Policy response to COVID-19 in Long-Term Care Facilities in Chile

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1. Key points

- To date, the number of new cases remains high. Nearly 80% of cases occurred in the highly-dense populated Metropolitan Region which accounts for nearly 40% of the country's population. Older people (60+) have been disproportionately affected; they represent only 15.7% of the cases, but 48% of hospitalizations and 89.6% of all deaths.
- The COVID-19 response started in early March with the cooperation of several actors. The Ministry of Health (MoH), the National Service of Older People (*Servicio Nacional del Adulto Mayor*, SENAMA), the Chilean Geriatrics and Gerontology Society (GGS), and the main non-profit organizations started a working group to coordinate the implementation of prevention and control measures.
- In all long-term care facilities (LTCFs) visits to people were banned, sanitary barriers for assessing temperature and symptoms were implemented and the entry of new residents was halted. There were also a series of non-enforceable infection prevention measures, guidance on how to use personal protective equipment (PPE), cleaning and disinfection guidance, and guidance on isolation areas for COVID-19 suspected cases.
- For the public, non-profit, and vulnerable for-profit organizations (average out pocket payment less than 820 USD/month) SENAMA provides face to face technical support, PPE, field testing with rt-PCR using relaxed access criteria that include atypical presentation, and temporary transfer of COVID-19 residents to sanitary houses.
- Information was identified as a key issue for long-term care facilities (LTCFs) in the COVID-19 context. To date, there is no official data on the number of cases and deaths coming from these facilities. Moreover, the lack of complete and updated data on the facilities, residents, and staff constitutes a broader barrier for the design and implementation of policies in the area.
- The adequate implementation of infection prevention and control measures needs strong technical face-to-face support, especially to ensure the adequate use of PPE and the implementation of isolation areas. The COVID-19 challenges coexist with deeper social challenges such as inadequate infrastructure and staff shortage. These challenges are especially relevant among informal (unregulated) nursing homes and represent a relevant implementation barrier for COVID-19 prevention and management measures.
- In the long run, strong infection prevention and control measures for COVID-19 and other infectious diseases will need to be structurally implemented in LTCFs. The adequate implementation of these measures, we believe, needs strong coordination and surveillance from the MoH, SENAMA, and the technical support of the Geriatrics and Gerontological Society.

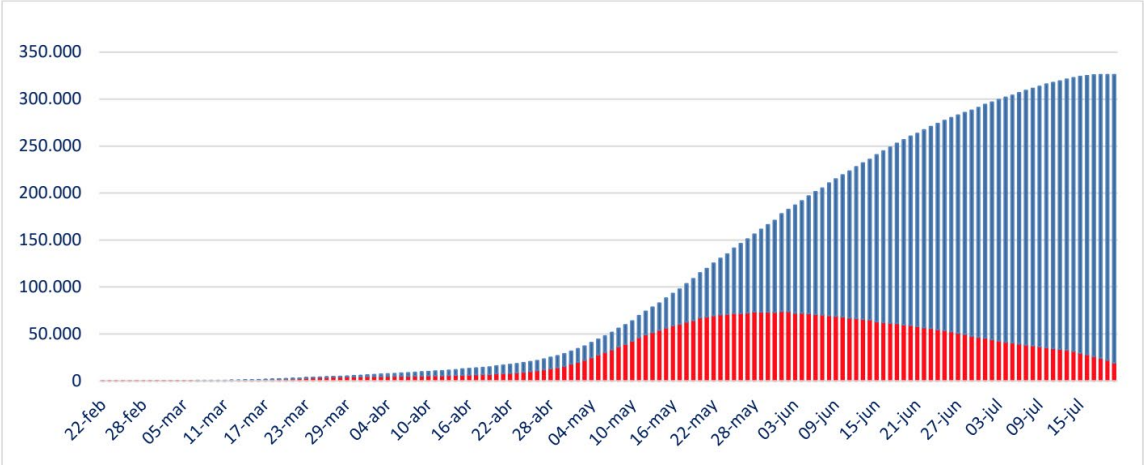
2. Impact of COVID-19

2.1. Number of COVID-19 cases and deaths

The Chilean Ministry of Health (MoH) monitors and reports the progress of COVID-19 in the country (Ministerio de Salud, 2020). By July 17th, Chile had 326,539 cases and 8,347 COVID-19 confirmed deaths (official up-to-date figures) (MINSAL, 2020).

