

Maude Abbott and the Origin and Mysterious Disappearance of the Canadian Medical War Museum

James R. Wright Jr, MD, PhD; Samuel J.M.M. Alberti, PhD; Christopher Lyons, MA, MLIS; Richard S. Fraser, MSc, MDCM

• **Context.**—In the early 1900s, it was common practice to retain, prepare, and display instructive pathologic specimens to teach pathology to medical trainees and practitioners; these collections were called *medical museums*. Maude Abbott, MD, established her reputation by developing expertise in all aspects of medical museum work. She was a founder of the International Association of Medical Museums (later renamed the International Academy of Pathology) and became an internationally renowned expert on congenital heart disease. Her involvement in the Canadian Medical War Museum (CMWM) is less well known.

Objective.—To explore Abbott's role in the development of the CMWM during and after World War I and to trace its history.

Design.—Available primary and secondary historical sources were reviewed.

Results.—Instructive pathologic specimens derived from Canadian soldiers dying during World War I were shipped

to the Royal College of Surgeons in London, which served as a clearinghouse for museum specimens from Dominion forces. The Canadian specimens were repatriated to Canada, prepared by Abbott, and displayed at several medical meetings. Abbott, because she was a woman, could not enlist and so she reported to a series of enlisted physicians with no expertise in museology. Plans for a permanent CMWM building in Ottawa eventually failed and Abbott maintained the collection at McGill (Montreal, Quebec, Canada) until her death in 1940. We trace the CMWM after her death.

Conclusions.—Sadly, after Abbott had meticulously prepared these precious teaching specimens so that their previous owners' ultimate sacrifice would continue to help their military brethren, the relics were bureaucratically lost.

(*Arch Pathol Lab Med.* 2018;142:1292–1301; doi: 10.5858/arpa.2017-0425-HP)

Maude Abbott, MD (1869–1940) (Figure 1) is one of the best known Canadian physicians of the 20th century.^{1–5} In addition to having important and well-known roles in the founding of the International Association of Medical Museums (IAMM, later the International Academy of Pathology⁶) and the development of the science of congenital cardiac disease, she was at the forefront of efforts to open doors of opportunity to women physicians in Canada. Her involvement in the Canadian Medical War Museum (CMWM) and the story of its development and outcome is less well known and is the subject of this historical essay.

In the 1800s and the early 1900s, it was common practice to retain, prepare, and display instructive pathologic specimens obtained at autopsy or the operating room to teach pathology to medical trainees and practitioners; these collections were called *medical museums*.^{7,8} In 1899, Abbott was hired by Pathology Professor John George Adami, MD (1862–1926)^{5,9} to curate the McGill Medical Museum, which held many specimens preserved by William Osler, MD (1849–1919),^{5,10} and she quickly became recognized as a world authority in all aspects of medical museum work.

The advent of World War I (WWI) created new opportunities for women to fill positions that historically had only been open to men. According to Abbott: "... nearly everyone we cared for (i.e., all of her McGill physician colleagues) went across. My part was of course to carry on at home, and I was given the Acting Editorship of the *Canadian Medical Association Journal (CMAJ)*, and did my best to keep it from going under during that troubled and short-handed time."^{11(p149)} Unfairly, Abbott was never actually given the title "acting editor,"⁴ as the Founding Editor, Andrew MacPhail, MD (1864–1938),^{5,11,12} never resigned after enlisting and going overseas.

Abbott's other marketable skill—museology—also proved to be useful in the context of the war effort. By the time of WWI, collecting and creating a repository for pathologic teaching specimens illustrating types of war injuries and infectious diseases common amongst troops had become state-of-the-art wartime medical practice. When the war began in 1914, the major combatant factions immediately

Accepted for publication December 4, 2017.

Published online May 7, 2018.

From the Departments of Pathology & Laboratory Medicine and Paediatrics, University of Calgary, Calgary, Alberta, Canada (Dr Wright Jr); Calgary Laboratory Services - Alberta Children's Hospital Site, Calgary, Alberta, Canada (Dr Wright Jr); Science and Technology, National Museums Scotland, Edinburgh, Scotland, United Kingdom (Dr Alberti); McGill University Archives, Montreal, Quebec, Canada (Mr Lyons); and Maude Abbott Medical Museum, McGill University, Montreal, Quebec, Canada (Dr Fraser).

The authors have no relevant financial interest in the products or companies described in this article.

Presented at the American Osler Society meeting; May 3, 2016; Minneapolis, Minnesota.

Corresponding author: James R. Wright Jr, MD, PhD, Pathology & Laboratory Medicine, University of Calgary, 2888 Shaganappi Trail NW, Calgary, AB T3B 6A8, Canada (email: jim.wright@cfs.ab.ca).



Figure 1. Portrait of Dr Maude Abbott (1869–1940) by Mary Eastlake (1864–1951); oil on canvas 29 ½ × 24 ½ inches. McGill Visual Arts Collection: Accession No. 73-065.

needed to plan for such museums.^{13–15} In November 1914, the British Medical History Committee was formed and was charged with developing these plans for the Commonwealth.^{16,17} Because Abbott was *the* Canadian expert on the preparation and mounting of medical museum specimens, she naturally expected to be involved in planning the CMWM. Moreover, since she was a woman and could not enlist, overseeing the collecting and cataloging of Canadian war specimens would be a perfect way to serve.

Decisions on how this would proceed for all Dominion forces were made in London. In May 1915, the Royal College of Surgeons (RCS) of London agreed to be the repository and serve as the clearinghouse for specimens derived from dead British, Canadian, and Australian soldiers, with the plan that these would eventually be repatriated to the soldiers' countries of origin to populate their own medical war museums.^{14,18} Arthur (later Sir Arthur) Keith, MB ChB (1866–1955), a British surgeon/anthropologist and director of the RCS's Hunterian Museum, was placed in charge.¹⁹ Later, Edmonton pathologist Captain Morton Eldred Hall, MD, CAMC (1887–1975),²⁰ was assigned to the RCS in London and became highly proficient with mounting and displaying macerated bones damaged by projectiles. Hall and Keith published 4 illustrated articles in the *British Journal of Surgery* after the war, documenting their work^{21–24}; however, a knowledgeable pathologist was really needed upstream in the field to optimally collect and ship specimens.

