

The impact of COVID-19 on the elderly dependent population in Spain with special reference to the residential care sector

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Abstract *The objective of this study is to analyze the residential care crisis in Spain in the context of the COVID-19 pandemic and its impact on high mortality and abandonment of the user population. The direct, indirect and structural causes are analyzed. Specifically, precarious employment in residences over the past decade was analyzed as one of the main explanatory causes of the structural crisis of nursing homes. The theoretical focus of analysis is the comprehensive and person-centered care (CPCC) model based on the autonomy of people and the centrality of their rights. The methodology combines a quantitative analysis of employment and a qualitative analysis of documents and debates. The study concludes by proposing a comprehensive reform of long-term care that includes both a change in residential care in the form of small cohabitation units and reinforcement of care in the home and the community as a growing preference for the elderly population. An optimal combination of residential and home care is the basic proposal of this work.*

Key words *Nursing homes, Pandemic, Precariousness, Social and health coordination, Care reform*

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Introduction

COVID-19 had a great impact in Spain during the first wave of the pandemic between March and June 2020. Confronted with this crisis, health containment policies were imposed for the confinement of the population for three months, economic policies were enacted to address the drop in production, and employment and social policies were implemented to protect and care for the vulnerable population at risk of social exclusion, especially the elderly population, both living at home and in residential care settings.

The impact of COVID-19 on elderly and disabled people living in residential care settings has been especially intense and dramatic, resulting in high mortality and overwhelming the care response capacity. The major argument of this study is that the cause of this crisis lies not only in the pandemic but also in structural causes.

This dramatic impact has challenged not only the current model of residential care for dependent people but also the long-term care system implemented in Spain in December 2006.

In this context of a triple health, social and economic crisis, this study aims to answer three questions: What is the sociodemographic structure of the elderly population and the corresponding structure of service provision for dependent people? Did or does the residential care structure in Spain have the organizational and care capacity to confront the effects of COVID-19, focusing the analysis on the structure of professional employment in residential care settings? What impact has the pandemic had on the residential care sector, mortality, response capacity and crisis of governance and coordination among different central and territorial governments? Following the analysis, we consider what reforms are necessary both in the residential sector and in the whole long-term care (LTC) system to ensure that these institutions are of quality and have the affected people as protagonists. We conclude the study with a discussion of the results of the analysis. The second wave of the pandemic, which began in late August 2020, has again put the spotlight on the population living in residential care settings and on the need to implement comprehensive social-health protection policies, reinforcing that comprehensive reform of the LTC system in Spain in the context of the 2030 Agenda has become an urgent issue.

General overview of the structure of services for older people: special attention to the residential sector in Spain

Sociodemographic overview of elderly people in Spain

According to Eurostat, in 2018, there were 9.1 million people over 65 living in Spain (19.4% of the population), and aging projections for 2030 and 2050 indicate that people over 65 will represent 24.1% and 32.4% of the Spanish population, respectively (EU-27: 20.3%; 24.3%, 29.3%). People over 75 currently represent 9.6% of the Spanish population, reaching 11.8% in 2030 and 18.9% in 2050 (EU27: 9.7%, 12.1% and 17.1%). The dependency ratio (age 15-64) is estimated to increase from 29.2% in 2018 to 37.9% in 2030 and 59.3% in 2050 in Spain (EU27: 30.8%, 39.5% and 51.9%)¹. According to these estimates, in 2050, Spain will rank fourth among the EU27 countries with the highest dependency ratios and people aged over 65 and 75 years. Additionally, Spain is one of the EU27 countries with the highest life expectancy (21.6 years) and more years living in good health (11.4 years) at age 65. The potentially dependent population in the country will increase from 1.55 million in 2016 to 1.99 million in 2030 and to 3.20 million in 2050.

Other determinants must also be highlighted, including changes in the structure of the organization and provision of care for the elderly and dependent people that have occurred in recent decades. The reorganization of the traditional supply of care due to the smaller size of families and the growing participation of women in the labor force² have bolstered the supply of formal care services. As a consequence, the informal caregiver population has been reduced, and the volume of care hours for dependent people has increased. The percentage of the population over 16 years of age who performs care tasks for dependent people is 3.4% (1,312,400 people; 4.2% women; 2.5% men) (EU27: 6.3%). Spain ranks first among EU27 countries in terms of the percentage of people who claim to spend more than 20 hours a week providing care (53%) (EU27: 22%)³, which is almost 3 hours a day of work that, in general, is unpaid.

