

## **A British Perspective on Military Healthcare Ethics and War – Past, Present and Future**

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### **Abstract**

Papers on military medical ethics have increased over the past twenty years across the following topics: International Humanitarian Law and medical ethics; dual loyalty; access and entitlement to care; care for detained persons; ethical decision-making; biomedical research; teaching military medical ethics; military technology; and mental health. This paper considers whether these are new topics in the British academic discourse, reflecting a change in the character of military medical ethics, or topics that endure due to the fundamental nature of war. The website for *BMJ Military Health* (formerly the *Journal of the Royal Army Medical Corps*) was searched using the terms 'ethic' and 'Geneva Convention' to detect papers on military medical ethics published up to the end of 1999. This was augmented by a search of the *British Medical Journal* and the *Lancet* and complemented by a review of Army Medical Services teaching manuals and Official Histories from the Second World War. The papers that were found were then reviewed against the topics listed above. Overall, most of these topics reflect enduring ethical issues within the nature of military healthcare, even if the character of the debate has evolved. Only the topic of 'access and entitlement to care' has substantially changed and it also became an important ethical issue during the COVID crisis. Whilst the term 'military medical ethics' is most commonly used, this paper also uses the term 'military healthcare ethics' to reflect that ethical practice in the military environment applies to all professional groups within the healthcare team, not only doctors.

### **Keywords**

Military medicine, Medical history, Medical ethics, Medical education and training, Medical law

## **Introduction**

The medical profession places its representatives squarely within the orbit of the moral order, to be governed in their activity by its laws. Whether it be a question of teaching or giving advice or prescribing a cure or applying a remedy, the doctor may not step outside the frontier of morality dissociating himself from the fundamental principles of ethics and religion. His vocation is noble, sublime; his responsibility to society is grave.

This text is an extract from an address given at the Vatican on 30 January 1945 to a group of more than 120 Allied physicians from the British, American, Polish and French Armies by Pope Pius XII who emphasised the duties of doctors in their role in alleviating suffering in the service of humanity.<sup>1</sup>

Medical practice is governed through the intersection of law, ethics and morality. Law prescribes a nondiscretionary course of action. Ethics is the set of principles that govern a person's activities or behaviours, often codified by professional regulation. Morality is a personal code underpinned by an individual's social and religious context.

The term 'military medical ethics' (MME) is widely used in the academic literature to encompass the ethical challenges faced by military doctors. However, this paper will also use the newer term 'military healthcare ethics' (MHE) in recognition that ethical issues within the military context apply to the entire healthcare team; not just doctors.<sup>2</sup> MHE is underpinned by International Humanitarian Law (IHL), most specifically the duties and rights of health professionals under the Geneva Conventions. These are augmented by their responsibilities under national law and regulations governing their healthcare profession.<sup>3</sup>

A recently published analysis of topics covered in academic papers on MME over the period 2000-20 showed that there had been a substantial increase in the number of papers on this subject over the first two decades of the 21<sup>st</sup> century as result of the wars in Iraq and Afghanistan.<sup>4</sup> These papers covered the following topics: IHL and medical ethics; dual loyalty; access and entitlement to care; care for detained persons; making ethical decisions; biomedical research; teaching MME; military technology; mental health. This academic evidence, plus the increasing evidence of deliberate attacks on health facilities and healthcare workers during conflict, would suggest that there could be new issues to be addressed in the field of MHE.<sup>5</sup>

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<sup>1</sup> Pope Pius XII. An Address to Physicians of the Allied Forces. *Journal of the Royal Army Medical Corps*. 1958; 104: 201-203.

<sup>2</sup> Lin CY, Bricknell MC, Brockie AF, Kelly JC. Military Healthcare Ethics: Making It Relevant to the Whole Military Care Team. *Military Medicine*. 2023; 188: 21-24.

<sup>3</sup> Bricknell M, Story R. An overview to military medical ethics. *Journal of Military and Veterans Health*. 2022; 30(2): 7-16.

<sup>4</sup> Bailey Z, Mahoney P, Miron M, Bricknell M. Thematic Analysis of Military Medical Ethics Publications From 2000 to 2020: A Bibliometric Approach. *Military Medicine*. 2021; 187(7): e837–e845.

<sup>5</sup> Afzal MH, Jafar AJN. A scoping review of the wider and long-term impacts of attacks on healthcare in conflict zones. *Medicine, Conflict and Survival*. 2019; 35(1), 43-64.

The aim of this paper is to review sources on the subject of MHE published in the British military academic literature up to the end of 1999 and to determine whether the issues discussed in the past twenty years are new, resulting from a change in the nature of war, or modern versions of old issues, suggesting that although the nature of war persists its character has changed.

### **Nature versus character of war**

There is a persistent debate within the discipline of ‘War Studies’ about the enduring ‘nature’ of war versus changes in the ‘character’ of war.<sup>6</sup> Many authors cite von Clausewitz’s aphorisms written in his famous book *On War* quoting: ‘war is simply a continuation of political intercourse, with the addition of other means’ and ‘war is an act of force to compel our enemy to do our will’.<sup>7</sup> This framing emphasises the enduring nature of war as violent, destructive, interactive, political, and uncertain.

However, the character of war is determined by the many factors applicable to the means and methods of conducting war that are available to the protagonists. These can be categorised by contextual factors using the acronym STEEPLE – Societal, Technological, Economic, Environmental, Political and Ethical – or other analytical approaches.<sup>8</sup> It is notable that ‘ethical’ is a specific contextualized factor, rather than an intrinsic, immutable part of warfare. The same conceptual approach can be applied to analysis of topics within MHE. The historical perspective will review the academic debate within each of the topics listed in this author’s previous work and consider whether the discussion of these topics reflects their enduring nature or whether the topic has substantially changed over the period of review, suggesting that there has been a change in the topic’s character.