THE CANADIAN MEDICAL WAR MUSEUM

Shortly after the first public display of the Army Medical Collection of War Specimens at the RCS in London on October 11, 1917,^{25,26} the first consignment of fixed “wet”

specimens and macerated bones derived from Canadian soldiers reached Canada in March of 1918, and Abbott prepared them for their first public display at the Canadian Medical Association meeting in Hamilton, Ontario (May 27–June 1, 1918).²⁷ Despite all of her work, Captain A. B. Chandler, MD,²⁸ a pediatrician with no credentials in pathology or medical museums, was placed in charge of the exhibit. It is not clear what Chandler actually did during his very short tenure overseeing the CMWM. However, Abbott invited him to write a “Retrospect of Literature” review for the *Canadian Medical Association Journal (CMAJ)* covering war articles that had been published in the May 1918 issue of the *Bulletin of the International Association of Medical Museums*.²⁹ Ironically, Abbott, who was never permitted to play anything but a supportive role in the CMWM, was simultaneously coeditor of both journals. Chandler also wrote 1 other review.³⁰ Chandler's role with the CMWM was short-lived (<1 year), but he was the first of many enlisted male physicians temporarily directing the CMWM.

Abbott wanted to do more. In 1918, she repeatedly corresponded with Arthur Keith, outlining why she should be sent to France to collect and prepare specimens. She even suggested a creative way to circumvent the barrier of being unable to enlist by proposing that she could first arrive in France on IAMM business and then provide unofficial assistance. Her request was denied and instead Captain Lloyd Phillips MacHaffie, MD (1889–?), a newly enlisted surgeon with no knowledge of museum techniques, was put in charge in France. Abbott volunteered to assist MacHaffie, but her offers were again rejected.³¹

In the meantime, the Canadian Department of National Defence (DND) appointed Abbott as “acting curator” of the Museum in Canada. It was formally agreed that the preparation, mounting, and cataloging of specimens would be done at McGill under her supervision, where she was assisted by museum technicians E. Lionel Judah (Figure 2) and J. Giroux, as well as liaison officer Major Fraser B. Gurd, MD.^{1,32,33} As “acting curator,” Abbott reported to Canadian Director General of Medical Services (DGMS) John Taylor Fotheringham, MD (1860–1940).³⁴ A consultant board was formed that developed plans to publish a multivolume *Canadian War Museum, Medical Section, Scientific and Descriptive Catalogue* describing each specimen and to establish a museum in Ottawa for the permanent public display of the collection, similar to the display of British specimens at the RCS.¹⁶ By 1919, Major John George Alexander Campbell, MD (1889–?) (a general practitioner), had been appointed curator of the National Medical Museum. It is not clear what his role was, since Abbott appears to have organized most of the related work; however, Campbell did give some speeches about the importance of the collection. The consultant board met several times (see below) and its plan for the catalogue, which was to be a critical research repository and educational tool, was accepted by Privy Council and given \$10,000 to fund it on June 15, 1921.¹⁶ Volume 1 was ready for publication by 1922 and other volumes were not far behind. Fotheringham was to be editor-in-chief. However, the physical museum building never materialized and the catalogue was never published.

Despite these failures, the material in the collection was seen and discussed. On November 7, 1919, a “Symposium on Pathological Specimens From France, Canadian Army Medical Services, through the Pathological Museum McGill



Figure 2. Museum technician Lionel Judah and Maude Abbott. 1921. McGill University Archives, PR026471.

University," was held by the Montreal Medico-Chirurgical Society by permission of the DGMS. It had 12 pages of coverage in the *CMAJ*.³⁵ In October the following year, the recently established American College of Surgeons (ACS)³⁶ met in Montreal and the collection, which now included wax models and other artwork, was exhibited with great fanfare; Abbott made all of the arrangements. The chair of the Programme Committee wrote to thank her:

No one who ever attended a meeting of the American College of Surgeons has ever before seen anything like it, and the catalogue you issued of all of the exhibits was a perfect marvel to everybody. How you ever managed to get this catalogue out of the Government none of us have the slightest idea; but it just made complete an exhibition which was really wonderful.³⁷

The only extant photographs of the CMWM collection come from this ACS meeting (Figure 3, A through C). The meeting's catalogue contents section³⁸ formally credits Major Laurence Joseph Rhea, MD (1877–1944), Major Fraser B. Gurd, Major G.A. Campbell, Captain L.P. MacHaffie, and other Canadian officers, but does not even mention Abbott. The catalogue briefly describes 88 macerated bone specimens damaged by projectiles, some showing healing, and calls numbers 1 to 42 "Major Rhea's Collection," noting that these were personally prepared by him; numbers 43 to 88 are simply called "all other bone collections." Fraser Gurd, who had assisted Abbott in her laboratory "for a time"^{33p132} (likely a few months) exhibited

wet specimens 1 to 80, demonstrating "destructive effects of gun-shot wounds and reparative changes" on various organs and tissues as well as wet specimens 81 to 94 demonstrating the "effects of poisonous and irritative gases on the respiratory tract." A "detailed descriptive catalogue" was noted to accompany these 94 wet specimens.^{38p26} Unfortunately, neither the McGill Archives nor the ACS Archives have a copy of this descriptive catalogue, which likely could have provided insights into the now lost official CMWM descriptive catalogue Abbott was "assisting" Fotheringham to prepare. Abbott's passion for the CMWM and its descriptive catalogue clearly showed in her role as *CMAJ* "acting editor," as she also provided regular updates to the readership on the progress of the CMWM throughout the war and shortly thereafter.^{39–41}

The final size of the CMWM collection is not entirely clear, as it arrived in Canada in a piecemeal manner. One estimate suggests about 900 specimens. The first installment, as noted above, came before the war was over and in time for the meeting in Hamilton in 1918; unfortunately, there is no record of how many war museum specimens were exhibited there.

Sixteen Canadian General Hospitals, 10 Canadian Stationary Hospitals, and 1 Canadian Mobile Laboratory were established in Europe during WWI, some or all of which contributed specimens.^{42,43} In some instances, Canadian General Hospitals were staffed by physicians from a particular medical school (eg, No. 3 was staffed by McGill physicians and No. 4 was staffed by University of Toronto physicians) and in other instances, they were simply an assembly of Canadian physicians and surgeons (eg, No. 1). It seems intuitive that general hospitals with primarily academic staffing would have been most inclined to provide specimens, but nonacademic hospitals such as No. 1 also took part.⁴⁴ McGill's No. 3 Canadian General Hospital was likely the most active contributor, since most McGill physicians and surgeons were aware of the importance of medical museums because of Abbott. According to MacPhail, Dr Rhea was serving as pathologist and was an outstanding source of museum material. In particular, MacPhail praised Rhea for his bone specimens, which he had:

... macerated and mounted in the hospital, and in spite of the difficult conditions imposed were brought there to a high degree of perfection, the delicate process of repair in bone being in situation with the aid of x-rays made during life. In addition, each specimen was made the subject of a complete clinico-pathological study carried out with the assistance of the surgeon in charge of the patient during life. The whole was a collection unique in the history of war, and a brilliant example of the triumph of personal skill and intelligent collaboration over serious difficulties. It has been sent forward intact by the British Government with the remainder of the material of the Canadian Army Medical Museum, and now constitutes one of its most important sections.^{16p313}