The structure of services for elderly people

The structure of services for elderly and dependent people is integrated within the social services of each region or autonomous community; however, there is a catalog of common reference services for the entire country.

Social services for elderly people in Spain can be grouped into four major categories: home care services, day care services, social participation services and residential care services⁴ (Table 1).

Within these services, the telecare and home help services stand out. Telecare is offered to elderly people or people with a moderate degree of dependence who live at home to resolve emergency, safety, loneliness or isolation situations. This service has the highest number of users (942,446 people, 10.41% of the elderly population). The majority of users are older than 80 years (67%). The home help service, which responds to the basic needs of daily life of elderly people in the home, serves 5% of people aged 65 and over. Of these, 69% are over 80 years of age.

Day care services include day care centers geared towards providing psychosocial care to elderly dependent people and providing a respite service for caregivers. As of December 31, 2018, it served 1.1% of elderly people (96,500 vacancies distributed among 3,603 centers).

Last, residential care services, the object of this analysis, offer permanent or temporary housing and support to elderly people. Nursing and residential homes for elderly people stand out. In nursing homes, accommodation and specialized care are offered to elderly people who, due to their family, economic and social situation, as well as their personal autonomy limitations, cannot be cared for in their own homes. They represent more than 97% of residential care services. Currently, Spain has 4.2 nursing home vacancies per 100 seniors; in total, there were 381,158 nursing home vacancies in 2018⁴.

Residential care services in Spain

Social services for elderly people are the exclusive responsibility of autonomous communities (ACs), each of which has its own Social Services Law. There is no Social Services Law for the entire country.

According to Law 39/2006 (December 14) on the Promotion of Personal Autonomy and Care for Dependent People (hereinafter LAPAD), ACs are responsible for the accreditation, registration and quality control of all social centers in their territory.

The minimum criteria for the entire country in terms of the ratio of caregivers per user, the qualifications of the personnel and the material resources, the equipment and the documentation of the accredited care centers are established through the Interterritorial Council of the System for the Autonomy and Care for Dependent People (CISAAD, for its acronym in Spanish) in which the central and regional governments are represented. In the case of residences for dependent elderly people, an average ratio of 0.41 is established for each resident; within this ratio, there must be 0.28 caregivers, geriatric staff or the like for grade III and 0.27 for grade II facilities. However, as we analyze in the next section, the problem is not the ratios but the deficit in the quality of employment.

In practice, central legislation is adapted for regional legislation on social services. As a result, there is wide diversity among regulations and quality plans. There is no single residential management system, requiring cautious comparisons among regions.

Nursing homes are not considered health centers and are not integrated into autonomous health systems. Except for some social-health centers, most are not medical centers and access the national health system under the same conditions as all citizens.

Public social services for elderly people are provided directly through a public network of regional and municipal centers (representing approximately 30% of all nursing homes in Spain) or through accredited private centers (commercial and nonprofit) subsidized by the public sector (accounting for 70% of nursing homes). Private nonprofit management is increasingly being displaced by the commercial sector, in which venture capital funds predominate.

Table 1. Coverage rate by type of social service for elderly people in Spain.

Type of Social Service	Coverage rate (vacancies/population ≥ 65 years)*100
Telecare	10.41%
Home help	4.99%
Day centers	1.07%
Senior centers	46.3%
Residential care services	4.32%
• Nursing homes	4.21%
• Retirement homes	0.11%

Source: Prepared by the authors based on IMSERSO (2019).

Genesis of the crisis in the residential care sector

The impact of COVID-19 on the morbidity and mortality of elderly people, which we analyze in the third section, has been especially deadly in closed spaces with a high degree of social contact and where elderly people converge. The factors related to the pandemic cannot ignore the importance of structural factors that characterize the Spanish residential care sector. These factors have manifested themselves in all their dimensions and constitute a large part of the explanation for the crisis in the residential care sector in the spring of 2020. Among these factors, we must differentiate between demographic and care factors, normative and administrative factors, and, last, those relating to the work structure of nursing homes. This last factor is central in the analysis presented here because it affects quality of care.

