THE MONTREAL MATERNITY, 1843-1926: EVOLUTION OF A HOSPITAL

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ABSTRACT

The Montreal Maternity underwent fundamental changes during its eighty-three year history. Between the time of its opening in 1843--by McGill University's Faculty of Medicine--and the 1880s and 1890s it attracted mostly poor working-class women, who entered the hospital because of its commitment to social assistance rather than because it offered superior medical care. The Maternity's educational function (whereby medical students learned clinical obstetrics) was largely undeveloped: there was little incentive for frequent student attendance, no organized program of instruction, and minimal participation by physicians.

Beginning in the last two decades of the nineteenth century the hospital changed substantially. Annual patient admissions grew enormously; along with working-class patients the Maternity was beginning to attract wealthy middle-class women who were accommodated in private wards. Developments in obstetrical therapeutics served both to improve hospital deathrates and to encourage the hospitalization of birth, by making it a much more medically-oriented event. Programs for the clinical training both of medical students and nurses were reorganized and made more demanding, with Maternity physicians much more involved in the process of instruction.

RESUME

L'hôpital "Montreal Maternity" a subi des transformations fondamentales pendant ses quatre-vingt trois années d'existence. Entre son ouverture en 1843--par la faculté de médecine de l'Université McGill--et les années 1880 et 1890, l'hôpital attire, pour la plupart, des femmes venant de la classe ouvrière qui y entrent à cause de l'assistance sociale accordée à l'hôpital, plutôt que pour la présence de soins médicaux supérieurs. La fonction éducative de l'hôpital, c'est-à-dire, l'enseignement de l'obstétrique clinique y est très sous-développé; il existe peu d'incitation pour les étudiants à fréquenter l'hôpital, aucun programme d'instruction organisé et une participation minimale des médecins.

Cependant, durant les deux derniers décennies du dix-neuvième siècle des changements substantiels se produisent. On constate une augmentation énorme du nombre des patients admis chaque année. Les développements dans le domaine de la thérapeutique obstétrique servent à réduire le taux de mortalité à l'hôpital et à encourager l'hospitalisation pour la naissance par la constitution de celle-ci en acte médical. En plus des patients issus de la classe ouvrière, la maternité commence à attirer des femmes bourgeoises qui sont installées dans des salles privées. Les programmes de l'enseignement clinique pour les étudiants en médecine et pour les infirmières sont réorganisés. Ils deviennent plus exigeants et demandent une participation accrue des médecins de la maternité dans le processus de l'enseignement.

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PREFACE

The Montreal Maternity Hospital was opened by the medical faculty of McGill University in 1843. Known at the time as the University Lying-In Hospital, it began its existence in a rented house containing a few beds borrowed from another hospital associated with McGill, the Montreal General. The Montreal Maternity was a voluntary hospital, supported by donations and administered privately.

When the Maternity opened, McGill professors were, for the first time, gaining access to obstetrics cases in a hospital setting. At the time, pregnant women were not admitted to the Montreal General nor apparently to any of Montreal's general hospitals except in emergencies. In 1843 there was only one other maternity hospital in the city, the Montreal Lying-In Hospital, which had begun operation in 1841. It was not open to McGill faculty or students since it was run by a professor connected with a rival medical school, l'Ecole de médecine et de chirurgie de Montréal.

The establishment of the Montreal Maternity fulfilled three important needs: it extended the medical facilities available in the city for women about to give birth, it allowed McGill's doctors to have access to a hospital where

obstetrics cases were treated, and it served as a clinical environment where McGill students could gain practical experience. In its educational role the Montreal Maternity was actually making history: it, and its rival Montreal Lying-In Hospital, were amongst the first in North America to allow students to witness childbirth.

McGill's medical faculty always retained its control over medical matters at the Montreal Maternity. Except in certain circumstances only physicians connected with the hospital--professors and graduates--were allowed to treat patients there, or work as residents, or do consultations. Administration of the hospital was handled by the Committee of Management. Organized soon after 1843 and in charge of all non-medical matters, this committee was composed of women who volunteered their time to what they deemed a charity institution. The First Directress was the Committee's chief executive, and she was assisted in executive matters by a Second and Third Directress. The efforts of the ladies of the Committee resembled those of lay trustees in other voluntary hospitals. However, in most other hospitals, such trustees were usually men. These middle-class women were the wives or daughters of entrepreneurs, merchants, doctors, or other professionals. The Committee of Management occasionally challenged the dominance of the medical administrators of the

hospital, but usually worked harmoniously with them to execute what appears to have been a shared perception of the Montreal Maternity's evolving function.[1]

The Montreal Maternity grew substantially over the years and relocated several times. In 1852 it settled into another converted house, where it remained until 1905. It then moved into a specially-constructed building on the corner of St. Urbain and Prince Arthur Streets--now the Jeanne d'Arc Hospital. Soon finding this building insufficient, the Maternity entered into negotiations with the Royal Victoria Hospital (established in 1893) for the amalgamation of the two institutions. In 1926 the Maternity was relocated in the Women's Pavilion, which became known as the Royal Victoria-Montreal Maternity Hospital.

This growth of its physical environment is symptomatic of the medical transformation that affected the Montreal Maternity's orientation, size, patient population, obstetrical therapeutics and educational function. During its first half-decade of existence the Maternity was better described as a charity which offered medical assistance, rather than as a hospital in the modern sense of the term. Its patients, like those of other similar institutions of its day, were usually poor or working-class women who needed shelter as much as a birth attendant. Its medical

staff consisted of a midwife, and one or more nurses. While McGill's obstetrics professor was also designated chief obstetrician at the Maternity, neither he nor other McGill doctors appear to have devoted much time to caring for its patients, to instructing the students at the hospital, or in an administrative capacity. Because the physicians' involvement with the Maternity was minimal the hospital was largely run by the Committee of Management. These administrators, influenced by Victorian moral standards, imposed their own priorities on the hospital. They set up a strict code of behaviour and imposed religious instruction on the hospital's predominantly poor and unmarried patients.

In the last two decades of the nineteenth century the hospital began to change dramatically. McGill's doctors, re-evaluating the role of the hospital as a centre for obstetrical therapeutics, took a much more active interest in the Montreal Maternity. First, they coopted medical and educational duties by eliminating the midwife and replacing her with a staff of resident doctors and a group of male instructors who were medical school graduates. They also began to participate to a much greater degree in the hospital's administration, forming themselves into a formal governing body, the Medical Board, which paralleled the structure of the Committee of Management.

The patient population changed as well. Annual patient admissions increased enormously, from an average of just under 110 between 1843 and 1890 to over 1600 in 1925. Part of this growth was related to the arrival of an entirely new group of patients at the hospital. Of middle-class background and wealthy enough to afford substantial hospital fees, these private patients were accommodated in special rooms, were exempted from being examined by medical students, were attended by their own physicians regardless of whether they were on the Maternity staff, and were carefully segregated from public ward patients. The advent of private patients was a sign that the Montreal Maternity was increasingly perceived as a medical facility rather than as a charity.

However, while its role as a medical facility became dominant, the Montreal Maternity never abandoned its charitable responsibilities. Indeed its social functions expanded: while continuing to accept poor patients free of charge it broadened its facilities for aiding poor married women who were delivered in their own homes. A social service department was set up to serve as a referral service for needy patients and as a means of offering advice and assistance.

Evolving medical therapeutics was a central factor in the Montreal Maternity's transformation. Between 1880 and 1920 the effects of the therapeutic revolution--antisepsis and asepsis, anaesthesia etc.--had an enormous impact on the

medical treatment of patients at the Montreal Maternity. By promoting the hospitalization and medicalization of birth the hospital was slowly becoming the centre of obstetrical care. Women were encouraged to believe that pregnancy and childbirth were fraught with problems and that the hospital offered unparalleled facilities for emergency care. The developing therapeutics also helped make the hospital environment more attractive to physicians.

The training programs for medical students and nurses at the Maternity also underwent significant change. Clinical obstetrics became a central part of the training of medical students, and the Maternity's clinical teaching program was lengthened, and made more thorough. The program for training nurses, profoundly influenced by the reforms of Florence Nightingale, was also revised.

The evolution of the Montreal Maternity is the central theme of this thesis. Unlike conventional hospital histories, this one will not include long lists of illustrious doctors and generous benefactors. Rather, it will have more in common with the recent studies of medical historians like Charles Rosenberg and Morris Vogel.[2] These researchers, influenced by the work of other social historians, try to understand the hospital--the relationship between administrative groups, patients' response to the hospital environ-

ment, the effect of such external forces as urbanization and internal ones like the therapeutic revolution--instead of simply describing it.

The Montreal Maternity provides an excellent opportunity to study a hospital in transition. Numerous primary sources exist and the institution, while manageable was large enough to be well-documented and to repay exhaustive study. Finally, the timespan of the hospital--1843 to 1926--is an important period for the social or medical historian: the second half of the nineteenth and beginning of the twentieth centuries were crucial periods in the history of medicine and hospitals in general, and also coincided with important transitions occurring in Montreal, namely industrialization and urbanization.

CHAPTER 1

THE EARLY PERIOD OF THE MONTREAL MATERNITY: CHARITY FUNCTIONS PREDOMINATE

To understand the Montreal Maternity of the mid-nineteenth century in terms of its present-day equivalent is to misunderstand it. The "lying-in" of one hundred years ago was not perceived as a state-of-the-art medical facility, claiming to offer the most advanced obstetrical therapeutics available. Nor was it the obvious choice as a birthsite for women with high-risk pregnancies. These characteristics of the maternity hospital would only begin to emerge around the turn of the century.

Instead, the Montreal Maternity's primary role during its early period--1843 to the last decades of the nineteenth century--was that of a charity. The vast majority of its patients consisted of working class women of little financial means. Unmarried mothers made up a significant proportion of the patient population. These women chose hospitalization, not because it was superior to home birth, but because they could not afford to have a doctor or midwife attend them at home. Many had nowhere else to give birth, as was frequently the case with recent immigrants and single mothers.

The administrators of the Maternity recognized their

obligation to admit and care for these women. Those patients who could not afford to pay for their accommodations were admitted free of charge. However, something was expected of them in return. The Ladies of the Committee of Management, true to their Victorian ideals, believed it their duty to attempt to socialize these women. Wayward patients had to be instilled with moral and religious values, and were expected to embrace the new way of life endorsed by the administrators.

The dominance of the charity aspect of the Montreal Maternity can also be accounted for by examining the behaviour of the hospital's medical personnel. Physicians seem to have taken little interest in the affairs of the hospital, either on the medical or the administrative level. This attitude is not surprising given the nature of obstetrical therapeutics at that time and the minimal role played by the maternity hospital within that orientation. Precisely because the doctors were not, at this stage, actively involved in hospital affairs, the Committee of Management's ideas about how the hospital should be run went unchallenged; the Committee's central concern--charity--consequently became the hospital's primary area of importance.

Nor were the Maternity's educational functions as much of a priority as its charity ones. Its program of clinical

obstetrics for medical students was perfunctory in many respects. Some students were able to pass through the system with very little experience in childbirth procedure, and especially in the handling of abnormal or complicated births. Here too, McGill's physicians were only tangentially involved.

A Charity Institution

An examination of the Maternity's patient population reveals it to be composed primarily of women who required charity assistance. The single most important group of needy patients was unwed mothers. These women usually comprised the majority of patients at the hospital during the early period. For example, just over one half of the patients admitted in 1953--71 of 127--were unmarried, while almost three-quarters of those admitted during the decade 1876-1885 were single. Only in the 1890s did the proportion of unmarried decline.[1]

Irish immigrants were another group in need of assistance. Massive mid-century Irish immigration swelled the ranks of patients at the hospital. In fact, the percentage of Irish-born women often far outweighed that of the Canadian-born group. Of the 127 patients in 1853, for example,

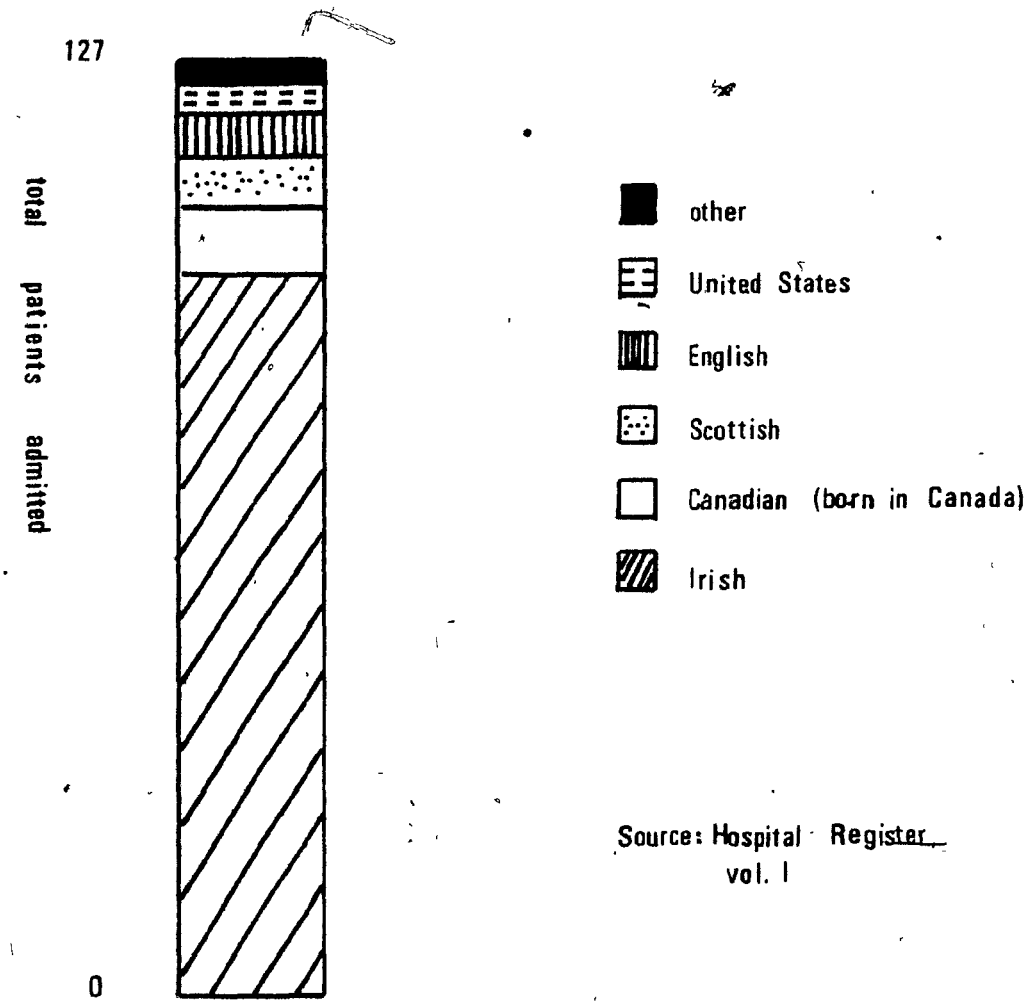
only nine were Canadian-born while the Irish contingent accounted for over three-quarters (98 of 127) of all patients (figure 1.1). Irish patients continued to dominate through the 1850s and into the 1860s. The impoverished condition of these patients is demonstrated by the hospital's repeated requests to the government for reimbursement of its medical expenses for Irish patients.[2]

One indication of the financial difficulties of the Maternity's patient population is the length of time each patient spent at the hospital before she went into labour. 1853 statistics (see figure 1.2) show that thirty-two, or about one-quarter of all women admitted in that year were in the hospital more than twenty-five days before giving birth. In 1884, the proportion was about the same.[3]

Some of the patients who spent a long time at the hospital before giving birth may have been ill during their pregnancy.[4] However, this group was undoubtedly small, since prenatal care was minimal before 1900 and there was little that could be done to prevent an abnormal delivery even if a woman were known to be in medical distress. Most of the long-term residents of the hospital were "waiting patients"--women admitted on the basis of social or financial, as well as medical factors. Permission for married women to enter as waiting patients was granted "if a case

Figure 1.1

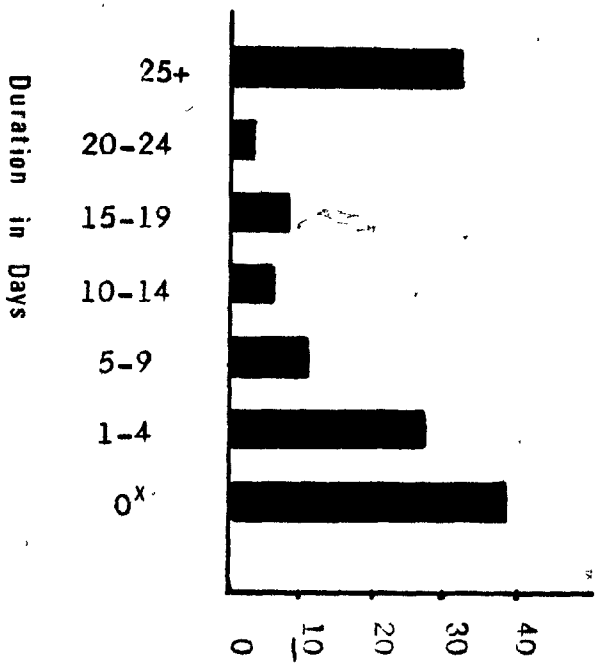
Nationality of Patients, Montreal Maternity, 1853



Source: Hospital Register, vol. I

Figure 1.2

Patients' Duration of Hospital Stay Before the Birth of the Child, Montreal Maternity, 1853



Source Hospital Register, vol. I

Duration unknown in two cases

x ie. women who gave birth on the day they were admitted

of distress or destitution be presented." Unmarried women were admitted

> in consequence of the want of proper asylums for the casual poor and lonely female, where a Priest, Clergyman or Minister, or Parent or Guardian, requests a refuge for some young female....[5]

Clear evidence of the good health of waiting patients was that they were expected to assist in housekeeping duties around the hospital.[6]

Finally, the poverty of the Maternity's patients is demonstrated by patient fees. While it is difficult to estimate how many women were exempted from paying for accommodation at the hospital, what little material does exist concerning patient fees confirms the presence of a substantial group of non-paying women.[7] For example, an annual report of the hospital lists a total of 171 women admitted between September 1, 1846 and August 31, 1847. During that twelve-month period a total of £21/15/0 was taken in as patient fees, when the charge per week appears to have been a minimum of seven shillings and ten pence--receipts equivalent to 58 patients paying for one week's stay at the hospital. Moreover, since the average duration of hospital stay was more than seven days, the number of patients who paid their whole medical bill was even less than 58. Similarly, in 1850 when ten shillings was the weekly charge,

224 patients brought in £9/12/6--the equivalent of some 19 women paying full fees for one week. And a year later 145 patients brought in £20/16/6 at ten shillings per week, equivalent to only about 40 patients staying one week at the full rate.[8]

There are other ways in which the Montreal Maternity helped poor patients, besides admitting them early or free of charge. The hospital's administrators were actively involved in a network of charity and public-assistance agencies in Montreal. The Maternity acted as an information and referral centre, to guide its patients to related organizations. For example, mothers were put in contact with the Grey Nuns Foundling Hospital if they were compelled to give up their children. The Maternity also maintained contacts with the Protestant Orphan Asylum.[9] The hospital also served as a referral centre for affluent mothers who sought wetnurses. This was seen as a chance for some patients to find employment once they left the Maternity. Those who had lost or given up their babies were--for a fee--put in contact with their wealthier counterparts. Mothers employing wetnurses were also charged a fee unless they had already donated funds to the hospital.[10]

The Religious and Moral Dimension

There was a moral and religious dimension inherent in the Montreal Maternity's social role. Sources reveal a strong commitment to moral instruction of patients and the desire to improve their behaviour not only in the hospital, but in the community.

Hospital administrators used several tactics to maintain strict discipline in the wards. Excerpts from the Maternity's bylaws of 1858 include the following:

> The patients shall breakfast at eight o'clock in the summer and nine in the winter, and shall dine at one and sup at seven. They shall go to bed at nine in summer and eight in winter.
>
> No liquors or provisions of any kind shall be brought to the patients by their friends.
>
> Patients are not without permission to leave their respective wards.[11]

In addition, visiting privileges were very restricted.[12] Those who transgressed the rules were liable to be expelled: records reveal instances of patients being asked to leave and not to return until just before the onset of labour.[13] Religious values were enforced. The bylaws of 1859 designated prayers to be read in the wards twice daily; bible classes were held at the hospital as late as 1898.[14] Religious services--presumably Protestant although

a significant proportion of the patients was non-Protestant--were apparently held as late as 1926.

Attempts were made to influence patient behaviour after they were discharged from the hospital. As the matron explained in 1889, "so far as it is within my power to keep alive sympathy between old patients and ourselves it has been my earnest endeavor to do so, in order that we may help them to amend their lives and avoid temptation in future."[15]

What was the motivation behind the administrators' efforts? The emphasis on religion and morality at the Montreal Maternity was typical of Victorian charity. Social assistance was linked with an attempt to reform people who did not abide by the laws and standards governing society. When the poor turned to philanthropists, aid was bestowed on certain conditions: recipients were obliged to accept religious and civic instruction.[16] The ideology and social function of charity may simply have resulted from the preoccupation of the Victorian bourgeoisie to promulgate morals and appropriate social behaviour. Alternately, these efforts at discipline, religion and behaviour modification may have been designed to reinforce the social power of the middle class. Whatever the motive of the Montreal Maternity's managers, they worked from the premise that what they did was right, good, and necessary. They seemed

convinced that the poor women who utilized their facilities should be given a chance to 'amend their lives'. In the minds of the administrators, illegitimacy was linked with immorality; the unwed mother in particular had to be reformed. Thus, reinforcing their conviction (and serving as a confirmation that the patients needed such attention) was the fact that through most of the century the majority of mothers was unmarried.

Charles Rosenberg has questioned whether these efforts to influence morals had much effect on the patients, explaining that administrators had little actual contact with the patients. Patients' primary contact was with the nurses and servants who worked in the hospital--groups whose sense of religion and morality had more in common with patients' attitudes than with those of their employers. As Rosenberg explained:

> ...the everyday realities of the ward were... significant...in insulating the patient from the full impact of the social values which informed the attitudes of trustees and attending physicians. Both public and private hospitals seem to have been administered on a day-to-day basis by individuals who failed in some measure to share the moralistic assumptions of those individuals who wrote the formal rules.[17]

Rosenberg's explanation for the marginal success in the propogation of bourgeois values is supported by the Montreal Maternity experience. Contact between patients

and trustees was theoretically ensured by sending "visitors" to the wards. These visitors--members of the Committee of Management or important donors--had virtual inspection powers in the wards; in the process of inspection, they undoubtedly also preached and chatted to the patients.[18] The Maternity's matron resided at the hospital and was invariably a strong supporter of the ideals of her superiors.

Despite these influences, patients dealt largely with servants and nurses--occupational groups that apparently lacked the crusading spirit. In fact, these hospital workers were members of the same social group which the hospital administrators were trying to reform. As will be demonstrated in chapter five, nursing prior to the 1880s was very close to being an unskilled occupation: it was certainly a working-class occupation. Moreover, many of the servants were past patients.

Available material suggests that friendly relationships did take place between the patients and the support staff. For example, a laundress was fired in 1893 because of her "interference with the patients, lending them money and so on." That hospital workers had a negative influence on patients was revealed in 1894, when the hospital's matron complained that "the cook...is being constantly visited by a former patient, a very rough girl. I am told

that their talk is very bad and low."[19] This affinity between staff and patients was reinforced by the help with household duties that waiting patients and others that were healthy and ambulatory gave to nurses and servants. In addition, examples abound of the gap between the ideals of the administrators and the reality of the patient experience. In 1850 patients were reported as stealing apples from a neighbourhood orchard. In 1864 one woman was found to have liquor in her possession, for which she had traded some bread from the hospital.[20]

The Minimal Involvement of Physicians

It is clear then, that charity was a central concern of hospital administrators and the generating impulse behind much of the Montreal Maternity's routine in the early years. The primacy of the charity role was reinforced by the behaviour of the hospital's medical staff.

Officially, the Maternity's chief obstetrician (always McGill's professor of obstetrics) controlled all medical aspects of the hospital's management. He was to determine the kind of treatment to be given to the patients, evaluate medical statistics, and assist the hospital's regular staff "in cases of doubt or difficulty."[21] There was no

resident physician on staff; a midwife handled all routine deliveries and sent for the chief obstetrician when problems arose. Because the chief obstetrician was the only birth attendant qualified to administer medication, use forceps, and carry out emergency interventionary measures, one might expect him to be in close touch with what was happening in the wards. However, there is evidence that he did not attend the hospital with any regularity. In 1864 a midwife threatened to resign unless regular medical attention was guaranteed.[22] A student who took his clinical instruction at the hospital in the early 1870s reported that over a summer he never once saw the chief obstetrician there.[23] And in 1863 the Committee of Management petitioned the physicians for the appointment of a resident doctor "in consequence of the great increase of patients, together with the serious illness of several /and the/ death of another. Also that the present Medical Attendant not being able /sic/ to give sufficient time and attendance."[24]

The chief obstetrician, as well as the Maternity's Medical Board of Physicians (consisting of the medical faculty of McGill) also had administrative duties. Here, too, their involvement was minimal. Although ex-officio members of the Committee of Management until 1887, the

medical staff rarely attended Committee meetings until the 1870s.[25] What little business the doctors did attend to, took place at medical faculty meetings.

