

HISTORIQUE DES SOINS INFIRMIERS ET L'ANESTHÉSIE AU CANADA

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RÉSUMÉ

Il existe peu de détails sur l'histoire du rôle des infirmières dans l'anesthésie au Canada. Selon les quelques sources disponibles, au début du XXe siècle, les infirmières au Canada administraient l'anesthésie. L'historiographie limitée existante révèle que les infirmières travaillant dans les petits hôpitaux ruraux à travers le Canada participaient à l'administration de l'anesthésie en raison d'un manque de médecins spécialisés et de personnel adéquat. Afin d'en apprendre davantage sur le rôle des infirmières dans ce domaine, les auteures ont puisé la collection de sources orales de la British Columbia History of Nursing Society située au College of Registered Nurses à la British Columbia Library. Plusieurs récits indiquent que, entre 1917 et 1953, l'occasion d'administrer l'anesthésie se présentait aux infirmières canadiennes. Les histoires orales identifient le besoin d'administrer l'anesthésie, la capacité des infirmières de fournir ce service, et une flexibilité dans la

pratique de la profession leur permettant d'assumer ce rôle. Il existait un besoin grandissant pour l'anesthésie que ne pouvait combler les médecins. Pour explorer plus en profondeur le rôle des infirmières, les auteures ont également examiné les revues contemporaines traitant des soins infirmiers et médicaux.

Le pourquoi de la disparition de ce rôle au Canada tandis qu'il s'établissait fermement aux États-Unis n'est pas clair. Plusieurs causes juridiques de cette période, ainsi que la très grande différence entre les résultats des causes canadiennes et américaines, jetent un peu de lumière sur les raisons possibles pour lesquelles les anesthésistes infirmières ont été exclues de la pratique de l'anesthésie au Canada. Le domaine des soins de santé n'a jamais cessé de changer, et le besoin de services d'anesthésie augmente toujours.

Il s'ensuit donc que de nouvelles questions se posent sur la possibilité de rôles avancés en anesthésie pour le personnel infirmier au Canada. La demande de services d'anesthésie s'agrandit de pair avec le vieillissement de la population canadienne, et le manque de services est le plus prononcé dans les petits hôpitaux ruraux. Cet article offre un contexte historique important sur l'évolution du rôle de l'anesthésiste infirmière au Canada.

Voir l'Association des infirmières et infirmiers de salle d'opération du Canada (2007). *Normes de pratique recommandées, lignes directrices et énoncés de position pour la pratique en soins infirmiers périopératoires de l'AIISOC* (8e édition), Module 1, page 62 pour consulter les compétences professionnelles pour personnel infirmier en pratique avancée (périopératoire).

NURSING AND ANAESTHESIA: HISTORICAL DEVELOPMENTS IN CANADA

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ABSTRACT

There is little historical knowledge available about nurses' role in anaesthesia in Canada. It appears, from the few sources available, that nurses did administer anaesthesia in the early 20th century in Canada. The limited historiography reveals that nurses who worked in small rural hospitals across Canada were, due to the lack of physician specialty and coverage, involved in the administration of anaesthesia. To learn more about nurses' role in this area the authors explored the oral history collection from the British Columbia's History of Nursing group at the College of Registered Nurses of British Columbia Library. Several stories indicated that between 1917 and 1953 there were opportunities for Canadian nurses to administer anaesthesia. The oral histories identified that there was a need for the administration of anaesthesia, that nurses had the skill to provide it, and that flexibility in their nursing practice enabled them to fulfill this role. There was an increasing need for anaesthesia service that was not being filled by physicians. To further explore nurses' role the authors also examined nursing and medical journals from that time period.

There is limited understanding of how this role ceased to exist in Canada while it became well established in the United States. Various legal cases from that time period, and the

substantially different results between Canadian and America cases, provide some insight into the reasons why nurse anaesthetists were excluded from anaesthesia practice in Canada. As the Canadian healthcare environment continues to change, and the need for anaesthesia services increases, new questions have begun to arise about the potential for an advanced practice role in anaesthesia for Canadian nurses. The demand for anaesthesia services is increasing in-line with the aging Canadian population and the shortage of available services is most dramatic in small, rural hospitals. This article provides important historical background on the development of the role of nurse anaesthetists in Canada.

