

Researching Modern Military Medical History

Martin CM Bricknell* and David Vassallo

* Centre for Conflict and Health Research, School of Security Studies, King's College London, London WC2R 2LS. Email: *martin.bricknell@kcl.ac.uk*

Abstract

Military healthcare in war has many differences from civilian and military peacetime healthcare. War may lead to substantial advances in military health systems and clinical practices. However, there is historical evidence of a loss of collective knowledge between wars. This may result in lower survival rates and poorer clinical outcomes for the first cohorts of casualties in the next war compared to the last cohorts of casualties from the previous war. The next generation neglects the lessons of its forebears at its peril. Studying military medical history should be much more than just an interpretation of advances in clinical care by military health practitioners and should include an interpretation of the wider social and cultural contexts that influenced change in military health systems in peace and during war.

The aim of this paper is to provide potentially inexperienced military health practitioners or researchers with signposts to key sources of information to catalyse and enrich their personal study of twentieth and 21st-century military medical history. This time period was chosen because important lessons learned here are most likely to be of direct relevance to military health practitioners and their patients in current or near-future wars.

The paper then signposts an approach to analysing the history of organisational developments and clinical developments in modern military medicine by highlighting topics to be considered when reviewing the historical narrative. It closes by discussing how studying military medical history can inform the personal learning of historians and military health professionals and considers how they might share these insights. The Appendix lists sources and resources for the study of modern military medical history.

Keywords

Military medicine, Medical history, Medical education and training, Health systems

Introduction

Those who cannot remember the past are condemned to repeat it.¹

– George Santayana

There have been substantial advances in medical care during war, but there is historical evidence of a loss of collective knowledge between wars.² Military healthcare in war has many differences from civilian peacetime healthcare and so it is necessary to ensure each new generation of military health practitioners learns from the experiences of its forebears alongside their formal military training. Lives may otherwise be lost unnecessarily on the battlefield and in field hospitals if military health practitioners' learning curve is unduly extended into a deployment for want of better knowledge and training beforehand – this adds a sense of urgency to researching modern military medical history. This 'learning curve' effect during war was vividly demonstrated during the Iraq and Afghanistan conflicts of the early 21st century.³

The need to learn from the past becomes more important especially for military health practitioners as they progress through their career because the knowledge and skills required to lead and manage a military health system in war are considerably more complex than can be replicated in clinical training or field exercises.

Studying military medical history should be much more than just an interpretation of advances in clinical care by military health practitioners and should include an interpretation of the wider social and cultural contexts that influenced change in military health systems in peace and during war. As an example, the development of military pre-hospital care in the early 21st-century wars of Afghanistan and Iraq was shaped by the experience of first aid in the wars and peace of the twentieth century.⁴ Furthermore, lessons build upon advances in biomedical sciences that were most rapid in the twentieth century after key medical discoveries about scientific method, physiology and infectious disease during the nineteenth century.

Military health practitioners should know the key events and clinical advances that have occurred over the whole history of military medicine, but most particularly in World War 1 (WW1), World War 2 (WW2) and the major conflicts since 1945. They should have sufficient knowledge to challenge the narrative and to understand the reasons why some advances seem to regress or be forgotten. They should also be willing to learn from lessons learned by nations other than their own. The history of tourniquet use, and non-use, is a salutary example.⁵

¹ Santayana G. *The Life of Reason or The Phases of Human Progress. Reason in Common Sense*. New York: Charles Scribner's Sons; 1905, p.284.

² DeBakey, ME. History, the Torch That Illuminates: Lessons from Military Medicine. *Military Medicine*. 1996; 161(12): 711-716.

³ Penn-Barwell JG, Roberts SAG, Midwinter MJ, Bishop JRB. Improved survival in UK combat casualties from Iraq and Afghanistan: 2003-2012. *Journal of Trauma & Acute Care Surgery*. 2015; 78(5): 1014-20.

⁴ Bricknell MC, Hodgetts TJ. Evolution of First Aid Training in the British Army. *Military Medicine*. 2021; 186 (suppl.1): 808–813.

⁵ Kragh JF, Swan KG, Smith DC, Mabry R, Blackbourne LH. Historical Review of Emergency Tourniquet Use to Stop Bleeding. *American Journal of Surgery*. 2012; 203: 242-252.

This paper supplements the expertise of librarians, academic historians, museum professionals and archivists who should be consulted for detailed help. It covers sources and resources in general, focussing on land or joint operations, with naval and air medical history being highlighted where appropriate. Most casualties, and most medical experience, occur in the land environment and this is reflected in the relative volume of sources and publications. Naval medical history is important in understanding the unique challenges of service on or below the sea. Air Force medical history starts with the development of aeroplanes as weapons of war during WW1. The medical history of land and joint operations covers the contribution of the naval and air force medical services in the evacuation of all military casualties.