### **Academic approach**

*BMJ Military Health* and its predecessors before 2020, the *Journal of the Royal Army Medical Corps (JRAMC)* and the *Journal of the Royal Navy Medical Service (JRNMS)* are the only dedicated academic journals covering military medical practice with a British editorial board. The first edition of the *JRAMC* was published in July 1903 to support ‘the high standard of professional and scientific attainment in the Army Medical Services’.<sup>9</sup> Papers published in this journal provide an authoritative insight into the debates and evolution of thinking within the UK military health services; and, therefore,

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<sup>6</sup> Garard OA, Friedman BA. Clausewitzian alchemy and the modern character of war. *Orbis*. 2019; 63(3): 362-375.

<sup>7</sup> Clausewitz KV. *On War*. Howard M, Paret P. (trans). New Jersey: Princeton University Press; 1976.

<sup>8</sup> Hodgetts TJ. Innovating at pace during crisis — military lessons for the COVID environment. *BMJ Leader*. 2020; 4: 105-108.

<sup>9</sup> Taylor W. L’envoi. *Journal of the Royal Army Medical Corps*. 1903; 1: 1-4.

is the primary UK source for academic debate on MHE. Indeed, a special issue on the subject was published in 2019.<sup>10</sup>

This paper provides a review of the subject of MHE as covered by papers published within the *JRAMC*, the *JRNMS*, and Army Medical Services (AMS) doctrine and regulations in the twentieth century to determine whether the issues identified in the previous review of this topic in the last twenty years are new issues or issues that endure due to the fundamental nature of war. The search tool of the website for *BMJ Military Health* was used to identify all relevant papers published before the sample for our literature review between July 1903 and the end of 1999 for the term ‘ethic’ (133 papers) and ‘Geneva Convention’ (181 papers) in the title, abstract or text. The full texts of the papers listed were reviewed to identify any papers specifically covering the subject of MHE and to exclude duplicates and irrelevant papers. Forty-five papers were analysed.

The websites for the *British Medical Journal (BMJ)* and the *Lancet* were also searched for relevant papers on ethical practice in military healthcare as a sample of perspective from wider authors. Papers were identified using the journal search tools for the same time period against the following search terms: ‘military AND medical AND ethics’ (0 hits), ‘military ethics’ (*BMJ*, 49 hits for editorials but only 4 relevant papers; *Lancet*, 3 hits), ‘war ethics’ (*BMJ*, 26 hits for editorials, though the relevant papers were the same as those identified in the search ‘military ethics’; *Lancet*, 0 hits).

No papers published in the *Journal of Medical Ethics* had ‘military’ as a keyword in either the title or abstract before 2004. Overall, 52 papers were identified for review. The distribution of papers by decade and key topics is shown in Table 1.

Time-period	Number	Key topics
1903-09	7	Geneva Conventions, arming of Territorial Force medical units
1910-19	7	Difference between civilised war and war against ‘savages’
1920-29	5	Identification and protection from the Red Cross, dual loyalty
1930-39	5	Red Cross and protection from aerial attack
1940-49	6	Red Cross and nuclear war, dual loyalty, prisoners of war, biomedical research
1950-59	4	Red Cross and nuclear war, triage, biomedical research
1960-69	4	Dual loyalty, medical jurisprudence, military technology
1970-79	0	No papers found
1980-89	5	Dual loyalty, triage
1990-99	9	Consent, confidentiality, triage, biomedical research, military technology, civilian consequences of war

Table 1. Number and key topics of academic papers on military healthcare ethics from the twentieth century.

<sup>10</sup> Brockie A, Breeze J. Highlights of the edition: the military medical ethics special issue. *Journal of the Royal Army Medical Corps*. 2019; 165: 217-218.

The contents of all editions of Regulations for the AMS, training manuals for the Royal Army Medical Corps (RAMC), doctrine for the AMS and Defence Medical Services (DMS), and the ‘medical’ Official Histories of World War 1 (WW1) and World War 2 (WW2) were also reviewed to identify any entries that covered these topics.

The following sections discuss relevant papers from the list in Table 1 that cover each topic identified in our literature review, except for ‘making ethical decisions’ and ‘mental health and ethics’ as no historical papers were found on these topics.

## **International Humanitarian Law and military medical ethics**

The development of the Geneva Conventions during the late nineteenth and early twentieth centuries provided the rationale for the neutrality of medical services in war and their commensurate responsibilities to alleviate human suffering. These Conventions provide the foundations of IHL and the conduct of armed actors during war.

The 1910 paper by Major General Sir William Grant Macpherson (1858-1927) provides a comprehensive summary of the debates leading to these conventions and the challenges associated with balancing humanitarian, legal, military, and military medical perspectives to enable the promulgation of treaties based on principles or ‘articles’ that could be acceptable to all signatories.<sup>11</sup> Representatives of the UK Army Medical Services played a prominent part in these debates, starting with Sir Thomas Longmore (1816-95), the first professor of military surgery at the Army Medical School.<sup>12</sup>

Whilst signatories to the Geneva Conventions agreed to respect the neutrality of military medical units, there are considerable difficulties with the implementation of these provisions in practice. The practicality of the Geneva Convention of 1864 was challenged based upon experiences from the Boer War (1899-1902).<sup>13</sup> This paper describes events during which a medical unit and ambulances were fired upon, primarily at long range or in the dark when it would have been impossible for the enemy to see the Red Cross flag. The author advocated that hospitals should not be located separately from military units, so as to be distinct from legitimate military targets, in contrast to the requirements of the Geneva Convention. He suggested instead that they should be assigned to the safest and most central position in camps (alongside the artillery!) as was done in Indian warfare in which the protagonists were considered to be ‘savages’ and not to comply with the Geneva Conventions.

Before WW1, Macpherson contrasts the medical priority of evacuating the most severely injured first with the military merit of evacuating the patients most likely to be able to return to the ranks before the more severely injured if there is a risk of being overrun as the Geneva Convention obliges the enemy to ensure proper medical treatment

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<sup>11</sup> Macpherson WG. The Geneva Convention. *Journal of the Royal Army Medical Corps*. 1910; 15: 607-628.