Introduction:

Connecting nursing with anaesthesia is not a new concept. Historical documentation shows that nurses began to provide anaesthesia in the late 19th century when anaesthesia first began to be administered on a regular basis during surgical procedures.¹ Nurses practiced anaesthesia during the American Civil War and during both World Wars.² Several influences shaped anesthetic practices by nurses. By the late 19th century, nurses began to be skilled in providing many different aspects of patient care. In addition there was an increasing need, which was not being filled by physicians, for anaesthesia to be administered. Nurses were also readily available in both rural and urban hospitals and were flexible in the patient care they were willing and able to provide to many different hospital services. Historical records document several nurses, in Canada, providing anaesthesia at the beginning of the 20th century, although formal education for this role did not evolve in Canada.

"By the late nineteenth century, institution's dedication to charitable care was being challenged by dramatic new developments in scientific medicine."³

The combination of the germ theory of disease and the new method of antiseptic

ANAESTHESIA (cont.)

surgery affirmed the need for nursing care in hospitals. In addition to an increase in surgical cases and advances in surgical procedures, there were also advancements in anaesthesia taking place.⁴ In the late 19th century “as hospitals became more acceptable places for the middle and upper classes to recover from illness, and in particular to undergo surgery, medical practice became more and more hospital based”.⁵ Moreover, more hospitals opened training schools for nurses, which enhanced not only the level of care in the hospital, but also its social reputation. In turn, this change influenced the status and training of nurses. Nursing became a respectable, paid occupation, and their skills were in demand.

In the early 20th century, nurses were becoming skilled at working in multiple departments of the newly built and improved hospitals which were spreading throughout Canada. Florence Nightingale’s educational model for nurses had transformed how nurses were trained and resulted in their training being intimately linked to the hospital.⁶ This resulted in an expansion of nursing specialization within hospitals.

“As hospitals employed more graduate nurses to provide direct patient care, nurses began to use certain rituals and behaviors to subtly display their expertise while supporting physicians’ traditional place in the hierarchy.”⁷

Nurses began to maintain a permanent presence in the operating room for surgical specialties. Photos of nurses assisting during surgery in the early 1900s are archived in the British Columbia Archives Collection.

This evidence confirms that nurses were skilled in providing surgical care for patients undergoing complex and often painful surgeries. The caring role played by nurses was credited with helping to alleviate patient anxiety before surgery and drew upon the publicly accepted notion of middle-class female compassion that shaped nursing at that time.⁸



Courtesy of Royal BC Museum, BC Archives

*Pemberton Memorial Operating Room,
Royal Jubilee Hospital, Victoria (1902)*

In the beginning of the 20th century there was, due to advances in surgical procedures, an increase in the need for personnel to administer anaesthesia. Hospitals changed from charitable institutions that only looked after the poor, to full medical facilities that served all classes of society.^{9,10}

As a result of the establishment of training schools for nurses, during this period, nurses were now available in both large and small hospitals. Multiple resources refer to nurses’ presence in both small and large communities.^{11,12,13} In contrast there was a shortage of physicians and new advancements in surgery were creating additional demands. Because nurses were always on hand they could fill in when other medical staff were not available.

Nurses showed a greater flexibility around learning new skills to meet the many new demands in the hospitals. Many, for example, became involved with work in the laboratories and some even began providing anaesthesia. Nurses were keen to take on new opportunities within many areas of healthcare. Twohig¹⁴ asserts that the need for a range of work responsibilities in healthcare created ongoing debate, especially in regards to space in hospitals and boundaries between professional groups. This resulted in

ANAESTHESIA (cont.)

competing and contradictory pressures: “The scope and practice of any one occupational group is frequently a matter of negotiation and renegotiation. Workers in health care also have a myriad relationships and roles”.¹⁵ The status of women at the time may also have had an influence on nurses and their role in relation to administering anaesthesia in the early 20th century. As Twohig¹⁶ points out, nurses were inexpensive (compared to physician salaries), could also fulfill clerical duties, and could be asked to complete tasks that were more technical or manual. Their lower status as women made them subordinate and allegedly tolerant of the physicians who were predominantly male. This status helped create a perception of their role as medical assistants which would have applied not only to general nursing but to other areas such as anaesthesia.

This article seeks to contribute to the current debate around how to create a more receptive environment for the nurse anaesthetist role in Canada. This debate should also be informed by sound historical knowledge of the early roots of this specialty role in Canada. Reviewing this aspect of nursing history reveals how, in the past, some Canadian nurses negotiated this role and pioneered their own way, facing similar challenges that the proposed new Nurse Practitioner-Anaesthesia role will likely also face. We strongly believe that understanding the past will be a powerful tool in the development



Courtesy of Royal BC Museum, BC Archives

Port Simpson General Hospital (190-)



Courtesy of Royal BC Museum, BC Archives

Nurses in Operating Room, Victoria, BC. (191-)

of a professional identity for Canadian nurse-anaesthetists.

