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THE MUSEUM OF HEALTH CARE AT KINGSTON: ITS ROLE IN THE PRESERVATION OF THE LEGACY OF HEALTH CARE IN CANADA

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SUMMARY

Beginning in the 16th century, museums were an important resource for medical education. By the mid 20th century, however, the perceived educational value of museum collections declined and museums adopted the strategy of turning collections into publicly accessible medical history. The Museum of Health Care at Kingston, governed by a Board of Directors, began in 1991. The collection reflective of health care in Canada is available as a research resource through the Museum website and Artefacts Canada. The Museum communicates the history and science of health and health care as it has occurred in Canada to the general public by means of special events, exhibits and educational programs. The outstanding challenge for the Museum, as a not-for-profit institution, is to meet the increasing demands of the annual operating budget and to establish an Endowment Fund to assure long-term financial stability of the Museum.

Many of the first museums of Western society were cabinets of curiousities. Those developed by princely and wealthy families gathered and studied natural history. Canada, a young society, did not develop this tradition although small collections were developed in larger centers.
The use of museums for medical education began in the 16th Century. In Italy, many Italian scholars adopted an order of arrangement

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shaped by medical and pharmaceutical practice, which modified the nature of their museums. Their collections developed to serve as practical reference works for physicians, pharmacists and botanists[1]. Studies of plants, animals and humans by emerging professionals, including apothecaries and physicians, led to increasing knowledge of material medica. Similarly dissections enhanced understanding of anatomy[2]. The tradition of creating wax models or moulages began in the 17th century and subsequently became a regular feature of the comprehensive medical museums.

During the 18th century, the principle means of training of the surgeon-apothecary continued to be an apprenticeship of five to seven years. Increasingly students would supplement an apprenticeship by attending short lecture courses[3]. Anatomical educational programs, exemplified by those of William and John Hunter in London, grew in number. They developed large collections of normal and pathological specimens that are still preserved in Museums of the Royal College of Surgeons in London and the Hunterian Museum in Glasgow. William Hunter lectured at the Great Windmill Street anatomy school for two or more hours a day, six days a week, from October to May. He used wet and dry preparations for teaching and provided an opportunity for student dissections. This work was complemented by preparations used for scientific study that led to his publication, *Treatise on the Human Gravid Uterus*. The Great Windmill Street anatomy school and museum occupied an impressive purpose-built edifice that continued until 1830s.

However during the 18th century these independent programs were gradually eclipsed by museums in teaching hospitals[4].

During the 19th century as medical schools replaced apprenticeship training, some instruction was conducted in museums. Specialized museums emerged with the goal of providing at least one pathological manifestation of each disease. After 1850, specific collections

Fig. 1 - Great Windmill School of anatomy, designed by Robert Mylne in 1768, when it was the leading theater of anatomy in London (Reproduced from Black, N. Walking London's Medical History. London, Royal Society of Medicine press, 2006).

reflected the components of medical education such as anatomy, pathology, material medica and midwifery.

During the first half of the 20th century, the International Association of Medical Museums was formed to foster improved preservation and careful cataloguing of these expanding collections. During this period, Canadian medical schools developed major museums for teaching purposes. The JCB Grant Museum at the University of Toronto was an excellent anatomical museum[5]. The medical museum at McGill University begun in 1832[6] became a leading pathology

museum under the leadership of Maude Abbott [7,8,9]. Similarly, William Boyd at the University of Manitoba and University of Toronto[10,11] developed outstanding pathological museums.

By the mid 20th century, however, the perceived educational value of medical museum collections declined as the morphology of normal anatomy and gross pathology competed with an increasing number of educational priorities[12,13]. The advent of photography led to educational texts illustrated in great detail, with reference to new techniques in microscopy, microbiology and pathophysiology. Today, the collections of specimens that made up the pathology museums have a limited role in Canadian medical schools. Although student dissections have been reduced some anatomy museums augmented by Internet access continue as teaching resources[14]. The new focus of teaching emphasized learning from the living patients and healthy volunteers.

During the latter half of the 20th century, museums adopted the strategy of turning collections into publicly accessible medical history. The traditional form includes the presentation of a universal survey of medical history, exemplified by the permanent display at the Wellcome Museum of the History of Medicine. The second format is the presentation of thematic exhibitions often crossing disciplinary boundaries and reflecting the social and cultural aspects of the story[15].

