COVID-19 and the structural vulnerabilities in the Spanish health and long-term care systems

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Abstract
The article analyses the impact of COVID-19 on health and long-term care systems, as well as institutional resilience by applying indicators of preparedness, agility and robustness. The study shows how the weakness of intergovernmental and cross-sectorial coordination instruments, and the particularities of the Spanish health and long-term care sectors, hindered the initial response to the challenges presented by the pandemic. However, after the first tragic wave of the disease, the intensification of cooperation mechanisms between health and social services authorities, as well as the free initiative of long-term care facility managers, corrected these initial errors and reversed the long-term care facilities’ extremely fragile situation.

Keywords Health care policy · Long-term care · Resilience · Spain · Vulnerability

Introduction

On 9 May 2021, the Spanish government put an end to the state of alarm which had been in force since 14 March 2020 and established three tools in order to fight the pandemic: curfew, restriction of social gatherings and perimeter closures of regions (Decree-Law 8/2021). At the end of the state of alarm, the number of officially reported infections was 3,567,408, while the number of certified deaths due to COVID-19 was 78,792 (many of whom were older people), and the incidence of the disease was still 170 per 100,000 inhabitants (Health Institute Carlos III 2021). These 14 months put the health and long-term care systems to the test in dealing with a challenge unprecedented in recent history.
The purpose of this article is to show the impact of COVID-19 on the health and long-term care systems, the interconnectivity between the two systems and the institutional resilience measures adopted to respond to the emergency situation. The rationale for the choice of the case study involves the socio-demographic and institutional particularities of Spain that conditioned the responses to the COVID-19 crisis. These were, on the one hand, the fact that it is a country with a higher percentage of elderly individuals than most OECD countries, yet it allocates a lower percentage of resources to long-term care (OECD 2021, 2022), and on the other hand, the evidence that institutional arrangements in decentralised countries such as Spain require an extraordinary effort of coordination at two levels: between central and regional governments, and between health and long-term care systems.

This work is supported by quantitative data taken from official sources, specifically the COVID reports released by the Ministry of Health, the National Centre of Epidemiology (2021), the National Institute of Statistics (INE 2020, 2021) and the Institute for Older Persons and Social Services (IMSERSO 2019, 2021). The results obtained from these data sources have been complemented by analysis of qualitative information on the protocols and emergency plans in force, and an interview with the Director General of the Health and Social Consortium of Catalonia, a public umbrella organisation made up of 108 associated entities in charge of health institutions and long-term care facilities (LTCFs) for older people. To understand the impact of COVID-19 on the health and long-term care sectors in Spain, we must first assess the institutional design and characteristics of the Spanish long-term care system. In-line with the analytical dimensions proposed by this Symposium, the present article assesses the institutional resilience of health and long-term care in Spain by assessing preparedness, agility and robustness and focusing mainly on the variables “institutionalisation of the elderly”, which refers to older people who live in long-term care facilities, and multilevel and cross-sectoral “coordination”, as some of the explanatory factors for the differences in mortality between regions.

The remainder of the article is structured as follows: the second section provides an overview of the developments throughout COVID-19 in Spain along with background information about the health and long-term care systems. The third section assesses institutional resilience along the three indicators. The fourth section explains how the long-term care sector achieved a high degree of resilience by adopting urgent organisational measures that succeeded in reversing the high mortality rates among the elderly during the first wave of the crisis. The final section highlights the main findings of the study and discusses the lessons drawn from the Spanish case.