Figure 1 shows the evolution of cases since the start of the pandemic (late February). New cases were rising steadily from early-May until mid-July when the number of new daily cases showed a downward trend. According to official records, the peak of daily cases at the national level was on June 11 with 7,291 people reported COVID-19 positive. Since July 12th, less than 3,000 new daily cases have been reported (MINSAL, 2020).

Figure 1. Number of total cases (active=red; recovered=blue) by date first symptom was reported



Source: Gobierno de Chile (2020).

After four months since the first case, daily new cases are lower but remain high (2,840), with a cumulative incidence rate of 1,884 per 100,000 inhabitants (data from July 16th). Nearly 80% of cases have occurred in the densely populated Metropolitan Region which accounts for roughly 40% of the country's population. At the national level, the cumulative mortality rate is 44.1 with a fatality rate of 2.3%. However, older people (60+) have been disproportionately affected; they represent only 15.7% of the cases, but 48% of hospitalizations and 89.6% of total deaths (MINSAL, 2020).

A total of 1,370,603 tests have been performed, resulting in a rate of 7,044 tests per 100,000 people, with a positivity rate of 23.8%. The July 17th report, informed 18,699 new tests performed and 2,840 new COVID19 cases: the ratio between newly positive cases over the total daily performed tests was 15.1% (roughly 1 case every 6.5 tests) (MINSAL, 2020)

2.2. Population-level measures to contain the spread of COVID-19

The first case in Chile was confirmed on March 3rd, in the city of Talca. The Chilean government established a three-month state of emergency throughout the national territory to manage the emergency. This measure started on March 15th, when the number of confirmed cases was 75. Additional regulations and measures were established with immediate effect and uncertain end date:

- Daily nation-wide curfew between 10 PM and 5 AM.
- Residential quarantine for people aged 80 and older (modified to include people between 75-79 years on May 13th).
- Mandatory 14-day self-quarantine for all foreigners and Chilean citizens arriving into the country.
- Access to sanitary residences for people who could not comply with quarantine and isolation measures in their houses.
- Residents of long-term care facilities were placed under strict quarantine, with visits banned and only essential workers able to access the facilities. All other public centers for older people were closed indefinitely.
- Public events with more than 50 people were prohibited indefinitely.
- Permanent closure, throughout the country, of cinemas, pubs, nightclubs, and similar places.
- Prohibition of eating-in in restaurants and coffee shops and similar places.
- Permanent prohibition of professional and amateur sports events in the national territory.
- Displacement of people to places of residence other than their usual home address was prohibited.
- Mandatory use of face masks in public transportation and paid private transport.
- Sanitary controls will be carried out by the health authority in different locations in the country.

During the following days and weeks, new population-level measures were established in the country: suspension of classes in all schools and universities in the country, being able to continue providing education remotely (they are still closed as of July 17th), and the closure of land, sea and air borders of the country for the transit of foreign passengers. This last measure was set to be reviewed on May 20th, in case it needed to be extended. As for July 17th, borders are still closed.

The Chilean government established a strategy of dynamic quarantines, health customs, and sanitary controls, meaning that local quarantines were enforced and released weekly, depending on the number of cases and incidence rates at the local level. These measures were implemented and adjourned according to the epidemiological evidence from different areas of the country, including particular areas within the limits of a specific city/region.

The first lockdown of a city in Chile was established on March 25th in Puerto Williams, Región de Magallanes, with a 24-hours curfew. Soon, as the number of cases increased in the country, new health customs, sanitary controls, and quarantines were established in different points of the territory, being lifted when the local epidemiological data improved. Most notably, 32 municipalities of the Metropolitan region, where more than 8 million people live (representing approximately 42% of the national population), started a mandatory quarantine, with a 24-hours curfew on May 15th for an initial period of seven days. As of today (July 17th), the measure is still in force for these municipalities, and new ones have been added according to the advance of the virus in the country (Gobierno de Chile, 2020).