In Canada, a number of institutions address some features of either the traditional or the thematic approach. National and provincial museums incorporate health care in exhibits reflecting the social or cultural history of Canada. Biographical presentations of important contributors to Canadian health care are inducted into the Canadian Medical Hall of Fame with a celebratory dinner (www.cdnmedhall.org). Several leading figures such as Frederick Banting and Norman Bethune, are memorialized in late 19th century house museums[16]. Although most initiatives by hospitals to establish individual

museums have failed, a successful exception has been the Musée des Hospitalières de l'Hôtel Dieu de Montreal[17]. A large number of historic sites preserve pharmacies, offices of doctors and dentists. These buildings may or may not be in their original location and are mostly generic reconstructions designed to represent the work of a fictional person[18,19,20].

Health Care in Canada

The nineteenth century was a period of remarkable change in Canada during which the hospital emerged as an essential component of health care. As Vogel stated, hospitals in the early years of the nineteenth century were "marginal institutions treating the socially marginal"[21]. Constructed between 1833 and 1835, Kingston General Hospital (KGH) became the third purpose-built general hospital in Canada. By 1880 there were eight general hospitals in Ontario[22,23]. Of these original general hospitals, KGH is unique in that the original buildings are still intact and continue as an integral part of the present day hospital.

In November 1995, the Historic Sites and Monuments Board of Canada designated the hospital as a site of national historic and architectural significance.

An interpretive plaque unveiled in July 1997 bears the following words:

> *An enduring witness to the evolution of public health care, Kingston General is one of Canada's oldest functioning hospitals. Most of its early buildings have survived, notably the Main Building and the Watkins Wing, which date to a time when hospitals were places for the care of the poor. Expansion in the late 19th and early 20th centuries marked the transformation of this charitable hospital into a centre of scientific medicine. The Nickle Wing for patients with infectious disease, the Doran Building for the care of women and children, and the Fenwick operating theatre all date to the 1890's. They show the gradual shift away from treatment in*

the home in favour of the hospital, which offered new surgical techniques and an antiseptic environment. The new nurses' home, completed in 1904, acknowledged the advance of nursing as a profession critical to the institution. Opened in 1914, the Empire Wing with its private and semiprivate rooms demonstrates the hospitals acceptance by the well-to-do. These early buildings form an integral part of a larger hospital complex that continues to reflect new approaches to medical treatment.

Over the course of the 20th century, KGH has been transformed into the tertiary care hospital of the Southeastern Ontario Health Science Centre. New wings for patient care were constructed contiguous with the original hospital. The original 19th century buildings, constructed of local limestone, now serve the administrative functions of the hospital. Beginning in 1967, the Hospital has developed an excellent archive that reflects the history of the institution since 1835[24]. The Archives complement the historic designation of KGH and serves as a valuable research resource of the history of institutional health care in Canada.

Fig. 2 - Kingston General Hospital during the last decade of the 19th century (Courtesy of the Kingston General Hospital Archives, Kingston, Ontario. Used with permission)

In 1988, the Board of Governors of the Kingston General Hospital asked the Archives Committee of the Board to consider establishing a Museum of Health Care in a historic building of the hospital. Two years of consultation determined that: 1) a successful museum must be managed professionally; 2) such a museum requires a substantial budget; and 3) earlier initiatives by hospitals, universities or physician groups elsewhere in Canada had ultimately failed because of budgetary limitations. Funding for cultural initiatives was not a priority in their health care budgets.

At that time Canada had no mission-specific museum of health care. We were urged to address this deficiency in Kingston. Therefore in 1991 with the support of a grant from the Associated Medical Services Inc. and the assistance of an experienced part time Curator, the acquisition of a collection began. During the long history of KGH and the Queen's University Medical School, a number of artifacts had been kept although they were inadequately stored or preserved. Beginning with these objects the collection developed rapidly. The first exhibit by the Museum on the "Role of the Physician" was placed in the Hall of Honor near the main entrance of the Kingston General Hospital in 1994.

During the first three years, it became evident that meaningful planning was necessary if development was to continue and that the museum must meet professional standards. Therefore as the first manager, I completed the Certification Program on Museum Management conducted by the Ontario Museum Association to become familiar with these professional standards. Because my academic commitments as a member of the Faculty of Health Sciences, Queen's University often took me to Britain and Europe, I had the opportunity to visit some of the leading medical museums in those countries. All were interesting experiences but three were of particular value. Over several visits to the Wellcome Museum of the History of Medicine, Ghislaine Lawrence candidly provided valuable

insight into the challenges of creating a successful medical museum. Two visits to the Thackray Medical Museum in Leeds demonstrated what could be done by an independent medical museum housed in a building of a health care institution. A three-day visit with the staff at the Dittrick Museum of Medical History provided the administrative and curatorial staff with an understanding of the terminology of the Medical Subject Headings (MeSH) classification that has since been incorporated into the artifact classification of our collection.