1 We wish to thank José Augusto García Navarro, Director General of the Health and Social Consortium of Catalonia for the information provided for this case study.
COVID-19 in Spain

Spain is a highly decentralised unitary state with federal features (Ruano 2017) made up of 17 autonomous communities in which the central government is responsible for the general coordination, basic legislation and *ex ante* financing of the whole health system. For their part, regions can develop the basic legislation of the state, have a broad capacity for health planning and for territorial organisation, can opt for different models of health service delivery in order to maximise efficiency, and ultimately decide on the most appropriate level of funding according to their possibilities and political preferences. Thus, national health and long-term care systems are the sum of the regional systems, with the Inter-Territorial Health Council as the coordinating body between the central government and the governments of the Autonomous Communities. Consequently, this broad regional autonomy in the configuration of the health and long-term care systems is reflected not only at different levels of public expenditure, but also in the deployment of different care formulae for the dependent population or in the choice of models of service provision that are more or less based on collaboration with the private sector.

COVID-19 is a complex problem involving multiple interrelated variables such as age composition, the distribution of comorbidities in the population, the prevalence of dense urban centres, poverty, inequality or the occupational structure, among other factors (Alam et al. 2021; Mendoza et al. 2021). In Spain, as in other countries, COVID-19 mainly affected older people due to the greater presence of comorbidities such as cognitive impairment, hypertension, diabetes, cardiovascular diseases and respiratory diseases in this age group compared to other age groups. Moreover, it has been established that multimorbidity is directly associated with increased mortality from COVID-19 (Araújo et al. 2021a).

The frailty and dependence of most institutionalised older people necessitates a high degree of closeness and direct contact with the staff who take care of them (Machado et al., 2020; Araújo, et al. 2021a), which favours the spread of the virus. However, in addition to these causes which are shared with other countries, there are specific characteristics of the Spanish long-term care model that ought to be considered: it is based on family care (provided mostly by women) up to very high degrees of dependency and therefore there is a high concentration of very frail and elderly people in LTCFs. In addition, the high price of LTCFs favours a system of shared rooms as opposed to the model of supervised flats in countries with more developed welfare systems. Finally, the rapid growth of the sector in recent years has been based on the participation of the private sector, which owns 74.5% of the 5457 residential centres, most of which (over 384,000, with a coverage of 4.2%) are financed by public funds (IMSERSO 2019).

The long-term care sector employs approximately 320,000 people, which represents 1.7% of total employment (INE 2020). It is a highly feminised production sector (83% of workers are women) and it is concentrated in the private sector with part-time contracts, which often forces LTCF workers to work in several institutions due to precarious labour conditions. This movement generates a
greater number of infections (Araújo et al. 2021b). The decentralisation of social policies shaped a heterogeneous and diverse sector in terms of the ownership of LTCFs and their financing (public or private), their size, architectural characteristics, occupancy rate or environment (urban or rural). These factors may explain the greater or lesser impact of COVID-19 on the long-term care sector in the Spanish regions.

### Resilience indicators: an assessment

This section analyses the degree of institutional resilience of the health and long-term care sectors in Spain in the face of the crisis triggered by COVID-19 by applying the indicators of preparedness, agility and robustness. These three indicators have been operationalised in accordance with the definitions provided in the introduction of this Symposium (Gherghina et al. 2022). Thus, preparedness is understood as the existence of emergency plans for risk management and the institutional readiness to tackle the crisis. Agility refers to the speed of response to the unexpected circumstances arising from the crisis. Robustness is the degree of vulnerability of the health and long-term care systems and the extent to which these systems resulted in the recovery from the crisis (Table 1).

### Preparedness

Establishment of policy for the general coordination of health is a responsibility held by the central government (Ministry of Health). Prior to the COVID-19 crisis, the Ministry of Health had put in place several protocols for action in response to the influenza A virus (H5N1 and H1N1) and Ebola threats. These protocols provided