The paper will then highlight topics to be considered when studying the history of both organisational developments and clinical developments in modern military medicine and discuss how a reader might shape their personal learning.

The Appendix to this paper contains a comprehensive list of the most useful sources and resources including those cited below, with online links where available. The majority are from English speaking countries as there are very limited sources in English from non-English speaking countries. This is not to deny the importance of resources in other languages, particularly French, German and Russian but that analysis would merit another article.

All online sources referenced in this article were accessed on 9 December 2023 with the exception of the British Library EthOS website which was unavailable at the time.

Sources and resources

Online

The advent of digital publishing has revolutionised access to information and converted the personal computer into an exceptionally powerful library resource. Most readers will be familiar with using internet search engines as a start point to find sources of information. These searches will find websites, books, theses, and academic papers on nearly any topic of human knowledge. The Internet Archive is also an excellent resource. This is a non-profit library of millions of free books, movies, software, music and websites. Academic databases such as PubMed can complement general searches, except these are currently not efficient at finding primary sources of historical information published as articles in the academic literature before the late twentieth century because electronic indexing is a relatively recent development.

General searches should be augmented by targeted searches of core repositories and seeking specific documents. Many governments host searchable online repositories of official publications, either through their ministries (for example, Ministries of Defence) or through their national archives (for example, The National Archives in the UK). It may also be worthwhile to search for reports on military medical services or of formal government inquiries in the 'scrutiny' institutions that monitor the performance of government such as the House of Commons Defence Select Committee for the UK and the Government Accountability Office of the United States. An example is the

Mesopotamia Commission which examined the management of the ill-fated campaign in Iraq during WW1.⁶

Books

These remain the best aggregation of knowledge in a single source and are increasingly available online, whether newly published in digital form, which may require institutional access or purchase, or free as facsimiles after expiration of copyright, especially through the Internet Archive or the Hathi Trust Digital Library.

For the British reader, the introductory books that best summarise modern military medical history are *The Medical War: British Military Medicine in the First World War* and *Medicine and Victory: British Military Medicine in the Second World War* by Professor Mark Harrison.^{7 8} The clinical lessons and organisational developments from the wars of the first two decades of the 21st century are described in detail in *Military Medicine in Iraq and Afghanistan: A Comprehensive Review* and summarised in *Military Medical Revolution: How the UK's Defence Medical Services transformed in conflict, 1990-2015*.^{9 10}

There are comparable books for the US military health system covering WW1 and WW2, the Korean War, the Vietnam War, and the wars in the Middle East, listed in the Appendix. A deeper summary of US military medical history is available in the Textbooks of Military Medicine hosted by the Borden Institute and the 'heritage' pages of the websites of the US Army, Navy and Air Force medical services. The US Uniformed Services University of the Health Sciences has a large digital archive of US and international military medical pamphlets and books. The US Army Medical Services has additional online collections at the Stimson Library Digital Collections.

A number of Allied countries including the UK, USA, Australia, Canada and India have published Official Histories of their medical services during major wars, and many of these are available online. Further information can be obtained from official publications and regulations for the medical services; many Royal Army Medical Corps (RAMC) documents are hosted in the RAMC Muniments Collection in the Wellcome Collection and Museum of Military Medicine, and many have been digitised. Beyond these, there are multiple books on discrete topics in military medical history either as

⁶ Mesopotamia Commission. Report of the Commission Appointed by Act of Parliament to Enquire into the Operations of War in Mesopotamia: Together with a Separate Report by Commander J. Wedgwood and Appendices. London: HMSO; 1917. <https://archive.org/details/mesopotamia-comm-report1917>

⁷ Harrison M. *The Medical War: British Military Medicine in the First World War*. Oxford: Oxford University Press; 2010.

⁸ Harrison M. *Medicine and Victory: British Military Medicine in the Second World War*. Oxford: Oxford University Press; 2004.

⁹ Greaves I (ed). *Military Medicine in Iraq and Afghanistan: A Comprehensive Review*. Boca Raton FL: CRC Press; 2018.

¹⁰ Vassallo D. *Military Medical Revolution: How the UK's Defence Medical Services transformed in conflict, 1990-2015*. Kettering: Crest Publications; 2020. Available through Museum of Military Medicine. Original MA dissertation available online as 'Military Medical Revolution: yes or no? Do the advances in military medicine since 1990, with particular reference to the British Defence Medical Services, amount to a revolution in military medical affairs?'

historical summaries or the memoirs of individual military medical personnel. These are best found through searching a bookselling site, including second-hand booksellers.

University theses

Many nations' defence medical services actively encourage personnel to undertake postgraduate research leading to Masters and PhD level degrees, often as a prerequisite for promotion. Academic theses, especially PhDs awarded to leading personalities in the military medical services, can provide deep insights into key developments in military medicine and organisational transformation.¹¹ They are often open access and can be retrieved through the 'Open Access Theses and Dissertations' and British Library search engines.

