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The Global Health Context for the Military in Defence Engagement (Health)

Abstract:

Global health practice is becoming a key enabler within UK defence and foreign policy. The definition of global health remains debated, though some important themes have been identified including: the multi-disciplinary nature of global health, its ethical foundation and the political nature of global health. This paper contributes to the ongoing rational discourse that this important discipline deserves and recommends a framework and principles to apply to military health and care system strengthening in the Defence Engagement (Health) (DE (H)) practitioner role. DE(H) involves complex multi organisational relationships and processes, and while practitioners should be mindful of the political nature of their role, the broad aims of preventing conflict and building stability mean DE(H) should contribute positively to global health.

This paper forms part of a special issue of BMJ Military Health dedicated to Defence Engagement.

Key messages:
What is already known on this topic: Despite the growing amount of literature on the subject the definition of global health remains debated. Some important themes have been identified including: the multi-disciplinary nature of global health, its ethical foundation and the political nature of global health.

What this study adds: This paper contributes to the ongoing rational discourse that this important sub-discipline deserves and recommends principles to apply to military health and care system strengthening.

How this study might affect military practice or policy: This study highlights the impact that health and care have on improving human security to inform effective Defence Engagement in health.

Introduction

This article examines the concepts of global health, global health security, the different types of international health systems (including military) and recommends a framework and principles to apply to military health and care system strengthening in the DE(H) practitioner role. It forms part of a special issue of BMJ Military Health dedicated to Defence Engagement.

What is Global Health?

Global health has developed as a prominent discipline in parallel with the advance of globalisation, highlighting common regional vulnerabilities but also reinforcing the collective sense of responsibility for inequalities globally. Global health practice is becoming a key

enabler within UK defence and foreign policy, with an increased emphasis given in the 2021 Integrated Review.[1] and the 2023 publication of the UK Global Health Framework.[2] In 2019 Michaud et al. outlined the "*growing willingness to use militaries to support global health*",[3] whilst in 2018 Sullivan and Bricknell argued that the establishment of the Centre of Defence Healthcare Engagement was directly related to "*UK national goals in global health*".[4]

The term global health is contested in the academic literature, with no consensus on a common definition. A 2021 systematic review identified four themes relating to key aspects of global health displayed in Table 1.[5]

Table 1: Recurring Themes in Global Health 2009-2019

Global Health is:	
Theme 1:	A multiplex approach to worldwide health improvement taught and pursued at research institutions;
Theme 2:	An ethically oriented initiative that is guided by justice principles;
Theme 3:	A mode of governance that yields influence through problem identification, political decision-making, as well as the allocation and exchange of resources across borders;
Theme 4:	A vague yet versatile concept with multiple meanings, historical antecedents and an emergent future.

Despite much exploration in the literature, the term remains debated. However, important themes exist: the multi-disciplinary nature of global health, its ethical foundation, and the political nature of global health. Critiques of the equitable delivery of global health have gained more attention through the COVID-19 pandemic and there are growing calls for more meaningful diversity and inclusivity.[6] This is particularly pertinent to DE(H) in which wealthy "Global North" countries (such as the UK) seek to influence other, often poorer countries.[6] DE(H) practitioners should note the themes identified by the 2021 systematic review and other literature as assists the approach to a complex area. They should be aware of tensions surrounding the themes when considering global health in their work.

Since DE(H) aims to prevent conflict, build stability and gain influence,[4,7] a more practical framework for the DE(H) practitioner is the scope and nature of global health outlined by Koplan et al. (2009).[8] The elements of their approaches will form the basis of discussion for this paper and act as a framework for DE (H) practitioners:[8]:

1. Transnational Health Issues including communicable disease and pandemics
2. Public Health (population-based prevention) including the wider determinants of health, health security and human security
3. Global Health Systems (individual-level clinical care) including military health systems

This framework also reflects the main themes of the literature in stating that the nature of global health is characterised by a number of elements that reach beyond the health sciences (including economics and the social sciences), promotes interdisciplinary collaboration, is heavily influenced by wider aspects such as governance, politics, the natural world, crime, conflict, migration etc. This is encompassed in the concept of human security in section 3 below. Overall, Koplan et al. concluded that "*global health is an area for study, research, and*

practice that places a priority on improving health and achieving equity in health for all people worldwide".[8]

There is an argument however, that DE(H) cannot fit into the definition of global health as it seeks to influence and advance UK foreign policy rather than purely focusing on health needs and equity. It is acknowledged that militaries' efforts may not be perceived as humanitarian as they lack neutrality, impartiality and independence [3] though they are expected to strive for this. However, the improvement in global health and health security is a shared objective for the UK Government [2]. Therefore, although not in a position to comply completely with the humanitarian principles,[9] DE (H) practitioners must aim to make the health benefits the main focus of their work as these are likely to achieve the most influence and advancement.[7]

