An Overview to Military Medical Ethics

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Abstract

This paper provides an overview of military medical ethics (MME). It intends to inform military medical professionals on the breadth of the subject, including important subordinate topics, in preparation for further study. The paper opens by introducing core concepts at the intersection of medical and military ethics. It then examines the ethical issues that arise during conflict, focusing on obligations under international humanitarian law (IHL) and the Geneva Conventions. While MME might be most challenging during conflict, many issues also arise during healthcare practice in garrison healthcare. This includes biomedical research on military subjects or within military scientific laboratories. It also emphasises the need for strategic policy and education programs in MME. The paper concludes by identifying issues for further debate covering civil–military relations in complex emergencies and humanitarian crises, medical rules of eligibility, mitigation of risks to military healthcare workers, uses of technical medical knowledge to inform future military weapons and accountability for transgressions of MME. The comprehensive reference list provides a guide to sources for further study.

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Introduction

Military medical personnel may face very challenging ethical decisions during operational deployments. A study of senior British military medical personnel with experience of leading a field hospital over multiple deployments in Afghanistan found that there were frequent ethical issues associated with the following topics: allocation of limited resources (e.g. blood), balancing resources between international military patients and Afghan patients, complying with policies on eligibility for medical care, transfer of Afghan patients to local hospitals, and treating local women and children.[1] A review of ethical issues arising from UK military assistance during the Ebola crisis in West Africa found a comparable range of challenges covering medical rules of eligibility, consent and experimental treatment regimes.[2] Similar observations on ethical challenges in military medical practice have been reported from many other nations, including the USA,[3] Canada,[4] Australia,[5] France,[6] Germany,[7] Sweden,[8] Turkey[9] and Pakistan[10]. There has also been a substantial increase in academic papers published on military medical ethics (MME) over the past 2 decades as a result of significant concerns over the ethical challenges faced by military health professionals during recent military operations.[11] Reflecting this background, in 2015, all member states of the International Committee of Military Medicine endorsed the *Ethical Principles of Health Care in times of Armed Conflict and other Emergencies*, drafted under the aegis of the International Committee of the Red Cross (ICRC), as an international consensus on core ethical principles.[12]

This paper provides an overview of issues in MME and international humanitarian law (IHL) that impact the practice of military healthcare professionals including those that constrain their role as a member of the armed forces. The paper introduces core concepts at the intersection of medical and military ethics. It then examines the ethical issues that arise during conflict, focusing on obligations under IHL and the Geneva Conventions. While MME might be most challenging during conflict, many ethical issues in military healthcare practice arise in garrison healthcare. Ethical issues in this setting include confidentiality, consent and biomedical research on military subjects or within military scientific laboratories. This paper emphasises the need for strategic policy and education programs in MME and concludes by identifying issues for further debate. We hope this provides a primer for military healthcare professionals to guide further studies in the domain, including references to textbooks[13–16] and academic papers. Readers are encouraged to refer to the sources cited for further examination of the topics identified in the paper. The list is indicative rather than comprehensive, though the sources have

been deliberately selected to reflect perspectives from the widest number of countries practicable.

The paper will use the term 'military medical ethics (MME)' to cover the ethical principles and practice that apply to all healthcare workers in the armed forces (doctors, nurses, allied health professionals and non-professional military personnel assigned to medical duties). The term 'professional' is used to cover all healthcare workers whose licence and accountability for practice is defined by a non-military professional regulatory body (e.g. doctors, dentists, nurses, pharmacists, paramedics). This contrasts with military personnel without professional qualifications who are assigned to medical duties (e.g. non-registered medics and designated first aiders) and so only accountable to military authorities through military law.