<sup>12</sup> Longmore, Sir Thomas (1816-1895). Plarr’s Lives of the Fellows. Royal College of Surgeons of England. [https://livesonline.rcseng.ac.uk/client/en\\_GB/lives/](https://livesonline.rcseng.ac.uk/client/en_GB/lives/) (accessed 13 December 2023).

<sup>13</sup> Donegan JDF. The Geneva Convention in Modern Warfare. *Journal of the Royal Army Medical Corps*. 1904; 2: 12-19.

for prisoners.<sup>14</sup> However, this view is not covered in a fuller descriptions of the tactical implications of the provisions of the 1906 Geneva Convention.<sup>15</sup>

A paper published in 1924 reflected upon of the experience of WW1 for the future development of military medicine.<sup>16</sup> It noted the limitations of the Red Cross emblem for protection of medical units and civilians through the advent of ‘long’ range guns, the use of aircraft as long distance bombers, and the potential use of gas which would be dispersed according to the weather alone. It also suggested that the provision of medical aid for stricken populations would form an important part of the medical arrangements of future wars which would more tightly link the medical services of armies and navies with the civilian medical services.

The revised Geneva Conventions of 27 July 1929 codified the protections to be afforded to air ambulances, introduced an international court of inquiry to investigate alleged violations of the Conventions, and created a discrete convention to cover all categories of prisoners of war.<sup>17</sup> The protection of medical units from attack from the air became an increasingly prominent debate within the International Congress of Military Medicine and Pharmacy during the 1930s, and was the subject of active debate in the AMS before WW2.<sup>18 19 20 21</sup>

Whilst the Geneva Conventions were, in general, followed at the tactical level in battle between the Allies and Germany during WW2, they were completely disregarded by the Japanese in the Far East and by the Germans and Russians on the Eastern Front. In spite of this, the editors of *The Principal Medical Lessons of the Second World War* concluded that:

International Law, even if not always codified, has great force and weight and goes much of the way in setting moral as well as legal standards. Despite time and change the Geneva Cross and all it stands for will always be a powerful help to man in time of war.<sup>22</sup>

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<sup>14</sup> Macpherson WG. The Removal of Sick and Wounded from the Battlefield. *Journal of the Royal Army Medical Corps*. 1909; 12: 78-100.

<sup>15</sup> Edmonds JE, Macpherson WG. Notes on the Laws and Usages of War, so Far as they Relate to the Treatment of the Sick, Wounded, and Dead. *Journal of the Royal Army Medical Corps*. 1909; 13: 275-285.

<sup>16</sup> Ritchie MBH. Mars Hygeaque. *Journal of the Royal Army Medical Corps*. 1923; 41: 1-11.

<sup>17</sup> Collins DJ. The Geneva Conventions of 1929. *Journal of the Royal Army Medical Corps*. 1930; 54: 81-86.

<sup>18</sup> Schickelé. The Principles of Hospital Accommodation in the Organization of Medical Services in the Field. *Journal of the Royal Army Medical Corps*. 1934; 62: 20-27.

<sup>19</sup> The Geneva Convention and Modern Warfare. *Journal of the Royal Army Medical Corps*. 1937; 68: 160-163.

<sup>20</sup> Jinga P. 7th Session De L’Office International De Documentation De Medecine Militaire. *Journal of the Royal Army Medical Corps*. 1939; 73: 356-359.

<sup>21</sup> Cowell EM. The Protection of Medical Establishments by Signs. *Journal of the Royal Army Medical Corps*. 1939; 72: 289-293.

<sup>22</sup> MacNalty AS, Mellor WF (eds). *Medical Services in War: The Principal Medical Lessons of the Second World War, Based on the Official Medical Histories of the United Kingdom, Canada, Australia, New Zealand and India*. London: HMSO; 1968. p.761.

They also noted the limitations of the Red Cross emblem as a shield against air attack due to difficulties in identification through smoke, in darkness or at altitude. This was a topic identified in the Director General Army Medical Services (DGAMS) staff exercises ‘Medical Bamboo’ in 1948, and ‘Medical Deucalion’ in 1956.<sup>23 24</sup> This latter exercise specifically considered the implications of nuclear warfare and the requirements for civil-military collaboration in response to such an attack on centres of population. Figure 1 shows an aerial photograph of a British field hospital set up for a training exercise in 1999 as an example of the use of the Red Cross as an emblem to identify a medical unit.



Figure 1. British Field Hospital displaying the Red Cross. Photographer unknown. Author's collection.

At the individual level, the Red Cross emblem may not provide protection from enemy attack. There has always been provision for medical personnel to carry weapons for their personal protection and the defence of their patients. This was a topic of discussion before WW1 as Territorial Force medical units were not provided with weapons, though the debate concerned the difference of risk of attack in ‘civilised

<sup>23</sup> Anon. *Journal of the Royal Army Medical Corps*. 1949; 93: 55-56.

<sup>24</sup> Richardson FM. Exercise “Medical Deucalion” D.G.A.M.S. Annual Exercise, 1956. *Journal of the Royal Army Medical Corps*. 1957; 103: 127-141.

warfare' between parties that had signed the Geneva Conventions and 'savage warfare' in places such as Soudan (sic), India and Africa.<sup>25</sup>

An RAMC officer, writing in 1913 about warfare against a civilised enemy, observed that the Red Cross brassard could never be noticed at the range of modern rifles and therefore should not be worn near the firing line.<sup>26</sup> This difference persisted in discussions regarding medical tactics after WW1 with an author writing in 1929 emphasising that, where the Geneva Convention is non-existent, conditions of warfare are entirely different from those applicable to fighting in civilized European countries.<sup>27</sup> Local decisions were made not to wear armbands during the 1982 Falklands War and armbands were not universally displayed by medical personnel during the NATO mission in Afghanistan (2003-14).<sup>28 29</sup>

