vol. 13, nº 2. ISSN 2317-7721
DOI: 10.12957/rdc.2021.53644

COVID-19 CRISIS MANAGEMENT IN MEXICO: INITIAL REOPENING

COVID-19 GESTÃO DE CRISE NO MÉXICO: REABERTURA INICIAL

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ABSTRACT

The COVID-19 pandemic has shaken the whole world throughout 2020. In Mexico, the management of this crisis has fallen upon a federal administration that took power in December 2018 and promised to prioritize the poor and the marginalized. On the other hand, the health care system has been neglected for many years and is undergoing a transformation process (OECD, 2019; Presidency of the Republic, 2019). The present paper examines how federal government organizations managed the initial phase of the crisis, involving general confinement at the national level, and the first six weeks of the gradual reopening of activities, the so-called "new normality," which has been implemented by subnational governments. We employ crisis management theory as a theoretical framework to analyze coordination instruments in a profoundly fragmented health system, leadership styles, and the implementation of voluntary quarantine avoiding coercive measures. Concerning our methodology, we describe a mixed case study based on federal regulatory instruments, abundant publicly-available official information, and a press review for the study period. Finally in the concluding section, we point out the reasons why we consider that the management of the crisis in Mexico has been acceptable during the first months of the crisis.

Keywords: crisis management, coordination, Mexico, COVID-19, reopening

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vol. 13, nº 2. ISSN 2317-7721
DOI: 10.12957/rdc.2021.53644

RESUMO

A pandemia COVID-19 abalou o mundo inteiro ao longo de 2020. No México, a gestão desta crise recaiu sobre um governo federal que assumiu o poder em dezembro de 2018 e prometeu priorizar os pobres e os marginalizados. Por outro lado, o sistema de saúde foi negligenciado por muitos anos e passa por um processo de transformação (OCDE, 2019; Presidência da República, 2019). O presente trabalho examina como os órgãos do governo federal administraram a fase inicial da crise, envolvendo o confinamento geral em nível nacional, e as primeiras seis semanas de reabertura gradativa das atividades, a chamada "nova normalidade", que vem sendo implementada por governos subnacionais. Empregamos a teoria da gestão de crises como referencial teórico para analisar instrumentos de coordenação em um sistema de saúde profundamente fragmentado, estilos de liderança e a implementação de quarentena voluntária evitando medidas coercitivas. Com relação à nossa metodologia, descrevemos um estudo de caso misto com base em instrumentos regulatórios federais, abundantes informações oficiais disponíveis ao público e uma revisão da imprensa para o período de estudo. Finalmente, na seção final, destacamos as razões pelas quais consideramos que a gestão da crise no México foi aceitável durante os primeiros meses da crise.

Palavras-chave: gestão de crise, coordenação, México, COVID-19, reabertura

INTRODUCTION

Mexico is a federal country with a current population of 125 million inhabitants (INEGI, 2019). In 1983, the operation of the health sector began to be decentralized; the process moved forward in 14 of the 32 states, but then it stopped (Cardozo, 1993). It was then resumed in late 1996 with the transfer of human, material, and budgetary resources, and the normative role was reserved to the federal government (Cabrero, 2010).

In 2019, at the beginning of the current administration, Mexico had an inadequate, inefficient, and impoverished public health system, also scourged by corruption, which left millions of people without access to any of the institutions or benefits of the system or facing ailments lacking adequate coverage, while at the same time, private dispensaries, clinics, and hospitals of all kinds proliferated (DOF, June 12, 2019:12). Additionally, the health care system is undergoing a transformation process.

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DOI: 10.12957/rdc.2021.53644

The Popular Insurance was recently eliminated, and the Health Institute for Well-being (INSABI) was created instead to provide health care services, medicines, and supplies to people lacking social security (DOF, November 29, 2019, art. 2).

National health services are severely fragmented. Six federal agencies are responsible for the provision of health care services to different population segments. The Mexican Social Security Institute (IMSS), largest of these agencies, provides the services to personnel from private companies; the Institute for Social Security and Services for State Workers (ISSSTE) provides it to federal government employees; the Health Secretariat (SSA) to people not registered with the previous two, and state-owned oil company Petróleos Mexicanos (PEMEX), the Secretariat of National Defense (SEDENA), and the Naval Secretariat (SEMAR) operate their own networks of hospitals for employees, military personnel, and marines, respectively. The health sector fragmentation increased with the 1997 decentralization reform, which established the creation of health care agencies and their corresponding hospital systems in each of the 32 federal entities to provide medical services to state government workers and people lacking affiliation to a federal social security institution (Culebro & Castro, 2017; Bode & Culebro 2014).

