Four centuries of military surgery in Canada

Vivian C. McAlister, University of Western Ontario

Available at: https://works.bepress.com/vivianmcalister/50/
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Vivian McAlister
1 Canadian Field Hospital
“On top of this came cold and snow and frost so hard that wine froze in the casks, and had to be shared out by weight…Soon unknown diseases broke out, like those already described by Captain Jacques Cartier”
Champlain's map of St Croix Island from his "Voyages", which was used in the 1790s to determine the international boundary between New Brunswick and Maine. Champlain drew the island on a scale three times as great as that of the shores in order to include all features on a single map. The shore at the top is now Maine; that at the bottom, New Brunswick.

**KEY TO CHAMPLAIN'S MAP OF ST CROIX ISLAND**
(Figures indicate fathoms of water)

A. Plan of the settlement.  
B. Gardens.  
C. Small islet serving as platform for cannon (letter should be further right by drawing of cannon, on a knoll now called Cannon Nubble).  
D. Platform upon which cannon were placed.  
E. The cemetery.  
F. The chapel.  
G. Rocky shoals around St Croix Island.  
H. A little islet (now called Little Doshet Island).  
I. The spot where Sieur de Monts had begun a water-mill.  
J. The place where charcoal was made.  
M. Gardens on the western mainland.  
N. Other gardens on the eastern mainland.  
O. A large high mountain in the distance.  
P. River of the Etchemins, flowing around St Croix Island (now called the St Croix River).
Of the 79 men who wintered on St Croix in 1604-05, 35 died. In 1968-69 the Jacob W. Gruber / Temple University, Philadelphia, group examined 23 of the burials. In accordance with Christian burial practices of the time, the bodies were interred with the feet towards the east. The rising sun was probably used as a reference point for burial; variations in alignment, as illustrated at left, would be due to changes in the position of the sun on the horizon during the winter and spring.
“The sickness broke out among us with extreme and unusual symptoms, for some lost all their strength, their legs became swollen and inflamed with sinews shrunken black like charcoal, in others the legs were spotted with purple blood. The disease would rise to the hips, shoulders, arms and neck. And all their mouths so infected that the gums rotted down to the roots of the teeth, nearly all of which fell out.”

“The heart was found all white and shrunken, surrounded by a potful of water like date juice, the liver good, but the lungs all blackened and corrupted”  

