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**Insights into health sector governance in a turbulent environment –
towards best-practice approach**

Увиди у управљање сектором здравствене заштите у турбулентном
окружењу – ка приступу добре праксе

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Insights into health sector governance in a turbulent environment – towards best-practice approach

Увиди у управљање сектором здравствене заштите у турбулентном окружењу – ка приступу добре праксе

SUMMARY

The COVID-19 pandemic occurred at a high spreading rate with sudden pattern changes, high variability, and unpredictability. This generated uncertainty making it hard for authorities to predict, plan and conventionally prepare preventive and suppressive actions. As a result, governments worldwide had to find new, more comprehensive, and complex solutions to manage the health sector in a turbulent environment. The paper's main objective is to analyze different organizational practices that respond to the COVID-19 crisis regarding healthcare sector resilience and describe best practices. Health sector authorities should consider applying the "new mode of governance," which refers to a policy not limited to a single approach with less hierarchy and formalism and with a flatter governance structure. Countries that have had more success in COVID-19 crisis suppression applied "dynamic resilience" with decentralization in decision-making, a more important role of front-line healthcare providers, high transparency, and flexibility enabling continuous adaptation to rapidly changing conditions.

Keywords: turbulent governance; crisis management; dynamic resilience; transformational leadership

САЖЕТАК

Пандемију је карактерисало да се шири великом брзином, са изненадним променама ситуације, високом варијабилношћу и непредвидивошћу, стварајући неизвесност која је отежавала надлежним институцијама да предвиде, планирају и припреме мере сузбијања и превентиве на конвенционалан начин. Владе широм света морале су да пронађу нова свеобухватнија и комплекснија решења како да управљају здравственим системом у турбулентном окружењу. Циљ овог рада је анализа различитих организационих решења у одговору на кризу ковида 19 како би се ојачала отпорност система, те идентификовали примери добре праксе. Надлежни у здравственом систему треба да разmotре примену "новог модела управљања", који се не ослања на само један приступ и који карактерише мање хијерархије и формализма у управљању са равнијом управљачком структуром. Државе које су имале више успеха у сузбијању кризе ковида 19 примениле су приступ "динамичне отпорности", који подразумева децентрализацију у одлучивању, већу улогу нижих хијерархијских нивоа који непосредно пружају услугу пацијентима, високу транспарентност, као и флексибилност које омогућавају континуирано прилагођавање брзим променама услова.

Кључне речи: управљање турбулентним ситуацијама; управљање кризама; динамичка отпорност; трансформационо лидерство

INTRODUCTION

Before the COVID-19 pandemic, most countries had the health sector organized as a highly bureaucratic and hierarchical system with strict rules that regulated processes of providing standardized health services to their citizens. When dealing with anticipated changes and managing potential risks, governments usually apply a standard approach consisting of five phases: 1) identification of risks, 2) risk assessment, 3) risk prioritization, 4) risk response planning, and 5) risk monitoring and control [1]. The phases are linear and sequential, thus making planning and preparation less demanding.

However, external conditions that influence the governance of the health sector changed radically with the pandemic. Changes occurred at a high spreading rate and severity with huge

complexity and great uncertainty. The problem described in this paper can be defined as an assessment of governing authorities' capacities to predict, plan and prepare actions, to prevent and reduce adverse effects of the crisis induced by the COVID-19 pandemic.

The paper's main objective is to analyze different organizational practices that respond to the COVID-19-induced crisis regarding resilience policy and systematize/describe best practices.

TURBULENCES AS A “NEW NORMALITY” AND THEIR IMPACT ON HEALTH SECTOR POLICIES

This article is based on the literature review. We summarise current research findings and use secondary data sources to illustrate organizational changes in the system. The framework describing organizational traits is adopted chiefly from Mintzberg [2] and Goold & Campbell [3]. Our literature review of the changes in general organization in turbulent environment is applicable to healthcare sector organizations.