This article will now outline how DE (H) practitioners can help achieve those shared UK Government objectives using the Koplan et al. framework:

1 Transnational Health Issues: **Communicable Disease and Pandemics**

The first International Sanitary Regulations were developed in 1851 in an attempt to control communicable disease.[10] These were adopted by the World Health Organization (WHO) in 1948, revised in 1951 and then renamed the International Health Regulations (IHR) in 1969.[10]

The IHRs (last updated in 2005) place a legal obligation on all WHO member states to report all Public Health Emergencies of International Concern (PHEIC), defined as "*an extraordinary event which is determined to constitute a public health risk to other States through the international spread of disease and to potentially require a coordinated international response*".[10] The first PHEIC was declared by the WHO in 2009 in response to the H1N1 (swine flu) pandemic, followed by the Ebola outbreak in 2014, 2020 for COVID-19 and monkeypox in 2022.[10] An example of DE(H) here is Operation GRITROCK, the UK military operation in Sierra Leone. It focussed on three key areas: (i) training of local healthcare workers; (ii) the provision of UK quality healthcare to entitled infected healthcare workers; and (iii) strategic support to the Sierra Leonean leaders coordinating the response. Key to DE(H) success was the ability to work effectively with other government agencies—a skill developed during previous stabilisation operations, added to the deep relationships that existed between the two countries resulting from previous DE activities.[11]

The IHRs form the basis of international law to control transnational health hazards, but enforcement mechanisms are relatively weak. This has led to calls for further revision to increase their effectiveness,[12] whilst other states have developed their own additional voluntary coalitions to mitigate the threats from health hazards such as the US-led Global Health Security Agenda.[12]

However, understanding communicable disease is not sufficient for advancing global health. Focus also needs to be placed on wider causes of ill health, which can also cross international borders. This brings us to the second topic in the framework.

2 Public Health (Population-Based Prevention)

Population-based prevention or public health is concerned with the health of populations and communities. Public health focuses on societal conditions that influence health, also known as the determinants of health. In 1986 WHO outlined eight conditions for health in the Ottawa Charter: peace; shelter; education; food; income; a stable eco-system; sustainable resources; social justice and equity.[13] A populations' health will only improve if these conditions are met.

Several models have been developed to demonstrate the relationship between health and its determinants which can be of use in DE(H). Perhaps the best known is the Dahlgren and Whitehead model of health determinants (Figure 1).[14] The model outlines four levels of determinants ranging from the structural to the individual.

Figure 1 Dahlgren and Whitehead Diagram

On the outer level of the diagram highlights how a society's macroeconomic outlook, stability, quality of institutions and availability of employment opportunities for its citizens. The next level displays the various aspects of living and working conditions, such as access to good quality housing, education and nutrition. Healthcare services are included at this level and explored in greater detail in the next section of this paper. At a more local level social and community networks such as family and other forms of social support will influence an individual's health. The final level of modifiable health determinants occurs at the individual level. Individual lifestyle factors such as smoking and maintaining a healthy diet will have a profound impact on their health. The inner core of the model represents those determinants that are (arguably) non-modifiable such as genetics, sex, age and ethnicity.

The relationship between these determinants is complex and symbiotic, even with the non-modifiable constitutional factors. For example, a society that places greater emphasis on gender equity, including sustained investment in maternal health, is likely to see superior health outcomes for its women than an otherwise similar society that does not.[15]

Public health interventions can be developed based on each level of the model to improve a population's health. It is worth considering that other units in the military can assist with tackling wider determinants of health such as engineers in constructing schools and rebuilding bridges.

As a DE(H) practitioner, it is important to understand that health can be addressed at several levels outlined by Dahlgren and Whitehead, but that they can all also have a positive and negative effect on each other. Often DE(H) practitioners are working to address imminent or actual threats to health. This is where an understanding of health and human security is essential.

<u>Health Security</u>

Linking a public health approach and the determinants of health to combating health threats is the concept of health security. Health security is defined by the WHO as: "*the activities required, both proactive and reactive, to minimize the danger and impact of acute public health events that endanger people's health across geographical regions and international boundaries*".[16]

Much of the literature refers to communicable disease as a threat to 'health security'. For example, the Global Health Security Agenda is primarily concerned with infectious diseases.[12] Others have made the alternative case (after the Ebola outbreak) that the scope of health security should be widened to include all threats to health.[17] Examples of aspects identified include human security, global governance, surveillance and public health capacity and conflict and natural disasters.[18] Others have included antimicrobial resistance and climate change as priorities and highlighted the link to the Sustainable Development Goals [2]. The One Health concept highlights the natural and animal environment as well.[2,19] All these present further strategic direction and a framework for monitoring, evaluation, accountability and learning that military planners should build into their DE(H) strategies.