Core concepts

Medical practice is governed through the intersection of law, ethics and morality. Law prescribes a non-discretionary course of action. Ethics is the set of principles that govern a person's activities or behaviours, often codified by professional regulation. Morality is determined by individual conscience.[17] Across many cultures, there is a long history of prescribing the ethical standards by which doctors and other healthcare professionals practice their art through law or regulation. Medical ethics starts with the dictum 'first do no harm', though this is incorrectly attributed to the Hippocratic Oath.[18] This is commonly reinforced by Beauchamp and Childress's four principles of bioethics: autonomy (the right of competent adults to determine their treatment), beneficence and its corollary non-maleficence (favourable outcomes for patients with minimal harms) and justice (fairness on the basis of equality and non-discrimination).[19] Many national health professional organisations publish guidance on ethics; however, there is variation in the ethical frameworks of countries' medical bodies.[20] Health ethics has an international dimension[21] and many international bodies such as the World Health Organization,[22] United Nations Children's Emergency Fund[23] and the World Medical Association[24] also publish guidance.

Ethics for healthcare professions contrasts with the 'military profession' that has the ultimate function of applying lethal force against a nation's enemies to achieve political objectives. Military ethics concerns the moral challenges and dilemmas of professional military practice.[25] Even in war, there should be limits to the use of violence. This is commonly separated into 'jus ad bellum', the legality of states to go to war, and 'jus in bello', the use of military force during hostilities. The latter is guided by the laws of armed conflict (LOAC) or IHL. Beyond the conduct of war, many aspects of military service constrain the freedom of armed forces personnel beyond that enjoyed by citizens. Examples include the duty to follow a legal order, restrictions on freedom of expression, and the legal authority to kill on behalf of the state. Thus military health professionals have rights and duties that are unique to their profession and are also subject to military law throughout their service in the armed forces, including when off duty.

MME lies at the intersection of medical and military ethics. Military healthcare professionals are, arguably, bound by a more extensive range of laws and ethical principles, both domestic and international, than any other group. Although employed in the armed forces, military healthcare professionals will be accountable to their national healthcare professional regulatory bodies for their ethical practice. For example, Australian doctors are subject to the national law that regulates health practitioners[26] as administered by the Australian Health Practitioner Regulatory Authority (AHPRA). As military officers, they are subject to the Australian Military Justice system,[27] and when deployed, the Australian Defence Doctrine Publication (ADDP) *06.4 Law of Armed Conflict*[28] and relevant IHL. This 'dual loyalty' lies at the heart of MME. Examples include balancing the humanitarian need to care for casualties from conflict and the military need to ensure empty beds in military hospitals for military patients, maintaining patient confidentiality against the need for military commanders to know the fitness of their personnel, and restrictions on medical personnel undertaking combat duties. Military healthcare professionals must base the resolution of ethical issues on relevant principles from both the healthcare and military professions.[29] This topic continues to be extensively debated in the military medical literature by both academic ethicists and practitioners.[30, 31] The concept of dual loyalty also applies to other healthcare professionals with institutional obligations like healthcare managers, occupational physicians and prison doctors.[32]

Military medical practice is underpinned by the principle that medical facilities and personnel are fundamentally neutral actors undertaking humanitarian roles and are afforded protection under IHL. Medical personnel (encompassing all healthcare workers and personnel assigned to medical duties) are not parties to conflict and thus have rights and duties. These principles extend from the conflict setting into the wider military environment and reflect the application of medical ethics into the unique context of military service. The

potential for a clash between ethical principles of the healthcare and military professions has led to debate over the relative primacy of each ethical framework.[33] Misunderstandings of these duties can lead to prosecution under military law, as in the UK case of a junior Air Force doctor who believed that the UK military deployment to invade Iraq in 2003 was illegal. A court martial convicted him of disobeying orders by refusing to undertake preparatory training and deploy to Iraq in 2005.[34] Failure to follow ethical guidance can result in the removal of a professional licence to practise. This occurred to a UK doctor due to concerns over his reports of injuries sustained by a detainee in Iraq, though the fairness of that decision has been challenged.[35]

Military medical ethics during conflict

In the latter half of the 19th Century, the Red Cross movement and the Geneva Conventions established the duty of states to provide medical care to the injured on the battlefield based on medical need and the neutrality of medical services.[36] The 'state' usually delivers this through a military medical service with healthcare personnel, though this burden may be shared through multinational cooperation and commercial contracting. Therefore, it is not contrary to medical ethics for healthcare workers to be employed in support of the armed forces as long as their duties comply with medical ethics and IHL. Healthcare workers in many countries may be required, as part of national conscription, to join the armed forces and thus, work within military medical services may not be voluntary. It is also ethical for civilian healthcare workers to conscientiously object to military duties, though the state may enforce other obligations during war.[37]