Among the *demographic and health factors*, it is necessary to highlight, on the one hand, the *overaging of nursing home populations*. The population 80 years and older represents 79% of the entire population living in nursing homes^{1,5}. This overaging makes this group especially vulnerable to health crises. On the other hand, there is a *high level of occupancy*. Although there is a lack of data collection mechanisms on available residential care resources⁶ and the level of occupancy of nursing homes is unknown, it is estimated that in 2019, an average of 322,180 people aged 65 years and older lived in nursing homes, which implies that 86% of the total nursing homes vacancies were occupied⁵. This high level of occupancy is somewhat due to the lack of public and subsidized private residential care settings⁶. In addition, there is a *high concentration of vacancies in large nursing homes*; the predominant model for residential care services in Spain is that of large nursing homes, with a high concentration of vacancies in large nursing homes and an insufficient ratio of workers per resident. Fifty percent of vacancies are concentrated in centers with more than 100 residents and 29% occur in centers with between 50 and 100 residents. Last, the *low medicalization* of residential centers should be noted. Health care in *residential centers* is usually provided by referring residents to primary healthcare centers or hospitals in the National Health System network. Only a small group of nursing homes are of a social-health nature with broader medical and nursing care. In general, before the pandemic, there was adequate coordination between nursing homes and the centers of the National Health

System network. However, the adjustments made to the health system since the economic crisis of 2008-2015, with the consequent reduction in available resources in the health system, together with the low efficiency of the early warning system and the lack of foresight of public administrations regarding the extent of the pandemic, has accelerated the saturation of hospital centers and forced, in some regions, adverse selection of elderly people with previous pathologies.

Among the *normative and administrative factors*, the following should be highlighted. First, there is an *insufficient number of inspections*. According to Ombudsman⁶, although regions are giving greater importance to the inspection of centers, the inspections are still insufficient given the large number of existing nursing homes and different management models. The lack of inspections has also meant that the quality of care has not been adequately supervised, which has aggravated the condition of elderly people who presented with nutritional deficiencies when the pandemic arrived. Second, the differences in standards among regions regarding authorization and accreditation requirements for nursing homes and a deficient data collection mechanism continue to hinder the development of more appropriate strategies for residential care⁶.

The third structural factor explaining the crisis in residential care refers to the *structure and quality of employment*. In nursing homes, the main production factor is the employees who care for people, especially those who provide direct care personnel (caregivers, nurses, etc.). The quality of care for users will depend, in large part, on the working conditions of the staff.

During the COVID-19 health crisis, difficulties in care have been evident in nursing homes due to a lack of sufficient caregivers and qualified professionals, such as in the case of nursing; furthermore, the precariousness of the working conditions of residential care staff has also become evident. Here, we refer to two fundamental aspects: type of labor contract and salary compensation. These are the result of a research study on employment in residential establishments for elderly and physically disabled individuals⁷.

In residential care establishments for seniors, the high number of contracts with few hours of work shows the inadequacy of using the total number of employees as an indicator to describe employment at a center because it is not indicative of the workforce actually utilized. Therefore, the concept of *effective employment* should be used instead; effective employment measures

the *full-time equivalent staff* according to the annual hours established in collective agreements, and both the number of days under contract and the number of hours contracted for each worker are considered. The number of employees is approximately reduced by almost half (42%) when transformed into “effective employment”. Thus, in 2018, the number of employees was 153,625, while the “effective employment” was 89,248.

One of the main labor characteristics is the high temporality of employment and the low quality of that employment. In 2018, more than 25% of effective employment is performed by workers with temporary contracts, showing that an important part of regular work is performed by workers who are not in the permanent structure of the company.

In 2018, 95% of temporary contracts are grouped into three types of contract (*obra/servicio, eventual, and interinidad*), allowing the same worker to extend the days worked per year by linking contracts one after another or several contracts of the same group as long as the outcome does not exceed the limitation imposed by the rules. These contracts are special because in addition to having a fixed duration, they do not provide workers with the right to seniority bonuses or to enjoy any of the other advantages provided by permanent contracts, such as training, among others.