Although there are numerous books available on the history of nursing in Canada,^{17,18} there are none that focus specifically on the specialty of anaesthesia. In other histories of healthcare, however, we found evidence that nurses were indeed administering anaesthesia in Canada. These examples provide some starting evidence of the work conducted by some Canadian nurses. In describing the career of two nurses in particular, Greta MacPherson and Margie Fitzpatrick, Twohig¹⁹ mentions examples of nurses practicing anaesthesia. Fitzpatrick was even specifically trained for this purpose.

Greta Macpherson began her nursing career in 1922 performing x-ray and laboratory work.²⁰ MacPherson was quick to accept a job that others refused, likely because, at the time, there were few hospital jobs available to new nurses. Twohig²¹ noted that MacPherson spent “ten years doing lab work, x-rays and she administered anesthesia”.

Twohig’s²² other example, Margie Fitzpatrick, was employed, in 1922, as an anaesthetist at the Chipman Memorial Hospital, NB. She went to Lakeside Hospital in Cleveland, Ohio, to receive her anaesthesia diploma. Twohig²³ states that she “also acquired the responsibility of working in the laboratory as well as providing anesthesia”.

ANAESTHESIA (cont.)

These two examples of nurses providing anaesthesia in small, rural hospitals in Canada provides some evidence of how nurses were flexible, available, and skilled to do a job that was not yet being filled by any other medical specialty.

The College of Registered Nurses of British Columbia holds an oral history collection compiled by the members of the British Columbia History of Nursing Group. An in-depth search of this collection revealed some interesting evidence of nurses giving anaesthesia in Canada. Specifically, there were four interviews with nurses who described their involvement with anaesthesia, between 1917 and 1953, during their early nursing careers.

The first reference was from Jo Russell who interviewed Dorothy D'Arcy-Goldrick on July 7, 1987. D'Arcy-Goldrick started her nursing training in 1917 in Vernon, BC. She was only able to complete her first year as the training program was closed due to staff shortages resulting from the First World War. She then moved to Salt Spring Island, BC, to work at Lady Minto Hospital. She worked with one other nurse at this 10 bed hospital that was under the direction of one female physician. She described two separate occasions in which she was involved with anaesthetic during her three-month period of employment. Her first experience involved holding a coal lamp so the physician could administer the ether. It was a memorable experience for her because she was terrified that the ether would be exploded by the lamp she was holding. She described as 'unbearable' the smell of the ether mixed with the coal lamp. Another experience involved a patient who was brought in bleeding profusely from a serious laceration to the leg. She had to administer the ether, before the emergency surgery was performed, as the physician was too busy trying to stop the bleeding. She described it as a terrifying experience. Her account mentions no other training in administering anaesthetics. This example illustrates how nurses were available, flexible and especially needed to



Courtesy of Royal BC Museum, BC Archives

Operating Room at Vancouver General Hospital (190-)

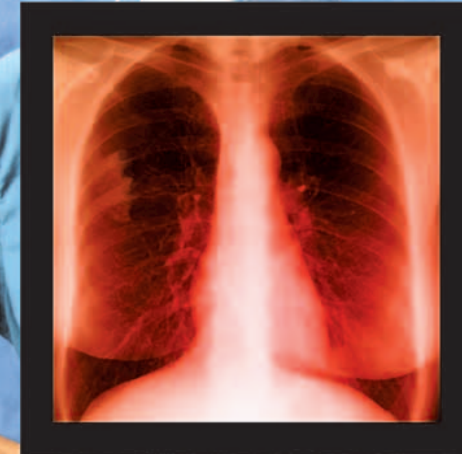
provide anaesthesia in a small rural hospital that lacked any other physician support.²⁴

In the history of the Lady Minto Gulf Islands Hospital, Charles Kahn and Sue Mouat²⁵ noted that the physician at the time of D'Arcy-Goldrick's employment was a woman by the name of Sutherland. She worked at the hospital from 1916-1930. It was quite challenging to employ a physician in such a community during this time period as it was difficult for Doctors to make a living in such a small community. "This situation meant that no operations could be performed as one doctor would act as an anaesthetist for the other, and a doctor couldn't perform both anaesthetics and surgery simultaneously".²⁶ From the accounts described by D'Arcy-Goldrick, however, when there was a life threatening surgical emergency the nurse, as the only available help, was occasionally called on to administer the anaesthetic. This may not have been routine procedure, but there is evidence that it certainly did happen.²⁷

In another interview, Gwen Kavanagh spoke with Kathleen Hodgson on April 24, 1987. Hodgson conducted her nursing training between 1926 and 1929 at Royal Inland Hospital in Kamloops, BC. In the interview she described her training in the OR. As a student

Continued on Page 23

DID YOU KNOW?