A special edition of the *BMJ* in 1999 presented papers covering many dimensions of the consequences of war on civilians. The accompanying editorial reinforced the provisions of IHL on the duties of the health professions and governments during wartime.<sup>30</sup> The non-combatant status of the military medical services continues to be an issue due to the increasing evidence of direct targeting of health facilities by some states during recent wars in Syria, Yemen and Ukraine.<sup>31</sup> Overall, the topic of the neutrality of military medical units, compliance with IHL by protagonists, and the display of the Geneva emblems for protection of medical personnel and medical units are persistent issues that reflect the enduring nature of war, including the contrast in armed conflicts between states and non-state actors.<sup>32</sup>

## **Dual loyalty and ethical military healthcare practice**

Military healthcare professionals have obligations under military law to follow a legal order, and also duties as a member of a regulated health profession (medicine, nursing

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<sup>25</sup> Reed KH. Proposal for Arming Medical Units, with Special Reference to the Royal Army Medical Corps. *Journal of the Royal Army Medical Corps*. 1912; 18: 246-248.

<sup>26</sup> Ensor H. The Duties of a R.A.M.C. Officer Attached to an Infantry Battalion on Active Service against a Civilized Enemy. *Journal of the Royal Army Medical Corps*. 1913; 20: 676-698.

<sup>27</sup> Dudding TS. Notes on Medical Services in the Field. *Journal of the Royal Army Medical Corps*. 1927; 48: 248-266.

<sup>28</sup> Burgess J. My experiences in the Falkland Islands War (Operation Corporate). *Journal of the Royal Army Medical Corps*. 2007; 153: 21-24.

<sup>29</sup> Bricknell MC, Hanhart N. Stability operations and the implications for military health services support. *Journal of the Royal Army Medical Corps*. 2007; 153: 18-21.

<sup>30</sup> Leaning J. Medicine and international humanitarian law. Law provides norms that must guide doctors in war and peace. *British Medical Journal*. 1999; 319: 393-394.

<sup>31</sup> Bricknell M, Lin CY, Bailey Z. Non-combatant status of military medicine and contemporary warfare: old issues or new problems? *BMJ Military Health* [Published Online First: 02 September 2022]. <http://dx.doi.org/10.1136/military-2022-002161> (accessed 13 December 2023).

<sup>32</sup> Bricknell M, Finn A, Palmer J. For debate: health service support planning for large-scale defensive land operations (part 2). *Journal of the Royal Army Medical Corps*. 2019; 165: 176-179.



or the allied health professions) to practice in the best interests of their patients. This tension is widely termed ‘dual loyalty’ and is referred to in more than one academic paper as a tension between Mars Hygeaque or Mars and Aesculapius.<sup>33 34 35 36 37</sup> The relative balance of each profession has been a prominent topic of debate in the *JRAMC*. The first paper that identified the relationship between doctors as non-combatants and their brother officers as combatants was published in 1928.<sup>38</sup> This was the text of a lecture given to officers at the Senior Officers School and emphasised the need for cooperation between the professions.

In 1947, at the 11<sup>th</sup> Congress of the International Committee on Military Medicine and Pharmacy in Basel, General Jules Voncken (1887-1975), the Secretary-General, proposed an international convention governing the things a doctor could or could not be called upon to do in war.<sup>39</sup> Whilst based on reports of human experiments committed by doctors in Nazi concentration camps, his comments reflect the wider challenge of dual loyalty for military healthcare practitioners between professional healthcare ethics and obligations as an ‘employee of the state’. This debate is also reflected in an observation from *The Principal Medical Lessons of the Second World War* that:

A member of the R.A.M.C. is a protected person and enjoys certain privileges for the reason that his activities are concerned with the care of the sick and the wounded. If such a person becomes involved for example in the designing of body armour or of an armoured vehicle, both intended to protect a man from harm, can he claim the protection of the Geneva Convention and should he remain in the R.A.M.C? The considered opinion of higher Army authority in 1939-45 was that he could not and should not.<sup>40</sup>

A paper in the *Lancet* in 1968 examined this dual loyalty from the perspective of military physicians in the United States, emphasising the importance of an ethical framework for healthcare practice in light of the conviction of Captain Howard Levy for ‘failure to obey a lawful order’ because he refused to ‘train’ combat soldiers to enable them to provide ‘medical care’ to Vietnamese civilians. The paper argues for a deeper debate on the duties of a doctor in the armed forces to maintain the ethical duties of a doctor.<sup>41</sup> Field Marshal Lord Carver (1915-2001), in a lecture to the United Services

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<sup>33</sup> Olsthoorn P. Dual loyalty in military medical ethics: a moral dilemma or a test of integrity? *Journal of the Royal Army Medical Corps*. 2019; 165: 282-283.

<sup>34</sup> Donegan. The Geneva Convention in Modern Warfare, 1904 (Note 13).

<sup>35</sup> Cheever D. Address of the President: Mars and Aesculapius. *Annals of Surgery*. 1941; 113(6): 881-90.

<sup>36</sup> Porritt A. Mars and Aesculapius; a New Zealand memorial oration. *British Medical Journal*. 1950; 2(4694): 1438-40.

<sup>37</sup> Sidel VW. Aesculapius and Mars. *Lancet*. 1968; 1(7549): 966-967.

<sup>38</sup> Amy AC. Combatant and Non-Combatant: A Medical Lecture. *Journal of the Royal Army Medical Corps*. 1928; 51: 431-442.

<sup>39</sup> Sayers MHP. International Committee on Military Medicine and Pharmacy. *Journal of the Royal Army Medical Corps*. 1949; 92: 42-44.

<sup>40</sup> MacNalty, Mellor. *Medical Services in War*, 1968 (Note 22). p.92.

<sup>41</sup> Sidel. Aesculapius and Mars, 1968 (Note 37).