Military healthcare professionals should not be involved in policy decisions about 'going to war', except to organise the medical plan required to support the mission (including civil–military planning for healthcare for all casualties from conflict). The four Geneva Conventions of 1949 and associated protocols of 1977 provide the foundations for IHL 'in war'. The ICRC provides commentaries on these conventions[38] and a searchable database to enable easy access to relevant sections by topic.[39] In summary, these require that parties to conflict (state armed forces and non-state armed groups) ensure that anyone (combatant, prisoner, shipwrecked or civilian) who is wounded or sick 'shall be treated humanely and shall receive, to the fullest extent practicable, without distinction except on medical need, and with the least possible delay, the medical care and attention required by their condition'.[39]

The ICRC guidance for armed forces on protecting healthcare[40] and guidance on the responsibilities of healthcare personnel working in armed conflicts and other emergencies,[41] both published in 2020, provide excellent practical information for the conduct of military health professionals during operations. These include suggestions for military medical planning and civil–military cooperation to mitigate the health consequences of war. Medical personnel and facilities should be regarded as neutral, respected and protected from harm. Military medical personnel and facilities may use the Geneva emblems (Red Cross, Red Crescent and Red Crystal) to identify them as protected entities. Military medical personnel, and those assigned to medical duties, must also carry a card that identifies their role. Military medical personnel may use 'light individual weapons' in their own defence, or in the defence of the wounded and sick in their charge. They are prohibited from renouncing their protection (i.e. they may not choose to become combatants). Medical or scientific experiments on the wounded or sick are forbidden unless directly for the patients' benefit and consistent with generally accepted medical standards.[42] This adds an additional level of scrutiny over the ethical review process for military medical research on protected persons in conflict environments compared with a civilian emergency environment. As an example, over the past decade, the UK Defence Medical Services has introduced procedures to balance the need for rapid approval of medical research with scrupulous ethical oversight.[43] Military healthcare personnel and commanders of medical units must know these principles and be prepared to challenge any order that might compel them to contravene the rules of medical ethics as they are protected from punishment under IHL.[44] Military healthcare personnel need to be specifically aware of the application of IHL to the following topics: impartial provision of emergency care;[45] medical rules of eligibility;[46] rights of specific groups of patients (especially prisoners[47]); decisions to withdraw curative treatment in the face of catastrophic injuries;[48] protection afforded to medical personnel;[49, 50] right to bear arms and self-defence; identification of medical units and personnel; and specific prohibitions that apply to medical personnel (such as the banning of medical experiments). Many of these provisions will be contained in national military law and are also covered during generic training in LOAC.

Military medical ethics in garrison

Issues in MME in garrison (or non-combat) situations that apply to armed forces personnel as employees are very similar to 'dual-loyalty' ethical issues in

occupational medicine, forensic medicine, mental health and medical management. The military healthcare professional has duties to both their patients and their employer. This may be amplified by provisions in military law that place duties on all military employees for their behaviours plus specific obligations that protect national security. The basic principle of autonomy continues to apply to consent within the clinical 'doctor–patient' relationship.[51] However, a patient's perception of freedom of choice over medical treatment might be constrained by rank or other power differentials in this relationship.[52] This might be exacerbated by restrictions on the source of health providers due to control of access to care outside the military health system. Finally, military personnel may need preventive medicine measures as a condition of their specific employment or role (e.g. vaccinations, antimalarial prophylaxis), which requires their informed consent[53] or is a mandatory requirement for military service.[54] There are similar risks associated with confidentiality. An individual's health status may have significant implications for their military role, thus requiring a system for reporting an individual's health status outside the clinical domain.[55, 56] While clearly applicable for physical health conditions (e.g. a broken bone), this also applies to mental health conditions and 'social health' (e.g. drug or alcohol misuse, family breakdown). There will be other situations in which it may be necessary to break patient confidentiality for public health purposes, such as monitoring an infectious disease outbreak. While much emphasis on the academic debate for MME is placed on compliance with IHL, the non-operational component of MME must not be neglected given that the majority of a military healthcare professional's clinical career is likely to be spent on garrison duties.