2.3. Infection rates and mortality among long-term care residents and staff

Currently, there is no official data regarding COVID-19 cases and deaths linked to long-term care facilities (LTCFs) in the country. However, information published in a local newspaper states that, by May 29th, 137 outbreaks in LTCFs had occurred in different regions of the country. The report also indicates that these episodes implied more than 800 cases of residents COVID-19 positive, and 141 COVID-19-related deaths among LTCFs residents, not considering facilities' personnel. At the time, these deaths accounted for 22% of total COVID-19 deaths at the country level. To date, official figures on the COVID-19 situation of people living and working on LTCFs have not been released (La Tercera, 2020)

3. Long-term care in Chile

In Chile, according to the latest version (2017) of the National Socioeconomic Characterization survey (CASEN), there are 3.439.599 older people (60+) (Ministerio de Desarrollo Social, 2018), of which 14.2% (488,990) have some degree of functional dependency (FD). Using the definitions by SENAMA (2010) and Ministerio de Desarrollo Social (2018), the functional dependency is defined as:

Table 1. Definition and classification of people with care dependency

No dependency	Declares no difficulty in performing basic activities of daily living (BADL) and instrumental activities of daily living (IADL)
Mild dependency	1. Inability to perform one IADL, or 2. Permanent need for help in performing one BADL (except bathing), or 3. Permanent need for help in performing one IADL

Moderate dependency	1. Inability for bathing (BADL), or 2. Permanent need for help in performing two or more BADL, or 3. Permanent need for help in performing three or more IADL, or 4. Inability to perform one IADL and constant need for help in performing one BALD
Severe dependency	1. Inability to perform one BALD (except bathing), or 2. Inability to perform two IADL

Source: Villalobos Dintrans (2019).

Out of these 488,990 people, 31.23% have mild dependency, 38.43% have moderate dependency, and 30.33% have severe dependency. In terms of gender, 32.87% of those with FD who are aged 60 years and older are men, and 67.13% are women. The number of people aged 60 years and older with FD represents 76.76% of the people (>15 years) with dependency in the country (672,084) (Villalobos Dintrans, 2019).

As in many other countries, in Chile, long-term care services are mainly provided by unpaid caregivers. The CASEN 2017 survey identifies 672,174 people providing care services to a third party, with almost 60% of them providing unpaid home services. Of the caregivers who answered the survey (521,584), most of them were women (68.1%), with an average age of 53.5 years (73% of them are 65 years or older), usually spouses or children of the people with FD (Villalobos Dintrans, 2019).

Institutional care is also available as part of the LTC supply. In Chile, the main LTC policy has been to subsidize the supply of LTC services, through funding nursing homes. For example, 60% of SENAMA's budget in 2016 was dedicated to supply-side subsidies to LTCFs. Institutional LTC services in the country are provided by a mix of public, private non-profit, and private for-profit LTCFs (Villalobos Dintrans, 201; 2018).

SENAMA's preliminary data shows that there are 994 authorized LTCFs in the country, with 24,214 beds in total. Out of these, 16 are public facilities (100% public financing) and 181 are non-profit facilities that receive subsidies from SENAMA. The rest of the facilities are for-profit institutions operating under sanitary authorization and supervised by the Ministry of Health (MoH). Additionally, there is an unknown number of LTCFs working without authorization, the so-called "informal" "clandestine" facilities. During a cadaster carried out in April 2019, 200 of these facilities were identified in the country. These LTCFs were concentrated in the regions Metropolitana, Valparaíso, and Bío Bío, providing services to approximately 2,000 people. These figures are similar to the ones calculated in an unpublished study carried out by SENAMA using the 2017 census, in which the number of LTCFS in the country was set around 925 facilities, based on the number of households reporting five or more older people (60+) living in the same household.