The DE(H) Practitioner will need to have a broad understanding of the concepts of public health, wider determinants, and health security in order to maximise their effectiveness in preventing conflict, building stability and gaining influence. They often are called to work in places where threats to health are far more numerous and impactful than at home.

Human Security: Links to Health Security

Human security is defined as: "*an approach to national and international security that gives primacy to human beings and their complex social and economic interactions*".[20] It may be thought of as the security of individuals, groups and communities (culturally and society determined) as opposed to state security (which is geographically and politically determined). Global health and health security are inextricably linked to human security. Full guidance on the UK Military approach to Human Security can be found in Joint Service Publication (JSP) 985, where it is recognised as essential to operational success.[20]

The UN identifies health security as an integral component of human security as shown in the model at table 2.[21)] We can see how each component may impact on another. Accurate information and a gender-sensitive approach are viewed as cross-cutting themes. This appreciates that many individual and community needs may be met through information activities, and the gender–sensitive approach to international security acknowledges the roles of civilians (women and children as well as men of fighting age) where DE(H) may take place.

Communication, media information and intelligence shape the thinking and behaviour of people and communities. Public health policy contributes to this by binding the components of human security together. Reliable information and actionable intelligence are essential to address health insecurity and undertake effective DE(H).

Table 2: Types of human insecurities and possible root causes

TYPE OF INSECURITY	ROOT CAUSES
Economic insecurity	Persistent poverty, unemployment, lack of access to credit and other economic opportunities
Food insecurity	Hunger, famine, sudden rise in food prices
Health insecurity	Epidemics, malnutrition, poor sanitation, lack of access to basic health care
Environmental insecurity	Environmental degradation, resource depletion, natural disasters
Personal insecurity	Physical violence in all its forms, human trafficking, child

	labour
Community insecurity	Inter-ethnic, religious and other identity-based tensions, crime, terrorism
Political insecurity	Political repression, human rights violations, lack of rule of law and justice

UK Defence personnel, including health and care professionals, directly contribute to human security objectives of freedom from fear, want, and to live in dignity. Health is integral to all of these as defined in the Ottawa Charter.[13] Health planners and medical intelligence are intrinsic to helping those already working in, or planning to undertake, DE(H) to understand the needs of the target population together with the potential frictions and politics involved.

UK Defence understands that individual and community security is the foundation for long term stability. DE(H) is not the sole responsibility of the UK's Defence Medical Services (DMS) but can include all arms, services and peers across missions encompassing outreach and building partner capacity. Operation GRITROCK illustrates the value of a public health approach. This effort was led by Department for International Development (DfID) but was delivered by cross-departmental, international organisation and non-government organisations further integrated with the local Sierra Leone capability and capacity. The DMS provided tactical expertise and effective planning based on sound doctrine that enabled other government departments and agencies to operate in a very challenging environment. Another example is from South Sudan where Horne et al. described how the DMS were requested to help write the major incident plan for their Protection of Civilian Camps.[22] The deployed commanding officer saw an opportunity for building capacity in partner organisations. Horne et al. concluded that "*this is a fundamental function of Defence Engagement, which seeks to enhance UK national influence and security through overseas capacity building and conflict prevention*."[22]

The DE (H) practitioner should also think long term. DE(H) as a sub-set of persistent engagement or building partner capacity might learn from the global development community's lessons. For example, national, regional and international policy whether 'obligatory', 'aspirational' or 'an intent' need to be articulated at all levels as defined in the UK Government's '*The Good Operation*'[23] and DE(H) also must take the opportunity to prevent conflict or work "upstream".[24] This may present difficulties in terms of resource and political will.

3 Global Health Systems (including Military Health Systems)

Individual clinical care takes place within a healthcare system. According to the WHO "*a health system consists of all organisations, people and actions whose primary intent is to promote, restore or maintain health*."[25] This includes organisations involved in the determinants of health already discussed as well as those actors delivering healthcare services. Healthcare systems differ from country to country, which can make understanding the essential components for a health system difficult. The WHO has developed a framework for this consisting of six building blocks (service delivery, health workforce, health information systems, access to essential medicines), financing leadership/governance), four goals or outcomes (improved health, responsiveness, social and financial risk protection, improved efficiency) and four attributes (access, coverage, quality, safety).[25]