The conceptual framework has been grounded on the "New modes of governance" approach, introduced and applied as an alternative policy mechanism in the European Union health care policies [4]. At a state level, it refers to a policy not limited to a single approach with less hierarchy and formalism. The new health sector governance mode developed during the COVID-19 crisis is based on creativity and innovation supported by leadership, "communityship" and flexible organization [5]. Communityship is reached when team members work together towards a joint goal. Healthcare leaders share leadership activities with front-line workers in crisis [6]. Hospital teams had a sense of autonomy in decision-making and were flexible in connecting with other teams and the crisis command center.

During the pandemic, the issue of (de)centralization was widely discussed. Key arguments for decentralizing healthcare systems in the OECD countries were increasing efficiency and better adaptability of healthcare services to patients' needs [7]. In countries with decentralized healthcare systems, central authorities are responsible for the health policy framework as well as monitoring and coordination. In that case, lower-level authorities are taking care of the inputs and outputs of healthcare services. A conclusion of the efficiency research in responding to the COVID-19 crisis in the three Italian regions: Lombardy, Veneto, and Emilia-Romagna, was that strong vertical coordination is needed when the system is highly institutionally decentralized [7].

However, in the COVID-19 crisis, flatter organizational structures with less traditional hierarchical levels increased healthcare institutions' capabilities to adapt to new emerging requirements. Moreover, modularization refers to flexibly combining and rearranging modules such as a) testing, tracking, and quarantining; b) lockdown and social/physical distancing; c) intensive care treatment; d) gradual re-opening of society as significantly improving the efficiency of governance response to pandemic [8].

When faced with turbulences, systems including healthcare need to demonstrate resilience, which depends on turbulent governance, as a response to "events, demands and support that interact and change in "highly variable, inconsistent, unexpected or unpredictable manners" is becoming a "new normality" in public governance [9]. After the pandemic started more than three years ago, the new turbulence affected all major aspects of human life in Europe. Furthermore, the climate change impact on society causes the necessity to tackle the disaster and migration risks issues and calls for a new "turbulence approach" in organizational governance [9].

Turbulence has been defined as the cumulative effect of several disruptive events and crises, posing a challenge to existing decision-making and governance, so recent research suggests incorporating the "organizational turbulence" approach in public policy [10]. There are three major factors for integrating turbulence in governance: 1) speed in communications, 2) complexity due to interdependence and unpredictability, and 3) potential or actual conflicts among different stakeholders. The COVID-19 crisis proved that governance needs to evolve along with the world and that resilience becomes a sine qua non for the success of governance processes [10].

Response in low-chance, high-impact situations, such as the COVID-19 crisis, requires on-the-spot decision-making, flexibility, and informal coordination [11]. The COVID-19 pandemic required healthcare institutions to relax control to increase organizational capacities for improvisation. A good example of growing autonomy for front-line clinicians is the pediatric intensive care unit (PICU) at Loma Linda University Children's Hospital, California, USA. Decision-making is migrated to the front-line staff regardless of their rank or seniority. However, improvisation requires a common frame or structure around which adjustments occur. Having structure supports collective actions through coordination [11].

NEW APPROACH IN MANAGING OF PUBLIC HEALTH ORGANIZATIONS UNDER UNCERTAINTIES

An important pandemic challenge to governance is intercurrency, where "unexpected interactions occur between otherwise independent or compartmentalized subsystems" [12]. Managers perceive intercurrency as a sudden pattern change that produces unexpected outcomes. Dynamic interactive change and uncertainty are challenging to be responded to because they are highly variable, inconsistent, unexpected, or unpredictable [11].

The first instinctive reaction of managers once they perceive turbulence is to protect the organization from it and to keep the status quo. However, the second impulse points toward organizational transformation, and Ansell & Trondal sum up "windows of opportunity" for significant policy changes and novel organizational solutions [9].

Concrete guidelines to the healthcare sector managers are not to behave as rigid bureaucrats but as situation-oriented professionals who urge innovative and creative approaches in dealing with emergencies – which has to be supported by the policymakers and control officials. Hospitals should establish local incident management teams consisting of a clinical director, a managerial director, public health specialists, and a reference person to regional or state command centers [13].