Section of the Royal Society of Medicine in 1988, highlighted the strain of dual loyalty for military doctors between preserving the human body versus contributing to the effective use of military manpower – to see that the cannon is well supplied with fodder in good condition.<sup>42</sup> Writing in 2000, Alan Hawley, who was DGAMS from 2006 to 2009, argued that military health professionals need to understand the basics of military strategy and tactics and the concepts that underpin the roles of the military medical services in order to achieve the best results in the ethical and clinical challenges of war.<sup>43</sup>

Legal and ethical issues for military healthcare practitioners can also arise in peacetime garrison healthcare, primarily related to duality of practice as both a clinical practitioner and an occupational health practitioner. A literature review written in 1963 of 40 books on ‘military medical jurisprudence’ published between 1826 and 1936 identified only four published in English, compared to twelve in French and 24 in Italian.<sup>44</sup> The books in English primarily covered feigned diseases while French and Italian authors considered multiple other topics including: medical secrecy, expertise, suicide, duels within the Service, medical examination of recruits and disqualifying diseases, pensions, the writing of certificates and reports, sanitary legislation, criminality, insanity, mental deficiency and neuroses, paralyses, epilepsy, anosmia, otorhinolaryngology, homosexuality, and attempted suicide. Much of this list would be valid today. Medical confidentiality has been covered by papers published in 1994 and consent to treatment in 1995.<sup>45 46</sup> It would seem that the issue of dual loyalty and the potential for a clash between professional duties and military duties separate from conflict is also a generic tension attributable to the nature of clinical healthcare practice in the military environment.

### **Triage and access to medical care**

From the earliest days of the Geneva conventions, there has been provision for the sick and wounded to be respected and to receive medical treatment without distinction of nationality. However, at the start of the twentieth century there was ‘no obligation to tend to inhabitants or other persons not officially attached to armies who may have been wounded by chance, or accident, as a result of hostilities in progress’.<sup>47</sup> This has subsequently been addressed, specifically by including the common Article 3, which requires the wounded and sick to be provided care, into the Fourth Geneva Convention

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<sup>42</sup> Carver L. Morale in Battle – the Medical and the Military. *Journal of the Royal Army Medical Corps*. 1989; 135: 5-9.

<sup>43</sup> Hawley A. Doctrine, Dogma and Debate. *Journal of the Royal Army Medical Corps*. 2000; 146: 60-64.

<sup>44</sup> Brittain RP. A Bibliography of Military Medical Jurisprudence. *Journal of the Royal Army Medical Corps*. 1963; 109: 220-222.

<sup>45</sup> Morgan D. Medical confidentiality in the Armed Forces. *Journal of The Royal Naval Medical Service*. 1994; 80: 169-171.

<sup>46</sup> Smith MS. Consent to treatment. *Journal of The Royal Naval Medical Service*. 1995; 81: 61-65.

<sup>47</sup> Edmonds, Macpherson. Notes on the Laws and Usages of War, 1909 (Note 15).

of 1949 that provides for protection of civilians.<sup>48</sup> Moreover, the 1977 Additional Protocols mandated that the wounded and sick shall be:

... treated humanely and shall receive, to the fullest extent practicable and with the least possible delay, the medical care and attention required by their condition. There shall be no distinction among them founded on any grounds other than medical ones.<sup>49</sup>

Since WW1, it has become axiomatic that military medical units will triage casualties into a priority for treatment and evacuation. Normally the highest treatment priority is afforded to the most severely injured, but in large volumes of casualties (Mass Casualty situation, or MASCAL, in NATO terminology) priorities might change to focus on those most likely to survive.<sup>50</sup> As reported from WW2, this shift in prioritisation can cause emotional distress for civilian clinicians who have been mobilised during war.<sup>51</sup>

The threat of nuclear war further emphasised this difference through the introduction of the 'T' system of classification during MASCAL versus the routine 'P' system.<sup>52</sup> The 'P' system categorises patients for the order of treatment solely on the basis of clinical need. The 'T' system additionally categorises patients according to the intensity of treatment that they require and introduced the 'Expectant' category for patients who are so badly injured that they are likely to die even when optimal treatment is available, and this effort would be a disproportionate use of medical resources against the needs of other patients. It seems that this has been considered as a technical function that differentiates military trauma care from civilian trauma care.<sup>53</sup>

Hawley, writing in 1996, suggested that there is an ethical problem in the transition from individual patient care which lies within peacetime practice and the challenges of high intensity war with the resulting volume of casualties that is likely to overwhelm the capacity of the field medical system if peacetime approaches to care are maintained.<sup>54</sup> A paper in the *Lancet* in 1986 looking at triage within civilian hospitals in the event of

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<sup>48</sup> International Committee of the Red Cross (ICRC). The Geneva Conventions of 1949 and their Additional Protocols. <https://www.icrc.org/en/doc/war-and-law/treaties-customary-law/geneva-conventions/overview-geneva-conventions.htm> (accessed 04 January 2023).

<sup>49</sup> ICRC. International Humanitarian Law Databases. Geneva Conventions of 1949, Additional Protocols and their Commentaries. Article 10 - Protection and Care (Commentary of 1987). <https://ihl-databases.icrc.org/en/ihl-treaties/api-1977/article-10> (accessed 13 December 2023).

<sup>50</sup> North Atlantic Treaty Organization. NATO STANDARD AMedP-1.10: Medical Aspects in the Management of a Major Incident/Mass Casualty Situation. Edition B, Version 1. [https://www.coemed.org/files/stanags/03\\_AMEDP/AMedP-1.10\\_EDB\\_V1\\_E\\_2879.pdf](https://www.coemed.org/files/stanags/03_AMEDP/AMedP-1.10_EDB_V1_E_2879.pdf) (accessed 21 June 2023).

<sup>51</sup> Brooking JI. Potential Psychological Problems of Army Medical Services Personnel in Combat with particular reference to The Territorial Army *Journal of the Royal Army Medical Corps*. 1983; 129: 146-153.

<sup>52</sup> Kirby NG and Blackburn G (eds). *Field Surgery Pocket Book*. London: HMSO; 1981.