Thus, the average number of days per year of this group of contracts is almost four months per year (3.71), and the average number of contracts per worker and per year is 2.38, reinforcing the idea that temporary contracts not only are used to cover temporary losses of regular staff or to reinforce specific moments of work overload but also seem to be intended to complement the work of regular staff.

Nearly 90% of total temporary contracts are signed by women, a percentage that is almost the same as that for permanent contracts, reinforcing the idea that people’s care work is highly feminized. This is a common factor in the different types of organizations providing residential care services for elderly people, regardless of whether they are for-profit organizations (commercial companies), nonprofit organizations (associations, foundations) or public organizations (local corporations or other public bodies), although religious institutions and local corporations are at the top of the ranking.

Another factor showing the low quality of employment in residential care centers is the

structure of employees according to Social Security professional categories. These categories are more indicative of the characteristics of a position and the salary compensation corresponding to that position regardless of the professional qualifications of the workers. The results show that on average, *80% of jobs are classified in the lowest professional categories* — administrative assistants, officers, and laborers, among others — providing an idea of the level of qualifications required to work in these centers and of the low proportion of workers with medium or high professional qualifications. The remaining 20% of the workers are distributed as follows: 13% in the medium category group (positions requiring a master’s degree or middle-level positions) and 7% in the high category group (positions requiring a college degree or directors and senior positions).

Eighty percent of employees in residential care establishments for seniors earn, on average, a gross monthly salary of 1,184 euros, which is estimated to be reduced to a *net monthly salary of less than 1,000 euros* after personal income tax and social security contributions are withheld. This amount corresponds to the Spanish minimum interprofessional salary. However, although salaries are within the margins established by law, they do not correspond to the effort and dedication that these workers must devote to serve very vulnerable users.

Table 2 shows the results for the three large groups according to professional category. The wages of workers included in the high category are probably not accurate because the figures are limited by the maximum social security contribution cap.

The *gender gap* of employees in the low category is very small (1.5%). It is understood that when wages are low, there is no margin to decrease the gender gap; however, in the medium and high wage categories, the gender gap increases, reaching quite similar figures, 7.5% and 7.1%, respectively. In turn, there are salary differences between the different types of contracts; wage earners with a fixed-term contract receive 4.2% less than those with an indefinite-term contract. The difference is more pronounced in men than in women (13.3% in men and 2.7% in women).

In summary, the quality of care for elderly people largely depends on the quality of the working conditions of workers, which are currently characterized by a high degree of job insecurity.

Impact of the COVID-19 crisis on the elderly residential care sector

The differential impact of the pandemic and the mortality occurring in nursing homes for elderly and disabled people in Spain is attributed to direct causes (blocked access to the hospital system, adverse selection of older people and overwhelmed response capacity of residential care), indirect causes (crisis of governance) and structural causes (analyzed in the previous section).

Recent literature has analyzed the different dimensions of the residential care crisis, differentiating in general the three types of causes⁸⁻¹¹.

COVID-19 has had a *differential health impact* on elderly people with multiple pathologies, both those who live in residences and in their own homes. This being true, there has been, although not in a generalized way, a screening or adverse selection of elderly people who, until the sudden arrival of the pandemic, normally accessed the hospital system. The de facto blockade in access to the hospital system, together with the limited health care capacity in nursing homes, has led to an overmortality of the population living in residential care centers, with some exceptions in the case of social-health or specialized homes. This is not so much associated with the low level of medicalization of homes but rather to an insufficient health care capacity to deal with emergencies such as the COVID-19 pandemic. To this must be added the overwhelming of the general response capacity of nursing homes, which is fundamentally based on care provided by a precarious professional staff, as discussed in the previous section, underresourced with personal protective equipment (PPE), means and techniques and without replacement in case of contagion.

Another cause to consider is the *crisis of governance of the social services system*. Nursing homes are the responsibility of each AC or region, and in this sense, the response has varied depending on the policies and institutional arrangements of each territory. The “state of alert” imposed in Spain between March 14 and June 21, 2020, has not resulted in the application of a common policy as a response to the nursing home crisis. In contrast, there has been a dispersed or uneven reaction dependent on residential care models and the type of relationship between the minority public sector and the majority private sector. Once again, the crisis has brought to light the deficit of coordination between social and health services.