As we pointed out, features of the COVID-19-induced crisis were unpredictability, and quick changes of circumstances with a high degree of surprise, resulting in a strong sense of lack of control and high emotional disruption. In such cases, routine solutions are mainly inappropriate. However, during the two years of acute COVID-19 infection, in many cases, institutions reached for static resilience and took steps to maintain and restore equilibrium conditions. Planning aimed to find a way for the organization to resist changes.

However, during the two years of acute COVID-19 infection, it became clear that turbulent problems can't be dealt with simply by building resilience based on employees trained to apply routines using emergency equipment that would be employed when the next unpredictable event with high and widespread impact occurs. In other words, the proper answer to turbulent situations is not to try to restore past equilibrium but to search for new ones [14].

Some factors, such as the availability of testing capacities may lead to distortion of epidemiological situation assessment. For instance, in Italy and Spain, due to limitations in testing capacities, health institutions set more stringent criteria for testing, limiting it only to those with severe symptoms and high risks of comorbidities [15]. That could result in a

flattened epidemic curve and misleading conclusions regarding epidemic status. The opposite example provides countries like South Korea with more liberal eligibility testing policies [16].

During the pandemic, healthcare institutions were faced with limited facilities. In Italy, more than two-thirds of buildings were near the end of the life cycle, limiting their adaptability and efficiency in response to patients' demands [17]. Broader use of digital technologies by hospitals during a health crisis in monitoring the health status of patients would decrease pressure on hospital capacities. Using the Internet of Things remotely will reduce contact between infected patients and medical institution staff. A wider range of medical procedures that can be treated without physical presence based on digital systems will increase their capacities and enable more successful management, which is particularly important during turbulences [17].

As Ansell and Trondal [9] pointed out, health system institutions must demonstrate variety, modularity, and discretion to manage turbulence by adopting and applying dynamic resilience. Variety means that an organization's internal structure fits well with its environment's diversity. Modularity refers to adaptability to changing customers' requirements [18]. Discretion means that managers and employees can make decisions quickly with no significant constraints coming from complicated hierarchical procedures that require numerous levels of approval [17].

The growing role of the private sector in fulfilling citizens' health service demands led to reduced public sector capacities. Decreased public health institutions' capacities, followed by underinvesting, threatened their ability to handle pandemic emergencies.

Attempt to introduce private sector models of management in public sector health institutions in Commonwealth nations resulted in increased inefficiency and rising costs of health services followed by deterioration of the overall quality of health care [19]. Assumed superiority of managerial over bureaucratic control in healthcare institutions did not result in improved performances as expected. In many cases, the use of managerial instruments failed to simplify hospital procedures and increased their costs [20]. Permanent monitoring and measurement of performance in the healthcare sector resulted in ambiguous responsibility and increased complexity [21].

The need for a proactive role of the state i.e. public sector in terms of emergencies has been highlighted in the International Health Regulation (IHR), a binding document adopted by the World Health Organization, and came into force in 2007, requiring coordination of efforts

across states to control the effect of any health threats of international concern protecting dignity, human rights, and freedom. However, the pandemic showed that many countries failed to apply the IHR, particularly regarding the standard of 'the duty to warn' i.e. early alert, notification, and response, as well as government commitment and financial support.

INTERNATIONAL EXPERIENCES IN IMPLEMENTATION OF NEW ORGANIZATIONAL MODELS – LESSONS LEARNED SO FAR

Different approaches among countries in responding to the COVID-19 pandemic's induced challenges shaped based on various theoretical models resulted in different outcomes regarding the pandemic curbing success. Experiences of more successful countries may be used for further upgrading of health sector governance. Medical institutions are not just health service providers, but significant purchasers of inputs for their operations, primarily of medicines and medical devices. During the COVID-19 crisis healthcare institutions were faced with disruptions in their supply. For that reason, the issue of purchasing should be covered in the discussion of lessons learned so far on how to improve overall medical institutions' governance.

In the UK, the Government first identified risks that may endanger the UK in the future and assessed each of the risks regarding their: 1) impact and 2) likelihood to occur based on a reasonable worst-case scenario on a scale of 1 to 5 and plotted on a risk matrix [1]. The pandemic risk was assessed as 5 regarding its potential impact (maximum) and as 3 regarding its likelihood (medium) in the risks matrix.