<sup>53</sup> Ryan JM. Towards the 21st Century: Provision of Battlefield Surgical Care. *Journal of the Royal Army Medical Corps*. 1992; 138: 6-7.

<sup>54</sup> Hawley A. Trauma Management on the Battlefield: A Modern Approach. *Journal of the Royal Army Medical Corps*. 1996; 142: 120-125.

a nuclear war compares the ‘fairness’ of a utilitarian approach to a purely medical approach and recommends that civil defence plans should address this issue.<sup>55</sup>

The ethics of triage alongside the ethics of ‘medical rules of eligibility (MRoE)’ has emerged as an important topic over the past twenty years.<sup>56</sup> MRoE is a concept designed to limit the access of non-military patients to military medical units in order to ensure that there was capacity in the military medical system for military patients. This created ethical tensions for military clinicians who might be obliged to refuse access to military medical evacuation or to transfer ‘non-eligible’ patients to local hospitals in spite of the potential for the patient to benefit from Western-level clinical care.

The COVID-19 crisis placed even greater emphasis on the ethics of MASCAL in times of overwhelming demand for healthcare.<sup>57</sup> There was substantial debate in the medical literature about the consideration of additional factors beyond solely the immediate clinical indicators in the allocation of intensive care beds to COVID patients. There seemed to have been a reluctance to provide guidance at a system level on these factors due to the inherent political implications of such a policy.<sup>58</sup> Whilst entitlement to care and triage are enduring issues, the character of the debate has changed substantially over the past twenty years due to the experiences of military clinicians who faced difficult decisions regarding the care of non-military patients on military deployments and the political implications of MASCAL triage during the COVID crisis.

This suggests that the process of determining MRoE and guidance for MASCAL merit further ethical examination to establish the balance between meeting the needs of individual patients with a utilitarian approach in the allocation of scarce resources to achieve equity for the wider population, including strategic decisions over the level of assurance that a military medical system will have sufficient capacity to care for the number of casualties predicted by a casualty estimate. In addition to the crude choice in the MRoE or MASCAL decision, there are ethical dimensions to the allocation of other scarce clinical capabilities such as blood, poison antidotes, surgical time and intensive care beds.

## **Responsibilities towards prisoners and detainees**

The medical care of captured persons (prisoners of war) during the wars in Iraq and Afghanistan has been a significant topic in recent academic papers.<sup>59</sup> The *JRAMC* has

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<sup>55</sup> Pledger HG. Triage of casualties after nuclear attack. *The Lancet*. 1986; 328(8508): 678-679.

<sup>56</sup> Kelly J. Following professional codes of practice and military orders in austere military environments: a controversial debate on ethical challenges. *Journal of the Royal Army Medical Corps*. 2015; 161: i10-i12.

<sup>57</sup> Khorram-Manesh A, Goniewicz K, Phattharapornjaroen P, Gray L, Carlström E, Sundwall A, *et al*. Differences in Ethical Viewpoints among Civilian–Military Populations: A Survey among Practitioners in Two European Countries, Based on a Systematic Literature Review. *Sustainability*. 2022; 14(3): 1085.

<sup>58</sup> Huxtable R. COVID-19: where is the national ethical guidance? *BMC Medical Ethics*. 2020; 21: 32.

<sup>59</sup> Simpson RG, Wilson D, Tuck JJ. Medical management of Captured Persons. *Journal of the Royal Army Medical Corps*. 2014; 160: 4-8.

several papers on the topic of healthcare for UK military personnel held as prisoners of war during WW1 and WW2. However, only two papers were identified in this literature search on the topic of the ethical responsibilities of military health professionals towards prisoners and detainees held by the UK armed forces. The first summarised the duties of a Senior Medical Officer of a prisoner of war camp.<sup>60</sup> The second described the role of a field hospital that was designated for prisoners of war during the Desert Campaign in WW2.<sup>61</sup>

The 2021 paper by Louis Lillywhite, DGAMS from 2003 to 2006 and Surgeon General from 2006 to 2009, shows that this was an important policy issue of relevance to the AMS before 2001 as a result of allegations of mistreatment of prisoners in Aden and Northern Ireland.<sup>62</sup> The provisions within the Third Geneva Convention on the Treatment of Prisoners of War are clear and place enduring responsibilities on members of the military medical services to ensure that prisoners are treated with dignity and have their health needs met.

### **Biomedical research**

Biomedical research during war has often led to significant advances in clinical medicine. However, the potential for unethical biomedical research on military personnel or to enhance military capability underpins modern principles of ethics in medical research and is a vitally important topic within MHE. The cases of German and Japanese medical experiments on prisoners during WW2 are, perhaps, the most extreme examples of unethical practice.<sup>63</sup> A further quote from *The Principal Medical Lessons of the Second World War* is an indication of the sensitivity of biomedical research for purely military purposes:

It became increasingly necessary to undertake investigations that were overtly concerned with matters relating to the human aspects of offensive training and tactics and with the design, development and employment of lethal weapons. Such information could only be supplied by the physiologist and psychologist. The great majority of these possessed medical qualifications ... *It is suggested* that ... medically qualified scientists engaged in activities unrelated to the treatment of the sick or wounded, or to the prevention of disease, shall not be regarded as 'protected personnel'.<sup>64</sup>

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<sup>60</sup> Vine RS. Medical Officer of a P.O.W. Camp. *Journal of the Royal Army Medical Corps*. 1943; 81: 128-134.

<sup>61</sup> McDonald JR. Medical Services for Prisoners of War in the Middle East. *Journal of the Royal Army Medical Corps*. 1944; 83: 36-38.

<sup>62</sup> Lillywhite L. Medical services policy in respect of detainees: evolution and outstanding issues. *BMJ Military Health*. 2021; 167: 23-26.

<sup>63</sup> Gaw A. Beyond consent: the potential for atrocity. *Journal of the Royal Society of Medicine*. 2006; 99(4): 175-177.