There are three levels of attention. The first level includes the Family Medicine Units (IMSS), Health Care Centers (SSA), and Family Clinics (ISSSTE), which provide attention to 80% of core health issues. The second level of health care includes the General Hospital; different regional, integral, community, pediatric, and obstetric and maternal and children's health hospitals, and federal hospitals located in Mexico City, which play the role of health centers for the entire national territory and carry out diagnostic, therapeutic, and rehabilitation procedures for patients referred by the first level, in addition to specific clinical or surgical treatments. The third level of health care is a network of highly specialized hospitals using advanced technology to deal with complex, low-prevalence, and high-risk diseases in patients referred to by the second level. These hospitals are known as National Medical Centers (CMN), Specialty Medical Units (UMAEs), and National Health Institutes; most are located in CDMX, but Regional Specialty Hospitals operate in six different regions in the country (Culebro, Méndez & Cruz, 2019).

In the regulatory field, the General Health Law establishes that the National Health System consists of federal public administration agencies and subnational governments, as well as individuals or

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DOI: 10.12957/rdc.2021.53644

companies in the social and private sectors that provide health care services and the mechanisms for coordinating their actions (DOF, February 7, 1984, art. 5); it also points out that health authorities are not limited to the Health Council at the federal level: it includes the state governments, which collaborate with the federal Health Secretariat and operate their own health care systems (art. 9).

In this regard, the article seeks to understand how federal government organizations managed the initial phase of the crisis and the way in which state governments implemented the recommended measures. The present article is organized as follows. We will first present the theoretical-methodological approaches guiding the analysis; subsequently, we will describe the first management phase of the COVID-19 crisis, as well as the second phase, which consists in the reopening of activities, and finally, we will put forward lessons resulting from the analysis.

I. Crisis management and coordination

Crises are complex phenomena that demand the adoption of a multidisciplinary perspective to understand their dynamics and management (Boin, Hart, & Kuipers, 2018). The present study adopted organizational theory and institutional analysis to address crisis management in the Mexican health care system.

A crisis represents a threat to the underlying structures, norms, and fundamental values of a system, which is why their management requires immediate decisions and actions (Backman & Rhinard, 2017; Boin et al., 2005; Christensen et al. al., 2016; Matthews, 2012) in a context where uncertainty, short times (Boin et al., 2005; Christensen et al., 2016), and scarce resources are the norm. The crisis management approach partakes from the inevitability of crises, although the role of prevention and risk management are also important. It also points out that crises represent opportunities for some actors (Boin, Hart, & Kuipers, 2018).

There is, however, a special type of crisis: the progressive crisis. Its effects are more devastating than those of other types of crisis because it emerges abruptly, rapidly transcends physical and administrative borders, is difficult to identify, can be perceived as external when first detected, and requires a management strategy that challenges traditional governance models (Boin, 2020; Boin & Lodge, 2019; Drennan et al 2014).

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Crisis management is the sum of activities focused on minimizing the possible impact of a crisis or a disaster (Boin, Kuipers, & Overdijk, 2013). Crisis management effectiveness can be assessed based on ten executive tasks: early recognition; sensemaking; critical decision-making; orchestrating vertical and horizontal coordination; coupling and decoupling; meaning-making; communication; rendering accountability; learning; enhancing resilience (Boin, Kuipers, & Overdijk, 2013).

The importance of adequate crisis management resides in its goals of saving lives and protecting infrastructure, but also of recovering the population's trust in public institutions (Boin, Kuipers, & Overdijk, 2013) since during crisis people turn to their political leaders (president, governor, mayor, senior public officials) for guidelines on how to evade or minimize the threat (Boin, et al, 2005).

Governments are confronted with the unknown during crises, and they immediately relate to a wide range of actors who constantly question their actions and demand transparency, high ethical standards, and accountability. Therefore, they adapt processes, structures, intervention mechanisms, and working teams as quickly as possible (Baubion, 2012), seeking to combine flexibility and efficiency in a fragmented administrative environment (Christensen et al., 2016). Thus, in the face of such a complex problem, coordination stands out as a most urgent necessity since areas in different agencies report to organisms whose functions overlap, and some areas remain unattended (Koop & Lodge 2014).

The institutional analysis approach and organizational theory see coordination as a process in which a set of interdependent actors adjust their activities and decisions to accomplish specific goals shared by at least two of the actors involved and to improve political coherence (Koop & Lodge 2014). Its complexity is due to the diverging interests and approaches of the different persons and agencies involved; however, the appearance of contradictions and incoherence should not be assumed as deviations, but as expected and common elements during crises (Wolbers *et al.*, 2018). A coordination process requires, firstly, willingness to cooperate with others. Depending on their specific function, it can be difficult for actors to agree on the goals to be met and the actions and decisions to be adjusted.