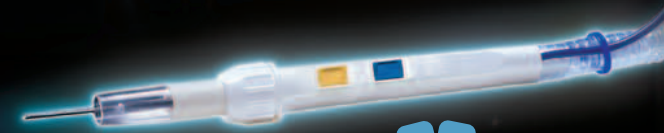


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ANAESTHESIA (cont.)

she completed two and a half months of hands-on training in the operating room and after the completion of her regular training she went back to the OR to further develop her skills in this area. She mentions a woman named Ms. Stone who was the matron in the operating room. Stone was a nurse anaesthetist from the United States who worked at the Royal Inland Hospital during the 1920s. When there were no physician anaesthetists available, Stone occasionally administered chloroform, as an anaesthetic, under the supervision of a nearby physician. This example showed that physicians were not the only individuals meeting the need for anaesthesia services at this small, rural hospital. Nurses were occasionally called on to help meet this surgical need.²⁸

Additionally, Audrey Stegen interviewed Marie Logan on February 11, 1988. Logan had received her training at the Toronto General Hospital in Toronto, ON, from 1939-1942. She had always wanted to work in the operating room and because a number of the nurses had left to go overseas for war service she was able to get a job, just six months after graduating, as the head nurse in the operating room. The hospital had three operating rooms – one in each of the three surgical wards. During her time in the operating room she described the anaesthetic room that was adjacent to the operating room. The junior nurse was assigned to work in the anesthetic room and her role was to assist the physician anaesthetist. The anaesthetic room had a machine to provide oxygen and nitrous oxide. For the abdominal surgeries that required greater relaxation, ether was used. The nurse was responsible for preparing and folding the gauze mask that was used but did not administer the ether. Pentathol was often given prior to the ether. She described that there was a definite shortage of physician anaesthetists but, because it was a large training hospital, the interns would administer the anaesthetic on their own under the watchful eye of the head. This example shows that even in large, urban hospitals nurses stepped in to fill a gap, by supervising the interns, when physicians were not available.²⁹

In one other example from the 1940s, Marion McLeod interviewed Lillian Loeppky on June 8, 1987. Loeppky received her nursing training, from 1940-1943, at St. Michael's Hospital in Toronto, ON. In 1948 she moved to British Columbia and in 1949 she obtained work at the Cottage Hospital in Abbotsford. During the interview she identified that nurses gave anaesthetics at the Abbotsford hospital when she was employed there between 1949 and 1953. She administered anaesthetics for tonsillectomies and for mothers in labour, and described doing this “many times”. “I wasn't afraid of tackling anything, I guess, but when I think of it now, I am very fortunate that I didn't have any problems on my hands”. These examples illustrated that nurses skillfully filled a need in providing anaesthesia if no physician was around.³⁰

So if nurses were administering anaesthesia in Canada, why did a role of nurse anaesthetists not develop as it did in the United States? From the evidence it appears that the legal aspect of a non-physician providing anaesthetics provided the crucial difference. It is likely that legal cases, and their outcomes, at the time played a key role in the nurse anaesthetist role, and its development, in different countries.

In 1934, in California, a case was brought against nurse Dagmar Nelson, accusing her of prescribing medication without a medical license. The surgeons she worked with fully supported her anaesthesia practice and the court ruled in favour of the nurse, thus paving the way for the development of the current role of the nurse anaesthetists in the United States.³¹

Canadian legal history can, by contrast, provide documentary insight in to the exclusion of nurse anaesthetists in Canada. Of particular importance is the 1939 Canadian court case of McFall versus the Victoria Hospital and Turner. McFall died while undergoing anaesthesia at the Victoria Hospital in Montreal. The court found that the death could not be solely blamed on the anaesthetic that had been administered by a nurse. The court ruled, however, that the

hospital should not have allowed the anaesthetic to be administered by anyone not medically qualified. "The practical effect of the decision has already shown by the fact that those hospitals which were still employing nurse-anaesthetists have given up this practice and now provide qualified medical practitioners in that capacity".³²

Additionally, the Supreme Court of Canada, in the 1938 case of Sisters of St. Joseph versus Fleming,³³ questioned the limits of liability of hospitals for negligent acts by nurses in their employment. This case, although not specific to anaesthetics, resulted in the hospital being held to be responsible for the negligent acts of nurses.