<sup>64</sup> MacNalty, Mellor. *Medical Services in War*, 1968 (Note 22). p.761.

The ethical duties of medical professionals in regard to biomedical research within the military continued to be a tension after WW2 with a prominent editorial in the *BMJ* in 1968 suggesting that this is an issue that deserves debate beyond the small number of practitioners who work in this field.<sup>65</sup> Two papers from 2019 provide an excellent summary of the weakness of governance and ethical review within the UK military biomedical research institutions during the Cold War and the way in which these were addressed.<sup>66 67</sup> None of this story was covered within contemporary papers in the *JRAMC*, presumably because of the security classification and lack of transparency described in these two papers. An Editorial published in 1980 described changes to the AMS Research Executive in order to improve the link between policy and governance for medical research conducted under the auspices of the AMS.<sup>68</sup>

These changes reflect some of the earlier vicissitudes in the relationships between the Military Personnel Research Committee of the Medical Research Council, the Scientific Adviser to the Army Council, and the Director of Medical Research appointed by the DGAMS, as described in the Official Histories of WW2.<sup>69</sup> The 1991 Gulf War exposed a wide range of legal and ethical issues associated with the decision to administer medical countermeasures against chemical and biological weapons (nerve agent pre-treatment drugs and anthrax vaccine) to mitigate the potential for these weapons to be used by the Iraqi armed forces. Given the sensitivity around these decisions, it is notable that the Chairman of the Ethics Committees of the Chemical and Biological Research Establishment and the Army Personnel Research Establishment choose to write a paper on research ethics committees within the Ministry of Defence that was published in 1994.<sup>70</sup> The subsequent research on the causation of Gulf War syndrome and scrutiny over the legal and ethical authorities of the Ministry of Defence as an employer and the AMS as advisers and administrators of these policies were extensively reviewed by Galbraith in 2000.<sup>71 72</sup>

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<sup>65</sup> Anon. Ethics and biological warfare. *British Medical Journal*. 1968; 5605: 571–572.

<sup>66</sup> Schmidt U. Creating a ‘Father Confessor’: the origins of research ethics committees in UK military medical research, 1950–1970. Part I, context and causes. *Journal of the Royal Army Medical Corps*. 2019; 165: 284-290.

<sup>67</sup> Schmidt U. Creating a ‘Father Confessor’: the origins of research ethics committees in UK military medical research, 1950–1970. Part II, origins and organisation. *Journal of the Royal Army Medical Corps*. 2019; 165: 291-297.

<sup>68</sup> Anon. Army Medical Research. *Journal of the Royal Army Medical Corps*. 1980; 126: 110-111.

<sup>69</sup> Crew FAE. *The Army Medical Services. Administration, Volume 2* [History of the Second World War. United Kingdom Medical Series]. London: HMSO; 1955.

<sup>70</sup> Dudley HAF. Research ethics committees and military defence. *Journal of the Royal College of Physicians*. 1994; 28: 237-41.

<sup>71</sup> Galbraith SN. Medico-Legal Issues Surrounding Medical Countermeasures Used in The Gulf War - Part 1. *Journal of the Royal Army Medical Corps*. 2000; 146: 33-36.

<sup>72</sup> Galbraith SN. Medico-legal Issues Surrounding Medical Countermeasures Used in the Gulf War - Part 2. *Journal of the Royal Army Medical Corps*. 2000; 146: 104-109.

## **Military technology**

New military technologies may present new ethical issues in the conduct of biomedical research to evaluate their harms (or military effectiveness – depending upon the purpose of the research). This was exemplified by discussions on the role of international treaties to prohibit the use of the ‘dumdum’ bullet due to its destructive powers versus conventional bullets at the beginning of the twentieth century. In reality, as described in a German academic paper and reproduced in the *JRAMC*, it would be very difficult to differentiate between the types of bullets in use by the enemy purely on the basis of examination of individual wounds.<sup>73</sup>

The role of the medical profession to act as a ‘conscience’ to the process of weapons development has influenced the development of international conventions on gas warfare, biological warfare, and land mines. A 1996 *Lancet* paper by Robin Coupland, the medical advisor to the International Committee of the Red Cross, highlighted the importance of the medical profession understanding the health effects of weapons.<sup>74</sup> Writing later in the *BMJ*, Coupland highlighted this risk in regard to the concept of ‘non-lethal’ weapons and the implication that the term might diminish the unique purpose of weapons as an agent that is specifically designed to cause bodily harm.<sup>75</sup> He reminds the medical profession to guard against the use of its knowledge for weapon development and repeats his case in support of a ban on anti-personnel landmines; a further *BMJ* paper applied the same logic to blinding laser weapons.<sup>76 77</sup>

More recently, the improvements in clinical combat casualty care in Iraq and Afghanistan were underpinned by a comprehensive clinical research programme approved by the Ministry of Defence Research Ethics Committee.<sup>78</sup> These arrangements persist and should enable timely and ethical research to be undertaken by the UK DMS during future health crises.<sup>79</sup>

Whilst the character of biomedical technologies and their potential applications may change, it is clear that the legal and ethical frameworks for the conduct of biomedical research on military subjects, and the investigation of biomedical technologies for military purposes are enduring topics of significant importance within military medical

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<sup>73</sup> Kirschener M. Remarks on the Action of the Regular Infantry Bullet and of the Dumdum Bullet on the Human Body. *Journal of the Royal Army Medical Corps*. 1915; 24: 605-614.

<sup>74</sup> Coupland RM. The effect of weapons on health. *Lancet*. 1996; 347(8999): 450-451.

<sup>75</sup> Coupland RM. “Non-lethal” weapons: precipitating a new arms race. Medicine must guard against its knowledge being used for weapon development. *British Medical Journal*. 1997; 315: 72.

<sup>76</sup> Coupland RM. Abhorrent weapons and “superfluous injury or unnecessary suffering”: from field surgery to law. *British Medical Journal*. 1997; 315: 1450.