(Cartier 1535)
Origins of the Canadian school of surgery

Vivian Charles McAllister, MB

Background: Since its inception 50 years ago, the Canadian Journal of Surgery has published articles under the banner “History of Canadian Surgery.” Because no comprehensive history of surgery in this country has yet been written, these articles may provide its basis. Method: The Canadian Journal of Surgery was searched from October 1957 to August 2007 for articles on the practice of surgery in Canada before 1957. Articles regarding the development of surgery in provinces, universities, hospitals and surgical specialty societies were included, as well as biographies and obituaries of surgeons. Results: Thirty-six articles dealing with the lives of 57 Canadian surgeons were located. Three periods of Canadian surgery were covered: the French regime (1535–1759), the transition period (1759–1870) and the early modern period (1870–1945). The review shows that persistent efforts were made in Canada to develop surgical education and to regulate the practice of surgery. Isolation forced a spirit of adaptability that led to innovation and progress. Conclusion: The practice of surgery in Canada today can be traced back to contributions made by pioneering surgeons over the entire history of modern Canada. An archive of materials related to the history of surgery in Canada is being created at www.historyofsurgery.ca to facilitate further research.
<table>
<thead>
<tr>
<th>Name</th>
<th>Dates</th>
<th>City</th>
<th>Narrative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonnerme</td>
<td>Died 1608</td>
<td>Habitation de Québec</td>
<td>Surgeon in Champlain’s Québec settlement; accused, but exonerated of participation in mutiny; died of scurvy</td>
</tr>
<tr>
<td>Adrien Duchesne</td>
<td></td>
<td>Habitation de Québec</td>
<td>Surgeon of the Habitation (1618); first extant “coroner’s report” (1639)</td>
</tr>
<tr>
<td>Robert Giffard</td>
<td>1587-1668</td>
<td>Québec</td>
<td>Very successful surgeon and colonizer; appointed King’s Physician and the colony’s senior medical officer; first seigneur in Canada</td>
</tr>
<tr>
<td>René Goupil</td>
<td>1608-1642</td>
<td>Québec and Huronia</td>
<td>A Parisian surgeon who joined the Jesuits; martyred in Huron Country; canonized (1930)</td>
</tr>
<tr>
<td>Jean Madry</td>
<td></td>
<td>Québec</td>
<td>“Lieutenant in New France of the King’s chief barber-surgeon” charged with starting a school for barber-surgeons</td>
</tr>
<tr>
<td>Michel de Sirsée, René Saugageau and Jean Rouxcel</td>
<td></td>
<td>Montréal</td>
<td>Barber-surgeons mentioned in archives of Montréal</td>
</tr>
<tr>
<td>Jean Desmony, père et fils</td>
<td></td>
<td>Québec</td>
<td>Father and son were surgeons-major of Hôtel-Dieu</td>
</tr>
<tr>
<td>Timothee Roussel</td>
<td></td>
<td>Québec</td>
<td>Surgeon-major of Hôtel-Dieu</td>
</tr>
<tr>
<td>Etienne Bouchard</td>
<td>1622-1676</td>
<td>Montréal</td>
<td>Introduced first prepaid medical plan in Canada</td>
</tr>
<tr>
<td>Michel Sarrazin</td>
<td>1659-1734</td>
<td>Québec</td>
<td>First scientist (botanist) in America; excellent surgical reputation; King’s Physician</td>
</tr>
<tr>
<td>Hubert-Joseph de la Croix</td>
<td></td>
<td>Montmagny, Que; Québec</td>
<td>Local surgeon influenced by Sarrazin, passed over in favour of Gauthier</td>
</tr>
<tr>
<td>Jean Francois Gauthier</td>
<td>1708-1756</td>
<td>Québec</td>
<td>Excellent surgeon; botanical and meteorological pioneer; discovered oil of wintergreen and recommended spruce tree tea for scurvy; King’s Physician</td>
</tr>
<tr>
<td>André Amoux</td>
<td>Died 1760</td>
<td>Québec</td>
<td>Surgeon-major of army in New France and friend of Montcalm who died in his house</td>
</tr>
<tr>
<td>Antoine Briault</td>
<td></td>
<td>Québec</td>
<td>Doctor of medicine, surgeon-major of the Marine and of Hôpital Général 1759-1760</td>
</tr>
<tr>
<td>Philippe-Louis Badelart</td>
<td>1728-1802</td>
<td>Québec</td>
<td>Military surgeon; first medical publication in North America (about la Maladie de la Baie Saint Paul, which he thought to be syphilis)</td>
</tr>
<tr>
<td>Jacques Dénéchaud</td>
<td></td>
<td>Québec</td>
<td>Last physician from Old France in charge of Hôtel-Dieu</td>
</tr>
<tr>
<td>Name</td>
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<td>City</td>
<td>Narrative</td>
</tr>
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</tr>
<tr>
<td>Adam Mabane</td>
<td>Died 1791</td>
<td>Québec</td>
<td>First British surgeon in Québec, founded Québec Library Association</td>
</tr>
<tr>
<td>James Bowman</td>
<td></td>
<td>Québec</td>
<td>Established a registry of patients suffering from Baie Saint Paul disease</td>
</tr>
<tr>
<td>Mervin Nooth</td>
<td></td>
<td>Halifax; Québec</td>
<td>Continued investigations of Baie Saint Paul disease</td>
</tr>
<tr>
<td>John Gould</td>
<td></td>
<td>Québec</td>
<td>Published, in the Quebec Gazette, a petition to Lord Dorchester that University medical school be established in Canada (1790)</td>
</tr>
<tr>
<td>James Fisher</td>
<td></td>
<td>Québec</td>
<td>Early proponent of medical legislation; teacher of francophone physicians, Fortier and Blanchet</td>
</tr>
<tr>
<td>François Fortier</td>
<td></td>
<td>Québec</td>
<td>First Canadian-born physician to become member of Royal College of Surgeons of England (1813)</td>
</tr>
<tr>
<td>François Blanchet</td>
<td></td>
<td>Québec</td>
<td>First Canadian-born medical author; pioneer of medical research and education; founder of the Québec Medical Society; foundation dean of Université Laval (1854–1856)</td>
</tr>
<tr>
<td>James Douglas</td>
<td>1800–1886</td>
<td>Québec</td>
<td>Taught anatomy (from 1826) and “principles and practice of surgery” (from 1837), progenitors of Québec School of Medicine (1847) and later, Université Laval (1854)</td>
</tr>
<tr>
<td>John Mackieson</td>
<td>1795–1885</td>
<td>Charlottetown</td>
<td>Casebook provides excellent account of practising surgeon</td>
</tr>
<tr>
<td>John Rolph</td>
<td>1793–1870</td>
<td>Toronto</td>
<td>Dedicated teacher; contentious politician; founder of the first medical school in Toronto (1834)</td>
</tr>
<tr>
<td>William Thomas Aikins</td>
<td>1827–1897</td>
<td>Toronto</td>
<td>First professor of surgery in Toronto; North American trained; pioneering orthopedic surgeon; medical politician</td>
</tr>
</tbody>
</table>

Inspector General James Barry
Army Medical Department
A woman
whose sex was only discovered
after her death in 1865.

