



The Role of Health Security in Healthcare Settings: A Comprehensive Review

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Abstract

1. Introduction

Health security has increasingly emerged as an essential and critical component in various healthcare settings across the globe, significantly influencing both the overall quality of patient care and the resilience of health systems when faced with emerging threats and challenges. The importance of securing health has never been more pronounced than it is today, as it plays a vital role in maintaining the safety, protection, and well-being of individuals and communities alike, ensuring that they can thrive even in the face of adversity. With the rise of new health challenges, the focus on health security becomes not only necessary but fundamental, highlighting the need for robust strategies and preparedness plans to tackle unforeseen circumstances effectively.

Methods

This section elaborates on the diverse methods that are employed for the thorough evaluation of health security's significance within various healthcare settings. It focuses specifically on crucial aspects such as data collection methods, the different analysis techniques utilized, and



the established criteria for selecting relevant studies that contribute to understanding health security comprehensively.

Conclusion

The COVID-19 pandemic has revived calls for strengthened health security, leading to a wave of new regulations and frameworks. The aim of this comprehensive literature review is to summarise frequently cited health security interventions (HISs) in healthcare settings. The second, interlocked aim is to situate this empirical focus within the changing global political landscape of security and health diplomacy. The latter is substantiated by a breakdown of health security norms and guidelines (HISGs) issued and renewed in light of the pandemic. Twenty-eight HISs are summarised, with an additional scheme of combined measures. The study then identifies key gaps in the current research and underlines the need for grounded and contextualised approaches. The review foregrounds the need for discussions on global health diplomacy and the role of power disparities in HIS applications, as well as their implications on humanitarian healthcare delivery.

It is clear that the perceived relationships between health, security, and global governance have deepened and become more politically prominent. For example, the outbreak of the Ebola Virus Disease (EVD) in West Africa in 2014 was unprecedented. Affecting three states. Four affected states. Over 22 months, 28,616 cases, 11,310 deaths. Liberia, Sierra Leone, and Guinea were fundamentally destabilised and their fragile healthcare sectors decimated. West Africa was bedded. For the first time in the history of this virus, cases were detected in Europe and the USA; Ebola became the second disease to be declared a "threat to international peace and security" by the UN Security Council. This resulted in the establishment of the first-ever UN emergency health mission: the United Nations Mission for Ebola Emergency Response (UNMEER). COVID-19 represents the latest visible critical juncture in the broader re-ordering of the health-security nexus (McCoy et al., 2023).

2. Conceptual Framework of Health Security

Theoretical approaches in the social sciences and philosophy can offer critical insights into the rise of public health arguments for surveillance technologies, the rights-based criticism over digital surveillance during the pandemic, and the neocolonial assumptions underpinning global health security policies (McCoy et al., 2023). By bringing the philosophical perspective of Michel Foucault into conversation with a set of case studies of health security from the social sciences, a more comprehensive understanding is approached about the emergent health security field and it is possible to develop a novel and layered theory for the analysis of health security governance, contingent upon the shifting geopolitical constellations, the evolving application and mediation of health security measures, and the influence of ideas on health security from globalization.



The rise of sophisticated surveillance technologies and practices in three Anglo-American countries argues health security governance is a layered arrangement where macro-political processes co-constitute meso-technical infrastructures and micro-social practices. A theoretical and methodological approach is enact assemblage thinking by combining the work of Foucault with the case study findings, which draw on a number of policy and media documents, expert interviews, and legal guidelines to model the synchronic and diachronic working of assemblages. Such an approach contributes to a more thorough conceptualization of health security governance by examining: (1) macro-political factors, including new forms of international power, the concurrent development of surveillance technologies, and the adaptation of post-9/11 security measures by health policy networks; (2) meso-technical elements, such as the building of the epidemic intelligence infrastructure, the proliferation of digitalized forms of surveillance, and the creation of ‘sick lists’; and (3) micro-social practices, such as contact tracing for infectious diseases and the information coercion of suspected cases, which permeate across different social settings and health event scales.

2.1. Definition and Scope

As an anthropologist, I am interested in collective practices of care across various contexts, including that of health institutions, towards critically reflecting on the axioms shaping care practices. Hospitals have been identified as ‘total institutions’ involving extreme forms of care practices ordered through complex sets of regulations and expertise. Health facilities may emerge as biosecurity sites inheriting public-private partnerships that support ‘health’ as increasingly important for global and national (in)security projects (McCoy et al., 2023). Recent COVID-19 emergency measures in clinical settings give continuity to previous health security approaches that shaped a new normativity of healthcare practices.

