

DELSA/HEA/WD/HWP(2021)8

Unclassified English text only

15 October 2021

DIRECTORATE FOR EMPLOYMENT, LABOUR AND SOCIAL AFFAIRS HEALTH COMMITTEE

Health Working Papers

OECD Health Working Paper No. 131

COVID-19 in long-term care: impact, policy responses and challenges

Eileen Rocard,* Paola Sillitti* and Ana Llena-Nozal*

JEL classification: H75, I31, I38.

Authorised for publication by Stefano Scarpetta, Director, Directorate for Employment, Labour and Social Affairs

(*) OECD, Directorate for Employment, Labour and Social Affairs, Health Division

All Health Working Papers are now available through the OECD Website at http://www.oecd.org/els/health-systems/health-working-papers.htm

JT03483129

OECD Health Working Papers

http://www.oecd.org/els/health-systems/health-working-papers.htm

OECD Working Papers should not be reported as representing the official views of the OECD or of its member countries. The opinions expressed and arguments employed are those of the author(s).

Working Papers describe preliminary results or research in progress by the author(s) and are published to stimulate discussion on a broad range of issues on which the OECD works. Comments on Working Papers are welcomed, and may be sent to health.contact@oecd.org.

This series is designed to make available to a wider readership selected health studies prepared for use within the OECD. Authorship is usually collective, but principal writers are named. The papers are generally available only in their original language — English or French — with a summary in the other.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Note by Turkey:

The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union:

The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

© OECD 2021

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for commercial use and translation rights should be submitted to rights@oecd.org.

Acknowledgements

This paper reflects the efforts of many officials and experts from the OECD and from countries, who contributed to the project.

The project was led by Ana Llena-Nozal. Eileen Rocard, Paola Sillitti and Ana Llena-Nozal are the main authors of the report. Masaaki Sato provided research assistance and support to the data analysis. The authors would like to thank all of the country representatives that contributed their time and supported this project with information on their countries through the work on the questionnaires and the expert interviews. The project also benefited from comments from the OECD Health Committee delegates.

The authors would also like to acknowledge Francesca Colombo, Mark Pearson, David Morgan and Frederico Guanais from the OECD Directorate for Employment, Labour and Social Affairs. The paper benefited from comments from the Health Committee delegates as well as from Jessica Mahoney from the OECD Centre on Well-being, Inclusion, Sustainability and Equality of Opportunity and from Yvan Guillemette from the OECD's Economics department. The assistance of Ricardo Sanchez Torres of OECD is also gratefully acknowledged.

The opinions expressed and arguments employed herein do not necessarily reflect the official views of Organisation for Economic Co-operation and Development (OECD) member countries, the EU, or EU Member States.

This data from SHARE Waves paper uses 1, 2, 3, 5, (DOIs: 10.6103/SHARE.w1.710, 10.6103/SHARE.w2.710, 10.6103/SHARE.w3.710, 10.6103/SHARE.w4 .710, 10.6103/SHARE.w5.710, 10.6103/SHARE.w6.710, 10.6103/SHARE.w7.711, 10.6103/SHARE.w8.1 00, 10.6103/SHARE.w8ca.100), see (Börsch-Supan et al., 2013_[1]) for methodological details. The SHARE data collection has been funded by the European Commission, DG RTD through FP5 (QLK6-CT-2001-00360), FP6 (SHARE-I3: RII-CT-2006-062193, COMPARE: CIT5-CT-2005-028857, SHARELIFE: CIT4-CT-2006-028812), FP7 (SHARE-PREP: GA N°211909, SHARE-LEAP: GA N°227822, SHARE M4: GA N°261982, DASISH: GA N°283646) and Horizon 2020 (SHARE-DEV3: GA N°676536, SHARE-COHESION: GA N°870628, SERISS: GA N°654221, SSHOC: GA N°823782) and by DG Employment, Social Affairs & Inclusion through VS 2015/0195, VS 2016/0135, VS 2018/0285, VS 2019/0332, and VS 2020/0313. Additional funding from the German Ministry of Education and Research, the Max Planck Society for the Advancement of Science, the U.S. National Institute on Aging (U01_AG09740-13S2, P01_AG005842, P01_AG08291, P30_AG12815, R21_AG025169, Y1-AG-4553-01, IAG BSR06-11, OGHA 04-064, HHSN271201300071C, RAG052527A) and from various national funding sources is gratefully acknowledged (see www.share-project.org).

Abstract

The COVID-19 crisis has hit the long-term care (LTC) sector particularly hard, with large numbers of people dependent on care and particularly vulnerable to COVID-19 have fallen ill, and a disproportionate rate of LTC workers both exposed to, and infected by, COVID-19. The analysis presented in this report describes the effects of COVID-19 on LTC in OECD countries, mainly showing infection rates and mortality of LTC recipients. It takes stock of the wide range of policy responses that countries have implemented, detailing the changes over time on testing strategies, reduction of interactions and isolation measures, digitalisation of services, and workforce. The report also assesses emergency preparedness in the sector, as well as workforce, organisational and coordination challenges. Finally, the report analyses how policy responses affected care continuity and the well-being of residents while also outlining the effectiveness of vaccination.

Résumé

La crise du COVID-19 a eu un impact important sur le secteur des soins de longue durée (SLD), en raison du grand nombre de personnes âgées et vulnérables qui ont été infectées ainsi que des travailleurs du secteur. L'analyse présentée dans ce rapport décrit en premier lieu cet impact du COVID-19 dans le secteur, en termes du nombre d'infections et de la mortalité. Le rapport décrit l'étendue des politiques mises en place suite à la pandémie, en particulier l'évolution dans le temps des mesures pour réduire les infections, notamment l'isolation et la restriction des visites, les tests, la digitalisation et les mesures concernant les travailleurs. Le rapport évalue également la préparation aux situations d'urgence dans le secteur, ainsi que les défis liés à la main-d'œuvre, à l'organisation et à la coordination. L'impact des politiques sur la continuité des soins et le bien-être des résidents ainsi que l'efficacité de la vaccination sont aussi présentés.

Table of contents

OECD Health Working Papers	2
Acknowledgements	3
Abstract	4
Résumé	5
1 Introduction	9
2 Impact of COVID-19 on the elderly and the long-term care sector The overwhelming majority of COVID-19 deaths were among older people The spread of COVID-19 in long-term care facilities has varied widely across countries	11 11 13
3 Policy responses to mitigate COVID-19 in long-term care Most countries focused on infection prevention and control and reduced interactions Limited testing and PPE capacities hampered their use in LTC in the initial phase Structures were put in place to ensure rapid intervention and co-ordination but models of intervention varied Efforts to address staffing shortages Vaccination of LTC residents, the elderly and care workers has been prioritised Support for informal carers was not forthcoming	24 26 28 34 37 45 47
4 How prepared was the sector for the pandemic and how effective were the subsequent policy responses? Emergency preparedness in long-term care was insufficient Early intervention has been an important element for limiting spread Countries need to find the right balance between well-being of LTC residents and containment strategies There have been concerns about continuity of care but telehealth was boosted Insufficient improvements in the workplace have limited the impact of other policies Certain organisational features in LTC limited containment of COVID-19 COVID-19 highlights how good co-ordination is pivotal in LTC and across healthcare sectors Initial findings point to a positive impact of vaccination	50 51 55 56 60 63 66 70 75

5 The way forward?	80
Annex A. Detailed data on COVID-19 and LTC	82
Annex B. Emergency Preparedness Systems in OECD countries	85
References	90
OECD Health Working Papers	108
Recent related OECD publications	109
FIGURES	
Figure 2.1. Almost 95% of COVID-19 deaths are among those aged 60 and over Figure 2.2. Old age is a main risk factor for death from COVID-19 frigure 2.3. In England, the trends in COVID-19 incidence in LTC residents mirror that of LTC workers. Figure 2.4. The share of LTC deaths in total COVID-19 deaths was about 40% across OECD countries as of February 2021 figure 2.5. The rate of LTC deaths varies widely across countries Figure 2.6. LTC deaths tend to be more important in countries where COVID-19 hit harder in the non-LTC-recipient population Figure 2.7. The share of LTC deaths among COVID-19 deaths is higher where the share of LTC recipients in the population aged 65 or over is higher figure 2.8. All-cause LTC mortality was generally higher in 2020 in Portugal compared to previous years, especially in late 2020 Figure 2.9. Mortality in nursing homes was over 20% higher in Paris and Eastern French regions during the first wave compared with the same period in 2019 Figure 3.1. Almost all countries implemented recommendations on visits and isolation in 2020 Figure 3.2. Group activities were heavily restricted in LTC facilities in 2020 Figure 3.3. Access to PPE and testing was particularly challenging in the LTC sector in the first three months of the pandemic Figure 3.4. Not all LTC workers wore PPE when caring for older people during Q3 2020 Figure 3.6. Testing recommendations in OECD countries aim mostly to trace symptomatic workers and contact cases Figure 3.7. Testing recommendations in OECD countries aim mostly to trace symptomatic residents and contact cases Figure 3.9. Most task forces included at least one LTC expert Figure 3.10. Most countries took measures to recruit unemployed or former LTC workers Figure 3.11. About 40% of surveyed OECD countries provided a one-time bonus Figure 3.12. Most countries newseut fiered from the economic crisis in a number of OECD countries Figure 3.13. Informal carers have suffered from the economic crisis in a number of OECD countries Figure 4.1. COVID-19 brought a new	19 20 21 22 27 28
Figure 4.3. Infection control guidelines for LTC rarely mention palliative care Figure 4.4. Earlier publication guidelines may have contributed to limit LTC fatality rates Figure 4.5. A sizeable share of LTC recipients feel more anxious and lonely since the outbreak Figure 4.6. Day care centres often closed to protect older people in most OECD countries Figure 4.7. About 30% reported forgone care or postponed care on average Figure 4.8. A substantial share of older recipients faced more difficulties inreceiving care since the outbreak Figure 4.9. About two-third of OECD countries have guidelines or legislative policies on staff ratios for LTC facilities Figure 4.10. Many policies aimed to reduce interactions of LTC workers Figure 4.11. About 4% of LTC residents had at least one health care-associated infection in 2016-17	54 56 58 60 61 62 64 66 67

8 | DELSA/HEA/WD/HWP(2021)8

Figure 4.12. In Ontario, Canada, higher population density within LTC facilities was associated with higher	
incidence rate and higher death toll	68
Figure 4.13. The association between for-profit status of LTC facilities and fatality rates is unclear	69
Figure 4.14. Hospitalisations for severe disease have decreased more sharply among the elderly in Israel	
since the vaccination campaign	76
Figure 4.15. COVID-19 death rate in England and Wales has lessened more among the elderly since the	
vaccination campaign began	77
Figure 4.16. COVID-19 death rate in the US has decreased more rapidly in the older population since the	
vaccination campaign began	77
TABLES	
Table 3.1. Overview of policy measures implemented during 2020 to protect LTC recipients and workers from	
COVID-19, and to maintain continuity of care during the crisis	25
Table 3.2. Most OECD countries had COVID-19 Task Forces	34
Table 3.3. Most OECD countries created rapid response teams	36
Table 3.4. Education requirements for LTC workers vary greatly across countries	43
Table 3.5. Example of policies recommended supporting family carers in accessing long-term care facilities	49
Table 4.1. OECD countries with public guidelines on infection control in LTC prior and post COVID-19	52
Table 4.2. Example of policies recommended supporting visitors in accessing long-term care facilities	59
Table 5.1. Emergency Preparedness Systems in OECD countries	85

Introduction

- 1. The pandemic associated with Coronavirus Disease 2019 (COVID-19) is a global threat to countries, with unprecedented health and economic impacts. The COVID-19 pandemic has hit OECD countries particularly hard because of a large share of the population is older and frail, or living with chronic conditions. The impact in the long-term care (LTC) sector1 has been particularly acute, both because of the large numbers of older people dependent on care falling ill and because LTC workers are particularly exposed to the infection. The risk of infection and of death from COVID-19 increases with age and among individuals with pre-existing conditions, such as diabetes and heart disease. People aged 80 and over represent 50% of those receiving LTC across OECD countries, and deaths have been heavily concentrated on this age group.
- 2. The impact of COVID-19 on mortality has led countries to implement stringent mitigation and containment strategies on all population groups, including the elderly receiving LTC. A wide range of measures were introduced in the LTC sector, both targeting elderly people and LTC workers. A set of measures focused on infection prevention and control (heightened hygiene, use of Personal Protective Equipment (PPE), reduction of interaction within and across LTC settings), while another set aimed to test and trace cases in LTC. Structures, like task forces and rapid response teams were put in place to ensure rapid intervention and co-ordination. Vaccination in LTC was prioritised from the initial stages of vaccination campaigns.
- 3. In parallel, efforts were made to increase funding and address staffing shortages - two longstanding challenges in LTC. However, pre-existing structural challenges have compounded the impact of the pandemic on the sector. The LTC sector has experienced long-term, chronic underinvestment with a large number of preventable safety failures occurring in the sector prior to the pandemic. Poor safety is in part attributable to a lack of resources such as inappropriate levels of staffing, supplies, and treatments, which can pose a challenge for the delivery of safe care; as well as insufficient quality standards and monitoring in LTC. Work conditions are often very difficult and demanding, accompanied by high staff turnover. There is a lack of sufficient, qualified medical staff, as well as insufficient co-ordination with the rest of the health system and across LTC stakeholders (OECD, 2020[2]).
- This report discusses the impact of COVID-19 in terms of cases of COVID-19 infection and deaths among older people in LTC. It outlines the wide range of policy responses countries implemented to contain and mitigate the pandemic in LTC, and reviews the effectiveness of these responses in light of the institutional arrangements for care services in countries. It also discusses the effects of these measures on the well-being of LTC recipients and the initiatives taken to minimise these effects. The paper reviews LTC co-ordination policies and finally draws attention to the positive impact of vaccination.
- 5. Two important elements are to be kept in mind. First, the pandemic is ongoing so no definitive assessment can be made at this stage. Second, the results presented in this report are limited by data comparability within and across countries.

¹ The long-term care sector includes care for individuals with limitations in their daily activities, such as washing, and instrumental daily activities, such as preparing food, both at home and in institutions. While the analysis aims to cover both, there is a strong focus on the institutional side.

- 6. The key findings are summarised below:
 - The LTC sector was not sufficiently prepared to address the COVID-19 health crisis: just over 50% of the countries had guidelines on infection control in LTC. Early intervention has been key to prevent deaths in LTC: the greater the time lapse between the first case and the implementation of the first guidelines on COVID-19 in LTC, the higher the number of LTC deaths per million population aged 80 and over. Poor data measurement and evaluation in LTC hampered the effective surveillance of outbreaks of COVID-19.
 - The share of LTC deaths within total COVID-19 deaths tends to be higher in countries
 where the share of LTC recipients in the population aged 65 years or older is higher. About
 40% of COVID-19 deaths were among LTC residents across OECD countries. Death rates
 were generally high in LTC but there was a large degree of variation across countries.
 - Most countries banned visitors to LTC facilities and reduced group activities, while
 operational protocols, guidelines, and training for detecting and isolating cases were
 slower to be put in place. Because of the negative impact of containment and mitigation
 strategies to address the COVID-19 pandemic on mental health and social isolation,
 countries have revised visiting protocols, but more needs to be done to ensure safe visits
 and outings, as well as to ensure care continuity.
 - Testing and PPE in the initial phases of the pandemic were not sufficiently prioritised for the sector: on a scale of one (not an issue) to five (extremely challenging), countries defined access to PPE as three and access to testing as four for the sector. Even after testing shortages were addressed, routine testing was not common in LTC.
 - Efforts were made to boost both staff, and training for staff, during the pandemic but
 mobilising sufficient staff and containing infections remained challenging. Higher LTC
 staffing rates were strongly associated with lower LTC death rates as of May 2020;
 similarly, reducing staff movements has been key to reduce viral spread, as workers have
 often been one of the key vectors for introducing the virus into LTC facilities. Addressing
 staff to resident ratios, the working conditions and occupational health and safety for LTC
 workers appear to be a necessity going forward.
 - Organisational features such as communal living, shared rooms, and lack of spare capacity have rendered isolation of cases challenging. In particular, high population density in LTC facilities is often associated with worse outcomes. Multiple occupancy room facilitated the spread of infection and hindered the implementation of isolation measures of suspected or infected cases. Some LTC facilities in some countries were initially ill prepared for implementing hygiene and environmental decontamination measures.
 - Failure to provide good co-ordination and integration with the health system had a negative impact on the health of LTC recipients. The lack of medical provision within nursing homes created particular difficulties in places where transfer to hospital was delayed, especially in terms of having expertise and equipment (e.g. supply of oxygen). While a few countries (e.g. Estonia, Canada, Colombia, Finland, Latvia, Luxembourg, Portugal and Slovenia) generated guidelines for better integration with hospitals and measures with respect to multidisciplinary teams, such approaches were not adopted by the majority of states surveyed. Similarly, access to palliative care was more difficult in some cases, such as in the Netherlands and the United States.
 - Countries have prioritised the sector for COVID-19 vaccination, which is resulting in reductions in deaths and hospitalisations from LTC sector, and among the elderly overall.

Impact of COVID-19 on the elderly and the long-term care sector

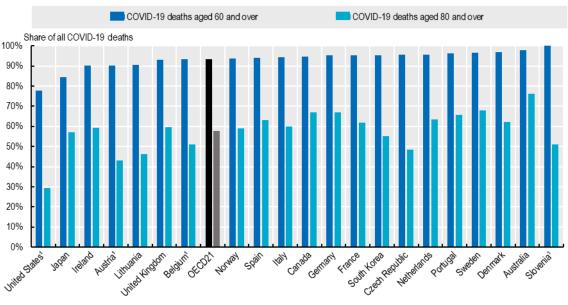
Population of all age groups are likely to be infected, but older people are those more likely to get infected and die from the infection or from another cause worsened by COVID-19 (Neumann-Podczaska et al., 2020_[31]). Most people who are infected with COVID-19 survive – infection fatality rate estimates have ranged between 0.17-1.7% (Meyerowitz-Katz and Merone, 2020[4]). However, the fatality rates are higher among older population. A meta-analysis found that the estimated age-specific infection fatality rate is very low for children and younger adults but increases gradually to 0.4% at age 55, 1.4% at age 65, 4.6% at age 75, and 15% at age 85 (Levin et al., 2020[5]).

The overwhelming majority of COVID-19 deaths were among older people

COVID-19 deaths among the elderly

8. The majority of COVID-19 deaths were among older people. 93% of COVID-19 deaths were among people aged 60/65 and 58% COVID-19 deaths were aged 80/85 (Figure 2.1).

Figure 2.1. Almost 95% of COVID-19 deaths are among those aged 60 and over



Note: Data on cumulative deaths up to early May 2021, except for Canada, Italy and the United Kingdom (late April); the Czech Republic, Ireland, Japan, Lithuania and Slovenia (late February). 1. Data refer to those aged 65 and over and 85 and over for Austria, Belgium, Slovenia and the United States (65+ and 85+). The United Kingdom refers to England and Wales.

Source: COVID-19 INED Demographics of COVID-19 Deaths (https://dc-covid.site.ined.fr/en/), complemented with 2021 OECD Questionnaire on COVID-19 and LTC. Our World in Data for total COVID-19 deaths.

9. Older people are more likely to die of COVID-19 in all countries with available data (Figure 2.2), particularly among those aged 80 and above. The average rate of COVID-19 deaths among those aged 80/85 and over is about 15 500 per million people, while the average rate of COVID-19 deaths among those aged 60/65 and over is about 4 600 per million people. Slovenia and the United States had the highest mortality rates among people aged 60/65 and over².

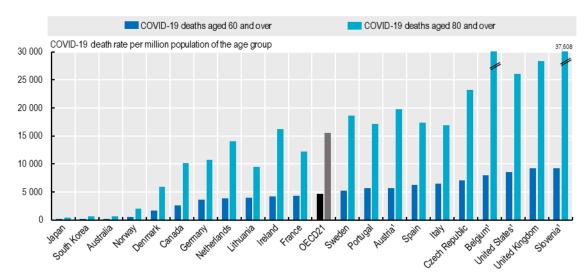


Figure 2.2. Old age is a main risk factor for death from COVID-19

Note: Data on cumulative deaths up to early May 2021, except for Canada, Italy and the United Kingdom (late April); the Czech Republic, Ireland, Japan, Lithuania and Slovenia (late February). 1. Data refer to those aged 65 and over and 85 and over for Austria, Belgium, Slovenia and the United States (65+ and 85+). The United Kingdom refers to England and Wales.

Source: COVID-19 INED Demographics of COVID-19 Deaths (https://dc-covid.site.ined.fr/en/), complemented with 2021 OECD Questionnaire on COVID-19 and LTC. OECD Health Statistics and Eurostat Database for data on demographics (2018).

- 10. The mortality rates by gender are higher for older men than for older women in all countries with available data, even though the gender gap is small (Global Health 50/50, $2021_{[6]}$). For example, the mortality rates per million for people aged 60 or over in Italy was 8 000 for older men while it was 5 100 for older women in Italy (as of 28 April 2021). In France, the rate was 5 400 for older men, compared with 3 100 for older women (as of 6 May 2021). In Germany, the mortality rate was 3 900 for older men and 3 000 for older women (as of 4 May 2021). In Japan, mortality rate was 150 for older men while it was only 80 for older women (as of 8 February 2021). In England and Wales, mortality of males is 10 700 while that of females is 8 000 and in the United States, mortality of males is 9 700 while that of females is 7 200 (as of 5 May 2021). The share of men in COVID-19 death in these countries, ranged from 51% in Germany to 59% in Japan.³
- 11. While reported COVID-19 deaths are a critical measure of the health impact of the pandemic on countries, comparability of this indicator is limited by differences in recording, registration and coding practices across countries. Moreover, other factors, such as the low availability of diagnostic tests (especially at the start of the pandemic) are likely to have impinged on the accuracy of attributing the causes of death. The reported count of deaths due to COVID-19 may be underestimated to varying

OECD HEALTH WORKING PAPER NO. 131

² Available data for Slovenia, United States, as well as Belgium and Austria, refer to the mortality rates among those aged 65 and over (rather than 60 and over).

³ The source is COVID-19 INED Demographics of COVID-19 Deaths for all countries except Japan (national statistical website).

degrees across countries (see Box 2.1). In addition, higher COVID-19 death rates among the elderly in some countries might be related to higher susceptibility to COVID-19 due to inherent factors that go beyond policy makers' responses to the virus. In particular, the share of older people, the prevalence of certain risk factors such as obesity and diabetes in a population, the intensity of tourism and international travel in and out of the country, and population density are all likely to have affected the number of COVID-19 deaths.

Box 2.1. Limitation of COVID-19 deaths indicator

For reported COVID-19 deaths, cross-country comparability is linked to different registrations depending on where the death occurred and the availability of testing (particularly early on in the pandemic), and different coding practices. In particular:

- Whether COVID-19 deaths occurring outside of hospitals, notably nursing homes are fully recorded.
- Whether suspected cases are counted alongside those confirmed by tests.
- Differences in testing capacity across countries and over time, with many countries having faced severe constraints in testing capacities early in the pandemic.

The spread of COVID-19 in long-term care facilities has varied widely across countries

Incidence rate in LTC

- Older recipients of care, including those in long-term care (LTC) facilities, often have compromised immune systems or chronic conditions that place them at high risk of infection – especially, but not only, during the COVID-19 crisis. Infections have long been a leading cause of morbidity and mortality among LTC recipients.
- 13. While there is no internationally accepted definition of long-term care, this reports focuses on formal care provided to older people who are no longer able to perform activities of daily living on their own (see Box 2.2).

Box 2.2. Defining long-term care and its scope in this report

Long-term care (LTC) consists of a range of medical, personal care and assistance services that are provided to alleviate pain, and reduce or manage the deterioration in health status for individuals who are no longer able to perform activities of daily living on their own. The definition of LTC may vary between countries, due to differences in health care systems, culture and demographics. However, the primary goal of LTC services is to help ensure that individuals who have a degree of long-term functional or cognitive disability are able to live as independently and safely as possible.

In many countries, most people who require LTC live in their own homes or with family members within the community. Home care may be delivered through health care and LTC workers who visit homes to assist recipients with activities of daily living and key activities of daily living, such as personal hygiene, preparing meals, and administering medication. Home care may be complemented by institutions to temporarily support ageing-in-place such as adult day care centres and respite care. However, most LTC is provided informally by unpaid family members and friends, and data on recipients of informal home care is limited.

This report focuses mostly on formal care and includes data about formal LTC from residential homes, general nursing homes, mixed LTCFs, community-based settings (e.g. day care) and within homes (e.g. home care). While LTC recipients can include people younger than 65 years old in some cases, the majority of LTC recipients are elderly.

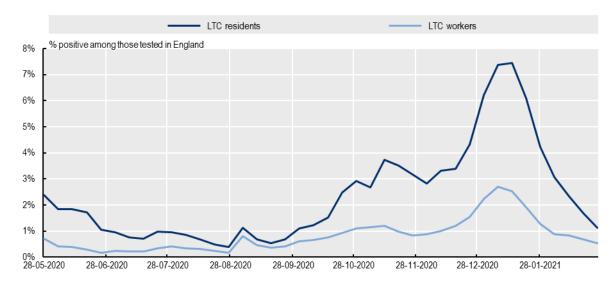
LTC workers were particularly exposed to the virus and many fell ill

- 14. LTC workers were at higher risk of being infected compared with other workers. For example, in Spain, results of the fourth round of the National ENE-COVID sero-epidemiology study (of over 51 000 participants) showed that the global prevalence of IgG antibodies against COVID-19 stood at 9.9% in December 2020. The prevalence among workers was highest in health professionals (about 17%) and women looking after dependent people at home (16%) (Spanish Ministry of Science and Innovation, 2020_[7]). Similarly, a large English study undertaken from 16 March to 26 July 2020 found that health care workers and social care workers were more likely to be infected than workers defined as non-essential (Mutambudzi et al., 2020_[8]).
- Many LTC workers have fallen ill with COVID-19 and had to take sick leave. In Navarre, Spain, over 24% of workers in LTC facilities took at least one medical leave and three-quarters of LTC facilities had at least one employee who took leave during the first wave. All LTC facilities where at least one resident was infected had at least one employee who took leave. Leave in context of staff shortages limited the capacity to respond effectively to the pandemic (Fresno, 2020 [9]). In Portugal, workers in LTC facilities accounted for about a third of COVID-19 related sick leave (European Trade Union Institute, 2021[10]). In Germany, the LTC insurance fund (13.6 million employee members) counted that 4.2% of LTC staff (including home care workers) took sick leave between March and December 2020, compared with 2.1% on average across all employee members. In Luxembourg, the average number of days of sick leave for LTC workers (nursing and medical staff, including home care workers) was 25 calendar days per LTC worker between January and end of September 2020. Over the same months, in the last three previous years, the average was 16 calendar days per LTC worker. Those working in LTC facilities had a slightly higher average of sick leave compared with home LTC workers on average (in 2020 and in previous years). In Slovenia, for those working in LTC facilities, the average number of calendar days of sick leave was 35 calendar days per LTC worker in 2020, compared with 30 calendar days per LTC worker in the three previous years on average.

Incidence rate of LTC residents and LTC workers in LTCF

- 16. Available data on incidence on LTC residents and LTC workers is scarce but suggests that the spread of the virus varied across countries and that the incidence rate among LTC residents often mirrored that of LTC workers, with larger peaks among LTC residents during outbreaks.
- 17. In Denmark, about 5% of LTC residents were confirmed positive in 2020. In Estonia, 10% of LTC residents were confirmed positive and 11% of LTC workers in LTC facilities in 2020 (from March).⁴ The weekly trends for both residents and workers mirror each other closely⁵. In Ireland, 5.1% LTC residents were confirmed cases linked to a nursing home outbreak from the start of the pandemic to 22 February 2021. In Slovenia, 58% of LTC residents in nursing homes and special social care facilities had been tested positive in 2020.⁶
- 18. In England, 2% of tested LTC residents had COVID-19 over the period 28 May 2020 to 30 December 2020. From 31 December 2020 to 3 March 2021, 4.6% of tested LTC residents had COVID-19. Over these periods, the shares were respectively 0.8% and 1.6% for tested LTC workers. The weekly trends in the share of positive residents and LTC workers among those tested mirrors each other as well as that of overall confirmed cases, with a first strong increase in November 2020 followed by a sharp peak in December 2020 and January 2021, likely linked to the English variant (Figure 2.3).

Figure 2.3. In England, the trends in COVID-19 incidence in LTC residents mirror that of LTC workers.



Note: Confirmed cases based on PCR tests.

Source: 2021 OECD questionnaire on COVID-19 and LTC.

⁴ Data refer to nursing homes and 24-hour special care facilities. Data on workers refer to the end of 2019 and the number of workers in 24-hour special care facilities is estimated.

⁵ Data available refer to early March 2020 to end of November 2020, a period without peaks in Estonia. The 2020 most important peak was mostly during December 2020, although it started end of November.

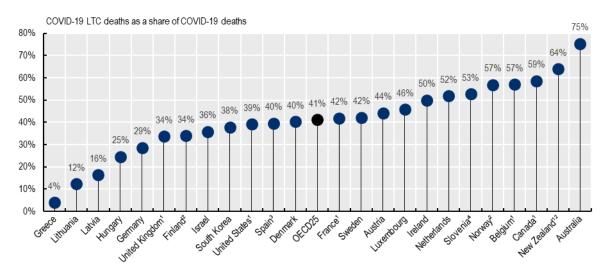
⁶ Another source (https://ltccovid.org/wp-content/uploads/2021/02/LTC_COVID_19_international_report_January-1-February-1-1.pdf) suggest that about half of residents of nursing homes could be been tested positive as of 17th January 2021.

- 19. In the Czech Republic, there were an estimated 166 positive LTC residents per 100 000 population and 107 positive LTC workers in LTC facilities per 100 000 population from 12 November to end of December 2020.⁷ As in England, the trends in incidence mirrored each other in the Czech Republic, with a larger gap during peaks, (the incidence increases more sharply among LTC residents than LTC workers).
- 20. In Norway, 1.3% of LTC residents and 1.8% of LTC workers had been tested positive in 2020. While the trends mirrored each other, the incidence rates of LTC workers were larger during peaks than those of LTC residents.

COVID-19 deaths among long-term care residents

21. The share of COVID-19 LTC residents mortality rate varies widely across countries (Figure 2.4), suggesting that LTC residents were more impacted than the rest of the population in some countries. The OECD average was 41%, with Australia having the highest at 75%, followed by New Zealand at 64%. However, along with countries like Norway and Slovenia, these are the countries where the overall COVID-19 mortality rates have been lowest in the OECD countries, and so comparisons with countries with much higher overall rates are not really appropriate. The lowest shares were in Greece (8%), Lithuania (12%) and Latvia (16%).





Note: Data on cumulative deaths up to early February 2021 (see Annex A for details). 1. Includes confirmed and suspected deaths. 2. Only includes deaths occurring within LTC facilities. 3. Data come from regional governments using different methodologies, some including suspected deaths. 4. Slovenia includes deaths in nursing homes and social LTC facilities.

Source: (Comas-Herrera et al., 2021[11]), ECDC (https://www.ecdc.europa.eu/en/all-topics-z/coronavirus/threats-and-outbreaks/covid-19/prevention-and-control/LTCF-data), 2021 OECD Questionnaire on COVID-19 in LTC.

22. When looking at the rate of LTC deaths in the older population (aged 80 or over), the country positioning changes (Figure 2.5). LTC deaths per million people aged over 80 are highest in Belgium and Slovenia, followed by Luxembourg, the United States, and the United Kingdom, with rates higher than 10 000 LTC deaths per million people aged over 80. The OECD average is about 6 000 LTC deaths per million people aged over 80. However, caution is needed when interpreting these results: many countries

_

⁷ Data are based on a sample of about 82% of clients and workers in residential social care services.

with the highest rates, like Belgium, the US and the UK, are countries reporting both confirmed and suspected deaths. In Slovenia, LTC deaths refer to nursing homes and social LTC facilities. In addition, the country ranking is due in part to the population structure in different countries. Slovenia and Belgium are two countries with over 5% of their population aged over 80. Luxembourg counted 270 LTC deaths, but has also a small elderly population (3.9%, or 24 282 people aged 80 and over in 2018).

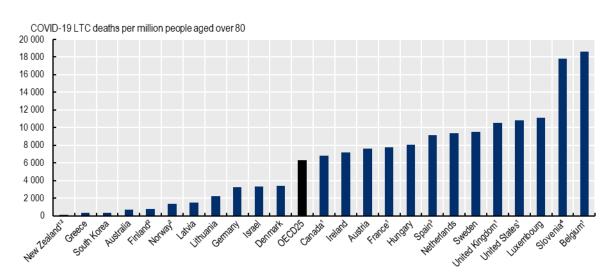


Figure 2.5. The rate of LTC deaths varies widely across countries

Note: Data on cumulative deaths up to early February 2021 (see Annex Afor details). 1. Includes confirmed and suspected deaths. 2. Only includes deaths occurring within LTC facilities. 3. Data come from regional governments using different methodologies, some including suspected deaths. 4. Slovenia includes deaths in nursing homes and social LTC facilities.

