach might be described as more charismatic than scientific. In Dr. Isaacs' own words, "it was not a very high class school, which the profession in the province is probably just as happy to forget about".[6] For instance, Munro, in his practice, used a technique called "practiclast"--a psychic approach in which he diagnosed and treated the patient by means of the vibrations emanating from the body. Such treatment, according to Isaacs, resulted in some rather marvellous cures, but also in some outstanding errors. The fact that today's professionals discredit such methods perhaps explains the silence regarding this chapter in the history of Manitoba chiropractic.

Between 1928 and 1945, there were no chiropractic schools in Canada, and all training had to be obtained in the United States. After World War II great strides were made both in the supervision and the education of the Canadian profession. The Manitoba Chiropractic Act of 1945 for the first time assured that unqualified practitioners would not ply their trade in the province.[7] The Act required all who wished to practise or continue practising to become licensed. Licensure required those who had been practising at least a year to furnish evidence of their qualifications and satisfactory moral character. The requirements were stringent enough to eliminate 52 per cent of the province's practitioners as not being able to meet the standards.[8] For persons wishing to become licensed after 1945 it was required that the applicant be of good moral character, possess at least Junior Matriculation and four years in an approved college of chiropractic and further, that he pass a provincial examination

prepared or approved by the examining board. This three person board was appointed by the general board of the Chiropractor's Association which in turn was elected by the registered membership. The subjects and practical skills to be examined were also listed in the act.

The same year, 1945, saw the opening of the first Canadian school of chiropractic, the "Canadian Memorial Chiropractic College", in Toronto, Ontario. "Memorial" in the name was added to pay tribute to the man who organized the first school in North America, Dr. Daniel David Palmer, a Canadian. At a meeting held in January, 1943, chiropractors from all over Canada had met to discuss the establishment of such a school "keyed to the Canadian situation with an emphasis on high academic training".[9] Two years later the Canadian Chiropractic Association was established. This was quickly followed by the opening of the College on September 18. These two sequential developments led to a strength and unity unprecedented in Canadian chiropractic. They would also indirectly raise the qualifications deemed adequate for Canadian practitioners.

The college, since its inception, has been entirely supported by tuition fees and levies on the practising profession. Numerous Manitoba students continued to obtain their training in American colleges after the opening of the Canadian institution. Gradually, however, the numbers going to Toronto increased. Of the chiropractors currently practising in Manitoba 80 per cent are graduates of the Canadian College.[10] The preprofessional requirements for entrance to the college are a minimum of two years study in a recognized Ontario university, college, or its equivalent in another province.

Three subjects which are specific requirements to be completed during those two years are biology, inorganic chemistry, and psychology.

The course itself is of four years' duration, divided among the four divisions of biological studies, clinical studies, chiropractic studies, and clinical training. Clinical training becomes increasingly intensive as the student progresses from his first to his fourth year. Coursework is examined at the end of each session. Clinical practice is continually evaluated. The fourth year student, in addition, must complete an independent research undertaking known as an "Investigative Project". Students thus proceed from basic sciences to diagnosis to chiropractic sciences and, eventually, to clinical practice.[11]

Upon graduation students receive the "Doctor of Chiropractic" degree. Because the College has no university affiliation at present, the degree rests on no such authority. However, Canadian Memorial Chiropractic College is an affiliate member of the United States Council on Chiropractic Education. This Council was first listed by the United States Office of Education as a nationally recognized accrediting agency in 1972. The degree's status derives from this authority. In April, 1978 a similar Council on Chiropractic Education was created in Canada. It is at present in the process of obtaining its charter as a recognized Canadian accrediting agency.

Subsequent to graduation, each candidate must write the Canadian Board examinations. The National Examining Board, established in 1963, operates under the auspices of the Canadian Chiropractic Association. Successful completion of these examinations

opens the way for the candidate to sit for licensure examinations in the province in which he wishes to practise.