Coordination mechanisms rely on structures or hierarchical networks. The instrumental structural theoretical perspective (Christensen et al., 2016) refers vertical coordination to hierarchy: the higher the level of leadership, the larger the scope of the coordinating authority. Horizontal coordination refers to the joint work carried out by different actors at the same level, which generates networks of public servants from different areas and is joined by non-governmental actors (Christensen et al., 2016).

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II. Crisis management: from start to reopening

In preparation for the imminent arrival of the SARS-CoV2 virus (COVID-19), in January 2020, the federal government focused on two areas: increasing the installed hospital capacity and restricting activities to decrease the presence of people in the public space so that the spread of the disease could be temporarily contained and the hospital system was not overwhelmed. The first infected patient was detected on February 28. On March 13, when the number of cases increased from 4 to 12, the government implemented the National Campaign for Healthy Distance, in force from March 23 to May 30. The campaign consisted in a list of preventive measures suggested as mandatory, yet not coercive, intended for the entire Mexican population and people traveling in the country. Its goals were to decrease the number of people-to-people infections and consequently the number of people spreading the disease, with a particular emphasis on vulnerable groups, and to scatter the impact of the disease over time in order to guarantee access to medical care in severe cases (DOF, March 24, 2020).

These restrictions were: a) To avoid workplaces, public spaces, and other potentially crowded spaces, in case of adults over 65 years of age and groups of people at risk of developing a serious case and dying from it; these groups included pregnant or lactating women, children under five, the disabled, and people suffering from chronic non-communicable diseases (high blood pressure, lung disease, kidney failure, lupus, cancer, diabetes, obesity, liver or metabolic deficiency, heart disease) or any ailment that suppresses the immune system (or under a pharmacological treatment affecting the immune system); b) To temporarily suspend school activities at all levels; c) To temporarily suspend activities in the public, social, and private sectors involving physical concentration, transit, or movement of people (DOF, March 24, 2020).

Restrictions were divided into three types: closure of educational system facilities, closure of companies defined as non-essential, and closure of public or private spaces used for leisure activities. The invitation was summed up by the phrase "stay at home." Concerning educational facilities, all schools, public and private universities, and research centers were instructed to close for ten weeks, from March 20 to May 30. Initially, the two weeks of Easter holidays were moved earlier, and the full suspension of the schoolyear was announced shortly after that (SEP, 2020). These actions reduced the number of contacts among 37.8 million primary education students (25.5 million), 5.2 million secondary

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DOI: 10.12957/rdc.2021.53644

education students, 4 million higher education students, 1 million of people training for work, and 2.1 million teachers. Three subnational governments (Jalisco, Guanajuato, and Yucatán) suspended activities four days before, on March 17.

The second type of restrictions stated that companies, businesses, commercial establishments and all facilities necessary to cope with the contingency would continue operating, for example, hospitals; clinics; pharmacies; laboratories; financial, telecommunications, and media services; hotel and restaurant services; gas stations; markets, supermarkets, and convenience stores, and transportation and gas distribution services (DOF, March 24, 2020). Nearly 6 million private companies and more than 30 million employees ceased their activities (INEGI, 2020). Shortly thereafter, the number of people in supermarkets was restricted, and restaurants were allowed to provide take-home services only.

The third group of restriction, related to recreational activities, canceled music concerts, traditional religious festivities, and celebration of masses in churches; banned access to movie theaters and stadiums, and restricted access to public parks, public squares, and pedestrian streets.

The federal government considered the activities of the health, citizen security, national guard, army, and naval sectors essential, and stressed that security corporations would not be used to restrict free movement, impose fines, or detain citizens who violated contingency regulations. This approach is noteworthy because many countries decreed the suspension of individual guarantees, states of exception, or curfews. In sum, the goal of the campaign was to reduce the presence of people in the public space by appealing to persuasion in order to reduce the spread rate of the pandemic and thus avoid overcrowding the available facilities.

Three large e-messaging services companies operating in Mexico (Google, Twitter, and Facebook) provided the government with anonymous data on user mobility, as measured by the movement of users' cellphones, which served as a statistical proxy. These data were used to calculate the citizens' level of compliance with the National Campaign for Healthy Distance; the decrease in national mobility average was as high as 68% in some areas, a remarkable outcome when considering that, in Mexico, 60% of the population is informally employed and lacks social benefits that would allow it to afford a stay-home lockdown during a health contingency. The federal government claims that

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DOI: 10.12957/rdc.2021.53644

approximately 80 million people were away from the public space at the moment of greatest social distancing[4].

At the same time, the capacity of the health sector was increased by deploying five groups of actions, the first of which was hospital reconversion (Secretaría de Salud, 2020). Table 1 shows the increased number of hospitals that were partially or totally reserved for COVID-19 cases and the increase in the number of beds for patients presenting severe lower respiratory tract infection (LRTI), including those who required a mechanical ventilator, admitted in an Intensive Care Unit (ICU). The reconversion included federal and state government hospitals, among which 116 were rehabilitated by the army on June 13, including two that had been abandoned 10 years before.