As a result of the two aforementioned causes, there has been an overmortality of the elderly population, especially those living in nursing homes. As shown in Table 3, the excess mortality in the population over 65 years has been substantial compared to that in the population under 65 years. Not all of the excess mortality is explained by COVID-19, but it is surely the most important cause. Until the beginning of 2021, the deceased population and the causes of death will not be accurately known. From March to May 2020, during the critical period of the pandemic, of all excess mortality, 94.7% corresponded to the population older than 65 years; i.e., 74.2% of excess mortality corresponded to the population older than 74 years.

Regarding the population over 65 years of age who have “applied for social security benefits” from the national System of Autonomy and Dependence (SAAD, for its acronym on Spanish), between March and May 2020, the observed mortality was 81,232 people, and the expected mortality was 51,369 people, an excess mortality

Table 2. Estimated gross and net monthly salary by professional category (2018).

	Salario bruto mensual			Salario neto mensual		Brecha de género
	Total individuals(%)	Men	Mujeres (euros al mes)	Hombre (euros al mes)	Mujeres (euros al mes)	
High category	13.7%	1,828	1,699	1,462	1,359	-7.10%
Medium category	6.7%	1,484	1,373	1,187	1,098	-7.50%
Low category	79.6%	1,201	1,182	961	946	-1.50%
Total		1,350	1,260	1,080	1,008	-6.70%

Note: Monthly salary for 14 payments.

Source: Montserrat7 from Muestra Continua de Vidas Laborales (MCVL) 2018.

of 31,263 people, i.e., 60.9% excess. Of this excess mortality, 83.1% are people aged 80 years and older, particularly women. Of the population “receiving social security benefits” during those three months, 57,469 people died, 25,819 more than expected, i.e., an excess mortality of 80.1%; of this excess mortality, 84.2% are 80 and older¹².

The quantification of the mortality of the population *living in nursing homes* is still a subject of debate because the data are not properly centralized, and there are no rigorous indicators, as noted by the GTM research group⁹. There are estimates based on data from the ACs and the Ministry of Health¹³. Not all mortality in nursing homes can be attributed to COVID-19, although it is associated with the disease in a large number of cases. Thus, as of May 28, according to the International Long-Term Care Policy Network of the London School of Economics and Political Science, 237,906 people had been diagnosed with COVID-19, of whom 27,119 had died. Of this group, 19,194 people who lived in nursing homes had died from COVID-19 or associated symptoms, i.e., 70.8%. The vulnerability of residents, very elderly people, the precariousness of care employment, the commercial orientation of the vast majority of residential care activity, the crisis of coordination between social and health services, the lack of adequate protection and training of the staff, and the absence of internal and external contingency plans are factors to

highlight in the explanation of the excess mortality and isolation suffered by residents in total confinement. Doctors Without Borders¹⁴ estimates as of June 20, 27,354 people died in nursing homes, 69% of whom died from COVID-19, a percentage very similar to the aforementioned result. Nursing homes have been a death trap for the most vulnerable population, in many cases left to their own devices.

Regarding the *structural crisis* of the residential care model, nursing homes had to assume a de facto responsibility for which they were not prepared, equipped or protected, with disastrous consequences for residents, staff, management teams and families¹⁴. The necessity of nursing homes is evident for residential care experts. However, COVID-19 has revealed the deficits and limits of the current model of care in nursing homes. The responsible authorities have acted late, little and poorly¹⁴ despite some coordination effort by the central government¹⁵.

There is broad consensus among public and corporate actors, as well as the third sector, on the limits of the current residential care model. The recent debate highlights the lines of reform and improvement in defense of the health and autonomy of people living in nursing homes as well as an appeal for a comprehensive residential care model focused on people and based on their individual rights, whether living in nursing homes or in their own homes.

Table 3. Excess mortality due to COVID-19 in two periods of impact: acute and low impact.

Period 3/10/2020 to 5/9/2020				
Population	Observed	Estimated	Excess Mortality	Excess Mortality%
All	111,253	67,697	43,556	64.3
Men	55,815	34,180	21,636	63.3
Women	54,377	32,833	21,544	65.6
Age < 65	11,773	9,521	2,252	23.7
Age 65-74	14,438	9,403	5,035	53.5
Age > 74	85,042	48,819	36,223	74.2
Period 7/27/2020 to 8/15/2020				
Population	Observed	Estimated	Excess Mortality	Excess Mortality%
All	22,763	20,223	2,540	12.6
Men	11,146	10,176	970	9.5
Women	11,598	9,851	1,747	17.7
Age < 65	3,205	3,076	130	4.2
Age 65-74	3,016	2,857	159	5.6
Age > 74	16,545	14,384	2,160	15.0

Source: Daily Mortality Surveillance. Centro Nacional de Epidemiología (ISCIII). www.isciii.es.