Manitoba conducts its own examination in radiology and one or two other courses as well as administering a practical test for new applicants.[12] For licensure in the province, the candidate must be a member of both the Manitoba and Canadian professional organizations. A further condition for subsequent annual registration is attendance at the spring and fall seminars of eight hours each, organized by the Manitoba Chiropractor's Association.

A local chiropractor, Dr. Brian Baizley, suggests that while they are equally qualified to practise, there is a detectable difference in style among Manitoba practitioners which reflects differences between American and Canadian training programmes.[13] Persons trained in the United States, in line with the older American tradition, tend to think of chiropractic holistically, seeing it as an alternative to pharmacological and surgical medicine. Canadian trained persons are more inclined to think of their profession as a health specialty, dealing specifically with body mechanics and physical health. The Royal Commission on Health Services, appointed in the early sixties, saw the trend to specialization as an older one in the Canadian profession.

> It was mainly since the 1930's that chiropractors came to see their services no longer as a cure-all; it was increasingly recognized that neurological and muskuloskelatal configurations were not the only elements involved in human disabilities. Consequently, there appears to be an increasing tendency on the part of practitioners to view chiropractic as a specialty within the healing arts.[14]

It was this shift in the philosophy of the profession which probably was responsible for the greatly increased emphasis on the basic

sciences after World War II. The tendency to view their profession as one part of the whole also reduced the almost fanatic independent streak evident in the profession earlier.

The fact that a large portion of the Canadian profession no longer viewed itself as an isolated entity, but rather as one facet of the total health care system, had other implications. In the past, many practitioners saw any move toward affiliation as a sacrifice of independence, fraught with the risks of becoming absorbed by the medical profession. Now that the profession had satisfied itself and a portion of the public that chiropractic occupied a legitimate and defined role within total health care, the need to keep chiropractic training safely isolated from the general educational system diminished.

In recent years a number of factors have created the rationale for the ultimate close affiliation of Canadian Memorial Chiropractic College with a university. Increased public acceptance in the last twenty years has reduced some of the hesitancy on the part of practitioners to move in this direction. Dr. Rutherford reflects this changing viewpoint in the following comment:

> The best way to break down longstanding prejudices against chiropractors is to form a faculty at a recognized university and once and for all lay to rest the notion that there is something deficient in their training.[15]

A very practical consideration is cost. In the long run, the profession alone cannot provide the funding necessary to maintain a viable institution, complete with facilities for post-graduate research. Only University affiliation and concomitant public funding can relieve that burden. Independent studies are adding weight to

the argument. A recommendation of the Ontario Healing Arts Commission of 1974 stated that the chiropractic college should seek close affiliation with an established university.[16]

Such a move was vigorously pursued by a group of Manitobans in the mid-sixties. Their aim was to relocate the Toronto college and establish it as a faculty of chiropractic in one of the province's institutes of higher learning, other than the University of Manitoba. Involved in this effort were doctors R. W. Rutherford and Obie Baizley, well established Winnipeg chiropractors. Their initial inquiries were directed to the University of Winnipeg. Initial discussions with President Lockhart at an informal level indicated that the chances for such an arrangement at that University were remote. As with optometry, the University of Winnipeg was not anxious to add professional schools to its campus, particularly not health related professions*. Logically then, a faculty of chiropractic would be attached to a university with other health related faculties. Why was this not done, inside or outside Manitoba. Dr. Rutherford explained that most university medical schools have evolved powerful medical fraternities. Given the long standing rift between medicine and chiropractic, it would be very difficult to break into a campus with a medical faculty.

Because Brandon University had no medical faculty, it seemed to hold more promise. The president of the University in the 1960's,

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*See page 175 for a description of the University's reaction to requests by the Manitoba Optometric Society.

Dr. Robbins, was anxious to broaden the composition of the student body--something which a faculty of chiropractic would do in that its students would be drawn from many provinces and countries. Most important, Dr. Rutherford and Dr. Baizley personally knew a number of influential people within the University administration--people who appreciated their intent and would do all they could to facilitate such a move. Among these were Milton Holden, chairman of the Board of Governors, Dr. Cecil Webb, chiropractor and member of the board, and Maitland Steinkopf, chancellor of the University and cabinet minister of the government of the day.