Several other public initiatives provide long-term care-related services in the country, mostly delivered by the MoH or the Ministry of Social Development and Family (*Ministerio de Desarrollo*

Social y Familia, MDSF). Although they share objectives and populations, these public programs have different eligibility criteria and some are not primarily designed to meet long-term care needs (e. g., many are focused on older people or people socioeconomically vulnerable) (Ministerio de Desarrollo Social y Familia, 2020).

These programs include home-based care, such as the Home-based care program (*Cuidados Domiciliarios*) of SENAMA or MoH's Home-based program for people with severe dependency (*Atención Domiciliaria a Personas con Dependencia Severa*). The MoH also has a program of home visits, to provide health services to people that cannot access healthcare services at a health center. Since 2016, the MDSF, has implemented a Local Support and Care Network (*Red Local de Apoyo y Cuidados*), originally designed as part of a set of programs that will constitute the National System of Care. The program intends to articulate different initiatives to provide services to people with functional dependency (moderate and severe).

Many of these initiatives also include benefits for caregivers, both in-cash (such as the subsidies of MoH's home-based program for people with severe dependency) or in-kind (like the respite service in the Local Support and Care Network).

4. Long-term care policy and practice measures to respond to COVID-19

The COVID-19 response with a focus on older people started in early March, involving several actors. The MoH, SENAMA, the GGS, and several non-profit organizations started a working group to coordinate the implementation of prevention and control measures. The MoH led the creation of local guidelines that included non-enforceable measures such as the recommendations for personal protective equipment (PPE) utilization. On the other hand, since early March, SENAMA led a public-private cooperation (SENAMA, 2020b) that raised approximately $USD 15 million for COVID-19 related measures for the 250 public and SENAMA-affiliated nursing homes. The main purpose of this project was to prevent and control the spread of COVID-19 and its consequences through on-site technical support, ensuring the availability of PPE and staff availability, temporary transfer of COVID-19 residents to sanitary houses, and rt-PCR testing.

In mid-June, new funds for this project made it possible for access to be extended to for-profit LTC facilities with an average fee per resident lower than $CLP 650,000 (roughly $USD 800). As a result, public, non-profit, and the 85% most vulnerable for-profit nursing homes are currently considered as beneficiaries for these initiatives.

4.1. Care coordination issues

4.1.1. Hospital discharges to residential and nursing homes

Currently, there is no specific protocol from hospital discharge to nursing homes; due to the high pressure of health care services, older people are being discharged to their nursing homes

without the requirement for COVID-19 testing. After re-entering the nursing home, residents remain in an isolation area for 14 days.

4.2. Care homes (including supported living, residential and nursing homes, skilled nursing facilities)

4.2.1. Prevention of COVID-19 infections

On March 16th visits to people to nursing homes were banned, sanitary barriers to assess temperature and symptoms were implemented and the entry of new residents was halted. Also, day centers and their related activities were closed. Also, the MoH together with SENAMA and the GGS proposed a series of non-enforceable infection prevention measures including:

- Guidance on how to use PPE (SENAMA, 2020a)
- Cleaning and disinfection guidance (SENAMA, 2020a)
- Guidance on isolation areas for COVID-19 suspected cases (SENAMA, 2020a)

Furthermore, for those nursing homes affiliated with SENAMA a series of additional measures were implemented:

- Technical support: trained health professionals (nurses and physiotherapists) that provide face-to-face support to implement the prevention and control measures suggested by the Department of Health. These professionals also serve as a point of contact with the SENAMA to coordinate the measures below (SENAMA, 2020b).
- Ensuring the availability of Personal Protective Equipment (PPE): based on international utilization guidelines SENAMA is currently providing the 100% PPE needed. This includes the buying process, financing, and delivery of these PPE (SENAMA, 2020b).
- Digital platform to gather data on the number of suspected, active, and recovered residents in each facility (SENAMA, 2020b).

4.2.2. Controlling spread once infection is suspected or has entered a facility

The MoH, together with SENAMA and the GGS, published enforceable guidelines for the management of suspected and confirmed COVID-19 cases. These guidelines include:

- Guidance of when to suspect COVID-19 including atypical symptoms described in older people (SENAMA, 2020a).
- Protocol on how to provide care in isolation areas for suspected and confirmed cases (eg. infrastructure and use of PPE) (SENAMA, 2020a).
- Infection control protocols for the management of suspected or confirmed cases after their death (SENAMA, 2020a).