After 1870 the medical staff began to take a more active interest in the affairs of the Montreal Maternity largely because of the decision to construct a new building to house the hospital.[26] During the search for a hospital site physicians took a higher profile at Committee meetings: two were appointed to a building committee along with the First Directress of the Committee of Management.[27] However, the physicians made no important changes in the medical arrangement of the hospital until the end of the 1870s.

The physicians' minimal involvement in the early years of the Maternity must be understood from a nineteenth-century perspective, and can in part be explained by the orientation of obstetrical therapeutics at that time. First, the central role of the physician in the birth process was not taken for granted. The transformation of responsibility for the birth from the midwife to the doctor--the product of a strategy on the part of medical men to control all aspects of medicine--had only recently begun. Doctors were only starting to get used to being admitted into the lying-in room on a regular basis, and still dealing with public opinion against their entry into these rooms except in emergen-

cies.[28] Especially for working-class women--the vast majority of Maternity patients--the presence of the midwife during a normal delivery was deemed sufficient.[29]

Second, the accepted approach to obstetrical care saw the physician in a more passive role than in the twentieth century. The overall attitude to obstetrical intervention was conservative, letting nature take its course whenever possible. Medical opinions about the use of forceps reflect this attitude. Forceps were a means of assuring doctors' supremacy as birth attendant. The right to use forceps was a major distinction between physicians, who had developed and employed them since the seventeenth century, and midwives, who had traditionally been prohibited from using them and who were, even as late as 1917, expressly warned away from them by Quebec's College of Physicians and Surgeons.[30] However, the attitude of elite Canadian physicians towards forceps at mid-century was cautious. Many influential obstetricians opposed frequent forceps use, and criticized doctors who disagreed. Supporting an obstetrical text which scorned an overly-liberal use of forceps, a reviewer in the British American /medical/ Journal noted:

> ...there is one circumstance which will commend the volume to every true physician, every enlightened friend of humanity, and it consists in the author's stern, uncompromising disapprobation of instrumental delivery, except under the most imperious circumstances....[31]

The conservative approach meant that intervention was relatively infrequent.[32] Indications of this may be found in early medical records at the Montreal Maternity. For example, some patients remained in labour for inordinate periods of time--at least one patient for thirty-six hours--without any intervention at all.[33] In light of this obstetrical philosophy then, it appears that the chief obstetrician's presence at the Maternity was only infrequently considered necessary.

Third, doctors' participation in medical matters at the hospital, however minimal, was sufficient by nineteenth-century standards to enhance their status as clinical as well as theoretical experts in obstetrics. The shift toward clinical medicine, which began in France toward the end of the eighteenth century, emphasized the fact that observation was the basis of medical knowledge.[34] The hospital environment was the only place for this type of analysis, and clinical appointments gave physicians a chance to display their own commitment to clinical medicine. Once McGill's professors of obstetrics received their appointment as chief obstetrician of the Maternity, they reaped the benefits both of having a suitable environment for clinical study, and of the added status which went with the appointment. Being in charge of the hospital gave them more re-

spect in the eyes of their private patients, but did not oblige them to participate actively in hospital affairs. They could focus on interesting cases while leaving the routine ones to the midwife. The position also enabled them to publish the results of the treatment of hospital patients under their care.[35]

Yet another reason for doctors' minimal involvement in the Montreal Maternity had to do with the relationship between hospitalization and childbirth. As mentioned above, the hospital was not yet essential to obstetrical therapeutics. Obstetrical technology did not require any equipment which had to be located permanently at a hospital; the doctors' main resources were forceps, medicines (including anaesthesia, which for the most part consisted of a bottle of ether or chloroform and a small apparatus for administering it), scissors, and other things that were easily transported. Further, there was no systematic routine prenatal care, either at home or in the hospital. In the event of a medical crisis which necessitated monitoring the nurses of the Maternity, who, at least until the 1880s were untrained, in short supply, and little more than servants in terms of the jobs they did, were probably no more help to the patient than a private nurse, or even a friend or relative, caring for the patient at home.[36]

The Educational Role

In the mid nineteenth century the hospital's educational functions were in a primitive stage and here, too, the physicians played a minor role. In the tradition of obstetrics in France, the midwife supervised the practical training of students, each of whom had taken at least one of the two required courses in theoretical obstetrics at McGill.[37] When a patient went into labour, the midwife contacted students to witness the birth. While it is unclear how many students gathered for each birth it was apparently more than one. Those with more experience were, with the midwife's guidance, eventually given the charge of a birth.[38] The number of students who availed of this opportunity for clinical instruction ranged from less than twenty per year in the late 1840s, to sixty-three by 1879.[39]

One difficulty with this organization was that the clinical experience acquired by some students was minimal. Indeed, before 1870 there was no requirement for students to attend a birth as a prerequisite to graduation. After 1870 students had to attend the hospital for six months and be present for six births to qualify.[40] Nor was the disposition of student time in the hospital spelled out. This meant that students who were committed to making the most of

the opportunity for clinical instruction had to do more than satisfy the basic prerequisites. Many attended more than six births. The more dedicated students probably also went out of their way to be present at complicated births, as the chances of witnessing even one abnormal delivery attended by the chief obstetrician, out of the required six, were quite low.[41] On the other hand, those students who were satisfied with fulfilling the minimum requirements may not have benefitted to any great extent from their Maternity training. Their only advantage was having seen childbirth at all before graduating.[42]

This approach to clinical obstetrics was inferior to the training given in France or Great Britain, but apparently superior to that in the United States. The Montreal Maternity, and its rival the Montreal Lying-In Hospital, were amongst the first North American hospitals to permit students to watch the birth of a child. Buffalo Medical College appears to have been the first in the United States to give students this opportunity, but only in 1850; the event caused a furor amongst conservative practitioners outraged at this offence to moral decency.[43] French and British students witnessed childbirth long before their North American counterparts and were expected to have more practical training.[44] While a candidate for a Quebec or

Ontario medical licence in the early 1870s needed to show proof of only six births, the licencing bodies of Great Britain demanded twelve cases. By 1890, Britain demanded twenty cases to Quebec's six.[45] Consequently, important McGill obstetricians took European training. Arthur A. Browne, the Maternity's chief obstetrician between 1883 and 1886 graduated from McGill in 1872 and then went to Europe.[46] J. C. Cameron, who succeeded him as chief obstetrician, also went to Europe after receiving his McGill M.D.: he spent part of his time at the Rotunda Lying-In Hospital in Ireland, then one of the important centres of obstetrical care.[47]

Given the fact that the Montreal Maternity was not accepted as the location of all births, and that its potential as a centre of obstetrical technology and a clinical facility for medical students was not yet completely recognized, doctors did not feel compelled to devote much time and effort to that institution. As a result, since the bulk of administrative responsibilities was in the hands of the Management Committee, those women had virtually free rein to determine what the priorities of the hospital would be. As members of the middle class, influenced by the Victorian models and ideals of their day, it was inevitable that they

be concerned about religion and morality. Such a preoccupation was bound to find its way into the hospital.

CHAPTER 2

THE TRANSFORMATION OF THE MONTREAL MATERNITY, 1880s to 1926: INDICATORS OF CHANGE

In the 1880s the Montreal Maternity began a significant transformation. Previously, the hospital's primary function had been to provide charity to destitute and working-class women who were about to give birth. Now, the hospital's medical-care function was slowly becoming predominant--a service offered not only to the poor but to everyone. The hospital was beginning to be perceived as a first-class obstetrics facility, the preferred site at which to have a baby.

This chapter focuses on two important indicators of the transformation. The first is the changed attitude and behaviour of the doctors associated with the hospital. Beginning in the 1880s, they established a much greater medical presence in the hospital's wards. They took over the responsibility for routine cases and multiplied the number of doctors actually working in the wards. They also took full charge of training medical students at the hospital.[1] In addition, they brought in a group of consulting specialists in areas related to obstetrics and pediatrics, thus

extending the range of physician control at the hospital. Doctors' participation in the hospital's administration also increased.

The second indicator of the hospital's changing priorities was the transformation of its patient population. Annual admission figures rose enormously, especially after 1903, signalling the hospital's growing appeal. A significant factor in this growth was the changing characteristics of the patient population. Single patients, once the majority in the hospital, became a small minority. Their diminished proportion in the annual admission figures eased much of the pressure on the hospital to provide charity assistance. A reduction in the proportion of non-paying patients appears to have occurred as well--further evidence that the number of destitute patients was declining. At the same time, the hospital was beginning to attract a different class of patient. Middle-class women were now admitted to luxurious facilities and pampered by the staff. Thus, the hospital began to lose its poor-house reputation and gained recognition as an important obstetrical facility.

Finally, 'duration of stay' statistics emphasize that the Maternity's role as a shelter was declining. Whereas in 1853 a substantial number of waiting patients lived at the Maternity for lengthy periods before giving birth, by

1915 the vast majority of mothers was admitted either in labour or very close to it.

Physicians' New Interest in the Hospital

The first step taken by physicians to gain full control over medical matters was the replacement of the midwife by a resident physician. This significant change in the hospital's structure was carried out as a very simple administrative matter and apparently caused no controversy: when the hospital midwife resigned in 1886 the position was redefined and divided into two. Matters related to housekeeping, disciplining and training nurses, and other non-medical responsibilities were now placed under the matron's jurisdiction, while the central function of the midwife--treating patients and taking charge of the births--was given over to a resident physician.[2] According to the hospital's medical administrators, with the new arrangement "the professional work of the hospital /would be/ greatly facilitated."[3] The presence of a resident doctor, according to the Maternity's annual report, would "insure careful attendance upon the patients, /the need for which/ had long been felt."[4] In fact, as has already been mentioned in chapter one, the Committee of Management had requested a resident to

assist the midwife, as early as 1863.

In one sense it is possible that, as a result of this transition, the quality of care offered during childbirth actually deteriorated. Residents were chosen from recent McGill graduates; their obstetrical experience was probably inferior to that of the midwife being replaced.[5] What prevented disasterous results was the more frequent presence of the chief obstetrician, and the fact that a more experienced physician--the students' instructor--was also to be present at all the births.[6]

Over the years, the number of residents increased. While only one worked at any given time in 1886, there were nine residents listed in the 1924 annual report.[7] This growing staff of residents and the 1905 relocation brought administrative reorganization, whereby the senior physicians created a hierarchy of command. In line with general hospital practice the position of medical superintendent was created. An important part of his function was as intermediary between the hospital's internal staff (residents), and the chief obstetrician and the medical faculty. His duties also included patient admissions, the keeping of admission and case records, responsibility for medical instruments and apparatus, and the disciplining of resident doctors, students, patients, and visitors.[8]

In addition to this hierarchy medical credibility was strengthened after 1905 by the introduction of certain medical specialists (table 2.1). These physicians apparently worked on a consultation basis, rather than as a regular part of the internal staff.

TABLE 2.1: INTRODUCTION OF SPECIALISTS TO THE MONTREAL MATERNITY, AND THE YEAR IN WHICH THIS OCCURRED

SPECIALIST	YEAR
opthalmologist	1905
pathologist	1908
anaesthesiologist	1910 or 1911
dermatologist	1915 or 1916

Source: MMB, I (December 9, 1905), pp. 45-47; (January 7, 1908), p. 118; AR 1911, 1916.

As noted in chapter one, the preparation during the 1870s of plans for a new hospital prompted doctors to play a larger administrative role. An important aspect of this developing administrative role was the formation of a formal medical administrative body. Until 1905 the Maternity's medical staff had no formal representative body to speak of such as the Committee of Management, no administrative hierarchy amongst themselves (such as the Management Committee's

First, Second, and Third Directresses), no regular meetings, or specifically defined functions beyond the "medical management of the hospital." Technically, a "medical board" had existed since 1859, consisting of the staff of McGill's medical faculty, but it never operated as one.[9] Physicians who had something to say about hospital policy raised the issue at a Committee of Management, or at a faculty meeting. With the construction of the new hospital, a more organized Medical Board was formed. It was headed by a Chairman, and had designated officers. Monthly meetings were held, and minutes were kept. Not only did the Medical Board now resemble the Committee of Management in structure, but it also began to have a significant impact on hospital affairs, permitting it to challenge its non-medical counterpart.

It has been argued that the evolution of the hospital into a medical unit must have caused tension between the traditional managers--the lay committee--and the new force in determining policy--the physicians. For example, Charles Rosenberg believes that

> The physicians' allegiance to the institutionally-defined needs and priorities of medicine created priorities and perceptions inevitably different from those which informed the view of his lay superiors. The hospital... can thus be more usefully seen as a battleground for the conflicting values of traditional stewardship and the priorities of an

> emerging profession than as the coherent expression of a carefully articulated vision of society.[10]

Despite Rosenberg's contention, Montreal Maternity records do not contain evidence of repeated major disagreements between the Committee of Management and the medical managers of the hospital. Only two serious confrontations are detailed in the records. In October 1894 the Committee of Management, facing financial difficulties, threatened to resign "unless immediate action was taken" by McGill's medical faculty, "to place the Institution on a satisfactory financial footing." Specifically, the Committee requested a guarantee of $1000 and the promise of a new building to house the hospital. When the faculty declined to give any aid the Committee responded by threatening to deny admission to the Maternity to the new class of McGill students. A solution was found which saved face for the faculty but solved the Committee of Management's financial problem: while the faculty as a unit still refused to assist, its physicians as individuals resolved to cover any deficit for that year not exceeding $1000.[11]

On the second occasion the physicians were victorious. The conflict arose in response to the Medical Board's appointment in 1913 of a new medical superintendent, Dr. F. G. Bauld, at an annual salary of $1000; for its part the

Committee was willing to offer only $500. When the Medical Board imposed the higher salary, the Committee's two senior executives resigned, protesting the

> apparent want of confidence shown the Directorate by the [chief obstetrician] in as much as [the appointment of Bauld] assumed the form of a direct message from the Obstetric Physician to the Committee of Management, without the Directorate having had any previous knowledge that this said motion would be put to the meeting.
>
> The motion was urged upon the meeting without full discussion.[12]

While Rosenberg's general hypothesis then, does not seem to apply to the Montreal Maternity, Rosenberg did anticipate exceptions. He noted that voluntary hospitals--that is, privately-owned institutions, administered by volunteers who were well-off financially, and depending to a large extent on donations for funding--may have had a lower degree of tension between the two administrative groups than government-run hospitals:

> The voluntary hospital seemed to have experienced a lower level of conflict between medical staff and lay managers. One explanation lies in the greater degree of identity between the elite members of such governing boards and the elite physicians who populated their attending staffs. Physicians at these prestigious private hospitals might have served as family physician to board members of [sic] their friends; in a few cases they might even be related; their children might attend the same schools and dancing classes.[13]

The Montreal Maternity was a voluntary hospital, and the members of the Committee of Management and the Medical Board had much in common. Unlike most hospitals, its two administrative bodies were not entirely autonomous.[14] Membership in the Committee of Management, for example, was granted to the chief obstetrician. Before 1887 the doctors of McGill medical faculty, by virtue of their status as consulting physicians, had the right to attend and participate in Committee meetings.[15] For its part, the Committee of Management had some jurisdiction in areas controlled by the Medical Board, such as approving staff choices made by the Medical Board.

There is strong evidence as well that the physicians and the ladies of the Committee of Management shared ideological and social values. As professors at what was probably Canada's most important medical school, the doctors represented an elite group of practitioners. For example, James Chalmers Cameron, chief obstetrician between 1886 and 1912, attended Upper Canada College and received his M.D. at McGill. A member of such prestigious clubs as the St. James, the University Club, the Royal Albert Lodge and the Teutonia Club, he was also a Mason to the thirty-second degree.[16] As well as these social affinities, family ties linked members of the two administrative groups. Wives of

doctors served regularly as members of the Committee of Management and at times held executive positions.[17] While never a majority in the Committee, doctors' wives served as channels through which their husbands could exert influence on the Committee.

The minimal conflict may also be explained by the sexual composition of the two administrative groups. The Committee of Management was entirely composed of women, and they may have been reluctant to challenge the male physicians. Another explanation is the Maternity's origin as an institution created and initially organized by the medical faculty of McGill. The very existence of the hospital--before it accepted its first patient--was based on furthering the interests of the faculty. When the Committee of Management was organized some months after the hospital opened it had to accept the premise that the interests of the doctors would be served.[18] In later years, even when the Committee had power to restrict the furthering of these interests, the precedent had already been set. This differed from other hospitals that were organized through a collaboration of medical men and lay benefactors. In these institutions the lay group had as much reason as the doctors to assume that the hospital would conform to its needs and aspirations. Even in cases where doctors alone were founders, they were

not so formidable a body as the entire faculty of an important university, and would not have carried quite as much clout.[19]

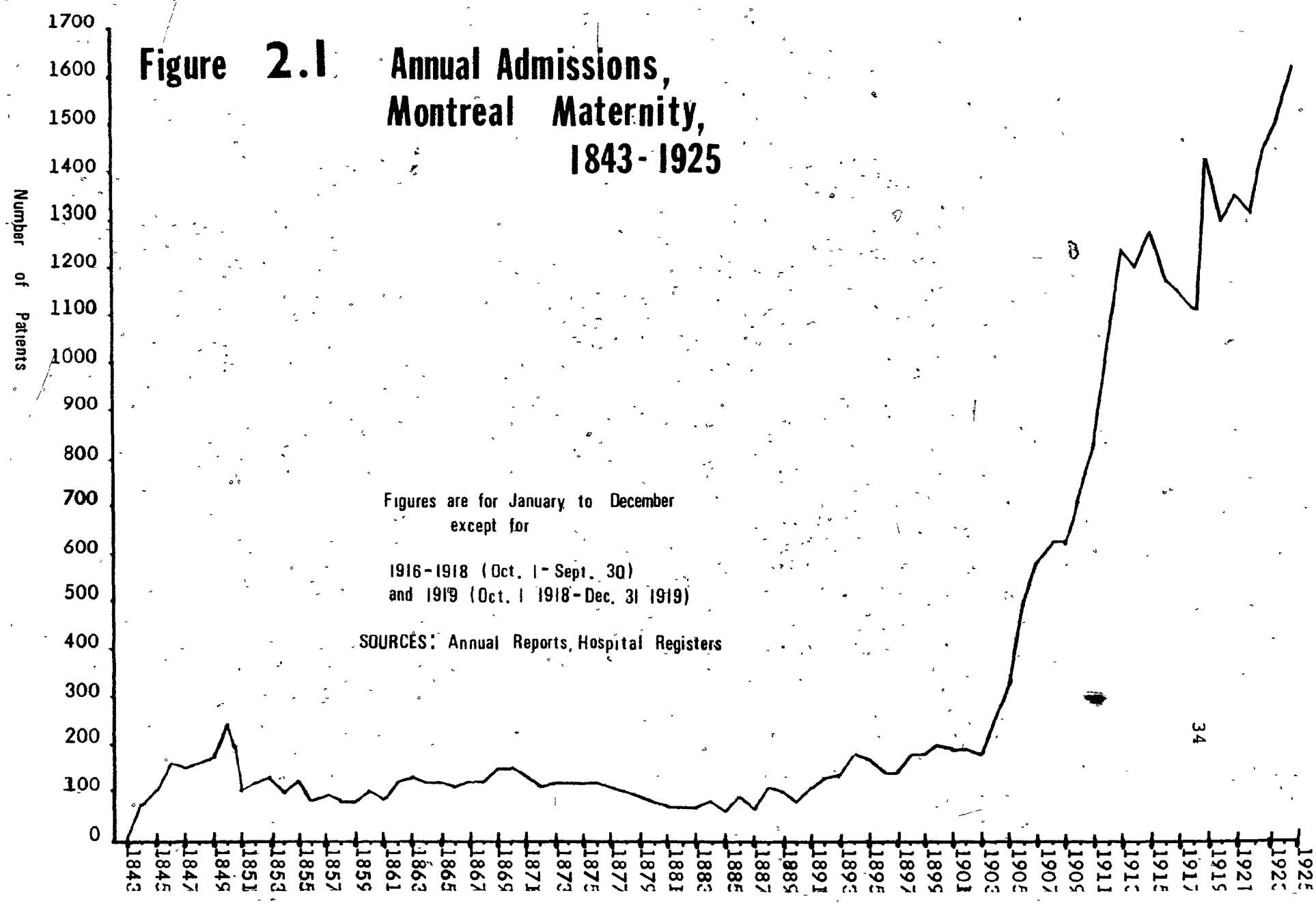
Changes in Patient Characteristics

Increasing annual patient admissions indicate the rapid growth of interest in the hospital by Montreal women (figure 2.1). With few exceptions the annual admission rate before 1890 was about 100 patients per year. Between 1890 and 1903 about 200 women were admitted each year. After 1903, the rate rose very quickly. Except for a dip during the war, the number admitted increased almost every year, passing the 1600 mark in 1925.[20]

This growth of interest was largely due to the influx of married patients, and by the 1890s, they had begun to predominate over their unmarried counterparts. In 1898 the ratio of married to unmarried reached five to four. It climbed to approximately two to one in 1904, to five to one in 1909, to thirteen to one in 1919. As of 1925, 94% of patients at the Montreal Maternity were married.[21] Clearly, the hospital could no longer be described as a shelter for unwed mothers.

That fewer charity patients were being admitted is

Figure 2.1 Annual Admissions, Montreal Maternity, 1843-1925



Figures are for January to December except for

1916-1918 (Oct. 1 - Sept. 30) and 1919 (Oct. 1 1918 - Dec. 31 1919)

SOURCES: Annual Reports, Hospital Registers

also evident from available statistics on the proportion of non-paying to paying patients. As noted in chapter one, during the early years the majority of patients was not able to pay all or part of the hospital bill. On the other hand, at least between 1904 and 1917, the majority of patients did pay all expenses. In 1904 only 80 of the 252 women treated at the hospital were listed as non-paying. In 1911 only 79 of 802 (10%) did not pay. During 1915-1917 the proportion of those who could not meet the hospital expenses rose as compared with 1911, to between 14 and 20%, but never again reached the proportion of the early years.[22]

An important component of the rising patient population, one which most clearly demonstrates the increasing attraction of the hospital as a medical unit, is private patients. These patients necessarily came from Montreal's more affluent classes, as the private wards were very expensive (table 2.2):[23]

TABLE 2.2: HOSPITAL FEES, MONTREAL MATERNITY, FOR PUBLIC AND PRIVATE ACCOMMODATION, 1905-1920

YEAR	COST FOR TWO-WEEKS ACCOMMODATION	
	PUBLIC WARD	PRIVATE WARD
1905	$6.	$25. to $40.[1]
1907	$6.	$45.[2]
1918	$10.[3]	$70.[2]
1919	$15.[3]	$70.[2]
1920	$15.[3]	$100.[2]

[1]Cheapest room has accommodation for three, most expensive rooms sleep only one patient.

[2]Probably for a single private room.

[3]Includes $5. medical fee.

Sources: MCM, IV (October 5, 1905), p. 3; (June 7, 1907), p. 63; V (November 29, 1918), p. 5, (September 26, 1919), p. 12, (April 30, 1920), p. 22.