Applying appropriate ethical oversight is essential in biomedical research on military personnel, especially when undertaken by military research institutions. There have been occasions where biomedical research conducted by military personnel has been unethical or even barbaric.[57, 58] While the examples of experiments conducted by German and Japanese military medical personnel during World War II are well known, there are more recent examples of ambiguous military medical experiments conducted during the Cold War.[59–61] The power differential between researchers and subjects is even more apparent if there are rank or other potential sources of coercion (loss of pay etc.) that could undermine true informed consent.[62] Military biomedical research might also be conducted for 'offensive military' purposes, such as developing new weapons (e.g. chemical or biological agents). It would be contrary to the ethical duties of healthcare professionals for them to be involved in this research both as a result of the Geneva Conventions but also under the prohibition of the use of medical knowledge to violate human rights and civil liberties.[24] Furthermore, military biomedical research may be classified on the grounds of national security, limiting independent oversight. These issues require very carefully constructed governance arrangements to ensure that both the subjects and the institutions are protected from harm or allegations of research misconduct.[59, 60]

The breadth of individual topics and the number of academic publications published over the past two decades[11] imply that challenges in MME are inevitable and should be mitigated through strategic policy on this subject for military medical services that covers the gap between policy issued by national professional regulatory bodies and its application within a military environment.[63, 64] As an example, the North Atlantic Treaty Organisation (NATO) doctrine publication on military medical support uses the term 'ethic*' on 10 occasions, referring to the obligation to comply with IHL and national laws and regulations.[65] This document implies that members of the NATO Alliance should have underpinning guidance on MME for their armed forces. This guidance should cover MME both on military operations and in garrison within a governance framework for the whole system.[66] It is notable that the US Department of Defence has recently published such a policy for the US Armed Forces.[67]

Training and education in military medical ethics

Military healthcare professionals need to be taught about medical ethics as part of their clinical education, which especially applies within military healthcare institutions.[68, 69] Military medical personnel also require specific training on applying IHL and general medical ethics during armed conflict for their duties.[70] This should be considered as an essential component of the educational curriculum for training for their role and should be reinforced as part of the preparation for any military deployment.[71, 72] This training should be adapted for both the context of deployment and the individual's role. The UK experience has shown that it is particularly important for senior military medical leaders (the Deployed Medical Director) to rehearse their duties in making difficult ethical decisions and in the supervision of compliance with IHL by their subordinates.[1] This has been reiterated for more recent operations.[73] In addition to didactic teaching, a number of

commentators have advocated the importance of problem-based learning for military and military medical ethics using actual case scenarios as a tool for discussion and to influence behaviours and attitudes of participants.[74–76] The King's Centre for Military Ethics has recently published a smartphone app that provides a suite of scenarios in MME that can be used for small group learning in a physical or virtual teaching environment[1].

Education and training for the ethical challenges of military medical practice may reduce the risk of 'moral injury' after exposure to crisis environments.[77] Moral injury has been defined as 'perpetrating, failing to prevent, bearing witness to or learning about acts that transgress deeply held moral beliefs'[78]. Whether moral injury is distinct from, or a subset of, post-traumatic stress disorder is not yet evident. Research suggests that pre-deployment preparation covering ethically challenging decisions and how such decisions could make individuals feel might have some protective effect.[79] Military health professionals may experience situations that have the potential to cause moral injury due to their role in caring for sick and injured patients in challenging circumstances.[80] These same risk factors have also informed the extrapolation of advice about preventing moral injury in a military setting to civilian healthcare workers during the current COVID-19 crisis.[81]