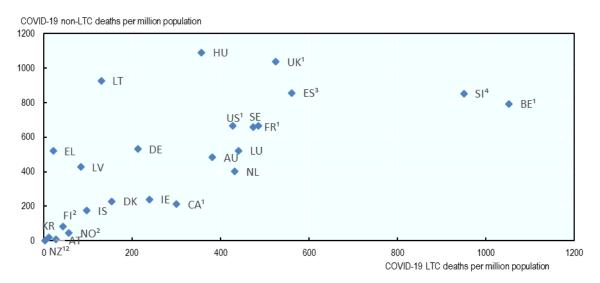
Source: (Comas-Herrera et al., 2021[11]), ECDC (https://www.ecdc.europa.eu/en/all-topics-z/coronavirus/threats-and-outbreaks/covid-19/prevention-and-control/LTCF-data), 2021 OECD Questionnaire on COVID-19 in LTC. For population data, sources refer to Eurostat Database, complemented with OECD Health Statistics (2019 or latest year available).

- 23. COVID-19 LTC deaths occurred mostly in LTC facilities based on countries with available data. In Belgium, 14% of COVID-19 LTC deaths occurred in hospital; in France, the share reached 13%. In the UK, it was 9% and in Sweden only 4%, as of early February 2021 (Comas-Herrera et al., 2021_[11]). In Norway, this share was 5% in 2020, on par with the share for all-cause LTC residents (7% of all-cause LTC deaths in hospitals in 2020, 9% in 2019 and 2018, 10% in 2017). In Luxembourg, 23% of all deaths in LTC facilities were in hospital in 2020 (compared with 28% in 2019), but 34% of COVID-19 LTC residents' deaths occurred in hospitals in 2020. In Slovenia, while the place of death is unknown for the deceased with COVID-19, all-cause mortality of LTC residents shows that 43% of LTC residents who died in 2020 were in hospitals, a lower share than those of previous years (51% in 2019 and 52% in 2018⁸).
- 24. When looking at the association between LTC deaths and non LTC-deaths (Figure 2.6), it appeared that LTC deaths were strongly associated with non-LTC deaths, suggesting that the frontier was largely porous. This also means that the comprehensive measures taken on the general population contributed largely to protect LTC recipients and LTC workers.

_

⁸ 50% in 2017, 52% in 2016 and in 2015.

Figure 2.6. LTC deaths tend to be more important in countries where COVID-19 hit harder in the non-LTC-recipient population

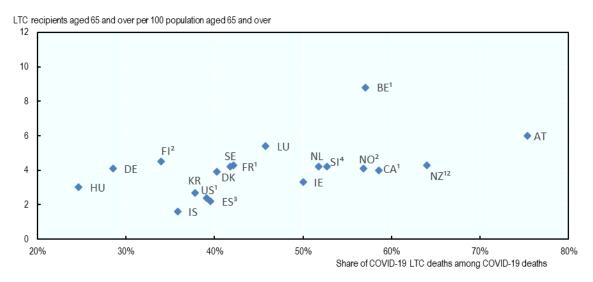


Note: Data on cumulative deaths up to early February 2021 (see Annex A for details). 1. Includes confirmed and suspected deaths. 2. Only includes deaths occurring within LTC facilities. 3. Data come from regional governments using different methodologies, some including suspected deaths. 4. Slovenia includes deaths in nursing homes and social LTC facilities.

Source: (Comas-Herrera et al., 2021_[11]), ECDC (https://www.ecdc.europa.eu/en/all-topics-z/coronavirus/threats-and-outbreaks/covid-19/prevention-and-control/LTCF-data), 2021 OECD Questionnaire on COVID-19 in LTC. For population data, sources refer to Eurostat Database, complemented with OECD Health Statistics (2019 or latest year available). For life expectancy, data refer to Eurostat Database for European countries (2019) and OECD Health Statistics for non-European countries (2018).

25. Beyond the spread of the virus among the general population, COVID-19 LTC mortality rates might also be related to the level of formal care provision. The share of LTC deaths in COVID-19 deaths tends to be higher in countries where the share of LTC recipients in the population aged 65 years or older is higher (Figure 2.7). As outlined previously, long-term care facilities are more vulnerable to the COVID-19 pandemic, in terms of disease spread and mortality rate (Salcher-Konrad, 2020[12]).

Figure 2.7. The share of LTC deaths among COVID-19 deaths is higher where the share of LTC recipients in the population aged 65 or over is higher



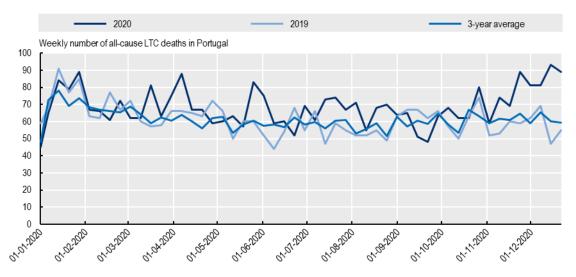
Note: Data on cumulative deaths up to early February 2021 (see Annex A for details). 1. Includes confirmed and suspected deaths. 2. Only includes deaths occurring within LTC facilities. 3. Data come from regional governments using different methodologies, some including suspected deaths. 4. Slovenia includes deaths in nursing homes and social LTC facilities. (Comas-Herrera et al., 2021[11]), ECDC (https://www.ecdc.europa.eu/en/all-topics-z/coronavirus/threats-andoutbreaks/covid-19/prevention-and-control/LTCF-data), 2021 OECD Questionnaire on COVID-19 in LTC. For LTC recipients, data refer to OECD Health Statistics (2018 or latest year).

Evolution of all-cause mortality among LTC residents

While many OECD countries publish statistics on COVID-19 related mortality, the timing of publication and differences in coding and reporting practices pose challenges for international comparisons. Looking at the number of total deaths in long-term care settings can help to overcome some of these differences in national practices. It also provides a better view of the overall impact of COVID-19, by taking into account not just the possible underreporting of COVID-19 deaths but also indirect mortality caused, for example, by health systems not being able to cope with other conditions (Morgan et al., 2020[13]). However, because it captures all deaths irrespective of their cause, caution is needed when comparing mortality over time and attributing excess mortality to COVID-19 deaths. Cross-country differences in other significant events this year and in previous years, such as severe or mild flu seasons, heatwaves and natural disasters, can lead to under- or over-estimates of the impact of COVID-19 on excess mortality (Morgan et al., 2020[13]). At the same time, there has been some discussion on how isolation during COVID-19 led to sharp declines in cognitive functioning of the elderly - especially those with dementia - leading to earlier death in some cases (see section "Countries need to find the right balance between well-being of LTC residents and containment strategies").

27. Excess mortality in LTC facilities is extremely difficult to collect in the overwhelming majority of OECD countries. In Norway, there were 3% more deaths among LTC residents (dying in hospital or in LTC facilities) in 2020, compared with 2019. That being said, there were hardly more deaths among LTC residents in 2020 compared to the average of the last three years. In Latvia, the evolution was of -0.3% over the same period for LTC residents dying in LTC facilities. In Portugal, there was over 12% more deaths among LTC residents dying in LTC facilities in 2020, compared with 2019. The all-cause LTC mortality was much higher in 2020 than the average of the three previous years (Figure 2.8).

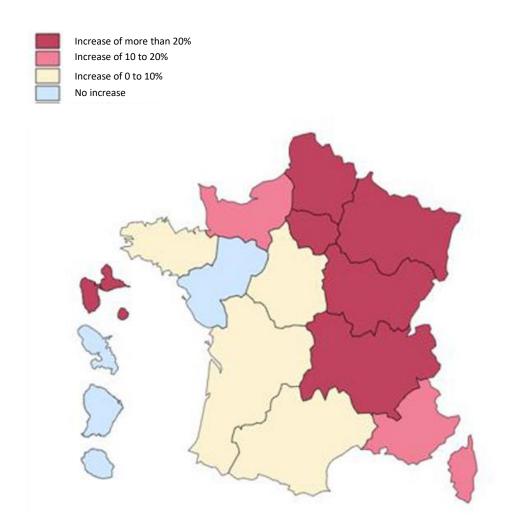
Figure 2.8. All-cause LTC mortality was generally higher in 2020 in Portugal compared to previous years, especially in late 2020



Note: 3-year unweighted weekly averages refer to 2019, 2018 and 2017. Source: 2021 OECD questionnaire on COVID-19 in LTC.

28. In France, mortality in nursing homes has been over 20% higher in the Parisian region and Eastern regions during the first wave, between March and early April 2020 compared to the same period in 2019 (Figure 2.9). Two regions were particularly hit: almost three times more LTC residents died in the Parisian region ("Ile de France", 171%) and nearly twice more LTC residents died in the north eastern region ("Grand Est", 83%), compared with the same period in 2019 (Roy, 2020[14]), regions that were hard hit during the initial phases of the pandemic.

Figure 2.9. Mortality in nursing homes was over 20% higher in Paris and Eastern French regions during the first wave compared with the same period in 2019



Note: Evolution of cumulated deaths from 1 March 2020 to 20 April 2020, compared with the same period in 2019, in nursing homes. Source: (Roy, 2020_[14]).

29. In Italy, a study showed that Lombardy, Sardegna Abruzzo-Molise were the regions with the highest death rates among LTC residents from February and March 2020 (Figure 2.10). The ratios of observed to estimated expected deaths⁹ for almost all regions (but four: Lazio, Umbria, Calabria and Puglia) suggested a higher mortality among LTCF residents, the highest ratios were found in Lombardy, in Sardegna and Abruzzo-Molise (over twice more observed deaths than expected) (de Girolamo et al., 2020_[15]).

_

⁹ Expected deaths refer to the estimated deaths that occurred based on the number of LTC residents in each region and age-specific regional mortality rates, taking into account the age structure of the population resident in LTC facilities.

Mortality rate of LTC residents per 100 residents Observed deaths per expected deaths Observed deaths per expected deaths Mortality rate of LTC residents per 100 residents 14 14 12 12 Observed deaths = expected deaths 10 10 8 8 6 6 4 4 2 Λ ADULIO & Molise Tenino Alo Adige Etiliakonagra Liguria Fridity G. Lombardy Saldedia Piemonte Marche Sicilia Veneto Campania Tuscany

Figure 2.10. In Italy, mortality was higher than expected in Northern regions

Note: Residents up to 1st February 2020 and new admissions from 1st March 2020. The period covered is February and March 2020. Data not available for Basilicata and Valle D'Aosta. Data from Bolzano and Trento were presented as "Trentino Alto Adige". Expected deaths are based on regional mortality rates of those aged 75-79 years old and the number of LTC residents in each region. Source: (de Girolamo et al., 2020[15]).

Lack of comprehensive data and timely monitoring systems reduces the ability to measure the impact of COVID-19

- 30. As previously outlined, the results presented in this chapter are limited by data comparability within and across countries. At the start of the pandemic, data on COVID-19 deaths were only collected on people who had been tested and died in hospitals. An international initiative of the International Long-Term Care Policy Network to track data on deaths of residents of long-term care facilities only found publicly available data for 11 countries in April 2020, 21 countries in May 2020 and 23 countries in February 2021 (Comas-Herrera et al., 2021[11]). In the European Union, the European Centre for Disease Prevention and Control shares data on LTCF as part of its strategy for COVID-19 surveillance since early 2021, about one year after the start of the pandemic. It collects data from Member States covering mitigation action, infection rates and mortality (European Centre for Disease Prevention and Control, 2021[16]).
- 31. In addition, lack of data about the characteristics of the residents of long-term care facilities has been identified as a barrier to response planning for the COVID-19 pandemic ((World Health Organization, 2020_[17])). For instance, mathematical models that have informed policy responses have not accounted for residents in long-term care facilities, or attempted while recognising data limitations (Overton et al., 2020_[18]; Giordano et al., 2020_[19]; Institute for Health Metrics and Evaluation, 2021_[20]). This is concerning giving that about 40% of COVID-19 deaths are among LTCF residents across OECD countries.
- 32. A summary of major monitoring and measurement challenges encountered at the time of writing is listed below.
 - Coding differences over the registration of COVID-19 deaths, with a few countries including suspected deaths. While this enables to measure more accurately COVID-19 mortality burden, it creased biases in international comparisons. Less concerning but still indicative, in a few countries, subnational areas have not agreed on a common methodology to count deaths.
 - The lack of regular data collection or update on COVID-19 LTC deaths. At the time of writing (May 2021), most recent data on LTC deaths dated back to up to early February 2021, at best. In the

- EU, the ECDC website does not provide frequent updates, even though many EU countries publish COVID-19 LTC deaths on their national website.
- The difficulty to obtain comparable COVID-19 mortality LTC deaths with breakdown by settings, or at least to be certain of the settings covered (e.g., whether LTC deaths include those in hospitals).
- The lack of readily available data on all-cause mortality in LTC facilities. Data are often available
 only on an ad-hoc basis. It is also difficult to access data with a breakdown by setting (in hospital
 or in nursing home).
- The paucity of data on mortality among community-based users of LTC, rendering any crosscomparison analysis hardly possible.
- 33. In addition, lack of comprehensive information and monitoring systems impeded further analysis on the preparedness level of countries and the effectiveness of policy responses. Lack of data covered a range of topics, including:
 - The lack of data about the private and the NGO providers (World Health Organization, 2020_[17]).
 This is a key issue in OECD countries where the private sector and/or not-for-profit organisations play major roles.
 - The lack of data on funding mechanisms in LTC (Spasova et al., 2018_[21]) and comparable data on expenditure in LTC (OECD, 2020_[22]).
 - The lack of data on the quality of LTC. Data are often available only on an ad-hoc basis and the few indicators on care quality in LTC facilities do not cover all the dimensions of quality (Spasova et al., 2018_[21]).
 - The lack of information and data on informal carers, despite their significant role.
- 34. Still, the presentation of policy responses and country experiences analysed in the next chapters offer emerging insights and underline how important it is to address the long-standing challenges of this sector.

Policy responses to mitigate COVID-19 in long-term care

- 35. Residents of LTC facilities are at a higher risk of developing severe disease and death due to COVID-19 because they tend to be older and to have underlying medical conditions and/or functional decline. In addition, the congregant nature of facilities makes the risk of infection spread more acute. National and international guidance has since the beginning of the pandemic concentrated on containment and mitigation strategies in LTC. Such strategies aim to minimise the risk of transmission of infections and slow the spread of the virus.
- 36. These containment and mitigation strategies were implemented in all OECD countries, but with different levels of stringency, as shown in column 3, Table 3.1 which summarises the main measures taken across European countries. Restrictions within facilities to shelter residents have been very common, with 32 OECD countries reporting this type of measures. These measures included both banning and restricting visits inside the facilities and reducing contacts among residents by limiting group activities (OECD questionnaire, 2021). Such restrictions were coupled with environmental cleaning and disinfection, and promoting hand and respiratory hygiene among residents, staff, and visitors (Rios et al., 2020[23]).
- 37. Despite several initial challenges related to the access to PPE and testing in LTC, at least 30 countries have developed policies to improve the access to PPE and 24 have prioritised the testing of care home residents and staff. The measures included increasing funding for PPE and tests, creating special provision channels of PPE in LTC, training LTC staff on the use of PPE and testing, and providing mobile units to test LTC residents in loco.
- 38. Moreover, countries implemented measures to ensure care continuity, by boosting staff numbers, expanding telehealth services, improving coordination between LTC and primary care and/or hospitals and changing or loosening regulations and inspections in LTC facilities. Policies to boost staff numbers existed in at least 26 OECD countries and included funding to hire new staff, students or recently retired healthcare workers, but also staff redeployment and rapid response teams constituted by the army or volunteers. To allow such measures, 24 countries also loosened regulations and inspections in LTC facilities. 21 OECD countries expanded the use of telehealth services to allow remote consultations between patients and the healthcare sector and to keep LTC residents in touch with their relatives outside the facilities. Other efforts to ensure care continuity included measures to improve coordination between LTC and other healthcare settings. Coordination has been a longstanding issue both between governmental levels and between different care settings. Care is sometimes jeopardised among hospitals, primary health and social care and the pandemic has exacerbated the need of coordination to facilitate adequate care provision. 24 OECD countries reported having implemented measures to improve care coordination, including the deployment of medical staff to LTC facilities to treat LTC residents with COVID-19, measures to cover the extra-cost of COVID-19 residents in LTC facilities and coordination plans across health settings.
- 39. Finally, when vaccination became available, 28 countries prioritised care home residents and staff in the vaccination rollout. To allow easier vaccinations for LTC recipients, countries implemented mobile teams inside the facilities and trained GPs and LTC nurses to vaccinate respectively LTC recipients at home and LTC residents.

Table 3.1. Overview of policy measures implemented during 2020 to protect LTC recipients and workers from COVID-19, and to maintain continuity of care during the crisis

Country	Improve access to PPE (funding or direct distribution)	Prioritised testing of care home residents and staff	Restrictions within facilities (restricted visits, isolation measures)	staff numbers (funding or staff redeployment)	Expanded telehealth services	Coordination between LTC and primary care/hospital	Change in regulations/ inspections	Prioritised Vaccination of care home residents and staff
Australia	✓		√	✓	√	√	✓	✓
Austria		✓	✓	✓	√		✓	
Belgium	✓	✓	✓	✓	✓	✓	✓	✓
Canada	✓	√	✓	✓	√	✓		√
Chile	✓	✓	✓	✓		√		✓
Colombia	√	✓	√		✓	✓		√
Czech	· ✓	•	·	✓	· ✓	· ·	✓	· ✓
Republic	•		•	•	•	•	•	•
Denmark	✓	✓	✓	✓	✓	✓	✓	✓
Estonia	✓		✓	✓	✓	✓	✓	✓
Finland	✓		✓		✓	✓		✓
France	✓	✓	✓	✓	✓	✓	✓	✓
Germany	✓	✓	✓	✓		✓	✓	✓
Greece	✓	✓	✓		✓	✓		✓
Hungary	√	✓	✓	✓		✓	✓	✓
Iceland			✓					
Ireland	✓		✓	✓	✓		✓	✓
Israel ¹⁰		✓	✓					✓
Italy	✓	✓	✓	✓	✓	✓		✓
Japan	✓	✓	✓	✓	✓	✓	✓	✓
Latvia	✓		✓	✓		✓		✓
Lithuania	√	✓	✓	√		✓	✓	✓
Luxembourg	√	✓	✓	√		✓	✓	✓
Mexico								
Netherlands	√	✓	√	✓	✓	✓	✓	✓
New Zealand								
Norway	✓	✓	✓	✓	✓		✓	✓
Poland	✓	✓	✓	✓	✓	✓	✓	✓
Portugal	✓	✓	✓	✓		✓	✓	✓
Slovak Republic			√		✓			
Slovenia	✓	✓	✓	✓		✓		✓
South Korea	✓	✓	✓	✓	✓	✓	✓	✓
Spain	✓	✓	✓	✓				
Sweden	✓	✓	✓	✓			✓	✓
Switzerland	✓				✓			
Turkey								
United Kingdom	√	√	✓	√	√			√

¹⁰ The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

United	✓	✓	✓	✓	✓	✓	✓	✓
States								

Note: For countries with all columns empty, this may reflect insufficient information from the sources used below.

Source: OECD health system policy tracker, European Observatory Health System Response Monitor. (Comas-Herrera, Ashcroft and Lorenz-Dant, 2020_[24]), https://ltccovid.org (last accessed July 30). OECD questionnaire on COVID-19 in LTC.

Most countries focused on infection prevention and control and reduced interactions

40. From the onset of the pandemic until the vaccination rollout, non-medical containment and mitigation actions were the only policy options countries had to prevent the spread of COVID-19. This reflected a context of limited information on the natural history of the infection and absence of a vaccine or effective prophylactic treatment. The different policy options described in this section aimed to prevent the COVID-19 outbreak from reaching its exponential acceleration phase, or to at least curb it to alleviate the burden on health care systems

Environmental decontamination and hygiene

- 41. Guidelines for LTC contained a series of measures and recommendations where measures for infection control were prioritised. Strong infection prevention and control program is critical to protect both residents and personnel. Some evidence of the effectiveness of these measures was known from previous epidemics. This is most evident for measures such as hand hygiene and regular cleaning which have been associated with reductions in the spread of infection. During the SARS outbreak in Hong Kong, China, in 2002-2004, people who got infected were less likely to frequently have worn a face mask in public (odds ratio 0.36) or to have washed their hands 11 or more times per day. A study during the influenza A(H1N1) pandemic of 2009 showed a 35% to 51% reduction in the incidence of influenza-like illness when using masks, proper hand hygiene practices and cough etiquette. Similarly, a meta-analysis found that combining masks and hand hygiene reduced the risk of influenza infection by 27% (OECD, 2020[25]).
- 42. In order to implement such measures, additional training for workers and supplies were necessary and had to be arranged. Previous to the pandemic, different studies have documented that outbreaks of infectious diseases occurred because of suboptimal infection control practice including inadequate decontamination and poor hand hygiene (Lee et al., 2019[26]). In addition, it was documented that workers in LTCFs tend to be poorly informed about infection prevention and control (IPC), and compliance with IPC is generally low and that they have limited resources and capacities for diagnosis of infection.
- 43. Belgium data from MSF provide insights on concrete organisational challenges that nursing homes could meet when facing the pandemic (data were collected by mobile teams in 135 nursing homes across the country by the mid-2020). In Belgium, many nursing homes did not have sufficient capacity to implement environmental decontamination in the wake of the crisis. For example, about 15% of surveyed nursing homes did not have virucidal products and 19% did not disinfect appropriately medical devices at the early stage of the pandemic. Nearly one-third of surveyed nursing homes did not separate the dirty laundry flow from the clean one or did not have an appropriate waste management to prevent the spread of an infection (Médecins Sans Frontières, 2020[27]).In some countries, special task forces and mobile teams came to reinforce the hygiene and cleaning, although it was also found in some cases that their interventions were not forthcoming in the initial stages of the pandemic (Senat, 2020[28]).
- 44. A case study reporting the spread of an outbreak in a care home in the United States found that factors that contributed to the outbreak included: inadequate adherence to standard droplet precautions, contact precautions, and eye protection recommendations were not followed; infection control was inadequate, in part due to inadequate supplies of PPE and hand sanitizers; there was a delay in case recognition; testing methods were limited; and it was difficult to identify COVID-19 cases based on signs

and symptoms alone. These factors are largely consistent with the above evidence (McMichael et al., 2020_[29]). Educational interventions to improve hand hygiene in nursing homes have had some success, and evidence suggests that providing adequate hand sanitizers and gloves and support from line managers can reduce infection rates (Yeung, Tam and Wong, 2011_[30]) (Fendler et al., 2002_[31]). In addition to the use of hand hygiene facilities in the workspace, the use of WHO multimodal strategies can improve adherence to hand hygiene measures (Lee et al., 2019_[26]).

Visit restrictions, movement of residents and isolation measures

45. A majority of countries have recommendations with respect to visits (Figure 3.1) but most of them have changed their recommendations over time. A number of countries after initially banning visitors except for an emergency or end-of-life reason, were later allowing them but with restrictions on the numbers, frequency or conditions of access. England for instance allows visits but restricts them to two people per day. In the Czech Republic, visits were banned while they were afterwards permitted with hygienic standards and testing. In Estonia and Hungary, visits in LTC facilities were later allowed after use of PPE and 2 m distance and if possible, in special meeting rooms or outdoors. In France and Lithuania, virtual visits are encouraged and facilitated. In Greece, visits were allowed during June-July 2020 when the pandemic was receding. In Japan, visits were restricted to those with urgent business. In Latvia, visits must be booked in advance and take place only in the presence of staff, with the visitor and resident keeping a distance. During the summer, if possible, visits take place outdoors. In the Netherlands, since June 15 2020, more visitors were allowed (initially there was a banning and on May 1st 2020, only one visitor was allowed).

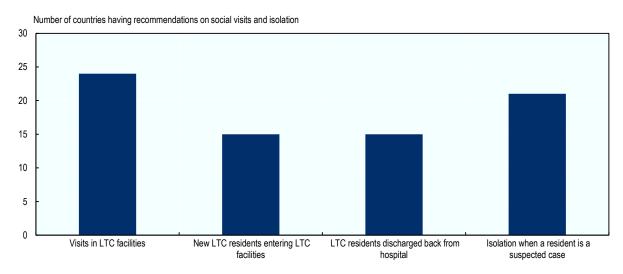


Figure 3.1. Almost all countries implemented recommendations on visits and isolation in 2020

Note: N=25. Source: OECD questionnaire on COVID-19 and LTC 2021.

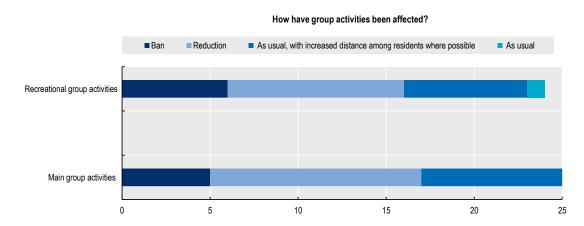
46. Not all countries have recommendations in place for new residents and those discharged from

hospital (Figure 3.1). A number of countries have issued recommendations for new residents which were not in place at the beginning of the pandemic. Belgium and Korea recommend a quarantine period for new residents; the same as Greece even if the test results are negative. A number of countries, such as Canada, the Czech Republic, Estonia, Finland recommend testing prior to admittance. Hungary was previously banning new admissions, allowed them between June and September 2020 and since then, only with two negative tests. Similarly, testing for those discharged from hospital is recommended. In

Slovenia, those discharged from the hospital are accommodated in a grey zone for 7 days, and are tested on the eighth day.

47. Main group activities such as group meals and recreational activities have been heavily restricted (Figure 3.2). In five countries (Belgium, France, Germany, Lithuania, Portugal), such group activities were banned and it was recommended to have individual meals in bedrooms, although in some countries there was regional differentiation according to incidence. In 12 other countries, it was recommended to have meals in bedrooms on a regular basis. Although in some cases LTC facilities had to ban both main and recreational group activities, this was avoided when possible, in order to balance the minimization of the risk of contagion with the support of a dignified everyday life inside the facilities. In fact, a number of other countries kept such activities as usual, although encouraging distance among residents. In Demark, for instance, the recommendations were to plan joint activities and meals in small groups, possibly by shifting in time. In England, the guidelines are rather to first initiate a risk assessment which should be undertaken to see if all communal activities in the care home can be stopped. A similar country composition was observed for recreational group activities such as watching TV and exercise or games. Finally, in some countries like Finland, France and Germany, measures have evolved over the time according to the epidemiological situation, alternating periods of complete ban to periods of restrictions' loosening (OECD questionnaire, 2021).

Figure 3.2. Group activities were heavily restricted in LTC facilities in 2020



Mote: N=25 for main group activities, N=24 for recreational group activities.

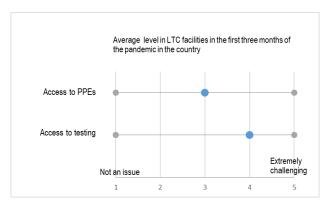
Source: OECD questionnaire on COVID-19 and LTC 2021.

Limited testing and PPE capacities hampered their use in LTC in the initial phase

48. The LTC sector was not typically prioritised for PPE and testing across many OECD countries at the onset of the pandemic, with some exceptions. OECD countries perceived access to both PPE and testing as very challenging. In a ranking from 1 (not an issue) to 5 (extremely challenging), countries defined access to PPE as 3 and access to testing as 4 (Figure 3.3). Large-scale testing for COVID-19 infections requires trained staff, supplies, testing kits and equipment, in addition to the entire workflow from logistics of collecting samples from patients to the reporting of results to them and to public health authorities. A mix of strategic, logistic, capacity, and regulatory considerations can explain variation in countries' testing capacities. Moreover, purchasing and distributing PPE items under conditions of extreme

urgency and uncertainty is challenging – with risks of shortfalls in supply or poor quality products due to disruptions in the global supply chain.

Figure 3.3. Access to PPE and testing was particularly challenging in the LTC sector in the first three months of the pandemic



Note: N=20 for the question on access to PPE and N=19 for the question on access to testing. Source: OECD questionnaire on COVID-19 and LTC 2021.

Personal Protective Equipment (PPE)

- 49. Even before the onset of the pandemic, countries have reported increased shortages of critical medical supplies and products. At the onset of the pandemic, several countries faced challenges in having adequate supplies of PPE. In fact, LTC workers faced important issues in accessing PPE at the beginning of the crisis. On a rank from 1 (not an issue) to 5 (extremely challenging), countries ranked as 4 access to PPE in the LTC sector during the first three months from the onset of the pandemic in their country. For example, in France, difficulties to access PPE were common in the LTC sector up to end of April 2020 (Commission d'Enquête Évaluation des politiques publiques face aux pandémies, 2020_[32]). One survey of care workers in England highlighted that they are nearly half (44 per cent) felt that their job safety had declined, in part due to the inadequacy of Personal Protective Equipment (PPE) and COVID-19 related training. Over a fifth (22 per cent) of care workers said they had not received adequate COVID-19 training; 16 per cent said they had not been given necessary PPE, and 16 per cent said they had not received clear guidance about procedures (Hussein, 2020_[33]).
- 50. Figure 3.4 shows that not all LTC workers wore personal protective equipment when caring for the elderly in the summer of 2020. In Spain, Switzerland, Greece, Belgium and Czech Republic, nearly 90% of health and social workers caring for elderly with LTC needs at home wore PPE. However, the average across 17 countries is lower, at 75%.

% of LTC recipients at home that reported that LTC workers were protective devices during Q3 2020 90 80 70 60 50 40 30 20 10 OECD15 Cled Republic Smiteland Sweden Bullgaria Germany Croatia Gieece Istael Estoria Finland France Spain 4314

Figure 3.4. Not all LTC workers wore PPE when caring for older people during Q3 2020

Note: LTC recipients refer to those aged 65 years old receiving regularly home care who reported ADL or IADL limitations in SHARE wave 7 (2017). Question is "Did the people who cared for you wear protective devices such as masks or gloves?". Source: SHARE-COVID-19 wave 8 (data cover June to August 2020).

- 51. Challenges in accessing PPE illustrate how the LTC sector was initially at a disadvantage compared with hospitals and other parts of the health sector in some countries. For instance, inequalities in PPE access happened in Denmark, where the reason for the shortages of PPE in the municipalities was that early in the outbreak (March 10th, 2020), the Danish Medicines Agency approached the providers of PPE and asked them to prioritize delivery to the regions and therefore for hospitals. The municipalities therefore needed to find other providers and this led to a shortage of PPE in the municipalities (Rostgaard, 2020_[34]).
- 52. There was also an initial lack of clarity with respect to PPE and the recommendations on how to handle the disease in the nursing homes. For instance, in Denmark, physical distance was initially considered sufficient, while later (when the supply of PPE seemed sufficient), wearing PPE was considered essential and regardless of whether there were symptoms of the disease (Rostgaard, 2020_[34]).
- 53. With respect to the measures addressed to staff in the LTC sector, clear training was sometimes lacking. Seven OECD countries did not provide training for PPE. For instance, in Germany facilities are directly responsible for training (OECD questionnaire, 2021). Similarly, in Italy, the Regions have mainly focused on giving operational and peremptory indications on the use of PPE without giving space to training and emergency management preparation practices. Compared to this, there is a variability between more general indications provided to the staff of the structure (e.g. Piedmont) and cases in which the indications have been provided in detail for the individual professional figures (e.g. Tuscany). Governments delegated the training of care workers to the local level and each structure managed it autonomously or in conjunction with healthcare companies until about the end of the lockdown. Later, some regions (Veneto, PA Trento for example) have provided specific indications regarding the training of socio-health personnel, equating it to health personnel and making content and number of hours mandatory (Berloto et al., 2020_[35]).
- 54. After the initial hurdles, most countries issued guidelines on the use of PPE in LTC and many countries took measures to provide or facilitate access to PPE as quickly as possible. Most countries issued the guidelines around March 2020. Few countries issued guidelines even earlier, like Lithuania, Slovenia and the UK; few others issued them later, like Denmark and the UK. Korea, a country that took particularly swift containment measures, developed a strategy to avoid shortages of PPE from early March 2020. Korea established a working group to manage supplies and an IT system at the Central Disaster

Management Headquarters to distribute 5.46 million public masks (770,000 employees) for long-term care providers in a timely manner. Priority was given to LTC facilities and then extended to the whole LTC sector (e.g. day care centres). In Trentino Alto Adige, following the first period of hurdles in the access to PPE, a specific channel for the provision of PPE to the LTC sector was created, making PPE more easily accessible to LTC facilities (OECD interview, 2021).

55. Moreover, all surveyed OECD countries indicated having learned from the initial PPE shortages and having stockpiled PPE in 2021, although recommendations vary to determine the sufficient quantity. For example, in Lithuania, the stockpile of each LTC provider should be sufficient for 30 days and the national level possesses a stockpile for 60 days. In Norway, municipalities order PPE with the help of a web-calculator made available by the national authorities. Municipalities factor in different R-values to know what amount of PPE they should order. In Japan, the national government estimated the peak demand at the national level based on the information on cluster cases in LTC facilities and other facilities at the initial stage of the pandemic. Subnational governments assessed the adequacy of the stockpiles. When there is a shortage, the national government replenish the supply upon request from sub-national governments (OECD questionnaire, 2021).