The fees for private patients, 1907-1919, did not include additional costs for special medicines or operative interference during labour. None of the fees for private patients included their physicians' fee.[24]

Private patients were treated very differently from those in the public wards. They were isolated in rooms containing one to three beds, had medical benefits such as exemption from being examined by the students, and a special private ward nurse after 1917.[25] They also had the right to choose and be treated by their own physician regardless of whether he was a member of the Maternity's regular staff. This latter benefit was a significant drawing-card--not only for the patient but also for her physician whose status, and probably fee, were thus enhanced.[26] There were yet other advantages to being a private patient. They had more liberal visitation rights. Their babies were not required to be dressed hospital clothes and were kept in a separate, more attractive nursery (compare figure 2.2 with figure 2.3).[27] It was Lady Allan, wife of one of Montreal's most prominent capitalists, who directed the decoration of the new private wards. There were flowers in the rooms and special meals served on silver and china.[28]

Figure 2.4 shows the growth in private patients between 1884 and 1925. Although figures are only dependable after

Figure 2.2
Private Patients' Nursery,
Montreal Maternity, 1925

source: Montreal Maternity
Photograph Album, McGill
University Archives

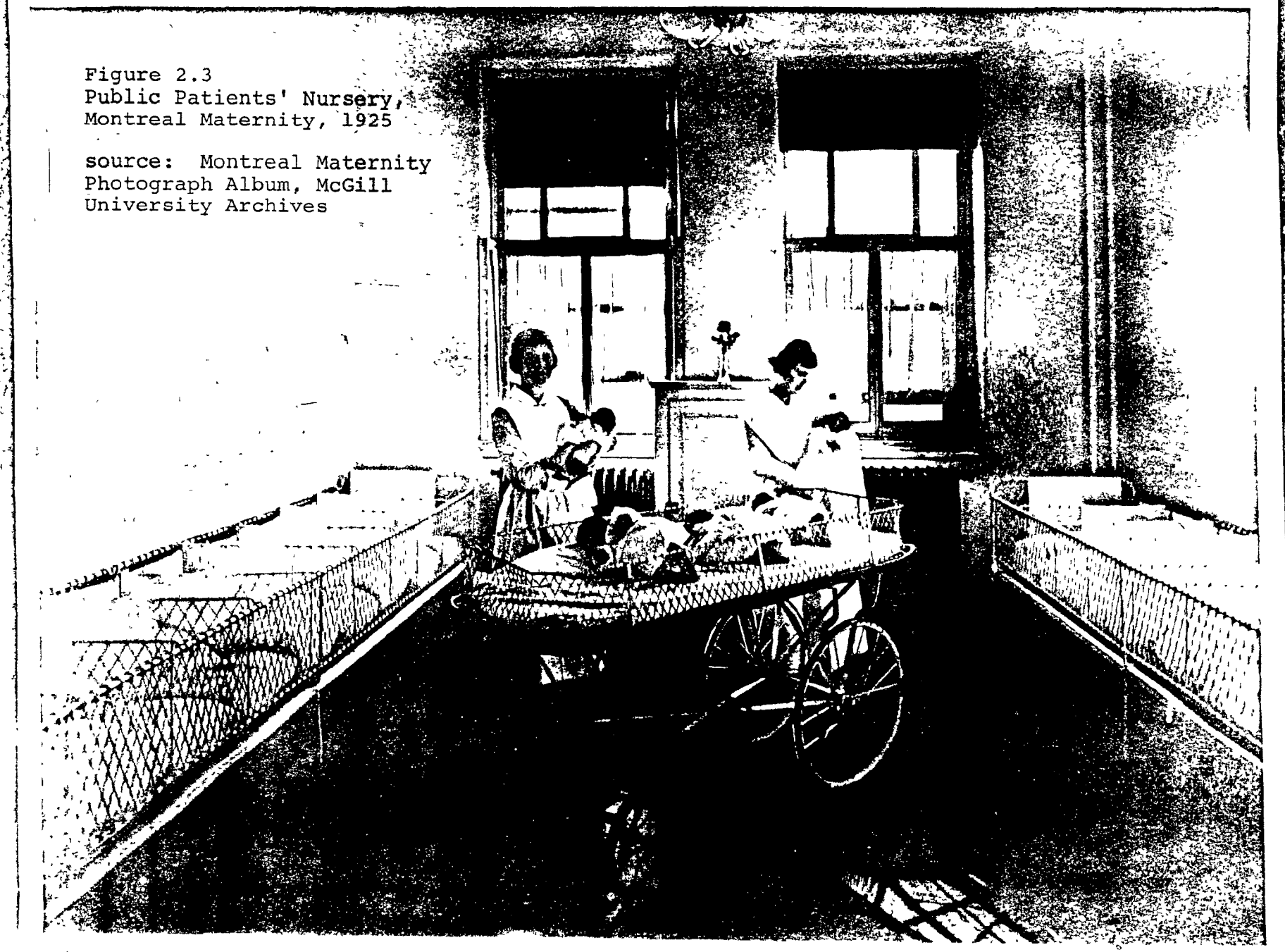
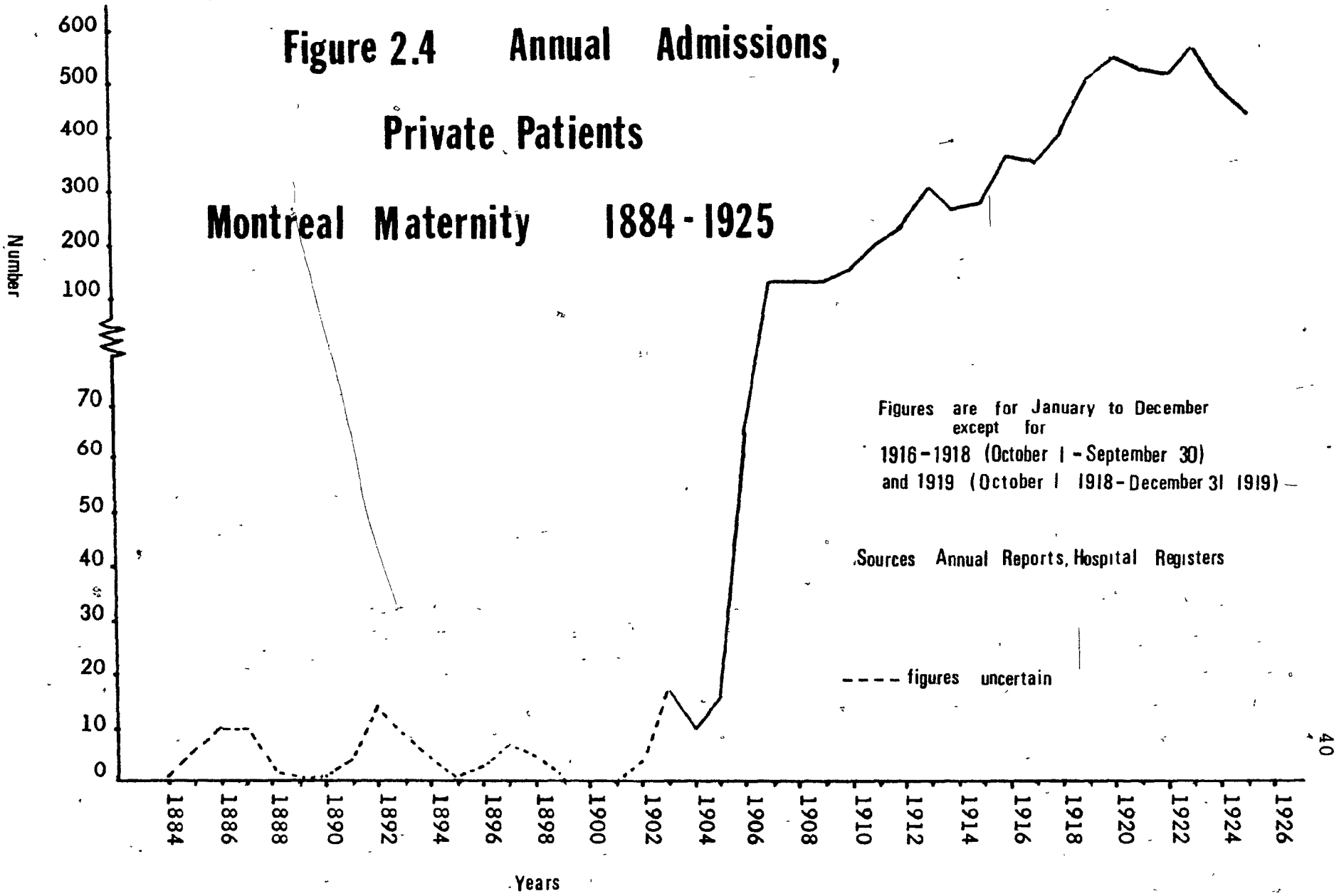


Figure 2.3
Public Patients' Nursery, Montreal Maternity, 1925

source: Montreal Maternity Photograph Album, McGill University Archives

Figure 2.4 Annual Admissions, Private Patients Montreal Maternity 1884-1925



1902, several observations may be made.[29] Between 1884 and 1905 there were probably never more than twenty private patients in any one year. As early as 1892, an insufficient number of private rooms was blamed for the small number of private patients.[30] By 1903, when seventeen women--more than ever before--were admitted, the isolation ward was being used as a private ward and at least one patient's admission was postponed because of lack of space.[31] There was a substantial jump in private patients after the move to the new hospital in 1905. The addition to the hospital of separate nurses' residences in 1914 and 1919 freed their rooms at the Maternity for use as private wards. Despite this expansion, private-ward facilities were soon in short supply again and in 1920 and 1921 private patients had to be billeted in public wards.[32] The maximum number of private beds in 1922, was twenty-three. Given that each patient stayed approximately two weeks and that there were 514 private patients that year, it is clear that the private wards were operating at close to full capacity.[33]

Private patients comprised an increasingly high proportion of the total patient population. Between 1907 and 1915, one-fifth to one-quarter of all the Maternity's patients were in the private wards. The figure surpassed one-third between 1916 and 1923, reaching a maximum of just

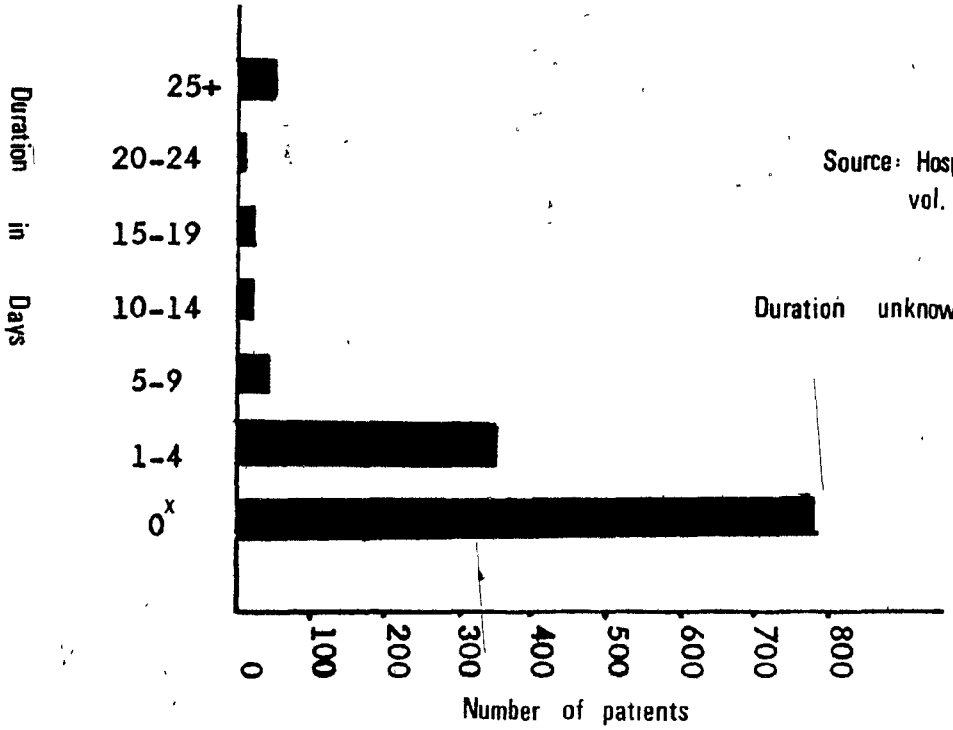
over 40% in 1920. However, it dropped off slightly in 1924-25, to just over one-quarter in 1925.[34]

Patients' duration of stay at the Maternity before giving birth also illustrates the hospital's evolving function after 1890. The proportion of patients in 1915, for example, who checked in more than four days prior to delivery (figure 2.5), as compared with 1853 (figure 1.2) decreased dramatically, from almost one-half in 1853 to about one in ten in 1915. Further, the number who stayed zero days before they give birth (ie. entering the hospital on the day their baby was born) doubled from about 30% in 1853, to about 60% in 1915.

The changes in the patient profile and number, coupled with the doctors' new interest in hospital practice, brought the maternity hospital closer to the obstetrical wards of today: the shorter duration of patients' stay before the birth, with many women entering the hospital in labour, closely resembles current practice. The fact that the hospital's patient population was no longer confined only to needy patients, and now included women of all classes and socio-economic backgrounds, made the eventual routine hospitalization of all births possible. As they took charge of medical matters, doctors increasingly emphasized the

Figure 2.5

Patients' Duration of Hospital Stay Before the Birth of the child, Montreal Maternity, 1915



Source: Hospital Register, vol. II

Duration unknown in ten cases

x ie. women who gave birth on the day they were admitted

role of the medical profession in birth. As we will see in chapter three, this ultimately led to the medicalization of the birth process.

CHAPTER 3

DEVELOPMENTS IN OBSTETRICAL THERAPEUTICS AND THEIR IMPACT ON THE MONTREAL MATERNITY

The transformation of the Montreal Maternity coincided with a period of fundamental change in medical therapeutics. In the area of obstetrics, many of the properties that characterize this specialty today emerged in the closing years of the last century and the first few decades of this one: sterile birth environment, routine anaesthesia, pre- and postnatal care, and liberal intervention practices to facilitate labour.[1]

These medical changes had fundamental effects on the usefulness of the maternity hospital. We noted in chapter one that during the Montreal Maternity's early period it offered almost nothing to the mother-to-be that she could not receive in her home: the maternity hospital performed largely a charitable function. The therapeutic revolution however, increased the maternity hospital's usefulness in medical areas to the point where it became the site of the vast majority of births in North America. First and foremost, a new approach to obstetrics was developed, hinging on the more frequent employment of surgical techniques and devices such as forceps, than had ever been advocated before. The

rise of "surgical obstetrics" necessarily put the hospital at the forefront because a sterile operating room was required, because an operating team rather than a single doctor performed the surgery, and because the patients' condition could be more closely monitored there than at home: newly-trained nurses, for example, had much to do with this transition. Around 1920, when there was a rethinking of this interventionalist philosophy coupled with a much greater emphasis on pre- and postnatal care, the hospital continued to be important by setting itself up as a headquarters where pregnant women, or those who had already given birth and their babies, could be attended.

The maternity hospital's growing usefulness helped make it a more desirable birthsite from the point of view of its patients. Hospitals lost their notoriety as infection factories and improved aesthetically as well just by being clean. Declining mortality rates attested to the increasing success of the hospital staff. All this had a great deal to do with the Montreal Maternity's expanding patient population. But the new therapeutics did more than just improve the hospital's ability to treat complications and prevent infection: it encouraged women to choose hospitalization, who had never previously done so. Certain changes in the medical profession's approach to obstetrics

made hospital birth attractive, not only for women with high-risk pregnancies, but for those who were progressing normally as well. This was done by medicalizing, to the largest extent possible, even the simplest cases. For example, at the Montreal Maternity, elaborate antiseptic procedures eventually became the norm for all patients when they went into labour. And by the mid 1920s everyone was anaesthetized during at least part of her labour. Even the length of time that the medicalization process was to be endured, even for routine cases, was extended to include the pre- and postpartum periods. Rather than remaining a natural event requiring medical participation only in the cases of difficulties, childbirth was transformed into an event that had to be directed by a medical person if all precautions were to be taken.[2] Once women were convinced of this, and also came to think of the hospital as having the best birth facilities, it follows that they would choose hospitalization regardless of how their pregnancy was progressing.

Antisepsis and Asepsis, and Puerperal Fever

One of the first stages of the therapeutic revolution was in the area of establishing a link between germs and in-

fection, leading to the acceptance of the doctrine of antisepsis and asepsis.[3] Although the value of such measures was not immediately recognized by all physicians, once introduced to hospitals they were instrumental in reducing the rate of infection.[4] On the other hand, their influence before 1926 must not be overestimated. Important aspects of the process of eliminating harmful bacteria did not come into practice until later. For example, the importance of wearing a mask while in the operating or delivery room was not known until after 1925.[5] Moreover, not until many years after 1926 were combattant drugs such as antibiotics used successfully to cure infection once it occurred.[6]

Beginning around the 1870s antisepsis and asepsis were incorporated into obstetrics and introduced to maternity hospitals, primarily in an attempt to reduce postpartum infection. Not only were antiseptics used to cleanse the hospital, medical instruments, and other objects that come in contact with the patient, but initially they were also introduced into the vagina and uterus both for prophylactic and curative purposes.[7]

Relative to other maternity hospitals, the Montreal Maternity introduced antiseptic techniques fairly early. Antisepsis was practiced there--albeit crudely--in 1870s, while it was only introduced into most maternity hospitals

in the United States and Great Britain toward the late 1870s and 1880s. Students at the Montreal hospital washed their hands with strong carbolic soap and the patient was syringed with a disinfectant. This procedure, on the admission of the chief obstetrician himself, was not very effective in reducing the deathrate due to infection. By 1887 the routine had become more systematic: attendants scrubbed and disinfected their hands, a preliminary vaginal douche was done whenever possible, and disinfectant-soaked dressings were applied to the mother after delivery. If infection was suspected, additional applications of disinfectant were made. In 1896 the hospital boasted the introduction of a "thorough antiseptic treatment...in accordance with the latest scientific methods." The move to the new building in 1905 permitted an even more vigorous elimination of germs; the old building had been plagued by "continual dust and dirt."[8]

The connection between germs and puerperal fever, an infection which caused many postpartum fatalities in the nineteenth century, had been established in the mid 1850s through the research of Oliver Wendell Holmes and Ignaz Semmelweis. Not all doctors were immediately convinced of the accuracy of the theories; many refused to admit that they themselves transmitted the fever by carrying the germs responsible for the infection from afflicted patients to

healthy ones. Other physicians, skeptical but cautious, followed the advice of the transmission theory advocates and tried to reduce the contamination of the birth field. By the 1880s Louis Pasteur isolated the specific germs which caused the fever, offering inarguable proof concerning the cause of puerperal fever.[9]

The maternal mortality rate due to puerperal fever for the Montreal Maternity suggests that antisepsis and asepsis did have an effect on reducing fatalities from infection. Before the advent of antisepsis at the Maternity, deaths from puerperal fever occurred in clusters. That is, once the infection was introduced into the hospital or a patient developed the fever, it tended to be transmitted to other mothers. Table 3.1 lists all the years in which there were puerperal fever fatalities, between 1847 and 1872, according to available information:

TABLE 3.1: PUERPERAL FEVER FATALITIES PER ANNUAL NUMBER OF PATIENTS ADMITTED; MONTREAL MATERNITY, FOR SELECTED YEARS.

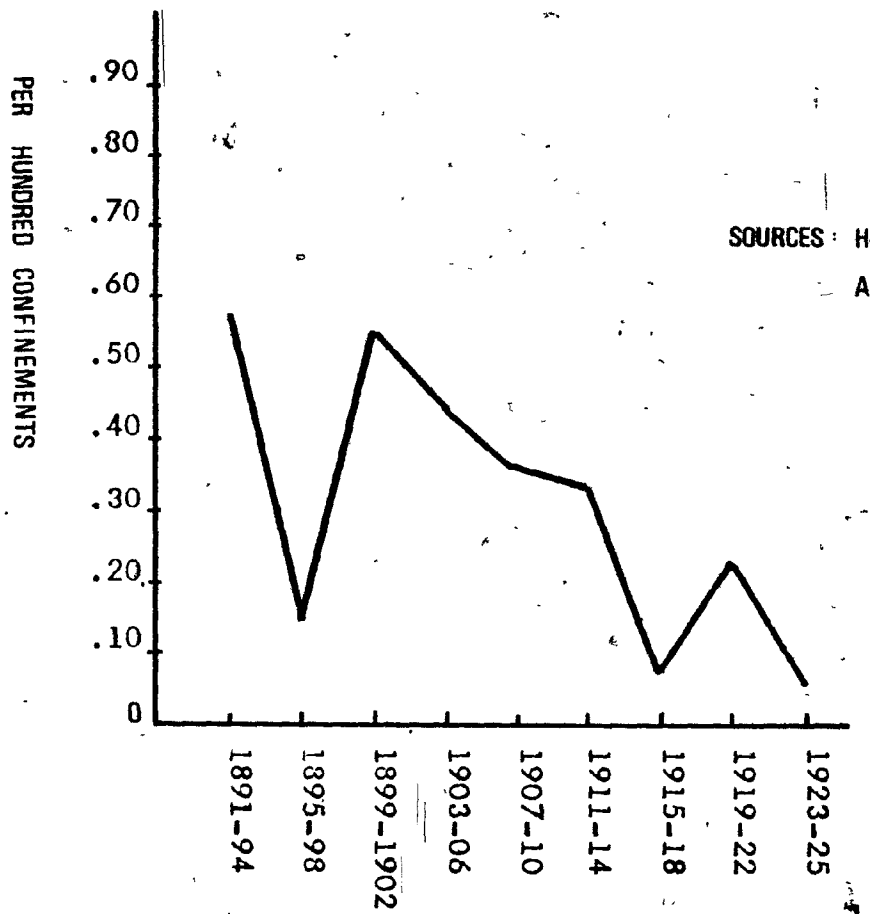
YEAR	PROPORTION OF DEATHS PER TOTAL CASES DUE TO PUERPERAL FEVER
1847	2/171
1852	3/106
1857	2/79
1871	3/131
1872	4/108

Sources: Hospital Register, 1847-1872; D. C. MacCallum, "Report of the University Lying-In Hospital, Montreal, for Eight Years, October 1 1867 to October 1 1875," reprint from Canada Medical and Surgical Journal, February 1878 (Montreal: Gazette Printing House, 1878), p. 4.

All the cases in any given year listed above, resulted from a single outbreak. Never in any of these years did one woman alone die from the fever. What this suggests is that, although the Maternity's puerperal fever deathrate was comparatively low during the period 1847 to 1872, once the infection found its way into the hospital, its spread and subsequent fatalities could not be prevented.[10]

Figure 3.1 shows the mortality rate due to puerperal fever per hundred confinements, for four-year periods between 1891

Figure 3.1 Mortality Rate of Puerperal Fever Cases, Per Hundred Confinements, Montreal Maternity, 1891-1925



SOURCES: HOSPITAL REGISTERS; MEDICAL AND ANNUAL REPORTS

and 1925. The graph fluctuates, but declines overall. This decline is especially significant in light of several factors. First, the sharp rise in annual confinements (mirrored by the rise in admissions as illustrated in chapter two), coupled with the overcrowded accommodations at the Montreal Maternity during much of the time, provided optimal conditions for the spread of infection. Second, the decline also occurred in spite of the fact that an increasing annual number of medical students were conducting even more thorough examinations of the patients, increasing their susceptibility to infection. The "more frequent manipulations and greater interference with the patient which such instruction demanded" had been linked to six puerperal fever fatalities between 1879 and 1882 by the admission of the chief obstetrician himself (total patient admissions for that period were a little over 300).[11] Third, the higher rate of obstetrical intervention also increased the risk of infection. Since the decline in mortality was not the result of a breakthrough in the ability to cure the patient once infected, the credit must have been due, to a large extent, to improved preventive measures. In addition, puerperal fever deaths seem no longer to have been clustered in bunches; the designation of isolation wards at the hospital, part of the wider program of infection prevention, must have had some impact as well. With the

hospital cleaned up, and the deathrate due to infection down, the foundation was laid for a wider acceptance of the hospitalization of birth by Montreal women. Moreover, physicians were now able to conduct more radical forms of medical intervention with less risk.[12]

Obstetrical Anaesthesia

The development and more widespread employment of obstetrical anaesthesia was another significant part of the new obstetrics. Originally introduced in 1847 by Sir James Y. Simpson, it was only around the turn of the century that they were no longer restricted to cases requiring medical intervention, at least according to Canadian medical advice. Reasons for the initial apprehension of physicians included valid concern about the dangers of the procedure; off and on throughout the second half of the nineteenth century Canadian medical journals reported deaths due to chloroform or other anaesthetics. Concern was also expressed about the possible damage to the mother and child brought on by this tampering with the natural process. But some of the doctors' reluctance to use anaesthetics more widely, if at all, was on religious grounds, based on the belief that women were condemned to pain in childbirth because of Eve's transgression in the

Garden of Eden.[13]

At the Montreal Maternity, indications for the use of anaesthesia changed over the years. Before the 1880s it was prohibited in ordinary labours. Rather, it was reserved for instances "whenever anything untoward [occurred] demanding artificial assistance" such as the use of forceps or the turning of the child internally. By 1900 a textbook written by Dr. D. J. Evans, an instructor at the hospital, recommended the use of anaesthesia "when the pains [of labour] are not well-borne without it," presumably even if nothing else was unusual. Statistics for 1901-1903 reveal that about half the mothers received some form of anaesthesia during the birth. The appointment of an anaesthetist, Dr. F. W. Nagle, to the hospital in 1911 facilitated the routine employment of anaesthesia. Previously, one doctor presumably helped another: the physician in charge of a particular case was assisted by a colleague who oversaw the administration of the anaesthetic agent. An anaesthesia specialist, on the other hand, was able to concentrate on perfecting his knowledge and technique, and observe his patients in a systematic way. By 1924, obstetrical anaesthesia was routine at the hospital.[14]

Different anaesthetic agents were tried over the years. Simpson had initially experimented with ether, but later

switched to chloroform. The latter was probably the most popular agent until around the time of the First World War. A new method of conquering pain, called twilight sleep, was introduced around the turn of the century. Developed in Germany it combined the use of an analgesic and an amnesic with a procedure meant to make the mother forget that she ever suffered during the labour.[15] Twilight sleep attracted the attention of many women, and was tested at the Montreal Maternity in 1915 and 1916. The results of the 1915 study with fifty-two patients caused a spokesman of the hospital to conclude "it is not applicable to every case... [but] in experienced hands, the results are extremely satisfactory." All of the patients "received very apparent relief and there was a very noticeable absence of the usual post-labour fatigue." However, some problems with the babies were noted.[16] After 1916 the project seems to have been dropped at the Maternity, and twilight sleep was generally abandoned elsewhere as well by the 1920s and 1930s.[17] Other agents included nitrous oxide and heroin. Regardless of which agent was used, it was customary for obstetrical purposes to "blunt and not wholly abolish the sensibilities." Except when major operations became necessary, and just before the child was expelled (when the pain was thought to be the greatest) the patient was not rendered unconscious.[18] This way the mother could cooperate with her doctor.

The more widespread use of anaesthesia was a boon to hospitalization in three ways. It was a way to medicalize even normal births, a prerequisite to routine hospitalization. Second, twilight sleep (if not all kinds of anaesthesia) was best done in a hospital situation. This was not only because of the availability of support staff and the ability to monitor the mother better there, but also because one of twilight sleep's biggest attractions was the isolation of the mother from all responsibility while she had the baby, including home, husband and children. Third, just as antisepsis paved the way for a freer approach to intervention in labour, anaesthesia, in reducing the trauma from intervention, had the same effect. Joyce Antler and Daniel M. Fox even go so far as to claim that safe and simple anaesthetics ultimately contributed to maternal mortality because they facilitated surgical intervention.[19] This argument is not substantiated by Montreal Maternity statistics. However, what can be argued is that the higher intervention rate, assisted by anaesthesia, was responsible for filling maternity hospital beds.

