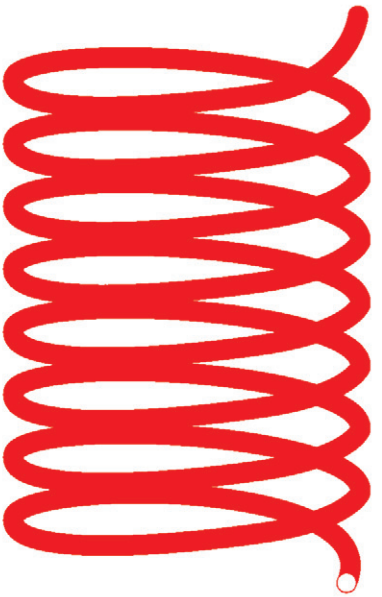
European Health
Management in Transition



Resilient Health Systems

What We Know
What We Should Do

Federico Lega and
Giada Carola Castellini

RESILIENT HEALTH SYSTEMS

European Health Management in Transition

Series Editors:

Federico Lega, Full Professor of Health Management and Policy, Director of the Research and Executive Education Center in Health Administration, University of Milan

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Healthcare is currently undergoing an unprecedented period of change, which is presenting a challenge to the fundamental tenants of health management and policy established over the last decades. The differentiated nature of the change agenda and the pace of change has been such that there has been limited space or time to provide a structured or comprehensive response, or to consider at a strategic level how health management teaching and practice should evolve and develop. This then is the focus for the *European Health Management in Transition* series, published in alliance with the European Health Management Association (EHMA).

Books in the series investigate how changes to the health and social care environment are leading to innovative and different practices in health management, health services delivery design, roles and professions, architecture and governance of health systems, patients' engagement and all other paradigmatic shifts taking place in the health context.

The books provide a roadmap for managers, educators, researchers and policy makers to better understand this rapidly developing environment.

Books in the Series:

Federico Lega and Usman Khan: *Health Management 2.0: Meeting the Challenge of 21st Century Health*

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RESILIENT HEALTH SYSTEMS

What We Know; What We Should Do

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INVESTOR IN PEOPLE

CONTENTS

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LIST OF FIGURES AND TABLES

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FOREWORD

Why a book on resilient health systems?

Ça va sans dire.

WHO leaders[1] have noted: 'COVID-19 has "unmasked" critical health system gaps and deficiencies. Health workforce shortages, broken supply chains, fragmented services and silo information systems are a few of the problems that hindered the response in the early days… This indicates that there is a need to rethink how public health and health care services should be organized and placed at the core of societal services, and to build people-centred health systems that are resilient to emergencies, through actions that include the following: 1. strengthening hospital capacities to handle significant influxes of patients associated with a largescale pandemic (ensuring sufficient capacity in terms of intensive care units and associated medical equipment, a trained health workforce and infection prevention and control measures); 2. providing high-quality protective equipment to frontline health workers and planning surge capacity in case of rapidly increasing demand for hospitalizations, but also for other core response functions, such as contact tracing; 3. equipping diagnostic laboratories and training laboratory personnel; 4. improving surveillance,

1 Hans Henri P. Kluge, Dorit Nitzan and Natasha Azzopardi-Muscat, A perspective from the WHO Regional Office for Europe, Eurohealth 2020; 26(2).

data collection and case investigation; 5. strengthening procurement systems, supply chains, operational support and logistics; 6. embedding strong risk communication and community engagement in governance; 7. accelerating research and development of tests, vaccines and therapeutics'.

Direction and road seem clear. The resources to implement the envisioned changes are coming through the recovery funds.

Yet, clouds are darkening the horizon.

Recovery plans developed and adopted by health systems are mostly focused on strengthening the organization and supply of community services. Fine. Better, great! More capacity (and hopefully also more capability).

But, adding 'people and things' does not make a health system necessarily more resilient.