56. Finally, despite the challenges related to PPE access, in most cases governments - either national or local – funded the equipment. As Figure 3.5 shows, only in Colombia and Czech Republic workers contributed to the purchase of PPE and only in Lithuania LTC recipients at home paid for their own PPE (OECD questionnaire, 2021). There are also some hybrid systems. This is the case of Japan, where each LTC facility pays for PPE, but when there is a surge in the use of PPE - including the case of COVID-19 cluster within the facility- the national or sub-national governments provide PPE for free. In addition, national subsidy for PPE purchase is available to LTC facilities (OECD questionnaire, 2021). In France, the first protocol issued on March 18 2020 stated that home-based LTC workers had to buy masks in retail pharmacies and only for priority visits. However, on March 23 2020, a second protocol tied their supply to those of hospitals and supply was distributed by the regional health authorities (ARS).

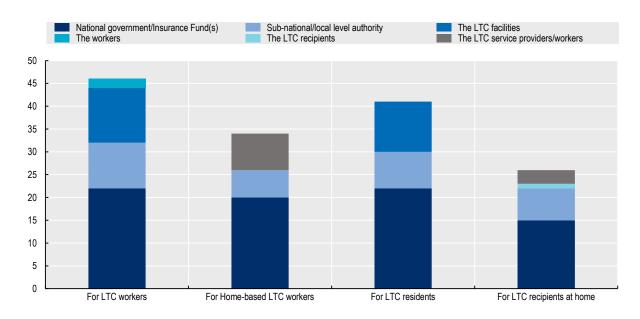


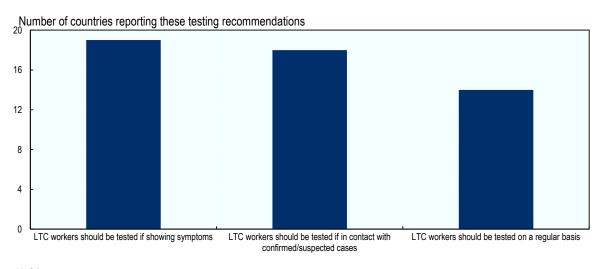
Figure 3.5. Governments funded PPE in LTC in most countries

Note: N=25 for LTC workers and home-based LTC workers; N=24 for LTC residents; N=21 for LTC recipients at home Source: OECD guestionnaire on COVID-19 and LTC 2021.

Testing

- 57. At the beginning of the COVID-19 pandemic, insufficient testing in nursing homes slowed effective detection and isolation of confirmed cases. On a rank from 1 (not an issue) to 5 (extremely challenging), countries ranked as 4 access to testing in the LTC sector during the first three months from the onset of the pandemic in their country. In Italy there was lack of ability to track down and control the spread of the COVID-19 in nursing homes, failing in testing suspected cases among residents and care personnel. Even in July 2020, procedures did not foresee testing residents in nursing homes, not even those presenting symptoms (Berloto et al., 2020_[35]). In France, mass testing for symptomatic and asymptomatic elderly only began on 22 April 2020 to detect cases more thoroughly (Commission d'Enquête Évaluation des politiques publiques face aux pandémies, 2020_[32]).
- 58. Almost 60% of OECD countries (21) implemented measures to increase testing capacity for LTC workers and residents. Specifically, in 13 countries LTC facilities received support that included training and equipment for staff; 11 countries set up mobile teams to facilitate testing in the facilities and 10 countries provided extra funding to the facilities to finance testing. In the overwhelming majority of countries the government covers the cost of testing for workers and residents. Other measures to improve testing capacity also existed, like in Germany, where the federal government supplied and financed volunteers and Armed Forces personnel to support testing in LTC facilities or in Greece, where starting from February 26th 2021, a new legislation allowed hospitals to provide LTC Units with free rapid tests (OECD questionnaire, 2021).
- 59. Between March and April 2020, most OECD countries developed the first guidelines on testing in LTC. One exception is Denmark. Denmark had already developed guidelines in January 2020. As of March 2021, most OECD countries had policies to test LTC workers and residents for COVID-19 when they experienced COVID-like symptoms and when they have been in contact with a confirmed or suspected COVID-19 case (Figure 3.6 and Figure 3.7). While testing is recommended for LTC workers, the type of test recommended (PCR and/or antigen) depends on the accessibility of the test (OECD questionnaire, 2021).

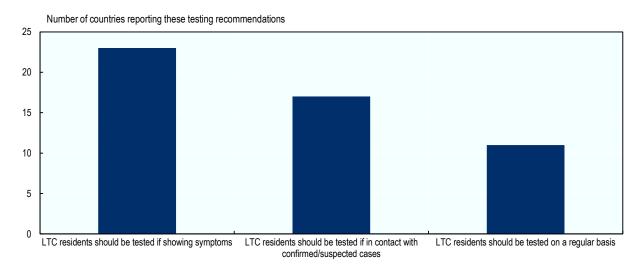
Figure 3.6. Testing recommendations in OECD countries aim mostly to trace symptomatic workers and contact cases



Note: N=24.

Source: OECD questionnaire on COVID-19 and LTC 2021.

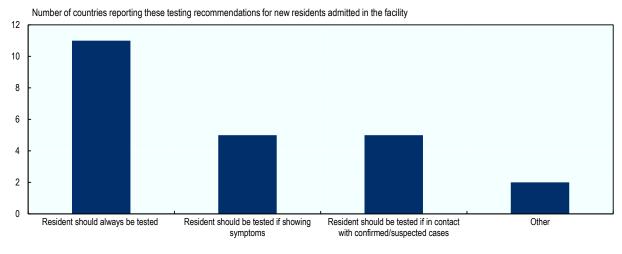
Figure 3.7. Testing recommendations in OECD countries aim mostly to trace symptomatic residents and contact cases



Note: N=24. Source: OECD questionnaire on COVID-19 and LTC 2021.

60. Although routine testing of residents and workers is less frequent among OECD countries, it is often compulsory to test new residents before admitting them to the facility (Figure 3.8). In the majority of countries with available information, routine test rely on antigen tests while those with COVID-19 symptoms and contact cases are recommended to take PCR tests.

Figure 3.8. Testing is often compulsory to admit new residents inside a LTC facility



Note: N=24. Source: OECD questionnaire on COVID-19 and LTC 2021.

61. Insufficient surveillance systems, including those lacking testing capacity or relying only on symptoms as indications for testing, have been identified as aggravating factors for COVID-19 outbreaks because of the important share of asymptomatic positive cases in LTC facilities. A Spanish study screened in April 2020 about 5 870 people in 69 nursing homes. About 24% of residents and 15% of staff were positive. Among them, 70% of residents and 56% of staff were asymptomatic (Borras-Bermejo et al., 2020_[36]).

Structures were put in place to ensure rapid intervention and co-ordination but models of intervention varied

Task forces to co-ordinate responses

62. During the COVID-19 pandemic, OECD countries have often included task forces in their package of measures to respond to the crisis (Table 3.2). They consist of groups of experts organised at the national, local or facility level with the aim of managing and coordinating responses to the COVID-19 crisis.

Table 3.2. Most OECD countries had COVID-19 Task Forces

Country	Task Forces
Australia	At the national level
Austria	At the national and sub-national/local level, in most regions
Belgium	At the national and sub-national/local level, in most regions
Canada	At the national level
Chile	-
Czech Republic	At the national and sub-national/local level, in most regions
Colombia	At the national level
Denmark	At the national and sub-national/local level, in most regions
Estonia	At the national and sub-national/local level, in most regions
Finland	At the national and sub-national/local level, in most regions
France	At the national and sub-national/local level, in most regions
Germany	At the national and sub-national/local level, in most regions
Greece	At the national and sub-national/local level, in most regions
Hungary	At the national level
Iceland	-
Ireland	-
Israel	At the national level
Italy	At the national and sub-national/local level, in most regions
Japan	At the national and sub-national/local level, in most regions
Korea	At the national level
Latvia	At the national level
Lithuania	At the national and sub-national/local level, in most regions
Luxembourg	At the national level
Mexico	-
Netherlands	At the national and sub-national/local level, in most regions
New Zealand	
Norway	At the national and sub-national/local level, in most regions
Poland	At the national and sub-national/local level, in most regions
Portugal	At the national and sub-national/local level, in most regions
Slovak Republic	
Slovenia	At the national level
Spain	-
Sweden	At the national and sub-national/local level, in most regions
Switzerland	
Turkey	
United Kingdom	
United States of America	At the national and sub-national/local level, in most regions

Source: OECD questionnaire on COVID-19 and LTC 2021.

- 63. With most of the COVID-19 task forces still ongoing, evidence of their efficacy is still lacking, but some criticalities have already emerged. The low women's participation into their boards and some lack of transparency in the decision making stood out as common features of several COVID-19 task forces worldwide. Despite women being on the front line against the COVID-19 pandemic, constituting the majority of healthcare workers worldwide, they make up only 24% of COVID-19 task forces member worldwide (UNDP, 2021[37]). Moreover, information on selection criteria for task forces' members and the decision-making processes are not always easily accessible or clear (Rajan et al., 2020[38]).
- 64. Due the severity with which the COVID-19 crisis has hit the LTC sector, most countries (45%) have created specific task forces for LTC. When task forces were not specific for the LTC sector, experts were often included to represent it. Nevertheless, 19% of countries did not include LTC experts in their task forces (Figure 3.9).

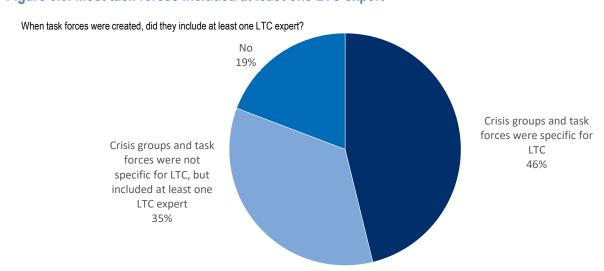


Figure 3.9. Most task forces included at least one LTC expert

Source: OECD questionnaire on COVID-19 and LTC 2021.

- 65. In seventeen countries, task forces to manage the COVID-19 crisis exist both at the national and subnational level. Among those, in 47% of the countries, the task forces are specific for the LTC sector. When LTC-specific task forces are missing, 29% of the countries include experts of the sector in the task forces' boards. Only in the remaining four countries (24%) LTC experts are not involved into the COVID-19 task forces. In some countries, the task forces provided direct support to the LTC facilities. This is the case of Finland, where alongside a national task force municipalities created local task forces composed by the head of the LTC facility and the physician responsible for LTC facility together with the physician responsible for communicable diseases and other relevant actors (OECD questionnaire, 2021). Another example was the possibility for Greek LTC facilities to get in direct contact with the national task force, to receive targeted help (OECD interview, 2021).
- 66. Nine countries activated task forces only at the national level. Among them, four created specific task forces for the LTC sector, three included at least one LTC expert in their task forces, while only Latvia's task forces do not include any LTC representative. Moreover, in Australia, although governmental COVID-19 task forces existed only at the national level, the national task force the Communicable Diseases Network Australia (CDNA) issued guidelines to create Outbreak Management Teams inside each residential care facility (Communicable Diseases Network Australia, 2020_[39]).

67. The creation of COVID-19 task forces has mainly been an emergency measure taken specifically to face the current pandemic crisis, but interestingly some countries have permanent task forces that intervene when a crisis takes place. This is the case of Denmark, where a permanent task force – the national operational staff (NOST) - includes a plethora of authorities and meets when major crises and incidents occur to ensure crosscutting cooperation and coordination between the authorities (OECD questionnaire, 2021). Korea also has permanent task forces - the Central Disaster Management Headquarters and the Central Disease Control Headquarters – that manage the coordination between central and local governments, prevention and control measures. The two task forces also communicate and coordinate the emergency response (OECD interview, 2021). Other provinces in Canada (e.g., Prince Edward Island and New Brunswick) established rapid response teams should the need for their use arise (OECD questionnaire, 2021).

Rapid response teams

68. OECD countries have experienced several staff shortages as a consequence of COVID-19 outbreaks (see Chapter section 3.4 below). The overwhelming majority of OECD countries (around 90%) prepared rapid response teams, either at the national or subnational level, to counteract staff shortages (Table 3.3). The rapid response teams consist of groups of healthcare workers, military or volunteers from NGOs to be deployed to specific regions and/or facilities facing serious staff shortages. Providing help to overwhelmed facilities, rapid response teams have supported continuity of care in LTC facilities during the crisis. In Belgium, for instance, 135 nursing homes received help from rapid response teams by mid-2020 (Médecins Sans Frontières, 2020[27]) as well as 130 LTC facilities in Quebec, Ontario and Manitoba (Canada) (OECD questionnaire, 2021). Likewise, in Chile rapid response teams have been a prompt measure to substitute sick personnel and avoid shortages (OECD interview, 2021).

Table 3.3. Most OECD countries created rapid response teams

Country	Rapid Response Teams
Australia	Yes, at the sub-national/local level
Austria	-
Belgium	Yes, at the sub-national/local level
Canada	Yes, at the national and sub-national/local level
Chile	-
Czech Republic	Yes, at the national level
Colombia	Yes, at the national and sub-national/local level
Denmark	Yes, at the national and sub-national/local level
Estonia	Yes, at the sub-national/local level
Finland	Yes, at the sub-national/local level
France	-
Germany	Yes, at the national and sub-national/local level
Greece	Yes, at the national and sub-national/local level
Hungary	Yes, at the sub-national/local level
Iceland	-
Ireland	-
Israel	Yes, at the national level
Italy	Yes, at the national and sub-national/local level
Japan	Yes, at the national level
Korea	Yes, at the national level
Latvia	No
Lithuania	No
Luxembourg	No
Mexico	-

No	Netherlands
-	New Zealand
Yes, at the national level	Norway
	Poland
Yes, at the sub-national/local level	Portugal
-	Slovak Republic
Yes, at the national level	Slovenia
Yes, at the national level	Spain
-	Sweden
	Switzerland
-	Turkey
-	United Kingdom
Yes, at the national and sub-national/local level	United States of America

Source: 2021 OECD Questionnaire on COVID-19 and LTC.

- 69. Although most countries (83%) deployed rapid response teams to face staff shortages, they developed these measures in different manners. Most countries deployed rapid response teams constituted by workers from different sectors or from geographical areas less hit by the crisis. This was the case in Italy, with home care workers deployed into LTC facilities in case of staff shortages (OECD interview, 2021). Similarly, in Australia, experienced aged care workers have been called to move from areas without transmission of the virus to areas where the emergency had caused personnel's shortages (Australian Government, 2020[40]). Spain also deployed rapid response teams of care professionals to care homes, providing them with dedicated online training (Comas-Herrera, Ashcroft and Lorenz-Dant, 2020[41]).
- 70. In at least five countries, the army deployed personnel to the facilities in need. As an example, in Czech Republic the army created rapid response teams where the military could volunteer without receiving training, due to a lack of time and the need of fast intervention (OECD interview, 2021). Likewise, in Estonia the Rescue Board composed rapid response teams to provide help in harder hit regions (OECD questionnaire, 2021).
- 71. Belgium and Canada opted for hybrid solutions. In Belgium, the government deployed rapid response teams of healthcare professionals at the sub-national/local level (OECD questionnaire, 2021) while also several NGOs, such as Médecins Sans Frontières, deployed mobile teams to implement infection control and hygiene measures (Médecins Sans Frontières, 2020_[27]). In Canada, healthcare professionals, the Red Cross and the Canadian Armed Forces all contributed to deploy help to overwhelmed facilities (OECD questionnaire, 2021).

Efforts to address staffing shortages

Nearly all surveyed countries took measures to recruit LTC workers

72. Since the start of the pandemic, nearly all surveyed countries have introduced measures to recruit LTC workers or provide funds to LTC facilities that they could use independently, including to recruit staff (Figure 3.10). Over half of surveyed countries provided financial help to LTC facilities to recruit unemployed or former LTC workers (Australia, Czech Republic, Denmark, France, Denmark, Lithuania, Netherlands, Norway, Portugal, Slovenia, Spain). About 40% of countries supported the recruitment of LTC students through financial help (Australia, Czech Republic, Denmark, France, Germany Lithuania, Netherlands, Norway, Portugal, Slovenia and Spain). In Belgium, Canada (some provinces), Estonia, Finland (some municipalities), France, Luxembourg and the Netherlands a pool of volunteers was available for emergencies and activated to boost LTC staff since the start of the pandemic. In the Netherlands, Poland, Slovenia and the United States, LTC facilities received financial support that they could use independently, including to recruit staff. In Hungary, there were efforts to recruit volunteers from the health sector (e.g.

students, professionals in private sector). No specific measures to recruit LTC workers were taken in only three surveyed countries (Colombia, Greece and Latvia).

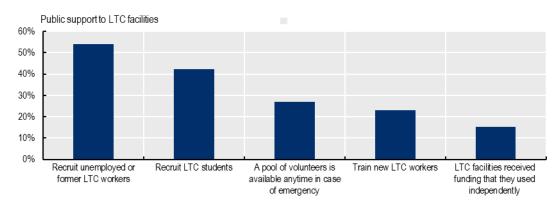


Figure 3.10. Most countries took measures to recruit unemployed or former LTC workers

Note: N=26. Source: 2021 OECD Questionnaire on COVID-19 and LTC.

- 73. In Spain, based on survey data, the number of LTC workers increased by 7% during the first semester of 2020. The increase was driven by the private sector recruiting female temporary staff, mostly part-time. This suggests that Spain relied on a traditional pool of LTC workers, who were offered non-standard jobs (Fundación de Estudios de Economía Aplicada, 2020[42]). In March, in several Italian regions (e.g. Apulia, Lombardy, Piedmont, Veneto), an important hiring effort was implemented attracting many professional care workers thanks to public sector contractual conditions (generally better than contracts applied in private nursing homes) (Berloto et al., 2020[35]). In England, the NHS Volunteer Responders has been set up to support the care sector during the COVID-19 outbreak. The program enables volunteers to provide care or to help a vulnerable person. It includes Community Response Volunteers who deliver shopping, medication, or other essential supplies to the homes of people who are self-isolating and Check and Chat Volunteers providing short-term telephone support to individuals who are at risk of loneliness as a consequence of self-isolation (Comas-Herrera et al., 2020[43]). In Germany, an initiative across federal states has created the website 'Pflegereserve' where people with a care-related qualification but not currently working in this area can register. They can be connected to health care and LTC facilities in their area that experience staff shortages (Lorenz-Dant, 2020[44]).
- 74. Other strategies to boost LTC workers were more uncommon. In four OECD countries (Germany, Greece, Luxembourg and Norway), the maximum number of working hours were increased or lifted, in two countries (Japan and Norway), visas for foreign workers in LTC facilities were temporarily extended and Portugal fastened the accreditation of foreign diplomas. Luxembourg signed short-term contracts with foreign workers and in Australia, international students were temporarily allowed to work.
- 75. About 90% of surveyed countries did not take any specific measure to recruit janitors and other non-care workers in LTC facilities, despite the importance of heightened hygiene to prevent and control COVID-19 infection. Countries that indicated providing financial help for this actually provided funding that LTC facilities could independently use (Canada, Poland, Slovenia, the US). Estonia and the Netherlands are the only surveyed countries that provided specific financial help to recruit janitors and other non-care workers in LTC facilities. In Australia, there was no targeted measure, but service providers of home-based care recipients were eligible to apply for additional funding through the CHSP Emergency Support for COVID-19 Funding Round.

- 76. With respect to home-based LTC workers, in Finland, municipalities have reorganised the work of their employees, for example, home care workers providing personal care started to support carees in domestic tasks, such as shopping.
- 77. During the first wave of the pandemic, many countries decided to reward LTC workers for their exceptional efforts and improve their working conditions (Figure 3.11).

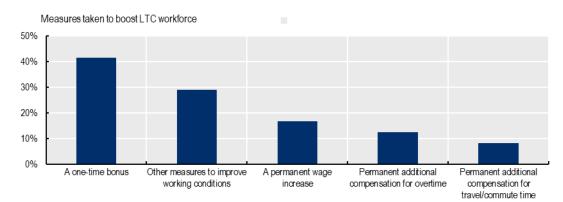


Figure 3.11. About 40% of surveyed OECD countries provided a one-time bonus

Note: N=24.

Source: 2021 OECD Questionnaire on COVID-19 and LTC.

- 78. About 40% of OECD countries provided a one-off bonus to reward LTC workers of their exceptional efforts, notably during the first wave of the pandemic (Canada, France, Germany, Hungary, Japan, Korea, Latvia, Lithuania, Netherlands and Slovenia). On 27 March 2020, the German Ministry of Health announced a funding and support package to help care institutions during the COVID-19 pandemic. All people employed in old age care were able to make a staggered claim on a one-off bonus payment of up to EUR 1 500 tax-free. The highest bonus payment were made to full-time staff providing direct care and support. In France, the government also provided bonuses for care workers at the end of the first wave.
- 79. A few countries also improved wages permanently following the start of the pandemic (Czech Republic, France, Germany, Korea). On 23 April 2020, the German government announced that the minimum wage for nursing assistants was increased from 1 May 2020 to 1 April 2022 in four steps and from 1 April 2022, the hourly minimum wage across Germany for this profession will be set at EUR 13.20. For care workers with three-year apprenticeship, the hourly minimum wage will increase to EUR 15.40 by 1 April 2022 (Lorenz-Dant, 2020[44]). In France, all health workers in nursing homes received a pay raise in September 2020 as part of the Ségur de la Santé (an additional EUR 90 per month), with another pay raise in June 2021 (EUR 93 per month).
- 80. Many countries decided to improve working conditions of LTC workers, as a part of programmes to address COVID-19 in LTC and improve working conditions (Australia, Belgium, Canada, Ireland, the Netherlands, Poland, the United Kingdom and the United States).
- 81. In Canada, the federal government announced in mid-April 2020 that it would provide up to CAN 3 billion in support to provinces and territories to increase the wages of low-income essential workers across the country as part of the 'COVID-19 Economic Response Plan'. It was up to the various provinces and territories to determine which workers would be eligible and how much money they would receive: seven out of 13 provinces and territories implemented wage top ups that were exclusive to those working in health and social care services. British Columbia, has implemented one of the most comprehensive

financial policies to stabilise the LTC workforce, including a bonus payment. British Columbia's Provincial Health Officer also became the employer of all LTC workers for six months to guarantee that all workers receive the same standardized wage rate (Hsu and Allin, $2020_{[45]}$). In addition, the government of Canada established the New Safe Long-term Care Fund (CAN 1B for provinces for 2021-22) to help provinces and territories protect people in long-term care and support infection prevention and control. Provinces will be able to use this funding to undertake a range of activities, including carrying out infection prevention and control readiness assessments, infrastructure improvements (e.g., making improvements to ventilation) and hiring additional staff or topping up wages.

- 82. In Poland, in addition to funding from the state budget, an additional fund of PLN 378 million (EUR 84 million) was allocated to bonuses to LTC workers and the purchase of tests, PPE and disinfectants. This available fund is part of the project "Ensuring the safety and care of patients and the safety of the staff of chronic care homes, nursing homes, social assistance homes and hospices for the duration of COVID-19", under the Operational Program Knowledge Education Development 2014-2020 (PO WER), cofinanced by the European Social Fund.
- 83. In the United Kingdom, the government provided the sector time-limited funds totalling GBP 1.8 billion as of April 2021 to ensure that staff who are isolating in line with government guidance receive their normal wages, limit staff movement between settings and setting resident cohorts unless absolutely necessary, supporting active recruitment of additional staff (and volunteers), and ensure that time spent to go to testing centres and vaccination centres are paid (usual wage) as well as related costs, among others.
- 84. In Ireland, the Minister for Health introduced a Temporary Assistance Scheme to support private and voluntary nursing homes with additional costs due to COVID-19. This scheme consists of a Standard Assistance Payment and an Outbreak Assistance Payment. The Standard Assistance Payment is a retrospective payment, based on actual costs incurred, for which there is a monthly cap (calculated based on the number of residents). There is also an overall cap on the maximum amount that can be paid to each nursing home under the scheme. Under this scheme, eligible nursing homes receive funding to compensate staff for the work that would not have incurred were it not for the impact of the Covid-19 Pandemic (HSE, 2021_[46]).
- 85. In the United States, the federal and state governments provided substantial financial support to nursing homes in addition to reimbursement for care through the Medicare and Medicaid programs. The Federal Government has given, or in some cases, loaned facilities (with many loans forgiven) hundreds of millions of additional dollars through multiple programs. The Coronavirus Aid, Relief, and Economic Security Act (CARES Act), enacted end of March 2020, created a USD 175 billion Provider Relief Fund, with about USD 21 billion earmarked for LTC facilities. The last phase of the three-phase distribution programme was tied to the performance of nursing homes. In addition, the CARES act created the Paycheck Protection Program and was extended by the Consolidated Appropriation Act in 2021. This programme provides loans to businesses to keep workers employed during the pandemic. Loans of up to \$10 million may be forgiven under specific conditions and businesses can receive multiple loans. As of March 1, 2021, 10 293 nursing facilities received PPP loans totalling USD 5.7 billion. (Center for Medicare Advocacy, 2021[47]). The Centers for Medicare and Medicaid Services also provided additional funding of USD 165 million to states operating Money Follows the Person (MFP) programmes (up to USD 5 million per state). These Medicaid programs strengthen efforts to residents of nursing homes to home and community-based settings. MFP state grantees transitioned 101,540 Medicaid beneficiaries from LTC facilities to home-based and community services since the program started in 2007. In 2019, only 4 173 Medicaid beneficiaries had transitioned under this programme (Centers for Medicare & Medicaid Services, 2020[48]). Many states have also increased Medicaid rates across-the-board or paid higher rates for COVID-19-positive residents or established COVID-19-only facilities and paid them high rates. The National Governors Association reported that 23 states provided additional payments to nursing facilities and 10 states increased staff payments and other employee incentives (Center for Medicare Advocacy, 2021[47]).

Sick leave

- 86. Isolation measures were put in place for LTC workers too. When workers showed mild symptoms, they were never allowed to keep working. In most cases (75%), they were required to stop working and isolate, receiving financial compensation. In the Czech Republic, despite having to stop working and isolate, they did not receive any financial compensation. Moreover in Korea, although staff with symptoms should usually stop working and isolate, a paid leave can be provided only under the facility's manager's discretion if symptoms are mild. In Manitoba (Canada), health staff is paid if required to self-isolate due to possible exposure at work; unpaid leave is provided otherwise (OECD questionnaire, 2021). When the isolation period is recommended, but left at the discretion of the LTC providers' managers, it may not always be implemented in practice. In England, a survey of care workers showed that nearly a fifth of those who needed to self-isolate did not receive any pay (Hussein, 2020_[33]).
- 87. Taking sick leave might be challenging for some care workers, such as for part-time workers and workers with temporary contracts. LTC workers who are paid per diem or per hour may have an incentive to work even when unwell. In response, strategies included extra hours for remaining staff, recruitment of temporary staff and rapid response teams (see Chapter 3). In Sweden, at the beginning of March, the municipal employer organisation, the Swedish Association of Local Authorities and Regions (SKR), urged all employers in the municipal sector to extend all temporary contracts to at least 14 days' duration, so that employees on short-term contracts would be able to benefit from payments when sick. Kommunal, Sweden's largest public sector union with more than 500 000 members strongly advocated for this (Pelling, 2021_[49]). In addition, infected LTC workers could be difficult to replace, leaving LTC facilities short of trained staff. A survey of care workers in England found that four-fifths (80%) had increased their workload, while over half increased their working hours because 18% of workers had to self-isolate. This was particularly an issue when a substantial number of workers were infected (as during outbreaks), because expertise can be lost (e.g. hygiene products logistics, clean and dirty laundry and waste flow systems).
- 88. Numerous OECD countries have now recognised the risk of LTC workers being infected by COVID-19 in the workplace. Almost three-quarters of OECD countries have labelled COVID-19 as an occupational disease or in a few cases as an accident at work (Australia (some states), Austria, Belgium, Canada (some provinces), Colombia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, New Zealand, Poland, Portugal, Korea, Slovak Republic, Spain, Switzerland, the UK, the US (in many states)) (International Labour Organisation, 2021_[50]). A clear connection between the virus and workplace exposure must be established to consider COVID-19 as an occupational disease. This means that the recognition is a case-by-case investigation subject of recognition procedures to meet medical and administrative requirements. The Czech Republic is the only EU country where proof that the disease arose in direct connection with workplace is not necessary (European Trade Union Institute, 2021_[10]). Once the occupational disease is established, workers can benefit from compensation, which covers at least part of their labour income. Compensation rules vary widely across EU countries.
- 89. Social dialogue and collective bargaining can play a key role to build arrangements aimed at enhancing the well-being and safety, including protecting incomes of LTC staff and their loved ones. In Scotland, any named survivor of a social care worker who died because of an infection at the workplace receives a one-off payment of GBP 60 000, if contracted pension arrangements do not offer death in service cover. Trade unions in Scotland played a key role in promoting this measure (Pelling, 2021_[49]). In Luxembourg, a new collective convention was signed in the beginning of 2021 and gives the LTC workers two additional extra leave days in 2021.

Temporary changes in requirements

90. In response to COVID-19 pandemic, a number of countries suspended accreditation requirements of LTC facilities (Germany, Luxembourg, Netherlands, Spain and the USA) and the required minimal

42 | DELSA/HEA/WD/HWP(2021)8

education degree (the Czech Republic, Germany, Lithuania and the Netherlands). For instance, in Germany, the Ministry of Health announced on 27 March 2020 a funding and support package to help care institutions during the COVID-19 pandemic. One measure outlined that the quality assessment of domiciliary and residential care were suspended, among many other measures (Lorenz-Dant, 2020_[44]). In the Czech Republic, requirements on the compulsory education of LTC workers were relaxed. In Hungary, the licence of LTC workers were prolonged and education requirements were performed online.

- 91. In Austria, the government adopted policies to relax some of the regulations that normally define the roles of health and long-term care professionals for the duration of the pandemic. Compulsory registration in a mandatory health professional's registry set up in 2018 was suspended, allowing retired professionals, those with formal training who work in separate sectors, and carers without formal training, to step in to support the existing workforce. Moreover, the tasks and responsibilities of health and long-term care workers were modified, giving more flexibility to the tasks undertaken by different professionals. Medical students have also been enlisted, in exchange for school credit.
- 92. Not all policies and protocols must, or should, be maintained during a crisis like COVID-19. In some cases, temporary suspension or adaptation can avoid more difficulties and costs in the longer-term. The impact of these delays and other issues on care quality and LTC workers wellbeing are unknown. However, they present a real risk in the medium- and longer-term and should be appropriately managed by regulatory authorities and other agencies.

Training

93. New hired staff needs training, especially if they are unfamiliar with the LTC sector. On-the-spot training at time of outbreak is often not sufficient. LTC jobs are more complex than often portrayed. In more than two-thirds of OECD countries, personal care workers' tasks go well beyond activity of daily living provision and in more than three-quarter of OECD countries nurses working in the LTC sector perform case management tasks. Education requirements for LTC workers vary greatly across OECD countries, with very low requirements for personal care workers (Table 3.4). In more than half of OECD countries with available data, there is no national curriculum for LTC nurses, and geriatric care training remains optional (participation rates can be low) (OECD, 2020_[51]).

Table 3.4. Education requirements for LTC workers vary greatly across countries

Personal care workers	Nurses in the LTC sector
No minimum education level (Australia, Bulgaria, Estonia, Greece, Iceland, Israel, Japan, Korea, Norway, Romania, United Kingdom, United States)	High school diploma (Croatia, Greece)
High school diploma (Belgium, Portugal, Slovenia)	Technical degree after high school (Bulgaria, Canada, Greece, Hungary, Korea, Latvia, Luxembourg, Poland, Romania, United States)
Technical degree after high school (Austria, Canada, Czech Republic, Estonia (after 2020), Lithuania, Malta)	Intermediate vocational training (Netherlands, Germany, Greece)
Primary or intermediate vocational training (Finland, Hungary, Latvia, Luxembourg, Netherlands, Slovenia)	Bachelor's degree (Australia, Austria, Canada, Cyprus ¹¹ , Czech Republic, Estonia, Finland, France, Germany, Greece, Iceland, Israel, Lithuania, Malta, Norway, Slovenia, Slovenia, Sweden, United States)
Other (40 hours of training in Lithuania, basic knowledge of Greek language in Cyprus, caregiver course/training in Croatia, training for nursing assistants varies across federal states in Germany, 8-10 months of training in workplace in Finland, training varies across regions in Germany)	

Source: OECD questionnaire on COVID-19 and LTC 2021.

- 94. During the pandemic, several countries have made efforts to provide exceptional training to LTC workers to implement infection protocols or other prevention and care activities. 17 countries provided additional training on infection control, 16 countries on use of PPE, and 12 countries on other safety procedures. In addition, eight countries offered exceptional training on palliative care during the pandemic and six countries on physical and mental well-being (Figure 3.12).
- 95. The scope of training material and programmes varied across OECD countries. The government of Canada committed CAN 38.5 million over two years, to rapidly recruit and train up to 4 000 new personal support workers interns through an accelerated 6-week online training program combined with a 4-month work placement, to address acute labour shortages in long-term care facilities and home care. At the provincial level, Manitoba provided in November 2020 a condensed one-week training for health sciences students to work as uncertified health care aides in LTC. In June 2020, Québec launched 3month accelerated training program for long-term care support workers to address staff shortages. Ontario launched on January 2021 a pilot training programme for over 300 personal support workers, with a fund of CAN 2.4 million.