Journals

Academic journals, particularly those focused on military medicine, are an excellent source of military medical history. These are both a reflection of contemporary thought at the time of publication and a source of papers on military medical history topics. The 2023 paper by Falconer Hall *et al* provides a global list of military medical journals.¹² The three most prominent English language journals are *BMJ Military Health*, *Military Medicine*, and *Military Medical Research*. The Stimson Library hosts an electronic archive of discontinued US Army medical journals.

Museums, libraries and archives

Many countries have military medical museums or host military medical collections within national military museums. These are a good source of physical documents and artefacts. Some also publish online versions of official histories of their military medical services. Collections of military medical artefacts may also be hosted within museums dedicated to science or technology. Many university libraries hold archival collections some of which will have been donated by senior servicemen who were former students.¹³ These institutions have subject experts who will have extensive knowledge of the collections and can respond to specific queries, sometimes providing digital documents by email. Some have created useful guidance to help researchers make best use of a visit. National archives may hold official documents and records for both military medical services and for individuals who served in the armed forces. Finally, government military historical branches and defence academies may hold restricted-

¹¹ A key example is the PhD thesis of now-Major General Timothy Hodgetts, the UK Armed Forces' current Surgeon General, Master General of the Army Medical Services and the elected Chair of the Committee of Chiefs of Military Medical Services in NATO (COMEDS). Hodgetts T. A revolutionary approach to improving combat casualty care. Unpublished Doctoral thesis. City University of London; 2021. <https://openaccess.city.ac.uk/id/eprint/2040/>

¹² Falconer Hall P, Falconer Hall T, Webster S, Poprádi-Fazekas O, Bricknell M. Around the bazaars: a global compendium of military medical journals in 2021. *BMJ Military Health*. 2023; 169(2): e002006. <https://militaryhealth.bmj.com/content/169/2/e002006>

¹³ For example, the Liddell Hart Centre for Military Archives at King's College London which holds nearly 200 collections relating to WW1 and has created useful guides to its resources. <https://www.kcl.ac.uk/library/assets/archives/jointww1guide.pdf>

access documents including lessons learned from current or very recent campaigns that might be provided on specific request.

Quality of information

While there are extensive primary and secondary sources, it is also important to consider the quality and authority of the information in the same way in which any academic paper would be judged. The author and their institution will provide some insight alongside the publisher and date. It should be assumed that any 'official' publication or a paper by a serving military author will represent their institution and not reveal any significant weaknesses for security or reputational reasons. Official histories, while being key reference sources, should not be assumed to be wholly accurate or necessarily free of bias. Researchers should also refer to non-official histories, personal memoirs and oral histories for a broader picture, judging each on their merits.

It is also important to consider whether there are any gaps or omissions in the information provided. This is likely to be increasingly problematic as public bodies and individuals have moved to electronic publication without the same level of diligent archiving that occurred with physical copies of records and documents. These points will be highlighted in the next sections, which discuss how such sources can inform a historical analysis of organisational or clinical developments in military medicine.

The history of organisational developments

The history of organisational developments within military health systems is the foundation for understanding the history of medical advances during war. This is characterised by tensions across several strategic relationships. These include: the relationship between military healthcare and civilian healthcare for armed forces personnel and their dependants; the relationship between the military and civilian health systems for the employment of the national healthcare workforce during war and other crises; the relationship of the military health services to the military leadership (particularly in the competition for resources in peace); the relationship between the health services and wider combat support services (including logistics and personnel management); the relationship between personal experience and translation into knowledge and training at military medical institutions.

Many Official Histories of the medical services in war start with a reflection on the challenges faced by the medical services during peace to recruit and retain sufficient healthcare personnel, to fund the number and types of field medical units with sufficient capacity to treat military casualties during war, and to maintain health services for military personnel and their families. For the medical services, the first phase of a military campaign is characterised by the efforts to resolve these shortfalls, including the capacity to receive and care for military patients arriving in the home base from overseas. As an example, the nature of these tensions is explicitly covered in the first six chapters of Volume 1 of the Administration volumes of the Official History of the

British Army Medical Services in the Second World War.¹⁴ The first chapter of *The Medics War* by Albert Cowdrey similarly describes the contraction in the US Army medical services and the challenge of recruiting and retaining medical personnel between 1945 and the onset of the Korean War in 1950. Researchers will find these issues feature in most analyses of the history of military medical services of other wars.