| Table 1 | An assessment of resilience indicators in Spain |
|---------|---------------------------------------------|
| Indicator | Score | Reasons for score |
| Preparedness | 1 | Health security plans and protocols that are not adapted to global threats  
Wrongful use of health care system due to fiscal austerity measures following the economic crisis of 2008–2014  
Lack of adequate information systems and personal protection devices |
| Agility | 3 | Slow response because of fear of overreaction that could harm the economy and because of misdiagnosis of the magnitude of the threat  
Weak intergovernmental and cross-sectorial coordination  
Gradual creation of technical working groups and development of protocols and support documents for long-term care facilities |
| Robustness | 3 | Qualified personnel, good health infrastructures  
Centralisation of decision-making in regional health authorities  
Scope for manoeuvre of the managers of long-term care facilities |
for coordinated actions between the national ministry and its regional equivalents. In addition, there is a National Security System that covers health risks. However, none of these action plans were implemented for various reasons: firstly, the idea, which turned out to be wrong, that a new health crisis originating in Asia could not significantly affect Spain (Interview with Fernando Simón, Director of the CCHAE 2020). Secondly, the aim was to avoid an overreaction in the form of restrictions on movement and economic activity that would damage the incipient recovery that began in 2014 following the severe crisis suffered since 2008. In addition, the health system had been weakened by the financial cuts implemented in Spain to address the fiscal crisis with a 12% reduction in public funding between 2010 and 2015 (Bank of Spain 2021). Furthermore, there was insufficient personal protective equipment and scarce information on the new virus and capacity to process it (Ministry of the Presidency 2021: 280).

Consequently, one year after the start of the pandemic, in March 2021, 91,800 more deaths were observed in Spain in comparison with a regular year, although official coronavirus deaths were 64,700. The Spanish government has admitted that during the first months of the health crisis it had only “partial or little updated information” and that the epidemiological surveillance system was not prepared to process this volume of data rapidly enough “for proper decision-making” (Ministry of the Presidency 2021: 280). The most striking example of the information system weaknesses was the review of data on 27 May 2020, which suddenly picked up an increase of 12,000 unrecorded deaths since March (CCHAE 2020). The data show that most of the revisions relate to deaths that occurred after 75 years of age, which is consistent with the numbers of deaths recorded in LTCFs.

Although these action plans and protocols insisted on the need for cross-sectorial coordination between health authorities and non-health sectors, none of them provided for the possibility of intervention in LTCFs in case of an emergency, nor did they stipulate which ministries (national or regional) should collect and transmit information on deaths in LTCFs, which reveals the difficult practical coordination between health and social sector authorities which, like the LTCFs, did not have the capacity to tackle the threat on their own.

Indeed, the pandemic has hit older people particularly hard: those under 59 have always accounted for less than 10% of all deaths, while from March on, almost 90% of all deaths have occurred after 70 years of age. From that date on, the cumulative number of deaths occurring in LTCFs is 30,145 (9.42% of all residents), of which more than half (53.8%) are unconfirmed but compatible with COVID-19, and occurred during the first stage of the pandemic when no tests were being carried out (IMSERSO 2021).

Agility

The Spanish government reported the first case of COVID-19 at the end of January 2020, when the Chinese authorities in Wuhan acknowledged nearly three hundred deaths and thousands of people infected. The first death occurred on 13 February. Authorities took too long to approve tests for the numerous cases of atypical
pneumonia arriving in hospitals. In just one month (from 24 January to 25 February), the government changed the protocol for the care of people possibly affected by the coronavirus: at first, only patients who had travelled to risk areas or who had been in contact with a confirmed case were considered suspected cases; later, any person with acute respiratory problems was suspected. When the central government decreed a state of alarm on 14 March 2020, Spain had recorded 292 deaths due to COVID-19. One week later, that figure increased fivefold, and 2 weeks later over 20-fold, with 6200 deaths.

The lack of reliable information led the disease to be equated with a variant of the common flu (Interview with Fernando Simón, Director of the CCHAE 2020). Another consequence was the late reaction to evidence of the presence of the disease in Europe, especially in countries heavily affected by the disease such as Italy, with which Spain had many daily flight connections.

The management of this crisis resulted in the generation of significant inequalities in access to health care within the age group of the elderly. Some of the cleavages around which inequalities in access to health were caused are: institutionalisation/non-institutionalisation; public/private; COVID/other pathologies.