Table 1

Hospital reconversion and bed availability

	April 24	May 1	May 15	June 1	June 15	July 1	August 1
COVID-19 Hospitals	645	667	734	789	803	904	Not available
severe LRTI beds	nd	14368	14144	22462	24411	27928	30712
LRTI beds ICU	6900				8424	9509	10338
% of general LRTI beds available	nd	71	63	46	44	55	45
% LRTI ICU available	nd	76	70	63	61	62	38

Source: Adapted from press conferences https://coronavirus.gob.mx/category/conferencias-de-prensa/

The second action involved the acquisition of specialized equipment, including gloves, face masks, gowns, and artificial respirators, among others. The third action refers to coordination among federal agencies (IMSS, ISSSTE, SSa), the 32 subnational health care agencies, army and navy organizations (SEDENA, SEMAR), and Pemex's hospital network. However, some of these coordination actions produced limited outcomes. For example, as of July 5, only seven states had signed a

[4] See https://www.youtube.com/watch?v=hy2jSwKiX3g

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coordination agreement allowing citizens access to health care institutions regardless of their affiliation[5].

The fourth action consisted in an agreement signed on April 23 with two groups of private hospitals in which the government committed to pay for 3,115 beds for patients not presenting COVID-19 to increase availability in public hospitals, focused on COVID-19 patients. The fifth action was the installation of two temporary hospitals supported by corporate groups and advisory services from public universities in Mexico City. The sixth action was to overrule restrictions associated with affiliation to specific institutions. Thus, in early May, the IMSS began to admit patients from other agencies, and on June 3, SEDENA began to admit civilian patients, with or without medical rights in other health care systems, while infected military staff was concentrated in SEMAR hospitals.

Overall, the strategy initiated on January 15 allowed for an increase in the installed capacity to provide health care to COVID-19 patients, even though approximately 30% of the health personnel in the IMSS and ISSSTE were sent home during the pandemic because they were over 60 years of age or were suffering from comorbidities that made them more prone to infection. As of May 12, 44,247 doctors and nurses (3,675 specialist physicians, 7,194 general practitioners, 1502 specialist nurses, 18,664 general nurses, and 13,212 health workers from other areas) had been hired, all of whom were given labor incentives[6].

[5] See https://www.youtube.com/watch?v=hy2jSwKiX3g
[6] See https://politica.expansion.mx/mexico/2020/05/12/mexico-ha-contratado-a-44-247-medicos-y-enfermeras-para-enfrentar-al-covid-19

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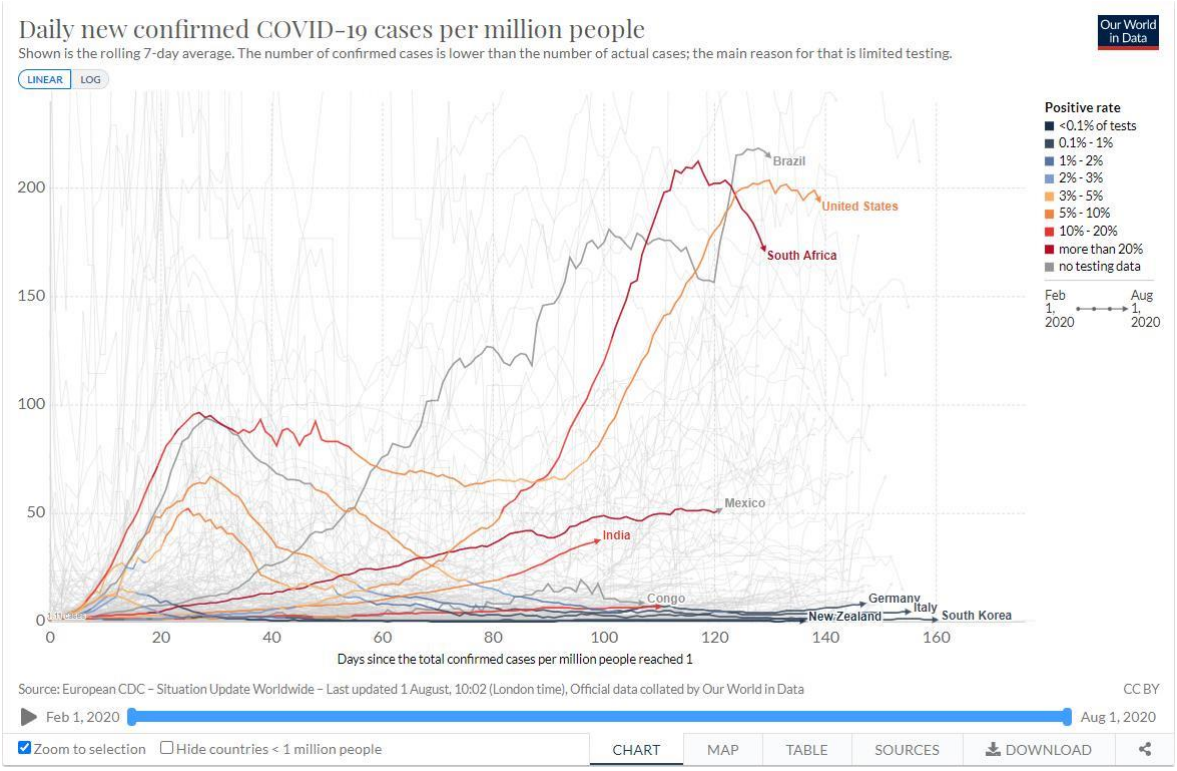
DOI: 10.12957/rdc.2021.53644