When at war, the organisation of medical support and the design of medical units is underpinned by the need to balance medical treatment and evacuation. Hospital care should be provided as close as possible to the point of injury but sufficiently far from the battlefield as to minimise the risk of destruction. The series on Casualty Evacuation in the twentieth century published in the *Journal of the Royal Army Medical Corps* (now *BMJ Military Health*) provides a summary of how medical units in the British Army addressed these conundrums across the century.¹⁵

Each war drives changes to the organisation of medical units. Chapter 13 of the previously cited Volume 1 Administration describes how these issues were addressed during the reorganisation of the Army Medical Services prior to the Normandy Campaign of 1944. These issues continue to influence the organisation of field medical units and how they adapt to changes in the purpose and structure of the armed forces. Unlike clinical research, contemporary evidence for this topic is rarely recorded within military medical academic journals.

Official publications on military medical doctrine or Tables of Organisation & Equipment are the best sources of evidence to track these changes over time. The current versions may be available from national military doctrine centres, and historical copies may be available in military medical museum archives. However, these may be difficult to find in the public domain and so relevant documents may need to be specifically requested from official sources. There might also be information available from 'grey literature' sources such as think tanks, for example, the American non-profit global policy RAND Corporation (RAND) and the UK's Royal United Services Institute (RUSI), parliamentary inquiries, or direct interviews with current or retired military medical leaders.

The success of military medicine during war is determined by the pace at which the organisation can re-discover lessons from military medical history and learn from the experience of the current war. If this adaptation is not achieved at a pace sufficient to match the expectations of politicians or public opinion, the medical services may be subjected to inquiries and externally driven reorganisations. Examples of such inquiries include the experiences of the Canadian Army Medical Services in 1916 during WW1 as described in the Canadian Official History, the problems that the US Army had to achieve full readiness to support its military campaign in the Gulf War of 1991 (Operation Desert Storm) as reported by the US Government Accounting Office, and the difficulties in the UK with caring for military casualties from the conflicts in Iraq and Afghanistan when they arrived in the UK which resulted in the House of Commons

¹⁴ Crew FAE. *History of the Second World War United Kingdom Medical Series. The Army Medical Services Administration, Vol. I*. London: HMSO; 1953.

¹⁵ The first of the five papers in the series is: Bricknell M. The Evolution of Casualty Evacuation in The British Army 20th Century (Part 1) – Boer War To 1918. *Journal of the Royal Army Medical Corps*. 2002; 148: 200-207.

Defence Committee undertaking several inquiries into medical care for the armed forces over the first two decades of the 21st century.^{16 17 18}

Therefore, an interpretation of the overall performance of military medical services during conflict should consider how it managed the tensions inherent in its strategic relationships and its success in adapting the organisational structure from peace to the realities of the actual war that was fought. This requires the military medical historian to be aware of the breadth of potential sources of information on military health systems beyond the clinical academic literature and to consider sources of criticism alongside sources of praise.

The history of clinical developments

Researchers should approach the study of clinical developments in military medical history with the same degree of caution regarding the 'official narrative' as has been suggested for the study of organisational developments. History might provide insights to the question 'why are lessons forgotten?' as much as 'how are lessons learned?'

The impetus of war on the evolution of medical knowledge is often considered to be the only silver lining in the dark clouds of war. The evolution of blood transfusion, the production of penicillin, and advances in plastic surgery are just three well known clinical developments arising from wars in the twentieth century. The evidence of the impact of war on armed forces personnel is often recorded in the medical statistics volumes of the Official Histories or official publications from government statistics departments. These same histories have volumes devoted to advances in clinical specialties.

While the narrative of clinical progress during war tends to focus on emergency medicine and surgery, war stimulates many other clinical specialities. The book *War and Medicine* published by the Wellcome Trust provides a good overview of the relationship between war and developments in clinical care, including rehabilitation and mental health.¹⁹

Contemporary research findings are often published in military medical journals and, for major results, general medical journals. If the conflict lasts long enough, journals may publish special editions devoted to lessons from combat to clinical practice (such as the themed issue 'Military medicine in the 21st century: pushing the boundaries

¹⁶ Macphail A. *Official History of the Canadian Forces in the Great War 1914-19: The Medical Services. Vol. 1.* Ottawa: King's Printer; 1925.

<https://archive.org/details/medicalservices00macpuoft/mode/2up>

¹⁷ US Government Accountability Office. *US Operation Desert Storm: Full Army Medical Capability Not Achieved.* NSIAD-92-175. 18 Aug 1992. <https://www.gao.gov/products/nsiad-92-175>

¹⁸ House of Commons Defence Committee. *Medical care for the Armed Forces. Seventh Report of Session 2007–08.* London: HMSO; 2008.

<https://publications.parliament.uk/pa/cm200708/cmselect/cmdfence/327/327.pdf>

¹⁹ Larner M, Peto J, Monem N. *War and Medicine.* London: Black Dog Publishing; 2008. <https://www.cotterrell.com/downloads/WarAndMedicineBook.pdf>

of combat casualty care' of the *Philosophical Transactions of the Royal Society*).²⁰ These research papers are easy to find using biomedical literature search engines. Many historical papers are available as open access from the archives of major medical journals.