The Rise and Fall of Obstetrical Intervention Rates

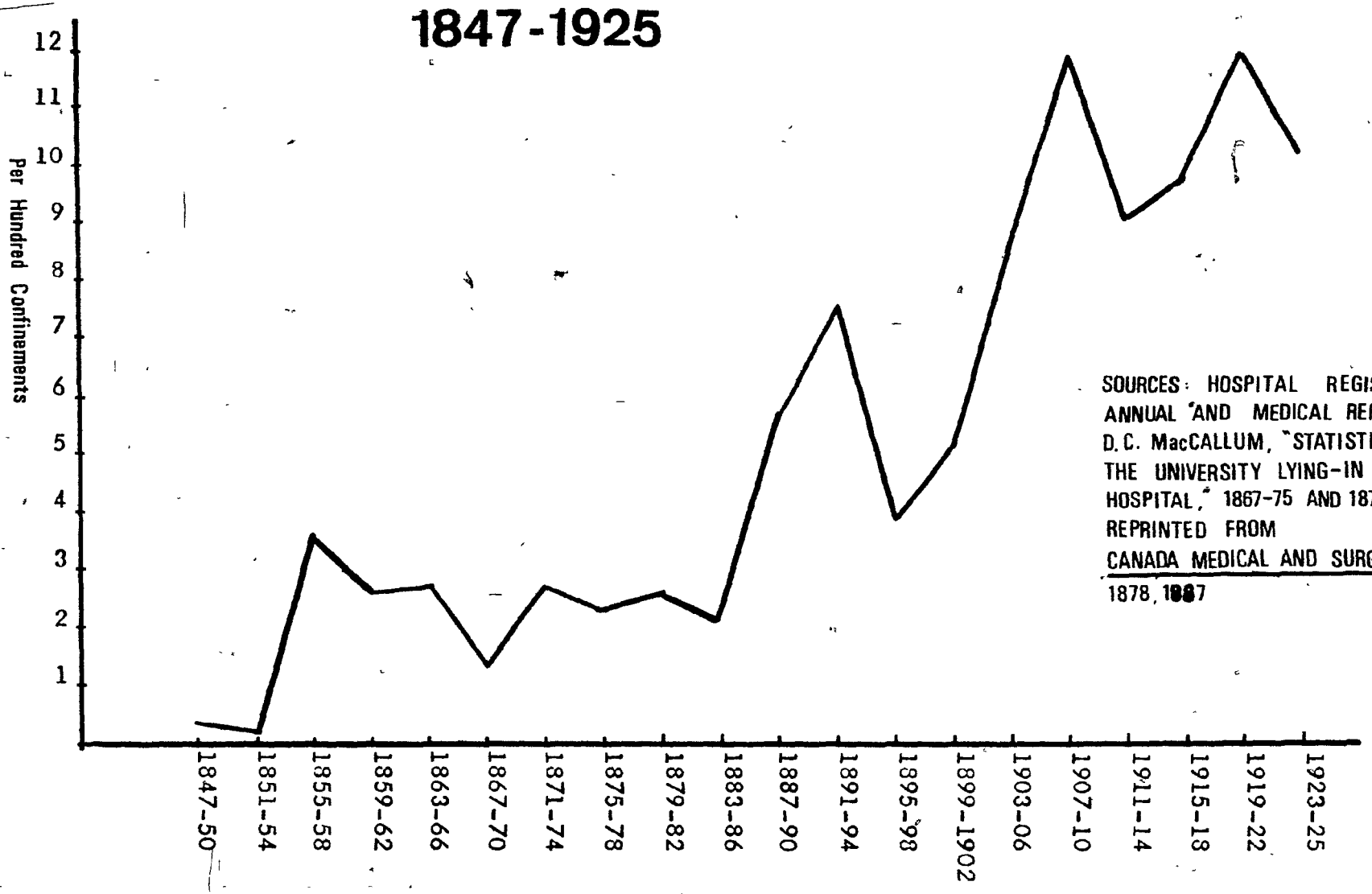
The Maternity's statistics show an important overall

rise in the intervention rate between the late 1890s and the early 1920s, a direct result of the shift to surgical obstetrics. But by the mid twenties, the path taken by obstetrical therapeutics was beginning to double back again, and a more conservative approach taken. While in 1909 a certain obstetrical technique had been criticized by a Maternity doctor because it was "unsurgical," by the mid 1920s that hospital's staff was proud of its high rate of spontaneous delivery. In 1926 the chief obstetrician, Dr. W. W. Chipman, summed up the new approach: too-frequent intervention was unjustifiable, "a dangerous practice..., and a still more dangerous teaching, for in unskilled hands such measures are inevitably disastrous, and they may be even criminal."[20] The Montreal Maternity thus underwent a transformation and reorientation.

The rate of forceps use reflects this pattern. For a long time, forceps was the only method of delivery in certain cases. For example, if labour contractions became ineffectual during the delivery, grasping the baby's head with the forceps enabled the doctor to ease the infant into the world. Other uses included guiding the baby through a slightly deformed pelvis, hastening delivery, or correcting a faulty presentation of the child's head.

Figure 3.2 shows the rate of forceps use per hundred confinements for available years. Between 1847 and 1854

Figure 3.2 Rate of Forceps Use Per Hundred Confinements, Montreal Maternity, 1847-1925



SOURCES: HOSPITAL REGISTERS, ANNUAL AND MEDICAL REPORTS, D.C. MacCALLUM, "STATISTICS OF THE UNIVERSITY LYING-IN HOSPITAL," 1867-75 AND 1878-83 REPRINTED FROM CANADA MEDICAL AND SURGICAL JOURNAL 1878, 1887

they were used very infrequently, only 4 times in 1161 deliveries. The rate increased to between 2 and 3% until 1883-86. Then it peaked more sharply through to 1891-94, dipped in 1895-8, and surged upward again until 1907-10. Yet another dip followed, succeeded by a recovery in 1919-22; finally the rate dropped off again.

Not all of the fluctuations are easily explained. The first jump in 1855-8 coincided with the arrival of a new chief obstetrician, Dr. Archibald Hall in 1854. He may have resorted to forceps more readily than his predecessor. The next sharp increase, in 1887-90 was concurrent with the displacement in 1886 of the hospital's midwife by a resident physician. A midwife might have waited longer before sending for a doctor to apply the forceps. A resident physician, who was able to use the instrument himself, may not have hesitated as long. The decline in 1895-8 is difficult to account for. There were no significant staff changes nor an articulated change in procedure. The surge beginning in 1895-8 and tapering off by 1919-22 reflected the overall increased intervention rate at the hospital; however, the reason for the setback in 1911-14 and 1915-18 is not clear. The descent during the last period correlates with the abandonment of the interventionalist approach.

An interesting aspect of the forceps frequency rate was the fact that at the Maternity, private patients as a

group had proportionally more forceps deliveries than women in the public wards. Table 3.2 shows the breakdown for a five-year period:

TABLE 3.2: RATE OF FORCEPS CASES PER HUNDRED CONFINEMENTS MONTREAL MATERNITY, PRIVATE AND PUBLIC WARDS

YEAR	FORCEPS CASES PER HUNDRED CONFINEMENTS	
	PRIVATE WARDS	PUBLIC WARDS
1909	25	8
1910	21.8	6.1
1911	18.4	4.4
1912	24.3	3.4
1913	16.9	4.6

SOURCE: MR 1909-13.

One reason for the consistently higher forceps rate is offered in the Medical Reports. Private patients were attended by their own physicians, who may or may not have been previously associated with the Maternity, while public patients were taken care of by the hospital's regular staff. If the difference between the two rates does lie in the physicians, and not in any medical differences between the two groups of patients (as is implied by this explanation) does this mean that a private patients' physicians had a

special reason for resorting to forceps more readily? Did they feel obligated to play a greater role in the birth process to justify admitting their patients to a hospital? Was there a difference in the training of those physicians not associated with the Maternity? Or were these doctors more willing to minimize the discomfort to their patients by hastening the delivery?[21] Precisely because private patients were treated by their personal physicians, hospital records about this group are few. This problem also makes an assessment of whether or not a higher forceps rate was necessary for medical reasons, extremely difficult.

Another form of intervention that follows the pattern is induction of labour. Bringing about labour through artificial means was considered in certain circumstances to be the best way of ensuring the mother's survival. For example, certain complications of pregnancy--eclampsia and other forms of toxemia--subsided after the uterus was emptied, thus providing relief to the mother. Another indication was slight pelvic malformation: induction before term meant the child would be smaller than normal and stand a better chance of passing through the pelvis. In both cases the life of the child was endangered as a result of being born prematurely. Other circumstances were those which necessitated an immediate termination of pregnancy, such as in placenta

praevia, heart disease, or pregnancies suspected of going beyond term.[22]

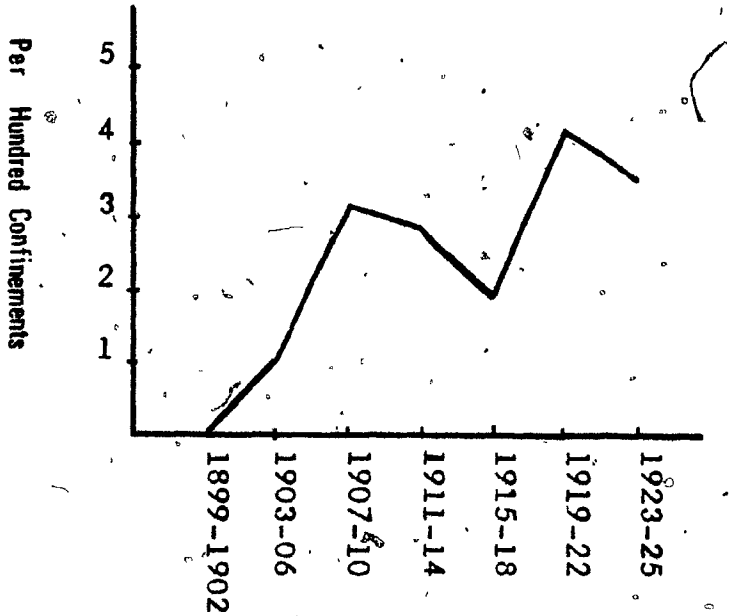
Figure 3.3 charts the induction rate at the Montreal Maternity, for available years, 1899-1925. No reference to induction exists prior to 1903.[23] The graph reaches its first peak in 1907-10 and then recedes through to 1915-18. Possibly, this reversal coincided with the re-evaluation of induction as a useful form of intervention: the decline occurred in spite of a concurrent rise in the annual number of eclampsia cases, one of the prime indications for induction. The graph then continues its upward climb to the hospital's highest induction rate, 4.1% in 1919-22, which was the very same four-year period that showed the highest forceps rate. A subsequent decline for 1923-5 is a reflection of the more conservative approach to eclampsia treatment, which maintained that the complication did not always warrant induction: by 1926 the uterus was no longer emptied at once and with only minimal regard for the child.[24]

The most extreme forms of intervention involved deliveries that were completely surgical--symphsiotomy, pubiotomy, and Caesarian section. These were performed when there was no perceived chance of a successful normal vaginal delivery even with the assistance of less drastic means such as forceps.

Symphysiotomy involved cutting through the pelvic bone

Figure 3.3
Induction of Labour; Rate Per Hundred Confinements
Montreal Maternity, 1899-1925

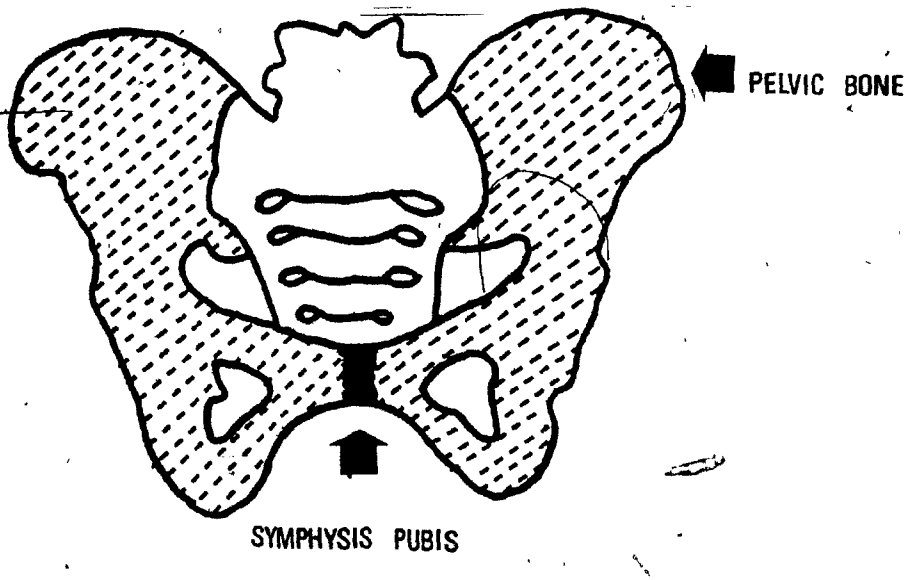
Source: Medical Reports



at the symphysis pubis (see figure 3.4). This created a gap which increased the diameter of a contracted pelvis, making more room for the child to pass through. After the child was born the patient's pelvis was bound tightly in the hopes that the two edges of the bone would knit properly. Although performed as early as the eighteenth century it had died out and was only reintroduced in the early 1890s. For a time there was some enthusiasm for the operation, but it soon declined again in popularity. Figure 3.5 shows the rate of symphysiotomies per hundred confinements at the Montreal Maternity. A total of four symphysiotomies were conducted--one each in 1893, 1894, 1897 and 1898.[25] According to hospital reports mother and child survived in each instance, but the long-term effects, for example the mothers' ability to walk, or have another child, are unknown. Possible complications after symphysiotomy included failure of the bones to reunite properly or damage if the gap between the two edges of the bone was allowed to spread too wide.

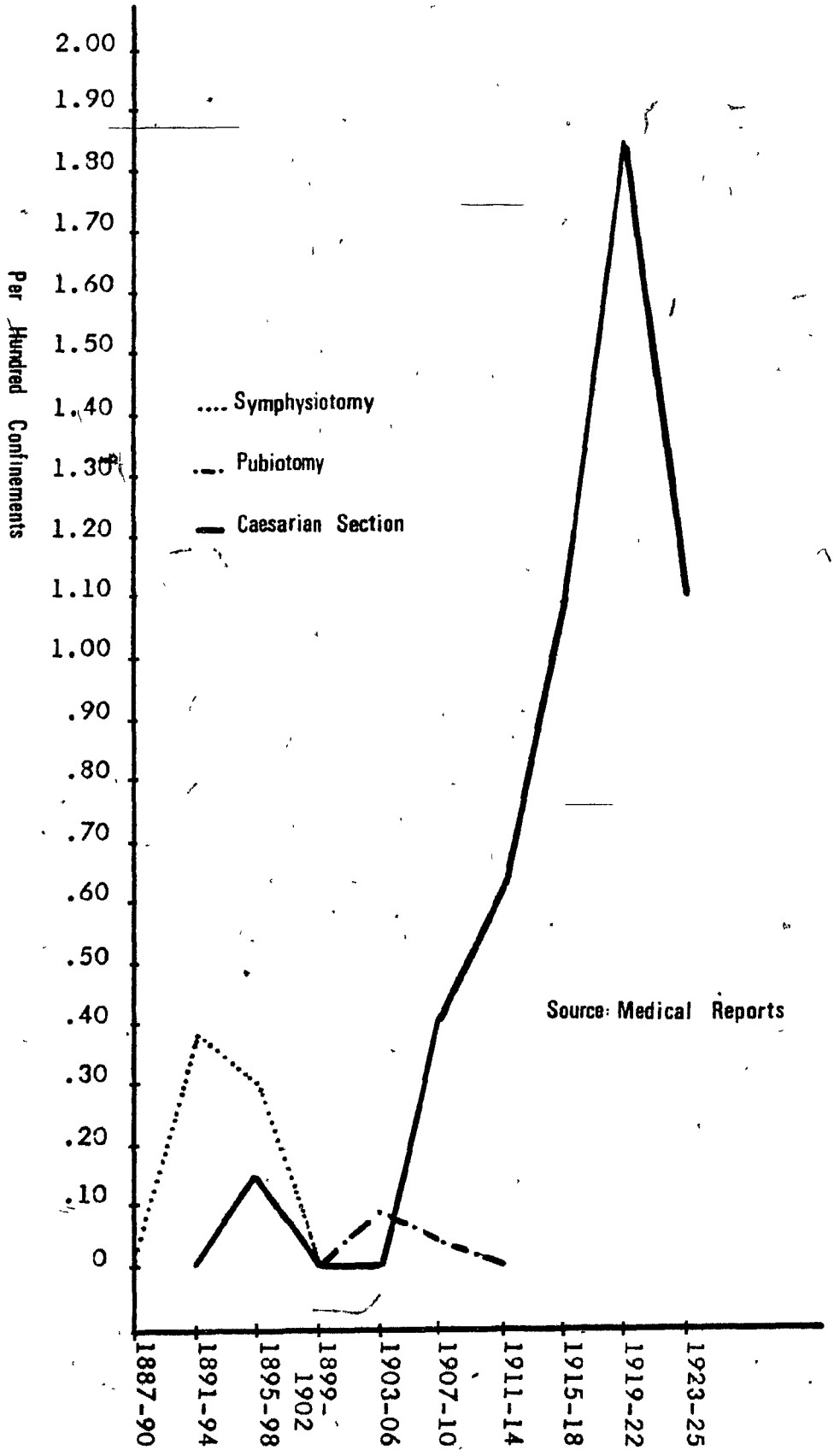
Pubiotomy was a similar procedure, except that the pubic bone was cut through slightly to one side of the symphysis pubis. The risks were also similar. At the Montreal Maternity it had a very short period of popularity. Only two pubiotomies were carried out, one each in 1906 and 1907; one of the mothers died.[26] Ultimately, both operations were replaced by

Figure 3.4 Female Pelvis, Location of Symphysis Pubis



Source: D. J. Evans, Obstetrics (Philadelphia and New York: Lea Brothers and Co., 1900), p. 61.

Figure 3.5 Surgical Deliveries, Rate Per Hundred Confinements Montreal Maternity, 1887-1925



Caesarian section.

Caesarian section involves making an incision in the abdominal and uterine wall through which the child and the afterbirth are extracted. Its principal danger lies in the opening of the abdominal cavity, exposing it to contamination or possibly damaging it. The uterus is also weakened by the incision.

When word reached the hospital's staff of the procedure's improving success rate, the response was cool. The chief obstetrician, while acknowledging its usefulness in certain circumstances, hesitated to endorse its use in all cases which at the time would otherwise have necessitated risking the life of the child. He especially feared the consequences of students being taught to resort to Caesarian section too frequently. If this danger were to become a reality, "much maternal life will be needlessly sacrificed and a wave of reaction will soon set in against the operation" which would discourage its use even when it was indicated. The life of the mother was not to be put at risk, even if the child's chances of survival were consequently improved:

> The life of an adult woman who has already contracted relations with society is of incomparably greater value, as judging by human standards, than the problematical existence of an unborn babe. Moreover, the expectancy of life in such children, is less than those of normal birth.[27]

Written in 1888, this physician's warnings were sound: there was much that doctors still needed to learn before Caesarian section could be carried out with some degree of safety. After the turn of the century, the operation gained significantly in popularity.

Figure 3.5 illustrates the rate of Caesarian section at the Montreal Maternity. In the first such operation attempted there (1897) the mother died. The next case occurred a decade later, after the experiments with symphysiotomy and pubiotomy. There was a dramatic rise in the rate from 1907-10 to 1919-22, to almost two per hundred deliveries. The maximum rate for this form of intervention was reached in 1919-22, as was the case for forceps and induction. The frequency of Caesarian sections then decreased to just over 1% for 1923-25, corresponding with the decline in the other intervention rates. The more conservative approach to Caesarian section by the mid 1920s is confirmed by the comment of one Montreal Maternity doctor. As he explained in 1924, he was not above increasing his personal rate of forceps use (to over 50% in cases of women having their first child) because he saw this as "the greatest safeguard against the real radicalism of today--the too frequent employment of Caesarian section."[28]

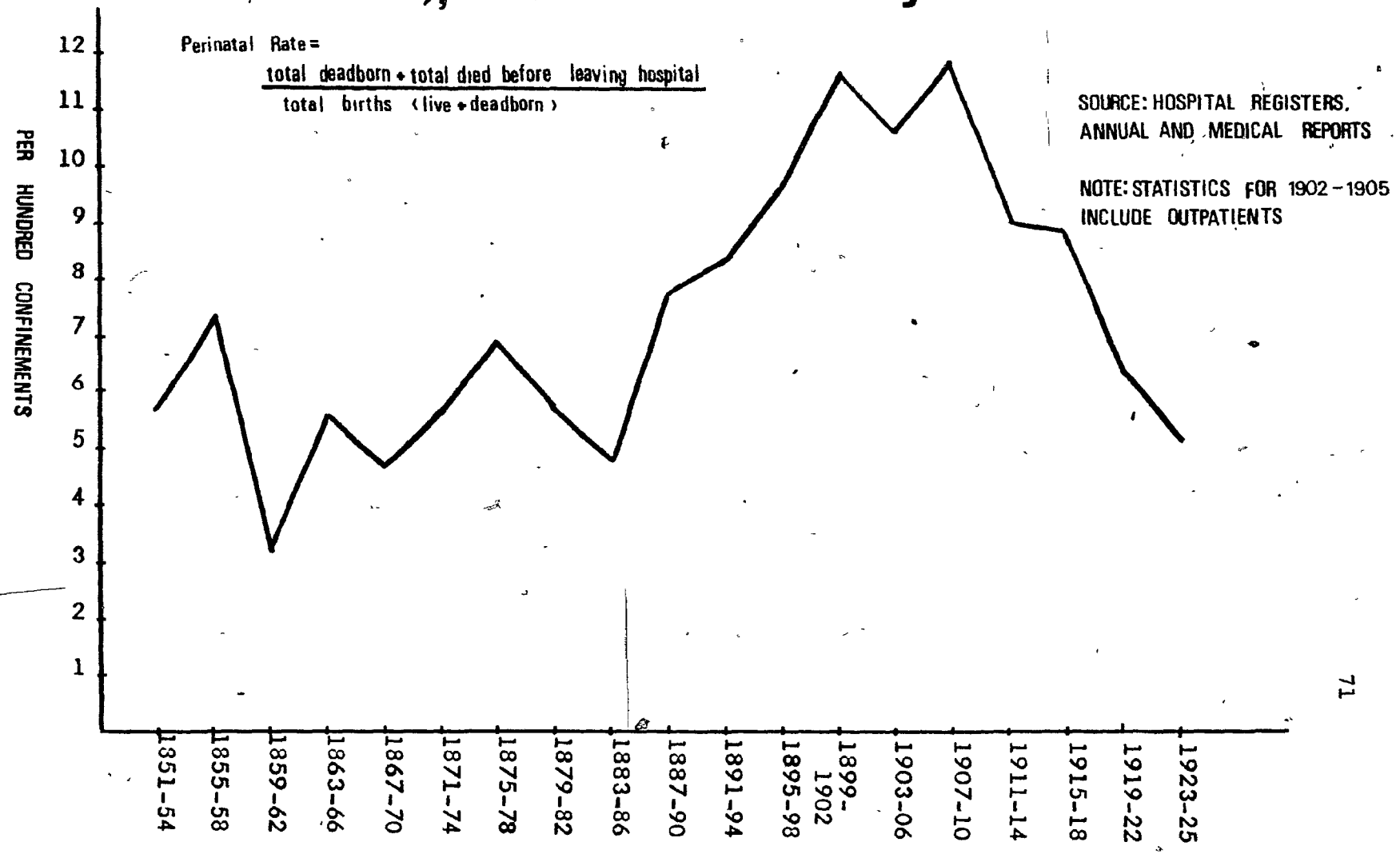
If a more frequent intervention rate had attracted

patients to the hospital, its downward turn after 1922 did not affect admissions. One reason for an even greater surge to hospitalization during the last few years of the Maternity's existence, was an outgrowth of the shift away from the emphasis on intervention. Along with this conservatism went a concern for extending the boundaries of medical involvement, into the areas of pre- and postnatal care. These areas had been of minimal interest to the medical profession before the turn of the century. While the manifestations of the new priority will be discussed in chapter five, what is relevant at this point, is that the extension into pre- and postnatal care widened the demand for hospitalization all the more by increasing the services offered by the Maternity in these areas. The extension also medicalized normal births to a further extent by encouraging routine consultations with a physician regardless of whether things were progressing well, or not. As mentioned above, medicalization of normal birth was vital to the eventual hospitalization of all childbirth.