The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union:

The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

¹¹ Note by Turkey:

On infection control

On PPE

On other safety procedures

On palliative care

On physical and mental well-being

No additional training

0 2 4 6 8 10 12 14 16 18

Number of countries that provided additional training

Figure 3.12. Most countries introduced exceptional training for LTC workers

Note: N=22. Source: OECD questionnaire on COVID-19 and LTC 2021.

Mental well-being of LTC workers

- 96. Work in LTC sector has been associated with high prevalence of stress, depression and anxiety well before the pandemic. LTC workers are vulnerable through long shifts and working hours, stress and other pressures. On average just under half (46%) of LTC workers in OECD countries were exposed to mental well-being risk factors in 2013, including severe time pressure or overload of work, violence or threat of violence, harassment or bullying (OECD, 2020[51]).
- 97. The pandemic has negatively affected the mental health of LTC workers. In Austria, results of a survey (over 20,000 Austrian employees) showed that 46% of care professionals assessed their job as mentally stressful in May 2020 (compared with 11% for those in other professions). One-third of care professionals reports stress due to time pressure and changing labour processes. Only 38% think that they will be able to reach pension age in care, although they are still generally satisfied with their job (versus 61% in other professions). (Leichsenring, Schmidt and Staflinger, 2020_[52]).
- 98. A meta-analysis of thirteen studies with a combined total of 33 062 participants showed that the pooled prevalence of anxiety was 23.2% and the prevalence of depression was 22.8% among health care workers during the pandemic in 2020. Female healthcare workers and nurses presented higher rates of affective symptoms compared to male and medical staff respectively. Insomnia prevalence was estimated at 38.9% (Pappa et al., 2020_[53]).
- 99. Given the unprecedented nature of COVID-19 outbreaks in LTC facilities, a number of countries are offering support on mental well-being to LTC workers. In early 2021, an OECD survey found that 15 countries offered LTC workers access to a free phone line as part of psychological support for LTC workers during acute phases of the epidemic (Belgium, Colombia, Czech Republic, Estonia, Finland, France, Germany, Greece, Hungary, Latvia, Lithuania, Luxembourg, Netherlands, Portugal and Slovenia). Another 12 countries offered LTC workers access to consultation with a specialist as part of psychological support systems (Belgium, Colombia, Czech Republic, Estonia, Finland, Germany, Japan, Lithuania, Netherlands and Portugal). Advocacy groups and stakeholders (e.g. nurse associations) also released resources to LTC providers and workers to support them.

Vaccination of LTC residents, the elderly and care workers has been prioritised

- 100. As of May 2021, all OECD countries had started their vaccination campaigns and the Pfizer/BioNTech, Moderna, Oxford-AstraZeneca and Johnson&Johnson vaccines had been authorized for emergency use in most OECD countries (Carl Zimmer, 2021[54]). The UK, Canada, US and Israel were the frontrunners, starting their vaccine rollouts on December 8 (UK), 14 (Canada and US) and 19 (Israel), 2020. The UK's Medicines & Healthcare products Regulatory Agency (MHRA) was indeed the first agency to authorize the Pfizer/BioNTech vaccine for emergency use, on December 2, 2020, followed by the US Food & Drug Administration (FDA) on December 11, 2020 and the European Medicines Agency (EMA) on December 21, 2020.
- 101. While countries' COVID-19 policy responses were initially focussed towards hospitals, they later integrated LTC into their policy responses and gave priority to LTC recipients. Several measures are in place to ensure LTC recipients can receive the vaccine as close as possible to their place of residence. Countries defined their priority groups according to vaccine availability, the spread of the virus, and the size of each priority group. However, in late 2020 in the context of limited vaccine supply and during the initial stage of the rollout, all OECD countries prioritised LTC workers and recipients (OECD questionnaire, 2021). In a second stage of the rollout, older people were included in the priority groups in all OECD countries. To facilitate vaccine administration, in most OECD countries COVID-19 vaccines for LTC recipients were provided through mobile teams or via LTC doctors and nurses (OECD questionnaire, 2021). In some cases, people receiving home care could be vaccinated by their GP and could be accompanied to the vaccination site by home care personnel (e.g. Australia) (OECD interviews, 2021). In some cases, as in Denmark and UK, housebound people can be vaccinated in their homes.
- Although the priority groups and modes of delivery of vaccines for LTC recipients have been similar across countries, the systems to book appointments for older non-LTC recipients have varied. In some countries, eligible people are required to register online or via a phone call in order to book an appointment for the vaccine. This was the case, for example, in Australia, France, Ireland, Italy and the US (Australian Government, 2021_[55]) (French MOH, 2021_[56]) (HSE, 2021_[57]) (CDC, 2021_[58]). In some other countries, such as Portugal and Spain, the NHS or the Health Services of the Autonomous communities are in charge of contacting eligible people to book their vaccination appointments (Spanish Government, 2021[59]) (SNS, 2021[60]). A different system existed in Japan and the UK, where people have to be notified of their eligibility via the GP, letters or phone calls before they can book an appointment (Yamakuma, 2021_[61]) (Public Health England, 2021_[621]). Allowing people to book their appointments online or by telephone probably allows an easier and faster vaccine rollout on the healthcare side. Nevertheless, there is growing concern regarding possible access disparities for people who are unfamiliar with the using the internet or who do not have a smartphone or internet access, who might find it challenging to book their appointment. There have also been reports of intermittent technical issues in the IT systems for vaccination registration, in the Czech Republic and Italy, for example (OECD interview, 2021).
- Despite the prioritisation of the LTC sector and elderly populations for vaccination, these patient groups have usually been excluded from clinical trials. During 2020, as data from several Phase II trials gave cause for optimism, with strong antibody responses and reassuring safety profiles reported, with the exception of the Oxford-AstraZeneca vaccine, these trials included few older people. Overall, the sparse data from Phase II trials suggested reductions in both antibody responses and mild to moderate adverse events in well older people compared to younger participants. While many of the Phase III trials made a conscious effort to recruit older people, those with co-morbidities and frailty were once again largely excluded, and there were little or no data on safety and efficacy in this group. Although the speed and impact of the pandemic on older people with frailty justify an approach prioritizing their vaccination, patients and their carers and supervising health care professionals alike had to make decisions based on limited evidence (Soiza, Scicluna and Thomson, 2020[63]). The inclusion of older people with frailty or complex comorbidities might have delayed clinical development programmes, as the likelihood of serious adverse

events withdrawals from trials increase. However, trials in these populations are possible, and judicious application of stopping rules and other safety criteria could mitigate against the risks costly delays. Better engagement between teams working on vaccine trials and those with experience of running trials in older people with frailty could have helped to achieve a closer correlation between trial and key 'real world' populations (Soiza, Scicluna and Thomson, 2020_[63])

- 104. People's attitudes towards COVID-19 vaccines have changed over the time. Globally, the percentage of people who intended to be vaccinated declined from 77% of adults in August 2020, to 74% in October 2020 and to 73% in January 2021. By contrast, the reasons for not being vaccinated remained unchanged over the same period, with the fear of side effects and the worry about the speed of clinical trials being the two most common reasons (Ipsos, 2021_[64]). As of January 2021, Mexico and UK reported a high degree of willingness to be vaccinated, with 82% and 79% of adults respectively prepared to accept a vaccine if available. However, in Japan and South Korea only a minority of adults were reported as willing to accept the vaccine, 39% and 28% respectively (Ipsos, 2021_[64]).
- 105. Consistent with the most commonly reported fears concerning COVID-19 vaccination, throughout the vaccine rollouts the public attention focused on vaccine side effects. In Austria, Belgium, Germany, Italy, Korea, Norway, Spain and the United States, deaths among the vaccinated population initially raised concerns, in some cases leading to a temporary suspension of the campaign (Jordan Wildon, Joscha Weber, 2021_[65]). The Norwegian Medicines Agency (NOMA), the Paul Ehrlich Institute in Germany, the Medicines and Healthcare Products Regulatory Agency (MHRA) in the UK (Torjesen, 2021_[66]) as well as the European Medicines Agency (EMA) (European Medicines Agency, 2021_[67]) all started investigations on suspect deaths following the COVID-19 vaccine. In April 2021, the EMA and the FDA announced that Thrombosis with Thrombocytopenia Syndrome (TTS) should be listed among the rare side effects of the AstraZeneca and Johnson&Johnson vaccines, although overall the benefits still overweight the risks for people aged 18 or older (EMA, 2021_[68]) (CDC, 2021_[69]).
- 106. The vaccination rollout has proceeded well in most OECD countries. In EU countries, a median of 77% of people over 80, 76% of LTC residents and 77% of healthcare workers had received at least a first dose of vaccine by the end of April 2021 (ECDC, 2021_[70]), with some countries, such as Italy, where the number of doses administered is 1.44 times¹² the population over 80, 1.77 times the LTC residents and 1.76 times the healthcare workers by the 4th of May 2021 (II Sole 24 Ore, 2021_[71]). The UK had also vaccinated a high portion of LTC residents and personnel, respectively 90% and 80% by mid-April 2021 (NHS, 2021_[72]).
- 107. The high acceptance rate among health workers in LTC has been more surprising than among older people. An analysis of potential acceptance of a COVID-19 vaccine studied 13,426 randomly selected individuals across 19 countries (most countries with a high COVID-19 burden) in June 2020. Of these, 71.5% responded that they would take a vaccine if it were proven safe and effective. Older people were more likely to report that they would take a vaccine (65+ vs 18–24, OR = 1.73; 95% CI (1.48, 2.02)). On the contrary, many healthcare workers avoid seasonal flu shots and had doubts about the safety of the first COVID-19 vaccines (Lazarus et al., 2020_[73]). However, there have also been cases of low vaccine acceptance among the healthcare workers. In Greece, for instance, while 90% of LTC residents had been vaccinated, only 50% of LTC workers accepted the vaccine by April 2021 (OECD interview, 2021).
- 108. To ensure transparency regarding vaccine safety, several OECD countries have online tools through which vaccine recipients can report adverse events they encounter in the days following vaccination. The overwhelming majority of reported adverse events relate to minor symptoms such as sore arm or flu-like symptoms that last around one or two days (MHRA, 2021_[74]) (AIFA, 2021_[75]). Examples of countries using these type of reporting tools are France (signalement.social-sante.gouv.fr), Ireland

_

¹² As some vaccines against COVID-19 are administered in two doses, the percentage of people receiving at least one dose can reach up to 200% in case of complete immunization.

(COVID-19 Vaccine Adverse Reaction Reporting Form), Italy (vigilfarmaco.it), the UK (vaccinemonitor-yellowcard.mhra.gov.uk), the US (V-safe tool). The information gathered through these tools is then compiled into publicly available reports.

Support for informal carers was not forthcoming

- 109. Informal carers, such as family members, friends and other relatives represent the vast majority of carers of the disabled and dependent elderly in many OECD countries. There are concerns about the living and care situations for many informal caregivers due to a variety of reasons. Limited care services available during the pandemic, social distancing, increased unemployment and competing care needs within households (e.g. due to school closures) may have increased the psychological strain experienced by caregivers and worsened their financial situation.
- 110. A report published by CarersUK in October 2020 highlighted the pressures faced by carers to people of all ages. A decrease in support and sometimes complete closure of local services alongside an increase in care needs has led to most carers having to provide much more care. There were up to 9.1 million unpaid carers across the UK before the COVID-19 pandemic. There has been an estimated 4.5 million additional new carers since the start of the pandemic, 2.8 million of whom are both working and caring. Among those who started caring before the crisis, over 80% of carers provide more care. Nearly two in five increased caregiving because of local services reducing or closing. About eight carers out of ten reported that the needs of the person they cared for had increased since the pandemic. Nearly three quarters reported feeling exhausted and worn out because of caring during the pandemic (CarersUK, 2020_[76]).
- 111. In Germany, a survey undertaken in the Summer 2020 by over 1 000 informal carers of working age (up to 67 years old) indicated the use of formal services decreased, especially in the case of respite care (-35%), support groups (-31%), home visiting services (-28%) and counselling by mobile care services (-25%). Over half of family caregivers reported that they spent more time every day to provide care and support since the pandemic and five out of seven (71%) carers who work reported more problems to reconcile work and care. While about one third of informal carers could be classified as "feeling lonely" before the pandemic, in the Summer 2020, this share had strongly increased to reach over 50% (Eurocarers, 2021[77]).
- 112. Due to the challenge of combining care responsibilities with employment, informal carers are often vulnerable to reducing their labour market attachment, or leaving the job market entirely, and subsequently sacrificing income. With the onset of the COVID-19 pandemic and resulting employment cuts, informal carers may have been particularly vulnerable to deterioration in their socioeconomic situation. There is little data available comparing caregiving situation before and after COVID-19. Findings from a survey in Austria undertaken during the first wave suggest a tightening of care networks, with new carers likely to have stepped in to provide low intensity care to relatively autonomous people. Caregiving was associated with poor mental well-being, especially among those without children (Rodrigues et al., 2020_[78]).
- 113. Adding to considerable pressures of caregiving, carers have also taken a financial hit. Figure 3.13 shows that the share of people aged 50, over who became unemployed, were laid off, or had to close their business because of COVID-19 by August 2020 was higher for informal carers than for non-informal carers in all countries, with the exception of Switzerland and the Czech Republic. It also varied across countries, with the largest share in Italy at 25%, followed by Greece at 20%, and the lowest in Czech Republic at 2.7%. Eurocarers, a major NGO in the field is currently undertaking a data collection on the consequences of COVID-19 for older caregivers (survey to be closed on early March 2021) (Eurocarers, 2021_[79]).

Informal carers Non-informal carers % of who became unemployed, were laid off or had to close their business because of COVID-19 25 20 15 10 5 0 Czech Republic Bulgaria Poland Sweden Finland Italy Estonia Germany Switzerland Greece

Figure 3.13. Informal carers have suffered from the economic crisis in a number of OECD countries

Note: Informal carers are those aged 50 or over who provided help outside their household ("Since the outbreak of Corona, did you help others outside your home to obtain necessities, e.g. food, medications or emergency household repairs?"). The question on the labour market impact is "due to the Corona crisis have you become unemployed, were laid off or had to close your business?" Note that business closure can be both temporarily or permanently.

Source: SHARE-COVID-19 wave 8 (data cover June to August 2020).

- Most countries did not implement specific support to informal carers: exceptions included Canada, Germany, Japan, Luxembourg, Netherlands, Norway, Scotland in the United Kingdom and a few states in the United States. In Germany, informal carers could receive financial support for up to 20 days (instead of 10 days) in situations where a gap in the community care their relative normally receives occurs from 14 May 2020 to 30 September 2020 (Pflegeunterstützungsgeld). In parallel, the right to stay away from work due to an acute care situation within the own family will also be extended from 10 to 20 days (Lorenz-Dant, 2020[44]). In Scotland, a special one-off Coronavirus Carer's Allowance Supplement of GBP 230.10 was provided to 83 000 eligible carers in June 2020. In Luxembourg, a new leave for carers was introduced for private sector employees and self-employed workers and public sector employees who are forced to stop working because of the closure of a facility, such as a day care centre - to be able to take care of the older people in need of LTC. France implemented in September 2020 a 2019 law that provides a financial compensation for family carers taking leaves to care an ill elderly, under specific eligibility conditions. Japan developed a new subsidy scheme for small and medium employers that had already introduced a paid leave program for caregivers. It aims to support workers who need to take care of their family members who would use formal care service if not because of the COVID-19 pandemic or who usually rely on informal carers. The subsidy is provided only to employers that allow employees to take more than 20 days of paid care leave, and can show that their employees who provide care take at least five paid days off.
- 115. While the COVID-19 outbreak has brought international attention to the importance of ensuring the safety of LTC workers, the crisis has not necessarily put informal carers' infection in the spotlight. Yet, factors of transmission are identical, including prolonged exposure, inadequate hand hygiene and insufficient PPE. At the onset of the crisis, informal carers could count mostly on themselves and NGOs, in collaboration with countries, to access PPE (see section on coordination between NGOs and countries). In the UK, unpaid carers who do not live with their caree can benefit from free PPE through a new national scheme since February 2021. At the time of writing, two-thirds of local authorities had signed up to set up distribution systems (UK Government, 2021[80]).
- 116. In addition, no OECD countries have included informal carers among their priority group in the vaccination rollout strategy, despite their importance. Priority has been given to elderly receiving long-term care, health and LTC workers and oldest people.

- 117. At the same time, more emotional and psychological support could be provided to informal carers of disabled of all ages. In the Czech Republic and Chile, social workers who were unable to make home visits) were staffed on hotlines providing advices to informal carers, such as families and friends. They provided support by advising informal carers and emotionally supporting them.
- Informal carers providing emotional and social support for residents of LTC facilities were particularly concerned by the restrictions on visits in nursing homes. Although virtual visiting was implemented to try to meet needs of residents, it is no substitute for informal carers who provided substantial care and support for many residents. More concerning, many residents have died alone without family present to support end-of-life needs. Since the beginning of the pandemic a number of policy recommendations have been published to strike the right balance between infection prevention and supporting LTC resident health and well-being (Stall et al., 2020[81]).
- 119. Based on a review of the literature, consultations with international experts, residents and informal carers, a study outlined guiding principles to define access to LTC facilities to informal carers (Table 3.5) (Stall et al., 2020[81]).

Table 3.5. Example of policies recommended supporting family carers in accessing long-term care facilities

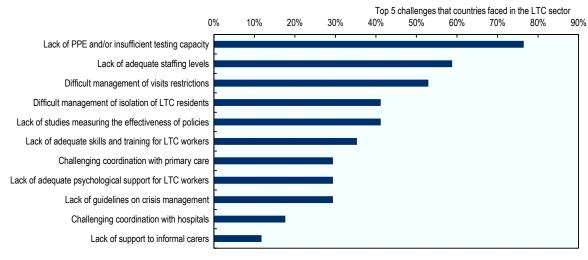
Domain	Policy recommendations	
Defining a "family caregiver"	 Residents, substitute decision makers and their families must retain the authority and autonomy to determine who is essential to support them in their care and designate their own family caregivers. Governments, public health authorities and homes must not define who is a family caregiver, especially or the basis of either an individual's caregiving involvement and role prior to the pandemic or by identifying those individuals providing services that would otherwise require a private duty caregiver. 	
Allowable number of designated family caregivers	 A resident may designate at least two family caregivers. A resident may identify a temporary replacement family caregiver if the primary designated family caregivers are unable to perform their roles for a period of time; the intent is not for designates to change regularly or multiple times but to enable a replacement, when required. 	
Allowable number of family caregivers in the nursing home at one time	One family caregiver per resident should be allowed in the home at a time. Under extenuating circumstances (i.e., end-of-life), this allowable number should be flexible.	
4. Allowable locations within the nursing home	• As essential partners in care, family caregivers should have access to areas both outside and inside the home (similar to staff members) but must maintain physical distancing from other residents and staff. They should be provided with an individualized caregiver identification and/or badge, and must abide by all IPAC and PPE requirements and procedures concerning staff members of the home.	
5. Allowable access during a COVID-19 outbreak	 In order to promote relational continuity and meet the ongoing needs of residents, family caregivers shou still have access to the home during a COVID-19 outbreak, as long as the following conditions are met: The family caregiver attests that they understand and appreciate they are entering a home under outbrea and that they may be at increased risk of COVID-19 infection They must be trained in IPAC procedures and the proper use of PPE and abide by all outbreak-related policies that apply to staff members of the home. 	
6. Allowable frequency and length of time for family caregiver presence	No restrictions as long as it does not negatively impact the care of other residents or the ability of other family caregivers to provide care and support.	
7. Screening and testing requirements	 As partners in care, family caregivers should be subjected to the same COVID-19 screening requirements as nursing home staff. If asymptomatic COVID-19 testing is recommended, family caregivers should be provided with the same access to testing as staff members of the home. 	
8. IPAC and PPE requirements	 As partners in care, family caregivers should receive an orientation and be educated and trained to follow the same IPAC and PPE requirements and procedures as staff members of the home, including remaining masked at all times. Homes must maintain ample PPE supply to enable family caregivers' participation in care. Failure of family caregivers to comply with these procedures could be grounds for loss of their rights to participate in care as family caregivers, which should be appealable. 	

Source: adapted from (Stall et al., 2020[81]).

How prepared was the sector for the pandemic and how effective were the subsequent policy responses?

- 120. In line with the OECD's Resilience Framework (OECD, 2019[82]), this chapter investigates how resilient LTC systems have been to the COVID-19 pandemic. The first section investigates how prepared the sector was to confront the pandemic, and what has changed since the initial wave. Section 4.2 to 4.4 discuss how countries initially responded to the pandemic and how they adapted. In particular, section 4.4 highlights some possible repercussions for care continuity. Section 4.5 to 4.7 discuss structural challenges relating to workforce, organisational features and co-ordination that hindered the LTC facilities' responses. At the same time, lack of data and comparability, together with simultaneous policy implementation, limits the assessment of which policy interventions have worked and which have not.
- 121. COVID-19 has brought a number of challenges to the LTC sector. As shown in Figure 4.1, lack of PPE and testing were the biggest challenges faced by countries. PPE and testing strategies were discussed in Chapter 3 and appear to have been implemented during the course of the pandemic. Staffing issues, difficult-to-implement containment and mitigation strategies, and coordination with healthcare facilities, were also highlighted by a large number of countries as challenges during the pandemic.

Figure 4.1. COVID-19 brought a new set of issues but also magnified long-standing challenges



Source: 2021 OECD questionnaire on COVID-19 in LTC.

122. There is no commonly accepted method to estimate the relative efficacy of the different containment and mitigation strategies adopted by countries. It appears the LTC containment and mitigation strategies enforced by countries in 2020 achieved their intended effect, in part, of shielding LTC facilities

and protecting LTC recipients and workers, thereby contributing to limiting the spread of the virus in countries. Yet, it is difficult to determine the relative effectiveness of each strategy in the evolution of the pandemic at country level, and how they interacted with characteristics of each country and their populations.

123. It is critical to stress that higher COVID-19 and/or excess death rates do not necessarily equate to less effective government responses to the virus. Some countries may be more susceptible to COVID-19 due to factors that go beyond LTC policy responses to the virus, including population density, share of elderly population, as well as prevalence of risk factors such as obesity. The spread of the virus in the general population also affected LTC facilities. Countries with lower incidence rate in the general population did not need to shield LTC facilities as much. Further, countries that were first hit by large outbreaks in LTC facilities (e.g. Italy) had less time to develop and implement policy responses, thus contributing to higher cases and deaths.

Emergency preparedness in long-term care was insufficient

- 124. At the onset of COVID-19 crisis, OECD countries' overall pandemic preparedness and response systems were heterogeneous and most did not appear fully prepared to face such a pandemic. For years, experts had widely acknowledged that countries needed robust emergency preparedness and response systems, particularly after the H1N1 pandemic in 2009 and the Ebola pandemic in 2014-2016. In the aftermath of the H1N1 pandemic in 2009, the pandemic preparedness activities put in place prior to the emergency had proven useful but insufficient to properly face the crisis (ECDC and WHO, 2017_[83]). In fact, where emergency preparedness systems existed, they often lacked follow-up to update existing measures, hampering an adequate and timely reaction (Global Preparedness Monitoring Board (GPMB), 2019_[84]). As part of the emergency preparedness and response system, a sound and flexible emergency preparedness plan helps trigger a fast reaction to the outbreaks, thus containing contagion and minimising its consequences. Even during the COVID-19 crisis, pandemic preparedness plans lacked responsiveness, failing to adapt to the rapidly evolving pandemic scenario (European Commission, 2020_[85]). On the brink of COVID-19, the 2019 Global Health Security Index which assessed health systems' emergency preparedness in 185 countries around the world found national health security to be weak overall, with no country fully prepared for epidemics or pandemics (GHS index, 2019_[86]).
- 125. When the COVID-19 pandemic began, OECD countries emergency preparedness differed widely. Most countries had developed some form of emergency preparedness systems, but many overlooked the LTC sector. In most cases, the existing pandemic preparedness plans did not focus on, or prioritise, the LTC sector and in some instances, never mentioned LTC facilities. Table 4.1 indicates which countries had public guidelines on infection control in LTC prior and post COVID-19, while Table 5.1 in 5Annex A provides more details on the overall health emergency systems of OECD countries. Nevertheless, it is noteworthy that countries appearing best prepared for a pandemic were not necessarily less affected by the COVID-19 crisis. For example the US LTC sector has been hit hard by the pandemic, at least initially, notwithstanding a sound emergency preparedness system that ranked first in the in the 2019 Global Health Security Index (GHS index, 2019[86]) and having LTC infection control plans both at the federal and local level prior 2020 (OECD questionnaire 2021). At the same time, it appears that such guidelines were not always effective and there was very little oversight. Conversely, countries like Czech Republic, Poland and Slovenia, whose emergency response systems looked weaker before 2020, were less affected by the crisis, especially during 2020.

Table 4.1. OECD countries with public guidelines on infection control in LTC prior and post COVID-

Country	Before COVID-19	Since COVID-19
Australia	Yes, at the national level	Yes, at the national level
Austria	No	Yes, at the sub-national/local level
Belgium	Yes, at the sub-national/local level	Yes, at the sub-national/local level
Canada	Yes, at the sub-national/local level	Yes, at the national and sub-national/local level
Chile	No	Yes, at the national level
Czech Republic	No	No
Colombia	Yes, at the national level	Yes, at the national level
Denmark	Yes, at the national level	Yes, at the national level
Estonia	Yes, at the national level	Yes, at the national level
Finland	Yes, at the national level	Yes, at the national and sub-national/local level
France	No	Yes, at the national level
Germany	Yes, at the national and sub-national/local level	Yes, at the national and sub-national/local level
Greece	Yes, at the sub-national/local level	Yes, at the national level
Hungary	Yes, at the national level	Yes, at the national level
Iceland	No	Yes, at the national level
Ireland	No	Yes, at the national level
Israel	-	-
Italy	No	Yes, at the national and sub-national/local level
Japan	Yes, at the national level	Yes, at the national level
Korea	Yes, at the national level	Yes, at the national level
Latvia	Yes, at the national level	Yes, at the national level
Lithuania	Yes, at the national level	Yes, at the national and sub-national/local level
Luxembourg	No	Yes, at the national level
Mexico	No	Yes, at the national level
Netherlands	Yes, at the national level	Yes, at the national level
New Zealand	Yes, at the national level	Yes, at the national level
Norway	Yes, at the national level	Yes, at the national level
Poland	No	Yes, at the national level
Portugal	Yes, at the national level	Yes, at the national level
Slovak Republic	-	-
Slovenia	No	Yes, at the national level
Spain	Yes, at the national level	
Sweden	Yes, at the national level	Yes, at the national level
Switzerland	-	-
Turkey	-	-
United Kingdom	No	Yes, at the national level
United States of America	Yes, at the national and sub-national/local level	Yes, at the national and sub-national/local level

Source: OECD questionnaire on COVID-19 and LTC 2021.

126. In eight countries (Australia, Austria, France, Germany, Iceland, Ireland, Italy and Slovenia), despite the existence of emergency preparedness systems for the healthcare sector in general, specific measures for the LTC were missing prior 2020. These countries took several actions to prepare for possible pandemics over the years, yet they overlooked the LTC sector. Emergency preparedness plans, infection control laws and governmental websites reporting information on possible crises and response measures are the most common features of health emergency preparedness systems. This is the case for Germany, whose Infection Protection Act (IfSG) regulates infection control at the federal level since 2001, together with laws and ordinances issued at the Länder level (OECD questionnaire, 2021). In Italy, the governmental website of the Department of Civil Protection regularly publishes information on several emergencies and

risks, including health emergencies (Dipartimento della Protezione Civile, 2021_[87]), while guidelines and plans for pandemic preparedness are also part of the Italian emergency preparedness system (Istituto Superiore di Sanità, 2006[88]) (Italian Ministry oh Health, 2014[89]).

- 127. Other countries mentioned LTC in their pandemic preparedness plans and guidelines, but varied widely in their emergency preparedness systems. Fifteen countries had issued guidelines for infection control in LTC facilities and seven countries had specific emergency preparedness plans for the LTC sector. Among them, five countries had more sophisticated emergency systems including institutes and task forces for emergency management, risk analyses and crisis management exercises. For instance Estonia performed crisis management exercises to test the country's ability to react in case of emergency (Ministry of the Interior - Republic of Estonia, 2017[90]) while Japan has a Disaster Management bureau as well as a task force that could be activated when a large scale disaster takes place (Ogata, 2016[91]). Similarly, other countries have specific institutes for the management of emergencies, like Australia (AIDR, 2021[92]), Finland (Ministry of Social Affairs and Health, 2008[93]), Netherlands (National Coordinator for Security and Counterterrorism (NCTV), 2019[94]) and Belgium (FPS Health, 2021[95]).
- Since the start of the COVID-19 pandemic, the LTC sector's pandemic preparedness has experienced a turnaround: nearly all OECD countries have published specific plans and measures to face the COVID-19 crisis in the LTC sector. Figure 4.2 shows that the percentage of OECD countries with public national guidelines on infection control in LTC rose from 53% prior to 2020, to 84% today.

Did/does your country have guidelines on infection control in LTC? Number of countries 30 25 20 15 10 5 0 Before COVID-19 Since COVID-19 Before COVID-20 Since COVID-21 Since COVID-20 Before COVID-21 Yes, at the national level Yes, at the sub-national/local level No

Figure 4.2. Pandemic preparedness plans for the LTC sector were stepped up during the COVID-19 crisis

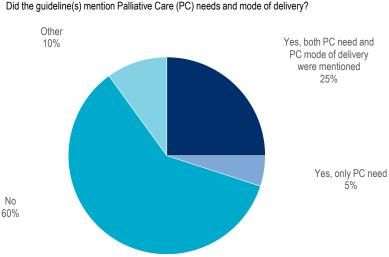
Source: OECD questionnaire on COVID-19 and LTC 2021.

- 129. In some cases, countries that had already issued infection control guidelines for the LTC sector prior 2020 issued additional guidelines and measures focusing on the sector since the beginning of the crisis. In Greece, LTC facilities developed new and more targeted measures to face COVID-19, while Colombia issued several guidelines containing information for caregivers, facilities, health authorities and local governments on several topics: mental health, prevention, isolation, containment and mitigation measures for COVID-19 inside LTC facilities (OECD questionnaire, 2021).
- Seven OECD countries that did not include the LTC sector in their emergency preparedness systems prior 2020 developed new LTC-specific measures like guidelines, webpages, task forces and rapid response teams. For instance, the Japanese Ministry of Health dedicated a page of its website to

older people and LTC (Ministry oh Health - Japan, 2020[96]), and in Iceland LTC staff were immediately quarantined, tested and substituted by a response team in case of an outbreak (COVID-19 Health Systems Response Monitor, 2020[97]). Moreover, some countries like Chile, Czech Republic, Mexico and Poland appeared particularly unprepared for a pandemic before the COVID-19 onset, but they reacted promptly. Nevertheless, the issue has been generally addressed in the healthcare system, with some extraordinary measures to manage visits and admissions of new patients in LTC facilities (MINISTRY OF HEALTH -Czech Republic, 2020[98]).

Despite the growing number of guidelines for the LTC sector during the COVID-19 crisis, they rarely mentioned palliative care, despite the pandemic highlighting the need for good and timely end-oflife care. People affected by life-limiting and life-threatening diseases are particularly at risk of developing severe COVID-19 symptoms if infected, and dying from it, thus requiring prompt palliative care. At the same time, although some countries eased visitor restrictions in healthcare facilities for people at the end of life, the pandemic has made it harder overall for relatives to assist patients. As such, having an Advance Care Plan in place would have allowed patients to receive the care they prefer, even when relatives' assistance becomes more complicated or rarer. Nevertheless, out of the 29 OECD countries that published infection control guidelines for the LTC sector in 2020, either at the national or subnational level, only six mentioned palliative care needs or mode of delivery (Figure 4.3). Canada, Latvia, Luxembourg, Portugal and the US mentioned both palliative care needs and mode of delivery; Ireland included the possibility of transferring people at the end of life across settings to ensure they are provided with the palliative care they need; and Slovenia activated a helpline for healthcare workers to receive counselling on the provision of palliative care services. Additionally, Australia and Denmark recommended relaxing the visitor bans for patients at the end of life (OECD questionnaire, 2021). In Ireland, guidance provided information on the care for patients with COVID-19, supportive therapies at the end of life, and advance care planning in residential settings. Some guidance also focused on the management of residents with dementia during the COVID-19 crisis (HSE - Ireland, 2020[99]).

Figure 4.3. Infection control guidelines for LTC rarely mention palliative care



Note: PC refers to palliative care.

Source: OECD questionnaire on COVID-19 and LTC 2021.

