

Review Article

Making the health systems resilient: Need of the hour in the backdrop of COVID-19

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Abstract

The ability of a healthcare system to respond to and recover from shocks, interruptions, and challenges while maintaining its fundamental operations and delivering necessary health services is referred as health systems resilience. As demonstrated by COVID-19, a robust health system is urgently needed in order to better prepare for potential public health hazards in the future. At the pretext of a variety of risks, including natural disasters, disease outbreaks, conflicts, economic crises, or technological failures, the health system requires the capacity to foresee, absorb, adapt, and transform. This paper provides various elements of the public health system's resilience, in the context of COVID-19.

The COVID-19 pandemic has had a substantial influence on vital health services around the world. While efforts were primarily directed at stopping the virus's spread, many routines and important health services were disrupted or put under a lot of strain. Implementing telemedicine and digital health solutions, ensuring infection prevention and control procedures in healthcare facilities, giving priority to high-risk populations, and enhancing healthcare systems' capability to manage COVID-19 and routine health services were some of the adaptation and restoration efforts made.

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By enhancing resilience by ensuring the continuity of quality healthcare services through better preparedness, augmenting response capacity, governance & leadership, infrastructure and logistics financing mechanism, healthcare workforce, community engagement, health information management systems and international, national & sub-nation level cooperation wherever applicable for making the health system absorptive, adaptive and transformative – the health systems can better withstand and recover from the public health emergencies.

Keywords: COVID-19; Essential health services; Health system resilience; Preparedness & response; Public health emergencies

Background

The COVID-19 pandemic has made the vulnerability of health systems more relevant and significant than it has ever been. Overwhelming the health systems for more than 3 years, the COVID-19 pandemic is still causing varied degree of disruptions to the global public health ecosystem. The concept of resilience offers a framework for resilient health system, and the characteristics that set them apart, informed by insights from other disciplines like disaster management that have adopted resilience as a practice. Based on the literature review, this paper outlines various elements of health system resilience to set the reforms to be better prepared and to respond to the next pandemic.

What is resilience in the health system?

Health system resilience is the capacity of actors, institutions, and populations in the health system to foresee crises, effectively respond to them, maintain key functions when a crisis emerges, and, using the lessons learned, re-organize if necessary. When health systems protect human life and guarantee that everyone lives happily both during and after a crisis, they are robust.

Why do we need a resilient health system?

A robust public health response and a highly proactive and functional healthcare delivery system are essential in times of crisis, such as a pandemic or any other calamity (such as a natural disaster or a mass casualty event), that suddenly raises the demand for healthcare services. These two systems need to work together both in times of crisis and before they even happen. Given that healthcare systems are complex adaptive systems, resilience is an emergent quality of the system as a whole, rather than a single characteristic. As a result, enhancing resilience is context-specific and iterative; it necessitates early assessments of the system's strengths and weaknesses, investments in those areas before a crisis, reinforcements during an emergency, and reviews of performance after a tragedy. Resilience is not a static idea; for example, how quickly one recovers from a disaster is a key success factor.

In order to make the health system resilient, varied considerations need to be taken in account including-

Policy environment: The legal and policy framework that would guide the response and provide accountability. International health standards must be followed for emergency response to be effective. These regulations call on governments to establish basic public health capacities and procedures for coordinating responses to health emergencies with regional and international partners. Legislation that clarifies the authority of public health agencies and the roles and responsibilities of private and public health actors is also necessary, as are policies for involving the private, non-health, and voluntary sectors in the response and allowing flexibility in sharing and reallocating resources across the health system.

Human resources: The already underfunded, disjointed, and generally unregulated health systems mainly in Low and Middle-Income Countries (LMIC) have been rocked by the COVID-19. In numerous unanticipated ways, it has only served to worsen the strain on human resources for health (HRH). Some of the confounding factors such as identifying HRH benchmarking, mobilizing the health workforce, psycho-social support, and protection from disease; the individual-level factors like measures around self-care by health workers have been a critical consideration. The system-level factors include developing a health workforce resilience policy, planning and funding for emergency preparedness, stakeholder engagement, and incentive mechanisms etc., may also be taken in account to place a strong emphasis on creating a future-ready health workforce utilizing a multi-sectoral strategy to increase its strength and resilience, in keeping with the interdisciplinary nature of the linked issues.