Rhea later published his methodology.⁴⁵

In August 1919, Morton Hall repatriated the remainder of the Canadian specimens.¹⁴ According to the *CMAJ*, "sixty-three boxes of museum material have been shipped from the Royal College of Surgeons, England, to Canada. ... Thirty Canadian specimens, included in the National collection at

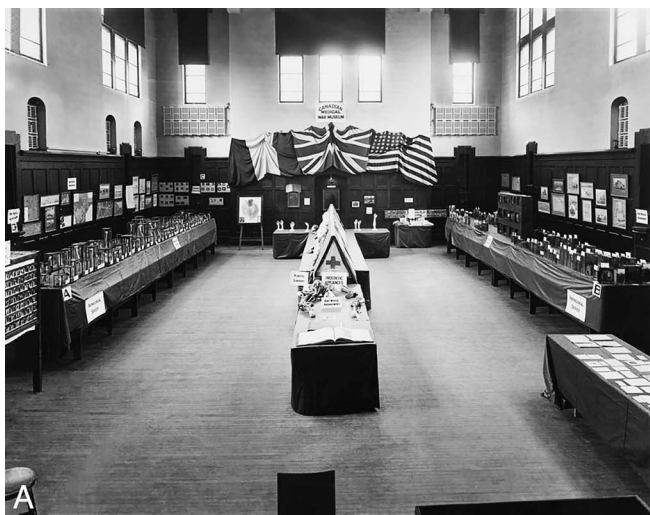


Figure 3. Canadian Medical War Museum exhibit at the American College of Surgeons meeting in Montreal in 1920. A, Macerated bone specimens on the left; wet pathologic specimens on the right; medical prostheses in the middle. B, Macerated bone specimens on the left; wet pathologic specimens on the right; prostheses, photographs, and artwork in the middle. C, Macerated bone specimens in the front and plaster casts showing types of hand or facial deformities and surgical repair in the middle. Credit: All images are in the public domain. Source: Library Archives Canada; raw images digitally enhanced by Thomas Kryton, BFA.

the Royal College of Surgeons were retained by the Imperial authorities and an equal number substituted from the National collection.^{40p949} These included approximately 200 macerated bone specimens, 300 wet specimens showing gunshot injuries, and other wet specimens (not numerated), as well as many other types of teaching material. It is not clear whether any of the macerated bone specimens he and Keith had published together were included. Hall, when telling the story in 1972, noted that it was so hectic while these materials were being packed up from the RCS Hunterian Museum for shipment to Canada, that “I nearly had some of Hunter’s specimens, but not quite!”⁴⁶

As highlighted by MacPhail, the teaching collection had grown in scope:

In addition to the material sent forward from the Royal College of Surgeons, the collection has now come to include examples of wax models, casts, pictures, and drawings illustrating plastic and facial surgery; models of orthopaedic surgery; enemy and allied equipment; x-ray lantern slides; traumatic lesions of the fundus of the eye; and water-colour sketches of army medical arrangements made under military instructions in the field.^{16p314}

This was consistent with the contemporary trend to expand the value of medical museums by using many different media.⁴⁷

THE QUEST FOR THE LOST CMWM

At the opening of the RCS exhibition on October 11, 1917, Sir Alfred Keogh, MD (1857–1936), director-general of the British Army Medical Services, outlined the objectives of army medical museums:

Men will be able to learn from each other’s ingenuity, and to avoid each other’s errors. ... It is so hard for a surgeon to realize that the conditions he is only too familiar with in the heat of a campaign are unknown to those who do not share with him the labours of the field, and will also remain unknown to those who have to undertake the care of soldiers in future times unless a record is made. There cannot be any doubt that in our former wars we have been too apt to attend to the medical exigencies of the campaign, and when it closed to bury our experience instead of consolidating it for the use of a future time and generation.^{25p621}

The dead soldier had already made the ultimate sacrifice for his nation; in the collection it was intended that he would continue to serve.¹⁴ But did that happen? Surprisingly and unfortunately, there is no convincing evidence that the collection was ever exhibited after 1920 and these relics derived from fallen Canadian soldiers mysteriously disappeared. We have confirmed that no Canadian War specimens remain at the RCS in London nor the Maude Abbott Medical Museum at McGill. We contacted the Canadian War Museum in Ottawa and were told that they were aware of its former existence but have never seen the specimens. Finally, representatives of the Canadian Forces Base (CFB) Borden Military Museum and the Canadian Forces Health Services Training Centre, CFB Borden, had never even heard of it.

The quest then moved to the Library Archives Canada (LAC) in Ottawa, which holds Director General of Medical

Services Fotheringham's papers.⁴⁸ While Abbott reported to Fotheringham about the CMWM efforts and had provided him with a final draft of at least the first volume of its official descriptive catalogue, no correspondence was found related to either. Library Archives Canada also holds the war diaries and other war papers of Adami,⁴⁹ who was initially charged with documenting the Canadian medical history of the war. These contain many entries about collecting specimens and describe the development of the policies surrounding this practice, but offer no insights as to what happened to the collection after the war.

Horst Oertel, MD (1871–1956), replaced Adami as the chairman of Pathology at McGill in 1919,⁵⁰ but there is no evidence he was interested in the CMWM. McGill Professor Sir Andrew MacPhail, the *CMAJ* editor who spent the entire war in Europe on activities for which he was knighted in 1919 (ie, while Abbott was his "acting editor"⁴), published the *Official History of the Canadian Forces in the Great War 1914-19: The Medical Services*,¹⁶ in 1925. This book amply describes the efforts related to the CMWM until October 1922, and describes how the consultant board had been assembled to plan the descriptive catalogue. According to MacPhail, after multiple planning meetings starting in November 1919 that culminated in the appointment of an expert consultant board on April 21, 1921, board meetings were held in Halifax, Ottawa, and Montreal in 1921 and 1922; however, these were apparently just planning meetings that did not involve any type of public display, as we could find no evidence that the local newspapers were even aware of these meetings. In Abbott's autobiography written in 1929, it is clear that she is still expecting a museum building to display the collection in Ottawa and the descriptive catalogue to be published, but she does not discuss the fate of the specimens after the ACS exhibition.¹

In 1919, Major Campbell was listed as curator of the National Medical Museum at 12 Emmett Street in the Ottawa phone directory (before 1919, this address was simply listed as DND space); therefore, we initially assumed that the collection had been moved to Ottawa for storage until the museum building was complete. However, Campbell apparently did not reenlist and the phone directory indicated that he was in private practice in Ottawa by 1921 (later entries indicate he was specializing in pediatrics); furthermore, the directory's listing for the National Medical Museum had also disappeared by 1921. In 1923, the building at 12 Emmett Street was listed as the Addison apartment building; it was demolished by the early 1930s and streets around it were reconfigured.