The outcome of social isolation and hospital expansion was certainly a "curve-flattening" one, that is, a smaller number of cases occurred over a more extended period. Thus, all cases requiring hospital admission could be cared for, and the hospital system was never overwhelmed. Figure 1, based on data from the University of Oxford[7], shows this phenomenon.

In addition to the daily morning conference by Mexico's President, a one-hour daily conference providing information on infection, death, and recovery rates using simple explanations supported by charts, images, and videos was publicly broadcasted since March 6. During these conferences, reporters and other agents asked questions and condemned cases of lack of equipment, aggression to health personnel, and discrimination, and authorities informed the citizenry on the status of the "traffic light" system by federal state. In these conferences, which at certain times had audiences of over 23 million viewers, fake news disseminated by social networks and media were refuted, and the citizenry was warned about the use of various medications.

[7] See https://ourworldindata.org/grapher/covid-daily-deaths-trajectory-per-million

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One of the most important elements during the crisis was the role of the federal government as a leader in facing the pandemic backed by transparency and supported by working groups, including medical specialists and researchers from public institutions, one of whose achievements was the creation of a statistical prediction model. The COVID19MEXICO database was updated and published every day[8] by the federal Health Secretariat. INEGI[9], the national agency in charge of statistics, published updated COVID-19 data and economic impact simulators. CONACyT[10], the national science and technology agency, created a website for georeferenced COVID-19 data.Health authorities visited companies to ascertain the temporary suspension of activities. As of April 14, 15% of companies identified as non-essential refused to suspend their activities temporarily, but as of May 4.94% of all companies were complying, and only 6% refused to stand down. As the crisis progressed, most federal and subnational hospitals improved their methods to inform patients' family members via phone calls and ad hoc smartphone apps.

Subnational governments assumed their responsibilities and gradually improved their coordination with the federal government. However, certain agents challenged the federal government's data and reports on equipment distribution, types of companies that could operate during the contingency, and budget requests for hospital operation and population support programs. In this regard, the daily reports by hospitals exclusively focused on COVID-19 cases should be taken into account. On July 3, 98% of hospitals (892 out of 912) were submitting their reports via the federal platform created for that purpose. Another relevant fact is that, by July 10, the health care system was still available to COVID-19 patients, although the demand rose to a critical point in some cities.

Concerning hospital coordination, 25 federal states currently have a Medical Emergency Regulating Center (CRUM)[11], which during the pandemic has allowed for COVID-19 patients to call 911 and be assigned to a hospital instead of personally visiting the facilities in order to request admission. The units admit patients without social security rights and allow for relocations from one health system to another one, which requires an agreement between the source and destination institutions.

[8] See https://datos.gob.mx/busca/dataset/informacion-referente-a-casos-covid-19-en-mexico
[9] See https://www.inegi.org.mx/investigacion/covid/
[10] See https://datos.covid-19.conacyt.mx/ y https://coronavirus.conacyt.mx/
[11] There is a lack of service in the states of Baja California Sur, Guerrero, Oaxaca, Nayarit, Nuevo León, Sinaloa and Yucatán.

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DOI: 10.12957/rdc.2021.53644

On the economic front, the federal government maintained and increased emblematic programs focused on poor and marginalized populations, the elderly, and students, and micro-enterprises were offered special small credits. Different forms of support were offered during the crisis, from food provisions and temporary social programs to a range of support measures to benefit private firms (credits, tax exemptions, or installment arrangements).