Early intervention has been an important element for limiting spread

- 132. One of the elements differentiating countries' policy interventions is the timing of their enforcement. Not all countries were able to implement measures at an early stage of the pandemic. Countries that were initially hit early implemented mitigation and containment strategies at a moment when the disease was already spreading widely across communities.
- 133. Broad containment strategies for the general population (such as closure of public spaces) were enforced less than ten days before the country reached the threshold of ten deaths per million population in Italy (one day), Spain (four days), France (seven days), Belgium (seven days), the United Kingdom (ten days). In contrast, Hungary, Lithuania, Poland, Latvia and the Slovak Republic enforced containment and mitigation strategies more than one month before reaching the threshold of ten deaths per million population. Being able to learn from the experiences of countries first hit by COVID-19 appears to have helped these countries control the first wave of the pandemic (OECD/European Union, 2020[100]).
- 134. Evidence has emerged that the timing of policies has an impact on COVID-19 fatality rates in community and hospital settings. While there is no evidence of the timing of containment and mitigation policies in LTC facilities, research on the effectiveness of several measures at the country level highlights that timing plays a role, with earlier interventions more likely to limit the spread of the virus (Haug et al., 2020_[101]; Summan and Nandi, 2020_[102]).
- 135. Figure 4.4 shows that at the early stage of the pandemic, there was a small association between the timing of policies (publication of LTC guidelines) and LTC fatality rates. For a few countries, the timing of LTC policies was slower (compared to the first COVID-19 case) and the cumulated mortality rate by May 2020 was higher. In most countries, restrictions implemented faster in LTC facilities were associated with lower fatality rates by May 2020.
- 136. A simple OLS¹³ regression-based analysis showed that, at the country level, the greater the number of days between the date of the first case and the first guidelines on COVID-19 on LTC, the higher the number of LTC deaths per million population aged 80 (significant moderate association). Control variables included percentage of population aged 65 years or older, population density, number of LTC beds per million population, number of hospital beds per million population, and number of LTC workers per 100 population aged 65 years or older. Higher rate of LTC workers per elderly was strongly associated with lower LTC death rates.
- 137. In Italy, LTC deaths rates are not available, but the country was very hard hit by the first wave of the pandemic. While the first COVID-19 case was registered on 30 January 2020, the first operational LTC guidelines were released after the total lockdown on 9 March 2020 and only required LTC facilities to suspend visits. The Ministry of Health released more comprehensive operational LTC guidelines on 25 March 2020. The first LTC-specific measures of Italian regions were published from mid-March, at least three weeks after the first measures were launched in the health care sector (Berloto et al., 2020_[35]).
- 138. Similarly, early implementation of measures may also be associated with lower fatality rates in other countries. In Navarre, Spain, LTC facilities that took preventive measures mitigated the potential impact of the pandemic. There was a positive relationship between the lag days between the implementation of measures (visitor restrictions, isolation of COVID-19 suspected cases, COVID-19 sectors within nursing homes, staff training) and the infection rate at the nursing home level (Fresno, 2020[9]).

¹³ Ordinary Least Squares.

Rate of LTC deaths per one million population aged 80 or over 9 000 8 000 BF¹² 7 000 6 000 5 000 4 000 3 000 US 2 000 DF 1 000 0 30 40 50 60 Number of days between the first case and the first LTC guidelines

Figure 4.4. Earlier publication guidelines may have contributed to limit LTC fatality rates

Note: cumulated LTC deaths as of May 2020. Reporting of countries not fully comparable due to different testing, reporting and coding standards. Unless otherwise stated, LTC deaths refer to confirmed deaths of LTC residents, including deaths that occur within LTC facilities and elsewhere (e.g. hospitals, homes). 1. Includes confirmed and suspected deaths. 2. Only includes deaths occurring within LTC facilities. 3. Data come from regional governments using different methodologies, some including suspected deaths. Guidelines publication dates differed across regions in March. Tentative date chosen is 15 March 2020.

Source: Comas-Herrera, A. and al (https://ltccovid.org/wp-content/uploads/2020/06/Mortality-associated-with-COVID-21-May-3.pdf) and 2021 OECD questionnaire on COVID-19 in LTC.

139. Stringency of measures may have affected the levels of COVID-19 deaths in the LTC sector. Indeed, more stringent social distancing measures had a key role on reducing COVID-19 mortality in communities and hospitals (Hussain, 2020[103]). In Austria, the share of LTC deaths was dramatically lower in regions where the regional governments applied stringent measures in LTC facilities. For instance, the share of LTC deaths as a proportion of total deaths by October 2020 was 43% in Vienna, while the same share was 91% and 82% in Lower and Upper Austria respectively. In Vienna, measures like screenings and visit restrictions to public spaces in nursing homes seem to have been potentially more successful than the specific 'Corona traffic lights' system in Lower Austria, with graded measures according to the level of infections in the local context. Upper Austria limited visits to two visitors per resident per day in general, and in nursing homes with at least one positive case, only to those in palliative care. However, by November 2020, restrictions in nursing homes were intensified across regions, although some regional differences remained (Leichsenring, Schmidt and Staflinger, 2020[52]).

Countries need to find the right balance between well-being of LTC residents and containment strategies

140. While containment strategies were needed, many measures have made LTC recipients even more socially isolated, particularly those in residential facilities, with potentially significant repercussions for residents' mental health. During the first wave, many LTC residents experienced severe functional and cognitive declines, deteriorations in physical health, severe loneliness and social isolation, while evidence suggests an increased use of psychotropic medications and physical restraints (Stall et al., 2020_[81]). Previous evidence already associated physical isolation, cessation of visiting hours and activities, as well as restrictions on movement within the LTC facility with increased feelings of isolation and depression (Sitoh, 2003_[104]) (Tse, Pun and Benzie, 2003_[105]).

Box 4.1. Containment strategies are particularly challenging for patients affected by dementia

People affected by dementia require particular attention during the current pandemic as they face serious difficulties in understanding and accepting rules and restrictions imposed by the current crisis, and they usually belong to the category of patients most at risk of dying from COVID-19. In fact, understanding and - even more - keeping in mind the reasons behind social distancing and bans currently in place is difficult for dementia patients as well as their carers, becoming a source of frustration for both sides. Moreover, prolonged isolation tends to cause or exacerbate feelings of loneliness, depression and stress, all factors deemed dangerous for people with cognitive impairment (Korczyn, 2020_[106]). Worsening of cognitive symptoms and lower independence have also emerged in some cases, following this period of prolonged isolation (Canevelli et al., 2020[107]). At the same time, dementia patients share the same risk factors as COVID-19 patients, resulting in a higher risk of contracting COVID-19 and dying from it than the general population. Caring for people with mental impairment is extremely challenging for the healthcare workers and often traumatic for patients. Being isolated and/or treated in ICU by unfamiliar doctors has often triggered restless reactions in dementia patients, sometimes requiring sedation and causing post-traumatic stress disorder (Korczyn, 2020[106]).

Countries should strive to find the right balance between sheltering dementia patients at risk of developing severe COVID-19 symptoms and ensuring a good quality of life, taking into account the specificities of dementia symptoms. Implementing telehealth services can facilitate communication through teleconsultations both with the healthcare side and with the relatives, reducing the feelings of loneliness and isolation (Padala, Jendro and Orr, 2020[108]).

Some OECD countries implemented special programs for dementia patients, but decisions on this type of measures are often left to the facilities and clinicians. In fact, Australia did not implement specific measures for these patients, while in Czech Republic and Greece decisions on this matter where taken at the clinician level. Sometimes in Greece doctors decided to avoid intubating dementia patients affected by COVID-19 to preserve their quality of life. Korea has specific programs for patients with cognitive impairment. Korean dementia patients could take part in cognitive enhancement programs even during the pandemic, while outdoor activities replaced inside groups activities. Finally, in Italy there has been discussion on the special needs of this category of patients in the communications between local governments (e.g. Provincia Autonoma di Trento) and facilities, and in the guidelines provided both at national and local level (e.g. Provincia Autonoma di Trento) (OECD interviews, 2021).

141. Mental health issues have also been a concern for older care recipients at home. Self-reported data suggests that the prevalence of anxiety and the share of people feeling lonely has risen among this population in many European countries since the pandemic. Figure 4.6 shows that, on average, about 24% of older people receiving home care felt more anxious and 21% lonelier since the outbreak. In response, public bodies and NGOs redoubled their efforts to help people cope with poorer mental health. In virtually all surveyed OECD countries, hotlines ran by public organisations and NGOs were set up or extended during the pandemic to enable people, including home-based LTC recipients to receive emotional support. 5

% of LTC recipients feeling more nervous, anxious or on edge since the COVID-19

% of LTC recipients feeling lonelier since COVID-19

% of LTC recipients feeling lonelier since COVID-19

Switzerland

OECD1A

Figure 4.5. A sizeable share of LTC recipients feel more anxious and lonely since the outbreak

Note: LTC recipients refer to those aged 65 years old receiving regularly home care who reported ADL or IADL limitations in SHARE wave 7 (2017). Question on loneliness is "How much of the time do you feel lonely? Often, some of the time, or hardly ever or never?" and, for those who answered "often" and "some of the time", the follow up question is "Has that been more so, less so or about the same as before the outbreak of Corona?" Questions on feeling nervous, anxious or on edge follows the same structure.

Source: SHARE-COVID-19 wave 8 (data cover June to August 2020).

Stael

HON

Sweden

Bulgaria

France

- 142. Particularly stringent measures to contain the first wave fostered debate in OECD countries over the right balance between COVID-19 measures and LTC residents' health and well-being, even though most countries strengthened the use of digital technologies to maintain essential clinical care and facilitate virtual contact with families. While almost all countries implemented bans or restrictions on visits, there is little evidence on the relationship between these bans or restrictions and lower COVID-19 infection rates in LTC facilities (Koshkouei, Abel and Pilbeam, 2020_[109]). At the same time, studies from hospital settings showed the efficacy of visitor restrictions in reducing COVID-19 transmission.
- 143. Following the first wave, countries eased up visitors bans to allow more flexibility, especially for the loved ones of residents in terminal stages of life. For example, in the Netherlands, the Ministry of Health, Welfare and Sports set up a national pilot to determine how to lift the ban in nursing homes while still protecting residents and workers from COVID-19 eight weeks after the implementation of a visitors ban. In a sample of nursing homes, one visitor per resident was allowed, and nursing homes were to follow a national guideline developed by stakeholders, including nursing homes, professional organizations for elderly care physicians, psychologists, nurses, the Alzheimer's Society, and client representative organizations. Although variation in local protocols was observed (use of PPE, location, and supervision of visits), in general, experiences were very positive for residents, visitors and workers during the pilot period. No new COVID-19 infections were reported in these nursing homes (Verbeek et al., 2020[110]).
- 144. In many countries such as Denmark and Austria, visitors were allowed to meet their loved ones in outdoor settings (Rostgaard, 2020_[34]). Establishing clear areas for visitors within LTC facilities was another strategy to enable visitors to connect with residents while respecting infection control measures. Such measures, like in-person visits with family, have the potential to reduce poor mental health outcomes to levels experienced prior to the COVID-19 pandemic (McArthur et al., 2021_[111]).
- 145. In Australia, some providers implemented a number of the initiatives to strike a better balance between taking precautions against COVID-19 while maintaining other parts of life that contribute to the health and happiness of residents. Initiatives included a concierge service to coordinate and screen visitors, dedicated communications teams within facilities to improve coordination between residents and their families, as well as training programs for family members in infection control and the use of PPE to

Croatia

Estonia

ensure the safety of visits. These initiatives are dependent upon adequate staffing and therefore require extra funding.

146. More generally, providing clear and practical guiding principles to LTC facilities is essential. A Canadian study outlined best practices for accessing LTC facilities to visitors based on a review of the literature, consultations with international experts, LTC residents and informal carers like family members (Table 4.2) (Stall et al., 2020_[81]).

Table 4.2. Example of policies recommended supporting visitors in accessing long-term care facilities

Area	Policy Recommendations	
Number of allowable visitors at one time	• Outdoors: outdoor visits can include more than one visitor at a time, if physical distancing can be maintained. Additionally, family members from the same household and/or bubble should not have to physically distance from one another.	
	• Indoors: one visitor per resident in the home at a time. One parent, guardian or family member may accompan a visitor who is a child.	
2. Allowable locations of visits and access during an	• Outdoor visits should be prioritized, when possible and feasible, to both minimize the risk of COVID-19 transmission and to maximize the number of possible visitors.	
outbreak	When outdoor visits are not feasible for either the resident or the visitor (e.g. for cognitive, psychiatric or physical reasons), the home must provide an indoor alternative which provides ample open space for physical distancing and adequate ventilation.	
	• Exceptional circumstances may sometimes necessitate the visitor meeting the resident in their room, but this should be a last resort if none of the previously noted alternative options are deemed feasible.	
Allowable access during a COVID-19 outbreak	• If the home goes into COVID-19 outbreak status, general visits may need to be temporarily suspended (if advised by the local public health authority), but if the outbreak does not involve the entire home, consideration should be given to suspending visits only on the floor or unit under outbreak. Virtual visits must be upscaled during suspensions of inpersons visits.	
Allowable frequency and length of time for visits	Visits should be at least 60 minutes/visit and residents should have access to visitors at a minimum of once per week	
5. Screening and testing requirements	 Visitors must pass an active screening questionnaire (which may include an on-site temperature check) but there should be no requirement for COVID-19 testing for outdoor and physically distanced visits. If exceptional circumstance necessitate a visitor entering the resident's room, they should be subject to the same screening and testing requirements as family caregivers. 	
6. IPAC and PPE requirements	Visitors must remain masked (cloth or surgical/procedure for outdoor visits and surgical/procedure for indoor visits) at all times and maintain at least 2 metres of physical distance from the resident they are visiting. Visitors should be encouraged to bring their own cloth masks for outdoor visits, but appearing without a mask should not be a barrier to visiting.	
	 If masking of visitors causes distress to the resident (e.g. for cognitive or mental health reasons) or poses difficulties with either recognizing (e.g. cognitive impairment) or understanding the resident (e.g. hearing-impaired residents who rely on lip-reading) a face shield which wraps around the chin or a transparent mask can be considered as alternatives Consideration may be given to allowing brief hugs and handholding while maintaining as much distance as possible between the faces of the resident and visitor, and ensuring the availability of alcohol-based hand sanitizer for prompt and effective hand hygiene both immediately before and after these encounters. Homes must maintain ample PPE supply to enable resident visits 	
	• Failure of visitors to comply with procedures could be grounds for a loss of visiting rights, which should be appealable	
7. Accommodations for visitors while on-site at the nursing home	 Visitors must have access to bathrooms (an accessible outdoor sheltered bathroom or designated indoor bathroom). Outdoor visiting must occur in weather-protected settings (e.g. a shaded area with hydration for hot weather, a sheltered area for rain, or a heated area for colder weather). 	
8. End-of-life considerations	• Residents designated as being "critically ill" or at "end-of-life" (<14-day life expectancy) should be provided with the same level of access that would be rendered to a family caregiver. If visitors need to enter the home under these circumstances, they should be subject to the same conditions and procedures as "family caregivers".	

- 1. Number of allowable visitors at one time
- 2. Allowable locations of visits and access during an outbreak
- 3. Allowable access during a COVID-19 outbreak
- 4. Allowable frequency and length of time for visits

- 5. Screening and testing requirements
- 6. IPAC and PPE requirements
- 7. Accommodations for visitors while on-site at the nursing home
- 8. End-of-life considerations

Source: adapted from (Stall et al., 2020[81]).

147. Striking the right balance between the well-being of LTC residents and restricting their rights to protect them of COVID-19 may remain difficult into the future, even despite the vaccination. The trade-off between security and freedom has long been a challenge in LTC facilities that COVID-19 has exacerbated. In France, the public independent institution ensuring the defence of rights noted an increase of referrals and testimonies reporting violations of the freedom of movement of LTC residents and their right to maintain contact with family. Recent complaints include maintaining restrictions on outings during periods of relaxation of lockdowns, prohibiting visits of relatives or family carers for several weeks, making it impossible for families to see their deceased loved ones because they were immediately put in a coffin, maintenance of restrictions on outings for vaccinated residents, and COVID-19 tests without consent (Défenseur des droits, 2021[112]).

There have been concerns about continuity of care but telehealth was boosted

148. The COVID-19 crisis demonstrates the importance of placing integrated care at the core of health systems. Older LTC recipients are not only highly vulnerable to complications and death from COVID-19, but they also suffer from disruptions to their regular care routines. Closures of day care, reduced availability for home care and absence of some LTC staff due to sickness or other reasons have all disrupted care. Overall, in an OECD survey carried out in early 2021, countries considered that ensuring continuity has been moderately challenging by the pandemic (an average of three on a scale from 1 (not at all challenging) to 5 (very challenging).

149. In most OECD countries, day care centres often temporarily closed in some regions, areas or at the national level (Figure 4.6). In Slovenia, France and other countries, all day care centres closed during the first wave at the national level, while only in highly infected areas were required to close during following waves. Closure of all day care centres and the pause in LTC provision at home at the national level can have a massive impact. For example, over 545 000 older people did not receive community-based LTC in Colombia during the first wave. Closure of day care centres in the Czech Republic affected an estimated 21 000 older people, and in Greece 25 000 older people. Care disruption also placed an additional burden on informal carers.

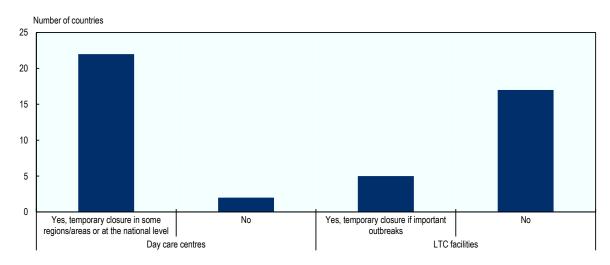


Figure 4.6. Day care centres often closed to protect older people in most OECD countries

Source: OECD guestionnaire on COVID-19 and LTC 2021.

- 150. Conversely, LTC facilities continued to provide care in most OECD countries, even during the first wave and during outbreaks. In cases of outbreaks, the most common response of LTC facilities was to minimise contact from outside as much as possible (LTC workers, visits of relatives) and reduce in-person interactions inside.
- 151. People receiving care at home also saw the availability of LTC reduced (a decrease was observed in 18 OECD countries out of 24 according to the OECD survey undertaken in early 2021). Australia appears to be the only country which introduced measures to increase the availability of home-based LTC. The Commonwealth Home Support Programme (CHSP) delivered entry-level services for LTC to older people (e.g. meals). The AUD\$ 70.2m CHSP emergency support for COVID 19 aimed to reinforce meal providers' activities (for about AUD\$ 15 million), modify and expand other home services, retain and hire workers, and purchase PPE among other objectives. The CHSP has a network of approximately 840 000 clients and 1 400 services providers.
- 152. Many older people receiving home care decided to forgo care from the fear of infection, or were asked to postpone it during July-August 2020. Figure 4.7 shows that about 30% of LTC recipients reported forgoing or postponing care on average. The highest share was observed in Greece (47%) and the lowest in Bulgaria (13%). Most of these older people reported being asked by doctors to postpone care (all types of care, including medical care).

% of LTC recipients at home who either had forgone care or postponed care

50
45
40
35
30
25
20
15
10
5
0
Hulleti's glories a point knitch and forgone care or postponed care

Coepital Republic Scientific Specific Codies Indian knitch Republic Scientific Codes Indian knitch Republic Codes Indian knitch Republic Scientific Codes Indian knitch Republic Codes Indian kn

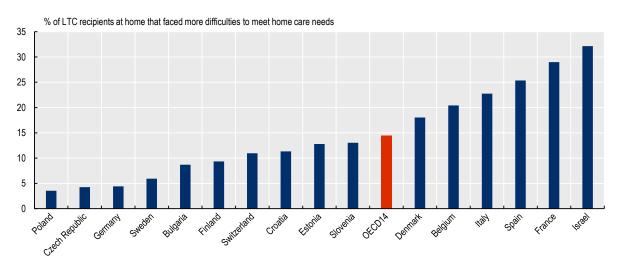
Figure 4.7. About 30% reported forgone care or postponed care on average

Note: LTC recipients refer to those aged 65 years old receiving regularly home care who reported ADL or IADL limitations in SHARE wave 7 (2017). Question on forgone care is "Since the outbreak of Corona, did you forgo medical treatment because you were afraid to become infected by the corona virus?" and the question on postponed care is "Did you have a medical appointment scheduled, which the doctor or medical facility decided to postpone due to Corona?"

Source: SHARE-COVID-19 wave 8 (data cover June to August 2020).

153. Figure 4.8 confirms that LTC recipients living at home did not receive all the care that they needed in the months of the pandemic. About 17% of older recipients reported facing more difficulties to receive care since the outbreak, on average, in 17 countries. The rate in Greece is particularly high at 53%.

Figure 4.8. A substantial share of older recipients faced more difficulties inreceiving care since the outbreak



Note: LTC recipients refer to those aged 65 years old receiving regularly home care who reported ADL or IADL limitations in SHARE wave 7 (2017). Question is "Since the outbreak of Corona, did you face more difficulties in getting the amount of home care that you need?" Source: SHARE-COVID-19 wave 8 (data cover June to August 2020).

- 154. One particular concern in terms of care continuity has been access to physiotherapy, rehabilitation and all types of physical activity among LTC recipients. Delaying or postponing such care can have serious repercussions for the dependent elderly in terms of autonomy loss. Some countries undertook targeted efforts to prevent such concerns. For instance, in Navarre, Spain, 85% of nursing homes organised physical activity exercises and emotion management (Fresno, 2020[9]). In Chile, special isolation facilities for those infected by COVID-19 were coupled with an additional budget for rehabilitation and reablement.
- 155. In most countries, one key measure to ensure care continuity for the elderly was the scaling-up of digital technology. As outlined previously, over half of surveyed OECD countries did not have programmes or guidelines on the development of telehealth services in LTC before the outbreak. Since the outbreak, the overwhelming majority of surveyed countries reported having developed digital technologies to ensure continuity of care. Six countries (Belgium, Denmark, France, Hungary, Ireland and Norway) set up coverage rates or fee-for-consultation of telehealth services. Two-thirds of surveyed countries (N=24) developed teleservices to maintain contact between the LTC recipients and their relatives, for example through tablets. In Navarre, Spain, the vast majority (82%) of nursing homes organised videoconferences for elderly people to communicate with their relatives, with these activities in high demand (Fresno, 2020[9]). Over 40% of surveyed countries use more remote management, data sharing and monitoring technologies. Digital teleservices included teleconsultations, as well as triage before hospital admission, in Hungary.
- 156. In Australia, LTC needs assessment became virtual, while online interpreting services ensured that services could be accessed by all cultural minorities. In addition, home-based recipients received comprehensive support to use tablets (distribution of tablets with pre-installed apps, help to connect to Wi-Fi at home, training, etc.). The take-up from the elderly was rapid. In parallel, Australia supported providers (e.g. meal providers) to develop online services so that the older people could perform their daily activities online as much as possible (groceries, meals, social activities, etc.). Additional support was provided for those living in remote areas (e.g. online monitoring of health conditions, personal alarms for falls).
- 157. In Germany, Lower-Saxony launched an initiative to develop digital health and social services. About 1 400 nursing homes received tablets to enable regular medical consultation by video call and maintain contact with relatives. Lower-Saxony paid around EUR 200 000 to supply the tablets and platform

used for medical consultations. In addition, GPs involved in the medical consultations of the residents of these nursing homes also received the necessary medical software free of charge (Lorenz-Dant, 2020_[44]).

- 158. Digital technology was also used to connect LTC facilities with geriatric specialists. In France, a hotline and an email dedicated to LTC workers was implemented in each region, with a geriatric specialist available during working hours every day of the week. A similar hotline and email system was implemented for palliative care (Commission d'Enquête Évaluation des politiques publiques face aux pandémies, 2020_[32]). France also introduced a financial incentive to ensure medical expertise in LTC facilities, whether virtual or in-person. A new top-up has been introduced for doctors visiting patients in LTC facilities or providing a teleconsultation in case of emergency (at least 57.6 EUR per visit or teleconsultation, compared with a "standard" consultation fee of 25 EUR).
- 159. However, it is possible to make further advances in digital tools to better connect providers, care recipients and caregivers. For example, the Caregiver Advise, Record, Enable (CARE) Act is a US model state legislation designed, in part, to make sure the names of family caregivers who will assume primary responsibility for hospitalised older adults' care following transition to home are documented in their medical records. Immediate access to this basic information is central to effective transitions at a time of crisis with 40 states and territories having enacted CARE Acts as of 2019 (Naylor, Hirschman and McCauley, 2020[113]).

Insufficient improvements in the workplace have limited the impact of other policies

160. LTC workers are among those particularly at risk of being infected and represent one of the most important elements in containment and mitigation strategies. Supporting LTC workers to implement recommendations is essential to protect LTC recipients. Equipping, training and having sufficient LTC workers is instrumental in shielding LTC facilities, as LTC workers (along with visitors) are potential transmission vectors (the COVID-19 Ontario Modelling Group, 2020[114]). For example, a study in New Zealand evaluating how LTC facilities are responding to COVID-19 found in three out of five affected facilities, the outbreak originated with a member of staff (NZ Ministry of Health, 2020[115]).

Staffing

- 161. The pandemic has highlighted and exacerbated pre-existing structural problems in LTC sector. For instance, results from the Statistics Canada's new Nursing and Residential Care Facility Survey show that during 2020, 77% of nursing homes reported an increase in overtime and 71% an increase in absenteeism. The sector commonly has shortages while staff retention is low, notably because of difficult working conditions, such as high part-time rates, temporary nature of jobs and poor pay in comparison to similar jobs in hospitals. The sector faces skills mismatches, poor integration with the rest of health sector, and inadequate or poorly enforced safety standards (OECD, 2020[51]).
- 162. Many studies suggest that facilities with lower numbers of LTC workers were associated with higher infection rates (Sugg et al., 2021_[116]; Xu, Intrator and Bowblis, 2020_[117]; Li et al., 2020_[118]). For example, in Navarre, Spain, death rates were higher where staff ratios were lower during the first wave. The death rate in nursing homes with staff ratios lower than 70 staff for 100 residents was 8% and the infection rate was 28%, while for nursing homes with higher staff ratios, the death rate was 6% and the infection rate 20% (Fresno, 2020_[9]). Staff include not only nurses, but also personal carers, janitors, administrative staff, etc. Risk factors at the nursing home level included total staffing levels and nursing staffing levels (Sugg et al., 2021_[116]).

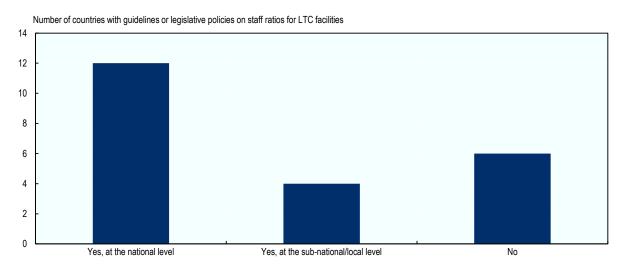
163. In Australia and Iceland, two countries with lower LTC COVID-19 death rates than in many other OECD countries, outbreaks in LTC facilities were rather rare and replacement staff were organised from less-affected areas. In Iceland, during the first wave of the pandemic in April 2020, an outbreak emerged in the Bergi nursing home in Bolungarvík in the Westfjords with 10 residents infected, resulting in two deaths. Following the positive tests of six employees and an additional 23 workers quarantined or self-isolating, replacement carers were transported from Reykjavík to Bolungarvík to help staff cope with the crisis.

Staffing ratios

164. Prior to COVID-19, about two-thirds of OECD countries had published recommendations or legislative policies at the national or sub-national level regarding staffing standards related to the number of workers needed and/or their competences (Figure 4.9). For instance, the United States recommends that certified nursing homes have at least one registered nurse on duty for eight consecutive hours, 7 days a week (Harrington et al., 2012[119]). In Canada, staffing standards are set at the provincial level, of which three require the staffing of a registered nurse director of nursing and seven require a registered nurse to be on duty at all times (Harrington et al., 2012[119]). In many countries, staffing ratios requirements are discussed because they are seen as indicators of adequate level of LTC workforce. In France, the latest recommendations propose to increase the staffing ratio in nursing homes by 20% by 2024, up from 62.8 full time equivalent staff per 100 residents in 2015 (an equivalent of 66 500 additional full time equivalent positions) (El Khomri, 2019[120]). In Greece, detailed staff ratios have been established since 2007 and relate to nurses, social workers, physiotherapists, psychologists, cooks and janitors.

165. In Germany, a scientifically based skill mix determination tool is being developed to establish adequate staffing levels and numbers in nursing homes. The tool will take into account (1) the mix of care interventions required per resident, (2) the required time per person per intervention, and (3) the assessed qualification level of the person providing the intervention. Results suggest that substantially more nursing assistants would be required to achieve optimal nursing home staffing levels, but only a small number of additional specialist nurses would be needed (Rothgang, Fünfstück and Kalwitzki, 2019[121]).

Figure 4.9. About two-third of OECD countries have guidelines or legislative policies on staff ratios for LTC facilities

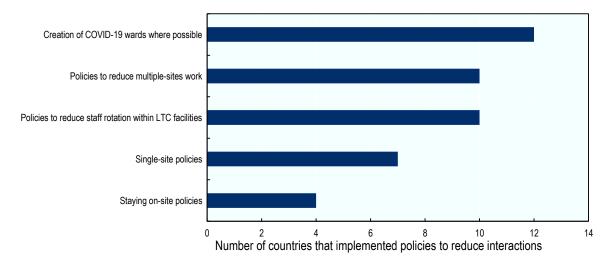


Note: N=22. Source: OECD questionnaire on COVID-19 and LTC 2021. 166. While recommendations or legislative policies on staff to resident ratios were already in place before the pandemic in about two-third of OECD countries, staff ratios became a renewed source of debate in 40% of surveyed OECD countries since the beginning of the COVID-19 pandemic. Since the onset, four countries introduced guidelines on staff ratios (Japan, Lithuania, Netherlands, and Slovenia). In Ontario, Canada, the provincial government announced in July 2020 a commitment to increase the minimum number of hours of daily direct care to an average of four hours of care per resident by 2024-2025. Colombia is in the process of adopting a regulation to set a staff ratio by LTC facility varying between one staff member for every 12 residents to one staff member for every 20 residents depending on the degree of LTC needs of the elderly. In Finland, staff ratio recommendations were legislated in mid- 2020, following discussions prior to COVID-19. With the Elderly Care Act, staffing ratio will be gradually increased from 0.5 to 0.7 by 2023 in LTC facilities and will vary depending on LTC needs' assessments.

Movement of staff across and within LTC facilities

- 167. Another prevalent challenge in the containment strategy is related to restricting the movement of staff between long-term care facilities, as many LTC workers work multiple part-time jobs (Rios et al., 2020_[23]). Across OECD countries, about 45% of LTC workers hold part-time positions and many have to work multiple jobs to make ends meet (OECD, 2020_[51]). As LTC workers (along with visitors) are potential transmission vectors, it is key to reduce the movement of staff. In Portugal, containment strategies such as banning visitors to LTC facilities, reducing group activities and isolating COVID-19 positive patients proved to be insufficient as the virus was transmitted through staff.
- 168. In twelve countries, policies comprised the creation of COVID-19 wards where possible (Belgium, Canada, Estonia, Finland, Greece, Korea, Lithuania, Luxembourg, Netherlands, Portugal, Slovenia and the United States) (Figure 4.10). Ten countries introduced policies to reduce multiple-site work (Canada, Estonia, Finland, Greece, Ireland, Lithuania, Netherlands, Poland, Portugal and the United States). Ten countries initiated policies to reduce staff rotation within LTC facilities (Estonia, Finland, Greece, Japan, Latvia, Lithuania, Norway, Poland, Slovenia and the United states). Creating working units that are smaller and with the same staff should reduce the cross-contamination (Secretaria de Estado de Derechos Sociales España, 2020_[122]). Single-site policies were introduced in only seven countries (Australia, Belgium, Canada, Estonia, Finland, Lithuania and the United States) while staying-on site policies were uncommon. At the same time, spontaneous initiatives took place with LTC workers self-confining with their patients to avoid spreading the virus in and out of the facilities. In France, centres where staff remained voluntarily confined with residents saw a much lower infection rate than others (0.4% versus 4.4%) and lower mortality (Belmin et al., 2020_[123]).

Figure 4.10. Many policies aimed to reduce interactions of LTC workers



Note: N=19. Source: OECD questionnaire on COVID-19 and LTC 2021.

169. While not all countries or LTC providers implemented these measures, such measures were effective in achieving their goal. Evidence suggests that limiting the mobility of staff, such as community nurses working in multiple locations, is important in limiting transmission (Lin et al., 2011_[124]) (Nuño et al., 2008_[125]). In Canada, multiple provinces implemented emergency single-site measures. An Ontario study found that mobility between nursing homes in Ontario fell by 70% after the emergency order by the Ontario government restricted long-term care staff to a single nursing home. In the period preceding restrictions, 43% of nursing homes had a connection with at least one other home, compared with 13% of nursing homes during the period after restrictions. The number of connections between LTC facilities was four prior to the COVID-19 pandemic and it fell to about one during the period of restrictions. In both periods, mobility between nursing homes was higher in homes located in larger communities, those with higher bed counts, and those part of a large chain (Jones et al., 2021_[126]).

Certain organisational features in LTC limited containment of COVID-19

LTC facility density

170. LTC residents have historically been at higher risk of infection (OECD, 2020_[127]). Even before the COVID-19 crisis hit, health care-associated infections were common in LTC – averaging a prevalence of 3.8% among LTC facility residents in OECD countries in 2016-17 (Figure 4.11). Spain had the highest share, at 8.5%, followed by Greece at 6.3%.