© **Build on emerging frameworks:** Globally, insufficient basic infrastructure, a lack of human resources, poor service quality, and low trust in medical professionals and authorities continue to be obstacles to effective preparedness and response to health emergencies; COVID-19 further exacerbated these obstacles by causing the disruption of non-COVID essential health services. The following important measures for boosting resilience have been proposed by WHO and are broadly supported by the international public health community [1,2]:

- **Governance:** effective and participatory leadership with strong vision and communication; coordination of activities across government and key stakeholders; an organizational learning culture that is responsive to crises; effective information systems and flows; and surveillance enabling timely detection of shocks and their impact.
- **Financing:** ensuring sufficient monetary resources in the system and flexibility to reallocate and inject extra funds; ensuring stability of health system funding through countercyclical health financing mechanisms and reserves; purchasing flexibility and reallocation of funding to meet changing needs; and comprehensive health coverage.
- **Resources:** appropriate level and distribution of human and physical resources; ability to increase capacity to cope with a sudden surge in demand; and motivated and well-supported workforce.
- **Service delivery:** alternative and flexible approaches to deliver care

Building on above listed pillars, the following five characteristics could define resilient health systems:

First, knowledgeable health systems are robust. Resilient health systems have a current map of their informational, physical, and human resources that highlight their strengths and weaknesses. These could be functional areas (like specialty care or information technology), medical specialties (like non-communicable diseases, reproductive, maternal, newborn and child health and adolescent health, etc.), or particular social or geographical situations (like floods and other natural and man-made disasters). Forecasting models are made possible by strategic health information systems and epidemiological monitoring networks (like Integrated Health Information Portal), which can provide real-time reports on system status and prospective health risks. Data from credible sources ought to be used to guide planning, including tabletop and simulation exercises to simulate the logistics of a crisis response.

Secondly, a wider range of health disorders can be managed by health systems, which are more stable and capable of identifying the disease as soon as they arise. Instead of dismissing a patient who presents to a primary care clinic with an unusual combination of symptoms because they don't fit into predetermined algorithms, the patient should get a thorough screening for new infections and then looped into a referral system.

Thirdly, the health systems have the ability to self-regulate, which enables them to restrict and isolate health risks while continuing to offer necessary medical services and halt the spread of instability across the system. This consists of three parts: (a) the ability to identify threats quickly, to isolate them, and to focus resources on them; (b) the reduction of disruptions to the provision of essential medical services during emergencies; and (c) the availability of extra or redundant capacity in particular locations that can be quickly brought online.

Fourthly, all this has to be integrated for the summative response. Resilient health systems bring together a variety of players, ideas, and organizations to create solutions and start projects. When there is a specified focal point within the health system, integration characteristics like information sharing, clear communication, and coordination of various actors are best realized. Public health programs, particularly those involving public outreach, must be strongly connected with the provision of healthcare services. An integrated response needs existing laws, cooperation agreements, and compacts that facilitate resource flows and allow for the pooling and redistribution of funds, personnel, and capacities during emergencies. Depending on the situation, other sectors at both the national and regional levels should be included in the response effort to assure the ongoing provision of these crucial health variables. Particularly, communities must be viewed as more than just patients in health systems.

Fifth, resilient health systems are adaptive. The ability to modify in ways that improve performance under exceedingly difficult conditions is known as adaptability. Any changes implemented should have an immediate positive impact on performance and, ideally, promote long-term resilience. Too often, the humanitarian response to health crises has a short half-life and has no discernible benefit for the larger health system after the crisis.

Conclusion

Resilient health systems will reduce mortality and adverse health impacts during emergencies by efficiently serving both urgent and routine medical demands. Resilience dividend ought to be noticeable

not only through improved normal healthcare delivery, social cohesiveness, and productivity during times without pressing requirements, but also through effective functioning under stress and quicker recovery.

Declaration

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