Wellcome Images
Dr Barry, who left Corfu in 1857 for Canada as an Inspector-General of Hospitals, fought for better food, sanitation and proper medical care for soldiers, their families as well as prisoners and patients with leprosy. 1864: retired 1865: died from dysentery in England.
Anderson Abbott 1837 – 1913
Dr. Edward Farrell

Dean, Faculty of Medicine, Dalhousie University
1895-1900

IN MEMORY OF THE FOUNDERS OF
THE FACULTY OF MEDICINE OF
DALHOUSIE UNIVERSITY
1868

W. J. Almon M.D., President
E. D. Farrell M.D.
A. P. Reid M.D., Dean
A. H. Woodill M.D.
A. G. Hattie M.D.
J. D. Ross M.D.
G. Lawson Ph.D., L.L.D.
T. R. Almon M.D.
Rev. James Ross, Principal ex officio.

"They built better than they knew."

Placed by the Halifax Branch
of the Medical Society of Nova Scotia. 1928.
The Hon. (Dr.) John Rolph (1837) (Royal Ontario Museum)
North-West Rebellion 1885

Sir Thomas Roddick (Montreal), Deputy Surgeon General
Hon Michael Sullivan (Kingston), Purveyor General
Dr Henri Casgain (Windsor), CO No2 Field Hospital

Hon Darby Bergin, 1\textsuperscript{st} Surg Gen
A permanent medical corps

• 1896: Sir Frederick Borden establishes a medical sub-department of the Militia
• Colonel Hubert Neilson, first Director General Medical Services, organizes Regimental Medical Service
• 1899: Army Medical Corps formed: 6 bearer companies, 6 field hospitals
1900 Queen’s scarf awarded to Private Richard Thompson for bravery at Paardeberg
Guy Carleton Jones

- Born Nova Scotia 1864; King’s college London MRCS 1887; Dalhousie MD 1890
- 2IC No 10 Canadian Field Hosp 1900-2
- DGMS 1906
- Instituted sanitary reforms; typhoid in Petawawa
- 1909 Assoc. of medical officers of the Militia
- 1911 1st Army Medical Corps camp in London, ON
No 7 Stationary Hospital
1915 - 1919
IN HONOUR AND MEMORY OF THOSE
WHO SERVED IN THE GREAT WAR
EMBARKATION ROLL 1916 UNIVERSITY OF WESTERN ONTARIO
CANADIAN EXPEDITIONARY FORCE
NO 10 STATIONARY HOSPITAL

1914 1918

PT. H. PEACH
- J. T. PURDON
- J. O. REYNOLDS
- G. D. RICHARDSON
- SGT. J. S. RITCHIE
PT. C. ROBERTS
- R. A. ROBERTSON
- E. J. ROSE
- L. G. SANDERS
- S. H. SHED
- W. P. SIMPSON
- W. H. SMALLMAN
- T. O. SMITH
- E. M. YOUNG
- LT. J. A. DICKIE
- MASON M. B. DULMAGE
- N. R. N. ANDERSON
- E. COLLIER
- E. A. DAVIES
- M. C. DOUGLAS
- K. C. DURRIN
- M. L. FERNOYER
- A. P. HICKS
- M. A. KING
- MO. H. ISMAY
- W. Y. KEENE
- J. MACALLUM
- M. I. M. ROBERT
- J. G. MCCLURE
- A. L. MCLLUEY
- R. C. MCMURRAY
- E. H. MACKAY
- R. B. RICHARDS
- R. B. SANDERSON
- A. S. SIMPSON
- A. E. TAYLOR
- R. E. WHITELEY
- S. E. COOK

PT. V. COOPER
PT. J. T. JARRITT
PT. P. O. JOHNSTON
PT. J. T. JARRITT
PT. J. T. JARRITT
PT. J. T. JARRITT
PT. J. T. JARRITT
PT. J. T. JARRITT

CPL. V. A. JAMES
CPL. J. S. RITCHIE
CPL. A. P. MACALLUM
CPL. F. A. MCKINNON
CPL. G. B. THOMPSON
CPL. G. B. THOMPSON
CPL. J. A. TOLLER
CPL. G. C. TOBER