Turnover of Medical Corps staff overseeing the CMWM was apparently rapid. In a paper she presented at the IAMM meeting in 1922, Abbott made the following revealing comment as she was describing the progress on the CMWM and its descriptive catalogue. According to her, Campbell was "replaced later by Col. H.A. Chisholm, C.M.G., D.S.O., C.A.M.C., and then Col. A.E. Snell, C.M.G., D.S.O., R.C.A.M.C. and Major Gorsline, D.S.O., C.A.M.C."⁵¹ In other words, the CMWM had 5 different officers-in-charge providing its administrative support from Ottawa in as many years! As evidence of this rapid turnover, none of these 3 latter names appear in other extant records of the CMWM.

Since there was no compelling evidence that the collection had actually moved to Ottawa as planned (and recognizing the confusion existing at the time), we refocused on Maude Abbott and McGill. The Osler Library

of the History of Medicine at McGill holds Maude Abbott's papers, in which we found a single file containing a few letters related to the specimens dated December 1919⁵²; however, these obviously could not provide information pertaining to the whereabouts of the specimens after the ACS exhibition. It should be noted that at about this time, Abbott's situation at McGill became more tenuous as Oertel made it clear that he should be the curator of the McGill Medical Museum (ie, Abbott's only paying job). It should be emphasized that, as a woman, even at a time when pathology was flourishing and there was an overall shortage of pathologists,⁵³ Abbott had no clinical income to fall back on as she had never been granted privileges to practice pathology at any Montreal hospital.⁴ Although Abbott had been a popular medical student teacher for several decades, this was not paid work.

In 1923, the McGill Pathological Institute Building opened and much of the departmental pathology museum moved from the Strathcona Building, under Abbott's supervision, to the Institute Building under Oertel. The specimens that remained under Abbott's control in the Strathcona Building were renamed the "Central Medical Museum." In September 1923, Abbott took a 2-year leave of absence to serve as acting head of Pathology at Women's Medical College of Pennsylvania in Philadelphia.¹⁻³ Although she was asked to continue on as head in Philadelphia, Abbott returned to McGill in September 1925 for personal reasons. Shortly before her return, E. Lionel Judah, Abbott's technician since 1896, was named curator of the McGill Pathological Institute Museum. Abbott's new position was in the History of Medicine department where she reported to MacPhail, and she was placed in charge of her own collection of congenital heart disease specimens, which she would eventually use to write her *Atlas of Congenital Cardiac Disease*,⁵⁴ as well as the remaining specimens collected by William Osler. *A Survey of McGill University Museums*,⁵⁵ published in February 1932 by Cyril Fox, PhD, director of the National Museum of Wales, describes all types of museums at McGill and then notes that there is a Pathological Museum in the Pathological Building that is controlled by Oertel, with Mr Judah as curator, and a Medical Museum in the Medical Building with Abbott as the curator. According to Fox:

The scope and function of the Medical Museum does not appear to be clearly defined. Much of the teaching, as opposed to historical, material formerly in the Museum has been transferred to the Pathological Museum, but a good deal remains. Thus the spheres of activity of the Medical and Pathological Museums respectively await definition, and it would be well if this definition could be brought about.^{55p21}

Perhaps the greatest difficulty in tracking the CMWM is its lack of a definitive name. In fact, it was given many names, including Canadian Army Medical Museum, Canadian National Medical Museum, National Medical Museum, Army Medical Department of the Canadian National War Museum, Canadian Army Medical Corps Museum, Canadian Army Medical Corps War Museum, Army Medical Pathological Museum, and Canadian National War Museum. To add to this confusion, an unrelated Canadian War Museum was actually built in Ottawa and flourishes today.⁵⁶

At the McGill Archives, we found a small file folder labelled "C.A.M.C. War Museum," which contained internal

McGill correspondence.⁵⁷ The file shows that Abbott had contracted with the DND to maintain the war specimens in her McGill Pathological Museum for \$300 per year and that these specimens resided with her for the next 2 decades. The file's contents included her correspondence with DND related to the annual \$300 check, her correspondence with the McGill Assistant Bursar related to depositing the check, her receipts and disbursements, and her hand-written ledgers. Interestingly, in 1927, she sought reimbursement for a trip to Ottawa, suggesting that plans for a museum building in Ottawa were still being discussed.

The CMWM was clearly a labor of love for Abbott. On September 16, 1938, she sent a balance sheet covering each fiscal year for the period 1923–1924 to 1937–1938 to the assistant bursar at McGill showing a surplus of \$1831.94 in the account. In this letter, she states that “I sent full reports on the status of the work on the descriptive catalogue, at the request of Col. (Jacob Leslie) Potter, the Director General of Medical Services, last winter, and I think it probable that Department of Militia will authorize publication of at least one of the volumes within the next few months.” Abbott states she is also prepared to use her surplus to defray publication costs. In 1938, perhaps noting that the government was under pressure for fiscal restraint during the Great Depression, she notified the DND that she can maintain the specimens for only \$200 per year and the DND agrees to this on a go-forward basis. In December 1939, she received her first check for \$200 for the care and upkeep of the Canadian Army Medical Museum during the fiscal year 1939–1940.⁵⁷ Little did she know the future repercussions of that small gesture. She died on September 2, 1940, only a few months after Fotheringham.

In retrospect, it is not surprising that the CMWM specimens remained at McGill. Since there was apparently no decision about funding for a dedicated museum building in Ottawa and since the specimens were safe under Abbott's care, there was no compelling reason to move them to Ottawa. After all, this was an inexpensive temporary solution. Interestingly, in Britain, the military had petitioned the government for a dedicated museum building to display the British War Collection as well, but the government opted for leaving their specimens at the RCS, which was also the least expensive option being considered.¹⁴

Rhea replaced Oertel as McGill Pathology chairman in 1938.⁵⁸ Since Rhea had received strong praise for his macerated bone specimen collection—now part of the CMWM—he was likely a strong proponent of the collection, but he died on July 3, 1944. G. Lyman Duff, MD (1904–1956)^{5,59} replaced him. Because of some confusion in clearing the affairs of Abbott and because of the rapid turnover of department heads, no one sent DND bills for the Museum until 1945, when Duff wrote A. Ross, Esq, Deputy Minister, Army, DND, and explained that Abbott had died and that he was now the curator of the Canadian Army Medical Corps Museum. On August 14, 1945, he wrote:

While it is true that the last grant received for maintenance of the museum on December 11th 1939, amounted to only \$200, the annual grant previous to that time had always been \$300, which was paid directly to the Bursar of McGill University without annual application of submission of accounts by us. The sum of \$300 per annum is the least that would be required to keep the museum in a normal state of repair and up to

proper standard. Accordingly, I have asked the Bursar's Office to submit to you an account for \$100, balance owing in respect to the year 1939-40 and separate accounts for the six years from 1940-41 and to 1945-46 inclusive, in the sum of \$300 for each year... I trust that this will meet with your approval, and I shall expect to hear from you at a later date regarding the proposed special appropriation of \$1,000 to cover the preparation and mounting of the sixty-five specimens that I understand are being forwarded to me from the Canadian Military Headquarters in London, England.⁶⁰