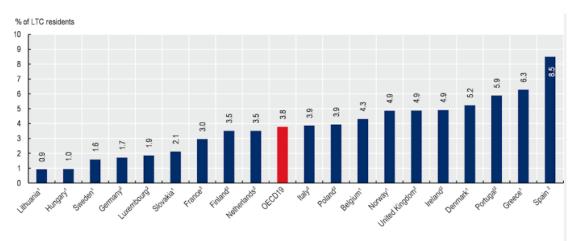


Figure 4.11. About 4% of LTC residents had at least one health care-associated infection in 2016-17

Note: 1. Under 45% of residents sampled were wheelchair bound or bedridden. 2. Over 45% of residents sampled were wheel chair bound or bedridden. 3. No data available on the proportion of wheelchair bound or bedridden residents. Source: (OECD, 2020[127]), based on ECDC, CDC.

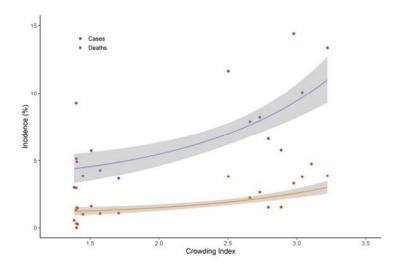
- 171. LTC facilities have been an important risk factors for the colonisation and infection with Multi-Drug Resistant Organisms (Cassone and Mody, 2015). In England, a large retrospective cohort study analysed infection rates in community-dwelling adults aged 70 years and older, and compared them to rates of similarly aged adults residing in LTC facilities (Rosello et al., 2017). The authors found that LTC residents were over twice as likely as older adults at home to present with a laboratory-confirmed urinary tract infection due to *Escherichia coli* or *Klebsiella*, and over four times more to develop laboratory-confirmed urinary tract infection caused by resistant *E. coli* or *Klebsiella*. (Oliveira Hashiguchi, Eze and Cecchini, 2021, forthcoming_[128]).
- 172. Most OECD countries have traditionally provided LTC in institutions¹⁴, even though many countries have supported a "deinstitutionalisation" strategy over the past few decades, promoting home-based care solutions in order to match elderly people's preferences for home-based ageing and contain LTC spending. In addition to enhancing home-based services, these countries have promoted use of community-based facilities as, for instance, hospices for terminally ill people, day care centres and homes for disabled people.
- 173. Despite the deinstitutionalisation trends found in many countries, institutions still cater for most disabled people and hence require congregant lifestyle living (OECD, 2020_[2]). Across 19 OECD countries, 56% of LTC workers were based in institutions in 2016. However, there are differences across OECD countries. In central and Eastern countries, family and friends still provide the bulk of care. In Italy and in Spain, the LTC system complements care delivered at home by families or paid informal caregiver (e.g. stand-in care).
- 174. Congregant living (and hence higher population density) played a role in explaining higher mortality rates in LTC facilities. A study in Ontario, Canada, showed that higher population density in LTC facilities was associated with higher incidence of COVID-19 infection and mortality (Figure 4.12). COVID-19 infection was distributed unevenly across nursing homes: 4,496 (86%) of infections occurred in 63 (10%) of nursing homes. Based on a crowding index from one (single rooms) to four (quadruple occupancy rooms), the study showed that incidence rate in high crowding index nursing homes (at least 2 out of 4) was 9.7%, compared with 4.5% in low crowding index homes (1 out of 4), while COVID-19 mortality was 2.7%, versus 1.3%. About 50% of nursing homes had a high crowding index. Simulations indicated that

_

¹⁴ A non-exhaustive list of institutions includes medical and health care facilities, rehabilitation facilities, specialised institutions for providing social services and social care establishments with accommodation

converting all 4-bed rooms to 2-bed rooms would have averted 19% of infections of COVID-19 and 19% of COVID-related deaths (Brown et al., 2020_[129]). The Government of Canada issued \$3 billion to support provinces and territories in ensuring that national standards for long-term care are applied and permanent changes are made to address health infrastructure and environmental design of long-term care facilities, as well as care quality.

Figure 4.12. In Ontario, Canada, higher population density within LTC facilities was associated with higher incidence rate and higher death toll



Note: Nursing home crowding index and the incidence of COVID-19 infections and deaths, per 100 residents. (N=618 nursing homes). Solid lines represent Poisson regression estimates and shaded regions represent 95% confidence intervals; homes have been aggregated into 20 groups according crowding index, there are 30-31 (5%) of homes in each bin).

Source: (Brown et al., 2020[129]).

LTC facility size

- 175. Evidence in Spain suggested that the mortality rate was associated with the median size of the nursing homes and the occupation rate across regions (Fundación de Estudios de Economía Aplicada, 2020_[42]). Bigger nursing homes generally have more collective spaces. In Navarre, Spain, over half of nursing homes beds are in double occupancy rooms. The share of infected residents was only 13% when the size of the nursing homes was 35 residents or less, 16% when it was between 36 and 100, and peaking at 34% when it was more than 100 residents. Overall, the infection rate was 25% while the mortality rate was 7% and the fatality rate among those infected reached 30%. When restricting the sample to nursing homes with COVID-19 deaths, the share of infected residents was 44% and the mortality rate 13%. (Fresno, 2020_[9]).
- 176. Many nursing homes in OECD countries have double or more occupancy room. Not only did multiple occupancy room facilitate the spread of infection, but also it hindered the implementation of isolation measures of suspected or infected cases. In Austria, complete isolation was almost impossible in nursing homes in part because of the double room setup for residents (Leichsenring, Schmidt and Staflinger, 2020_[52]).

LTC for-profit, not-for-profit and public facilities

177. Beyond population density within LTC facility and its size, there are some discussions on the differences in infection rates and mortality rates between for-profit LTC facilities and not-for profit or public

LTC facilities. Some papers indicate that the risk of dying of COVID-19 was higher on average in for-profit LTC facilities.

178. The differences seemed to be largely explained by organisational factors, such as older design standards and chain ownership (Stall et al., 2020[130]) and lower staffing ratios (McGregor and Harrington, 2020[131]). In the United States, transfer policies to designate distinct facilities or units within a facility to separate COVID-19 negative residents from COVID-19 positive residents and individuals with unknown COVID-19 status were more likely to be successfully implemented in large chain, corporate-owned assisted living communities that already had existing relationships with other assisted living communities from the same owners. Smaller, independently owned assisted living communities could encounter more difficulties to find alternate locations or space within their existing communities for COVID-19 wings or units (Dobbs, Peterson and Hyer, 2020[132]).

179. Various LTC systems rely on both public and private sector providers. The private sector is diverse and complex, and their role is context-dependent. Private sector providers range from donor-based, nonprofit providers to private equity-owned, for-profit providers. In addition, organisation factors differ across for-profit LTC facilities and countries. This is probably why (and with low sample size), at the country level, the association between for-profit status of LTC facilities and fatality rates is unclear (Figure 4.13). Some empirical evidence suggests that for-profit providers perform better in terms of efficiency, but worse in terms of quality of care compared to the non-profit and public sector. Overall, this suggests that enforcement of high quality standards before and since the pandemic has been key in all LTC facilities to contain and mitigate COVID-19 spread.

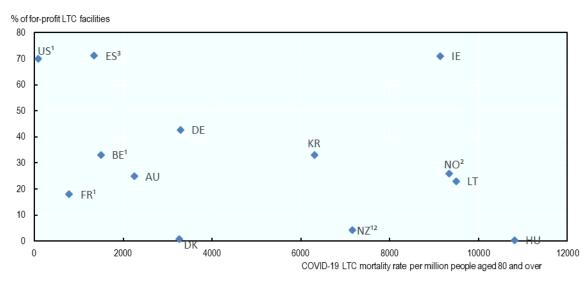


Figure 4.13. The association between for-profit status of LTC facilities and fatality rates is unclear

Note: Data on cumulative deaths up to early February 2021 (see Annex for details). 1. Includes confirmed and suspected deaths. 2. Only includes deaths occurring within LTC facilities. 3. Data come from regional governments using different methodologies, some including suspected deaths. Source: Comas-Herrera. A (2021), Mortality associated with COVID-19 in care homes: international evidence, International Long-Term Care https://ltccovid.org/wp-content/uploads/2021/02/LTC COVID 19 international report January-1-February-1-1.pdf, **ECDC** Network, (https://www.ecdc.europa.eu/en/all-topics-z/coronavirus/threats-and-outbreaks/covid-19/prevention-and-control/LTCF-data), OFCD Questionnaire on COVID-19 in LTC. For population data, sources refer to Eurostat Database, complemented with OECD Health Statistics (2019 or latest year available). 2021 OECD Questionnaire on COVID-19 and LTC for data on for-profit facilities (see Annex), complemented with Eurofound: Care homes for older Europeans: Public, for-profit and non-profit providers (https://www.eurofound.europa.eu/publications/report/2017/care-homes-for-older-europeans-public-for-profit-and-non-profit-providers),

OECD HEALTH WORKING PAPER NO. 131

COVID-19 highlights how good co-ordination is pivotal in LTC and across healthcare sectors

- 180. COVID-19 has magnified the impact of poor care integration to protect elderly care recipients. The COVID-19 pandemic presents challenges that require well-coordinated responses across national and subnational levels of authority, health and social sectors, care providers, formal LTC workers, and informal carers like relatives and NGOs.
- 181. Despite various national efforts to facilitate transitions of care and improve interaction between providers, poor integration is a long-standing problem within the LTC sector for many OECD countries (OECD, 2020[133]). Recent OECD work flags how poor care integration hinders the delivery of appropriate and safe LTC (OECD, 2020[2]). Fragmented care between hospitals, primary health and social care jeopardises the delivery of appropriate care for elderly LTC recipients. An inadequate skills-mix in the workforce and lack of effective platforms for planning care over different settings impedes continuity of care, while misaligned financial incentives hinders coordination across providers and care settings.

Collaboration and coordination between the health and social sectors

- 182. The sharp demarcation of health and social care systems has long been described as potentially inappropriate for older LTC recipients with complex care needs. The COVID-19 pandemic highlights how poor integration of the two sectors hindered policy responses.
- 183. Approaches to organising responses in the LTC sector have differed between OECD countries, in terms of responsibilities for guidelines, implementation and enforcement. Responsibilities varied across national level, regional levels, local levels and care providers, depending on the LTC system in place. The pandemic has raised questions about the degree of centralisation and the efficiency in policy responses. Effectiveness has been postulated as stemming from higher data integration and resource coordination, while decentralised health systems may make less uniform and efficient decisions (Desson et al., 2020_[134]). On the other hand, others have postulated that centralised systems have been too slow to respond to a crisis of this proportion. Overall, current evidence remains inconclusive, as different governance systems appear to face different challenges.
- 184. The states within Germany have exercised a high degree of autonomy and have diverged in the timing and type of guidance issued. In France, guidance was issued at the national level while regional health authorities and departments have been responsible for the LTC response. The national level strategy guidelines included financial support for independent doctors and nurses to perform health checks in institutions, and flexibility in reimbursement rates for teleconsultation.
- 185. In Italy, the Ministry of Health published on 25 March 2020 the first guidelines for COVID-19 management in nursing homes, requiring providers to ensure training of care workers and suggesting extensive testing. Much of the legislation was promoted from the regions, since they represent the institutional level in charge of defining the operating rules and guidelines for the LTC sector. The various regional entities have issued very different instructions on how to proceed in the management of LTC facilities during an emergency, both in terms of methods and extension of the guidelines provided. An Italian study showed that in nine surveyed regions (Lazio, Liguria, Lombardy, Marche, PA Trento, Piedmont, Emilia-Romagna, Tuscany, and Veneto), there were no guidelines on the transition between hospitals and LTC facilities during the first wave. Instead, the matter was delegated to providers who defined their own operational rules. In some cases, transfers were hampered or even blocked if, for example, transfers to hospitals were prohibited. However, one region (Lazio) responded by developing an integrated care model for COVID-19 cases across health and social services (Berloto et al., 2020_[35]).
- 186. In Canada, the implementation of containment strategies, such as hazard and incentive payments, varied substantially across provinces. As part of the 'COVID-19 Economic Response Plan', the

Government of Canada announced on 15 April 2020 that it would provide up to \$3 billion to support provinces and territories to increase the wages of low-income essential workers. It was up to the provinces and territories to determine which workers would be eligible and how much money they would receive. Seven out of 13 provinces and territories implemented wage top ups that were exclusive to those working in health and social care services (sometimes including correctional services as well). Most provinces also implemented single-site orders during the first wave of the pandemic, but their stringency varied and they were not coordinated with other provinces. Eight provinces or territory issued mandatory single-site orders, three introduced voluntary orders and three others did not implement any (Hsu, n.d.[135]).

- 187. In France, LTC responsibilities are shared by the regional health authorities and departments, and was a possible source of confusion in responding to the COVID-19 pandemic. During the first wave, the regional health authorities generally took most of the decisions, but some departments decided to be more involved than others. For example, some departments took initiatives to recruit LTC staff and distribute equipment with their trucks. Some regional health authorities did not possess sufficient information regarding home-based LTC workers on their territories to be proactive, while others were able to contact them to propose, for example, a contact person and help them to secure PPE. These policy responses were based on the distribution of responsibilities and particularly hindered the protection of home-based workers and their carers. (Commission d'Enquête Évaluation des politiques publiques face aux pandémies, 2020_[32]).
- 188. Where coordination approaches relied on local initiatives, past relationships across authorities and their relationship with providers could either support or obstruct coordination approaches to the COVID-19 pandemic. In North West England, there was an apparent reluctance of some LTC facilities to accept discharged hospital patients in a context of testing and PPE shortages during the first wave (Comas-Herrera et al., 2020_[43]).
- 189. Positive examples about how past relationship supported coordinated subnational initiatives also exist. In France, there was a central government strategy of support access to health for the elderly which was translated into different regional initiatives. For instance, in the South of France, an initiative of LTC integration emerged at the start of the first wave, in a region where LTC residents are aged over 86 years and the annual death rate in nursing homes is around 30%¹⁵. The hospital COVID-19 support platform for nursing homes (both public and private) aimed to respond to the information needs of nursing home staff, trigger COVID-19 testing in suspected residents and caregivers, provide teleconsultations and help decision-making processes. It also sought to support ethical and collegial reflection for LTC residents with COVID-19 nearing end of life (Rolland et al., 2020[136]). The pandemic also led coordinating doctors to take the lead in care during the crisis. In France, each registered nursing home has been required to have one coordinating physician since 2005. In the South of France, a hotline was widely distributed through the association of coordinating physicians and nursing homes mailing list. It allowed direct contact with a senior geriatrician from the geriatric hospital department. Another objective was increased screening for COVID-19 with a mobile team operating from 9 am to 7 pm, 7 days a week. Finally, geriatric hospital expertise, in palliative care, in ethics and in management of behavioural disorders, such as wandering around, was provided and helped staff manage outbreaks in LTC facilities (Rolland et al., 2020[136]).
- 190. In Chile, the policy response integrated health and social sectors. A project to protect and treat elderly people in LTCs was conceived and launched at the end of April 2020. This involved a combination of: (i) design and implementation of strict hygiene and safety protocols, (ii) proactive and reactive testing of residents and caregivers, and (iii) isolation. All of these elements were monitored by a technology platform aimed at the early control and detection of disease outbreaks and rapid response. To ensure the

_

¹⁵ In France, about 20% of residents of nursing homes (EHPAD) died every year on average (before COVID-19). This means that one death out of four was a resident of a nursing home on average in France (EHPA, 2020_[246]).

success of the project, a team was formed that brought together organizations from the economy, the state, and civil society to take joint action at different levels of society. An economic model covering 74 developed countries and regions estimates that the series of preventive and mitigating measures taken by the project saved 411 lives of the elderly by September 2020, and averted 1,468 infections among care home residents and 857 hospitalizations in critical care beds (Singer, 2020[137]).

Co-ordination with primary care providers and hospitals

- 191. Poor coordination between primary care and long-term care is a long-standing issue in LTC. In 2019, between 36% and 88% of the primary care providers in 11 OECD countries reported not coordinating care frequently with social care or other community care services (Doty et al., 2020_[138]).
- 192. Ten OECD countries reported having guidelines or legislation on the integration of long-term care and primary care before the outbreak (the Czech Republic, Denmark, Finland, France, Germany, Japan, Luxembourg; Portugal, Slovenia and the US)¹⁶. In Ireland, the Enhanced Community Care (ECC) programme aims to increase community capacity and build integrated models of care. As part of the ECC programme, the National Integrated Care Programme for Older Persons is leading the development of an end-to-end pathway that describes cohesive primary, secondary and acute care services for older people with a specific focus on those with more complex needs. In Germany, standard health care provision allows primary care doctors to conclude a contract with LTC facilities to ensure better coordination. In France, each facility must have a coordinating physician who have at least 140 hours of geriatric training (70 hours of theoretical and 70 hours of practical courses). They are responsible for the comprehensive geriatric assessment of LTC residents and for healthcare coordination (Rolland et al., 2020_[136]).
- Nursing homes are not hospitals, and most are not medically prepared to meet the challenges of 193. the COVID-19 pandemic. The lack of medical provision within nursing homes created particular difficulties in places where transfer to hospital was not forthcoming, especially during the first wave (World Health Organization/European Observatory on Health Systems and Policies, 2020[139]). Since the outbreak, eight OECD countries have introduced new measures to foster multi-disciplinary teams, with the aim to integrate more primary care in LTC facilities (Estonia, some provinces in Canada, Colombia, Finland, Latvia, Luxembourg, Portugal and Slovenia). In France, a new financial incentive is provided to primary care doctors at visit to LTC residents. While Italy and Luxembourg have required nursing homes to have a 24/7 medical presence to follow-up ill LTC residents (World Health Organization/European Observatory on Health Systems and Policies, 2020[139]). In Korea, there is an initiative currently being tested to ensure LTC facilities receive at least one doctor visit twice-a-week to improve continuity of care by introducing more medical care in nursing homes. In Portugal, a digital platform is being developed to help homes and residential facilities for the elderly monitor the health of users which generates alerts if situations arise in which it is necessary to intervene; facilitates the recording and monitoring of users' oxygen saturation levels, temperature and respiratory rate; supports institutions in the active surveillance of symptoms associated with COVID-19, as well as identify early other respiratory diseases.
- 194. Since the outbreak, Greece, Belgium, Colombia, Estonia, France, Hungary and the Netherlands introduced new guidelines on the integration of long-term care and care in hospital. In general, guidelines aimed at minimising transfers from nursing homes to hospitals, as well as share expertise, especially from geriatric units of hospitals to nursing homes. For example, in Upper Austria, hygiene specialists from hospitals went to LTC facilities at the beginning of the crisis to monitor hygiene standards and support improvements (Leichsenring, Schmidt and Staflinger, 2020_[52]).
- 195. In Belgium, the Interministerial Public Health Conference presented in mid-April 2020 a framework for possible support from the hospital sector to the LTC sector. Hospitals provide expertise (e.g. geriatric

_

¹⁶ Eight OECD countries (44%) did not report having any guidelines nor legislations (Greece, Columbia, Estonia, Korea, Latvia, Lithuania, Netherlands and Poland).

liaison, hygiene and control of infectious diseases), transfer staff, help with equipment or products (e.g. supply of oxygen), and provide screening and infrastructure support. During the first wave, many hospitals undertook spontaneous initiatives to support nursing homes by sharing expertise and providing equipment and staff (over 50% of surveyed hospitals) (Van de Voorde et al., $2020_{[140]}$). A survey from MSF indicated capacity to transfer severe cases from LTC facilities to hospital decreased from 86% to 57%, as capacity of hospitals to admit patients became more limited by the crisis (data was collected by mobile teams in 135 nursing homes across the country by the mid-2020). As plans or agreements on end-of life are not sufficiently widespread in Belgium, transfer decisions for severe cases were reported to be very ethically difficult (Médecins Sans Frontières, $2020_{[141]}$).

196. These guidelines were accompanied by appropriate financial incentives in some countries. In England, comprehensive guidance published on 19 March 2020 detailed recommendations on the discharge of patients from hospital to their own homes or nursing homes in order to streamline in-patient pathways and processes through more clearly specified responsibilities and accountabilities. In addition, charges/co-payments for social care services after hospital discharge were temporarily removed, and restrictions on information-sharing between health and social services relaxed (Comas-Herrera et al., 2020_[43]).

Transitional care nurses and case managers may be even more important at time of crisis

- 197. COVID-19 demonstrates the advantages of integrated care practice during a pandemic. Most hospitalised home-based LTC recipients with COVID-19 are older people confronting multiple other risks. Given their health and disability status, some might choose palliative care rather than curative care, yet limited in-person contact with caregivers and overwhelmed hospital staff made identifying what matters to older adults and aligning care plans with their preferences and values particularly difficult. Rapid engagement of transitional care nurses can contribute to meet the needs of older carees and their caregivers. (Naylor, Hirschman and McCauley, 2020[113]).
- 198. In the United States, for those hospitalised who have not communicated goals of care, the transitional care nurses can ensure that caregivers are contacted and receive appropriate information, and assure that discussion of treatment options takes into consideration older adults' goals (Naylor, Hirschman and McCauley, 2020_[113]). For this to happen, transitional care nurses need to be trained in communication skills, leadership roles, ICT skills and more advanced clinical skills (OECD, 2020_[2]). In the majority of OECD countries, nurses already undertake some co-ordinating tasks (OECD, 2020_[2]).
- 199. COVID-19 also highlights that case managers have the potential to become pivotal during a pandemic. Case managers can act as a point of contact to anticipate, plan and coordinate care with relatives. During COVID-19 pandemic, they are well-positioned to play a key role in discharge planning; transitions of care; care coordination; and palliative and end-of-life care, including advance care planning and securing the essential legal documents that clearly note the patient wishes and care goals to ensure a quality and dignified death (Tahan, 2020_[142]).

Accessing palliative care across all settings is fundamental for all patients nearing end of life

200. Care at the end-of-life, which includes providing palliative care but also the support given to individuals in their last stage of life, is a central aspect of health systems and is increasingly recognised as an important aspect of integrated care. In 2014, the World Health Organisation (WHO) approved the first ever resolution to integrate palliative care into national health services, policies, budgets and healthcare education (WHA, 2014[143]).

- 201. While three-quarters of surveyed OECD countries had guidelines on the integration of palliative care in health systems, palliative care provision varies across countries. Palliative care has traditionally been provided in hospital. In the overwhelming majority of surveyed OECD countries, palliative care beds in hospitals were maintained despite the need to increase ICU beds for COVID-19 by freeing up beds, including palliative care beds. Except in the Netherlands, where many palliative care wards were transformed into COVID-19 intense care units, a few countries reported some re-allocation of palliative care beds to a limited extent (Czech Republic, Hungary, Japan and to a lesser extent Lithuania, Portugal and Slovenia). These countries, as well as Australia, moved towards more palliative care in LTC facilities and homes.
- 202. Since the start of COVID-19, reaching the end of life has been more difficult for many, especially because of visitor restrictions. In the Netherlands, a small study indicated that visiting restrictions in the last 2 days of life was negatively associated with appreciation of care at the end of life and the dying process. Results suggest that end-of-life care during the pandemic was not sufficient in LTC facilities and hospitals in the Netherlands, especially with regard to emotional support and spiritual care (Onwuteaka-Philipsen et al., 2021[144]).
- 203. In the US, preliminary evidence indicates that initiating palliative or end-of-life care planning discussions has been more difficult since the COVID-19 outbreak. It has also been more difficult to obtain informed consent, encourage shared decision-making, and facilitate an opportunity for convening a routine interprofessional or interdisciplinary care management conference that is attended by the patient, their caregivers and the essential team members, whether physically or remotely present (Tahan, 2020_[142]).
- 204. However, digital tools contributed to maintaining or strengthening end-of-life care and palliative care. In the US, virtual family meetings facilitated in-patient palliative care at hospital. A small study suggested that both clinicians and family members were overall satisfied with the meetings (Kuntz et al., 2020_[145]). In the United Kingdom, there has been a strong take-up of the Electronic Palliative Care Coordination System (EPaCCS), a local¹⁷ initiative of a palliative care shared record that enables different health and care organisations to share information about a patient's end of life preferences and care plans. The system is now being used by hospitals, GP practices, hospices and other health and care providers across the local area. The next step for this initiative is to make information available to ambulance services (Crouch, 2020_[146]).

Governments joint forces with the voluntary sector during the COVID-19 pandemic to deliver support and care

- 205. Volunteers and NGOs have played an important role in supporting LTC system responses during the COVID-19 crisis, as well as to voice opinions and concerns of civil society over pandemic responses. Some OECD countries appointed the Red Cross as a main actor to deliver support and care to those in need, including the elderly. Doctors without Borders (MSF) launched their largest set of medical activities in Western Europe since its inception in 1971. Many NGOs have also advocated for the human, social and health rights of the elderly in the context of the COVID-19 pandemic.
- 206. Some OECD countries reached out to the Red Cross to develop coordinated responses. In Portugal, the Red Cross runs some nursing homes and it was asked to support other Portuguese nursing homes, including setting up procedures, hiring additional staff, securing and distributing PPE, training staff and contributing to testing. The Latvian Red Cross was appointed as coordinator for the distribution of PPE for NGOs across the country and was temporary acted as a distribution hub for PPE (Red Cross EU Office, 2020_[147]). In Romania, the authorities designated the Romanian Red Cross as the main actor to receive in-cash and in-kind donations, and to distribute PPE and other material to health services, frontline health

_

¹⁷ Humber, Coast and Vale Care Partnership area.

and social workers in need. About 2 000 volunteers and staff worked on a daily basis during the first lockdown in Romania. In Sweden, the National Board of Health and Welfare assigned the Swedish Red Cross to supply healthcare materials such as PPE to people over 70 years old. In coordination with other NGOs, the Swedish Civil Contingencies Agency (MSB) also assigned the Red Cross and other NGOs to deliver groceries, medicine, and pharmaceutical items to these older people, as well as support daily activities, like running errands, for those who were isolated. It also set up tents outside hospitals to offer psychosocial support - about 1 500 people received psychosocial support there by July 2020. It relied on 300 local branches and 2 800 additional volunteers that signed up to help respond to the crisis (Red Cross EU Office, 2020_[148]).

207. In parallel, Doctors Without Borders (MSF) has provided care and technical support in LTC facilities in Belgium, France, Italy, Portugal, Spain, and Switzerland since the early stages of the first wave, and more recently to the United States. Across these countries, MSF provided advice or assistance in over 300 nursing homes. More than 1 000 nursing home staff participated in webinars organised by MSF to share knowledge and experience on responses to the pandemic (Doctors Without Borders, 2020[149]).

208. NGOs and volunteers also played a key role in advocating for older citizens and providing spiritual care for those nearing the end of life. Some NGOs have voiced concerns about the situation of older people living in LTC facilities, the perceived lack of support for older people who receive care in the community and provided recommendations aiming to ensure that measures taken as a response to COVID-19 do not undermine older people's autonomy and dignity (AGE Platform Europe, 2020[150]). In Chile, the Catholic Church and the public sector joined forces by opening church infrastructure as emergency centres for LTC recipients during local outbreaks, particularly in remote rural areas. In Denmark, the Protestant Church of Denmark identified ten ministers who were trained as chaplains for COVID-19 intensive care units, in cooperation with hospitals and disease control centres, to provide spiritual care for those reaching end of life (Communion of Protestant Churches in Europe, 2021[151]).

Initial findings point to a positive impact of vaccination

209. As previously mentioned, vaccination campaigns started in most OECD countries between the end of 2020 and the beginning of 2021. As of 9 September 2021, Israel, Iceland, Chile, Portugal and Denmark had administered the highest number of vaccines doses per 100 people, among OECD countries. Israel is leading the way with 160.96 doses per 100 population, followed by Iceland (154.57), Chile (154.01), Portugal (149.01) and Denmark (148.6)¹⁸ (Our World in Data, 2021_[152]). In terms of share of the population fully vaccinated, 8 OECD countries have completely vaccinated more than 65% of the population: Portugal (78%), Iceland (77%), Spain (74%), Denmark (73%), Chile (72%), Belgium (71%), Ireland (69%), Canada (61%) (Our World in Data, 2021_[152]). Early evidence of the effectiveness of the vaccination campaign came from Canada, Israel, Italy, Spain, UK and US.

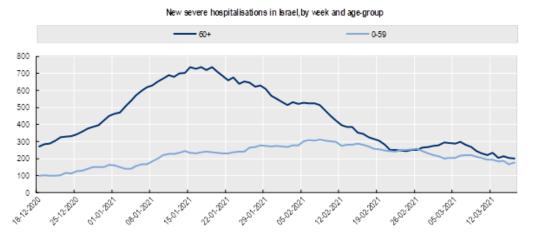
210. While determining the impact of vaccination on transmission may be confounded by confinement and other social distancing measures, its impact on rates of severe disease, hospitalisation and death has been profound. Transmission may also be influenced by seasonal changes and population compliance with containment measures. However, evidence of the impact of vaccination emerged quickly in countries with rapid vaccine rollout. In the United States, a CDC study of the Pfizer-BioNTech, Moderna and Johnson&Johnson vaccines, covering the period 14 December 2020 to 14 August 2021, reported an average effectiveness in preventing RT-PCR-confirmed infection among frontline workers of 80%. The observed effectiveness declined after the emergence of the Delta variant of COVID-19 (CDC, 2021[153]). In Israel, the estimated effectiveness of the Pfizer-BioNTech vaccine between 14 and 20 days after the first

_

¹⁸ The number refers to the vaccine doses rather than to the number of people vaccinated. The fact that some vaccines require two doses for each person explains why the number of doses administered may exceed the population.

dose and after at least 7 days from the second dose has been 46% and 92% respectively in reducing infection, and even greater for symptomatic disease, severe disease, hospitalisation and death (Dagan et al., 2021_[154]). As Figure 4.14 shows, since the beginning of 2021, the number of hospitalisation for severe disease in Israel decreased more sharply among the older population (aged 60+), a group prioritised in the vaccination rollout, than among younger age groups (aged 0-59).

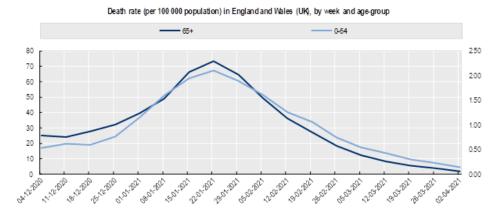
Figure 4.14. Hospitalisations for severe disease have decreased more sharply among the elderly in Israel since the vaccination campaign



Note: Israel began its vaccination campaign on December 19 2020, A third national lockdown began on January 8 2021. Source: (Our World in Data, 2021_[155])

211. Evidence of the effectiveness of both the BNT162b2 (Pfizer-BioNTech) and ChAdOx1 (AstraZeneca) vaccines in older adults has also come from the UK. Vaccination has been correlated with a reduction in symptomatic cases, severe disease and death. The two vaccines have shown similar levels of protection, which persisted for the entire 6-week of the study's follow-up period. The vaccines' first effects were observed 10-13 days after the initial dose, reaching maximum protection from infection (70%) at 28-34 days and flattening thereafter. From 14 days after receiving the second dose, vaccine effectiveness against infection rose to 89%. Moreover, the study showed a clear effect of the vaccines on the UK variant of COVID-19 (Bernal et al., 2021_[156]). Figure 4.15 and Figure 4.16 respectively report the death rates (per 100 000 population) in England and Wales, and in the US between December 2020 and April 2021. In both cases, mortality decreased more rapidly in the older age group (aged 65+) (prioritised in these countries' vaccination rollouts) than among younger population (aged 0-64).

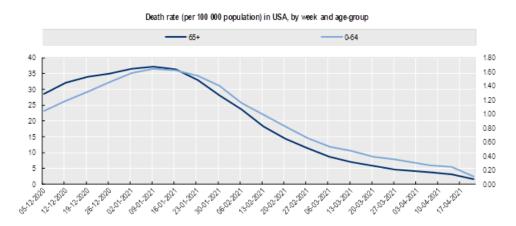
Figure 4.15. COVID-19 death rate in England and Wales has lessened more among the elderly since the vaccination campaign began



Note: UK started the vaccination campaign on December 8 2020 and a third national lockdown on January 6 2021. Death rate for the age group 0-64 is displayed on the secondary axis.

Source: (COVID-19 Ined, 2021[157])

Figure 4.16. COVID-19 death rate in the US has decreased more rapidly in the older population since the vaccination campaign began



Note: The US started the vaccination campaign on December 14 2020 Source: (COVID-19 Ined, 2021_[157])

- 212. In Chile, the death rate in the LTC population declined from 20% to 7% following the vaccination campaign (OECD interview, 2021). At the end of April 2021, the Italian ISS (Istutito Superiore di Sanità) published evidence showing that rates of infections, hospitalisations, ICU admissions and deaths were declining more quickly in the population groups prioritised for vaccine rollout (healthcare workers and people aged over 80) (Istituto Superiore di Sanità, 2021[158]).
- 213. As LTC residents have been prioritised for vaccination in all OECD countries due to their vulnerability, specific evidence of vaccine effectiveness has emerged from the LTC sector. A study undertaken by the American Health Care Association (AHCA) focusing on LTC facilities in the US, found evidence of the effectiveness of vaccines in reducing the spread of the virus. The study compared LTC facilities that carried out vaccination and facilities that did not, within the same county. Vaccinated facilities experienced a sharper decline in case numbers compared to non-vaccinated facilities (Domi et al., 2021[159]). Some preliminary evidence of vaccine effectiveness in LTC facilities has also started to emerge

in Spain, where the vaccination campaign began on 27 December 2020. Between 4 January and 4 April 2021, the number of positive cases registered weekly in LTC facilities plummeted from 2803 to 68 and the number of weekly deaths decreased from 367 to 5 (IMSERSO, 2021[160]). In spite of an increase the prevalence of COVID-19 in the general population also affecting the LTC sector since June/July 2021, vaccination has reduced the number of deaths: 1,313 residents were confirmed with COVID-19 in early August 2021, similar to early February 2021 (1,565 cases), however the number of deaths was 105 in the week of 02/08/21 to 08/08/21, compared with 629 between 01/02/2021 and 07/02/2021 (IMSERSO, 2021[160]).