The Effect of Evolving Therapeutics on Mortality Rates

How did the evolving obstetrical practices affect mortality rates?[29] Figure 3.6 shows the Maternity's perinatal

Figure 3.6 Perinatal Deathrate (Including Stillbirths), Montreal Maternity 1851-1925



mortality rate.[30] With minor fluctuations, it ranged between 5 and 7% until 1883-86 after which it began to rise. Too much emphasis cannot be placed on figures before 1890; evidence points to an underregistration during that period of babies who died between the time they were born and the time they left the hospital.[31] The perinatal rate reached a peak of almost 12% in 1907-10, which was followed by a general decline through to 1925.[32] Important aspects of the graph include the fact that the rate took a sharp upward turn precisely after 1886, when physicians assumed responsibility for all births occurring in the hospital; however, whether there was actually a causal relationship between the doctors' arrival and the deathrate, is not clear. Moreover, the downward trend beginning in 1907-10 coincided with the rise in Caesarian section rates, suggesting that the operation may have been effective in saving babies' lives.[33]

The maternal mortality rate of the hospital is charted in Figure 3.7. Most obvious are the wide fluctuations during the first fifty years or so; they are followed by a general pattern of decline beginning around the turn of the century. Some of the peaks of the early period are due to outbreaks of puerperal fever (1871-74, 1879-82), and no doubt the decline after 1900, as mentioned above, was related to antisepsis and asepsis. Another factor was a declining

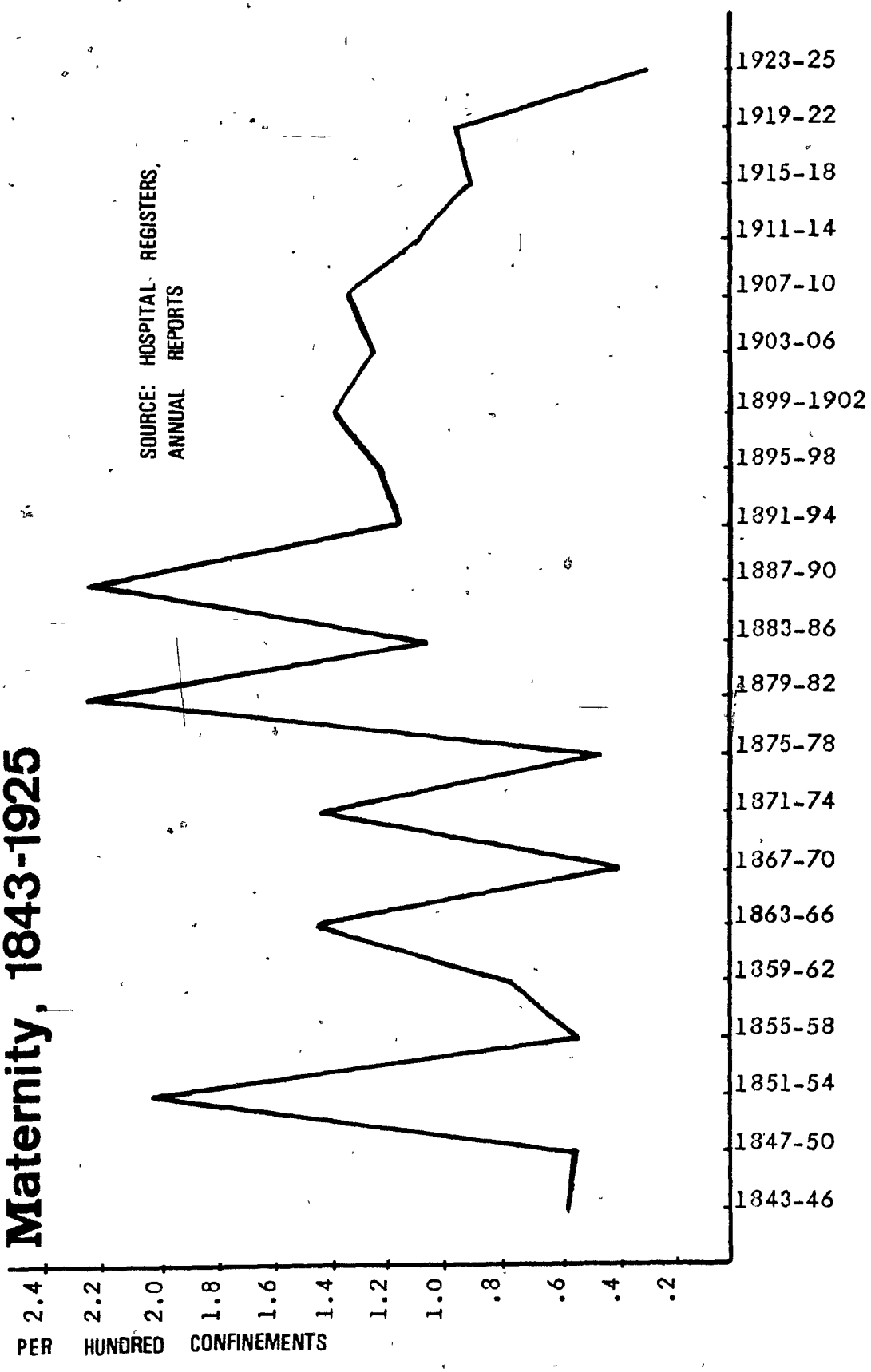


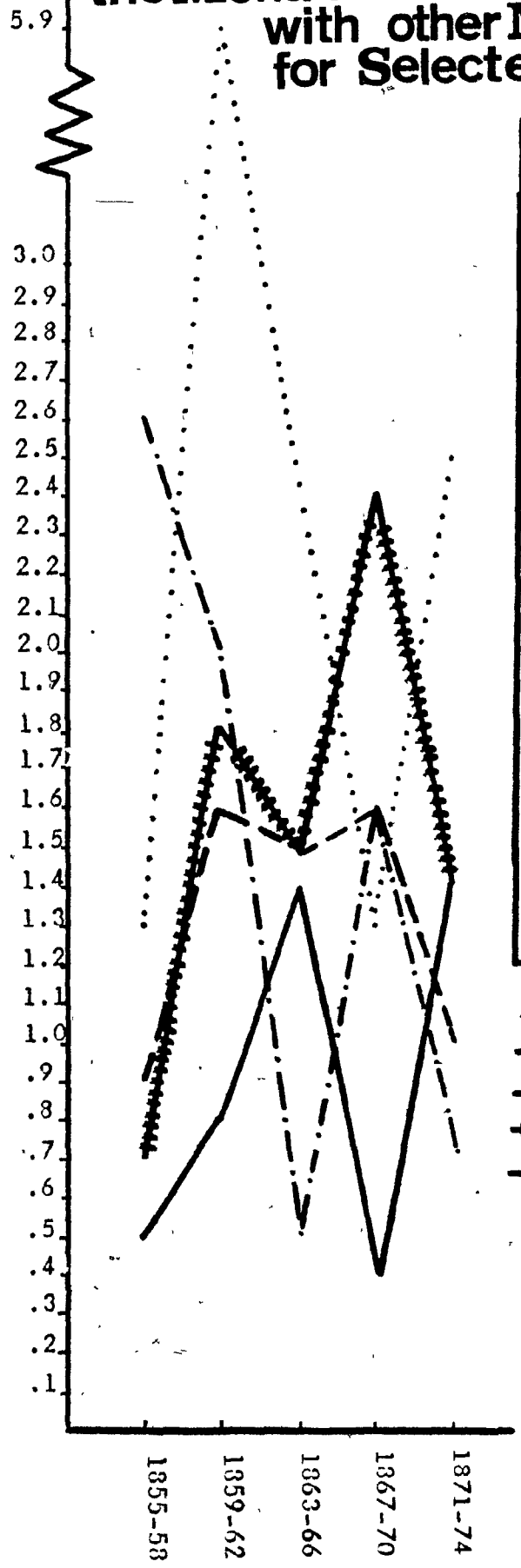
Figure 3.7 Maternal Mortality Rate, Montreal Maternity, 1843-1925

mortality rate from eclampsia, partly the result of the practice of inducing labour in such cases. Hospital statistics show that the lowest mortality rate from eclampsia occurred in years when the most radical measure--immediate induction--was employed.[34]

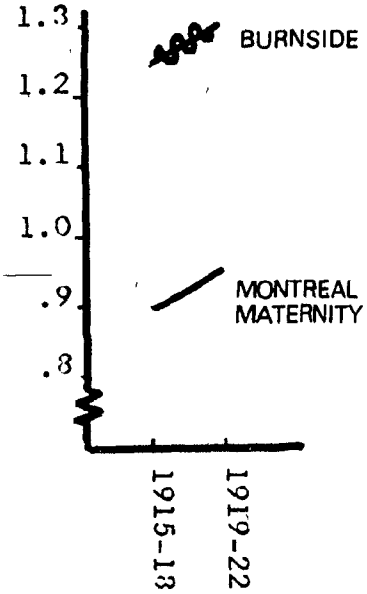
The Montreal Maternity's maternal mortality rate was usually lower then that of other institutions (figure 3.8). Only in 1871-4, when the Montreal rate was affected by an outbreak of puerperal fever, was the Montreal Maternity's rate higher than the British hospitals examined. A comparison with Toronto's Burnside Hospital shows the Toronto institution as having a higher mortality rate for both periods being observed.

Changes in the therapeutics of obstetrics were an important part of the reason why the hospitalization of childbirth began to gain favour. The medicalization of birth, a product of these changes, made even normal cases appear to be potentially laden with problems, and require specialized care; hospitalization was increasingly viewed as the environment of choice for providing this kind of care. Naturally, this view was held by physicians associated with the Maternity. But the number of doctors not on the hospital's staff, who nevertheless took advantage of the

Figure 3.8 Maternal Mortality Rate of the Montreal Maternity as Compared with other Maternity Hospitals for Selected Years



MONTREAL MATERNITY AND BURNSIDE LYING-IN, TORONTO 1915-22



SOURCE W B HENDRY, "MATERNAL MORTALITY," CANADIAN MEDICAL ASSOCIATION JOURNAL, XIII (1923) p 252

....QUEEN CHARLOTTE'S
— — CITY OF LONDON
— · — YORK ROAD
BRITISH
MONTREAL MATERNITY

SOURCE WILLIAM GILLIATT, "MATERNAL MORTALITY-STILLBIRTH AND NEONATAL MORTALITY," IN J M M KERR ET AL EDS, HISTORICAL REVIEW OF BRITISH OBSTETRICS AND GYNECOLOGY (EDINBURGH AND LONDON, 1954), P 263

chance to admit their patients to the private wards, suggests that hospitalization was favoured by a wider range of medical men than merely those who had university or hospital affiliations.

The Maternity's position as a center of obstetric care was also increasingly accepted by Montreal women. Its rising annual admissions attest to this, as does the growing proportion of the total births in Montreal, which took place at the Montreal Maternity. Although statistics on the Montreal birthrate are not reliable, they suggest that between the 1880s and 1926 the Maternity's share of the births in the city rose from about 1% to over 6%.[35] In Canada as a whole almost 20% of births occurred in hospitals by 1926, and this percentage was no doubt higher in the cities than in rural areas.[36] This information, along with the fact that in 1926 there were two other large maternity hospitals in Montreal plus several small ones, makes the 6% figure all the more believable. Clearly, the groundwork had been laid for the routine hospitalization of birth.

CHAPTER 4

CHANGES IN MEDICAL AND NURSING EDUCATION

Chapter one demonstrated that the Montreal Maternity had educational as well as charity functions. Indeed, the original reason for opening the hospital had been related to education: McGill students were to have a clinical environment in which to learn practical obstetrics. In spite of this initial motivation the program of clinical instruction at the Montreal Maternity was no more than perfunctory before the 1870s and physicians connected with the hospital during that time devoted little effort to teaching there.

By the end of the 1870s however, the approach to medical education began to change. The program was intensified and prolonged, and doctors replaced the midwife as instructors. A strong factor in this transformation was a rethinking in the 1880s and early 1890s of the entire medical educational process. Until that time, medical educators concentrated on medical theory, which they presented in formal lectures. By the late 1880s however, the heavy emphasis on theory was being reduced in favour of more clinical instruction through which the student could gain practical experience.

The Montreal Maternity's expanding role in medical education acted as an important incentive in the growth of the hospital. As the number of students in training rose and as each student was required to witness an increasing number of births as a condition of graduation, a larger patient population became necessary. The Montreal Maternity's expanding educational functions also directly affected the patients' hospital experience. Evidence suggests that many mothers objected to being the subject of students' examinations and questions.

The training of nurses underwent enormous transformation as well. During the mid-nineteenth century Florence Nightingale revolutionized nursing in Britain from a working-class, menial occupation to a skilled profession increasingly chosen by middle-class women. When Nightingale's influence reached North America in the 1870s, nursing schools were opened which reflected these changes.

Before the 1890s opportunities had existed to learn nursing at the Maternity, but the training period was short and instruction rudimentary. The Montreal Maternity's Training School for Nurses was established in 1892. In the new, formal nursing program, students were given intensive instruction along with--and this was also in keeping with Nightingale's philosophy of nursing--a thorough grounding in how nurses were to behave.

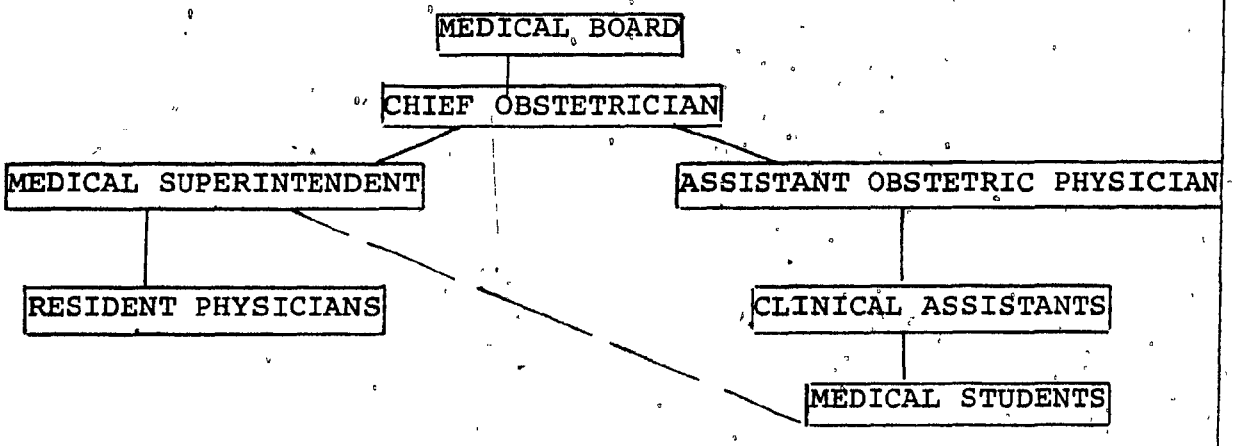
Changes in Medical Education

The expansion and intensification of the educational program for medical students took several forms. First, "with a view of giving the student of medicine a more thorough training in practical /obstetrics/" doctors took over the training of students--a function previously performed by the midwife.[1] The takeover was accomplished by an amendment of the Maternity's bylaws which redefined the position of "medical registrar." This office, which had existed since 1851, was reclassified in 1879 as "medical registrar and clinical instructor."[2] He was to be present at each case of labour, "demonstrate the progress of parturition, and deliver clinical remarks to the attendant students."[3] There were distinct advantages to the new arrangement. The "medical registrar and clinical instructor" was an experienced physician. The midwife had not been qualified to practice --and thus to teach--certain interventionary measures, nor did she have the theoretical background of a medical school graduate.

Additional staff changes at the Maternity were apparently intended to improve further the quality of education by separating teaching duties from patient treatment. The "medical registrar and clinical instructor" had kept patient statistics as well as instructing students. In 1905, when

the hospital moved to its new location and the whole medical staff was reorganized, staff positions which emphasized teaching were opened. The office of "medical registrar and clinical instructor" was eliminated and in its place a hierarchy of instructors was organized. After the chief obstetrician, the "assistant obstetric physician" had the highest status of the teachers. Responsible for clinical teaching in the hospital, he led students around the wards to examine the patients. "Clinical assistants" demonstrated such things as delivery techniques.[4] While this teaching staff was involved to some extent in the treatment of patients, the main responsibility for patient care remained with the superintendent and his staff of residents (Figure 4.1).

FIGURE 4.1 MEDICAL HIERARCHY, MONTREAL MATERNITY, 1905



Sources: MMB, I (July 3, 1905), pp. 9-41; (October 7, 1909) pp. 205-209.

While the teaching and patient-care functions were increasingly separated, the medical superintendent did remain responsible for preventing the students from becoming unruly in the hospital wards.[5]

An important part of this change in medical education at the Maternity was the organization of a special program of instruction for the medical students. Until the mid 1890s it was not specified how each student was to pass his time while on duty at the hospital. By 1894-95 descriptions of the instruction and the division of student duties at the Maternity were published. Included in the university calendar of that year are details of a Saturday afternoon clinic at the hospital, in which students reviewed the previous week's work with the chief obstetrician.[6] Patients were examined and diagnoses and treatments discussed. Beginning in 1904-05 six one-hour obstetrics ward classes were held during the winter and spring terms. During these classes, students were taken through the wards in small groups. 1904-05 also saw the Saturday clinic lengthened from one and one half to two hours in duration. Previously, ward attendance had been casually arranged--it being up to the student to determine when and how long to remain in the wards. Now a system existed to guarantee student presence at the hospital and the constructive use of this time.

The evaluation of students in clinical obstetrics demanded increasing evidence of proficiency in this area. By 1890-91 a clinical examination in obstetrics (aside from the theoretical one which had to be taken as well) was required as a prerequisite to graduation.[7] Moreover, by 1903 no student could write the clinical exam unless he had submitted complete clinical reports on two cases which had been assigned to him at the Maternity. These reports were part of the final examination for the degree.[8] Final evidence of the growing importance of clinical obstetrics to McGill's medical faculty is provided by the growing number of births each student had to witness (and actually participate in the delivery) in order to qualify for graduation. This was raised to twelve in 1909-10 and then to twenty in 1911-12.[9]

The Clinical Aspects of Education

This emphasis on clinical obstetrics at the Montreal Maternity was part of a general shift in the late nineteenth century in medical schools, to replace much of the theoretical instruction in all branches of medicine with clinical work in hospitals or in the laboratory. For example, leading medical professors in Great Britain were concerned about the over-reliance on medical theory. In 1889 they considered

the benefits of having students write a separate examination in practical surgery to complement their exam in theoretical surgery, with the result that "practical operative skill would have to be acquired, and a new and startling interest would be added to the surgical demonstrations /done by instructors/."[10] These changes were adopted in Ireland and at certain medical schools in England and Scotland. In the same year examining bodies in Britain were urged to require more proof that students were acquainted with a variety of common diseases and their treatment. One British examiner was struck by "the very narrow, monotonous and, withal, chronic, incurable and unhopeful group of cases constituting the material for examination, giving little idea of the variety and curability of cases in common practice making up the day's work of the ordinary practitioner." The remedy was "the curtailment of the systematic lectures" and the placing of more weight on clinical evaluation.[11]

The best source for determining the opinions of McGill's medical faculty is in the Montreal Medical Journal, published by members of the faculty. An editorial dated February 1889 reiterated that an excessive concentration on theory left no time for laboratory work or for effective clinical training. The editorial laid part of the blame on the provincial licensing boards of Canada whose overly-

theoretical examinations forced students and their teachers to emphasize the classroom over clinical experience.[12] The Montreal Medical Journal recorded the transformation at McGill and elsewhere, whereby more clinical work was incorporated into the academic program:

> The practical and personal parts of the teaching which in the schools, at least, were subordinate to the descriptive and didactic, have now become the most prominent and important, while the more formal lectures as such, are mostly confined to those fundamental and elementary facts and principles, which must always form a necessary foundation for practical knowledge.[13]

Impact of Medical Education on the Montreal Maternity

Physical expansion was one important result of the Maternity's growing education function:

> Year by year the work [of the hospital] is increasing. More students are in attendance, and as the law requires more from each student by actual experience in a larger number of cases than formerly, accommodation must be provided for more patients and a larger staff of nurses to wait on them.[14]

Student attendance may be approximated by examining final medical-year registration at McGill because it was at that stage--either in their final year or during the summer that immediately preceded it--that students did their clinical work at the Maternity.[15] During 1893-94, 66 final-year

students are listed, while the figure reached 73 for 1894-95. In subsequent years, except 1910-11, 1911-12, 1912-13, 1914-15, 1915-16, 1916-17 and 1919-20 the figure never dipped below 66, and for most years it was considerably higher. In 1923-24 some 260 students were listed as in their final year at McGill's medical faculty.[16]

The medical students' need for an increased patient population adds an important dimension to the charity role of the Montreal Maternity. It is important to remember that not all patients were subject to examination by the students. Private and semi-private patients were exempt, as were certain public patients who paid an exemption fee.[17] Thus, only the poorest patients were available for examination. The hospital's charity function thus served a dual purpose: needy patients were cared for and, at the same time, students were trained.

The presence of medical students in the wards was often not welcome by the patients. Hospital records for 1913 show for example that patients were frightened by the actions and discussions of students walking the wards with their instructors.[18] The examination by students of public-ward patients was such an ordeal that women paid to avoid it. Between 1905 and 1918, women could pay an additional fee to exempt themselves from being examined by the students. The

eight dollar fee was more than just a token payment since it was higher than the six dollar cost of two weeks' stay in the public ward. Hospital administrators apparently presumed that the high cost would ensure enough patients for student examinations while permitting women with the means, to opt out. The number of women who chose to avoid student examination is unknown but by 1918, the arrangement having "deprived the Hospital of considerable teaching material," the exemption fee was abandoned.[19]

Development of Nurses' Training Program

The most important factor in the development of the Maternity's program for training nurses was the reforms introduced by Florence Nightingale. Recognizing that nurses were untrained, were chosen from the lowest levels of the working class, and were usually characterized as gossips and inebriates, Nightingale organized a nursing program to transform the ability and image of nurses. Although the apprenticeship process by which nurses were trained remained essentially unchanged, certain innovations improved nursing education enormously. On-the-job training was supplemented by formal lectures given by physicians and graduate nurses, and the training period was lengthened to one year. In

addition student evaluation was made more rigorous. Students were required to keep lecture notebooks which were handed in to teachers for correction. Monthly reports on the students charted their progress in ward management and technical effectiveness, punctuality, quietness, cleanliness and trustworthiness. Students were also evaluated through written and oral examinations.[20]

At least as important to Nightingale as a thorough medical training was the elevation of nursing into a respectable and even noble profession. To achieve this nurses had to be well-disciplined, of good character, and beyond moral reproach. As a result, misbehaviour was severely punished and students were closely monitored. The nursing residence was an effective means of keeping students and graduate nurses under constant supervision. The homes were situated on hospital property. This not only gave the nurses quick access to the hospital but served to cut them off from the outside world. It was not recommended that nurses sleep in the hospital itself, presumably because of the presence of physicians and male patients.[21]

The second prerequisite to making nursing a respectable occupation was the attraction of a better class of women. At Nightingale's school, middle-class women were trained separately from their working-class counterparts and were

accorded a higher status. Working-class students were admitted as nurse probationers, middle-class students as special probationers. The latter group paid for their board while the nurse probationers were paid a small salary. In return special probationers received more medical lectures. While nurse probationers were required to work at the hospital for three years after completing the course, special probationers had to remain only two years.[22]

Although Nightingale's ideas ultimately had enormous impact on North American nursing, Canada and the United States were surprisingly late in establishing similar training schools. Saint Thomas's Hospital, the first school in Great Britain to teach the Nightingale method, began operation in 1859. Thirteen years passed until the first American school (in Roxbury, Massachusetts) opened its doors. Bellevue Hospital in New York and the Massachusetts General were next in 1873. In Canada, the first school of lay nurses was Mack's School in Saint Catherines, Ontario (1874) followed by the Toronto General Hospital in 1881.[23] At the Montreal General Hospital plans to open a nursing school existed as early as 1874, but it was 1890 before the school opened; the Royal Victoria Hospital School began in 1894.[24]

Development of Nurses' Training Program, Montreal Maternity

At the Montreal Maternity provisions had always existed for the informal preparation of student nurses. Students trained on the wards, assisted by the matron or a trained nurse. This practical education did not give students a solid grounding in nursing technique and theory. The training period was very short: nurses received a certificate after only two months. Nor was there a formal examination by which students were evaluated. Hospital records mention only once a series of lectures organized for the benefit of the "females" of the hospital (no doubt this meant student midwives but probably included nursing students as well). When the doctor who had promised to give them resigned a few months later, the lectures appear to have ended.[25] Most important was the fact that all nurses--training or graduates --were expected to help with household duties. The nurse as a domestic blocked the development of the nurse as a professional.[26]

In the late 1880s the need for more professional nurses became evident. Beginning in 1887 the nursing program was lengthened to three months if the student wished to receive the regular certificate; a special diploma was granted to students who trained for six months and passed an examination.[27]

The opening of the Montreal General's Training School for Nurses in 1890 set the stage for the development of the Maternity's own school. By 1892, an arrangement was made whereby students received eight months of initial training at the Montreal General, supplemented with three months of specialized obstetric work at the Maternity.[28] This entitled them both to a certificate from the Maternity as well as the diploma of the Montreal General. This arrangement between the Montreal Maternity and the Montreal General had several advantages. Nurses coming to the Maternity's wards already had some formal training and an acquaintance of rudimentary techniques. Patient care undoubtedly improved while student nurses were better prepared for the Maternity's obstetrical education. The system was obviously successful and other training schools connected with general and children's hospitals later sent their students to the Maternity for obstetrical and neo-natal work.