By 1995, it was agreed that any initiative to establish the Museum of Health Care at Kingston should be as a not-for-profit institution governed by a Board of Directors. A Steering Committee was established in the fall of 1995 and expanded into a full Board of twelve Directors in 1996. In 1997, the Museum applied and was approved as a registered charity in the Province of Ontario. The Board of Directors and the Committees of the Board meet regularly to endorse the policies and procedures that guide the activities of the Museum and ensure that they are consistent with the standards set by the Ministry of Culture of the Province of Ontario.

Ann Baillie Building

However the Museum needed a building within which the collection could be developed and displayed. The Kingston General Hospital School of Nursing was established in 1886. In 1904, the elegant limestone Nurses' Home opened signaling the growing importance of nursing as a profession. This building provided a private space away from the wards for the students. Nurses lived, trained, formed friendships and found a place of their own within the hospital environment[25]. This stately building had a big veranda and a lovely setting on the south side of the hospital facing Lake Ontario with a large lawn sloping down to the water. It consists of two-stories over a high basement constructed, as was the rest of the original hospital of random coursed hammer-dressed limestone. The Hospital School

of Nursing expanded rapidly requiring the addition of a large extension to the Nurses Home in 1927 that was named in honor of Ann Baillie, the Director of Nursing from 1924 to 1942. The apprenticeship nursing schools associated with the hospitals in Ontario were transferred to the Community Colleges in 1973 and the Ann Baillie Building reverted to administrative services.

In 1993, the Kingston General Hospital required space to expand its Cancer Clinic. Consequently, the 1927 extension of the Ann Baillie Building was torn down. However the KGH Board of Directors recognized the historic significance of the Nurses' Home, and decided to preserve the original building. In 1995, the KGH Board of Directors agreed that the growing Museum could relocate from the basement of the hospital to the Ann Baillie Building. The Museum had a home.

On the recommendation of the Historic Sites and Monuments Board of Canada, the Ann Baillie Building has been the focus of two complementary designations by the Minister of Canadian Heritage. In November 1995, it was included as part of the designation of the complex of pre-1920 buildings at the Kingston General Hospital. Subsequently in 1997, the Historic Sites and Monuments Board of Canada recognized the Ann Baillie Building and four other nurses' residences as part of their Woman's History initiative. At the present time, the Ann Baillie Building is one of six sites in Canada commemorating the role of women in nursing. The designation stated:

> *One of the earliest nurses residences in Canada; this stately building symbolizes the development and recognition of nursing as a profession. Here as elsewhere, a place of their own helped nurses shape a professional role indispensable to health care within the hospital and community.*

A further application to the Historic Sites and Monuments Board was submitted for assistance in the restoration of the Ann Baillie

Building. The Minister of Canadian Heritage approved the recommendation of the Historic Sites and Monuments Board. Therefore Parks Canada entered into partnership with the Board of Directors of the Museum of Health Care at Kingston for the conservation and presentation of the Ann Baillie Building as a National Historic Site. The noted architect William Newlands built the Nurses' Home of local limestone with a classically inspired exterior design. Its important exterior features include: its cruciform shape; its south facing monumental Greek temple portico; its symmetrical façade and impressive flight of entrance steps; its square headed windows with hammer dressed limestone lintels; and the uniformity and excellence of the finishes and detailing of the stonework. Overall, the exterior retains most of the original architectural elements that contribute to the coherency and unity of the design. Much has been retained of the interior design relevant to the nurses' residence as a home for respectable women.

Fig. 3 - Nurses Home, General Hospital, Canada (Courtesy of the Kingston General Hospital Archives, Kingston, Ontario. Used with permission)

A Conservation and Presentation Plan was prepared with Parks Canada that determined the restoration required to maintain the integrity of this historic site and the renovations to allow the Museum to function within the building. The presentation component of this report reflects the commitment of the Museum of Health Care at Kingston in partnership with the Kingston General Hospital to communicate the significance of this National Historic site to the public. In 2001, this Conservation and Presentation Report was approved by Parks Canada and will be the basis of a cost-sharing contract for the restoration costs when federal funds are available.