The Medical Services and Warfare pages of the AM Digital collection (see Appendix) are an excellent starting point for identifying resources outside the published academic literature. Using these sources it is often possible to track progress in clinical research from early case reports, to emerging case series, to small clinical trials, and then formal, institutional trials that provide the final evidence for the adoption of a new treatment or technique. It is also possible to observe the impact of single individuals, or research groups, by tracking author lists and citations.

However, these papers do not record the incorporation of research findings into clinical practice. This can be demonstrated by evidence of clinical policies contained in official military medical instructions that were disseminated across the military medical services. Historical British examples include the official HMSO publications *Memorandum on the Treatment of Injuries in War* (1915), *The Treatment of Wound Shock* (1940), and the *Field Surgery Pocket Book*, which was first published in 1944, with subsequent editions published in 1950, 1962, 1981 and 2004 (see details in Appendix). A modern US example is the 'Clinical Practice Guidelines' of the Joint Trauma System.²¹

Further evidence might be found by examining the curricula or teaching material of courses taught by military medical training institutions, such as the Post-Graduate Medical and Nursing Officers course in the British Army.²² An example from the US Army is the collection of papers representing 'the notes of a course entitled Recent Advances in Medicine and Surgery conducted by the US Army Medical Service Graduate School, 19-30 April 1954' that is available at the US Army Medical Department Centre of History and Heritage.²³ This provides evidence of the transfer of clinical lessons from field experience during the Korean War into teaching for the next generation.

These sources show the adoption of clinical innovations. However, it may be more difficult to prove the maintenance of this knowledge at the institutional level because policy publications may change or stop being published, course curricula may not be archived, or courses may be retitled or cancelled. While there is a considerable volume of academic publications on the contribution of military doctors to advances in clinical

²⁰ Mahoney PF, Evans GW, Kirkman E, Lillywhite L (eds). Military medicine in the 21st century: pushing the boundaries of combat casualty care. *Philosophical Transactions of the Royal Society of London B. Biological Sciences*. 2011; 366(1562): 121-309. <https://royalsocietypublishing.org/toc/rstb/2011/366/1562>

²¹ US Department of Defense. *Clinical Practice Guidelines*. Joint Trauma System, Department of Defense Center of Excellence for Trauma. https://jts.health.mil/index.cfm/PI_CPGs/cpgs

²² Matthews JH, Makin S, Booker RJ, Holland A, Bhabutta RK, Vassallo D *et al*. The History of the Post-Graduate Medical and Nursing Officers (PGMNO) course in the British Army. *BMJ Military Health*. 2022; 168: 487-491.

²³ United States Army Medical Service Graduate School, Washington, D.C. *Recent Advances In Medicine And Surgery (19-30 April 1954) Based On Professional Medical Experiences In Japan And Korea, 1950-1953, Vols. 1 & 2*. Washington: US Government Printing Office; 1955.

practice, the contributions of nurses and the allied health professionals are considerably less well reported.

Personal learning

Many military health professionals are motivated to review military medical history as part of their development, often for academic qualifications. This work may be available through libraries of PhD or Masters degree theses. The key to reflective learning is to interpret their findings and to place them in the context of their personal practice and leadership.

In addition to the skills required of a historian in the identification of sources to construct the historical narrative, the military health professional historian should develop a critical approach to the interpretation of military medical history. This should include an assessment of any gaps in the historical records (for example, the periodicity of updates, new editions, or the absence of key documents), the clarity of linkage between evidence and policy, and the implications of the historical trajectory to the future. All of this should be underpinned by an assumption that change is usually the result of insight and hard work by individuals and teams. Thus, it is the ‘human factor’ that is the catalyst for change.

The military medical historian should also consider how best to share their new knowledge or insights with their peers and successors by publication or teaching. The Military Staff Ride is recommended as an excellent format in which to share the link between history, organisation and clinical advances for professional education.^{24 25 26}

Conclusion

The study of military medical history provides insights into the enduring nature versus the changing character of military medicine. This paper has provided signposts to key sources of information to help budding military medical practitioners and historians with their personal study of modern military medical history as part of their professional development. It has then considered specific sources that may provide information for the study of the history of organisational and clinical developments in modern military medicine.

Readers are encouraged to consider how the rapidly improving access to sources and resources through new digitisation programmes can further deepen their knowledge of military medical history. Informed interpretation of the historical narrative will

²⁴ The Military Staff Ride is a study of a campaign or battle that involves a preliminary study phase, a field study phase visiting an actual battlefield location, and an analysis integrating lessons learned from each phase.