Preliminary discussions proceeded smoothly. Before long, Dr. Moyer and Dr. McLeod, department heads within the science faculty were sent to the Canadian Memorial College in Toronto, the National College in Chicago and Palmer College in Davenport, Iowa, to observe firsthand the instructional programmes and facilities. They were convinced that such a faculty could fit well alongside the existing science programme. The dean of the Ontario college was subsequently invited to discuss programme, and a curriculum was designed that would be satisfactory to both the University and the profession. It was agreed that the science faculty would teach all the basic sciences and that the only major additions to the teaching staff would be faculty members to teach the professional and clinical courses. Coincidentally, the University was in the planning stages of expansion to its science buildings. Modifications necessary to accommodate the chiropractic faculty were made.

By 1968, all indications pointed to a successful arrangement. The Canadian Chiropractic Association saw Brandon as an excellent

choice of site. It could supply an adequate cross-section of clients for clinical work and the city apparently contained the population make-up and type of institutions which would facilitate projected post-graduate research programmes. Within the University, few, if any, stumbling blocks appeared. The building was designed, the curriculum finalized, and the Board of Governors had given their approval. Only Senate approval was needed. Dr. Rutherford, and Dr. Ferguson, another chiropractor, met with the Senate to answer questions and there appeared to be no concerns of any consequence.

Why did the affiliation never materialize? The events of 1969 read like a tragi-comedy, provided one does not belong to the chiropractic profession. It is difficult to conceive of fate playing more sinister pranks. The first blow was the sudden death of Maitland Steinkopf, the man who in his dual role as chancellor and provincial politician had been the driving spirit behind the project. The remaining setbacks were related to changing political winds. With the change in government from a Conservative to a New Democratic administration after the 1969 elections came many uncertainties and some abrupt reversals of policy. The Board of Governors of the University of Brandon were removed en masse and replaced with a new set of individuals unfamiliar, and apparently unimpressed, with the plans for a faculty of chiropractic. In the same year, strong criticism of the University's administration combined with political considerations led to the resignation of Dr. Robbins. Because of such turmoil, the University Grants Commission cut off all funds needed to implement the plans.

When questioned about why the profession allowed the setbacks to end in quiet defeat, Dr. Rutherford explained that the profession had great difficulty in establishing communication with the new provincial government. Furthermore, he pointed out that the change in government had jeopardized the status of chiropractic within the provincial medicare plan. The Chiropractors' Association had considerable difficulty establishing workable fee schedules under the new administration. These more pressing difficulties eclipsed the whole question of establishing a faculty of chiropractic in the province. As a result, the entire effort died with hardly a whisper. Today the Canadian Memorial Chiropractic College is in communication with Hamilton's McMaster University regarding affiliation.

Aside from the quest for affiliation, is the one college adequate for the whole country? Is Manitoba supplied with sufficient numbers of chiropractors? Are students from Manitoba able to gain entry to the Ontario college? The answer seems to be affirmative in all three cases. Because the school is administered by the Canadian Chiropractic Association and is funded by the entire Canadian membership, candidates from all provinces have equal access to the college. Manitoba today has 60 practising chiropractors. Another 30 candidates are currently studying at various levels of the four year training programme. It appears that the province's needs are being met. This does not mean that Canada will always have only one college. Dr. Al Hawkins, president of the Manitoba association, speculated in a recent interview that the present language legislation in Quebec may well accelerate the organization of a French speaking college in that province.[17]

In a number of respects, chiropractic education in Canada has been unique when compared to other health professions. It has never had a formalized apprenticeship programme. Most other professions at one time used that form of training. Chiropractic is the one profession which has taken its inspiration and much of its basic philosophy from the United States. This contrasts with the other health professions whose strongest ties have been with Britain and continental Europe. It is the only profession whose training institution remains outside the larger public educational framework of the university, and thus is not in receipt of any public funding. Whether its continued alienation is attributable to its slightly different cultural background, or to its longstanding feud with the Canadian medical profession, it is certain that the lack of favorable professional climate retarded both proper licensing and education until after World War II. Manitoba, too, has afforded neither the favorable climate nor the receptive soil necessary for the establishment of a chiropractic training institute. Both early and recent attempts ended in defeat.