The Maternity's new three-month obstetrics training program offered a better nursing education than had previously been available at that hospital. Housekeeping became the responsibility of a housekeeping staff, allowing nurses to concentrate on their patients.[29] In addition, while apprenticeship continued to be the primary means of education, the time each nurse spent in the wards was now divided so that

the student served in different hospital departments (table 4.1).

TABLE 4.1 BREAKDOWN OF TIME SPENT BY STUDENT NURSES IN VARIOUS SPECIAL DEPARTMENTS OF THE MATERNITY, 1918-23.

DEPARTMENT	TIME SPENT
Private Ward	3 or so weeks
Nursery	2-3 weeks
Delivery Room	1-2 weeks
Outdoor and District Nursing	3-4 weeks

Source: Record of Pupil Nurses, IV, n.p.

Time that was not spent in the above-mentioned departments was devoted to work in the public wards. In addition to this practical training, instruction in the theoretical aspects of obstetric nursing was increased. Students attended lectures given by the staff of physicians as well as the matron and her graduate nurses. However, since lectures sometimes had to be cancelled when the hospital was short-staffed and nurses were needed in the wards, a new plan came into effect. After 1908 theoretical instruction was suspended at the Maternity: it was taught instead of one of the feeder training schools.[30]

Following the pattern set by Florence Nightingale, the instructional process also had a social context. Aside from her professional training, a nurse had to emulate the behaviour of respectable women. As in Great Britain middle-class nursing students were most prized at the Montreal Maternity:

> While endeavoring to secure women of a healthy moral tone for nurses, I would like also to see an advance in the matter of education. With two exceptions, the women hitherto trained by me here have been from the respectable servant class, very suitable in many ways for the work they undertake, but English hospital training has shown us how superior as a nurse is a woman of refinement and education. Such women are so far slow to present themselves as candidates, therefore we must utilize the material at hand, but I cannot but hope that coming years may show that the educated classes of Canada are in no way behind those of England and the States in this matter.[31]

Although the class origins of students is not clear transgressions from middle-class behaviour were severely punished: one nurse was nearly expelled after being seen in public with a staff physician. After the incident, Maternity nurses "were not even allowed to <u>speak</u> to a [medical] student."[32]

Loyalty and obedience were important qualities. Nurses were expected to obey doctors' orders without question. As one doctor put it,

> Your duty as a nurse in relation to the medical attendant of the patient is--to quietly and thoroughly carry out [sic]

> the directions you may receive from him--to be an efficient and trustworthy aid to him in care of the sick, and not to constitute yourself in any way his censor or critic.[33]

Further clues as to the importance of "female" characteristics like submissiveness and duty come from the matron's reports on student nurses. In some instances she appeared willing to overlook deficiencies in nursing ability and endorsed her students on the basis of social and work attributes. For example, one nurse was described as "most reliable and faithful.... Although in many cases lacking judgment, and making many errors--she showed an excellent disposition, and her corrections were taken in the proper spirit. She will make an excellent private nurse."[34] Another student who "passed a very poor examination" was nevertheless deemed "an excellent nurse, and will make a success of private nursing." This particular student was even recommended for the school medal reserved for superior students.[35]

Impact of the Nurses' Training Program on the Hospital

The effect of the nurses' training program on the Montreal Maternity tells much about the program's purpose. Undoubtedly, it was intended to produce a supply of high-

quality nurses for hospitals and private practice. But its other function was to serve as a source of free manpower for the Maternity. Without the nurse training program, more salaried nurses would have had to be hired.

Clearly, the number of salaried nurses on staff was not sufficient to take care of the demands of the hospital.[36] As table 4.2 emphasizes, salaried nurses could only have handled a small proportion of the patient-tending work, especially since their duty was both to supervise students and take care of the patients.

TABLE 4.2 APPOINTMENTS OF GRADUATE NURSES TO THE STAFF OF THE MONTREAL MATERNITY, 1905-1925, AND THE YEAR IN WHICH EACH APPOINTMENT FIRST OCCURRED

APPOINTMENT	YEAR
assistant to matron	1905
night superintendent	1907
operating room nurse	1911 or 1912
outdoor nurse	1911 or 1912
second outdoor nurse[1]	1913
social service dept. nurse[2]	1915 or 1916
private ward nurse	1916 or 1917
second private ward nurse	1920

[1] Eliminated in 1917

[2] Eliminated in 1918

Sources: AR 1905, 1907, 1912, 1916, 1917, 1920, in each case introductory unnumbered pages; Nursing Reports, II (December 1913), p. 224.

Nursing students were thus indispensable to ensure patient care at the Maternity and over the years their numbers increased substantially. Figure 4.2 shows that the greatest rise occurred after 1905. The number of students was increased by arranging for more nursing students to be sent from the feeder schools, particularly the Montreal General and the Royal Victoria Hospitals.[37]

That the growth in the number of student nurses paralleled an expanding patient and medical-student population was no coincidence. Hospital records make clear that increases in student nurses occurred because the existing nursing team could no longer handle the work. In 1897 for example, only lack of space prevented bringing in an additional student: "the outdoor work, and frequent applications made by doctors for nurses in emergency cases would justify the Matron in having a seventh nurse were it not that there is no accommodation in the Hospital for an increased staff."[38] In 1905 it was decided that since "a larger staff of [students] would be required in future," two extra nurses were requested of the Royal Victoria Hospital school.[39] And in 1906 "in order to carry on the work satisfactorily," five more students were brought in and "the Committee [of Management] have [sic] under consideration negotiations for receiving nurses from other hospitals."[40] The Training

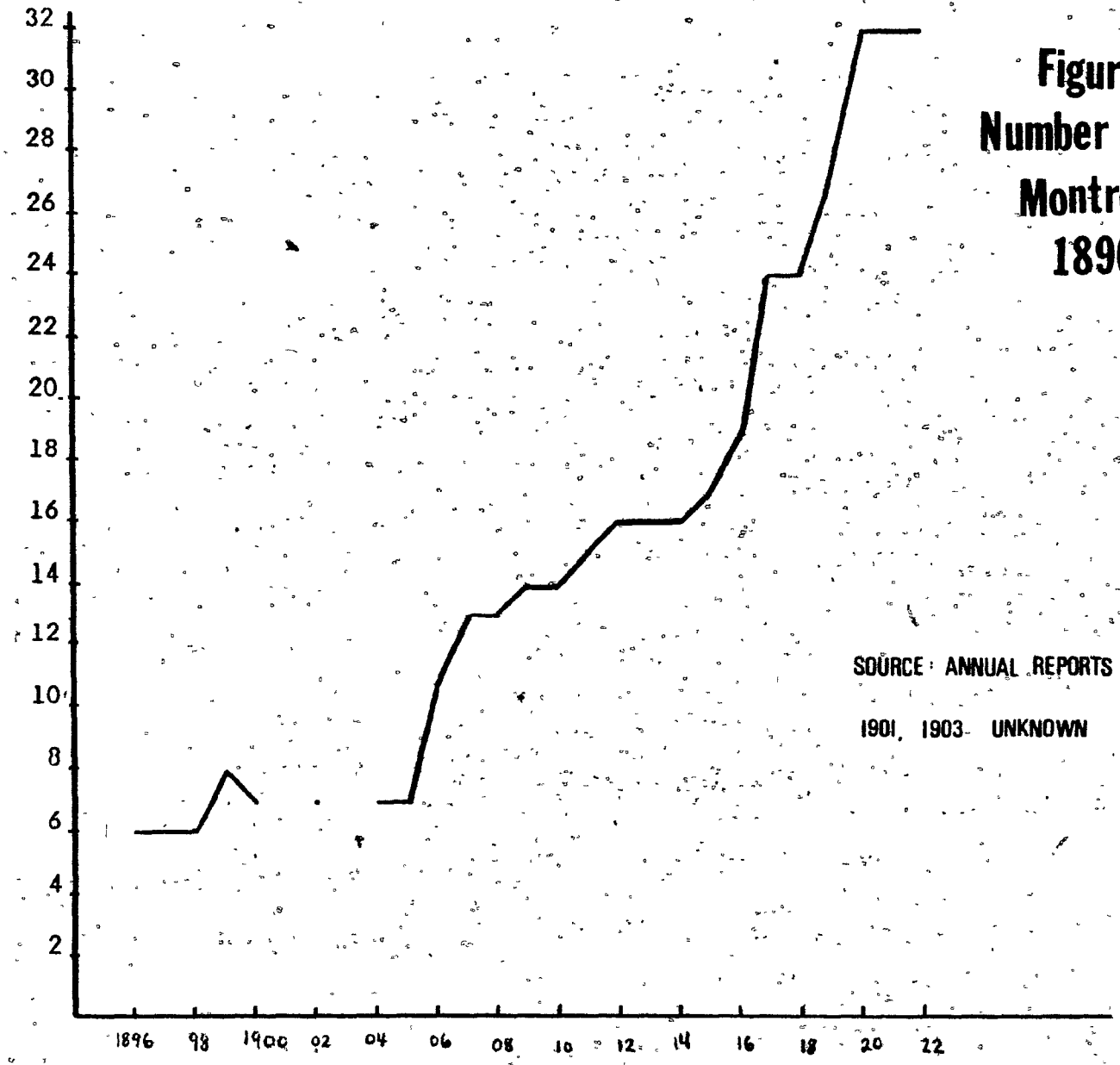


Figure 4.2
Number of Student Nurses, Montreal Maternity, 1896 - 1922

SOURCE: ANNUAL REPORTS

1901, 1903 - UNKNOWN

School for Nurses was thus one of the hospital's most important assets, as a source of inexpensive labour.

By 1880, the Montreal Maternity was evolving into a modern teaching hospital. The importance of its educational responsibilities had become recognized, as demonstrated by the hospital's adjustment to medical-student needs. As well, one of the principal disadvantages of the hospital as teaching facility--patients' dislike of student examinations--was apparent as well.

CHAPTER 5

THE WORKING-CLASS MOTHER AND THE "TENEMENT BABY": THE HOSPITAL'S ONGOING COMMITMENT TO SOCIAL ASSISTANCE

The Montreal Maternity's tranformation after 1890 brought its medical and educational services to the forefront. By expanding facilities, improving obstetrical care and upgrading student training programs the hospital fostered its image as a primarily medically-oriented institution. Middle-class patients were encouraged to think of the hospital as a better alternative to home birth. However, administrators did not neglect their commitment to working-class patients after 1890. While it is true that the proportion of non-paying patients in the hospital wards dropped after the turn of the century, numerous women with little financial resources were still treated.

The Maternity's continued assistance to the poor is evident from new or reorganized programs established after 1890. Through its outpatient department, women were delivered in their own homes by Montreal Maternity staff. Members of the hospital's social service department helped prepare women for childbirth, made postpartum visits to ensure the continued well-being of mother and child, and referred patients to other social-assistance organizations in the city.

In keeping with the increasingly medicalized approach to obstetrics care pre- and postnatal clinics were organized both at the hospital and elsewhere. The Montreal Maternity also helped the poor by encouraging public health, particularly by participating in Montreal's annual Child Welfare Exhibitions.

Concurrent with this continued interest in the physical health of working-class women was ongoing concern for their moral well-being. Establishment of the social service department and the reorganization of the outpatient department presented hospital officials with the means to influence patient behaviour more effectively than by traditional means such as preaching. Hospital personnel now entered the patient's house where, along with providing medical care, they could suggest ways of instituting a more "wholesome" or healthy life.

Reorganization of the Outpatient Department

This department existed--albeit in a crude fashion--as early as 1856 when at least one patient gave birth at home with the assistance of Maternity Staff. The procedure during the early years was spelled out in an 1860 annual report: home patients were delivered by the Maternity's

midwife, or "some of the gentlemen in attendance at the hospital" (presumably students) under the supervision of the chief obstetrician. However, in 1886 this program was suspended.[1]

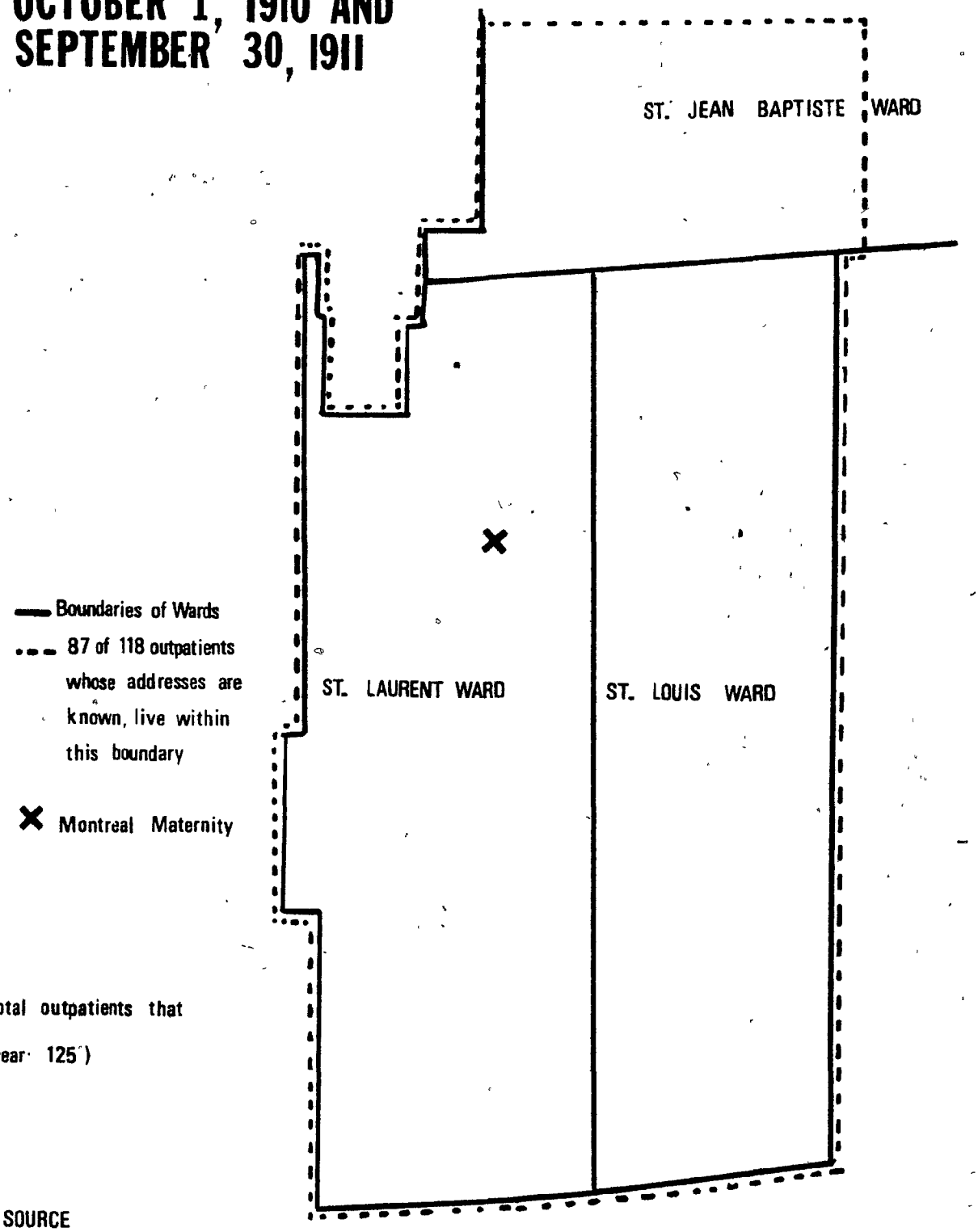
Reopened in 1892 or 1893, the outpatient department evolved from a branch of the internal facilities into an aid service in its own right. Outpatient procedure at the time of reopening was apparently similar to that of 1860 except that the resident physician had replaced the midwife. This however proved unsatisfactory, since in emergencies the resident could not serve simultaneously in the wards and in patients' homes: as a result, outpatients were "not... properly cared for."[2] In 1903 a separate doctor was given charge of the outpatient service, putting the whole system "on a more professional basis."[3] The entire procedure had been rearranged by 1907: during pregnancy each patient was registered and examined at the hospital, and given a card to be sent back to the hospital at the onset of labour. She was delivered by a Maternity physician and visited daily by a nurse, who might also prepare a meal and see that things were running smoothly. Usually on the tenth day the doctor returned with the nurse to ensure that there were no complications.[4] Finally, in response to growing demands on the outpatient service an arrangement with the Victorian

Order of Nurses was made in 1913 so that its staff handled outpatient nursing services between 7 P. M. and 7 A. M.[5] A Maternity doctor still attended each case of labour, but Maternity nurses were relieved of night duty.[6]

The outdoor department was designed to serve working-class women. Admission as an outpatient was based on a woman's financial need and at least until 1903 a clergyman or other "reliable person" had to vouch for each patient to make sure she qualified.[7] In 1914 an investigative bureau was set up within the outpatient department to ensure that only patients who could not afford doctors' fees were accepted.[8] Although as early as 1903 women were asked to pay a portion of the six-dollar childbirth fee, those unable to do so were not pressed.[9]

An indication of the patients' working-class background is their addresses. An analysis of 118 outpatients who used the service between October 1, 1910 and September 30, 1911 shows that 74% lived in the working-class neighbourhoods of St. Lawrence, St. Louis, and the southwestern part of St. Jean-Baptiste Wards (see figure 5.1). The convenient location of the Maternity in St. Lawrence Ward was undoubtedly a factor in bringing area women to the hospital's outpatient department; there may have been working-class women elsewhere in Montreal who would have used the facility but were outside

Figure 5.1 DISTRIBUTION OF OUTPATIENTS, MONTREAL MATERNITY, ADMITTED BETWEEN OCTOBER 1, 1910 AND SEPTEMBER 30, 1911



(total outpatients that year 125)

SOURCE
HOSPITAL REGISTER

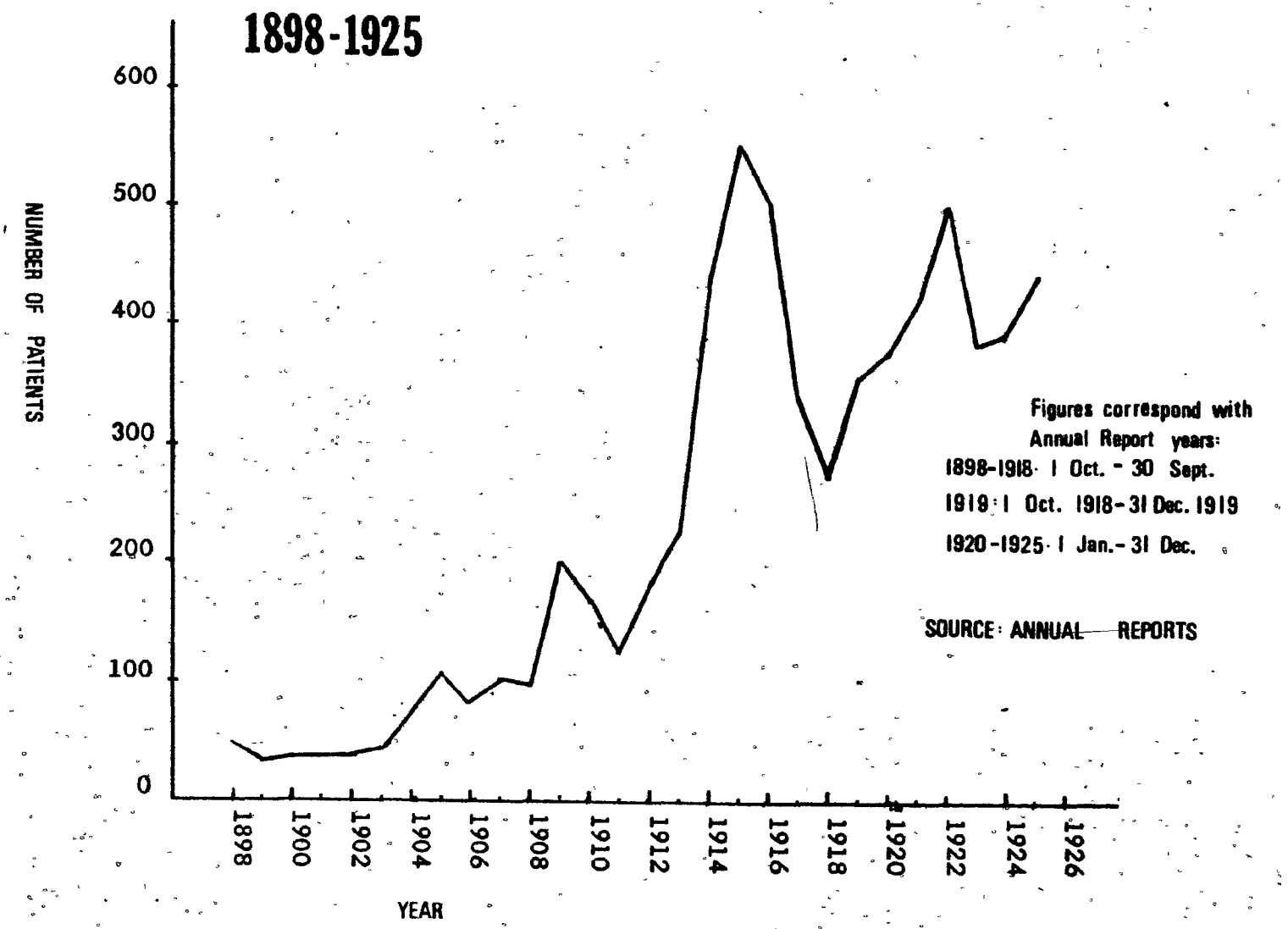
the area in which the department usually operated. However, convenience was not the only factor. Middle-class women who lived near the hospital, in better housing just to the south and west of St. Lawrence Ward, did not apply to be outpatients.

The outpatient department grew significantly over the years (figure 5.2). Between 1894 and 1897 less than thirty patients used the service each year. The number of patients then remained roughly the same (under fifty per year) until 1903. Annual figures then began to rise. The minor decline in 1906 was probably due to the hospital's relocation and the consequent reorganization of the outpatient department. The peak in 1915 represented the response to the service being offered free to soldiers' wives: the decline a year later seems due to the offer of free service for soldiers' wives in the Maternity's wards.[10]

The outdoor department was especially popular amongst immigrant Jewish women. Of the 125 patients in 1910-11, three-quarters were Jewish (versus only 12% of indoor patients). Almost two-thirds of the outpatients were Russian-born as compared with 8% of indoor patients.[11]

It is not clear why Jewish women were attracted to the outpatient department, although their status as recent immigrants and inhabitants of working-class neighbourhoods

Figure 5.2 Annual Number of Outpatients, Montreal Maternity, 1898-1925



makes it clear that they were members of the particular socio-economic group for which the outpatient department was intended.[12] This does not explain however, why their proportion in the outpatient population was so high as compared with women of other religions and nationalities. Possibly, there was a cultural factor involved in their decision to have a Maternity physician deliver the baby, rather than resorting to a midwife.

Other Services for Working-Class Mothers and their Children

As noted in chapter three pre-1900 care for working-class women was limited to assistance during childbirth and the immediate postpartum period.[13] During the first decades of the 1900s however, the services available to these women through the Montreal Maternity expanded to include instructing women on how to prepare for the baby and providing more substantial pre- and postnatal care.[14]

As early as 1899 mothers who planned to be admitted as inpatients were encouraged to place themselves under hospital care some two months before the delivery date for prenatal examination.[15] Outpatients were examined on registration by about 1907. A new phase in ante-natal care and guidance for outpatients began in 1915 with the formation of the

Maternity's social service department. This service--except for a short period in 1917 when funds ran out--remained in operation until 1926. A social worker visited the homes of registered patients and gave instruction on hygiene, diet and ventilation. She also recommended hospitalization for women experiencing medical problems, and referred patients to other social assistance organizations.[16] In addition, Maternity patients received some degree of prenatal instruction: pamphlets entitled "The Care of the Baby" and "To a Prospective Mother" were distributed in English, French and Yiddish and prenatal classes were offered by a Maternity physician.

The Maternity also made postnatal care available to working-class mothers and their children. The hospital's social worker visited the homes of both ward and outdoor discharged patients. Around 1906 the hospital opened a dispensary for the after-care of discharged patients. This service was so popular that its hours were extended in 1910 from two to three days per week.[17] Presumably, infants were also treated at the dispensary although by 1913 a separate infants' clinic existed at the Montreal Maternity. In that year 120 babies aged three weeks to five months were examined in the clinic, which grew steadily until its closing in 1926.[18]

In cooperation with other charity organizations in Montreal the Maternity opened four postnatal clinics for

babies in various parts of the city. In this way it offered care to children who had not been born in the hospital. The clinics, the first of which opened in 1921, were staffed in part by Maternity doctors and nurses. They operated in conjunction with organizations known as "settlements" or "neighbourhood houses," which aided poor children by offering playground facilities, social activities and summer camps.[19]

It is clear then, that by 1925 working-class mothers and their children received a wide range of assistance, as recapitulated in table 5.1:

TABLE 5.1: SERVICES OFFERED TO WORKING-CLASS PATIENTS BY THE MONTREAL MATERNITY, 1925.