- Guidance of how to inform and coordinate testing the health department of when suspected cases were identified (SENAMA, 2020a).

Furthermore, for those nursing homes affiliated with SENAMA, a series of additional measures were implemented: (i) a centralized monitoring system with active epidemiological vigilance based on daily phone calls to collect data on COVID-19 suspected, confirmed and deaths cases; (ii) Case management of all suspected and confirmed cases by an interdisciplinary team which includes; a territorial team (nurses and physiotherapists) and a centralized team (administrative team, geriatrician, epidemiologist). Based on each case, this team has the ability and resources to provide:

- Field testing with rt-PCR using relaxed access criteria that include an atypical presentation for older people and mass testing for all residents case of an outbreak (available in those geographical areas that concentrate the vast majority of the country population, Metropolitan, V, VI, VII, VIII and IX Regions) (SENAMA, 2020).
- Ensuring staff availability: through a non-profit human resources organization, SENAMA ensures replacement carers and health professionals in the case of COVID-19 sick-leave. This includes the headhunting process, administrative issues related to their contract, and its financing (SENAMA, 2020).
- Temporary transfer of COVID-19 residents to sanitary houses: when isolation of suspected and confirmed COVID-19 cases is not possible due to infrastructure or human resources capacity, residents are transferred to sanitary houses. These sanitary houses also called *residencias espejo transitorias* are different from those run by the Department of Health and exclusively focus on older people living in nursing homes (SENAMA, 2020).

4.2.3. Managing staff availability and wellbeing

To facilitate staff availability, a website for matching care and health professionals' supply and demand was created (*esmiturno.cl*). Also, for nursing homes that are affiliated with SENAMA, transitory staff replacement is financially and operationally covered by this institution. A holistic approach to staff wellbeing, specifically regarding mental health issues, remains a high priority. No country-level specific measures have been taken yet.

4.2.4. Provision of health care and palliative care in care homes during COVID-19

The health care needs of residents in nursing homes are mainly covered by the MoH, through the health services provided by the primary care level, as well as bilateral arrangements between nursing homes and private health workers. The GGS and the Chilean Palliative Care Society build specific end-of-life recommendations for older people with COVID- in nursing homes. However, the degree of implementation of these guidelines remains uncertain.

4.3. Impact on unpaid carers and measures to support them

To provide technical support to the increasing number of unpaid carers, a best practice caring manual was developed ("Yo me Cuido y te Cuido"). Furthermore, free online training is being offered through a user-friendly platform in which weekly teaching video conferences are offered to give carers tools for caring for others and themselves.

Mental health of older people and careers remains a great concern. SENAMA created a hotline for emotional support and mental health guidance. Other specific mental health interventions are currently discussed by the government by an expert working group (*Saludable mente*).

5. Lessons learned so far

In Chile, the early coordination between SENAMA, MoH, and the Geriatrics and Gerontology Society was crucial for the development of a comprehensive strategy for many LTC facilities. However, there are still key areas that need to be tackled.

One of the main issues arising from the COVID-19 crisis is the lack of publicly available, updated, and reliable information, particularly on the situation of informal (unregulated) LTCFs in the country. This problem was evident since the country lacks a complete and updated list of LTCFs. The issue became a transversal problem for an adequate policy response. First, it imposes barriers to assessing the impact of COVID in LTCFs as there is no information for a large number of facilities. As indicated above, to date there is still no official information on the impact of the COVID-19 (cases and deaths) on LTFCs in the country. This lack of public information diminishes its importance as a public policy issue and represents a barrier to align health and social sector actors that should collaborate on this agenda. Also, in the absence of adequate information about the number of LTCFs, the coverage of COVID-19 support for LTCFs is not universal. Policies only reach those facilities that are known. Therefore, the impact of public policy is limited by the information available.