In addition to asking for more money retroactively, Duff also indicates that WWII pathologic specimens are arriving and are generating further costs. Ross replied on September 7, 1945, that DND will only pay the \$200 per annum that was mutually agreed to in 1938 and, noting that they had actually already paid McGill for 1940–1941, requested that Duff forward new accounts “for the sum of \$200.00 in respect of the years commencing 1 April, 1941, 42, 43, 44, and 45.” The Department of National Defence paid these in early 1946, but this signaled the beginning of the end of this long-standing relationship that Abbott had forged with DND, allowing the CMWM to be cared for at McGill.⁶⁰

On June 24, 1947, incoming McGill Dean of Medicine Frederick Smith, MD (1903–1949), who had clearly had prior discussions with Duff, wrote McGill Principal Frank Cyril James, MD (1903–1973), that there is not enough space at the Pathological Institute to house the CMWM, that its contents “are not suitable for undergraduate teaching,” and that “experience during the recent war showed that the museum in its present location was used practically not at all in the training or instruction of medical officers.” Smith explains: “This latter fact ... led Professor Duff to recommend to the Director General of Medical Services that the museum be located at an appropriate Army Training Centre (but) ... no action was taken by the Army.... it was our intention to transfer the Army Medical Museum to Camp Borden for the instruction of medical officers. This, however, could not be carried out as we were unable to find suitable housing space.” Dean Smith further recommended that James should write to the DGMS “to point out that McGill University will soon be unable to provide space any longer for the housing of the Canadian Army Medical Museum and requesting that the D.G.M.S. formulate plans whereby the Army Museum could be removed to other quarters selected by him, ... not later than the end of 1947, the reason for this request being the inadequacy of museum space for our own undergraduate purposes.” Finally, Dean Smith wrote: “For your information, I have heard, by a confidential route, the D.G.M.S. would like to have the museum situated in the R.C.A.M.C. Training Centre and the request for its removal on our part may help him towards this end. However, I do not think it would be politic for us to mention that we are knowledgeable of this fact or for us to imply that would be a good idea, as recommended by Professor Duff and mentioned above in this letter.”⁶¹

This letter precipitated Principal James to write the DGMS on August 18, 1947, as had been requested by Dean Smith. The contents of the letter are as suggested in the dean's letter. This was followed by a reminder on September 16, 1947.

On September 22, 1947, Acting DGMS Stanley Gerald Umphrey Shier, MD, wrote: Cyril James:

Your letters of 18 August and 16 September regarding the Canadian Army Medical Museum have been received. Reply has been delayed until some definite line of action had been established. We are now in a position to advise that the arrangements have been made to move the specimens contained in this museum to another accommodation. At the same time, we would like to express our very great appreciation for the care which has been given these specimens by McGill University, since the inception of the museum many years ago. Professor Lyman Duff, present curator of the museum will be advised, by local army representative, as to what action is being taken to move the specimens.⁶¹

Additional correspondence between Smith and James on November 3, 1947, confirms that the museum had already been removed, that space issues were very real, and that something needed to be done about the proliferation of pathology museums and accumulation of specimens at McGill. Smith describes a general shortage of museum space as well as the need to move Maude Abbott's congenital heart disease specimens from the Medical Building to the Children's Hospital and the need to do something with Osler's collection, which also resided in the Medical Building. The dean also notes that Oertel had amassed a large collection of specimens during his tenure, that many remained in the Medical Building after the Pathological Institute Building was erected, and that he had started a new museum in the new building. Smith discloses to James what happened to the CMWM stating: "Your repeated efforts to persuade the D.G.M.S. to remove their museum from the Medical Building have been successful and the museum is now in Longueuil (sic). It constituted, however, only a small fraction of the unused and ancient medical material on the floor of the Building."⁶¹ Dean Smith died in 1949 and Duff became the new dean.

Exactly where the CMWM had moved to is unclear from this vague statement. Longueuil is on the south shore of the St Lawrence River directly across from Montreal.⁶² Saint Hubert is a borough of the city of Longueuil and it is possible that the specimens were moved to CFB St Hubert, a Royal Canadian Air Force base established during WWII at Montreal/St Hubert Airport. CFB St Hubert became part of CFB Montreal in 1968 but this base closed in 1997.⁶³ It is also possible that Shier simply arranged for temporary storage at a warehouse in Longueuil.

Stanley Gerald Umphrey Shier, OBE, CD, MD (1903–1968), would become the 18th DGMS (this position was called surgeon general after 1958) near the end of his career in March 1956.^{64,65} He had been acting DGMS at the time of this transfer. Unfortunately, his papers are unsorted and not filed together at LAC. Therefore, it is not currently possible to track the specimens by using his correspondence and the CMWM disappeared from November 1947 until November 1951, when through another source, they were identified as being at CFB Borden.⁶⁶ From 1951 to 1956, Shier, no longer acting DGMS and not yet DGMS, was posted to Army Headquarters in Oakville, Ontario. Nevertheless, his involvement with the CMWM continued.

Camp Borden, 70 miles north of Toronto, was established during WWI and expanded greatly during WWII. The Royal Canadian Army Medical Corp (RCAMC) School opened in 1946 at CFB Borden as Canada's permanent peacetime training center for the Corps. The Canadian Army expanded

in the early 1950s because of Canada's commitment to provide United Nations forces in Korea and Canadian forces to meet NATO commitments in Europe. This, combined with unification of Canada's medical services for its armed forces, resulted in rapid expansion of the school.⁶⁷ Therefore, moving the CMWM specimens to Canada's military medical, surgical, and technical training facility seemed ideal! How and when the specimens moved there is unclear, but this would have been sometime before November 1951.

John Drennan Hamilton (1911–2002) was the head of Pathology from 1951 to 1961 and dean of Medicine from 1961 to 1966 at the University of Toronto.⁶⁸ Before this, he had been the professor and head of Pathology at Queen's University in Kingston, Ontario (1946–1951) where he had modernized and downsized their medical museum. Hamilton began his academic career at McGill as an assistant professor of Pathology in 1945–1946, likely the year that Duff had decided that it was time for the CMWM to go.⁶⁹ On November 10, 1951, Hamilton sent a letter to DGMS Brigadier William Lawrence Coke, OBE, CD, MD (1905–1989)⁷⁰.