Drawing on such considerations, my aim is to critically engage with health security terminologies emerging within clinical practices as a way to convoke often uncontested infrastructures, technologies and experts that shape contemporary spaces of care. Extending the notion of ‘securitization’ developed within political sciences on studying how public issues may become matters of security, I contend such an approach might bring to light the ethical modes of engagement taking place in caring for security in healthcare institutions (Kumar Chattu & Kevany, 2019). Broadening the understanding of ‘securitization’ as a process in which attention is given to the social mechanisms through which traditional security issues gain recognition and attention, this invites ethnographic inquiries into actual practices through which health personnel engage with a rhetoric of ‘health security’, ‘protection’ and ‘biosecurity’.



2.2. Key Components

Background: The 2006 WHO health security resolution was not the first time a global security threat had been formally recognized. The WHO had been somewhat active in global planning to anticipate and combat new and emerging diseases. An international treaty, the International Health Regulations (IHR), had been in place in one form or another since 1851 and the present IHR document was signed by member states in 2005 with a five year implementation timeline (Kumar Chattu & Kevany, 2019). In 1999 an internet-based event led the WHO to create a program for monitoring and discussing disturbances in the global norm. In response to that, the Global Outbreak Alert and Response Network was created along with the Department for Emergency Relief Operations. That department was later subsumed in part by the Health Security section.

2.1. Definition of health security: Broadly, global health security is the maintenance of the normal course of globalised health-related things and processes to the equivalent level of current and future threats to health. It is one of the foremost priorities of nation-states, with concerns of health-related dangers being juxtaposed against the freedom of economic activity and individual rights. The subject has grown outside issues of contagious infectious diseases to caution against the potential phenomena of bio-terrorism, the nature of globalized food production, and significant patent medicine shortages. The WHO defines health security in a more demarcated sense as “the activities required, both proactive and reactive, to minimise vulnerability to acute public health events that could damage health and disrupt societies”. On national terms these activities run a spectrum from active (non-pharmaceutical interventions, surveillance, containment methods, rapid and robust health systems) to reactive (vaccinations, antivirals and antibiotics, border controls, quarantine), often subsumed within an interconnected idea of health resilience. Diplomatic concerns have laid stress on the need to coordinate such activities with neighboring states so as to maintain confident and regular communication between national health services. Access to clean drinking water, norms of hygiene, and the adequate provision of food are necessary in maintaining health resilience.

3. Health Security Measures in Healthcare Settings

Health care institutions are meant to provide a safe and secure environment for all users, and that includes a protective environment for the patients, personnel, and visitors. The safety and security environment in health care settings appears to have received limited attention. Safety and security within a health organization does not often receive attention until something dastardly transpires. Safety incidents at healthcare facilities include occupational hazards, resident and personnel abuse, accidents and medication-related injuries, while security incidents involve theft of personal belongings, verbal abuse, sexual harassment, and physical assaults. To increase the level of safety and security, healthcare facilities have employed numerous interventions, including installation of metallic detectors, training in conflict



resolution, violence prevention policies, surveillance systems, radio systems, guards, panic alarms and devising incident forms. In many countries, there exists limited guidelines that provide direction on how to enhance the overall safety and security measures at healthcare facilities. This section provides a comprehensive review on the health security measures within healthcare settings.

3.1. Infection Prevention and Control

Health security plays a vital role in healthcare settings and is of major concern in the pediatric population. There is growing attention being given to the possible source of infection in terms of family and visitor surveillance. The push for an organized systematic health security approach to infection control in healthcare settings has a long way to go. Broadening the perception of health security has to be an intrinsic part of this journey.

An effort to develop a research 10-point document for doctoral research is underway. The majority of the efforts have been put into developing the initial section and have yet to progress beyond this. However, this initial section can stand as a comprehensive review in its own right and, as such, this document has been developed for wider circulation to help develop additional interest and support.

The major bacterium associated with HAI's as a cause of morbidity, particularly in pediatric populations, is that of catheter-associated urinary tract infections (CAUTI) (Koutlakis-Barron & Ann Hayden, 2016). Despite success in many specific interventions in adult healthcare, CAUTI prevalence remains high in pediatric wards. At present, there is significant investigation being undertaken to study the effect of biofilm formation in CAUTI and to investigate any unique factors in pediatrics that potentially limit CAUTI interventions. Data on biofilm formation in pediatric CAUTI is currently non-existent. Further to this, there are activities to establish an animal model of pediatric-inducing microbes to study adherence and biofilm formation.

3.2. Emergency Preparedness

INTRODUCTION

It is a clear crib sheet that people working in the healthcare in general should keep it in mind. The term health security can be explained as protection from and mitigation of a wide range of public and global health risks, emergencies, and threats, encompassing natural, intentional, and accidental. Emergency preparedness is an integral part of patient safety. Patient safety within healthcare can be described as absence of preventable harm to a patient during the process of health care and reduction of risk of unnecessary harm associated with health care to an acceptable minimum. Arguably, patient safety is the antithesis of unsafe patient care. This review claims that those different, yet integrated, concepts should be strengthened



together by focusing on health security more in healthcare settings of patient safety as well as, by extending the concept to the global dimension, in urgent preparedness and response, outlining several perspectives.