Second, multisectoral coordination to address a multifactorial problem (LTC needs) has to be institutionalized. The implementation of prevention and management COVID-19 measures in nursing homes has been a continuous learning process. Nevertheless, overall institutional coordination between different sectors (health (MoH), social (SENAMA), and nursing home administrators) remains a key feature to ensure the adequate design and implementation of these measures. Direct communication channels between policymakers and implementers allow them to identify new challenges and overcome implementation barriers. Currently, these actors work together in a round table, yet a permanent institutional arrangement to coordinate efforts and facilitate cooperation is needed.

A huge effort has been made to generate guidelines, protocols, and recommendations, but whether they will have an impact of reducing the burden of COVID-19 in LTCFs depends on implementation issues that still are unknown. To date, the effectiveness of the measures described above remains uncertain. Yet, we hope that the combination of mass testing, PPE and staff availability, and isolation mechanisms such as transfer to sanitary houses are effective in containing the outbreak within facilities and to ensure the continuity of care for all its residents.

However, these measures need strong technical face-to-face support, especially to ensure the adequate use of PPE and the implementation of isolation areas. Unfortunately, health professionals are not always part of the staff members in nursing homes. In these cases, inadequate implementation of these measures has been frequently reported by the SENAMA technical support team. To overcome this issue, SENAMA is designing a "*rapid response team*" program which aims to provide continuous face to face technical support to nursing homes during the first 14 days after an outbreak is identified. This program has not been implemented yet (SENAMA, 2020).

5.1. Short-term calls for action

A comprehensive approach to support informal LTC facilities remains a key challenge. In this heterogeneous group, the COVID-19 challenges frequently coexist with deeper social challenges such as inadequate infrastructure and staff shortages. These challenges represent a relevant implementation barrier for COVID-19 prevention and management measures and, therefore, we perceive that further actions are needed in this group. As many of these facilities are still unknown to the government, a process to identify them and include them as beneficiaries of the COVID-19-related LTC policies is needed. This requires, at least for a limited time, a period of grace, so that they can be brought into the light without being penalized. Incentives are needed to promote a process of "self-disclosure" of informal LTCFs. The current regulation states that unauthorized LTCFs should be penalized; under this scenario, there is no incentive for these facilities to reveal information or ask for help. If we want to improve our knowledge and reduce the impact of COVID-19 on the LTCFs in the country, we need to convince them to participate in the system. This requires adding some carrots and eliminating sticks.

The information systems on LTCFs should also be improved. Other countries have identified the lack of a minimum set of data as a key barrier in managing the COVID-19 crisis in LTCFs. We should move towards the implementation of an information system with a well-defined process of collecting and updating data. This system should include individual-based information but, at least in the short run, Chile should point at completing a registry of facilities.

Furthermore, as described by Villalobos Dintrans et al. (2020), not all the challenges are related to COVID-19 mortality prevention. Adequate management of mental health problems, physical function, and other well-described consequences of COVID-19 and its measures need further actions. Specifically, in a more favorable epidemiology situation, an adequate balance between prevention measures and mobility restrictions is urgently needed.

5.2. Longer-term policy implications

Similarly to other countries, nursing homes in Chile have been particularly vulnerable to COVID-19. They agglomerate a high-risk population for adverse clinical outcomes, but also a high number of working staff that frequently work in other (often health-related) facilities which increase the risk of new outbreaks. Although we believe that prevention efforts are effective and further action is needed to strengthen this strategy, an assessment of the other suitable long-term care models is also needed. As highlighted by Villalobos Dintrans et al. (2020) alternative

schemes (including home-based care), more in line with the concept of "aging in place", could be structurally more robust against similar outbreaks. Moving away from institutionalization as the main policy response to deal with LTC needs in the country will also generate a policy response that is more efficient and aligned with people's preferences. These schemes could coexist with current institutionalization models and potentially provide cover for the needs of a significant share of older people with mild to moderate disabilities. Nevertheless, regardless of the long-term care model, strong infection prevention, and control measures for COVID-19 and other infectious diseases will need to be structurally implemented in these facilities. The adequate implementation of these measures, we believe, needs strong coordination and surveillance from the MoH, SENAMA, and the technical support of the Geriatrics and Gerontological Society.

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