<sup>77</sup> Marshall J. Blinding laser weapons. Still available on the battlefield. *British Medical Journal*. 1997; 315: 1392.

<sup>78</sup> Nordmann G, Woolley T, Doughty H, Dalle Lucca J, Hutchings S, Kirkman E *et al*. Deployed research. *Journal of the Royal Army Medical Corps*. 2014; 160: 92-98.

<sup>79</sup> Biswas JS, Beeching NJ, Woods D. Ethical approval for research on Operation TRENTON and beyond: a rapid, unified approach. *BMJ Military Health*. 2021; 167: 302-303.

practice. The medical profession might also express concern over the emergence of new weapons technologies, such as lethal autonomous weapons.<sup>80</sup>

## **Education**

The only reference to education in MHE in the *JRAMC* before 2001 was an editorial in 1988 that noted the delivery of a pilot course on the 'science of the permissible' that brought together at the Royal Army Medical College, officers of a wide range of seniority from the RAMC, the Army Legal Corps and the Royal Army Chaplains' Department to discuss medical ethical matters.<sup>81</sup> However, there is a chapter covering the Geneva Conventions in the *RAMC Training* publications from 1908 onwards (subsequent editions were published in 1911, 1935, 1944, and then the *Manual for Medical Assistants* in 1978).<sup>82</sup> This chapter included procedures for the use of the Red Cross emblem and the balance between displaying the emblem for the protection of medical units and personnel versus camouflage of medical units. These manuals indicate the teaching of aspects of IHL to RAMC recruits for at least a century.

Evidence of the teaching of MHE to officers is less easy to find, though there has been a reference to consent and confidentiality in the medical section of Queen's Regulations for the Army since 1975, and an Annex on IHL has been in UK Joint Medical Doctrine since 2007.<sup>83 84</sup> During the 2010s, the UK DMS established a Defence Medical Ethics Committee and held a regular series of study periods on the topic.<sup>85 86 87</sup> On the basis that MHE is an important topic in military medicine, it might have been expected that discussion on the topic of education in this subject might have featured more prominently in the *JRAMC* before 2000 to complement the volume of papers on education in military trauma and other clinical subjects.

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<sup>80</sup> Javorsky E, Tegmark M, Helfand I. Lethal autonomous weapons. *British Medical Journal*. 2019; 364: I1 171.

<sup>81</sup> Anon. The Science of the Permissible? *Journal of the Royal Army Medical Corps*. 1988; 134: 57-58.

<sup>82</sup> War Office. *Royal Army Medical Corps Training*. London: HMSO; 1908.

<sup>83</sup> Ministry of Defence. *The Queen's Regulations for the Army 1975*. Army Code AC 13206. <https://www.gov.uk/government/publications/the-queens-regulations-for-the-army-1975-amendment-number-37> (accessed 13 December 2023).

<sup>84</sup> Ministry of Defence. *Medical Support to Joint Operations*. Joint Doctrine Publication 4-03. Shrivenham: Development, Concepts and Doctrine Centre, Ministry of Defence; 2007.

<sup>85</sup> Sokol DK. The medical ethics of the battlefield. *British Medical Journal*. 2011; 343: d3877.

<sup>86</sup> O'Reilly D. Proceedings of the DMS Medical Ethics Symposium. *Journal of the Royal Army Medical Corps*. 2011; 157: 405-410.

<sup>87</sup> Ross DA, Williamson RHB. Commentary. *Journal of the Royal Army Medical Corps*. 2015; 161: i13.



## **Conclusion**

This study provides insights into the key topics within the subject of MHE that have been considered by academic authors concerning practice in the British military health system during the twentieth century before the wars in Iraq and Afghanistan. The method used was to search the British military medical journals, the *JRAMC* and the *JRNMS*, to identify papers published since the creation of these journals up to 1 January 2001. The *BMJ*, the *Lancet* and the *Journal of Medical Ethics* were also searched for papers on ‘military AND ethics’ relevant to British healthcare practice. Additionally, the official training publications of the RAMC and the Official Histories of the medical services from both WW1 and WW2 were reviewed.

This paper shows that the following topics reflect enduring ethical issues in the nature of military medicine: IHL and medical ethics; dual loyalty; access and entitlement to care, including triage; care for detained persons; biomedical research and military technology; teaching MME. From the distribution of papers and key topics by decade, it can be seen that IHL and the protection afforded by the Red Cross was the primary topic at the beginning of the twentieth century. The debate persists with discussion on the implications of attack from the air and nuclear weapons on the protection afforded by the Red Cross being discussed towards the middle of the century. There is also a persistent discussion about the dual loyalty of doctors to the military and the medical professions.

The ethics of biomedical research in the military and the implications of military technology emerged as important debates after WW2 and was especially influenced by the barbaric experiments on prisoners of war by the Japanese and Nazi regimes. Care for prisoners of war and education in MHE have fewer references, though these subjects were covered in the various editions of the training manuals for medical assistants. Of the topics discussed, only the character of the debate on access and entitlement to care would seem to have substantially changed with new discussions on MRoE and triage in the light of experience during the COVID pandemic. This topic merits substantial further analysis, especially the ethics of allocation of medical resources during mass casualty events.

Overall, this historical review provides insights into the challenges faced by our predecessors and also shows that ethical issues concerning the nature of military health practice are substantially enduring. The scope of this study only covers the debate within the British military health services as reflected in British military academic journals and official publications. Whilst a few papers were also found from the *BMJ* and the *Lancet*, it is possible that other relevant papers were published in other journals. Notably none was found in the specialist journal, the *Journal of Medical Ethics*.

A further study might undertake the same analysis for other national military forces. It might be particularly fruitful to analyse the United States, as many papers on MHE have been published in *Military Medicine*, the official journal of the Association of Military Surgeons of the United States. It might also be worthwhile undertaking a deeper historical study using material deposited by key British military medical leaders in the archives of the Museum of Military Medicine.

## **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*.

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