PERIOD OF CARE	RANGE OF CARE RECEIVED	
	INDOOR PATIENTS	OUTDOOR PATIENTS
Prenatal	- examination before admission (details unknown)	-examination at outpatient clinic held at hospital -visits by social worker
Chidbirth and Immediate Postpartum Period	-hospitalization	-visits by doctors and nurses (normally on day of birth plus nine subsequent days)
Postnatal	-dispensary -infant clinics, Maternity and elsewhere -visits by social worker	-dispensary -infant clinics, Maternity and elsewhere -visits by social worker

Sources: AR 1899, p. 7; 1907, p. 18; 1910, p. 20; 1913, p. 27; 1914, p. 25; 1915, p. 17; 1916, p. 32; MR 1913, p. 9.

Yet another way in which the Montreal Maternity disseminated public health information to working-class patients was by participating in the Child Welfare Exhibitions held in Montreal. The annual exhibitions were a combined effort of social workers, charity agencies, and representatives from government departments. To cater to working parents the first exhibition (1912) was a two-week event, free and open until 10 P. M. On display were exhibits of a schoolroom, living-room and playground, as well as charts and information in infant mortality, child-raising, and the newly-created Juvenile Court.[20] The Montreal Maternity apparently had a booth at the exhibition every year, at which posters and leaflets were distributed.[21] In 1922, the Maternity staff at the booth concentrated on publicizing the hospital's outpatient service and gave instruction on how to care for the eyes of the newborn.[22]

Concern about Morality

Although the concern about morality, so central to the hospital's early period, became subservient to its medical and educational priorities after 1890, it did not disappear. Its importance is clear for example in the 1895 negotiations for an amalgamation of the Montreal Maternity with the

Montreal General Hospital. The plan was rejected in part because the resulting institution would not have been as concerned with morality: "it would be necessary /if the plan went through/ to make special arrangements for the care of waiting patients in whose moral welfare they /the Committee of Management/ were greatly interested."[23]

The outpatient department provides the best demonstration of the Committee of Management's "moralistic" concern. Praising the department's work in 1908 the Committee emphasized the importance of home visits by nurses: "the district nurse is a powerful factor in raising the standard of morality and hygiene...."[24] The point was reiterated a year later. The outdoor service was beneficial because "the indirect moral influence on the families visited and the importance of wholesome living in the upbringing of the tenement baby /as demonstrated by the nurse/ will, we believe, bear fruit slowly, yet surely."[25]

The continuing importance of morality is suggested by the function of the social service department. One of its responsibilities--as revealed in 1916--was to determine if a potential outpatient was "deserving of the Department's assistance of not."[26] To some extent, "deserving" meant whether a patient could afford a private physician. But there also appears to be another meaning inherent in the

statement, a desire to select patients who showed respect for middle-class standards of morality. The fact that only married women seem to have been accepted as outpatients lends credibility to this argument.

Working-class women, then, continued to be assisted at the Maternity, but after 1900 they were helped in different ways. No longer were the hospital's wards crowded with the poor; much charity work was increasingly done outside of the hospital's wards--in the home, the dispensary or clinics. This allowed the hospital to fulfill its growing function as a medical obstetrical service for middle-class women, while continuing its service to the poor.

CONCLUSION

The Montreal Maternity of 1925 was dramatically different from the tiny hospital established in 1843. Originally a female-dominated (the Committee of Management and the midwife), primarily charity-oriented institution for working-class women, it had evolved into a male-dominated medical centre which cared for the wealthy as well as the poor. The staff and patient population increased dramatically and McGill doctors participated more actively in hospital affairs. The period saw the role of the doctor and of medical technology on birth as having increased substantially, as well as a broadening of the domain of medical responsibility to include the pre- and postpartum periods. In addition, whereas the hospital in its early years consisted mainly of an indoor department--the wards--and a small outpatient department, it later extended its services to include a social service department, mothers' and children's clinics, and a revamped, larger outpatient facility with a greater range of usefulness. In terms of the education it offered, the Maternity's three-month nursing program formed an important supplement to other schools' more generalized nursing instruction. The clinical obstetrics program for medical students also became more comprehensive and intensive.

During the hospital's early years it had operated on a very small scale with few patients, a small staff, limited student training facilities, minimal participation by doctors and almost no medical intervention in childbirth. By 1925 all these facets of the hospital's operation had been proportionately increased.

In terms of its medical service, the Montreal Maternity improved significantly. Its mortality rates declined, its staff was better trained, and it was better able to respond to obstetrical problems by employing new techniques such as Caesarian section and through its pre- and postnatal care programs.

However, this medical evolution resulted in significant changes in the form of patient care. Given the increase in patients and the decline in the ratio of nurses to patients, patient-staff relationships became much more impersonal, a problem undoubtedly exacerbated by the presence of scores of medical students examining many of the women. Second, the increasing class differentiation of the patient population after the turn of the century, specifically the presence of wealthy as well as working-class women, had diverse effects from the standpoint of the poorer women's response to the hospital environment. The new diversity in the socio-economic background of the patients removed the stigma

attached to the hospital as an institution for paupers, undoubtedly making the stay there--even for charity patients--less of a humiliation. On the other hand, there was a clear distinction within the hospital between public and private patients and even between public patients who could pay the student exemption fee and those who could not. There was a third characteristic: hospitalization may have saved lives but encouraging routine hospitalization and the medicalization of even normal pregnancies and births transformed childbirth from a family and woman-dominated experience into an impersonal, mechanical process. Only recently have attempts been made to correct these problems, by allowing the partner to be present during the birth, reducing intervention when warranted, providing prenatal instruction in natural childbirth, and using birthing rooms less threatening and alienating than the usual caserooms.

While the institutional effects of the transformation can be documented, it is more difficult to evaluate the experience from the patients' point of view. The documents, reports and minutes on which this history is based were written by hospital administrators, personnel and doctors--never by the patients themselves. Social historians recognize this as a major flaw in institutional studies and have tried to recreate individual experience through, for example, the study of clubs and organizations administered

by working-class people themselves.[1]

Sources also present a problem in trying to assess why hospitalization gained popularity after the turn of the century. Certainly, improved therapeutics was one incentive for hospitalization but social factors also played a part. For example, the expanding use of the automobile may have encouraged middle-class women to choose hospitalization. Women who lived some distance from the hospital were now assured of a fast, safe conveyance to the Maternity when the time came.

Another limitation of this particular institutional study is in trying to determine the relationship of the Montreal Maternity to the city in which it operated. Was it busier in times of economic hardship? How closely was its growth related to industrialization, urbanization, or the changing class structure? What was the relationship between the Montreal Maternity and other Montreal social assistance organizations? Before such questions can be answered, more research needs to be done on the social and economic history of Montreal in the late nineteenth and early twentieth centuries.

Despite these limitations, this study has permitted the analysis of an important medical institution. The changing structure of the hospital--its evolution from a primarily social-assistance oriented institution into a

facility geared to offering superior medical care--has been demonstrated. We have observed the transformation as it affected medical personnel: whereas one midwife had been sufficient for the medical and educational needs of the Maternity before 1879 (with the chief obstetrician offering additional support during medical emergencies), by the turn of the century she had been replaced by a staff of male physicians. Given the growth of the hospital's patient population, the more medicalized approach to childbirth and the more intense student instructional programs, one individual alone could no longer handle all the medical and educational responsibilities. Moreover, the midwife's training was no longer deemed sufficient for her to have a place in the Maternity of the 1900s. Evolving technology and the attitude of the medical profession, which did not yet endorse females as physicians, turned the hospital into a male-dominated institution as far as medical and medical-student educational functions were concerned. The role of women in the Maternity was reduced to handling administrative matters, nursing, and nurse-training. These developments are all symptomatic of the growing importance of the medical profession, and its increasing dominance of health care.

The thesis also sheds light on the history of childbirth at a pivotal moment: the centuries-old tradition of home

birth was being dismissed as antiquated, and the radical innovation of routine hospitalized birth endorsed. We have seen physicians' perception of childbirth develop from its consideration as a natural physiological process into a medical event necessitating close observation and a high intervention rate; by the 1920s there was a reconsideration of the need for a high degree of intervention, but never again would doctors' role in childbirth be reduced to the pre-1890 level. We also observed how medicalization displaced the previously-dominant emphasis on morality, and how the hospital's charity functions were, to a large extent, transferred outside the hospital's wards and into the outpatient and social service departments and the pre- and postnatal clinics.

In addition, the history of medical and nursing education in a central medical environment has been documented. Although the quality of medical students' instruction improved, this was not achieved without creating tension between students and the patients they examined, as demonstrated by what little evidence there is on patients' experience at the hospital.

In short, the Montreal Maternity was a microcosm which reflected social and medical change in the late nineteenth and early twentieth centuries.

Notes to Chapters

Abbreviations Used in the Notes:

AR:	Annual Report, Montreal Maternity.
HR:	Hospital Register, Montreal Maternity.
McGMF:	Minutes of Medical Faculty meetings, McGill University.
MCM:	Minutes of Committee of Management meetings, Montreal Maternity.
MG:	Minutes of Governors' meetings, Montreal Maternity.
MMB:	Minutes of Medical Board meetings, Montreal Maternity.
MR:	Medical Report, Montreal Maternity.
OC:	Obstetrics Casebooks, Montreal Maternity.

Notes to Preface

[1]Over the years a series of governors was also appointed to the hospital, and these, too, were predominantly middle-class. However, they were not as a group very influential as far as hospital matters were concerned.

[2]Charles E. Rosenberg, "And Heal the Sick: Hospital and Patient in Nineteenth-Century America," in Patricia Branca, ed., The Medicine Show (New York: Science History Publications, 1977), pp. 121-140; and "Inward Vision and Outward Glance: The Shaping of the American Hospital, 1880-1914," in Bulletin of the History of Medicine, LIII (1979), pp. 346-391; Morris J. Vogel, The Invention of the Modern Hospital: Boston 1870-1930 (Chicago: University of Chicago Press, 1980).

Notes to Chapter I

[1]See HR, I. The only time (before the 1890s) when there was a majority of married patients at the hospital, was during the first decade. The reason for this is unclear. At various points in this chapter, reference will be made to statistical information for various years that have been chosen as samples. The early sample, 1853, was one of the earliest years to be well-documented in the hospital register, but was late enough to ensure that the hospital was already in full operation. The decade 1876-1885 was chosen because it is roughly midway between 1843 and 1926; 1884 will also be isolated because it was exactly halfway between those years.

[2]MCM, I (June 7 and 10, and November 15, 1850), n.p.

[3]See HR, I, 1884.

[4]For example, an 1846 newspaper article written by the Committee of Management noted that several married women "came from a distance on account of peculiarities in their cases requiring more than ordinary skill in the treatment." MCM, I, (1846), n.p. These women may well have been from isolated areas where there was limited access to medical care.

[5]Bylaws, Rules and Regulations for the Management of the University Lying-In Hospital, Montreal, as Amended at the Annual Meeting, October 1859, p. 11.

[6]Ibid., p. 12.

[7]Unfortunately, statistics on the proportion of patients who sought admission because they lacked funds or had nowhere else to go, are not available.

[8]AR 1847, 1850; MCM, I, opening pages (not numbered); MCM, I (November 15, 1850), n.p.

[9]MCM, I (February 6, 1852), n.p. and (February 20, 1852), n.p.

[10]MCM, I (November 2, 1849), n.p.; AR 1855.

[11]Bylaws...1859, pp. 12-13.

[12]Ibid., p. 13.

[13]The first volume of the hospital register lists patients being dismissed in 1848 (1), 1854 (1), and 1855 (4), for example.

[14]AR 1898, p. 4.

[15]AR 1889, p. 5.

[16]See, for example, Richard W. and Dorothy C. Wertz, Lying-In: A History of Childbirth in America (New York: The Free Press, 1977) p. 132; and Charles E. Rosenberg, "And Heal the Sick: Hospital and Patient in Nineteenth-Century America" in Patricia Branca, ed., The Medicine Show (New York: Science History Publications, 1977), p. 126.

[17]Rosenberg, "And Heal the Sick," p. 127.

[18]Bylaws...1859, pp. 7, 13.

[19]Montreal Maternity, Nursing Reports, I (November 1893) and (July 1894), n.p.

[20]MCM, I (August 2, 1850), n.p.; II, (January 8, 1864), p. 80.

[21]Bylaws...1859, p. 15.

[22]MCM, II (January 8, 1864), p. 80.

[23]Francis J. Shepherd, Reminiscences of Student Days and Dissecting Room (Montreal, 1919), p. 14.

[24]MCM, II (not dated but between February 6 and October 2, 1863), p. 75.

[25]Bylaws...1859, p. 8. See MCM, 1844-1870, to note minimal participation at Committee meetings, and McGMF for those years, to show references to the Montreal Maternity during Faculty meetings.

[26]See MCM for those years.

[27]MCM, II (October 6, 1871), p. 111. The problems which kept the plans moving at such a slow pace were partly financial, and partly the reluctance of the eventual neighbours of the hospital, to have it in their midst: the proposed location thus had to be moved several times.

[28]For the takeover of obstetrics by physicians in the U.S. and Great Britain see G. J. Barker-Benfield, The Horrors of the Half-Known Life: Male Attitudes toward Women and Sexuality in Nineteenth-Century America (New York: Harper and Row, 1976), especially Part II, "From Midwives to Gynecologists," pp. 61-132; Datha Clapper Brack, "Displaced--The Midwife by the Male Physician," in Ruth Hubbart et al, ed., Women Look at Biology Looking at Women (Cambridge, Mass.: Schenkman Publishing Co., 1979), pp. 83-101; Jane B. Donegan, Women and Men Midwives: Medicine, Morality and Misogyny in Early America (Westport Conn.: Greenwood Press, 1978); Jean Donnison, Midwives and Medical Men: A History of Inter-Professional Rivalries and Women's Rights (New York: Schocken Books, 1977); Frances E. Kobrin, "The American Midwife Controversy: A Crisis of Professionalization," in Bulletin of the History of Medicine, XL (1966), pp. 350-363; Judy Barrett Litoff, American Midwives: 1860 to the Present (Westport Conn.: Greenwood Press, 1978); and Richard and Dorothy Wertz, Lying-In: A History of Childbirth in America. Very little has been written on midwives in Canada, and still less on the actual displacement of midwives by doctors. See Suzann Buckley, "Ladies or Midwives: Efforts to Reduce Infant and Maternal Mortality," in Linda Kealey, ed., A Not Unreasonable Claim: Women and Reform in Canada, 1880s to 1920s (Toronto: Canadian Women's Educational Press, 1979); and Kathy Moggridge-Kuusisto, "Midwives, Medical Men and Obstetrical Care in Nineteenth-Century Nova Scotia," unpublished M.A. thesis, University of Essex, 1980.

[29]This was a time when midwives still practiced in Montreal; in fact, some were receiving their training at the Montreal Maternity. AR, 1879.

[30]"Medical Laws of Quebec, section 6--Admission to the Practice of Medicine, and The Practice of Medicine" in Polk's Medical Register and Directory of the United States and Canada (Detroit, New York and Chicago: R. L. Polk and Co. Publishers, 1917), 4002s.2, p. 1678.

[31]Anonymous review of The Principles and Practice of Obstetrics by Gunning S. Bedford (1861) in the British American Journal, III (January 1862), p. 12. For a similar view, see another anonymous article entitled "The Use of Instruments in Childbirth," in the British American Journal, I (August 1846), p. 104.

[32]This point of view was diametrically different from the one which began to develop by the late 1870s, when medical opinion began to favour more active employment of instruments. An 1879 meeting of the Obstetrical Society of London, for example, advocated "the earlier and more frequent use of forceps under circumstances and in condition of the parts in which the older physicians would not have dreamed of applying them." William Gardner, "Report on Obstetrics," in the Canada Medical and Surgical Journal, IX (October 1880), p. 150. Unlike American physicians, who on the whole were reputed to use forceps liberally, British doctors had until then been reluctant to use forceps too freely. Canadian doctors appeared to have followed the British pattern here, rather than the American one.

[33]H.R., 1876. Delivery took place on August 20.

[34]W. H. Ackernecht, A Short History of Medicine (New York: The Ronald Press Co., 1955), pp. 133-161.

[35]See for example, George E. Fenwick, "Statistics of the University Lying-In Hospital," in The Medical Chronicle or Montreal Monthly Journal of Medicine and Surgery, V (Sept. 1857), pp. 151-60; Archibald Hall, "Statistics of the University Lying-In Hospital, Montreal," in The British American Journal. Devoted to The Advancement of Medical and Physical Sciences in the British American Provinces, I (February 1860), pp. 49-56; D. C. MacCallum, "Report of the University Lying-In Hospital, Montreal, From October 1st, 1875, to October 1st, 1883," in Canada Medical and Surgical Journal, XV (July 1887), pp. 705-712.

[36]Bylaws...1859, pp. 10-11.

[37]Wertz and Wertz, Lying-In, p. 63.

[38]Shepherd, Reminiscences, p. 15.

[39]MCM, I (Sept. 1852), n.p.; AR 1879.

[40]McGill University, Medical Faculty Calendar 1869-70. This was in contrast to the fact that even the earliest medical faculty calendar available (1852-53) shows that a medical degree could not be obtained without one-year's worth of clinical medical and surgical work in a general hospital. Medical Faculty Calendar, 1852-53.

[41]Francis Shepherd, for example, attended twelve cases to qualify for a British license. All his cases were normal. Reminiscences, p. 14. Admission tickets for one student who attended the hospital in 1871-72 show that he only witnessed four births, while tickets for another student at the hospital in 1880-81, who wished to qualify for a British certificate and thus watched twenty-five cases, reveal that he apparently saw only one forceps case. Admission Tickets to the Lying-In Hospital of Mr. G. H. Christie and Mr. Thomas W. Reynolds, Osler Library Collection.

[42]Physicians' role in the educational functions of the Montreal Maternity was minor, despite the fact that the original reason for beginning the hospital had been related to education: from the start it had been planned as a facility for clinical training. This apparent paradox may, however, be explained. A closer examination of the medical faculty's motives reveals that the catalyst prompting the doctors to open the Montreal Maternity was the establishment of a rival medical school in Montreal in 1843. The new school had been granted access to the already-existing Montreal Lying-In Hospital, which did not permit McGill students to use its training facilities. Prior to 1843, McGill had not been expected to provide such facilities. After 1843, McGill would have appeared inferior to the new school without them.

[43]Anonymous article entitled "Demonstrative Midwifery,"

in the British American Medical and Physical Journal, VI (1850-51), pp. 332-333.

[44]German universities, on the other hand, appear to have been less demanding: in 1888, even at the best schools, a student was not required to attend any cases of labour. Anonymous, untitled article in Canada Medical and Surgical Journal, XVI (April 1888), p. 575.

[45]Medical Faculty Calendar, 1889-90, p. 108; Shepherd, Reminiscences, p. 14. The 1890 figure for Britain might even have been twenty-five; see footnote 41.

[46]Caroline V. Barrett and John R. Fraser, The Royal Victoria Montreal Maternity Hospital, 1943 (private publication of the Royal Victoria Hospital, 1943), pp. 16-17.

[47]Anonymous article in the Canada Medical and Surgical Journal, VI (Feb. 1878), p. 384.

Notes to Chapter 2

[1]Changes in medical education are discussed in chapter four.

[2]McGMF, III (March 11, 1886), p. 29.

[3]Ibid.

[4]AR 1886.

[5]McGMF, III (March 11, 1886), p. 29.

[6]See chapter four.

[7]See annual report.

[8]Acts of Incorporation and Bylaws of the Montreal Maternity, 1910, p. 15. By this time, doctors had assumed control over admissions.

[9]Bylaws, Rules and Regulations for the Management of the University Lying-In Hospital, Montreal, as Amended at the Annual Meeting, October 1859, p. 14.

[10]Charles Rosenberg, "And Heal the Sick: Hospital and Patient in Nineteenth-Century America," in Patricia Branca, ed., The Medicine Show (New York: Science History Publications, 1977), p. 122.

[11]MCM, III (October 5, 1894), p. 171; (November 2, 1894), p. 175; (December 4, 1894), p. 176; (March 1, 1895), p. 183; (March 25, 1895), pp. 186-187.

[12]Bauld received his $1000. MCM, IV (October 31, 1913), pp. 244-245; Ibid., letter inserted between pages 244-245; MMB, II (October 29, 1913), p. 182; MCM, IV (April 28, 1913), pp. 236-237.

[13]Rosenberg, "And Heal the Sick," p. 132.

[14]Brian Abel-Smith, The Hospitals, 1800-1940 (London: Heinemann, 1964), pp. 34-5.

[15]Bylaws, 1859, p. 8; Bylaws of 1887, p. 12; Bylaws of 1910, p. 11; Bylaws of 1921, p. 11.

[16]William Henry Atherton, Montreal 1535-1914 (Montreal Vancouver and Chicago: S. J. Clarke Publishing Co., 1914), III, pp. 506-507.

[17]See annual reports. For example, a physician's wife (not the same one necessarily) was First Directress between 1883 and 1887.

[18]McGMF I (June 27, 1844), n.p.

[19]See Abel-Smith; and Morris Vogel, "Boston's Hospitals, 1870-1930: A Social History," Ph.D., University of Chicago, 1974, and The Invention of the Modern Hospital: Boston 1870-1930 (Chicago: University of Chicago Press, 1980) for descriptions of the origins of various hospitals.

[20]The hospital's move to larger quarters partly explains the growth in admissions, but the fact that the upward trend began two years before the move suggests that the availability of more space was not the only reason for the increase.

[21]Statistics taken from annual reports.

[22]The increased proportion of non-paying patients during 1916 and 1917 was at least partly influenced by the fact that soldiers' wives were being admitted free of charge to the hospital's public wards. AR 1916, p. 13; AR 1917, p. 13.

[23]A survey of all private patients in 1915 (271 in all) suggests that most of them came from Montreal's anglo-saxon population: 183, or about two-thirds, were Protestant. Further, immigrants were a minority, as 156 or 58% of private patients were Canadian-born. All were married. In the total population of 1915 excluding private patients (that is, all non-private patients), only 26% were Canadian-born, and only 48% were Protestant. Hospital Registers, II.

[24]See sources listed in table 2.2.

[25]AR 1917, p. 17.

[26]The idea of outside doctors bringing their patients to the Maternity only really caught on in the new building: between October 1, 1907 and September 30, 1908, for example, thirty-six physicians attended sixty-four patients in the private wards--about one-half of the total admitted. By 1921, when lack of space attested to the success of the Maternity's campaign, restrictions had to be placed on the number of patients each of these physicians could admit. After April 1922, doctors not connected with the hospital lost their privilege to treat patients there. MCM IV (January 5, 1906), p. 18; AR 1908, p. 23; MCM V (October 28, 1921), p. 42.

[27]MCM, IV (February 9, 1906), p. 24.

[28]MCM, IV (June 7, 1907), p. 63; Nursing Reports, III (October 26, 1922), n.p.

[29]Definite figures are available only for 1903 and subsequent years, when they were given in annual reports. Information for 1884 to 1902 was taken from the hospital registers, which seem not always to have mentioned a private patient's status. There were no references in the hospital registers to private patients before 1884.

[30]AR 1892, p. 9.

[31]Nursing Reports, I (March 1903), n.p.

[32]Ibid., II (October 29, 1920), n.p.; (September 30, 1921), n.p.

[33]Ibid., II (March 30, 1922), n.p.

[34]See annual reports for those years.

Notes to Chapter 3

[1]Editorial, "The Address on Medical Education by the Dean of the Faculty of Medicine, McGill University," Montreal Medical Journal, XIX (November 1890), pp. 391-5. For a discussion of the therapeutic revolution see Charles Rosenberg, "The Therapeutic Revolution: Medicine, Meaning and Social Change in Nineteenth-Century America," in Morris J. Vogel and Rosenberg, eds., The Therapeutic Revolution: Essays in the Social History of American Medicine (University of Pennsylvania Press, 1979).

[2]Frances E. Kobrin, "The American Midwife Controversy: A Crisis of Professionalization," Bulletin of the History of Medicine, XL (1966), pp. 350-63.

[3]Asepsis emphasized the maintenance of a germ-free environment, while antisepsis was only meant to destroy germs which came in contact with the body. The development of antisepsis and asepsis, and details of other aspects of the obstetrical therapeutic revolution, are the subject of a number of books and articles on the history of obstetrics. See, for example, John R. Brown, "A Chronology of Major Events in Obstetrics and Gynecology," Journal of Obstetrics and Gynecology of the British Commonwealth, LXXI, (1964), pp. 302-9, J. M. M. Kerr, R. W. Johnstone and M. H. Phillips, eds., Historical Review of British Obstetrics and Gynecology, 1800-1950 (Edinburgh and London, E. & S. Livingstone, 1954); Herbert Thoms, Our Obstetric Heritage: The Story of Safe Childbirth (Hamden Connecticut: The Shoe String Press, Inc., 1960); Walter Radcliffe, Milestones in Midwifery (Bristol: John Wright and Sons Ltd., 1967); G. J. Witkowski, Histoire des accouchements (Paris: Stendhal, 1887).

[4]Some doctors objected to the lengths that advocates went to, in their attempt to reduce infection. As one put it, the medical profession would have to start behaving

> like the Romish priests, when called to administer the communion at a person's residence we /physicians/ shall go forth, preceded by our couriers to clear the way and open doors, etc. etc., not daring to touch even a doorbell knob, lest, possibly, an unclean mendicant has first handled and defiled it.