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[9]Mills, Op. Cit., P. 113

[10]Dr. Allan Hawkins, Winnipeg, Manitoba, in an interview, August 16,1978

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[12]Dr. Al Hawkins, Winnipeg, in an interview, August 16, 1978

[13]Dr. Brian Baizley, Winnipeg, in an interview, August 22, 1978

[14]Mills, Op. Cit., P. 2

[15]Dr. R. W. Rutherford, Lac du Bonnet, Manitoba, in an interview, September 16, 1978

[16]Dr. Al Hawkins, Winnipeg, in a speech to an annual M.L.A./Chiropractors dinner, May 10, 1978

[17]Dr. Al Hawkins, in an interview, August 16, 1978

CHAPTER X

CONCLUSION

The purpose of this study as outlined in the introductory chapter was to trace, in a systematic way, the development of the training programmes of selected health professions in Manitoba. The thesis thus far has presented its findings in that manner, while also incorporating the writer's analytical and value judgments. The introduction further intimated that such a study would make it possible to discern trends and patterns common to the education of the professions under consideration, as well as to assess the interaction between training institutions and society. It is the intention at this point to bring together the numerous specific findings and to formulate some overall conclusions.

Trends and patterns emerge at various points, varying with the perspective or the frame of reference employed. One of the more striking patterns is the linear or sequential one. With the passing decades, all of the educational programmes follow a similar evolutionary pattern. The stages follow almost as consistently as the stages in human development. All pass through the same steps. Some begin earlier, some later. Each does not spend a fixed amount of time in each stage. Unlike human development, the late comers progress through the stages more quickly so that the maturity gap between the various programmes has narrowed. What are these steps?

Initially training was quite straightforward. Students would learn by firsthand observation and practice as apprentices. Their acceptance into such an apprenticeship was partly governed by formal educational requirements. However, their personal qualifications and interests played a large role as well. Thus training initially began with simple, practical, sometimes menial tasks, leading in time to the learning of more complicated procedures. Only after a period of "learning by doing" was the student deemed ready to supplement his training with formal study. The whole purpose of this form of training was to have the student become proficient in specific knowledge, tasks, and procedures. The size of this body of skills and facts was sufficiently limited that the learner could master them without a wider theoretical basis.

The rapid increase in medical knowledge beginning just prior to the turn of the century, and continuing at an ever-increasing pace, heralded a new type of education for the health professions. After 1900, many of the most helpful pharmaceutical, physical, or surgical remedies to illness were not arrived at by some chance practical discovery, but rather through systematic research into the nature of the body's normal functioning as well as its aberrations. Being able to utilize these new tools safely and effectively required the health professional to understand the theory of his discipline. The rapidly expanding body of medical knowledge precluded his acquiring an adequate training by means of rote learning and practical experience. Thus evolved the emphasis on the basic sciences. Translated into programme change it meant that the student studied theory prior to becoming involved in practical work. While medicine embraced

this mode of training immediately after World War I, other health professions such as nursing and chiropractic did not complete this transition till the 1940's. The strong emphasis on basic sciences led to a less personal, somewhat sterile mode of training and practice in which patients were regarded more as specimens with symptoms than as humans with problems. While it improved health care, it emphasized medical procedures and cures and ignored the patient's personal control over his health through his attitudes and habits.

The logical outcome or culmination to the basic sciences--clinical practice style was a strong thrust in the direction of research and specialization. Medicine reached its stride in this direction in the fifties. The other six professions flourished in this respect in the sixties and seventies. All are still involved in this continuing process. This stage in the sequence added to training the idea that education is not accomplished by the time of graduation, but rather that the scientific method must be an ongoing process in the life of the health professional. It resulted in a large scale fragmentation of health services, which by the seventies had become counterproductive in some instances, and certainly bewildering to the layman.