In relation to institutionalisation/non-institutionalisation, defined as the ratio of long-term care places per person over 65 years of age, older people living at home had access to intensive care units, while institutionalised older people did not have this possibility. The application of the action protocols required close collaboration between health services and social services, which did not exist, and this initial disconnection had fatal consequences for institutionalised older people during the first months of the pandemic. However, the lack of common guidelines was made up for by the direct intervention of LTCF managers, which constitutes the main source of resilience. As for the public/private cleavage, those with private health insurance had access to hospital services, but this possibility did not exist—at certain peak moments—for public network users. With regard to the COVID/other pathologies cleavage, there was an exclusion of those who presented with symptoms compatible with COVID as opposed to those who sought health services for other pathologies.

**Robustness**

The Spanish health system has traditionally enjoyed a good image among users and professionals, both in terms of the degree of coverage and the general quality of the services, and it is considered internationally to be one of the most developed systems (Global Health Security Index 2019). However, the impact of the pandemic on LTCFs for the elderly can be explained, to a large extent, by the absence of an integrated health and social care system that would provide LTCFs with appropriate health care. This is why one of the most significant differences in terms of mortality between regions is the degree of institutionalisation achieved by the care system for the elderly. Thus, not only are the lack of personal protective equipment and testing facilities against potential infections, from visitors or staff, factors that may have been reflected in the differences between regions, but also the institutionalisation factor itself.
In this sense, although the national average of long-term residential places is 4.2 for the total population over 65 years of age (IMSERSO 2019, 2021), significant variations can be observed between regions (from 2.1 places in the Canary Islands to 7.6 in Castille and Leon); thus, a higher institutionalisation ratio precisely correlates with a higher mortality ratio in eight out of the ten most affected regions, which, in other words, would mean that regions with more institutionalised long-term care systems have suffered a higher impact as a result of the pandemic. Certainly, this correlation does not mean that the institutionalisation of elderly people is the only explanatory cause of the difference in mortality rates between regions (since interrelated factors of a different nature are involved), but it can be seen as a powerful explanatory factor in the high mortality of older people during the first wave of the crisis.

The initial uncertainty was progressively replaced by an intense adoption of regulations and action guidelines for the fight against COVID-19, which were the output of the re-activation of multilevel coordination tools. Thus, Decree-Law (21/2020) established measures to respond to new waves of transmission, surveillance, detection and control of cases and for the protection of residential centres for the elderly, placing these centres in a subordinate position to the health authorities for the first time.

Another example of the strengthening of coordination instruments is the approval of the “Early Response Plan” by the Inter-Territorial Council, which created a dynamic risk assessment system based on indicators which serve as a reference for the adoption of measures by the regions according to their specific epidemiological situation (Inter-Territorial Council 2021).

**Societal impact of institutional resilience**

Increased intergovernmental coordination, centralised decision-making within regional ministries of health and management innovation are the three positive effects of institutional resilience in the health and social domains that the pandemic has put to the test.

With regard to intergovernmental coordination, both the general coordination arena between central and regional governments (the Conference of Presidents) and the main instrument for sectorial coordination in health matters (the Inter-Territorial Council) were reactivated, thus facilitating joint decision-making during the period of “co-governance” and approval or protocols for action which sought to guide the decisions of regional governments in the health sphere. Likewise, in the social field, the impulse for intergovernmental cooperation has been provided by the System for Autonomy and Care for Dependency (SAAD), a technical body at the level of the Directorates-General which set up specific working groups to analyse the situation of LTCFs, obtain information and generate best practice strategies and protocols for their implementation.