George E.Armstrong, "Antiseptic Midwifery," Canada Medical Record, XIII (May 1885), pp. 170-171. Others were discouraged by the fact that many who tried the techniques had unsatisfactory results: chemicals used to kill the bacteria were not always effective. An article appearing in the Montreal Medical Journal in 1888 gave a list of some currently in use, and other chemicals which destroyed the value of these antiseptics upon contact with them. The author concluded that "It is highly probable...that in obstetric practice /of which he was specifically speaking/ failure to ensure antisepsis has often been due to the hands being soapy when immersed in disinfectant solution." Soap apparently neutralized the effects of the disinfectant. It is easy to imagine that such an error was made, on occasion, by doctors not familiar with its ill-effects. J. C. Cameron, "Quarterly Retrospect of Obstetrics," Montreal Medical Journal, XVII (July 1888), p. 16. Doctors also sometimes neglected to eliminate possible sources of germs, such as their own clothes.

[5]Leonard Colebrook, "Puerperal Infection," in J. M. M. Kerr, et al, eds., Historical Review of Obstetrics and Gynecology, pp. 214-217.

[6]For example, the first antibiotic, prontosil, came into clinical use by 1942 or 1943. I am indebted to Dr. R. A. H. Kinch for this information.

[7]William Gardner, review of "On Antiseptic Midwifery and Septicaemia in Midwifery" by Dr. Robert Barnes, in "Bi-monthly Retrospective of Obstetrics and Gynecology," Canada Medical and Surgical Journal, X (March 1882), pp. 479-485; William T. Lusk, The Science and Art of Midwifery, (New York: D. Appleton and Co., 1882), pp. 643-5. During the 1880s this work was recommended by McGill's medical faculty for its students. It was later recognized that no cure could be affected in that way, and by the late 1890s this practice was criticized by most physicians. F. A. L. Lockhart, "The Treatment of Puerperal Infection--Preventive and Curative," Montreal Medical Journal, XXVI (Aug. 1897), pp. 123-133; Herbert M. Little, "Puerperal Infections: Certain Clinical Considerations," Montreal Medical Journal, XXXVI (1907), pp. 395-405; Alistair Gunn, "Maternity Hospitals," in F. N. L. Poynter, ed., The Evolution of Hospitals in Britain (London: Pitman Medical Publishing Co. Ltd., 1964), p. 98.

[8]Colebrook, "Puerperal Infection," p. 215; Morris J. Vogel, The Invention of the Modern Hospital (Chicago: University of Chicago Press, 1980), p. 60; C. E. Heaton, "Control of Puerperal Infection in the United States during the Last Century," American Journal of Obstetrics and Gynecology, XLVI (1943), p. 483; Duncan C. MacCallum, "Report of the University Lying-In Hospital, Montreal, from October 1 1875 to October 1 1883," reprinted from the Canada Medical and Surgical Journal, July 1887, pp. 6-7; J. C. Cameron, "Aseptic Midwifery," Canada Medical and Surgical Journal XV (March 1887), pp. 464-5; Montreal Maternity, Annual Report, 1898; Matron's Report II (March 1905), n.p.

[9]Sherwin B. Nuland, "The Enigma of Semmelweis: an Interpretation," Journal of the History of Medicine and Allied Sciences, XXXIV (1979), p. 259; G. P. Parsons, "The British Medical Profession and the Contagion Theory: Puerperal Fever as a Case Study," Medical History, XXII (1978), p. 140; Colebrook, pp. 202-225; and Richard and Dorothy Wertz, Lying-In, p. 125. Textbooks of prominent physicians of the 1860s stressed that proper precautions should be taken regardless of whether or not the doctor recognized his role in spreading the disease: "whichever of these theories we may choose to adopt, we shall be acting on the safest principle, as far as the health of the community is concerned, and most wisely as regards our own individual puerperal patients, if in practice we take such precautions as would suggest themselves did we believe /puerperal fever/ to be eminently contagious." F. H. Ramsbotham, The Principle and Practice of Obstetric Medicine and Surgery (Philadelphia: Blanchard and Lea, 1860), p. 530. See also Fleetwood Churchill, The Theory and Practice of Midwifery (Philadelphia: Henry C. Lea, 1866), pp. 553-4. Both of these textbooks were recommended to students by McGill professors.

[10]Early annual reports of the Montreal Maternity reiterate the fact that the hospital's puerperal fever deathrate was low as compared with other institutions.

[11]D. C. MacCallum, "Report of the University Lying-In Hospital, 1875-1883," pp. 6-7.

[12]Compared to other maternity hospitals, the Montreal Maternity's maternal deathrate due to puerperal fever was quite good, especially for the early years. The following

table shows some comparisons based on available data for other hospitals:

TABLE 3.3: MORTALITY RATES DUE TO PUERPERAL FEVER, MONTREAL MATERNITY AND OTHER HOSPITALS, FOR CERTAIN YEARS

YEAR	HOSPITAL	HOSPITAL'S DEATHRATE	MTL. MATERNITY'S DEATHRATE
1875-83	N.Y. Maternity	4.7%[1]	.73%
1883	Boston Lying-In	20%[2]	0
1892-6	London Lying-In	0[3]	.4%
1914-22	Toronto, Burnside Maternity	.11%[4]	.16%

Sources:

[1] F. A. L. Lockhart, "The Treatment of Puerperal Infection: Preventive and Curative," p. 124.

[2] Richard and Dorothy Wertz, Lying-In, p. 126.

[3] Lockhart, p. 125.

[4] W.B. Hendry, "Maternal Mortality," Canadian Medical Association Journal, XIII (1923), p. 252.

The most startling difference is between the Montreal Maternity and the Boston Lying-In Hospital for 1883, where not only did one in five patients die from infection, but fully three-fourths had the fever at one time or another.

[13] John Duffy, "Anglo-American Reactions to Obstetrical Anaesthesia," Bulletin of the History of Medicine, XXXVII (1964), pp. 32-44.

[14] Archibald Hall, "Statistics of the University Lying-In Hospital, Montreal [1843-1859]," The British American Journal, I (1860), p. 14. Another article covering the years

1875-1883 suggests that anaesthetics were still not in routine use. In one specific case, complicated by unusual circumstances, the doctor had the patient anaesthetized "certain that /he/ would have to complete the delivery with forceps." D. C. MacCallum, "Report of the University Lying-In Hospital, 1875-83," p. 4; D. J. Evans, Obstetrics: A Manual for Students and Practitioners (Philadelphia and New York: Lea Brothers and Co., 1900), p. 127; Montreal Maternity Obstetrical Casebooks, 1901-3; MCM, IV (October 24, 1905), pp. 6-7; Wesley Bourne, "Anaesthesia in Obstetrics," in the Canadian Medical Association Journal, XIV (1924), p. 702.

[15]This was achieved through the use of a darkened room in an isolated area; the patient was disturbed as little as possible, in an attempt to minimize the trauma that she experienced during the birth.

[16]Of the forty-nine babies which were liveborn, only twenty-six had good colour and rigidity; the rest eventually regained their colour and activity although five needed artificial resuscitation. J. W. Duncan, Charles Holbrooke and George W. Phelan, "Twilight Sleep" Canadian Medical Association Journal, VI (1916), pp. 97-109; Wesley Bourne, "Anaesthesia in Obstetrics," p. 702. Limpness and lack of good colour were not unusual after-effects of twilight sleep. Dr. Kinch also pointed out that instead of becoming more relaxed, mothers who were under twilight sleep often became highly excited, to the point of being uncontrollable.

[17]See Richard and Dorothy Wertz, Lying-In, pp. 150-154; and Marguerite Tracy and Mary Boyd, Painless Childbirth: A General Survey of Painless Methods with Special Stress on "Twilight Sleep" and its Extension to America (London: William Heinemann, 1917).

[18]D. J. Evans, Obstetrics, pp. 126-7.

[19]Antler and Fox, "The Movement toward a Safe Maternity: Physician Accountability in New York City 1915-1940," in Patricia Branca, ed. The Medicine Show: Patients, Physicians, and the Perplexities of the Health Revolution in Modern Society (New York: Science History Publications, 1977), p. 378.

[20]H. M. Little, "On the Treatment of Puerperal Convulsions,"

Journal of Obstetrics and Gynecology of the British Empire, XVI (1909), p. 151; W. W. Chipman, "Symposium on Obstetrics: Some End Results," Canadian Medical Association Journal, XVI (1926), p. 682.

[21]Dr. Kinch has suggested one reason why forceps were resorted to more quickly for private patients: anaesthesia was more easily available for private patients and consequently, forceps were applied earlier to minimize discomfort.

[22]Placenta praevia is a haemorrhage caused by the abnormal location of the placenta. The placenta is attached to the uterus and passes nourishment to the fetus through the umbilical cord. It is usually implanted high in the uterus, out of the path of the child being born. In placenta praevia, it is implanted lower down, sometimes right over the entrance to the vagina. Consequently, there is danger that, during delivery, the placenta will be torn away, causing haemorrhage.

[23]Medical statistics before 1896 are not reliable, but in that year and afterward they show a real improvement. If inductions had occurred between 1896 and 1902 they most likely would have been alluded to in the annual and medical reports of these years.

[24]W. W. Chipman, "Symposium on Obstetrics--Some End Results," p. 682.

[25]For a description of the case which occurred in 1894 see an anonymous report of the Montreal Medico-Chirurgical Society, Montreal Medical Journal, XXIII (1894), p. 291.

[26]The earlier case bode well for mother and child (although the latter's well-being later on is questionable as it was deeply asphyxiated at birth and had to be made to breathe). It was written up by the physician who performed it. See D. J. Evans, "Pubiotomy: Case Report," Montreal Medical Journal, XXXV (1906), pp. 799-804.

[27]J. C. Cameron, "Quarterly Retrospect of Obstetrics," Montreal Medical Journal, XVII (July 1888), pp. 20-22.

[28]Maybe so, but his forceps rate was still high.

H. M. Little, "An address on Obstetrics During the Past Twenty-five Years," Canadian Medical Association Journal, XIV (1924), p. 907.

[29]It has been argued that medical developments may have been less important than other changes in reducing mortality rates. For example, David Hamilton argues that better nutrition had a significant impact on improving deathrates. "The Nineteenth-Century Surgical Revolution--Antisepsis or Better Nutrition?" Bulletin of the History of Medicine, LVI (1982), pp. 30-40.

[30]Perinatal mortality rate is calculated as follows:

$$\frac{\text{total number of babies who were deadborn or died in hospital}}{\text{total number of births (Born alive AND deadborn)}}$$

The neonatal mortality rate is a different calculation:

$$\frac{\text{total number of deaths occurring after the child was born}}{\text{total number of LIVE births}}$$

Infant mortality rate is a third calculation, taking into account a whole year of life, and is thus not suitable. The perinatal rate is the best-suited to analyzing data from a maternity hospital, since it does not ignore children who died before they were born.

[31]Other omissions in hospital records complicate matters even further. Annual reports for 1902-5 lump together patients who gave birth in the hospital with those who were delivered in their own homes through the Maternity's outpatient service. There is no way to isolate inpatient figures (which are the concern of this chapter), and hospital registers for those years are not complete. For these particular years, then, the total number of births includes those from the outpatient department as well. The number of outpatients in those years was 38, 39, 69, and 105 respectively. Furthermore, the accuracy of 1918 deathrate figure is uncertain. With only one exception--1918--the annual medical report statistics between 1908 and 1925 make specific reference to the number of macerated fetuses (those which had died well before delivery and were already in the process of decomposition). This number is part of the total number of deaths for a given year. From 1915 to 1920, except in 1918, the annual number of deadborn was in the range

of fifty to sixty, about twenty or so of which were categorized as macerated. In 1918 only thirty-four babies were deadborn, and there is no allusion to macerated fetuses. On the other hand, the 1918 general annual report published by the Committee of Management lists eight babies as macerated, but the same figure--eight--is given in the medical report to children who died because they were premature and non-viable, an entirely separate category. All this leads to the suspicion that the number of macerated fetuses was left out of the 1918 medical report, and incorrectly listed in the general annual report. The annual deathrate for that year might in fact be higher than reported.

[32]To compare some current statistics: the present mortality rate in the first seven days of life at the Jewish General Hospital is 2.2 per thousand, and at the Royal Victoria Hospital it is 4.4 per thousand. This information was obtained from Dr. Kinch.

[33]The Montreal Maternity was not the only hospital showing a decline. In a study of the Sloane Hospital for Women in New York, Charles M. Steer and J. George Moore also reported a decrease in perinatal mortality from 1888 to 1933. For the years 1908 to 1922 they found this rate to be about 8% for the hospital, while at the Montreal Maternity it was somewhere in the range of 9%.

This comparison should only be seen as giving a broad sense of the relationship between the two hospitals, in part because the way in which the rate was calculated for the Sloane was not completely spelled out. "The Course of Perinatel Mortality: A Review of Etiologic Factors in the Sloane Hospital 1888-1967," Obstetrics and Gynecology, XXXIV (July 1969), pp. 113-114.

[34]MR 1907-1925.

[35]There are several problems with these figures. First, the number of births in Montreal is only that for the City of Montreal, which does not include suburbs. Second, there is an underegistration of births for Montreal, especially in the early years, because figures were based on baptismal records and immediate baptism was not always practiced. Third, many patients were strangers to Montreal who had come from elsewhere to give birth; it is uncertain whether their children were registered in Montreal. Given all of these points it is likely that the Maternity actually had a smaller share of

Montreal births. Still, the hospital would probably have shown an increasing proportion over the years. For the number of births in the City of Montreal between 1875 and 1925 see City of Montreal, Department of Health, Annual Reports, 1875-1916; Quebec, Council on Hygiene, "Rapport du conseil d'hygiène de la Province de Québec," Quebec Sessional Papers, 1916-1922; Quebec, Provincial Board of Health, "Annual Reports," Quebec Sessional Papers, 1923-1927.

[36]M. C. Urquhart, ed., and K. A. H. Buckley, asst. ed., Historical Statistics of Canada (Toronto: Macmillan Co. of Canada Ltd., 1965), series B1-14, p. 38.

Notes to Chapter 4

[1]D. C. MacCallum, "Report of the University Lying-In Hospital, Montreal, from October 1st, 1875, to October 1st, 1883," Canada Medical and Surgical Journal, XV (July 1887), p. 7.

[2]MCM, II (May 9, 1879), pp. 158-159.

[3]MacCallum, "Report...1875 to 1883," p. 7. Until 1886 the midwife was also present at the birth, and still in charge of the medical, as opposed to educational aspects of the delivery unless the chief obstetrician was there.

[4]MMB, I (July 3, 1905), pp. 9-41; (October 7, 1909), pp. 205-09.

[5]An exception to this arrangement occurred between 1912 and 1918, when the internal organization of the hospital was divided into two units. Two assistant obstetric physicians were then given medical responsibilities, each one having been put in charge of one of the units. MMB, II (February 6, 1913), p. 106.

[6]It is possible that this clinic was instituted prior to 1894-5. A medical faculty calendar for 1886-7 also lists some kind of lecture scheduled on a Saturday morning, but the nature of this class and its location are not specified. McGill University, Medical Faculty Calendars, 1887-8, 1894-5, 1903-4.

[7]Medical Faculty Calendars, 1890-1.

[8]Ibid., 1903-4.

[9]Ibid., 1909-10, 1911-12. An important change in the theoretical obstetrics course also gave students a better opportunity to understand that particular field. In 1889-90 the course in theoretical obstetrics was graded for the first time, meaning that instruction was given separately, for the first time, to penultimate and final-year students. In

previous years, although two six-month sessions in theoretical obstetrics were required to graduate, students actually took the same course twice. The first time, they presumably absorbed the elementary aspects of the course, hopefully filling in the more complicated points the second time around. Final year students were hampered by the need to introduce elementary material (for the penultimate-year students) into a series of lectures that should, for their own sakes, have emphasized the more advanced material. See an editorial entitled "Didactic Lectures," Montreal Medical Journal, XVII (May 1889), pp. 865-7.

[10]Editorial entitled "Practical Surgery," Montreal Medical Journal, XVII (March 1889), pp. 713-14.

[11]Editorial entitled "Clinical Examinations," Montreal Medical Journal, XVII (June 1887), pp. 952-53.

[12]Editorial entitled "The Excessive Didactic Work Demanded of Students by the Canadian Licensing Bodies," Montreal Medical Journal, XVII (February 1889), pp. 633-4. A discussion of the changes in requirements of the College of Physicians and Surgeons of the Province of Quebec, the provincial licensing body, is beyond the scope of this thesis.

[13]Robert Craik, "Address Delivered at the Opening of the Fifty-Eighth Session of the Faculty of Medicine of McGill University, October 1st 1890," Montreal Medical Journal, XIX (November 1890), p. 324.

[14]MCM, III (November 2, 1894), p. 174.

[15]Actually, according to the medical calendars students had the choice to train either at the Montreal Maternity, "or other lying-in hospital approved by the University." However, it is doubtful that many McGill students took advantage of this latter option since the other maternity hospitals in Montreal were affiliated with other medical schools.

[16]See medical faculty calendars for those years.

[17]Semi-private patients were accommodated in a separate ward from public patients, and each of their beds was screened

off to give them some privacy. While these accommodations were not as luxurious as those of private patients (they were also cheaper), the women who used them were entitled to certain privileges not available to public patients.

[18]MMB, II (February 6, 1913), p. 106.

[19]Ibid., I (January 26, 1909), p. 157; MCM IV (April 5, 1918), p. 369.

[20]Edouard Desjardins, Eileen C. Flanagan and Suzanne Giroux, Heritage: History of the Nursing Profession in the Province of Quebec, translated by Hugh Shaw (Montreal: The Association of Nurses of the Province of Quebec, 1971), p. 99; Vern L. and Bonnie Bullough, The Care of the Sick: The Emergence of Modern Nursing (New York: Prodist, 1978), pp. 94-95.

[21]Bullough and Bullough, p. 95.

[22]Ibid.

[23]Desjardins et al, pp. 98, 100-102.

[24]Hugh C. MacDermott, History of the School of Nursing of the Montreal General Hospital (Montreal: The Alumnae Association, 1940); Marjorie Dobson Monroe, The Training School for Nurses: Royal Victoria Hospital, 1894-1943 (Montreal: Royal Victoria Hospital, 1943). See also Barbara Tunis, In Caps and Gowns: The Story of the School for Graduate Nurses, McGill University, 1920-1964 (Montreal: McGill University Press, 1966); John Murray Gibbon and Mary S. Mathewson, Three Centuries of Canadian Nursing (Toronto: The Macmillan Company of Canada Ltd., 1947); Judi Coburn, "I See and am Silent: A Short History of Nursing in Ontario," in Janice Acton et al, editors, Women at Work: Ontario 1850-1930 (Toronto: Canadian Women's Educational Press, 1974), pp. 127-164.

[25]MCM, II (January 4, 1856), p. 14; AR 1856.

[26]Bylaws, 1859, pp. 10-11.

[27]MCM II (May 6, 1887), n.p.

[28]Ibid., III (February 12, 1892), p. 128.

[29]Ibid., (February 3, 1888), p. 21.

[30]AR 1898, 1902; Record of Pupil Nurses, IV (1918-1923), n.p.

[31]AR 1889, p. 5.

[32]MCM, III (October 19, 1900), pp. 293-4; (December 7, 1900), p. 296; Gibbon and Mathewson, Three Centuries of Canadian Nursing, p. 148.

[33]Duncan C. MacCallum, "Inaugural Address Delivered at the Opening of the Training School for Nurses in Connection with the Montreal General Hospital, December 11, 1896," in Addresses (Montreal: Desbarats and Co. Printers, 1901), pp. 46-47.

[34]Record of Pupil Nurses, III, p. 14.

[35]Ibid., II, p. 258.

[36]Salaried graduate nurses are not to be confused with nurses who had graduated from training schools, but were doing post-graduate training at the Maternity. These followed a similar program to that of the students who had not yet graduated, but stayed for a longer period of time.

[37]Although more students were brought in, the proportion of patients per nurse after 1905 never fell below that of the years immediately preceding the turn of the century. For example, in 1899 there were about twenty-two patients per nurse (including both staff and student nurses), while in 1913 the ratio went to somewhere in the range of sixty-five patients per nurse.

[38]AR 1897.

[39]AR 1905.

[40]AR 1906.

Notes to Chapter 5

[1]MCM, II (April 4, 1856), p. 23; AR 1860. The reason given for discontinuing the program after 1886 helps to illustrate the Maternity's multiple functions, as both a charity and a training environment for medical and nursing students. In 1860, helping the poor was the main reason given for having the outpatient department:

> it is desirable that /the number of outpatients/ should increase in number, when such ample provision for proper attendance on them is secured; and this, there can be little doubt will be the case, when it is more generally known and understood that efficient assistance can be, and will be afforded to the destitute poor at their own houses when domestic circumstances prevent them entering the Hospital.

At time however, one of these functions was emphasized over the other; in 1886 the program was discontinued, in spite of its benefits to poor patients, because "the present method of free out-door visiting was accompanied with many drawbacks tending to the injury of the instruction /of medical students/." When the outpatient arrangement was resumed in 1892 or 1893, the patients' welfare was once more the justification: "a further object which the Committee /of Management/ have /sic/ in contemplation is sending out of the resident physician and trained nurses in cases throughout the city when the mother is unable to leave her home and is too poor to employ a regular physician or a nurse." In 1899 the outpatient department was again praised, this time for its role in training nurses: "the outdoor work is very good training for the nurses, who must learn some independence from hospital routine." AR 1860; MCM, II (June 4, 1886), n.p.; AR 1892, p. 4; AR 1899, p. 3.

[2]Montreal Maternity, Nursing Reports, I (December 1903 and January 1904), n.p.

[3]Ibid.

[4]AR 1907, p. 18.

[5]AR 1914, p. 17. Obstetrics was one of the central concerns of the Victorian Order of Nurses. See for example Suzann Buckley, "Ladies or Midwives? Efforts to Reduce Maternal and Infant Mortality," in Linda Kealey, ed., A Not Unreasonable Claim (Toronto: Canadian Women's Educational Press, 1979), pp. 131-149.

[6]Students--both medical and nursing--accompanied Maternity staff members when they went to the patients' homes. One advantage of the outpatient department was that it was apparently cheaper to operate per patient, then the public ward at the hospital was.

[7]Nursing Reports, I (no date), loose page inserted in volume.

[8]AR 1914, p. 25. A year later, the investigative bureau became the basis of the social service department.

[9]Nursing Reports, I (no date), loose page inserted in volume.

[10]AR 1915, p. 8; 1916, p. 13.

[11]According to annual reports Jews comprised the majority in the outpatient population between 1904 and 1906, and between 1913 and 1918. Between 1919 and 1925 their proportion declined from 43% in 1920 and 1921 to 17% in 1925. Jewish immigrants also became a significant proportion in the wards (ie. indoor department) of the Maternity. In a single year, between 1904 and 1905, the proportion of the total population of indoor patients that was Jewish rose from over 3% to almost 8%. After 1911 the proportion of Jews per total indoor patient population was considerably higher than the proportion of Jews in the population of Montreal. Between 1911 and 1931 this religious group comprised only between 6 and 7% of all Montrealers. At the Maternity however they represented 12% of the population by 1911, and 19% in 1915. The percentage then receded to 16% in 1921 and 13.6% in 1924. See annual reports for those years. Paul-André Linteau, René Durocher, and Jean-Claude Robert, Histoire du Québec contemporain (Montreal?: Boréal Express, 1979), p. 61, and Martin Tetrault, "L'Etat de santé des Montréalais,

1880-1914," M. A. thesis, Université de Montréal, 1979, p. 35.

[12]Before the outbreak of the First World War most of the city's Jews lived in the southern part of St. Lawrence and St. Louis Wards, within a six-block radius of St. Lawrence Boulevard. Kathleen Jenkins, Montreal: Island City of the St. Lawrence (Garden City, New York: Doubleday, 1966), pp. 514-515.

[13]Of course, wealthier patients could consult their private physicians.

[14]The importance of such care was recognized only around the turn of the century. Researchers, like J. W. Ballantyne of Edinburgh who carried out extensive research on intra-uterine life, concluded that prenatal monitoring was crucial to the infant's good health. Prenatal monitoring was also recognized as important to detect such complications as toxaemia and pelvic deformities. Postnatal care as seen from the perspective of the "new" obstetrics involved follow-up work, to ensure that mothers suffered no lasting injury from the birth and to correct any problems. See H. M. Little, "Ballantyne and the New Midwifery," in the Canadian Medical Association Journal, XIII (1923), pp. 441-3.

[15]AR 1899, p. 7.

[16]AR 1915, p. 17.

[17]AR 1910, p. 20.

[18]MR 1913, p. 9.

[19]W. H. Atherton, Montreal 1535-1914 (Montreal: S. J. Clarke Publishing Co., 1914), II, pp. 522-523. Chalmers House was the first location. It was situated on Delormier Street, in the east end of the city. The others were the University Settlement on Dorchester, and the Iverley Settlement (location unknown).

[20]See the Souvenir Handbook of the Child Welfare

Exhibition, 1912 (Montreal: publisher unknown, 1912).

[21]AR 1920, p. 32.

[22]AR 1922, p. 29.

[23]My emphasis. MCM, III (November 18, 1895), pp. 199-200.

[24]AR 1908, p. 16.

[25]AR 1909, p. 17.

[26]AR 1916, p. 31.

Notes to Conclusion

[1]Brian D. Palmer, A Culture in Conflict: Skilled Workers and Industrial Capitalism in Hamilton, Ontario 1860-1914 (Montreal: McGill-Queen's University Press, 1979).

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