²⁵ Bricknell MCM. The Medical Staff Ride: an education tool for military medical leadership development. *Journal of the Royal Army Medical Corps*. 2016; 162: 266-269.

²⁶ Combat Studies Institute Staff Ride Team. THE STAFF RIDE - A Guide to Planning and Conducting Unit-level Staff Rides. <https://www.armyupress.army.mil/Portals/7/educational-services/staff-rides/the-staff-ride-overview-2-august-2013.pdf>

increase the likelihood of their successful leadership if faced with the challenge of delivering healthcare in war in the future. This paper may also provide factors for the reader to consider when reading the other papers in this special edition on the history of military medicine.

APPENDIX

Sources and Resources for the Study of Modern Military Medical History

Knowledge is of two kinds. We know a subject ourselves,
or we know where we can find information upon it.²⁷
– Samuel Johnson

ONLINE

Digital libraries

The Internet Archive <https://archive.org> – A search on 9 December 2023 using ‘military medicine’ as key words yielded 21,157 documents.

Academic databases

PubMed <https://pubmed.ncbi.nlm.nih.gov/>

Web of Science <https://www.webofscience.com/wos>

Scopus <https://www.scopus.com>

Google Scholar <https://scholar.google.com/>

SUMMARY BOOKS (including online links where available)

UK

Harrison M. *The Medical War: British Military Medicine in the First World War*. Oxford: Oxford University Press; 2010. <https://academic.oup.com/book/34806> (limited online access)

Harrison M. *Medicine and Victory: British Military Medicine in the Second World War*. Oxford: Oxford University Press; 2004. (Winner of the Templer Medal Book Prize 2004)

Greaves I (ed). *Military Medicine in Iraq and Afghanistan: A Comprehensive Review*. Boca Raton FL: CRC Press; 2018.

Vassallo D. *Military Medical Revolution: How the UK's Defence Medical Services transformed in conflict, 1990-2015*. Kettering: Crest Publications; 2020. Available through Museum of Military Medicine <https://museumofmilitarymedicine.org.uk>

USA

Jaffin J. *Medical Support for the American Expeditionary Forces in France during the First World War*. Thesis - <https://achh.army.mil/history/book-wwi-jaffin-default>

Cowdrey AE. *Fighting for Life: American Military Medicine in World War II*. New York: Free Press; 1994. <https://archive.org/details/fightingforlifea0000cowd>

Cowdrey AE. *The Medics' War (Unites States Army in the Korean War)*. Washington DC: Center of Military History, US Army; 1987. <https://catalog.hathitrust.org/Record/003816486>

Neel S. *Medical Support of The U.S. Army in Vietnam 1965-1970*. Washington DC: Department of the Army; 1991. <https://achh.army.mil/history/book-vietnam-medicalsupport-default>

Kellermann AL, Elster E, Babington C, Harris R (eds). *Out of the Crucible: How the US Military Transformed Combat Casualty Care in Iraq and Afghanistan*. Fort Sam Houston TX: Borden Institute; 2017. <https://medcoe.army.mil/borden-outofcrucible>

²⁷ Quoted in: Boswell J. *Life of Samuel Johnson, Vol. II*. 18 April 1775.

OFFICIAL HISTORIES

UK

A full list of UK Official Histories of the Second World War is available at <http://www.ibiblio.org/hyperwar/UN/UK>

For online versions of official medical histories go to HathiTrust Digital Library <https://www.hathitrust.org/> – A partnership of academic and research institutions offering a collection of millions of titles digitised from libraries around the world. Search its Catalog using the term ‘official history medical services’ to find a digital version of most of the Official Histories of medical services from World War 1 and World War 2.²⁸

USA

AMEDD Center of History and Heritage (ACHH) for US Army. Books and Documents. <https://achh.army.mil/history/books>

Australia

Australian War Memorial.

<https://www.awm.gov.au/collection/official-histories-rolls-unit-diaries>

Canada

Government of Canada.

<https://www.canada.ca/en/department-national-defence/services/military-history/history-heritage/official-military-history-lineages/official-histories.html>

BOOKSELLERS

Abebooks <https://www.abebooks.co.uk/> – A good site for purchase of second-hand books.

Bookfinder <https://www.bookfinder.com/> – Wider reach than Abebooks with better comparison facilities (for example, type in ‘military medicine’ or ‘military medical’).

Helion & Company <https://www.helion.co.uk/> – An independent publisher of specialist military history (search ‘medical’ and ‘medicine’).

Pen & Sword <https://www.pen-and-sword.co.uk/search/products/medical> – Publisher of history books (for example, type in 'medical').

UNIVERSITY ACADEMIC THESES (PhD LEVEL)

Open Access Theses and Dissertations <https://oatd.org/>

British Library EthOS <https://ethos.bl.uk>

Use search tool for individuals, topics, campaigns or wars.