By 2005, the space and facility requirements of the Museum were growing rapidly. Therefore Phase 1 of the restoration and renovation of the Ann Baillie Building was initiated and completed in 2007 at a cost of one million dollars. This phase included restoration of the building foundations, restoration and renovation of level 0 to create environmentally appropriate storage areas for the collection, and the construction of a stairwell, elevator tower and installation of an elevator to provide a barrier-free entrance and access for the physically challenged throughout the building.

Buildings are an important expression of the history of health care[26,27]. All visitors to the Museum are oriented to the significance of the building. A permanent exhibit on nursing education is on display and a website project on nursing education is in the planning stage. In short, the building itself is the Museums largest artifact.

Museum of Health Care

The title of the Museum of Health Care was chosen to be broadly inclusive of all disciplines and social entities that contribute to health care, as we know it today.

Our vision is to be Canada's premier museum devoted exclusively to the history of health, illness and means of care. To assist in this objective, the Board of Directors in 2004 established a National

Advisory Board consisting of 12 prominent physicians, nurses and volunteers with experience in the health care field from across the entire country. The terms of the National Advisory Board are: 1) To foster commitment to the preservation of the legacy of health care in Canada; and 2) To advise the Board of Directors on how the Museum of Health Care can serve as a national resource for the legacy of health care in Canada.

In 2005, the National Advisory Board prepared a position paper stating its concern for the lack of commitment to and facilities for the preservation of the legacy of health care in Canada. This position paper was presented and discussed with all the national health care organizations in Canada, and has been endorsed by: the *Association of Canadian Academic Healthcare Organizations, Association of Faculties of Medicine of Canada, Canadian Coalition of Healthcare Museums and Archives, Canadian Medical Association, Canadian Nurses Association, Canadian Society for the History of Medicine, Royal College of Physicians and Surgeons of Canada, and The College of Family Physicians of Canada*.

The initiative of the National Advisory Board in seeking this endorsement raised awareness of the Museum and the role that it can play in preserving the legacy of health care in Canada.

Current status of the Museum of Health Care

The staff of the Museum has continued to increase with the development of the Museum. Management is the responsibility of an Executive Director and Museum Manager. Curatorial functions are the responsibility of the Curator, Collection Manager and a Registrar. The Education Officer is responsible for the educational programs. Four to five people on term contracts throughout the year supplement this staff. Consultants have been commissioned in the development of individual projects within the Museum. A dedicated group of volunteers assist the staff in areas of their interest.

The Museum's first responsibility has been the development of a collection reflective of health care in Canada. It now numbers in excess of 30,000 artifacts and has benefited from the contributions of many donors. Health care institutions finding historically significant artifacts hidden away in storerooms have been major donors. A corporate closure led to the transfer of a large pharmaceutical collection. Deaccession of the collection of the Canadian Museum of Health and Medicine in Toronto in 2002 led to the transfer of valuable 19th century objects. Estate settlements of individual collectors has resulted in several fascinating donations such as a large collection of cardiac pacemakers and trade cards used for mass advertising of health care products in the 19th century. Physician and nursing alumnae have offered small collections or individual artefacts and are pleased to find a safe haven to preserve their treasures for the benefit of current and future generations.

The increasing number of enquiries received by the Museum Curator from potential donors reflects the limited storage facilities for the long-term preservation of historically significant health care artefacts in Canada.

Since the goal of the Museum is to develop a representative collection reflective of all the health care disciplines, the Museum is exploring and beginning to sign contractual agreements with national associations interested in the preserving their legacy but without the space or staff to manage their own collections.

The Museum must provide optimal collection management. All artifacts are accessioned, described, classified and receive conservative conservation. Research to establish the provenance is conducted to document the interplay of science, medicine and society and to determine the significance of the object. Digital images are obtained. The Registrar transfers this information into our database and the Museum catalogue.

Secure, accessible and environmentally stable storage facility is required for this growing collection. To meet this requirement, Phase 1 of the restoration and renovation of the Ann Baillie Building included the creation of temperature and humidity controlled storerooms with high-density storage units that save space. To assure flexibility and to accommodate the large artefacts such as iron lungs, heart-lung machines and anaesthetic machines, off-site environmentally controlled storage has been acquired.