The centralisation of decision-making in the regional ministries of health gave the LTCFs a clear point of reference while consolidating stronger channels of information, monitoring and control of the situation at both the political and technical
levels. The progressive development of supporting guidelines and guidance documents put an end to the chaos and uncertainty experienced during the first wave of the pandemic. Up to that point, the channels of communication between the LTCFs and the administration, as well as the most appropriate manner to proceed in a context of uncertainty and lack of personnel and material resources, were unknown. The physical characteristics of the LTCFs, the organisation of the services and the needs of the institutionalised elderly (and their degree of dependency) had not been considered, so improvised discriminatory decisions were taken instead. By contrast, the centralisation of decision-making led to closer and more effective interaction between primary health care services, hospitals and LTCFs. The development of primary care played an important role in this phase of LTCF intervention because it dispelled the sense of abandonment and disconnection from the health system, and it allowed the regions to follow their LTCFs more closely through regular visits, clarification of action protocols and establishment of criteria for referral to hospitals, which put an end to the initial practices of age discrimination that scandalised Spanish society.

Innovation in management was undoubtedly one of the main factors of resilience at times when material means of protection were lacking, when there was no clear leadership, when information from the administration was confusing and when guidelines were non-existent or contradictory. Thus, paradoxically, many LTCF managers took early legal responsibility for their decisions without coverage from the responsible administration.

Hence, in terms of personnel management, urban or larger LTCFs were more likely to be able to replace staff that fell ill. But the managers of some less fortunate LTCFs had to relax training and experience requirements in order to be able to recruit new staff. This was the case of the Health and Social Consortium of Catalonia (CSC), which recruited hundreds of people to work urgently in LTCFs after the training provided online. In addition, the training of health workers was deregulated so that students in their final years and retired physicians could join, accompanied by a distance and on-site training programme (Interview with José Augusto García Navarro, Director General of CSC 2021). Accordingly, LTCFs played a key role in mobilising standby staff and training their own staff by relying on the possibilities of ICTs for remote transmission of information and instructions to different stakeholders. The establishment of extraordinary shifts of up to 12 h to reduce rotations in the centres, the confinement of workers with residents as an extreme measure, the sectorisation of LTCF spaces and the reorganisation of human resource management were aimed at minimising contagion, both between and among workers and institutionalised elderly people.

LTCF managers often turned to neighbourhood associations or local companies for the production of homemade personal protective equipment in times of shortage of approved material when it was not possible to obtain it through other LTCFs with less supply problems, thus strengthening the links between LTCFs and the closest social actors in the search for urgent alternatives in the face of the pandemic.

Finally, in some cases, the necessary isolation measures were achieved through the provision of alternative facilities to LTCFs where outbreaks had been experienced at times when it was not possible to refer diagnosed cases from LTCFs to
Conclusions

The pandemic has put the health and long-term care systems to the test. National emergency plans in force did not have information systems, risk analysis or action planning adapted to the magnitude of a global pandemic, nor did they provide for the possibility of LTCF intervention in health crisis contexts. Poor risk assessment, uncertainty, over-reliance on health and care systems weakened by cuts in previous years, and fears of an overreaction that could damage the economy, slowed the central government’s response.

In theory, a country with developed health and social services sectors could be expected to do well in the fight against the coronavirus. However, what the Spanish case teaches us is that a complex decision-making system in which responsibilities are dispersed between levels of government requires strong coordination instruments to deal with a health crisis that demands a fast and unified response capacity. This was made possible by strengthening the decision-making arenas in the health and care sectors.

Another lesson to be learnt from the Spanish case is that administrative division hampers crisis response. Specifically, the article shows how the protection of vulnerable groups in crisis contexts requires cross-sectorial policies, which was achieved in the Spanish case by subordinating the LTCFs (under the regional welfare ministries) to the health authorities, after an initial period in which, contrary to what one might assume, the regions with higher rates of institutionalisation of the elderly and welfare development suffered a greater impact as a result of the pandemic.

Finally, the present case identifies the essential role of the LTCF directors as vectors of resilience, as they had enough room for manoeuvre to take decisions that reversed the chaotic situation experienced during the first months, through initiatives of a different nature, both at the organisational level and in terms of recruitment and training of their staff.

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