- 214. Despite these encouraging early results, in some countries studies have raised concerns around effectiveness after the first dose in older and/or vulnerable populations. In Israel and Canada, these concerns have been focussed on the Pfizer-BioNTech vaccine (Brockman et al., 2021[161]). Israeli studies have shown only a 33% reduction in the rate of positive tests after the first dose of the Pfizer-BioNTech vaccine, in older populations (Mahase, 2021[162]). A preprint study from BC (Canada), showed that the immune reactivity generated after one dose of the Pfizer-BioNTech vaccine is weak in LTC residents (Brockman et al., 2021[161]). Similar results come from the Canadian COVID-19 Immunity Task Force, which is funding research projects targeting LTC facilities and seniors. These studies examined the effectiveness of vaccines and immune responses among residents of LTC facilities and use blood and/or wastewater analysis of LTC residents and staff. Results from one of these studies in LTC facilities in Vancouver, B.C., revealed that individuals of advanced age, following the first dose of a two-dose vaccination regimen, are less able to generate as strong an antibody response, both in terms of magnitude and function, compared to adults of younger age. Different results come from a preprint study analysing people aged 70 and older in England, which has found both BNT162b2 (Pfizer-BioNTech) and ChAdOx1 (AstraZeneca) vaccines were effective in reducing symptomatic disease, hospitalisations and mortality after the first dose (Bernal et al., 2021[156]). With countries extending the interval between the two doses of the ChAdOx1 (AstraZeneca) vaccine, this evidence has generated concerns and calls for a cautious approach to set the interval in between the doses, as well as more evidence.
- 215. Another element of concern relates to the management of lockdown measures during the vaccines' rollout, due to the rise of confirmed cases in Chile in the first quarter of 2021 the second most vaccinated OECD country per rate of citizens. Across February and March 2021, Chile experienced a parallel increase of vaccinations and confirmed cases. The causes of the worsening epidemiological situation seem to stem from a mix of factors: the Sinovac vaccine's effectiveness, the easing of lockdown measures and the movement of people during the summer holidays. Additional uncertainties are the duration of immunity, although there is some possibility that immunity from the vaccine will last for at least 6 months (Dan et al., 2021_[163]; GAVI, 2021_[164]); and the vaccines effectiveness against new variants (European Centre for Disease Prevention and Control, 2021_[165]) (Center for Disease Control and Prevention, 2021_[166]).
- 216. Discussion regarding the duration of immunity, together with the weaker immune response among the elderly has led to debate around the possibility of rolling out a third dose of the vaccine, distinguishing between booster shots for people with weakened immune systems and for the rest of the population. People with weak immune system might experience a limited response to a COVID-19 vaccine and thus need an additional dose to trigger a stronger antibody response, whereas the general population might need a third dose after the protection given by the vaccine decreases due to time.
- 217. On the 1 August 2021, Israel announced the rollout of booster doses for people aged 60 or older. The decision was made after COVID-19 cases had increased sharply in July 2021, reaching the highest levels since January 2021¹⁹. At the end of August 2021, Israel began offering a third for all people aged 12 or older who had received two doses of the vaccine at least 5 months earlier. The US also experienced

¹⁹ Hospitalisation and death rates have also increased, although less sharply.

an increase in the number of COVID-19 cases around July 2021, and on the 12 August 2021 the FDA authorized an additional vaccine dose for certain immunocompromised individuals. The FDA has specified that a third dose is not yet considered necessary for other individuals (US FDA, 2021[167]). Similarly, as of 6 September 2021, the ECDC and EMA noted that booster shots should be considered for people with weakened immune systems, while there has been no official approval of additional doses for the general population (ECDC, 2021[168]). As of the beginning of September, discussions are ongoing in Italy and Spain, while France began administering booster shots to vulnerable populations on 12 September 2021 (HAS, 2021[169]).

- 218. Studies of the effectiveness of vaccines are increasingly focused on their effectiveness against variants. Results show that despite some reduced efficacy, current vaccines remain highly effective against currently recognised variants of concern (VOCs). In England, the effectiveness of the vaccine against symptomatic disease after two doses has been reported as 94% (Pfizer-BioNTech) and 75% (AstraZeneca) in people affected by the Alpha variant and 88% (Pfizer-BioNTech) and 67% (AstraZeneca) among people with the Delta variant (Jamie Lopez Bernal, 2021[170]). Other studies in the UK have confirmed the effectiveness of the vaccines (Pfizer-BioNTech and AstraZeneca) against virus variants, despite protection waning over time (Koen B. Pouwels, 2021[171]).
- 219. Because of the abovementioned uncertainties, the unequal distribution of vaccines and the relaxation of measures in countries with high rates of vaccinated populations, scientists are leaning towards the possibility of SARS-COV-2 becoming an endemic virus (Phillips, 2021_[172]) (Jim Larson, 2021_[173]) and doubts are mounting regarding the likelihood of reaching herd immunity (Mandavilli, 2021_[174]). As long as these uncertainties persist, infections and outbreaks are likely to occur. Countries need to ensure that adequate measures remain in place during and after the vaccination rollout.

5 The way forward?

- 220. The pandemic has put LTC in the spotlight because of the high number of deaths among older adults who are more at risk of dying from COVID-19. Lack of prioritisation of containment and mitigation measures in the sector generated delays in the provision of PPE, and delays in testing of LTC workers and recipients. Staff shortages also affected the capacity to meet infection control protocols and provide adequate care. On the other hand, those in LTC institutions, as well as the elderly more broadly, have been prioritised in the ongoing COVID-19 vaccinations rollout in many countries. Vaccine effectiveness in real-world conditions is reassuring and has already made a clear impact in LTC. Such positive developments should not dampen the urgency for ensuring that LTC is better prepared to face future emergencies.
- 221. First, the pandemic has revealed the lack of standardised, comprehensive and timely data collection and use in the LTC sector. In a large number of the countries most severely affected by the pandemic in 2020, information on the number of infected cases and deaths in LTC was not available on a daily or weekly basis. In many of those countries, data availability has improved and is leading to regular standardised reporting. At the same time, much data on LTC is still missing to provide a complete and accurate picture on staffing (e.g. hours worked by category of worker, sickness absence) and job quality, care quality and outcomes. In that respect, ensuring that quality standards are appropriately measured and enforced to guarantee minimum standards of care appears to be more needed now than ever before. Good data will be a first step to generate a stronger culture of evaluation and evidence-based policymaking in LTC. Overall, there is insufficient evidence of the impact of policies on the sector.
- 222. Second, the sector was ill-prepared to tackle a health emergency. While many measures are being taken during the pandemic to improve the performance of the sector, more needs to be done. Some countries are now recommending that LTC preparedness for health emergencies requires regular, granular assessments of preparedness at the facility level, as well as in home-care settings. Such assessments would include assessment of infrastructure, resident characteristics, human resources, material resources (such as stock of PPE), protocols for different scenarios, as well as assessment for the revision and actualisations of protocols. The recommendations include having a specific response or contingency plan for each facility or adapting the plan. Clear responsibilities and follow-up mechanisms with appropriate metrics need to be in place.
- 223. The challenges in making protocols operational have highlighted that some institutions will be less ready to isolate cases because of infrastructure capacity or lack of health professionals. For future health emergencies, alternative solutions for intermediate care, and appropriate co-ordination channels with healthcare professionals, need to be put in place quickly. A clear communication plan with families of residents, and transparency in communications, should be part of the new strategy. Response plans for LTC homes must also include measures so that technology and other means are used to connect residents with family and friends, and for safe visits.
- 224. Third, recent events have resurfaced the discussion on workforce, care quality and safety. Several countries have highlighted concerns about staff ratios, shortages and skill mismatches prior to the pandemic. Ensuring avenues for rapid replacement of individuals on sick leave, and training of new personnel, need to be found. Rapid recruitment and retention of staff will remain challenging without addressing adequate pay and improving job quality. Previous research showed the high physical and

psychosocial risks associated with LTC jobs. Efforts to support mental well-being have been mostly focused on helplines, while a broader mental health approach and more intensive support is required. Lack of sufficient, qualified medical staff with skills to deal with complex cases; as well as structural problems involving insufficient co-ordination with the rest of the health care system, also need to be addressed. Promoting social dialogue and collective bargaining can be an avenue to improve job quality in the sector and provide solutions for professional development.

- 225. Even before the COVID-19 crisis, healthcare-associated infections were common in LTC, and the pandemic has amplified the pressing need to improve infection control and prevention. Countries have now developed specific COVID-19 infection control protocols and improved training for staff. Going forward, ensuring relevant training and ways to deploy experts on a regular basis is likely to reduce preventable safety failures. This requires ensuring access to information and resources in the form of guidelines, guidance and procedures on infection prevention to ensure all facilities establish safe routines for care. With respect to this, several countries are now recommending that LCT facilities should have one or more trained infection control officers as a condition for accreditation and/or to deploy accredited infection prevention and control experts into residential aged care homes to provide training, assist with the preparation of outbreak management plans and assist with outbreaks is also recommended.
- 226. Finally, models of care are being questioned. Most older adults prefer to stay in their homes as long as possible, but in many countries there are insufficient home care services. Home-based options may limit infection transmission, but require adequate PPE and job quality for LTC workers. Institutional care will still be needed for elderly dependent people but needs to be made safer and more people-centred. This implies revisiting discussions on appropriate size, and environments that guarantee better living conditions and quality of life for residents.

Annex A. Detailed data on COVID-19 and LTC

Table A.1. COVID-19 mortality

	COVID- 19 deaths	COVID- 19 LTC deaths	As of (date)	A: deaths of care home residents linked to COVID-19, B: deaths in care homes	C: confirmed, P: probable	Source	Number of people aged 80 and over	COVID- 19 LTC deaths as a % of all COVID- 19 deaths	COVID- 19 LTC deaths per million people aged over 80
Australia	909	685	22-Jan-21	Α	С	LTC Covid	1,021,200	75%	671
Austria	7,653	3,380	31-Jan-21	n.s.	n.s.	ECDC	442,517	44%	7,638
Belgium	21,135	12,055	02-Feb-21	Α	C+P	ECDC	646,969	57%	18,633
Canada	18,974	11,114	23-Jan-21	Α	C+P	LTC Covid	1,625,000	59%	6,839
Denmark	2,216	892	05-Feb-21	n.s. (likely A*)	С	ECDC	263,746	40%	3,382
Finland	701	238	08-Feb-21	В	n.s.	ECDC	302,710	34%	786
France	76,057	31,795	31-Jan-21	Α	C+P	ECDC	4,106,665	42%	7,742
Germany	61,675	17,602	08-Feb-21	n.s. (likely A*)	С	ECDC	5,389,106	29%	3,266
Greece	5,796	228	31-Jan-21	Α	С	ECDC	760,434	4%	300
Hungary	14,145	3,485	19-Feb-21	Α	С	OECD	433,033	25%	8,048
Ireland	2,344	1,172	09-Jan-21	Α	С	ECDC**	163,824	50%	7,154
Israel	2,404	861	25-Oct-20	Α	С	LTC Covid	261,700	36%	3,290
South Korea	1,605	607	28-Feb-21	А	С	OECD	1,767,300	38%	343
Latvia	983	161	18-Jan-21	В	С	OECD	107,513	16%	1,497
Lithuania	2,955	363	05-Feb-21	n.s.	n.s.	ECDC	161,539	12%	2,247
Luxembourg	590	270	05-Feb-21	Α	С	OECD	24,282	46%	11,119
Netherlands	14,412	7,464	07-Feb-21	n.s. (likely A*)	С	ECDC	798,820	52%	9,344
New Zealand	25	16	12-Jan-21	В	C+P	LTC Covid	180,800	64%	88
Norway	533	303	25-03-2021	В	С	OECD	225,999	57%	1,341
Slovenia	3,752	1,978	31-Jan-21	A (nursing homes and special social institutions)	С	ECDC	111,033	53%	17,815
Spain	66,557	26,328	22-Jan-21	Α	C+P	LTC Covid	2,880,884	40%	9,139
Sweden	11,773	4,961	31-Jan-21	Α	С	ECDC	522,133	42%	9,501
United Kingdom	104,130	34,979	England 15/1/2021, Wales: 15/1/2021, N. Ireland: 15/1/2021, Scotland: 17/1/2021	A	C+P	LTC Covid	3,319,956	34%	10,536
United States	357,124	139,699	07-Jan-21	А	C+P	LTC Covid	12,922,200	39%	10,811

Note: "n.s." for not specified. * based on a comparison with LTC Covid report. ** no LTC deaths collected between 15 July 2020 and 1 August 2020 inclusive in Ireland.

Source: "LTC Covid" refers to the report of Comas-Herrera. A (2021), Mortality associated with COVID-19 in care homes: international evidence, International Long-Term Care Network, https://ltccovid.org/wp-content/uploads/2021/02/LTC_COVID_19_international_report_January-1-February-1-1.pdf, "ECDC" refers to ECDC webpage (https://www.ecdc.europa.eu/en/all-topics-z/coronavirus/threats-and-outbreaks/covid-19/prevention-and-control/LTCF-data), "OECD" refers to 2021 OECD Questionnaire on COVID-19 in LTC. For population data, sources refer to Eurostat Database, complemented with OECD Health Statistics (2019 or latest year available).

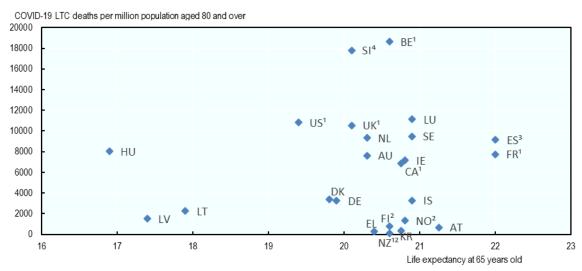
Table A.2. LTC facilities by type of ownership status

	Public	Not-for- profit	Private/For profit	Year	Notes
Czech Republic	65%	22%	13%	2019	
Estonia	55%		45%	2019	Covers only nursing homes. Not-for-profit and for-profit LTC facilities are not separated.
France	54%	27%	18%	2015	
Germany	5%	53%	43%	2019	Cover LTC facilities, including full-time stationary, day/night care and short-term stationary facilities.
Hungary	54%	45%	0.4%	2019	Not-for-profit facilities include faith-baised organisations. Data refer to nursing homes, institutions providing nursing care for people with disabilities and home help.
Ireland	22%	7%	71%	2020	
Japan	4%		96%	2019	Not-for-profit and for-profit LTC facilities are not separated.
Latvia	67%	0%	33%	2021	Public facilities refer to state or municipality established LTC institutions for elderly and persons with severe and extremely severe mental impairments. Private facilities refer to private and limited liability companies 'established LTC institutions.
Luxembourg	48%	29%	23%	2019	Data excludes facilities for disabled people.
Slovenia	37%	37%	26%	2019	Data include homes of elderly and special social welfare institutions.
United States	6%	23%	70%	2021	

Source: 2021 OECD questionnaire on COVID-19 and LTC.

227. Major risk factors are more common among the older populations including include chronic diseases, like heart diseases or diabetes. There were some discussions over the relation between life expectancy (as a measure of people health status) and COVID-19 deaths. However, this association between COVID-19 deaths of older people and life expectancy is not straightforward (below figure). At the start of the pandemic, timing of the spread of COVID-19 differed across countries, while health care systems and mitigation policies for older population has varied considerably.

Figure A.1. Beyond populations' health status, health care systems and COVID-19 responses play key roles



Note: Data on cumulative deaths up to early February 2021 (see Annex for details). 1. Includes confirmed and suspected deaths. 2. Only includes deaths occurring within LTC facilities. 3. Data come from regional governments using different methodologies, some including suspected deaths. 4. Slovenia includes deaths in nursing homes and social LTC facilities.

Source: Comas-Herrera. A (2021), Mortality associated with COVID-19 in care homes: international evidence, International Long-Term Care Network, https://ltccovid.org/wp-content/uploads/2021/02/LTC_COVID_19 international report January-1-February-1-1.pdf, ECDC (https://www.ecdc.europa.eu/en/all-topics-z/coronavirus/threats-and-outbreaks/covid-19/prevention-and-control/LTCF-data), 2021 OECD Questionnaire on COVID-19 in LTC. For population data, sources refer to Eurostat Database, complemented with OECD Health Statistics (2019 or latest year available). For life expectancy, data refer to Eurostat database for European countries (2019 and for the UK, 2018). For non-European countries, OECD Health Statistics (2018).

Annex B. Emergency Preparedness Systems in OECD countries

Table 5.1. Emergency Preparedness Systems in OECD countries

Country	Emergency Preparedness Systems
Australia	The government took several actions to prepare for emergencies over the years. In 2009, the Council of Australian Governments tasked the National Emergency Management Committee to manage the National Strategy for Disaster Resilience, in order to improve Australia's disasters preparedness and reaction. Moreover, the Australian Institute for Disaster Resilience regularly publishes information on emergencies preparedness in the Australian Disaster Resilience Knowledge Hub (AIDR, 2021 _[92]). Plans for pandemic preparedness in the LTC sector were lacking within this system, but attention was drawn to this sector in 2020, with several LTC-specific measures (e.g. rapid response teams, guidelines) (Australian Government - department of Health, 2020 _[175]) (CDNA - Communicable Diseases Network Australia, 2020 _[176]). The Australian government also allocated AUD 440 million to the long term care sector on the 11th of March 2020 (International Long-Term Care Policy Network, 2021 _[177]). The Communicable Diseases Network Australia (CDNA) developed the National Guidelines for the Prevention, Control and Public Health Management of COVID-19 Outbreaks in Residential Care Facilities, which included the creation of Outbreak Management Teams inside each residential care facility among the measures to face the COVID-19 crisis (Communicable Diseases Network Australia, 2020 _[39]). Additionally, Australia has national task forces that, although not specific for the LTC sector, included LTC experts (OECD questionnaire, 2021).
Austria	Before the COVID-19 crisis, the government's website published Civil Protection's guidebooks, articles and videos on crisis management and emergencies, mainly focusing on fires, earthquakes, accidents and radiations protection (Austrian Government, 2021 _[178]).
	Since the onset of the COVID-19 crisis, both national and local governments dragged more attention to LTC, but a greater effort would still be required to prioritise this sector. With the spread of COVID-19, some organisations of care homes have started to produce guidelines for the LTC and the regional governments established crisis groups to face the emergency. In February 2020, the Austrian central government has created a Coronavirus Task Force, but no representatives of the LTC sector are included in its board (Adelina Comas-Herrera, 2020[179]). Nevertheless, task forces responsible of developing guidelines for LTC facilities have been created at the regional level (Schmidt et al., 2020[180]).
Belgium	During the last 20 years, Belgium has taken action to prepare for health emergencies and has acknowledged the importance of a LTC sector ready for a prompt reaction in case of emergency. The Federal Public Service Health, Food chain safety and Environment (FPS Health) is a governmental body for health emergency management, established in 2001 to coordinate emergency medical care. It issued guidelines for pandemic preparedness in the LTC sector both before and after the COVID-19 outbreak (FPS Health, 2021 _[95]). Moreover, Belgium created specific task forces for the LTC sector, which always included at least one LTC expert in their board (OECD questionnaire, 2021), and deployed rapid response teams (Mobile Teams) at the sub-national/local level in order to face possible staff shortages during the crisis (OECD questionnaire, 2021). Several NGOs, such as Médecins Sans Frontières, also deployed mobile teams to implement infection control and hygiene measures. Their mobile teams helped 135 nursing homes by
	the mid-2020 (Médecins Sans Frontières, 2020 _[27]).
Canada	Canada has worked on emergency preparedness for several years, both at the national and provincial level. The national and provincial governments issued specific emergency preparedness plans already before 2020 and promptly updated them at the onset of the COVID-19 crisis. The Canadian government first published the Emergency Management Framework in 2007 and updated it until 2017. It aimed at strengthening the understanding of disaster risks in the society, as well as improving the country's preparedness to future disasters of various nature (i.e. natural, human-induced and technological hazards). Already before the COVID-19 crisis, all Canadian provinces, with the exception of Nunavut, Northwest Territories and Yukon, had published specific guidelines on infection prevention and control in the LTC sector.
	After the outbreak of COVID-19 in 2020, the Government of Canada developed and released national specific guidelines for infection prevention and control among residents and workers of the LTC sector (Government of Canada, 2020 _[181]) (Government of Canada, 2021 _[182]). The National Advisory Committee on Infection Prevention and Control developed the abovementioned guidance and the Pan-Canadian Special Advisory Committee endorsed it. At the local level, provinces of British Columbia (BC Centre for Disease Control, 2021 _[183]), Alberta (Alberta Health Services, 2020 _[184]), Saskatchewan (Government - Saskarchewan, 2020 _[185]), Manitoba (Shared Health Soins Commun Manitoba, 2021 _[186]), Ontario (Ontario Ministry of Long Term Care, 2020 _[187]) (Public Health Ontario, 2021 _[188]), Quebec (Santé et Services Sociaux Québec, 2021 _[189]), Nova Scotia (Government of Nova Scotia, 2020 _[190]), Prince Edward Island (Department of Health and Wellness - Prince Edward Island, 2020 _[191]), Newfoundland & Labrador

(Newfoundland and Labrador - Canada, 2021[192]) updated their guidance and issued directives on COVID-19 infection control in Moreover, in Canada there is an ongoing group, the National Seniors Council (NSC), mandated to provide advice to the Government of Canada on issues and opportunities related to the health, well-being and quality of life seniors. In 2020, the NSC established a COVID-19 working group to examine issues emerging from the pandemic provide advice on these matters (source: April 9, 2021 News Release, ESDC)., (Government of Canada, 2021[193]). Additionally, the national government has established a plethora of advisory groups²⁰ and task forces²¹ composed of experts from the public and/or private sector as well as academia and research community, whose aim is to provide recommendations and actions to address the COVID-19 pandemic... The Canadian Armed Forces deployed rapid response teams to LTC facilities experiencing significant COVID-19 outbreaks in Ontario and Quebec. Moreover, the national government has financed the Red Cross to deploy personnel to more than 130 LTC facilities with outbreaks in Quebec, Ontario and Manitoba. Additional funds have been provided to the Red Cross to deploy Testing Assistance Response Teams. (OECD questionnaire, 2021). At the local level, Prince Edward Island published a plan on the 2nd of June 2020 with measures to face possible outbreaks in LTC facilities and included the deployment of rapid response teams and special care units. On the 24th April 2020, New Brunswick established Rapid Response Teams to be deployed in case of outbreaks among vulnerable populations (OECD questionnaire, 2021). Chile's pandemic preparedness was generally weak before the COVID-19 crisis and it lacked guidelines on emergency Chile preparedness for the LTC sector, However, Chile reacted promptly when it observed the spread of infection in Asia and Europe, At the end January 2020, the Health Ministry, the Social Affairs Ministry and the Institute of Gerontology joined forces to issue protocols and put in place containment and mitigation strategies. Among other measures, it started a programme of social support for the elderly, to help them with ADL (Government of Chile, 2020_[194]) and issued recommendations on the prevention and management of COVID-19 in LTC facilities (Government of Chile, 2020[195]). Before the COVID-19 crisis, the government of Colombia already provided guidelines for infection control in LTC facilities, including Colombia several procedures related to the use of PPE, hygiene measures and waste measures (Minsalud Gobierno de Colombia, 2018_[196]). The government issued several more guidelines since the start of the COVID-19 crisis, containing information for caregivers, facilities, health authorities and local governments on several topics: mental health promotion for older people in preventive isolation against COVID-19 (Ministerio de salud y protección social, 2020_[197]); isolation measures inside LTC facilities (Ministerio de salud y protección social, 2020[198]); measures for the prevention, containment and mitigation of COVID-19 in older adults (Ministerio de salud y protección social, 2020[199]; measures for the prevention of COVID-19 infection for personnel involved in social care activities (Ministerio de salud y protección social, 2020[200]). Colombia has created national task forces specific for the LTC sector, where experts and technicians have been consulted to take measures to protect the elderly. The Ministry of Health and Social Protection is the governing body of the National Policy on Aging and Old Age and has issued guidelines and orientations for the protection of the elderly. Moreover, the Department and municipal Risk Management Committees and Councils held territorial and intersectoral discussions on the measures to deal with the COVID-19 health emergency (OECD questionnaire, 2021). Until the moment in which this report has been written, Czech Republic has never developed specific guidelines on infection control Czech Republic in LTC sector. Nevertheless, the issue has been generally addressed in the healthcare system, with some extraordinary measures to manage visits and admissions of new patients in LTC facilities (MINISTRY OF HEALTH - Czech Republic, 2020_[98]). The Army has been deployed to some hospitals to help dealing with outbreaks (OECD questionnaire, 2021). Denmark had guidelines on infection control in LTC sector already before 2020 (OECD questionnaire, 2021). More have been Denmark published during the current crisis, including guidelines on the ban of visits to LTC facilities, with the exception of dving patients as well as infection prevention during external visits, when the ban was lifted (Danish Health Authority, 2020_[201]). Denmark also has a permanent task force, the national operational staff (NOST), which includes a plethora of authorities²². The NOST meets when major crises and incidents occur and it must ensure crosscutting cooperation and coordination between the

authorities. Currently, the Danish Health Authority is chairing a "COVID-19 Task Force on Hospital Capacity" - which is responsible for coordinating hospital capacity during the pandemic - with representatives from national authorities and the Danish Regions.

²⁰ The National Advisory Committee on Immunization (Government of Canada, 2021_[235]), the COVID-19 Testing and Screening Expert Advisory Panel (Government of Canada, 2021_[236]), the Industry Advisory Roundtable on COVID-19 Testing, Screening, Tracing and Data Management (Government of Canada, 2021_[237]), the COVID-19 Exposure Notification App Advisory Council (Government of Canada, 2021_[238]), the Expert Advisory Group on the pan-Canadian Health Data Strategy (Government of Canada, 2021_[239]) and the Chief Science Advisor's COVID-19 Expert Panel (Government of Canada, 2021_[240]).

²¹ The COVID-19 Vaccine Task Force (Government of Canada, 2021_[243]), the COVID-19 Therapeutics Task Force (whose mandate ended in February 2021) (Government of Canada, 2021_[242]), The COVID-19 Immunity Task Force (The COVID-19 Immunity Task Force, 2020_[234]), the Chief Science Advisor's Task Force on LTC (Government of Canada, 2021_[241])

²² The Danish National Police (chair), Danish Emergency Management Agency (DEMA), Danish Health Authority, Defence Command, PET, DDIS, Ministry of Foreign Affairs, and Danish Transport, Construction and Housing Authority. Other authorities may participate ad hoc.

Moreover, the Sector Partnership on the reopening of the care sector is a specific task force for the LTC sector and there have also been government collaborations and groups that are non-LTC specific, but include experts from the LTC sector (e.g. employees from the Danish Health Authority and the Danish Patient Safety Authority). In addition to this national task forces, most regions have local task forces which are either specific for the LTC sector or include LTC experts (OECD questionnaire, 2021). As part of the Estonian emergency preparedness system, the Ministry of Interior dedicated one page of its website to crisis Estonia management. Risk analyses and emergency plans are updated every two years and crisis management exercises are performed to test the country's ability to react in case of emergency (Ministry of the Interior - Republic of Estonia, 2017₍₉₀₎). Infection control guidelines for LTC facilities existed already before the COVID-19 outbreak. In 2020, the Ministry of Health's website published information and recommendations on the current situation, including some specific measures to keep older population safe, even inside LTC facilities (Estonian Government, 2021[202]). Moreover, Estonia created specific task forces for the LTC sector, which always included at least one LTC expert in their board (OECD questionnaire, 2021) and the Estonian Rescue Board provided help in different regions and some municipalities have created local rapid response team (OECD questionnaire, 2021). Finland On April 2005, the Ministry of Social Affairs and Health nominated a National working group for Pandemic preparedness. Moreover, the country emergency preparedness system includes a National Influenza Centre (NIC), governmental reports on pandemic influenza preparedness (Ministry of Social Affairs and Health, 2008_[93]), National contingency plans for influenza pandemic (Ministry of Social Affairs and Health, 2012[203]), task forces on pandemic preparedness (Ministry of Social Affairs and Health, 2013[204]). Targeted measures for the LTC sector existed already before 2020 (OECD questionnaire, 2021) Since the start of the COVID-19 crisis, the Finnish Institute for Health and Welfare published specific instructions for older people and other risk groups (Finnish Institute for Health and Welfare, 2020[205]) while the Finnish government has issued specific governmental measures for older patients and other risk groups (Finnish government, 2020_[206]). Moreover, Finland activated task forces to face the COVID-19 health crisis both at the national and sub-national level. In particular, municipalities have created their own crisis teams and response groups. In the COVID-19 situation or in a crisis situation the teams consist of the head of the LTC facility and the physician responsible for LTC facility together with the physician responsible for communicable diseases and other relevant actors (OECD questionnaire, 2021). France Following the heatwave of 2003 (about 15 000 deaths, mostly among older people), France had implemented in 2005 an emergency plan (Plan Bleu) for LTC facilities (nursing homes and other medico-social establishments). This plan is an internal organizational tool, which allows the rapid and logical implementation of essential resources (material and human), making it possible to react in a timely manner. The LTC facility is in charge of drawing the emergency plan, with the support of regional health agencies. In normal times, the regional prefect (who are under the authority of the Prime Minister) triggers the ermergency plan by informing the regional health agencies. In turn, the latter are in charge of alerting the concerned LTC facilities. At the onset of the COVID-19, on 6 March 2020, the French government triggered the emergency plans "Plan bleu" of all LTC facilities. In the uncertainty of a crisis that had never been experienced before and in the lack of vaccines, the governmental response was mainly based on traking, tracing and isolating cases. According to the parliamentary report published in December 2020, although this approach was considered effective at the beginning, it also faced some difficulties and fluctuations in its application, which have severely affected its effectiveness (Senat, 2020_[28]). Moreover, France created the "Centre de crise national interministériel" and the "Centre de crise Direction général de la cohésion sociale" at the national level. At the same time, at the regional level, France activated the "Centre de crise ARS et Préfet" - which works in conjunction with the Minister of Autonomy - and a ministerial monitoring by the General Directorate for Social Cohesion and the General Directorate for Healthcare. These groups are not specific for the LTC sector, but they include LTC experts (OECD questionnaire, 2021). To face possible staff shortages, the national strategy relied on three types of mobile teams: mobile teams in geriatry, mobile teams in palliative care and mobile team for hygiene measures and protections. In the Auvergne-Rhône-Alpes region, nearly 30 mobile hygiene teams and 42 mobile palliative care teams were deployed during the crisis. In the Bourgogne-France-Comté region, the increase in the capacities of mobile geriatric teams enabled to mobilize 30% of additional full-time equivalent staff. While they were considered a success across France, this strategy was deployed at the end of March, largely building on the initiatives of the Eastern region in March, one of the most severely affected region at the wake of the pandemic (Commission d'Enquête Évaluation des politiques publiques face aux pandémies, 2020[32]). There were pandemic plans at the national and local level before 2020 (Robert Koch Institut, 2020_[207]). Since 2001 the Infection Germany Protection Act (IfSG) regulates infection control at the federal level, together with laws and ordinances issued at the Länder level (OECD questionnaire, 2021). Nevertheless, the LTC sector was overlooked until 2020, when a task force came into action to support LTC institutions facing an outbreak of coronavirus (Adelina Comas-Herrera, 2020[179]). Additionally, Germany has task forces both at the national and subnational levels, LTC experts were included in some of them, but it was not a compulsory requirement (OECD questionnaire, 2021). As an example, in the Federal state of Bavaria, a LTC-specific Infectiology Task Force is required to be mobilised if a COVID-19 outbreak happens in a LTC facility (Lorenz-Dant, 2020₍₂₀₈₁). There were guidelines on infection control in LTC sector already before 2020 (OECD questionnaire, 2021). Since the onset of the Greece COVID-19 pandemic, the LTC units developed their own protocols and guidelines based on previous experience and existing quidelines on swine and poultry influenza as well as the WHO and national quidelines (OECD questionnaire, 2021). Moreover, Greece created the first National task force to monitor the COVID-19 crisis in February 2020. The task force is parted by the Ministry of Health and the General Secretary of Civil Protection Service. As the crisis developed, new and more specialised task forces were created, like the Task force on education, on the National Planning and Monitoring of the vaccination and the task force against anticompetitive practices due to COVID19. Although the task forces were not specific for the LTC sectors, LTC experts were included into the board, with the Greek Care Homes Association (GCHA/PEMFI) involved to advise on LTC specific issues

(OECD questionnaire, 2021).