PT. A. R. MCBAIN
PT. A. R. MCBAIN
PT. E. G. MCALPINE
PT. W. W. McRAE

PT. R. G. MCBAIN
PT. R. G. MCBAIN
PT. R. G. MCBAIN
PT. R. G. MCBAIN
PT. R. G. MCBAIN

Sgt. E. GREEN
Sgt. E. GREEN
Sgt. E. GREEN
Sgt. E. GREEN
Sgt. E. GREEN

Cpl. J. G. GREEN
Cpl. J. G. GREEN
Cpl. J. G. GREEN
Cpl. J. G. GREEN
Cpl. J. G. GREEN

Cpl. A. R. MCALPIN
Cpl. A. R. MCALPIN
Cpl. A. R. MCALPIN
Cpl. A. R. MCALPIN
Cpl. A. R. MCALPIN

PAVED IN SERVICE
Nursing Sisters of No. 10 Canadian General Hospital, RCAMC landing at Arromanches, France, July 23, 1944.
<table>
<thead>
<tr>
<th>Name</th>
<th>Dates</th>
<th>Place</th>
<th>Narrative</th>
</tr>
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<tbody>
<tr>
<td>George Edgeworth Fenwick</td>
<td>1825-1894</td>
<td>Montréal</td>
<td>Surgical pioneer; educator; medical journalist</td>
</tr>
<tr>
<td>Louis Édouard Desjardins</td>
<td>1837-1919</td>
<td>Montréal</td>
<td>Pioneer ophthalmologist</td>
</tr>
<tr>
<td>John Harrison O’Donnell</td>
<td>1838-1912</td>
<td>Winnipeg</td>
<td>Surgeon; educator; politician in Red River Colony and in early Manitoba</td>
</tr>
<tr>
<td>John Stewart</td>
<td>1847-1833</td>
<td>Halifax</td>
<td>Professor of surgery and dean of medicine at Dalhousie University; Officer Commanding, No.7 Field Hospital (WWI)</td>
</tr>
<tr>
<td>Abraham Groves</td>
<td>1847-1935</td>
<td>Fergus, Ont.</td>
<td>Surgical innovator; first to use aseptic technique; entrepreneur; local politician</td>
</tr>
<tr>
<td>James Kerr</td>
<td>1848-1911</td>
<td>Halifax; Winnipeg; Montréal; Washington</td>
<td>Prominent surgeon; professor of surgery at Georgetown University and George Washington University</td>
</tr>
<tr>
<td>Francis J. Shepherd</td>
<td>1851-1929</td>
<td>Montréal</td>
<td>Chief, Montréal General Hospital; professor, McGill University</td>
</tr>
<tr>
<td>Irving H. Cameron</td>
<td>1855-1933</td>
<td>Toronto</td>
<td>Professor of surgery, University of Toronto</td>
</tr>
<tr>
<td>George A. Kennedy</td>
<td>1858-1913</td>
<td>Fort Walsh, Sask.; Fort Macleod, NWT</td>
<td>Surgeon to North West Mounted Police; pioneer prairie surgeon</td>
</tr>
<tr>
<td>George A. Peters</td>
<td>1860-1907</td>
<td>Toronto</td>
<td>Innovative surgeon; professor of surgery, University of Toronto</td>
</tr>
<tr>
<td>Alexander Primrose</td>
<td>1861-1944</td>
<td>Toronto</td>
<td>Distinguished Service Order (WWI); professor of surgery and dean of medicine, University of Toronto; President, American Surgical Association</td>
</tr>
<tr>
<td>John C. Webster</td>
<td>1863-1950</td>
<td>Chicago; Shediac, NB</td>
<td>Professor of obstetrics and gynecology; Canadian historian</td>
</tr>
<tr>
<td>Wilfred T. Grenfell</td>
<td>1865-1941</td>
<td>Newfoundland and Labrador out-ports</td>
<td>Innovative remote-area surgeon; first recipient of honorary MD from Oxford University; knighthood</td>
</tr>
</tbody>
</table>
On the afternoon of 25th April, 1915, in the neighbourhood of Ypres, when in charge of an advanced dressing station in some farm buildings, which were being heavily shelled by the enemy, he directed under heavy fire the removal of the wounded, and he himself carried a severely wounded Officer out of a stable in search of a place of greater safety. When he was unable alone to carry this Officer further, he remained with him under fire till help could be obtained. During the very heavy fighting between 22nd and 25th April, Captain Scrimger displayed continuously day and night the greatest devotion to his duty among the wounded at the front.”

(London Gazette, no.29202, 23 June 1915)
Early modern period (1870 – 1945) cont.