III. First eight weeks of reopening in Mexico

Citizen mobility was slowly recovered in some cities due to the increase in individual economic activities and operation authorizations granted by subnational or municipal governments. The National Campaign for Healthy Distance was still in force, but in general, around half of the population remained at home. As of May 30, a federal decree (DOF, May 14, 2020) established guidelines for subnational governments, as correspondent health authorities, to continue the reopening process toward the "new normality." These national guidelines included a weekly reopening system based on the principle of a traffic light. The federal government committed to continue providing detailed information and projected scenarios.

Table 2 systematizes four degrees of reopening identified by four colors (red, orange, yellow, and green) for the three groups of activities affected by the restrictions (schools, the public space, and economic activities). Its complement, table 3, shows the technical criteria used to assign the color.

Table 2
Traffic light by economic activity and allowed level of activity
Valid since June 1, 2020

Color/ Risk level/ Score	Activity	allowed level
Red	Schools	Suspended
	public spaces	Suspended

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(Maximum) 2.6 - 4.0	essential economic activities	Only essential economic activities
Orange (High) 1.6 - 2.5	Schools	Suspended
	public spaces	Reduced outdoor activities in public spaces; Suspended indoors
	general economic activities	Essential economic activities and non-essential activities with reduced operation
Yellow (Medium) 1.1 - 1.5	Schools	Suspended
	public spaces	Allowed attendance for outdoor activities in public spaces and in enclosed spaces with restrictions
	general economic activities	All work activities
Green (Low) 1.0	Schools	No restrictions
	public spaces	
	general economic activities	
Source: prepared by the authors, Semáforo por Regiones, published May 19 and June 12.		

Table 3

Technical criterion of traffic light system

Indicator	Weighting
Hospital occupation in the LRTI network	50%
Positivity to SARS-CoV-2 virus	10%
Trend in hospitalized cases	20%
Symptoms of COVID-19 syndrome	20%
Source: Prepared by the authors based on a document published on June 5.	

The weighting of the four technical criteria was criticized, probably because the traffic light was red for all 32 states during the first week (June 8-14). Some governors announced that they would use their own traffic light system, presumably due to pressure from economic actors in their territories. The intense debate around the system resulted in a small change in the weighting criteria and the following weekly procedure: calculation of indicators and presentation to governors at an online work meeting on

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Tuesday morning; reception of new data, confirmation of hospital capacity expansion for COVID-19, hiring of new health care personnel, increased provision of supplies to entities where the pandemic trend was on the rise, and new municipal-level measures (Tuesday and Thursday); Friday morning discussion in second virtual work meeting; public announcements on Friday night, and implementation on Monday.

In the second week (June 15-21), the scenario remained red for the whole country; in the third (June 22-28), 17 entities became orange while 15 remained red; in the fourth (June 29-July 5), 18 entities were orange and 14 were red. The epidemic began to decelerate at the national level, although its regional behavior was clearly differentiated. In the fifth week (July 6-12), the traffic light system was not updated due to inconsistencies in data provided by state governors, and the data from the fourth week was used. In the sixth week (July 13-19), after the contriversy, the system was updated with 14 states in orange and 18 in red status; these data were also used in the seventh week (July 20-26) In the eight-week (July 27-August 3), the system remained the same. During the ninth week (August 3-10), four relevant events occurred. First, after some controversies with some actors, the traffic light system suffered some adjustments, as shown in table 4. Second, as a result of the previews point, sixteen states entered to the orange phase of the system, whilst the other sixteen states remained in the red phase. Third, there was an agreement that the system ought to be updated every two weeks.

Lastly, and in relation with the previews points, although within the politics area, a letter supposedly signed by ten governors[12] demanded the federal government the immediate resignation of the person in charge of managing the covid-19 crisis, Hugo Lopez Gatell, the health sector sub-secretary. This happened because the governors said that his work so far was negligent. However, in the face of this situation, and due to the fact that the crisis management is a highly politicized issue, and in a way of trying impede some political actors from taking over the meaning creation aspect of the crisis management, the Mexican president publicly expressed his support to Gatell. This action ultimately provoked the participation denial, or withdrawal, of two governors into the creation and dissemination of such letter.

[12] https://doc-08-bk-apps-viewer.googleusercontent.com/viewer/secure/pdf/3nb9bdfcv3e2h2k1cmql0ee9cvc5lole/iosqe6n2u5hrsbeac9oc8d9oh5hug9sa/1596295125000/lantern/*/ACFrOgDULK-nhcU7t6pTuUXSWRNxD7Jaxy6l7iwFTSEt9ptMNphr8JHcm2uLQtqCxXI8kOz4J7FRZnNtaTcE1Teb7SKQlEDDV1DXqGfe7gblyTkPQEC3cbOAH8t68RvECnSSPOPs84Xg_y6vUkv?print=true .