²⁸ This search will not include the Official History of the Royal Naval Medical Service in the Great War because the Official History excluded it. However, the component articles can be retrieved from the *Journal of the Royal Naval Medical Service*, volumes 11 (1925) and 12 (1926). The Admiralty re-published these in a single volume *Naval Medical History of the War*, not widely available, but a copy is in the British Library.

MILITARY MEDICAL BIOGRAPHIES

For a comprehensive series of biographies search the *Journal of Medical Biography* <https://journals.sagepub.com/home/jmb> using the search term ‘World War’

MILITARY MEDICAL ACADEMIC JOURNALS

Global list

Falconer Hall P, Falconer Hall T, Webster S, Poprádi-Fazekas O, Bricknell M. Around the bazaars: a global compendium of military medical journals in 2021. *BMJ Military Health*. 2023; 169(2): e002006. <https://militaryhealth.bmj.com/content/169/2/e002006>

Select list

UK: BMJ Military Health <https://militaryhealth.bmj.com/>

USA: Military Medicine <https://academic.oup.com/milmed>

China: Military Medical Research <https://mmrjournal.biomedcentral.com/>

Canada: Journal of Military, Veteran and Family Health <https://jmvfh.utpjournals.press/>

Australia: Journal of Military and Veterans’ Health <https://jmvh.org/>

ONLINE LIBRARIES WITH MILITARY MEDICAL HISTORY RESOURCES

UK

The National Archives <https://www.nationalarchives.gov.uk/>

LibraryHub Discover <https://discover.libraryhub.jisc.ac.uk/> – A database of 201 UK and Irish academic, national & specialist library catalogues.

USA

Borden Institute. US Army Medical History Publications and Textbook of Military Medicine Series <https://medcoe.army.mil/borden>

Uniformed Services University Health Sciences

<https://digitalcollections.lrc.usuhs.edu/digital/collection/p16005coll4/search>

US Army Medical Center of Excellence. Stimson Library Digital Collections.

<https://stimson.contentdm.oclc.org/>

US National Library of Medicine <https://www.nlm.nih.gov/hmd/collections/index.html>

MILITARY MEDICAL SERVICES MUSEUM HERITAGE SITES

UK

Museum of Military Medicine <https://museumofmilitarymedicine.org.uk>

USA

AMEDD Center of History & Heritage <https://achh.army.mil/>

US Army Center of Military History <https://history.army.mil/> – Includes many medical documents.

US Naval History and Heritage Command <https://www.history.navy.mil/>

US Air Force Medical Service – History & Heritage
<https://www.airforcemedicine.af.mil/AFMSHeritage/>

France

Ministère des Armées. École du Val-de-Grâce <https://evdg.sante.defense.gouv.fr/>

GENERAL MUSEUMS & LIBRARIES WITH SECTIONS ON MILITARY MEDICINE

UK

Imperial War Museum: Medicine in the First World War

<https://www.iwm.org.uk/history/medicine-in-the-first-world-war>

National Army Museum: Health and Medicine <https://www.nam.ac.uk/subjects/health-and-medicine>

Science Museum: War and Medicine <https://www.sciencemuseum.org.uk/objects-and-stories/war-and-medicine>

Wellcome Collection <https://wellcomecollection.org/collections> – Particularly for digitised material. Image collections are available at <https://wellcomecollection.org/search/images> – All the images are open access as long as proper credit is given.

Wellcome Collection: Royal Army Medical Corps Muniments Collection

<https://wellcomecollection.org/works/xqc9qs4x>

International

US National Museum of Health and Medicine <https://medicalmuseum.health.mil/>

Australian War Memorial <https://www.awm.gov.au/>

Canadian War Museum <https://www.warmuseum.ca/>

Government of Canada: National Defence – Canadian military history

<https://www.canada.ca/en/services/defence/caf/militaryhistory.html>

SPECIALIST WEBSITES

AM Digital Medical Services and Warfare <https://www.amdigital.co.uk/collection/medical-services-and-warfare>

British Army Medical Services and the Malta Garrison 1799-1979 <http://www.maltaramc.com/>

Friends of Millbank <https://www.friendsofmillbank.org/>

Haslar Heritage Group <http://www.haslarheritagegroup.co.uk/>

Historic Collections Library of the Institute of Naval Medicine

<https://discover.libraryhub.jisc.ac.uk/about/libraries/institute-of-naval-medicine.html>

Queen Alexandra's Royal Army Nursing Corps <https://www.qaranc.co.uk/>

US National Museum of Civil War Medicine <https://www.civilwarmed.org/explore/primary-sources/>

MILITARY MEDICAL BIBLIOGRAPHIES

Medicine and healthcare in the Great War: an English-language bibliography. Collated by Jane Wickenden, former Historic Collections Librarian at the Institute of Naval Medicine. Published in 2021 as 'Jane Wickenden's WW1 Medical Bibliography' on the Friends of Millbank website.

https://www.friendsofmillbank.org/downloads/Jane_Wickenden%27s_WW1_Medical_Bibliography.pdf

A Bibliography of Great War Medicine. The Gillies Archives.