In this sense, the Ombudsman has taken a position, with very precise recommendations¹⁶, based on complaints from relatives of nursing home users, the Spanish Society of Geriatrics and Gerontology¹⁷ and, in general, third sector organizations and study centers¹⁸. Among the lines of reform are the following: effective improvement of coordination between the social services and health sectors; effective replacement of absent workers in nursing homes to ensure adequate care for elderly people; the guarantee of continuous and at least daily information provision to the person designated by the residents about their situation; allow noninfected adults living in nursing homes to return to their families voluntarily and temporarily and without losing their place during the coronavirus crisis; and adopt protocols, in cases of terminal clinical status, that facilitate saying farewell by at least one family member, in order to have a death process as humanized and dignified as possible, meeting the necessary public health requirements to ensure the safety of other users, workers and the family member. These measures all aim to avoid a situation in which, according to SEGG¹⁷, “elderly people have been discriminated against in their capacity for real access to specialized health services and nursing homes have been stigmatized”.

In conclusion, the residential care crisis has highlighted the need to harmonize accreditation and quality control protocols throughout Spain; improve the ratios of professionals and the qualifications and job stability of those professionals; respect the autonomy and rights of residents to be informed and participate in decisions that affect them; develop broader and more extensive medical and nursing care, without a detriment to the specific care provided in social-health residential care settings; and develop and disseminate a joint system of good residential care practices.

Discussion: necessary reform of the residential care sector and the development of living arrangements in the home and community environment

Nursing homes for dependent people, especially those 65 years and older, constitute a consolidated service in Spain but are characterized by high job insecurity, excessive sizes and unequal quality of care outcomes. As a result, what

we found is a general model of “parking” elderly people, not a quality resource, with notable exceptions.

Two types of debate arise from the analysis performed. The first refers to improvement of the current residential care system. This requires profound reform in which the public sector must have a clear role in the accreditation of the centers, in quality control and in defense of the rights of residents. Specifically, it is necessary to improve structural aspects of the current residential care system with adequate worker-to-resident ratios and quality jobs, greater funding of social services for elderly people, more inspections of residential centers and improved social and health coordination. All of these are instrumental requirements for comprehensive model change in which greater emphasis is placed on *person-centered care*, based on the organization of centers into small cohabitation units, with the structure and size of a home, in which a small number of elderly people live together and are provided with personalized support according to their needs and desires^{6,19}. It will also be necessary to promote adapted housing, which currently only represents approximately 3% of total residential care services.

However, the debate has a more general dimension: how elderly people should live, especially those who have some type of dependence. This is the central debate: what care model to adopt to guarantee the preference of people and their diversity, autonomy and fundamental rights. Nursing homes should be resources for people with high dependence and demand for social and health care. In contrast, for elderly people with moderate dependence, the resources to be provided are community and home services, both instrumental and emotional care. The development of this resource in Spain has been intense in the last two decades, but it is not sufficient to meet the demand, nor is it a comprehensive service focused on the autonomy and centrality of people^{10,20,21}.

The protection of dependent elderly people in Spain faces a horizon of uncertainty given the dynamics of population aging and changes in the social structure of care. Hence, strengthening the Welfare State²² and building a care society are part of the same social equation.

Collaborations

VM Gallego: prepared and wrote the final draft of the manuscript, in particular sections 1, 2 and 4, and participated in the design of the structure and methodology of the study, in the review and final editing and in the conception and analysis and interpretation of the data.

JM Codorniu: prepared and worked on the final drafts of sections 2 and 4, on the final review and on the conception and analysis and interpretation of the data.

GR Cabrero: prepared and worked on the final draft of the manuscript, in particular the introduction and sections 3 and 4, and participated in the design of the structure and methodology of the study, in the revision of the submitted version and in the conception and analysis and interpretation of the data.

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