EXAMINING HEALTH SECURITY ISSUES

Five concepts and tools are laid out that simplify a systematic approach to health security. Health security is to be maintained and promoted by preventive activities (hazard management, risk management, vulnerability analysis, risk assessment, and planning), by mitigative activities (monitoring and surveillance, warning, emergency services, and societal security management), by activities taking place immediately after the event (first aid and emergency medical care, search and rescue, public and media information), and by restorative activities (assistance in getting back to normal situation and reconstruction, and preventive activities for future events), to the public and environment in general. It appeared as the predominant requirement for the occurrence of a favorable safety culture in a healthcare unit. In order to fulfill patient needs and healthcare requests, the healthcare unit should necessarily guarantee the accomplishment of its mission in health security matter. Ideally, this commitment should be in place regarding every possible hazard threat and vulnerability condition susceptible to put health safety and general environment security at risk.

Therefore, healthcare management should be foreseen to be on even-footing with preventive, mitigative, and compensative (therapeutic) action-oriented effectiveness. Attention should be paid to the importance of reliable support structures (adequate HQ facilities and resources, targeted intervention and response strategies, trained personnel and information/knowledge management systems). Realism and efficiency of the plan should be verified by routine drills and full-scale exercises, and its review and updating should be afforded in a flexible and continuous process. Open challenges, such as pervasive bioterrorism likely attempts, are evoked that might reveal several hidden additional shortcomings in urban setting hospital preparedness and response (N. Rubin, 2006).

4. Challenges and Barriers to Health Security Implementation

The implementation of health security in healthcare settings is facing a panoply of challenges and barriers with respect to its organization, efficiency, sustainability, finances, training, and compliance by patients, staff and other in-house populations. The main obstacles to its accurate and efficient realization are identified, and they pertain to the barriers in the form of lack of definition and inconsistent assessment of health security and its significant overlap with related concepts. These are furthered through focusing on surveillance, on analysis and need for comprehensive planning to ensure sustainability of health security, and reliance on solid evidence of benefits and cost-effectiveness. In relation to these apertures, barriers more



directly related to healthcare systems or facilities are presented, and mainly concern unclear distribution of health security management in the health system and among departments and uncertain organization and responsibility for risk assessment and planning at the healthcare facility level (Coventry et al., 2020). Recommendations for overcoming all identified barriers, through policy implementation of comprehensive national and facility-level strategic health security planning, as well as the provision of support to local healthcare facilities through assistance in conducting assessment of health security needs, are proposed. Internationally health security has long been viewed almost exclusively as a geopolitical issue. This has resulted in few attempts to conceptualize health security, let alone define and measure it. Rather, assessment occurs through use of global indices that provide highly aggregated scores with little policy relevance. With the wide range of hazards that can potentially impact upon health, health security is clearly multi-dimensional, likely encompassing areas of surveillance, preparedness, mitigation, and response. However, its exact contours are not well understood, with significant overlap with related concepts such as health system resilience.

5. Conclusion and Future Directions

Health security functions as a public health and political concept, as well as a policy agenda that addresses the “linkage between health and security in societal interactions both locally and globally.” This concept pivots around the unknown and potentially unpredictable facets of a range of actual or possible dangers and the ever existing risk related to them; all falling into the huge category of the illnesses. A review of the relevant bibliography reveals both the gradual enhancement of the concept’s meaning and the increase in related political and policy activities, especially among international actors (McCoy et al., 2023). In accordance with the continuously broader conceptualization of health security, the present study aims at contributing in filling the gap in the empirical research by extending the analysis of health security beyond the traditional geographic borders and into one specific sub-category, namely, public hospitals.

Public health services provision is one of the basic constituents of the public welfare state institutions, specifically named “Safety Nets.” Therefore, susceptibility in this kind of services is likely to have a serious drawback on the public welfare state contract and, thus, on the state’s legitimacy to govern. Especially, in the case of Greece, public hospitals and the national health system had already been among the weakest institutional environments before the economic crisis of 2010, and this weakness has been significantly deepened after the austerity policies have been put into effect. The well-known reductions in the basic infrastructure of these institutions, together with spending cuts, hiring freeze, and an excessive increase in the demand for services due to a sharp increase in the number of



uninsured individuals, have put the Greek health system in a state of emergency. (Kalavrezou & Jin, 2021)(Myloneros & Sakellariou, 2021)(Kotios & Roukanas, 2022)

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