The word itself, after being overused in the first months of the pandemic, has almost disappeared in the debate and conversation on recovery plan implementation. Even worse, not just the word has disappeared, but it seems that any roadmap and path necessary to strengthen the resilience of health systems has vanished.

This is why this book on resilient health systems is important, as it shows us how to make health systems more resilient.

Enjoy reading!

Milan, January 2022.

1

IF YOU STAY READY, YOU WON'T HAVE TO GET READY

1.1 COVID-19. THE ULTIMATE TEST FOR HEALTH SYSTEM RESILIENCE (BUT NOT THE FIRST OR THE LAST)

'The COVID-19 pandemic is straining health systems worldwide',[1] the World Health Organization (WHO) stated on 30 March 2020. After the first clusters of unknown cases of pneumonia in Wuhan, Hubei province (China) were reported to the international health community, the emergence of a new virus, later to be sequenced and called COVID-19, began to arouse global concern. On 30 January 2020, the WHO Emergency Committee, under International Health Regulations (IHR, 2005), declared the coronavirus outbreak a Public Health Emergency of International Concern

1 WHO (2020). The WHO Issues guidelines to help countries maintain essential health services during the COVID-19 pandemic | News release. Available at: https://www.who.int/news/item/30-03-2020-who-releases-guidelines-to-help-countries-maintain-essential-health-services-during-the-covid-19-pandemic.

(PHEIC). The spread of COVID-19 provoked international alarm and mobilization to contain the potential catastrophic consequences such a virus can have on a public healthcare system. As the WHO stated in late March 2020, the strain on a country's healthcare system is a serious concern not only for developing countries when infectious diseases strike, where the health system capacity is often not strong enough to sustain the health needs of their population, but also for developed countries with a well-functioning health system.

After the initial COVID-19 outbreak in China and other Far East Asian countries like Singapore, it quickly spread to Europe in February 2020, where the first country was Italy. The Italian national health system (NHS) is recognized for its effectiveness and quality. Indeed, 'nearly all Italian residents are registered with the NHS, which covers most of the medical costs for hospital care and consultations with doctors' (OECD, 2019, p. 8), and hospitals are described as providing 'high-quality treatment for people requiring acute care' (OECD, 2019, p. 14). Nonetheless, the spread of new infections was quick: the first COVID-19 case was recorded on 23 February 2020; within less than two weeks nearly 3,000 new cases of infection and 100 deaths were recorded.[2] On 11 March 2020, the Italian government issued a Decree of the President of the Council of Ministers (DPCM) declaring a national lockdown which lasted until 3 May 2020, soon followed by France and the United Kingdom (UK).

2 Data retrieved from the Italian Civil Protection. Available at: http://opendatadpc.maps.arcgis.com/apps/opsdashboard/index.html#/b0c68bce2cce478eaac82fe38d4138b1.

The pandemic gripped not only Europe, with more than 100 million cases and 2.5 million deaths worldwide.[3] The virus continues to challenge health systems. In Italy, for instance, infection rates declined during summer 2020 but then rose again, and localized lockdowns were imposed starting in October 2020. New variants of the virus have begun to emerge, with the possibility of higher infection or death rates. An example is the new variant identified in the United Kingdom in early December 2020, which raised concerns about increased transmissibility and severity of the disease.[4]

Why did countries with a well-functioning, effective health system have to shut down several times to cope with this health crisis? Why weren't they able to manage the situation without engendering economic, social and political consequences? The ability of a health system to cope with and recover from a crisis depends not only on the quality of the system but also on multiple factors that condition the level of *resilience* to crises. Resilience can be defined as 'the ability to prepare for, manage (absorb, adapt and transform), and learn from shocks' (Thomas et al., 2020, p. 6). The term resilience has gained traction in the health systems literature in the context of coping with emergencies. Crises have challenged the capacity of health systems worldwide, calling for health systems research to address this issue. The 2008 global financial crisis reduced financial resources for health systems in Europe, limiting the provision of universal health coverage

3 Data retrieved from the *COVID-19 Dashboard by the Centre for Systems Science and Engineering* (CSSE) at Johns Hopkins University (JHU). Available at: https://coronavirus.jhu.edu/map.html.