The Internet has transformed the accessibility of museum collections. Through the Museum website (www.museumofhealthcare.ca) and Artefacts Canada (www.chin.gc.ca), the collection catalogue with images is available to scholars and the community at large. Thus researchers, students and any interested person in the world can access our collection and download the information and images.

The second goal of the Museum is to communicate the history and science of health and health care as it has occurred in Canada using these primary artifacts and archival resources. This task is of value to historians and health-care workers, but the main audience is the general public. To these ends the Museum offers special events, exhibits and educational programs.

The development of exhibits is the responsibility of a project team that includes the Museum Curator supplemented by commissioned experts and volunteer academic and community experts knowledgeable in the topic of the program. The academic and community consultants assist in the design, research and editing of the program. Exhibits address themes around the social and cultural significance of the objects.

They have been both traditional and thematic in design. Examples include the history of the development of Joint Replacement as we know it today, transition of psychiatric care from confinement to active treatment, the changing methods of diagnosis and treatment during the 19th century, and a presentation of the current status

of tuberculosis throughout the world. The opening of each exhibit provides an opportunity for a special event or unveiling, in which experts speak, ribbons are cut and toasts, made.

Exhibits are displayed in the galleries of the Ann Baillie Building. Additionally, partnerships have been established with the health-care institutions of the Southeastern Health Science Centre with the creation of outreach galleries in the high traffic lobbies of these institutions.

The Canadian Heritage Information Network in Ottawa created the Virtual Museum of Canada. It has become a window for Canadian culture to the world and has several million visitors each year. The Museum of Health Care hosts two exhibits on the Virtual Museum of Canada: "Athena's Heirs, Four Centuries of Science and Medicine" and "Healing Power of Plants". In 2007, they received 75,000 visitors. This year the Museum has established its own virtual gallery with four exhibits added to our website.

The museum is committed to programs for youth. A family gallery is under development to provide entertaining and educational presentations for preschool children. The Museum has developed a series of outreach education programs in collaboration with the regional school boards. A project team of experts working with the Museum Education Officer develops each program. Special care is taken to align the program with specific expectations of the school curriculum. In their own classroom, the elementary and secondary school students examine artifacts and hear explanations about the history and science of contemporary health care issues. A historic perspective may help students understand health care issues, both past and present, and the evolution of our knowledge of the cause and treatment of disease.

Outreach education programs have now been delivered to over 10,000 students in our region. Exposure to these programs has led to increasing number of school group visits to the Museum. These

programs are supplemented with holiday programs and "summer camps" in the Museum itself in collaboration with other cultural institutions in the community.

The Faculty of Health Science, Queen's University has an endowed Chair of the History of Medicine currently held by Dr. Jacalyn Duffin. She uses museum artifacts in teaching, and directs her students to the museum for research.

Research is a priority within the Museum. The curatorial service maintains a high research standard, an essential requirement in this field to augment the value of all artifacts in the collection. The Museum commitment to research is also reflected in the annual Margaret Angus Research Fellowship that awards summer funding to a student or recent graduate to address a specific topic related to artifacts in the collection.

In this multicultural country, the Museum is also committed to interpreting distinctive cultural factors shaping health and health care in aboriginal, Chinese, ayurvedic, and alternative health care systems.

The goal of the Museum, in collaboration with the health care archives, the health science library and the history of medicine unit of the Faculty of Health Sciences, is to foster the development of a centre of excellence in Canada in research and education of the history of health and health care.

Challenges

The outstanding challenge for the Museum, as a not-for-profit institution, is to meet the increasing demands of the annual operating budget and to establish an Endowment Fund to assure long-term financial stability of the Museum.

Gathering funds for the operating budget is a time-consuming, annual challenge. The budget is met each year through sustaining patrons, museum membership, donations, program sponsors and project specific grants. Earned revenue from activities such as sales

and delivery of education programs represents a modest part of the annual operating budget.

Federal, provincial and municipal governments offer project specific grants. However, with selected exceptions, such as the national museums in Ottawa, our governments hesitate to accept responsibility for basic operations for the wide range of cultural institutions in Canada. The onus is on public philanthropy.

Notwithstanding our achievements as a relatively new, and at the present time the only mission-specific museum of health care in Canada, our challenge is survival. We hope to grow, raising public awareness and thereby increasing the constituency across the country that believes in preserving the legacy of health care. Only then can we realistically hope to build the significant endowment fund necessary for our long-term fiscal stability.

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Acknowledgement

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