I apologize for the long delay in reporting on my visit to the Army Medical Pathological Museum at Camp Borden... I would like to recommend that Dr. H.J. Barrie (1909-?) be employed as the Curator of this Museum, for four half days per month. Dr. Barrie is most interested in developing the museum. He has had great experience with Dr. (William) Boyd in museum work ... I am listing below the approximate cost per month, and would suggest that if you are agreeable we review the situation with regard to cost and progress at the end of six months. In other words would you consider spending \$1000 to let us see what we can do. We might find that this is too much or possible too little. It is only a guess at the present time... Dr. J.D. Hamilton, Director, one-half day per month \$25; Dr. H.J. Barrie, four half days per month \$100; Artist, one day per month \$20; Traveling expenses, one trip per month \$12; supplies for 6 months \$100; Total for six months approximately \$1000.

I have attached two copies of a memorandum outlining our ideas about the Army Medical Museum (n.b., this is a four page document describing thoughts on how to improve the museum and make it more useful).⁶⁶

On January 7, 1952, Coke writes Shier that the museum is to be part of the RCAMC School and to proceed as Hamilton suggested. They note:

There should be no difficulty in paying for the services of Dr. Hamilton and Dr. Barrie under K.R.Army 21050, nor in meeting the travel expenses. No authority exists for payment of a medical artist, but this difficulty can be met by employing either Dr. Hamilton or Dr. Barrie for an additional half day per month, and having the artist paid by them.⁶⁶

In April 1952, Shier initiates this and Hamilton and Barrie are hired as military contractors. From 1952 to 1954, Barrie functions as curator for the museum and makes efforts to further develop it.⁶⁶ Barrie has meetings with RCAMC School representatives, and some concerns related to his

expanding museum plans and costs are expressed. However, things really begin to unravel related to the informal funding mechanism for the part-time civilian medical illustrator and Barrie's desire to buy some museum reagents from a nonmilitary source. A new DGMS, Brigadier Kenneth Adams Hunter, OBE, CD, MD (1904-?),⁷¹ wanted to "regularize" these latter transactions and referred the matter to Treasury Board of Canada. On January 25, 1955, Hunter tersely wrote Shier telling him that:

This submission did not obtain Ministerial approval. Further work on the Pathological Museum is not authorized for the fiscal year 1955-56. The RCAMC School will provide ordinary maintenance and custodial care. The DGMS will review the problem of the future of the Pathological Museum during the next year.⁶⁶

The following final report was issued by Shier on May 13, 1955:

Army Headquarters, Dept Nat Defense, Ottawa

Pathological Museum – the RCAMC School – Camp Borden

1. The following report is submitted for your information with respect to the originally noted subject.
2. Employment of Doctor John Hamilton and Doctor H.J. Barrie to develop the Army Medical Pathological Museum at the Royal Canadian Army Medical Corps School, Camp Borden, was commenced in February 1952. The original authority was for a 6 month period and was issued by Headquarters Central Command following receipt of the proposal from the Director General Medical Services.
3. Subsequent claims were processed on receipt and in December 1952, the employment was referred to the DCMS for reconsideration. DCMS approval was received in due course, to continue this employment during the fiscal year 1953/54. This was later extended in January 54 to cover the fiscal year 1954/55.
4. Due to the expenses incurred in the mounting and indexing of the specimens, the problem of paying for this service was submitted to DCMS in May 54 and further detailed in Sep 54. In reply to a later request to the DCMS in Jan 55, advice was received that further work on the Pathological Museum would not be authorized for the fiscal year 1955/56.
5. Claims passed for payment during the period were as follows:

Dr. Hamilton: \$325 (1952/53); \$100 (1953/54); \$50 (1954/55) = \$475 (Total)

Dr. Barrie: \$1,459 (1952/53); \$999.72 (1953/54); \$2,062.92 (1954/55) = \$4,521.64

(Total)
Total = \$4,996.64

6. This is submitted as a final report with respect to the employment of Doctors Hamilton and Barrie.

Colonel Shier
Command Medical Officer,
Central Command⁶⁶

CC: RCAMC School

The specimens were apparently left in the care of the RCAMC School at CFB Borden in mid-1955. The file was officially closed June 21, 1961.⁶⁶ We have not been able to identify any further useful correspondence after mid-1955 and so the CMWM was lost sometime during the last 60 years. Shier's papers are still not available at LAC. CFB Borden is unable to provide any further information. Stuart L. Beaton, lieutenant colonel (retired), director museum, CFB Borden, is certain that the specimens are not there now nor is he aware of them ever having been at CFB Borden (personal communication, August 2015).

CONCLUSIONS

Approximately 61,000 Canadians were killed in WWI. It was standard policy that bodies of Dominion soldiers were not repatriated but were buried in Europe, mostly France, where they fell.¹⁴ The pathologic specimens accumulated for the CMWM were the only fallen soldiers returned to their homeland—albeit in a piecemeal fashion. Their families were never told at the time that their loved ones were "continuing to serve" after their deaths.¹⁴ Sadly, after Maude Abbott had meticulously prepared these precious teaching specimens so that their previous owners' ultimate sacrifice would continue to help their military brethren, the relics were bureaucratically lost. Tragically, most of the WWI museum specimens collected by other combatant nations have also been either destroyed or lost.⁷² As noted by Arthur Keith, "such specimens are original documents; they constitute an original and reliable source of knowledge for all time."⁷³ While it is unlikely that continuing efforts will result in the CMWM specimens being found, perhaps as Shier's papers and other archival materials become sorted and catalogued, we may learn their fate. It is also possible that the draft of the descriptive catalogue might resurface, allowing this important piece of Canadian, WWI, medical museum, and pathology history to be preserved in the Osler Library⁷⁴ or the Maude Abbott Medical Museum.⁷⁵

Maude Abbott was clearly frustrated by the "Catch 22" scenario related to the CMWM. She had been unable to enlist because she was a woman, and, because she was not enlisted, she was not allowed to assume any leadership role in this military operation, even though her expertise and dedication should have resulted in her overseeing the entire CMWM from its beginning to its successful completion. Instead, these leadership roles were repeatedly assigned to enlisted male physicians with no relevant experience and little passion for medical museums. It is another example of the discrimination that this female pathologist experienced throughout her academic career. Therefore, it is appropriate to close with a sexist comment, that the writer meant as a compliment, in her CMAJ obituary:

Doctor Abbott's mind was characterized by three virtues, patience, perseverance, and versatility. While she often flitted from point to point in a way that was disconcerting to the mere male, yet she eventually came to order, and the final result was a piece of work logical,

coherent, and eminently worthwhile. Her magnetism was such that she got things done.^{76p395}

Perhaps, having to kowtow to everyone in a uniform and not allowing Abbott authority to make any decisions was what was really lacking and why the CMWM never got “done,” unlike so many of her other impressive works.¹⁻³

We thank Lily Szczygiel, DEC, and Anna Dysert, MA, MLIS, Osler Library of the History of Medicine, McGill University; Lori Podolsky, MA, and Gordon Burr, MLIS, McGill University Archives; John Krug (ResearchOttawa.ca); Isabel Campbell, PhD, military and naval historian, Directorate of History and Heritage, Department of National Defence/Government of Canada; Martyn Cooke and Carina Phillips, MA, Wellcome Museum of Anatomy and Pathology at the Royal College of Surgeons of England; Dolores J. Barber, MLIS, assistant archivist, American College of Surgeons; Kristin Rodgers, MLIS, The Ohio State University Medical Heritage Center; Harry Letts, MD; Charlotte Monroe; Sherry Mount, Tom Kryton, BFA. Finally, we thank Robin Cooke, MD, for his insights on medical war museum specimens around the world.