Finally, the late sixties saw the beginnings of a new emphasis--the attempt to humanize health services. While training programmes in no way ousted the scientific method, they added a new dimension. Much more emphasis was placed on the sociological and psychological characteristics of the clientele--the human element in sickness and health. Training programmes at this time concomitantly attempted to integrate the specialties and thus offset some

of the disjointed specialization being practised in the health system. Training once more emphasized the co-ordinating functions of the professional. This was particularly evident in medicine, pharmacy and nursing.

The sequential pattern described above did not spring up in Manitoba in an isolated fashion. Each stage was the result of the international status of the science and the practice of the discipline. The health professions historically have been quick to share discoveries and systems to the extent that they were politically and practically adaptable. Occasionally, as with the establishment of the medical college in 1883, in the training of dental auxiliaries in the early sixties, and in the case of medical research under Dr. Joe Doupe, Manitoba led the way. More often, as in the case of establishing the two year nursing programme, or a school of physiotherapy, Manitoba's position relative to other Canadian provinces was not in the vanguard.

Who maintained control over training institutions? An investigation of this question yields a second sequential pattern. Before World War II, control by the public was almost non-existent. Admittedly, the professions of medicine, dentistry, pharmacy, nursing, and optometry had been recognized by way of provincial legislation. However, that legislation had usually come at the urging of the profession. Control over training lay outside of governments. Medicine and pharmacy were firmly in the hands of the profession. Through personal commitment and financial sacrifice these professions had at an early date established and maintained their own training schools. Understandably, these institutions initially demonstrated a limited

scope, operating in ways convenient to the friends, families, and associates of the profession rather than being sensitive to the needs or wishes of the larger society. Chiropractic, in the 1920's, also began as a school operated by a group of professionals. It foundered because the group could not sustain the cost without a steady supply of students which was not forthcoming after a few years of operation. Nurses' training, too, began outside the sphere of governmental supervision. In this case education was not in the hands of the profession but was controlled by hospital boards or hospital administrators.

After World War II, the rapidly increasing costs of training health professionals elicited a parallel escalation in the public funding of their programmes. In the case of pharmacy and medicine this trend had begun earlier with the professional schools seeking recognition and financial assistance through affiliation with the University of Manitoba. It was after 1950, however, that a large scale infusion of public funds into these programmes resulted in a shift in control. Hospital nursing education programmes were the first to come under the scrutiny of the provincial government. Through financing arrangements and attendant regulations for eligibility, nursing education was affected. Medicine and pharmacy, being long established, retained greater influence for a longer period. With increasing frequency and to an ever greater extent, however, "funding approved" or "funding denied" dictated what could be implemented or retained in their programmes. With the introduction of national medicare plans and shared financing by various levels of government, control increasingly passed out of the hands of the

limited professional groups. In the case of nurses' education, contrary to the situation with respect to pharmacy and medicine, increased government involvement enhanced the influence of the profession.

By the late fifties when dentistry and physiotherapy established their schools in Manitoba it was understood from the outset to be a co-operative venture between the profession and the government. As always, the degree of public financing played a prominent role in decisions regarding facilities and programme. Optometry and chiropractic have been unsuccessful in their bids to establish schools in the province precisely because provincial governments have been less than anxious to invest in such training.

The transition from professional to public funding of such training did not eliminate all the shortcomings. Whereas professional or hospital control did not always serve the public with social conscience, government control necessarily subjected training programmes to the vagaries of party politics. The fortunes of a particular professional group often paralleled the inclinations of the party in office, or their perception of a specific need or crisis. In some cases decisions reflected the affiliations of key professionals and politicians. The schools of physiotherapy and dentistry were established under a sympathetic Liberal administration. The faculty of chiropractic at the University of Brandon seemed assured until the change of government in 1968. The century from 1870 to 1970 thus witnessed control over professional education passing from private or professional bodies to government, with the totality of that control

being less in the case of long established institutions initially begun by professional groups.