In April 2020, plans for 2019 were reviewed and one of the findings was that 82% of plans failed to meet the requirements of actual incidents [1]. Similar cases of inadequate answers to pandemic challenges were evident in other countries. That was a signal that a new approach to dealing with the pandemic and other emergencies is needed.

Based on that experience, the UK Government adopted a new "bottom-up" model to dealing with turbulences. According to the new approach, "decisions should be taken at the lowest appropriate level with coordination at the highest necessary level" [1]. Since the pandemic affected the whole society, a central coordinating body (the Cabinet Office) proved necessary. Moreover, lower levels of government such as line ministries, departments, and local authorities were actively involved in planning and responding to contingencies.

The pandemic required dealing with new contingencies such as fear, anxiety and, misinformation, managing medical staff shortages, and losing suppliers of medicines and medical devices. A specialized body that would take care of potential emergencies permanently in the health sector was needed. In response to that requirement, the Health Security Agency was established in 2021. The Agency became responsible for "planning, preventing and responding to external health threats, including pandemics" [1].

As in the UK, the "bottom-up approach" has been seen as effective enough in terms of a healthcare sector response to the pandemic in Switzerland. The empirical study has shown the importance of decentralization and decision-making participation at the micro-level i.e. level of teams and employees, which is crucial for good governance in turbulences. Although all organizational levels are essential for enhancing the system's resilience, the workers' and team initiatives provide insights from the 'front lines of the battle' where their collective self-regulation strategies support organizational resilience [22].

In some countries, such as Germany and South Korea, health systems responded much better to the pandemic than in other countries, thanks to the significant role of state-owned health institutions and the capacities of central authorities to coordinate private health institutions efficiently. Despite Germany's developed public healthcare sector, health institutions at the lower level of public administration were neglected. Local public health authorities were underfunded and understaffed for years with shadow existence [23]. However, with the rise of the pandemic, they became one of the key strongholds in efforts to overcome the crisis. Moreover, they are expected to remain key players in potential health emergencies.

South Korea had a less centralized approach than most other Asian countries. The roles and responsibilities of local administration and local communities were significant. One of the main characteristics of the South Korean approach was a high level of transparency, including sharing of all data with its citizens [24]. South Korean central coordinating body was the Korea Center for Disease Control and Prevention (KCDC) while other specific tasks were entrusted to relevant ministries and agencies. Delegation of roles and responsibilities proved to be an efficient solution when the number of infected people reached high figures. For instance, the Ministry of Interior and Safety (MoIS) monitored people in self-isolation, surveying those with high exposure to become contagious, primarily those who traveled to high-risk regions. That freed up the capacities of KCDC, enabling it to focus strictly on medical issues [25].

There was clear political leadership by the South Korean president, who made decisions based on expert group advice with a complete understanding of fluctuations and emerging risk

factors. Decision-making was decentralized, thus enabling local authorities to manage medical institutions' capacities to meet the rapidly increasing demand for medical treatment of severe cases. Moreover, local communities were included in overcoming shortages in treatment capacities. For instance, companies like Samsung and LG offered their training centers and facilities as life treatment centers [25].

The experience of hospitals in Paris in responding to increased demands when material and human resources were highly constrained and with very strong time pressure confirms the importance of implementing flexible organizational processes [26]. Crisis teams included both physicians and nurses with complementary skills in dealing with crisis situations.

As we have already pointed out COVID-19 crisis tested the supply function of health systems around the world. Established supply chains were broken while requirements from healthcare institutions as health service providers changed significantly. The health sector had to prioritize purchasing specific goods and services over others. Health authorities worldwide were forced to re-examine and modify purchasing arrangements due to changed needs.

Demand for health services changed towards a sharp increase in demand for pandemic-related healthcare services that include staffed hospital beds, and intensive and critical care beds [27]. Moreover, there was a surge in demand for specific pandemic-related services such as testing, tracking, and tracing. That included viral and antigen tests, tracking and tracing mobile applications that purchases were set as priorities.