The first author’s historical research is supported, in part, by a Scholar in Residence Award from The Ohio State University Medical Heritage Center.

References

1. Abbott MES. Autobiographical sketch [March 31, 1928]. *McGill Med J*. 1959;28:127–152.
2. MacDermot HE. *Maude Abbott – A Memoir*. Toronto, Canada: Macmillan; 1941.
3. Waugh D. *Maudie of McGill: Dr. Maude Abbott and the Foundations of Heart Surgery*. Oxford, United Kingdom: Dundurn Press; 1992.
4. Wright JR, Fraser RS, Adams A, Hunter M. Portraying Maude Abbott. *CMAJ*. 2017;189:E281–E283.
5. Bensley EH. *McGill Medical Luminaries*. Montreal, Canada: Osler Library, McGill University; 1990.
6. Cooke RA, ed. *Scientific Medicine in the Twentieth Century: A Commemoration of 100 Years of the International Association of Medical Museums and the International Academy of Pathology*. IAP; 2006.
7. Alberti SJMM. *Morbid Curiosities: Medical Museums in Nineteenth-Century Britain*. Oxford, United Kingdom: Oxford University Press; 2011.
8. Alberti SJMM, Hallam E, ed. *Medical Museums: Past, Present, Future*. London: Royal College of Surgeons of England; 2013.
9. Adami M. *J George Adami: A Memoir*. London, England: Constable & Co; 1930.
10. Bliss M. *William Osler: A Life in Medicine*. Toronto, Canada: University of Toronto Press; 1999.
11. Martin CF. Sir Andrew Macphail, Kt., OBE, LLD, MD, MRSC, FRSC [obituary]. *CMAJ*. 1938;39(5):508–509.
12. Robertson IR. *Sir Andrew Macphail: The Life and Legacy of a Canadian Man of Letters*. Montreal, Canada: McGill-Queen’s University Press; 2008.
13. Wright JR, Baskin LB. Pathology and laboratory medical support for the American Expeditionary Forces by the US Army Medical Corps during World War I. *Arch Pathol Lab Med*. 2015;139(9):1161–1172.
14. Alberti SJMM. The ‘Regiment of Skeletons’: A First World War medical collection. *Soc Hist Med*. 2015;28(1):108–133.
15. Henry RS. *The Armed Forces Institute of Pathology: Its First Century 1862-1962*. Washington, DC: Office of the Surgeon General, Department of the Army; 1964.
16. MacPhail A. *Official History of the Canadian Forces in the Great War 1914-19: The Medical Services*. Ottawa, Canada: F.A. Acland; 1925:311–315.
17. Adami JG. Sir William Osler’s part in the Medical History of the War and the organization of the British War Museum. *Bull Int Assoc Med Mus*. 1926;9:80–87.
18. Canadian collection of medical war specimens. *Lancet*. 1918;2(4955):215.
19. Keith A. *An Autobiography*. New York, NY: Philosophical Library; 1950.
20. Letts H. Dr. Morton Eldred Hall: the first pathologist at the Royal Alexandra Hospital Edmonton, Alberta 1919-1951 (unpublished). 1998. Copy provided to JRW by Dr. Harry Letts of Gatineau, Quebec. JRW’s historical holdings will be bequeathed to the Medical Heritage Center of The Ohio State University. <https://hsl.osu.edu/service-areas/mhc>. Accessed December 4, 2017.
21. Keith A, Hall ME. Bones showing the effects of gunshot injuries, in the army medical collection now on exhibition in the museum of the Royal College of Surgeons of England. *Br J Surg*. 1918;6(24):537–565.
22. Keith A, Hall ME. Specimens of gunshot injuries of the face and spine, contained in the army medical collection now on exhibition in the museum of the Royal College of Surgeons of England. *Br J Surg*. 1919;7(25):55–71.
23. Keith A, Hall ME. Specimens of gunshot injuries of the long bones, to show the type of fracture produced: contained in the army medical collection now on exhibition in the museum of the Royal College of Surgeons of England. *Br J Surg*. 1919;7(26):149–167.
24. Keith A, Hall ME. Specimens of long bones showing the processes of infection and repair: contained in the army medical collection now on exhibition in the museum of the Royal College of Surgeons of England. *Br J Surg*. 1919;7(27):302–319.
25. The army collection of war specimens: the opening of the exhibition. *Lancet*. 1917;2(4912):620–621.
26. The Great War exhibit at the Royal College of Surgeons. *CMAJ*. 1918;8(1):52–55.
27. The Canadian medical week in Hamilton, Ontario. *Lancet*. 1918;2(4951):120.
28. Dr. A. B. Chandler [obituary]. *CMAJ*. 1934;30(4):462.
29. Chandler AB. Retrospect of Literature: Bulletin No. VII of the International Association of Medical Museums. *CMAJ*. 1918;8(8):748–750.
30. Chandler AB. The pathology of the skin lesions produced by mustard gas (dichlorethylsulphide): by A.S. Warthin, PhD, MD and Carl Vernon Weller MD, Ann Arbor, Mich. *Journ. Lab. & Clin. Med* (Vol. Iii, No. 8, 1981, pages 447-449). *CMAJ*. 1918;8(8):750–752.
31. Correspondence M. Abbott to A. Keith. London, England: RCS Archives, RCS-MUS/5/3/32; August 6, 1918.
32. Dr. Fraser B. Gurd [obituary]. *CMAJ*. 1948;58(4):413.
33. Gurd FN. *The Gurdy the Montreal General and McGill: A Family Saga*. Burnstown, Ontario: General Store Publishing House; 1996.
34. Major-General John Taylor Fotheringham, C.M.G., M.D. of Toronto [obituary]. *CMAJ*. 1940;43(1):87–88.
35. Symposium on pathological specimens from France, Canadian Army Medical Services, through the Pathological Museum McGill University. *CMAJ*. 1920;10(8):773–784.
36. Wright JR. The American College of Surgeons, minimum standards for hospitals, and the provision of high quality laboratory services. *Arch Pathol Lab Med*. 2017;141(5):704–717.
37. Letter from ACS Planning Committee Chair to Abbott. Montreal, Canada: McGill Archives RG 41 C.10 38/51/3; October 22, 1920.
38. Catalogue of exhibits from the Canadian Medical War Museum [microform]: with announcement of exhibits from the International Association of Medical Museums, the Pathological Museum and Laboratory and the Medical Library of McGill University and the Montreal General and Royal Victoria hospitals: presented at the Medical School, McGill University by American College of Surgeons. Congress (10th: 1920: Montréal, Quebec). https://archive.org/details/cihm_83322. Accessed November 8, 2017.
39. Wax models for the National War Museum. *CMAJ*. 1919;9(10):936–937.
40. Report on material received for the Canadian National War Museum from the Royal College of Surgeons, London. *CMAJ*. 1919;9(10):949–950.
41. Canadian National War Museum. Progress report upon preparation of material for Army Medical Department of Canadian War Museum. *CMAJ*. 1920;10(3):285–286.
42. O’Leary M; The Regimental Rogue. Researching Canadian soldiers of the First World War, part 13: evacuation to hospital. http://regimentalrogue.com/misc/researching_first_world_war_soldiers_part13.htm. Accessed November 8, 2017.
43. Wright JR. British and Canadian mobile laboratories: bacteriology’s three tonne technical innovation in World War I. *Can J Pathol*. 2016;8(3):77–85.
44. Correspondence M. Abbott to A. Keith. London, England: RCS Archives, RCS-MUS/5/3/032; September 7, 1918.
45. Rhea LJ. Method used in the Army Zone for the preparation of bone lesions resulting from the injuries of war. *Bull Int Assoc Med Mus*. 1922;8:4–48.
46. Hand-written letter by Morton Hall from 1972, provided to JRW by Dr. Harry Letts of Gatineau, Quebec. JRW’s historical holdings are bequeathed to the Medical Heritage Center of The Ohio State University. <https://hsl.osu.edu/service-areas/mhc>. Accessed November 8, 2017.
47. Hallam E. *Anatomy Museums: Death and the Body Displayed*. London, United Kingdom: Reaktion; 2016.
48. Library Archives Canada. John T. Fotheringham fonds, Library Archives Canada. http://collectionscanada.gc.ca/pam_archives/index.php?fuseaction=genitem.displayItem&rec_nbr=102799&lang=eng&rec_nbr_list=102799. Accessed November 8, 2017.
49. Library Archives Canada. John George Adami fonds, Library Archives Canada. http://collectionscanada.gc.ca/pam_archives/index.php?fuseaction=genitem.displayItem&rec_nbr=105287&lang=eng&rec_nbr_list=105287,102323. Accessed November 8, 2017.
50. Hanaway J, Cruess R, Darragh J. *McGill Medicine: Vol 2. 1885-1936*. Montreal & Kingston, Canada: McGill-Queen’s University Press; 2006.
51. Abbott M. The preparation of the Canadian Army Medical Museum, and its descriptive catalogue in collaboration with experts. *Bull Int Assoc Med Mus*. 1923;8:34–39.
52. William Osler Library, P111 Maude Abbott Fonds, 606/30a, War Museum correspondence, 1919. <http://osler.library.mcgill.ca/media/pdf/p111.pdf>. Accessed November 8, 2017.
53. Wright JR Jr. The politics underlying the provision of and changes in pathology and laboratory services in the United States during the Roaring Twenties. *Arch Pathol Lab Med*. 2016;140(9):983–991.