The preceding discussion illustrates the fact that professional training schools were not sole masters in their own house. Fiscal arrangements and the contemporary political climate had a direct impact on programme. In fact, the variety of factors having a bearing on the training of health professionals is noteworthy. A short treatment of this aspect will form the remainder of this summation.

For Manitoba programmes during the hundred years after 1870, a key area to consider is the earlier history of that profession's training. Events in the development of professional education in Manitoba are recent additions to a larger sequence which usually began elsewhere. This prelude was not the same for all seven professions. The schools of medicine and pharmacy were very much rooted in the British tradition. Most of the earliest teachers had trained in Britain or in Ontario where programmes were patterned mainly after the British anatomical schools. Physiotherapy, although a recently established course in Manitoba, shared such a British background. Prior to the establishment of the school in 1958, many physiotherapists came to Manitoba as Toronto graduates or as professionals immigrating directly from England.

The background of optometry and chiropractic was quite different. Professional training in these two fields was much more influenced by the American tradition. Chiropractic was dominated by American thought both because of the powerful state of the profession in the United States and because of the fact that, until 1945, most

Canadian chiropractors were trained in that country. Optometry, although it had had a Canadian training school since 1910, had only one English speaking institution in Canada--one school as contrasted to the many American schools with which it was associated. Its cues were often taken from south of the international border.

Nursing and dentistry programmes represented somewhat of a compromise between British and American schools of thought. Nurses' training began very much on the English model developed by Miss Nightingale. However, because training programmes in the United States and Canada followed a very similar pattern of development, they began to look to each other more than to European roots. Common problems and common strategies produced a close affinity. This was strengthened by the fact that many Canadian nurses took employment in larger United States centres in periods of high unemployment in Canada. Before establishing the dental faculty at the University of Manitoba in 1958, Dr. Neilson, the first dean, studied both Canadian and American institutions, producing a blended programme in this field as well. More recently, particularly since World War II, all health professions have felt the American influence much more keenly than earlier.

Fluctuating economic health in the country and the province has had direct and indirect impact on the training of the health professions. One facet of this becomes evident in tracing the dates when major new programmes or facilities were introduced. The medical college was established during Winnipeg's "boom town" days of the early 1880's. The "new" basic sciences programme with associated new facilities was introduced in the "roaring" twenties. Few changes

were made in programme, and none in major facilities during the depression of the thirties, during World War II or the post war slump which extended into the early fifties. The schools of physiotherapy and dentistry were established in the late fifties as post war prosperity made itself felt in Manitoba. Major changes in curricula and additions or improvements to facilities in the schools of pharmacy, medicine, and nursing were effected during the spendthrift sixties.

General economic prosperity since the fifties has given rise to another influencing factor--public attitudes concerning both the availability and nature of health care. A wealthier, more educated populace expressed their wishes more effectively and created new demands. Health care was no longer regarded as a privilege but as a fundamental right, perhaps even as a consumer commodity. This created the need for more dentists than could be trained by existing institutions outside Manitoba. Demand for more than remedial dental care at reasonable costs called forth the use of more auxiliaries in dental offices--hence the dental hygienist programmes. New hospital units for medical college clinical training had to be created because people no longer found it necessary to use the old public wards. National medicare plans meant that health care had to be delivered on a much more massive scale. These developments were all related to increased economic prosperity and required rapid and far reaching change in the scale and nature of professional training programmes in the province.

Whether the motives for establishing comprehensive investigations into health care or training were political, economic,

professional or otherwise, the reports produced had major effect. Documents such as the 1910 Flexner report on medical education[1] the 1932 Weir report on nursing education[2], and the 1964 Hall Commission report on health services[3] themselves acted to change the direction or emphasis in professional education. The Flexner report became a stimulus toward the establishment of a basic sciences curriculum in medicine; the Weir report became a yardstick against which nursing groups measured actual conditions until the sixties. By systematically analyzing needs and problems, such studies became instrumental in the solutions to those conditions.