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Table 4 **Traffic system technical criteria**	
Indicator	Percentage
Red IRAG hospital occupation	30%
Positively confirmed virus SARS-CoV-2 cases	10%
Hospitalized case trend	30%
Syndrome COVID-19 tendency	30%
Source: Own elaboration with data obtained from a document published on July 31	

After the initial controversy, the federal government remained as the crisis management leading force, and the reopening, albeit rapid, has been conducted in an orderly fashion, leaving room for specific actions by subnational governments, such as those undertaken by the governments of Mexico City and the State of Mexico.

Mexico City is part of the Mexico City Metropolitan Area, which also includes 59 municipalities in the states of Mexico and Hidalgo. It is inhabited by just over 21 million people (SEDATU, CONAPO, INEGI, 2017), which represents 17% of the country's total population. Due to its population density and intense economic, political, educational, cultural, and recreational activity, it became the epicenter of the pandemic since March, accounting for one third of all COVID-19 cases in the country. An additional reason is that the area concentrates most third-level health organizations. Therefore, for example, 20% of total patients admitted by July 10 were from different states[13].

In Mexico City, the evolution of the pandemic had come to a point where, for the first time in three weeks, the number of daily cases remained almost constant; in other words, the number of deaths and recoveries was similar to the number of new hospital admissions day after day, creating a plateau with a high number of cases. In view of this scenario, when Mexico City had already begun the gradual transition to new normality (Gobierno de la Ciudad de

[13] See https://coronavirus.gob.mx/datos/

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DOI: 10.12957/rdc.2021.53644

México, 2020) but remained red in the second week, the government initiated a program for the detection, protection, and safeguard of COVID-19 cases and their contacts[14], a community-level early care protocol that assembled medical teams to carry out a house-to-house information campaign, with a special emphasis on the boroughs, towns, and neighborhoods that were overcrowded, had precarious services, and where many of the inhabitants carried out informal economic activities, that is, areas where potential contagion was high. COVID-19 tests (Reactive C-protein, PCR) were administered to detect positive cases in the first days of infection, track patients' contacts, and monitor them using the Locatel telephone system and SMS text messages; COVID-19 medical kits and food provisions were provided to the infected population. Thus, in the third week, the city's color became orange. At the same time, the resumption of activities in Mexico City's historical center, a space visited by more than one million people per day, was announced on June 29, when new pedestrian mobility measures were implemented in Mexico City as part of the gradual plan toward new normality (Gaceta, 2020a). An additional action during the fifth week was to create a weekly-updated neighborhood-level scale (Gaceta, 2020b); based on daily incidence data and reports from community brigades, the 34 neighborhoods with the highest levels of infection were identified and given red status, which prompted the closure of activities and the increase in prevention and care efforts. Thirty-six neighborhoods had been identified by the sixth week, and on July 27, the number was 39.

A similar prevention program aimed at communities, called Brigadas Cuídate, was implemented in Tlaxcala. In Michoacán, the community care program incorporated telemedicine. These cases are remarkable because, on July 10, all state governments agreed to create intervention models of this type after the sixth week of reopening to halt the chains of contagion and abate the incidence of the pandemic. The pilot program began in Chiapas in the sixth week and in Tabasco in the seventh.

[14] See https://cdmx.gob.mx/portal/articulo/programa-de-deteccion-de-casos-covid-19-y-sus-contactos.

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DOI: 10.12957/rdc.2021.53644

In the state of Mexico, as of May 19, 2020, in accordance with the health strategy and the agreement issued by the federal government to reopen social, educational, and economic activities, the state government established a plan for a safe return to activity, which consisted of four main axes: health care, gradual reopening of activities, mobility, and coordination for the reopening of Mexico City[15].

The system used to monitor the development of the pandemic uses four colors to indicate risk levels. The color red indicates a maximum level of sanitary alert in which only essential activities, or the "new essential" activities—construction, mining, and transportation equipment manufacturing—, small businesses not involving agglomeration of people, manufacturing activities, and various types of services can be carried out provided the business complies with the established sanitary preventive measures, such as the use of face masks, the reduction of capacity to 30% for services facilities, and keeping a distance of 1.5 to 2 meters between employees, among others.

The orange color indicates high health risk, and in addition to the activities allowed by the red status, it includes the opening of religious services, also at 30% of total capacity. The yellow color indicates intermediate health risk, and it allows for the reopening of museums and theaters, among other locales, at 60% of total capacity. Finally, the green color indicates a status of low health risk, and the allowed number of people in the facilities is not limited. Educational activities can also continue as long as it is so determined by the relevant health and education authorities.

Additionally, the territory was divided into four zones, two of which included metropolitan areas where the colors were used for "traffic light-based" monitoring. One of these metropolitan areas shares territory with Mexico City; therefore, the safe reopening plan involves coordinating the cities by using similar guidelines, criteria, and actions to harmonize and supervise the reopening of essential and non-essential activities, enforce measures to guarantee the execution of the plan, and make decisions on mobility.