The COVID-19 crisis changed health services modalities as well. For instance, in many countries, there was a surge in telehealth that required new technology, infrastructure, and training. A surge of demand for high-quality facemasks, gloves, ventilators, and other medical devices put suppliers in a favorable market and negotiating position in relation to health sector buyers. The consequences were chaotic and corrupt markets and competition among healthcare institutions to obtain needed products from monopolistic suppliers [27].

This situation led to an increased role of procurement in health policy during the crisis. In order to design a procurement system that would be able to respond to health crisis challenges, it is necessary to discuss the specifics of procurement in the health sector. Medicines and medical devices are mainly produced by monopoly providers (in particular medicines that are usually protected by intellectual property rights). The second issue is related to transaction costs of procurement [28].

If a supplier is changed frequently (once in two years, for instance), that can create disruption for patients who interact with the system, generating additional costs for medical institutions from transferring patients' records from one to the other information system, etc [29]. In cases when suppliers count on prolonged contracts with medical institutions he would be willing to build trusted relationships with it and to improve his service. That reduces the costs of contract execution monitoring by health institutions.

In times of crisis, speed is of critical importance. In that situation regular (open) procedure cannot be applied, but negotiated procedure without prior notice. Numerous studies confirmed that urgent situations are related to increased risk of misuse of public funds and corruption [30–33]. Governments are faced with challenges to find a balance of interests of both sides: purchasers (health institutions) on one and suppliers (producers of medicines and medical devices) on the other that would sustain in urgent situations such as a pandemic.

In order to increase Europe's ability to respond to future crises in an adequate way and in a timely manner, the EU set up the Health Emergency Preparedness and Response Authority (HERA). One of HERA's core goals is: "to address vulnerabilities and strategic dependencies within the Union related to the development, production, procurement, stockpiling, and distribution of medical countermeasures" [34]. Implementation of the task requires ensuring the manufacturing and procurement of key medical products and services relevant to pandemics. In order to achieve this, the EU promotes wider use of joint EU-level procurement including joint procurement of COVID-19 therapeutics and Advance Purchase Agreements of COVID-19 vaccines [34].

The need for better procurement coordination between different levels of governance was recognized in several studies [35–39]. The COVID-19 crisis has disrupted the supply chains for medicines and medical devices globally, posing major challenges to organizations and highlighting the importance of organizational resilience [40]. As Phillips et al. [41] pointed out national authorities in the UK failed to understand the true availability of products and local needs in medicines during the COVID-19 crisis. Broadly speaking, healthcare supply chain management (HSCM) needs to manage supply in order to be able to better adapt to changes on the demand side during turbulences. So far, healthcare supply chain management in pandemics was concentrated on six domains: vaccine distribution, personal protective equipment, drug supply chain, blood supply chain, healthcare delivery strategy, and medical supply tracking methods [42]. *De lege ferenda*, the more influence of front-line employees on decision-making

increases their motivation, thus having a positive impact on healthcare supply chain management emphasizing workplace democracy participation in management practices [43].

CONCLUSION

The pandemic caused two kinds of answers by the governments. One was “static resilience,” which aimed to maintain the status quo by building various buffers. The alternative approach was “dynamic resilience” which aimed to adjust governance continuously to rapidly changing conditions. Key elements of “dynamic resilience” are decentralization in decision-making, the more important role of front-line healthcare providers, higher transparency, and flexibility.

In many countries, the pandemic resulted in calls to strengthen state capacities to increase its ability to respond to health and other future crises. These calls are usually misinterpreted as a pursuit for “more state”. However, it is an aspiration for a different type of state that will have adequate capacities and capabilities to activate stakeholders from all governance levels and make them integral parts of a comprehensive process of transformation and adaption to turbulences. In that regard, the IHR effectiveness could also be provided considering the ongoing policy debate of revisiting the WHO international standards towards an approach based on integrated coordination of rights and responsibilities, as well as fair distribution of burdens, both at the international and national levels, including also the level of organizations.

While resilience in the healthcare system has been mostly analyzed in the literature on the level of individual employees, as well as some comparisons between personal and organizational level practices, there is a relative lack of analysis of the organizational structure and practice factors. The contribution of this study to the existing knowledge is in providing insights into building resilience in the healthcare sector focused on organizational-level practices, processes, decision-making, and structures in turbulent environments.

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