In the United States, in the early 20th century, surgeons were often hiring their own personal nurse anaesthetists and seemed comfortable with taking on the liability of the nurse. If the nurse was an independent contractor, rather

than an employee of the hospital then the liability would have remained with the physician. If, however, the nurse was acting as an agent or a servant of the hospital, within the ordinary scope of her practice, the hospital would be liable. In Canada neither surgeons nor hospitals did seem eager to take on liability for nurses administering anaesthesia, and the McFall versus Victoria Hospital court case may perhaps explain this to some degree.

Lately, the topic of nurse anaesthetists in Canada is re-emerging in health care literature. Nurses Schreiber and MacDonald³⁴ were instrumental in revitalizing the debate over bringing the role of nurse anaesthetists to Canada. In 2003 they published an analysis of the advanced practice role of nurse anaesthetists in the United States and pointed out the strong role played by the American professional organization in establishing a large, successful

anaesthesia nursing practice in most American hospitals. Schreiber and MacDonald suggested linking the role of nurse anaesthetists to the definition of an advanced practice nurse (APN) as described by the Canadian Nurses Association (CNA). The CNA³⁵ defined advanced practice nursing as an advanced level of nursing practice that maximizes the use of in-depth nursing knowledge and skill in meeting the needs of clients. Currently, the minimal educational requirement for an advanced practice nurse is a Master's degree. Schreiber and MacDonald noted that linking nurse anaesthetists with advanced practice nursing is not a new idea:

*Our observation of Certified Registered Nurse Anaesthetist (CRNA) practice indicated that CRNAs meet most of all of the competencies and characteristics of APN as defined by the CNA framework. Their practice is expert and specialized, occurring at the boundaries of nursing's currently defined scope of practice, grounded in nursing theoretical knowledge and based on research findings and evidence.*³⁶

In its latest definition statement the CNA³⁷ recognized four areas of advanced nursing practice: the clinical nurse specialist; the nurse practitioner; the midwife; and the nurse anaesthetist. The first three roles have been implemented in Canada, but the nurse anaesthetist role has never become formalized. The implementation of this new advanced nursing practice role faces challenges around the issue of the responsibility of prescribing and diagnosing. In Ontario, regulations have been approved to allow for nurse practitioner (NP) specialty certificates. These four specialties (called extended class) are NP-Primary Health Care, NP-Paediatrics, NP-Adult, and NP-Anaesthesia. It is within this framework that there will likely be further development of a nurse-anaesthetist role in Canada.

In conclusion, historical evidence shows that nurses in the early 20th century were administering anaesthesia in Canada. The

findings in the oral histories and cases reported by Twohig³⁸ support the fact that although the nurses' role in this area was not always "official", and was never fully established, it was definitely present. Nurses provided anaesthesia during this time due to the fact that they were available, flexible, and skilled, and therefore able to provide services to fill the increasing need for this service. This was most significant in small, rural hospitals where it was difficult to maintain full-time physician practice in anaesthesia.

Today, the debate, in Canada, over who should be a part of the "anaesthetic team" continues due to a shortage of physician specialists, in anaesthesia. The current pressures resulting from physician shortages are, in fact, similar to those that influenced the history of this role.

Some argue that the current attempt to formalize the nurse-anaesthetist role in Canada is a situation of re-inventing the health care system.³⁹ In this process of re-invention nurses may take up the challenge to shape care according to the context of their times, inspired by the work of nurses who did so before them, and encouraged by new opportunities such as the development of the advanced nurse practice role in Canada. The opportunity to use the role of advanced practice nurses to fill the need for anaesthetic experts is being encouraged by the acceptance of the nurse practitioner role implementation in other specialties. Due to current physician shortages in the specialty of anaesthesia, the University of Toronto has developed a post-nurse practitioner program in anaesthesia. This program's first class will enroll in 2009. This new role will not be without its challenges, similar to those faced by other advanced practice nurses in the establishment of their practice. Issues such as competition for authority, the enlisting of political support, and the establishment of a clear legal and professional framework for practice, are but a few of the ongoing pressures that this particular practice group will face... not unlike the nurses who walked this path before them.

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Refer to the Operating Room Nurses Association of Canada (2007). *ORNAC Recommended Standards, Guidelines and Position Statements for Perioperative Registered Nursing Practice* (8th edition), Module 1, page 62 to review "Professional Competencies for Advanced Practice Nurses (Perioperative)".

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