54. Abbott M. *Atlas of Congenital Cardiac Disease*. New York, NY: American Heart Association; 1936.
55. Fox C. *A Survey of McGill University Museums*. Montreal, Canada: McGill University; 1932.
56. Canadian War Museum. <http://www.warmuseum.ca/>. Accessed November 8, 2017.
57. Canadian Army Medical Corp War Museum. Montreal, Canada: McGill Archives RG4 C431 1351E.
58. Dr. Laurence J. Rhea [obituary by HEM]. *CMAJ*. 1944;51:184–185.
59. Boyd W. George Lyman Duff: in memoriam: First Annual George Lyman Duff Memorial Lecture. *CMAJ*. 1958;78:962–973.
60. McGill University Archives, C.A.M.C. War Museum, R.C. 4, CONT 227, 2166D; 1808.
61. McGill University Archives, Army Medical Museum, Acc No. R.G. 2, C. 138; Ref No. 2414.
62. Longueuil. Wikipedia. <https://en.wikipedia.org/wiki/Longueuil>. Accessed November 8, 2017.
63. CFB St. Hubert. Wikipedia. https://en.wikipedia.org/wiki/CFB_St_Hubert. Accessed November 8, 2017.
64. Stanley Gerald Umphrey Shier. Wikipedia. https://en.wikipedia.org/wiki/Stanley_Gerald_Umphrey_Shier. Accessed November 8, 2017.
65. Surgeon General (Canada). Wikipedia. [https://en.wikipedia.org/wiki/Surgeon_General_\(Canada\)](https://en.wikipedia.org/wiki/Surgeon_General_(Canada)). Accessed November 8, 2017.
66. Department of National Defence. File No. CC 1615-80/8 Closed Volume (no further correspondence to be placed in this file). June 21, 1961. Kardex file 325,009 (D728).
67. Nicholson GWL. *Seventy Years of Service: A History of the Royal Canadian Army Medical Corps*. Ottawa, Canada: Borealis Press; 1977:255.
68. Hamilton, John D [obituary]. *CMAJ*. 2003;168(5):655.
69. Haust MD, Steele HD, Manley PN. *The Early History of Pathology at Queens University and Her Teaching Hospitals (until 1966)*. Queens University Pathology. <https://www.path.queensu.ca/alumni/QueensPath-Haust.pdf>. Accessed November 8, 2017.
70. William Lawrence Coke. Wikipedia. https://en.wikipedia.org/wiki/William_Lawrence_Coke. Accessed November 8, 2017.
71. Kenneth Adams Hunter. Wikipedia. https://en.wikipedia.org/wiki/Kenneth_Adams_Hunter. Accessed November 8, 2017.
72. Cooke RA. A Cooke's tour to find the remaining pathology specimens collected during WWI by the pathologist in the various combatant countries. *History of Pathology Society Newsletter*. February 2017:11–32.
73. The Army Medical Collection of War Specimens at the Royal College of Surgeons of England. *Br Med J*. 1917;2(2964):532.
74. Osler Library of the History of Medicine. McGill University. <http://www.mcgill.ca/library/branches/osler>. Accessed November 8, 2017.
75. Maude Abbott Medical Museum. McGill University. <http://www.mcgill.ca/medicalmuseum/>. Accessed November 8, 2017.
76. Dr. Maude Elizabeth Seymour Abbott [obituary]. *CMAJ*. 1940;43(4):395.