4 WHO | Disease outbreak news | Emergency preparedness, response | SARS-CoV-2 Variants. Available at: https://www.who.int/csr/don/31-december-2020-sars-cov2-variants/en/.

and good quality healthcare (European Commission, 2014, p. 2) In response, the European Commission called for health systems to be resilient, so to 'be able to adapt effectively to changing environments, tackling significant challenges with limited resources' (European Commission, 2014).

Another event that prompted health systems researchers to focus on resilience was the 2014 Ebola Virus Disease (EVD) outbreak, which caused death, social disruption and the collapse of essential healthcare services, and revealed an absence of resilience in health systems (Kruk, Myers, Varpilah, & Dahn, 2015, p. 1910). More generally, infectious disease outbreaks like EVD, Zika virus and Middle East respiratory syndrome (MERS) have been a topic for the study of resilience in health system discourse (Haldane, Ong, Chuah, & Legido-Quigley, 2017, p. 1513). The present COVID-19 pandemic is severely damaging health systems worldwide, 'leading to a human cost far beyond the impact of the disease itself, understanding health system resilience has never been more essential' (Thomas et al., 2020, p. 6).

The question remains, however, why health systems researchers have adopted a resilience approach, despite the existing literature on health system strengthening, with a focus on the six WHO building blocks.[5] The problem is that this framework is not comprehensive enough to capture the

5 The WHO describes health systems based on six core components (so-called building blocks): (1) service delivery, (2) health workforce, (3) health information systems, (4) access to essential medicines, (5) financing and (6) leadership/governance. The six building blocks are considered essential for the strengthening of health systems. (Reference: WHO 2010. Monitoring the Six Building Blocks of Health Systems: A Handbook of Indicators and their Measurement Strategies. Available at: https://www.who.int/healthinfo/systems/WHO_MBHSS_2010_full_web.pdf?ua=1#:~:text=Instead%2C%20it%20is%20structured%20around,governance%20(see%20Figure%201).

complexity of health systems, especially the dynamic interactions between different stakeholders, and so does not adopt a 'whole system perspective' (Palagyi et al., 2019, p. 1848). Palagyi et al. (2019) argue that the six building blocks framework focuses largely on system inputs and not on human and institutional relationships or values and beliefs (Palagyi et al., 2019).

Moreover, the resilience approach focuses not only on the current ability of a health system to cope with a crisis but it also examines what can be learnt from a crisis and reflects upon how to prepare for and cope with future shocks (Thomas et al., 2020, p. 6). The concept of health system resilience is widely accepted in the literature and the international community, the latest example being the WHO Policy Brief 36 (2020) 'Strengthening Health Systems Resilience: Key Concepts and Strategies'.

1.2 HEALTH SYSTEM RESILIENCE: WHAT WE DO AND WHAT WE DON'T KNOW

Having described the relevance of resilience in the health systems literature, our aim is to expand on the topic with a meaningful contribution to existing knowledge. To do so, we carried out a literature review of health system resilience.

The review was performed between August 2020 and December 2020, and the research was conducted using the PubMed online database, an internationally recognized archive of scientific and biomedical journals. To identify scholarly papers on the concept of health system resilience, the database was interrogated using the key words: 'health systems' and 'resilience'. The search retrieved 359 records, which were then screened according to three criteria:

1. *Year of publication.* Only records published between 2010 and 2020 were included because resilience is a relatively new term in health system research and gained currency in the wake of the 2014 Ebola crisis. A total of 350 journal records met this criterion.

2. *Keywords* in the title of the paper. This criterion selected for records relevant to health system resilience. The keywords cluster was: 'health systems' or 'health system', 'resilience' or 'resilient', 'threats', 'emergency' or 'crisis' or 'disaster', 'preparedness', 'robustness'. The abstract of papers with fewer than two of the keywords was screened for eligibility. A total of 192 papers were eliminated because they contained either none of the keywords or only one keyword unrelated to health system resilience. A total of 158 records met this criterion.