[15] See https://salud.edomex.gob.mx/salud/plan_regreso_seguro

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LESSONS

Although the Mexican health care system is fragmented and deteriorated, in general terms, the crisis has been adequately managed. Authorities followed recommendations by experts and international organizations during the first stage of generalized confinement, which lasted 70 days, and during the eight weeks between June 1st and August 1st, for a total of 132 days. Six arguments support this central idea.

Firstly, as the pandemic spread in China, Europe, and the United States, the Mexican government was able to act in advance and prepare for two months before the impact of the crisis, in late February, an important factor in two crisis management tasks: early recognition and strategic decision-making. Therefore, serious problems associated with the lack of basic equipment and staff availability dating back more than 15 years were solved, and interorganizational coordination actions to increase patient care could be timely put in place. Another advantage of this factor was the possibility to learn from the results of initial actions and reopening processes in other countries.

Secondly, the federal government's call to voluntarily comply with sanitary quarantine (i.e., its sensemaking role: a crisis management task) was well received by the population, especially during the first 10 weeks. This is particularly significant in a country where half of the population lacks social security and stable, well-paid employment, forcing millions of people to live hand to mouth. Coercive measures of all kinds, including unreasonable ones, were applied in different countries; in Mexico, however, although certain subnational or municipal governments used excessive restrictions, generating conflict with the citizenry, the national norm was to appeal to persuasion.

Thirdly, measures and information on infections, deaths, and tests were publicly disclosed on national network every day by a well-trained and highly acknowledged team of epidemiologists who were always supported by the president. This approach attached a scientific nature to the management of the crisis and allowed for the development of another important crisis management task: communication with the citizenry and national health organizations. The team was also in constant dialogue with the state governors and their health secretaries and was supported by multidisciplinary groups of scientists from public universities who developed mathematical prediction models. This

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communication policy was supported by abundant information presented in open access, editable databases with 34 variables per patient and options to generate charts and maps (certain inconsistencies can be observed).

Fourth argument. Leadership styles have played an important role, and the federal government has led the way in managing the crisis and its implications, fully endorsing the decisions of medical specialists, health sector officials, and scientists, as mandated by the legal framework. These actors were granted national visibility and attributions in other areas of the federal public administration with which they jointly established guidelines on which activities to restrict and which ones to define as essential; these criteria were used to elaborate protocols in different fields to determine the moment when the initial stage was to be terminated, even if high levels of contagion were still present, given the pressing need to reactivate certain economic sectors, especially export activities. Unlike other countries such as the United States or Brazil, whose presidents publicly disavowed their medical specialists, specialists in Mexico were fully supported. Therefore, the federal government has made important efforts to clearly and transparently assume leadership during crisis management.

Fifth argument. Collaboration lines between state secretariats were clearly defined by the president. Thus, for instance, actions by the secretariats of Economy, Tourism, and Education were aligned with partial success. Moreover, governors, business groups, and small companies were willing to continue paying full salaries to their employees, which increased their opportunities to obtain special credits.

Sixth argument. Organizations were willing to adopt new strategies that complemented the main program; this willingness allowed for a new line of action for prevention and early attention at the community level. Undoubtedly, the most complex management angle in the COVID-19 crisis has been the coordination between the federal government and the 32 subnational governments in their capacity as health authorities. The different political agendas involved in these relations, permeated by the partisan affiliation of each actor and the political aspirations of many of them, have been a confounding factor in the analysis. The demands of local economic and political actors become a factor that puts pressure on the governors and sometimes impels them to assume specific stances. Thus, some governors have accepted all federal regulations, whereas others were very critical or openly expressed their disagreement, in some cases threatening to not comply with the federal plan or take their own

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path. The dispute over resources has also been an issue during the crisis; the original budget allocation was insufficient, state governors have requested additional funding, and the federal government has responded with direct allocations of supplies, equipment, and medical personnel. In this complex scenario, the federal government, and especially the Secretariat of Health team, achieved the country's compliance with confinement measures during the first stage. Later on within Afterward, in a context of growing tension with state governments, the federal government negotiated the reopening of the traffic light system, which was in place until the eight (31 july) week, when the community prevention phone hotline was implemented.

Due to the unfavorable conditions brought about by confinement and the political dimension of the crisis and its management, the population's patience during this ordeal can disrupt the current balance and trigger a new epidemic phase, which will most likely be prolonged. If the new phase takes place in the form of a sudden outbreak, the crisis would transcend the sanitary sphere and acquire deeply political implications.

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vol. 13, nº 2. ISSN 2317-7721
DOI: 10.12957/rdc.2021.53644

Trabalho enviado em 11 de agosto de 2019
Aceito em 17 de agosto de 2020