While factors cited thus far are more or less removed from the practitioners it is not the intention to overlook their influence over their own education. Whether acting independently, through a professional organization or as a lobby over against the provincial government, they have had much to do with the establishment and upgrading of their training. Establishing a licensing and registration system under statute usually came at the initiative of a group within the profession. Through its licensing act the profession could set the standard for incoming practitioners, thus affecting directly the length, intensity and nature of the training programmes. While each of the health professions included in this discussion no doubt continues to seek a greater measure of control over the training of those entering their profession, their degree of influence has, in fact, been comparatively strong. One reason for this strength is the considerable interest and solidarity within each professional group.

All seven groups display strong identification with, and approval of, their respective school, be it in Manitoba or elsewhere. While individuals voice cases of dissatisfaction with certain instructors or certain programme emphases, in general the professions express strong support for the schools. The cynical half-jocular remark that "all that dentists are interested in is getting rich; they have no independent viewpoint on their education as long as it gets them into the profession", is quite unrepresentative of the majority opinion. What might account for this overall solidarity?

On the whole, training toward a health profession is fairly lengthy and for many, strenuous. Without an initial strong sense of commitment, few complete that training. Once enrolled in the course, the experience of continuous instruction, study and clinical practice over a period of years must act to reinforce that commitment. With each passing year the student has more time, effort and funds invested, making him ever more committed to successful completion and practice within the profession as it exists. Furthermore, the programme is largely concentrated on the science itself, not on the philosophical basis of the programme. This concentration begins in the prerequisite years as students focus their studies toward the professional school they hope to enter. Thus, the student has limited tools with which to evaluate his own training. The length of training combined with the limited number of professionals in each group both contribute to a solidarity that discourages strong dissent from established practice. In Manitoba this cohesion and conservatism is reinforced by less buoyant economics than found in other provinces.

This has produced training institutions and professions which have pursued a course firmly rooted in past experience. While such an orientation may on occasion curb originality, it also precludes their being easy prey to poorly founded innovations clamoring for attention; certainly such an emphasis imparts a solidarity to the profession. Perhaps a further contributing factor arises from the fact that in the case of five professions, dentistry, nursing, pharmacy, optometry and chiropractic, the licensing authority and professional organization are vested in the same executive body. Only in the case of the nursing profession has there been a strong voice of dissatisfaction over training programmes. As nurses have been given more input, this voice of dissent has also diminished.

Professional groups have affected professional training in another way. Professional lobbies, especially older, more powerful ones like the medical group, had a decided effect on other professions. The physiotherapists wooed their support to organize a training programme. The chiropractors were not so inclined and suffered the duress of official exclusion from the health field much longer than most other professions. The converse has been that the growing strength of groups like pharmacy, nursing, and dentistry have necessitated medicine's redefining its role within the spectrum of health services. All professional groups have pushed hard for greater professional status, through increased qualifications. This fact, aside from the needs of the science itself, has tended to produce higher entrance requirements, longer training programmes, greater specialization and a wider scientific base. The attempt to gain recognition by means of strong educational programmes is particularly marked

among the less well established professions such as chiropractic, dental hygiene, and physiotherapy.

Finally it is necessary to recognize the impact of certain individuals. Admittedly, they were a product of the times. Beyond such context, however, they possessed the vision, intelligence, and force of personality to grasp the opportunities of their day and consolidate them into permanent steps forward. Kerr set the direction for the fledgling medical college; Professor Bletcher was the early college of pharmacy; Doupe left a lasting imprint on the faculty of medicine, and the success of the school of physiotherapy must in part be attributed to the strong efforts of Spence and Stackhayden.

It becomes apparent, then, that the history of the education of the health professions in Manitoba grew out of the interplay of many factors--social, political, economic, professional, and personal. With all these forces in play, it is not surprising that at times the direction of a health profession's training appeared somewhat schizophrenic; rather it is remarkable that the threads of continuity and progress can be traced at all.

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