Individual countries' health systems have developed based on characteristics on individual societies, their political, economic, and social conditions as well as their healthcare needs. Comparative health research has developed a heterogeneous classification of health systems,(26) with a 2009 article identifying a taxonomy of 27 systems.[27] These are outlined in further detail in Table 3.[28]

Table 3 – International models of healthcare systems

COVERAGE	**UNIVERSAL: EVERYONE COVERED FROM BIRTH OR AFTER A CERTAIN AGE OR CONDITION**			**NON-UNIVERSAL: INSURANCE REQUIRED, SOME WILL BE UNINSURED.**	
Model	Single payer, single provider [Beveridge model/ socialised medicine/	Single payer, multiple providers [National Health Insurance Model]	Multiple players, multiple providers [Bismarck model. Sickness Funds or Social Health Insurance]	Multiple payers (private insurance), multiple providers	Out-of-pocket
Function	Healthcare provided and financed by the government through taxation	Healthcare provided by private clinicians in private facilities. Majority of medical bills paid by governments	Employers and employees fund national health insurance through compulsory payroll taxes. Health insurance companies are private but non-profit and regulated.	Variety of payers; state, federal level and commercial health insurance companies reimburse healthcare providers on a fee-for-service basis. Most people have insurance through their employer.	Patients pay out of pocket for healthcare. They may or may not have private insurance individually or through their jobs.
Examples (% GDP spending on healthcare pre-pandemic)	UK (10.2%) Cuba (11.3%)	Canada (10.8%) Korea (8.2%)	Germany (11.7%) Switzerland (11.3%) Japan (10.7%)	USA (16.8%)	India (3%) China (5.4%)

Some countries' health systems may encompass multiple models. For example, healthcare in the USA arguably encompasses the market model (private insurance and out of pocket payments), the national health insurance model (Medicare) and the Beveridge model (Veterans Health Administration).[29] The market model is often more common in low- and middle-income countries, where methods of social protection are still limited (if in place at all). These systems are characterised by a high ratio of out-of-pocket payments, which can lead to family catastrophic health spending due to lack of insurance or other methods of collative protection, leading to debts and destitution.

An alternative method of understanding a nation's health system is to focus on its providers. This is the basis of the 2021 framework above developed specifically for the purposes of DE (H) (figure 2).[30]

Figure 2 Framework for Defence Healthcare Engagement

It is important that the DE(H) practitioner understands global health systems, including how they function and are funded. This should help to ensure suggested interventions are sustainable with adequate funding, to be aware that catastrophic health expenditure can impact health security and that there are political and cultural aspects regarding health systems that need to be appreciated. However, there have been successful DE(H) operations in countries where the military deliver a substantial amount of healthcare, such as Pakistan.[11]

All three aspects of the Koplan[8] framework on global health as it relates to DE(H) have been discussed throughout this article. Table 4 summarises the global health principles relating to DE(H) that have been highlighted.

Table 4 Global Health Principles Relating to DE(H)

1	Global health is characterised by its multi-disciplinary nature, its ethical foundation, and its political nature. Tensions surrounding these themes must be considered in DE(H) work, especially whether the military can be equitable or truly humanitarian.
2	Health benefits should be the focus of DE(H) as these are likely to achieve the most influence and advancement of UK foreign policy.
3	A broad understanding of public health, wider determinants, health security and human security is required to maximise effectiveness in preventing conflict, building stability and gaining influence.
4	Reliable information and actionable intelligence are essential to address health insecurity and undertake effective DE(H).
5	UK Defence personnel, including health and care professionals, directly contribute to human security objectives of freedom from fear, want, and to live in dignity.
6	Health planners and medical intelligence are intrinsic to helping those already working in, or planning to undertake, DE(H) to understand the needs of the target population, and potential frictions and politics involved.
7	DE(H) is long term and should include conflict prevention.
8	DE(H) practitioners should understand global health systems including how they function and how they are funded. This helps to ensure suggested interventions are sustainable with adequate funding, to be aware that catastrophic health expenditure can impact health security and there are political and cultural aspects regarding health systems that need to be appreciated.

Conclusion

Although there is no settled definition of global health, it is of growing importance to policymakers including Defence. It is therefore important that DE(H) practitioners understand its scope (transnational health issues, public health-including health and human security- and global health systems) and differences between countries. The limitations of DE(H) as a global health intervention also need to be acknowledged such as issues regarding equity, political influence and resources. Table 4 summarises relevant global health principles relating to DE(H).

DE(H) will involve complex multi-organisational relationships and processes, and while practitioners should be mindful of the political nature of their role, the broad aims of preventing conflict and building stability mean DE(H) should contribute positively to global health.

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Figure 1 Dahlgren and Whitehead Diagram

Figure 2 Framework for Defence Healthcare Engagement