3. *Content.* Four important criteria were identified as necessary for inclusion:

    - Being focused on system level resilience, not exclusively on individual and/or community level resilience: 49 records analyzed either individual or community-level resilience and so were eliminated.
    - Not being *country specific.* Because the review is centred on a concept of resilience that is generalizable to any country, eligible studies should not be peculiar to a single country or region: 52 records focused on either a single country or a specific geographical area and were eliminated.
    - Not being *disease specific.* The focus of the study should be on the resilience of health systems in a crisis or emergency, not on their preparedness to deal with a

single disease or threat: 25 records did not meet this criterion and were eliminated.

- Being fully available in *English*. One paper was eliminated because it was available only in French.

A total of 126 records did not meet the third content criterion and were eliminated. A total of 31 records met the inclusion criteria. Free access to 4 of the 31 was denied without a subscription to an online database or required payment; these 4 were eliminated, leaving a total of 27 records for this literature review.

1.2.1 In Search of a Definition

Because resilience is a relatively new term, health systems researchers have struggled to properly define it. Some argue that agreement on the definition is still lacking (Fridell, Edwin, Von Schreeb, & Saulnier, 2020; Haldane et al., 2017; Hanefeld et al., 2018; Thomas et al., 2020; Turenne et al., 2019), while others believe health system resilience has been sufficiently discussed and properly defined (Blanchet, 2015; Kruk et al., 2017). Despite the lack of universal consensus, many scholars seem to converge towards the definition mentioned above and endorsed by the WHO, i.e. the combination of adaptive and transformative capacities of health systems to address crises (Abimbola & Topp, 2018; Barasa et al., 2017, 2018; Blanchet, 2015; Blanchet, Nam, Ramalingam, & Pozo-Martin, 2017; Fridell et al., 2020; Haldane et al., 2017; Hanefeld et al., 2018; Kruk et al., 2015; Kutzin & Sparkes, 2016; Nuzzo et al., 2019; Thomas et al., 2020; Ziglio, Azzopardi-Muscat, & Briguglio, 2017). This definition will be further examined in the next chapter and will provide a comprehensive and acceptable definition of health system

resilience. A part of the literature identifies the definition and the characteristics that a resilient health system should have: awareness, diversity, self-regulation, integration and adaptivity (Kruk et al., 2015, 2017).

1.2.2 Meaningfulness

It is important to analyze the perception of the term's meaningfulness among academics. Some scholars emphasize the added value of the concept of resilience in health systems research. Most believe that recent crises like the Ebola outbreak and the 2008 global financial crisis have led to a call for resilient health systems in response to shocks (Abimbola & Topp, 2018; Barasa et al., 2017, 2018; Blanchet et al., 2017; Fridell et al., 2020; Haldane et al., 2017; Hanefeld et al., 2018; Kruk et al., 2015; Meyer et al., 2020; Palagyi et al., 2019; Thomas et al., 2020; Turenne et al., 2019). The literature also reflects upon the insufficiency of the WHO's six building blocks framework for strengthening health systems (Palagyi et al., 2019, p. 1848) due to the lack of a whole-system perspective. Further, some scholars argue that the concept of resilience introduces a dynamic dimension into static health system models (Barasa et al., 2017; Blanchet, 2015; Palagyi et al., 2019; Topp, 2020).

However, the emergence of the concept of resilience has also raised doubts and criticisms. First, some scholars argue that research on resilience has been largely conceptual to date, that it is utilized as a catchphrase (Fridell et al., 2020), and that evidence on how to practically strengthen health systems is lacking (Barasa et al., 2018, p. 491). Some academics see it as a 'boundary term' between politics and science (Blanchet et al., 2017; Topp, 2020). Nonetheless, its relevance is recognized, and more research on the topic is needed