<table>
<thead>
<tr>
<th>Name</th>
<th>Years</th>
<th>Location</th>
<th>Note</th>
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<tr>
<td>Wilfred T. Grenfell</td>
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<td>Innovative remote-area surgeon; first recipient of honorary MD from Oxford University; knighthood</td>
</tr>
<tr>
<td>Edward Archibald</td>
<td>1872-1945</td>
<td>Montréal</td>
<td>First in America to perform thoracoplasty for tuberculosis; pioneer in many surgical fields; teacher; author</td>
</tr>
<tr>
<td>Frederick Marlow</td>
<td>1877-1936</td>
<td>Toronto</td>
<td>Pioneer of surgery for cancer of the cervix</td>
</tr>
<tr>
<td>Benjamin-Georges Bourgeois</td>
<td>1877-1943</td>
<td>Montréal</td>
<td>Leading francophone surgeon who sought to bridge the divide through alliances with Penfield and Galle</td>
</tr>
<tr>
<td>Alexander R. Munroe</td>
<td>1879-1965</td>
<td>Edmonton</td>
<td>Served in No. 7 Canadian Field Hospital (WWI); professor of surgery, University of Edmonton; medical historian</td>
</tr>
<tr>
<td>Lorimer J. Austin</td>
<td>1880-1945</td>
<td>Kingston, Ont.</td>
<td>British Red Cross surgeon; Commanding Officer, No. 1 Field Ambulance (WWI); teacher</td>
</tr>
<tr>
<td>Harry H. Kerr</td>
<td>1881-1963</td>
<td>Winnipeg; Washington</td>
<td>Assisted Harvey Cushing during WWI; professor of surgery, George Washington University</td>
</tr>
<tr>
<td>William Edward Gallie</td>
<td>1882-1959</td>
<td>Toronto</td>
<td>Innovative surgeon; pioneer of pediatric surgery; educational philosopher</td>
</tr>
<tr>
<td>George Elias Darby</td>
<td>1889-1962</td>
<td>Bella Bella, BC</td>
<td>Dedicated surgeon, missionary and anthropologist</td>
</tr>
<tr>
<td>Amédée Marien</td>
<td></td>
<td>Montréal</td>
<td>Chief surgeon, Hôtel Dieu; teacher</td>
</tr>
<tr>
<td>Armand Paré</td>
<td>1889-1956</td>
<td>Montréal</td>
<td>Surgeon at Hôtel Dieu, Military Cross and la Croix de Guerre (WWI)</td>
</tr>
<tr>
<td>Norman Bethune</td>
<td>1890-1939</td>
<td>Montréal; Spain; China</td>
<td>Pioneer of international surgery; battlefield transfusion</td>
</tr>
<tr>
<td>Frederick Banting</td>
<td>1891-1941</td>
<td>Toronto</td>
<td>Experimental surgeon; Military Cross (WWI); Nobel Prize winner for insulin research; Order of the British Empire, Knighthood</td>
</tr>
<tr>
<td>Kenneth G. McKenzie</td>
<td>1891-1963</td>
<td>Toronto</td>
<td>Neurosurgeon</td>
</tr>
<tr>
<td>Pierre Z. Rhéaume</td>
<td>1891-1941</td>
<td>Montréal</td>
<td>Chief surgeon, Saint Luc Hospital and No. 6 Canadian Field Hospital (WWI)</td>
</tr>
<tr>
<td>Gordon Murray</td>
<td>1894-1976</td>
<td>Toronto</td>
<td>First clinical application of heparin therapy; pioneer of cardiac and vascular surgery; inventor of techniques for dialysis and renal transplantation</td>
</tr>
<tr>
<td>Robert M. Janes</td>
<td>1894-1964</td>
<td>Toronto</td>
<td>Proponent of the modern academic department of surgery</td>
</tr>
<tr>
<td>Merier Fauteux</td>
<td>1898-1950</td>
<td>Montréal</td>
<td>Coronary artery surgery pioneer</td>
</tr>
</tbody>
</table>
In Flanders Fields the poppies blow
Between the crosses, row on row,
That mark our place; and in the sky
The larks, still bravely singing, fly
Scarce heard amid the guns below.

We are the Dead. Short days ago
We lived, felt dawn, saw sunset glow,
Loved, and were loved, and now we lie
In Flanders fields.

Take up our quarrel with the foe:
To you from failing hands we throw
The torch, be yours to hold it high.
If ye break faith with us who die
We shall not sleep, though poppies grow
In Flanders fields

LCol John MacCrae CAMC
Punch 1915
Catastrophe Medicine - lessons from Canada’s experience in Afghanistan

Vivian McAlister
1 Canadian Field Hospital, Det London

Dalhousie University
Medicine Grand Rounds
3 Nov 2009