<http://www.gilliesarchives.org.uk/Qmbibliol.htm>

Not updated since 2015 so superseded for English material by Jane Wickenden's WW1 Medical Bibliography, but almost the sole source for material not in English.

A few bibliographies of notable military medical individuals have been published, for example: Davies M. A bibliography of the work of Sir David Bruce, 1887-1924. *Journal of the Royal Army Medical Corps.* 1955; 101(2): 122-129.

ORGANISATIONAL DEVELOPMENTS

Doctrine

Current UK military medical doctrine is hosted by the UK's Development, Concepts and Doctrine Centre <https://www.gov.uk/government/groups/development-concepts-and-doctrine-centre>

Current NATO medical doctrine is hosted by the NATO Centre of Excellence for Military Medicine <https://www.coemed.org/>

Other

RAND Military Health and Health Care <https://www.rand.org/topics/military-health-and-health-care.html>

Royal United Services Institute <https://rusi.org/>

UK Commons Select Committee on Defence

<https://committees.parliament.uk/committee/24/defence-committee>

US Government Accountability Office <https://www.gao.gov/>

CLINICAL DEVELOPMENTS

MOD National and Official Statistics by topic – see Health Statistics

<https://www.gov.uk/government/statistics/mod-national-and-official-statistics-by-topic/mod-national-and-official-statistics-by-topic>

HISTORICAL HMSO PUBLICATIONS

Memorandum on the treatment of injuries in war, based on experience of the present campaign. London: HMSO; 1915.

<https://babel.hathitrust.org/cgi/pt?id=njp.32101074754993&view=1up&seq=15>

The Treatment of Wound Shock (Instructions prepared by the Medical Research Council Committee on Traumatic Shock and on Blood Transfusion, in co-operation with the Army Medical Service). London: HMSO; 1940. <https://wellcomecollection.org/works/p75vuujg>

A Field Surgery Pocket Book: memoranda mainly based on experience in the present war. London: HMSO; 1944. <https://wellcomecollection.org/works/ap8y4exa>

Biographical details

Professor Bricknell was appointed as Professor of Conflict, Health and Military Medicine at King's College London in April 2019. Before this he served 34 years in the UK Defence Medical Services, culminating his service as the Surgeon General of the UK Armed Forces. He undertook operational tours in Afghanistan, Iraq, and the Balkans with multiple additional overseas assignments. In 2010 and 2006, he held senior Medical Adviser appointments in the NATO ISAF mission. He was awarded the Companion of the Order of Bath, the Order of St John and the US Bronze Star during his military service. He is an accredited specialist in General Practice, Public Health and Occupational Medicine. His multiple academic papers cover: how organisations learn, care pathways in military healthcare, MHE, civil-military relations in health, and the political economy of health in conflict. He is also Deputy Director of the KCL Centre for Military Ethics, Veterans Adviser for the King Edward VII hospital, Editor-in-Chief of the Military Medical Corps Worldwide Almanac, a non-resident Fellow of the Centre for Global Development, and on the editorial boards for the *Journal of Military and Veterans Health* and *BMJ Military Health*.

Colonel David Vassallo served 34 years as a general surgeon in the Royal Army Medical Corps, deploying on multiple occasions to war zones in the Balkans, Sierra Leone, Saudi Arabia, Iraq and Afghanistan, as well as serving in Germany, Cyprus and the UK until he retired in 2018. He has a keen interest in education and military medical history and has published many academic papers, several book chapters and four books. He was elected Chairman of Friends of Millbank in January 2020, since when he has been responsible for organising monthly military medical history talks online and at the former Royal Army Medical College at Millbank, London. He is responsible for the content of the Friends of Millbank website, which now contains many unit histories, recordings of over 30 talks, and other resources on the heritage, achievements and ongoing relevance of military medicine. He is Guest Editor of the 'History of Military Medicine' issue of the BSHM online journal *Topics in the History of Medicine*.

Acknowledgements

No acknowledgements.

Sources of funding

The authors did not receive any funding in support of this work.

Bricknell MCM and Vassallo D. Researching Modern Military Medical History. *Topics in the History of Medicine*. 2023; 3: 278-295.

Topics in the History of Medicine is an Open Access publication of the British Society for the History of Medicine made available under a Creative Commons Attribution-NonCommercial 4.0 International Licence which allows unrestricted redistribution in any medium or format for non-commercial purposes provided the original work is properly credited. <https://bshm.org.uk>

© *The Author(s)*, 2023.