Topics for debate

The previous paragraphs summarise key topics within the domain of MME. However, there are also topics for debate and further discussion—perhaps the most important concerns different definitions of 'humanitarian'. Since the creation of the Red Cross movement to establish the role and neutrality of medical services to treat wounded combatants and prisoners of war, the definition for a 'humanitarian' organisation has narrowed to cover the principles of impartiality, humanity, neutrality and operational independence.[82] This means that state-based organisations that undertake humanitarian work (including armed forces units) lie outside this definition because they are, de facto, instruments of the state as a security actor. This has particular implications for the conduct of military medical units and the importance of ethical decision-making in the use of military medical capabilities to provide healthcare for non-military populations during complex emergencies and humanitarian crises.[83] The planning for medical support during Iraqi-led security operations during the battle for the city of Mosul in 2016 is a recent case example of the complexity of civil–military medical planning, including the use of commercial and NGO medical services.[84]

The next topic for debate concerns the process of writing and applying 'medical rules of eligibility'.[85,86] As well as examining the balance between humanitarian obligations versus meeting the military mission, there is also a potential clash in the application of triage for the 'selection' of emergency patients for military healthcare between prioritisation based on clinical need versus prioritisation on the basis of ability to benefit clinically. This clash is at the heart of clinical decision-making for a mass casualty event. We suggest that the topic of 'risk to military healthcare workers' has not yet been significantly debated. This issue concerns the legality of a military order that would compel military healthcare professionals to be exposed to the risk of significant injury, illness or death and how this risk is compared to other military personnel or equivalent civilian healthcare workers. There was some debate on this subject in the context of the risk of contracting an infectious disease in response to Ebola[2,87] and it is likely to emerge in the reflections on the COVID-19 pandemic.[88] The topic applies both in the context of the initial treatment and retrieval of casualties from the front line and in the provision of personal protective equipment (body armour, helmets, protective clothing, etc.), especially in circumstances of short supply. A further topic is the use of technical biomedical knowledge by military health professionals for 'security purposes'. This covers research for 'defensive' security purposes such as antidotes to chemical weapons or vaccines against biological weapons. It becomes more challenging if military health professionals use their technical knowledge to support 'offensive' security objectives such as military intelligence, research into new weapons (e.g. biological or chemical agents, novel use of the electromagnetic spectrum) or biological augmentation of human performance (e.g. drugs to reduce the demand for sleep or to improve mental performance, especially if they have side effects). Finally, there is a debate over the accountability for transgressions of legal or ethical norms, including the chain of oversight from senior leadership. This has been most prominent in the debate concerning the involvement of military healthcare professionals in advising and monitoring the health status of prisoners undergoing interrogation.[89]

Alongside these topics, there has been a call for breadth[90] and clarity in the academic analysis of MME.[91] Open discussions on these topics may improve civil–military relations between military medical services and humanitarian organisations,[92] and inform non-military ethical practice in

1 This is available for both IOS and Android by typing 'military medical ethics' into their relevant 'app store'.

humanitarian crises.[93] This might also cover the ethics of using health capabilities for a primarily diplomatic purpose rather than humanitarian reasons, especially if military medical units are employed to care for civilian patients.[94, 95]

Conclusion

Overall, this paper has provided an overview of military medical ethics (MME) and its implications for the practice of healthcare workers within a military health system. The paper opened by introducing core concepts at the intersection of MME. It then examines key ethical issues that arise during conflict, focusing on obligations under international humanitarian law (IHL) and the Geneva Conventions. While MME might be most challenging during conflict, it is important not to ignore those issues that may arise during clinical practice in garrison healthcare. This includes biomedical research on military subjects or within military scientific laboratories. The paper concluded by emphasising the need for training and education in MME and identifying issues for further debate. It is argued that this subject is relevant in the broader context of military ethics for military leaders and of equal importance to biomedical clinical subjects for military healthcare workers. There are widely agreed fundamentals based on IHL, especially the Geneva Conventions and general medical ethics. However, the foundational challenge of 'dual loyalty' between professions can create tensions for ethical medical practice. It is unlikely that either the legal system or the professional regulatory system would accept ignorance as a defence. Therefore this is an important topic for the education of military healthcare professionals.

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