Hungary	Despite some changes over the time, the Hungarian emergency preparedness system produced specific guidelines on infection control in the LTC sector already prior the COVID-19 crisis (OECD questionnaire, 2021). Until 2016 Hungary had a National Center for Epidemiology which published information, data and national plans for emergencies (National Center for Epidemiology, 2016 _[209]). Since its suppression, the National Public Health and Medical Officer Service has published information on health emergencies and specific guidelines on infection control in LTC (National Public Health and Medical Officer Service, 2021 _[210]).
Iceland	The Civil Protection and Security Council of Iceland is in charge of updating prevention and preparedness actions and plans every three years and since 2009, according to the Civil Protection Act No 82/2008 and regulation No 650/2009, the National Commissioner is responsible for declaring an emergency and alert levels (European Commission, 2019 _[211]). Although Iceland's emergency preparedness system is constituted by a sound legal basis and a Civil Protection and Security Council, it did not prioritise the LTC sector before 2020. Since the outbreak of COVID-19, the LTC sector received the same guidelines and access to medical supplies as all other healthcare facilities and rapid response teams are available to provide additional health and social care to the
	facilities in need. When a LTC facility experienced an outbreak of COVID-19, its staff was immediately quarantined and tested and substituted by a response team (COVID-19 Health Systems Response Monitor, 2020 _[97]).
Israel	The staff of LTCFs affected by an outbreak can be replaced by special teams (called "Arrow team") for a maximum period of 14 days (Comas-Herrera, Ashcroft and Lorenz-Dant, 2020[41]).
Italy	The governmental website of the Department of Civil Protection regularly publishes information on several emergencies and risks, including health emergencies (Dipartimento della Protezione Civile, 2021[87]). Moreover, both the ministry of Health (Italian Ministry oh Health, 2014[89]) and the Istituto Superiore di Sanità (ISS) (Istituto Superiore di Sanità, 2006[88]) had developed guidelines on national emergency plans as well as more specific plans for pandemic flu before 2020, without the inclusion of specific measures for the LTC sector. In 2020, the ISS published the first instructions and guidelines for prevention and control over the spread of infection in LTC facilities.
	Specific guidelines for the LTC sector were also developed at the local (regional) level. Moreover, Italy has organised several task forces both at the national and regional level for the management of the COVID-19 crisis. At the national level, on the 22 January the Ministry of Health activated the task force on COVID-19 (Ministry of Health, 2020 _[212]), while on the 5 th of February 2020, the government has created the group "Comitato Tecnico Scientifico" to provide general support during the crisis (Ministry of Health, 2020 _[213]) and in March 2020 the Ministry for Technological Innovation and the Ministry of Health have coordinated to create a multidisciplinary task force to face the COVID.19 crisis (Ministry of Technological Innovation and Digital Transition, 2020 _[214]). Specific task forces for the LTC sector exist regionally, for instance in the regions of Lombardy, Piedmont, Sardinia, Tuscany (Comas-Herrera, Ashcroft and Lorenz-Dant, 2020 _[41]) and Provincia Autonoma di Trento (OECD interview, 2021).
Japan	A Disaster Management bureau as well as a task force can be activated when a large scale disaster takes place (Ogata, 2016 _[91]). Guidelines on emergency preparedness in the LTC sector existed already before 2020 (OECD questionnaire, 2021).
Korea	Before COVID-19, Korean LTC facilities managed infections under the "Act on the prevention and management of infectious diseases" and the "manual on safety of LTC institutions", both issued at the national level. Since the onset of COVID-19, the National Health Insurance Service published the "COVID-19 response scenarios by situation" in February 2020, while the Ministry of Health published the "Guidelines for Response Outbreak of COVID-19 of Social Welfare Facilities (7th edition)" in November 2020 (OECD questionnaire 2021).
Latvia	There were guidelines on infection control in LTC sector already before 2020 (OECD questionnaire, 2021). Latvia did not deploy any rapid response team (OECD questionnaire, 2021).
Lithuania	There were guidelines on infection control in LTC sector already before 2020 (OECD questionnaire, 2021). Lithuania did not deploy any rapid response team (OECD questionnaire, 2021).
Luxembourg	Luxembourg included the LTC sector into its measures of emergency management well before the current crisis. Already in 2006, the government had developed a flu pandemic plan, which defined 7 phases of the pandemic and some measures to put in place to manage the emergency. Among them, the activation of pandemic centres, the allocation of specific doctors in charge of the sick and the reduction of visits in LTC facilities (Le Gouvernement du grand-duché de Luxembourg, 2006 _[215]). In 2020, the government issued specific guidelines on COVID-19 infection control in LTC facilities (OECD questionnaire 2021). Luxembourg did not deploy any rapid response team (OECD questionnaire, 2021).
Mexico	The Mexican government issued the first guidelines and strategies for infection prevention and control in LTC facilities in 2020. The "Strategy for the Prevention and Control of COVID-19 in Long Term Care Institutions (ICLP) Based on Explicit Delimitation of Risk Zones", includes guidelines on the management of hygiene measures, visits and isolation and distancing of residents during the COVID-19 pandemic (Government of Mexico, 2020 _[216]). While the "Strategy for prevention of coronavirus disease 2019 in nursing homes for the elderly" is a clinical guideline on recognising COVID-19, monitoring symptoms and hygienic measures of residents (Government of Mexico, 2020 _[217]). Additional guidelines and infographic on LTC facilities can be found on the governmental website (Government of Mexico, 2020 _[218]).
Netherlands	The Netherlands ranked third in the 2019 Global Health Security Index (GHS index, 2019 _[86]), specific guidelines on infection control in the LTC sector already existed before 2020 (OECD questionnaire, 2021). The National Coordinator for Security and Counterterrorism (NCTV) is in charge of preventing and managing emergencies at the national level. The specialised governmental website Crisis.nl regularly publishes information on a plethora of possible emergencies. Before the COVID-19 crisis, its webpage reporting information on sickness waves and pandemics was last updated in November 2019 (National Coordinator for Security and Counterterrorism (NCTV), 2019 _[94]). After the COVID-19 crisis started, the government has published information on this specific emergency, including a section focusing on advice for risk groups and care homes (Government of the Netherlands, 2020 _[219]).

	Moreover, Netherlands had non-LTC specific task forces both at the national level and locally in most regions, which included LTC experts (OECD questionnaire, 2021) and it did not deploy any rapid response team (OECD questionnaire, 2021).
New Zealand	The Ministry of Health issued governmental information (National Ethics Advisory Committee – Ka hui Matatika o te Motu, 2007 _[220]), emergency plans (Ministry of Health, 2015 _[221]) and influenza pandemic plans (Ministry of Health, 2017 _[222]), including measures on the infection control in LTC facilities, already before 2020. The influenza pandemic plan has existed since 2002 and has been reviewed and updated, especially in the aftermath of the H5N1 and H1N1 influenza. During the COVID-19 crisis the government published more guidelines specific for the LTC sector, including measures for the
	management and isolation of positive residents and staff, hygiene measures, information for visiting LTC facilities (New Zealand Government - Ministry oh Health, 2020 _[223]) and advice on how to treat for patients with dementia (New Zealand Government - Ministry of Health, 2020 _[224]). The Health Quality and Safety commission New Zealand has also published clinical guidance for the prevention and control of COVID-19 outbreaks in LTC facilities (Health Quality and Safety Commission New Zealand, 2020 _[225]) and guidance on cleaning measures in LTC facilities, following a suspected, probable or confirmed case of COVID-19 (Health Quality and Safety Commission New Zealand, 2020 _[225]).
Norway	LTC facilities are required an infection control program. The Infection Control Guide by the National Institute of Public Health is used as a reference on which to build the programs (OECD questionnaire, 2021). Moreover, Estonia created specific task forces for the LTC sector, which always included at least one LTC expert in their board (OECD questionnaire, 2021).
Poland	In Poland, guidelines on infection control in the LTC sector did not exist before 2020. The ministry of Family and Social Policy published recommendations on infection prevention and control in nursing homes during the COVID-19 pandemic crisis (OECD questionnaire 2021).
Portugal	Pandemic preparedness plans specific for the LTC are available at the national level, both prior and post 2020 (OECD questionnaire, 2021). Moreover, Portugal has non-LTC specific task forces both at the national level and locally in most regions, which include LTC experts (OECD questionnaire, 2021).
Slovenia	The government published the first guidelines on infection control in the LTC sector only in 2020. The guidelines were developed at the national level and included infection control and prevention as well as the creation of an expert group to provide support to the crisis staff (i.e. rapid response teams) (LTC covid, 2020 _[227]). Social welfare institutions have to follow the governmental regulations in the field of infectious diseases as well as develop programs for the prevention and control on infections (OECD questionnaire, 2021). The Slovenian government has established, at the national level, the working group of coordinators for the prevention and control of infections with SARS-CoV-2 virus and other infectious respiratory diseases in LTC healthcare institutions. Moreover, the epidemiologists from the National Institute of Public Health worked with coordinators and all social welfare institutions to face the
Spain	COVID-19 crisis (OECD questionnaire, 2021). Already before 2020, the Spanish government have published Influenza national plans with some specific measures foreseen for the LTC sector, but the specific training exercises – although forseen in the plans - had not yet been tested (OECD questionnaire, 2021).
	The national government has authorised the regional governments to take over the management of facilities (both public and private) that become overwhelmed. Rapid response teams of care professionals were deployed to care homes since March 2020 and received dedicated online training (Comas-Herrera, Ashcroft and Lorenz-Dant, 2020 _[41]).
	Moreover, rapid response teams have been deployed as part of the National Aged Care Emergency Response. Experienced aged care workers have been called to move from areas without transmission of the virus to areas where the emergency had caused personnel's shortages (Australian Government, 2020 _[40]).
United Kingdom	The UK has dedicated growing attention to the LTC sector during the COVID-19 crisis, through specific guidance on the admission and care of residents in care homes (Public Health England, 2021[228]) and the creation of a capacity tracker for LTC facilities (Adelina Comas-Herrera, 2020[179]). Moreover, since 2020 the Ministry of Health has reserved a page of its website to the older people and LTC (Ministry oh Health - Japan, 2020[96]).
United States of America	The United States ranked first in the in the 2019 Global Health Security Index (GHS index, 2019 _[86]). Emergency preparedness plans and strategies existed in the US well before 2020 and were regularly updated (Homeland Security Council, 2005 _[229]) (Homeland Security Council, 2006 _[230]). Specific emergency preparedness plans for the LTC sector were also in place both at the federal level (U.S. CDC, 2016 _[231]) and at the local level (Colorado Department of Public Health and Environment, 2019 _[232]). With the onset of the COVID-19 pandemic, new guidelines on infection control and prevention in the LTC sector were developed both at the national (CMS, 2020 _[233]) and at the local level (OECD questionnaire 2021). Moreover, the United States created specific task forces for the LTC sector, which always included at least one LTC expert in their board (OECD questionnaire, 2021).
	The Federal State has supported those facilities affected by workforce shortages due to a COVID-19 outbreak by sending rapid response teams (Comas-Herrera, Ashcroft and Lorenz-Dant, 2020[41]). At the same time, rapid response teams exist in the US both at the federal and local level (OECD questionnaire, 2021).

References

Adelina Comas-Herrera, E. (2020), International examples of measures to prevent and manage COVID-19 outbreaks in residential care and nursing home settings, Massachusetts Medical Society, https://ltccovid.org/wp-content/uploads/2020/05/International-measures-to-prevent-and-manage-COVID19-infections-in-care-homes-11-May-2.pdf .	[179]
AGE Platform Europe (2020), COVID-19: Older persons' rights must be equally protected during the pandemic, https://www.age-platform.eu/policy-work/news/covid-19-older-persons%E2%80%99-rights-must-be-equally-protected-during-pandemic (accessed on 30 April 2021).	[150]
AIDR (2021), Australian Disaster Resilience Knowledge Hub, https://knowledge.aidr.org.au/about/ (accessed on 22 Feb 2021).	[92]
AIFA (2021), Terzo Rapporto AIFA sulla sorveglianza dei vaccini COVID-19.	[75]
Alberta Health Services (2020), Guidelines for COVID-19 Outbreak Prevention, Control and Management in Congregate Living Sites.	[184]
Australian Government (2021), <i>How will I get my COVID-19 vaccine?</i> , https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/getting-vaccinated-for-covid-19/how-will-i-get-my-covid-19-vaccine .	[55]
Australian Government (2020), Coronavirus (COVID-19) National Aged Care Emergency Response, https://www.health.gov.au/initiatives-and-programs/coronavirus-covid-19-national-aged-care-emergency-response (accessed on 2021).	[40]
Australian Government - department of Health (2020), Coronavirus (COVID-19) National Aged Care Emergency Response, https://www.health.gov.au/initiatives-and-programs/coronavirus-covid-19-national-aged-care-emergency-response (accessed on 15 march 2021).	[175]
Austrian Government (2021), <i>Disaster cases</i> , https://www.oesterreich.gv.at/themen/gesundheit_und_notfaelle/katastrophenfaelle.html (accessed on 22 Feb 2021).	[178]
BC Centre for Disease Control (2021), Long-Term Care Facilities & Assisted Living, http://www.bccdc.ca/health-professionals/clinical-resources/covid-19-care/clinical-care/long-term-care-facilities-assisted-living (accessed on 9 march 2021).	[183]
Belmin, J. et al. (2020), "Coronavirus Disease 2019 Outcomes in French Nursing Homes That Implemented Staff Confinement With Residents", <i>JAMA Network Open</i> , Vol. 3/8, p. e2017533, http://dx.doi.org/10.1001/jamanetworkopen.2020.17533 .	[123]
Berloto, S. et al. (2020), <i>Italy and the COVID-19 long-term care situation</i> , International long-term care policy network, https://lab.gedidigital.it/gedi-visual/2020/coronavirus-i-contagi-in-italia/?ref=RHPPRB-BS-I254751933-C4-P1-S1.4 (accessed on 9 December 2020).	[35]

Bernal, J. et al. (2021), Early effectiveness of COVID-19 vaccination with BNT162b2 mRNA vaccine and ChAdOx1 adenovirus vector vaccine on symptomatic disease, hospitalisations and mortality in older adults in England, Cold Spring Harbor Laboratory, http://dx.doi.org/10.1101/2021.03.01.21252652 .	[156]
Borras-Bermejo, B. et al. (2020), "Asymptomatic SARS-CoV-2 Infection in Nursing Homes, Barcelona, Spain, April 2020", <i>Emerging Infectious Diseases</i> , Vol. 26/9, pp. 2281-2283, http://dx.doi.org/10.3201/eid2609.202603 .	[36]
Börsch-Supan, A. et al. (2013), "Data Resource Profile: The Survey of Health, Ageing and Retirement in Europe (SHARE)", <i>International Journal of Epidemiology</i> , Vol. 42/4, pp. 992-1001, http://dx.doi.org/10.1093/ije/dyt088 .	[1]
Brockman, M. et al. (2021), Weak humoral immune reactivity among residents of long-term care facilities following one dose of the BNT162b2 mRNA COVID-19 vaccine, Cold Spring Harbor Laboratory, http://dx.doi.org/10.1101/2021.03.17.21253773 .	[161]
Brown, K. et al. (2020), "Association Between Nursing Home Crowding and COVID-19 Infection and Mortality in Ontario, Canada", <i>JAMA Internal Medicine</i> , http://dx.doi.org/10.1001/jamainternmed.2020.6466 .	[129]
Canevelli, M. et al. (2020), "Facing Dementia During the COVID -19 Outbreak", <i>Journal of the American Geriatrics Society</i> , Vol. 68/8, pp. 1673-1676, http://dx.doi.org/10.1111/jgs.16644 .	[107]
CarersUK (2020), Caring behind closed doors: six months on, Eurocarers, http://www.carersuk.org/images/News_and_campaigns/Behind_Closed_Doors_2020/Caring_behind_closed_doors_Oct20.pdf (accessed on 26 April 2021).	[76]
Carl Zimmer, J. (2021), Coronavirus Vaccine Tracker, https://www.nytimes.com/interactive/2020/science/coronavirus-vaccine-tracker.html .	[54]
CDC (2021), Effectiveness of COVID-19 Vaccines in Preventing SARS-CoV-2 Infection Among Frontline Workers Before and During B.1.617.2 (Delta) Variant Predominance — Eight U.S. Locations, December 2020–August 2021, http://dx.doi.org/10.15585/mmwr.mm7034e4 .	[153]
CDC (2021), How Do I Find a COVID-19 Vaccine?, https://www.cdc.gov/coronavirus/2019-ncov/vaccines/How-Do-I-Get-a-COVID-19-Vaccine.html .	[58]
CDC (2021), Updated Recommendations from the Advisory Committee on Immunization Practices for Use of the Janssen (Johnson & Johnson) COVID-19 Vaccine AfterReports of Thrombosis with Thrombocytopenia Syndrome Among Vaccine Recipients — United States, April 2021, https://www.cdc.gov/mmwr/volumes/70/wr/pdfs/mm7017e4-H.pdf .	[69]
CDNA - Communicable Diseases Network Australia (2020), CDNA National Guidelines for the Prevention, Control and Public Health Management of COVID-19 Outbreaks in Residential Care Facilities in Australia.	[176]
Center for Disease Control and Prevention (2021), Key Things to Know About COVID-19 Vaccines, https://www.cdc.gov/coronavirus/2019-ncov/vaccines/keythingstoknow.html#:~:text=lt%20typically%20takes%20two%20weeks,after%20a%20one%2Ddose%20vaccine.	[166]

Center for Medicare Advocacy (2021), Nursing Facilities Have Received Billions of Dollars in Direct Financial and Non-Financial Support During Coronavirus Pandemic, https://medicareadvocacy.org/report-snf-financial-support-during-covid/ (accessed on 17 May 2021).	[47]
Centers for Medicare & Medicaid Services (2020), CMS Announces New Federal Funding for 33 States to Support Transitioning Individuals from Nursing Homes to the Community, https://www.cms.gov/newsroom/press-releases/cms-announces-new-federal-funding-33-states-support-transitioning-individuals-nursing-homes (accessed on 17 May 2021).	[48]
CMS (2020), QSO-20-14-NH, https://www.cdc.gov/coronavirus/2019	[233]
Colorado Department of Public Health and Environment (2019), <i>Emergency Preparedness Regulations for Long Term Care Facilities</i> , https://cdphe.colorado.gov/emergency-preparedness-regulations-for-long-term-care-facilities (accessed on 15 march 2021).	[232]
Comas-Herrera, A., E. Ashcroft and K. Lorenz-Dant (2020), "International examples of measures to prevent and manage COVID-19 outbreaks in residential care and nursing home settings", https://ltccovid.org/wp-content/uploads/2020/05/International-measures-to-prevent-and-manage-COVID19-infections-in-care-homes-11-May-2.pdf .	[41]
Comas-Herrera, A., E. Ashcroft and K. Lorenz-Dant (2020), <i>International examples of measures</i> to prevent and manage COVID-19 outbreaks in residential care and nursing home settings. Report in LTCcovid.org, International Long-Term Care Policy Network, CPEC-LSE	[24]
Comas-Herrera, A. et al. (2020), "COVID-19: Implications for the Support of People with Social Care Needs in England", <i>Journal of Aging & Social Policy</i> , Vol. 32/4-5, pp. 365-372, http://dx.doi.org/10.1080/08959420.2020.1759759 .	[43]
Comas-Herrera, A. et al. (2021), Mortality associated with COVID-19 in care homes: international evidence, International Long-Term Care Policy Network, https://www.ecdc.europa.eu/sites/default/files/documents/Increase-fatal-cases-of-COVID-19-(accessed on 13 May 2021).	[11]
Commission d'Enquête Évaluation des politiques publiques face aux pandémies (2020), Santé publique : pour un nouveau départ - Leçons de l'épidémie de covid-19, http://www.senat.fr/rap/r20-199-1/r20-199-1.html (accessed on 14 April 2021).	[32]
Communicable Diseases Network Australia (2020), "National Guidelines for the Prevention, Control and Public Health Management of COVID-19 Outbreaks in Residential Care Facilities", https://www.health.gov.au/sites/default/files/documents/2020/03/coronavirus-covid-19-guidelines-for-outbreaks-in-residential-care-facilities.pdf .	[39]
Communion of Protestant Churches in Europe (2021), "Being church together in a pandemic" – Reflections from a Protestant Perspective, Communion of Protestant Churches in Europe, https://www.leuenberg.eu/cpce-content/uploads/2021/03/GEKE-focus-29-web.pdf (accessed on 30 April 2021).	[151]
COVID-19 Health Systems Response Monitor (2020), <i>Policy responses for Iceland</i> , https://www.covid19healthsystem.org/countries/iceland/livinghit.aspx?Section=3.3%20Maintaining%20essential%20services&Type=Section (accessed on 23 Feb 2021).	[97]
COVID-19 Ined (2021), COVID-19 ined, https://dc-covid.site.ined.fr/en/data/.	[157]

Crouch, H. (2020), <i>Electronic system to improve patients' end of life care shared nationally</i> , https://www.digitalhealth.net/2020/11/electronic-system-to-improve-patients-end-of-life-care-shared	[146]
shared- nationally/?utm_source=The%20King%27s%20Fund%20newsletters%20%28main%20accou nt%29&utm_medium=email&utm_campaign=12010564_NEWSL_DHD_2020-12- 09&dm_i=21A8,75FES,1SQQD4,SY49G,1 (accessed on 9 December 2020).	
Dagan, N. et al. (2021), "BNT162b2 mRNA Covid-19 Vaccine in a Nationwide Mass Vaccination Setting", New England Journal of Medicine, http://dx.doi.org/10.1056/nejmoa2101765 .	[154]
Danish Health Authority (2020), COVID-19: Infection prevention during visits to nursing homes and nursing homes, relief places, hospitals, clinics, etc.	[201]
Dan, J. et al. (2021), "Immunological memory to SARS-CoV-2 assessed for up to 8 months after infection", <i>Science</i> , Vol. 371/6529, p. eabf4063, http://dx.doi.org/10.1126/science.abf4063 .	[163]
de Girolamo, G. et al. (2020), "Older People Living in Long-Term Care Facilities and Mortality Rates During the COVID-19 Pandemic in Italy: Preliminary Epidemiological Data and Lessons to Learn", Frontiers in Psychiatry, Vol. 11, http://dx.doi.org/10.3389/fpsyt.2020.586524 .	[15]
Défenseur des droits (2021), Les droits fondamentaux des personnes âgées accueillies en EHPAD, Défenseur des droits, Paris, https://www.defenseurdesdroits.fr/sites/default/files/atoms/files/rap-ehpad-num-29.04.21.pdf (accessed on 4 May 2021).	[112]
Department of Health and Wellness - Prince Edward Island (2020), Prince Edward Island Guidelines for Infection Prevention and Control of COVID-19 in Long Term Care Facilities.	[191]
Desson, Z. et al. (2020), "An analysis of the policy responses to the COVID-19 pandemic in France, Belgium, and Canada", <i>Health Policy and Technology</i> , Vol. 9/4, pp. 430-446, http://dx.doi.org/10.1016/j.hlpt.2020.09.002 .	[134]
Dipartimento della Protezione Civile (2021), <i>Emergenze</i> , http://www.protezionecivile.gov.it/attivita-rischi/rischio-sanitario/emergenze (accessed on 2021).	[87]
Dobbs, D., L. Peterson and K. Hyer (2020), "The Unique Challenges Faced by Assisted Living Communities to Meet Federal Guidelines for COVID-19", <i>Journal of Aging & Social Policy</i> , Vol. 32/4-5, pp. 334-342, http://dx.doi.org/10.1080/08959420.2020.1770037 .	[132]
Doctors Without Borders (2020), Responding to the coronavirus pandemic in European nursing homes, https://www.doctorswithoutborders.org/what-we-do/news-stories/story/responding-coronavirus-pandemic-european-nursing-homes (accessed on 30 April 2021).	[149]
Domi, M. et al. (2021), Nursing Home Resident and Staff Covid-19 Cases After the First Vaccination Clinic, http://www.CHPE-LTC.org .	[159]
Doty, M. et al. (2020), "Primary Care Physicians' Role In Coordinating Medical And Health-Related Social Needs In Eleven Countries", <i>Health Affairs</i> , Vol. 39/1, pp. 115-123, http://dx.doi.org/10.1377/hlthaff.2019.01088 .	[138]
ECDC (2021), COVID-19 vaccine rollout overview, https://covid19-vaccine-report.ecdc.europa.eu/#6 Reported data.	[70]

[168] ECDC (2021), nterim public health considerations for the provision of additional COVID-19 vaccine doses. [83] ECDC and WHO (2017), "Guide to revision of national pandemic influenza preparedness plans Lessons learned from the 2009 A(H1N1) pandemic", http://dx.doi.org/10.2900/466319. [246] EHPA (2020), Surmortalité en Ehpad : le terrible constat | EHPA - Conseil - Formation, https://www.ehpa.fr/actualite/surmortalite-en-ehpad-le-terrible-constat/ (accessed on 29 April 2021). [120] El Khomri, M. (2019), Plan national en faveur de l'attractivité des métiers du grand-âge 2020-2024, https://solidarites-sante.gouv.fr/IMG/pdf/rapport_el_khomri_plan metiers du grand age.pdf. [68] EMA (2021), AstraZeneca's COVID-19 vaccine: EMA finds possible link to very rare cases of unusual blood clots with low blood platelets, https://www.ema.europa.eu/en/news/astrazenecas-covid-19-vaccine-ema-finds-possible-linkvery-rare-cases-unusual-blood-clots-low-blood. [202] Estonian Government (2021), Recommendations for the COVID-19 crisis, https://www.kriis.ee/en/recommendations-covid-19-crisis (accessed on 23 Feb 2021). [77] Eurocarers (2021), How informal caregivers' life and care situations changed during the coronapandemic in Germany, https://eurocarers.org/how-informal-caregivers-life-and-caresituations-changed-during-the-corona-pandemic-in-germany/ (accessed on 3 May 2021). [79] Eurocarers (2021), Study on the consequences of the COVID-19 outbreak on informal carers across Europe, https://eurocarers.org/study-on-the-consequences-of-the-covid-19-outbreakon-informal-carers-across-europe/ (accessed on 10 December 2020). [165] European Centre for Disease Prevention and Control (2021), Questions and answers on COVID-19: Vaccines, https://www.ecdc.europa.eu/en/covid-19/questions-answers/questions-andanswersvaccines#:~:text=Vaccines%20against%20some%20viral%20diseases,forms%20of%20the% 20disease. [16] European Centre for Disease Prevention and Control (2021), Surveillance data from public online national reports on COVID-19 in long-term care facilities, https://www.ecdc.europa.eu/en/all-topics-z/coronavirus/threats-and-outbreaks/covid-19/prevention-and-control/LTCF-data (accessed on 13 May 2021). [85] European Commission (2020), "Improving pandemic preparedness and management". [211] European Commission (2019), EUROPEAN CIVIL PROTECTION AND HUMANITARIAN AID OPERATIONS, https://ec.europa.eu/echo/what/civil-protection/disastermanagement/iceland_en (accessed on 23 Feb 2021). [67] European Medicines Agency (2021), EMA's safety committee continues investigation of COVID-19 Vaccine AstraZeneca and thromboembolic events – further update. https://www.ema.europa.eu/en/news/emas-safety-committee-continues-investigation-covid-19-vaccine-astrazeneca-thromboembolic-events.

European Trade Union Institute (2021), Covid-19 as occupational disease: the need for European homogenisation, https://www.etui.org/news/covid-19-occupational-disease-need-european-homogenisation (accessed on 5 May 2021).	[10]
Fendler, E. et al. (2002), "The impact of alcohol hand sanitizer use on infection rates in an extended care facility.", <i>American Journal of Infection Control</i> , pp. 30(4):226-33.	[31]
Finnish government (2020), Restrictions during the coronavirus epidemic, https://valtioneuvosto.fi/en/information-on-coronavirus/current-restrictions .	[206]
Finnish Institute for Health and Welfare (2020), <i>Elderly persons and other risk groups – coronavirus instructions</i> .	[205]
FPS Health (2021), Corona: Guidelines for Health Care Professionals, https://www.zorg-en-gezondheid.be/corona-richtlijnen-voor-zorgprofessionals#ouderenzorg (accessed on 22 Feb 2021).	[95]
French MOH (2021), <i>Trouver un lieu de vaccination Covid-19</i> , https://www.sante.fr/cf/centres-vaccination-covid.html .	[56]
Fresno, J. (2020), Estudios propios, Auditoría de los centros residenciales en Navarra ante la crisis de la Covid-19. Observatorio de la Realidad Social de Navarra, Observatorio de la Realidad Social,, https://www.observatoriorealidadsocial.es/es/estudios/auditoria-de-los-centrosresidenciales-en-navarra-ante-la-crisis-de-la-covid-19/es-556293/# (accessed on 15 April 2021).	[9]
Fundación de Estudios de Economía Aplicada (2020), <i>La asistencia residencial en España y COVID-19</i> , https://www.fedea.net/la-asistencia-residencial-en-espana-y-covid-19/ (accessed on 15 April 2021).	[42]
GAVI (2021), How long does immunity last after COVID-19 vaccination?, https://www.gavi.org/vaccineswork/how-long-does-immunity-last-after-covid-19-vaccination .	[164]
GHS index (2019), Welcome to the 2019 Global Health Security Index.	[86]
Giordano, G. et al. (2020), "Modelling the COVID-19 epidemic and implementation of population-wide interventions in Italy", <i>Nature Medicine</i> , Vol. 26/6, pp. 855-860, http://dx.doi.org/10.1038/s41591-020-0883-7 .	[19]
Global Health 50/50 (2021), <i>The COVID-19 Sex-Disaggregated Data Tracker</i> , https://globalhealth5050.org/the-sex-gender-and-covid-19-project/the-data-tracker/?explore=variable (accessed on 12 May 2021).	[6]
Global Preparedness Monitoring Board (GPMB) (2019), Annual report on global preparedness for health emergencies Global Preparedness Monitoring Board A WORLD AT RISK, http://apps.who.int/iris .	[84]
Government - Saskarchewan (2020), Information for Residential Homes - Personal Care Homes (PCHs), Group Homes and Assisted Living Facilities, https://www.saskatchewan.ca/government/health-care-administration-and-provider-resources/treatment-procedures-and-guidelines/emerging-public-health-issues/2019-novel-coronavirus/covid-19-information-for-businesses-and-workers/residential-homes (accessed on 9 march 2021).	[185]

Government of Canada (2021), COVID-19 Advisory Groups and Task Forces Fact Sheet, https://www.canada.ca/en/public-health/news/2020/12/covid-19-advisory-groups-and-task-forces-fact-sheet.html (accessed on 22 march 2021).	[239]
Government of Canada (2021), COVID-19 Expert Panel, https://www.ic.gc.ca/eic/site/063.nsf/eng/h 98013.html (accessed on 22 March 2021).	[240]
Government of Canada (2021), COVID-19 Exposure Notification App Advisory Council, https://www.ic.gc.ca/eic/site/icgc.nsf/eng/h_07687.html (accessed on 22 march 2021).	[238]
Government of Canada (2021), COVID-19 Testing and Screening Expert Advisory Panel: Overview, https://www.canada.ca/en/health-canada/services/drugs-health-products/covid19-industry/medical-devices/testing-screening-advisory-panel.html (accessed on 22 march 2021).	[236]
Government of Canada (2021), COVID-19 Therapeutics Task Force, https://www.ic.gc.ca/eic/site/lsg-pdsv.nsf/eng/hn01780.html (accessed on 22 march 2021).	[242]
Government of Canada (2021), Industry Advisory Roundtable on COVID-19 Testing, Screening, Tracing and Data Management: Overview, https://www.canada.ca/en/health-canada/services/drugs-health-products/covid19-industry/medical-devices/testing-outreach-collaboration/industry-advisory-roundtable.html (accessed on 22 march 2021).	[237]
Government of Canada (2021), Infection prevention and control for COVID-19: Interim guidance for long-term care homes, https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevent-control-covid-19-long-term-care-homes.html (accessed on 9 march 2021).	[182]
Government of Canada (2021), National Advisory Committee on Immunization (NACI): Membership and representation, https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/naci-membership-representation.html (accessed on 22 march 2021).	[235]
Government of Canada (2021), <i>National Seniors Council</i> , https://www.canada.ca/en/national-seniors-council.html (accessed on 22 march 2021).	[193]
Government of Canada (2021), <i>Ongoing initiatives on COVID-19</i> , https://www.ic.gc.ca/eic/site/063.nsf/eng/h_98027.html (accessed on 22 March 2021).	[241]
Government of Canada (2021), <i>The COVID-19 Vaccine Task Force</i> , https://nrc.canada.ca/en/corporate/covid-19-vaccine-task-force (accessed on 22 March 2021).	[243]
Government of Canada (2020), Interim guidance: Care of residents in long term care homes during the COVID-19 pandemic, https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/guidance-documents/residents-long-term-care-homes-covid-19.html#a5.0) (accessed on 2021).	[181]
Government of Chile (2020), <i>Cuenta con migos</i> , https://www.gob.cl/cuentaconmigo/ (accessed on 15 march 2021).	[194]
Government of Chile (2020), Protocolo de recomendaciones para la Prevención y Atención del COVID-19 en Residenciales para Adultos con Discapacidad, Fase 4	[195]

Government of Mexico (2020), Estrategia Prevencion Control COVID19, http://www.geriatria.salud.gob.mx/descargas/covid/Estrategia-Prevencion-Control-COVID-19-23-julio-2020.pdf (accessed on 2020).	[217]
Government of Mexico (2020), <i>Guia Prevencion enfermedad coronavirus 2019</i> , http://www.geriatria.salud.gob.mx/descargas/covid/Guia-Prevencion-enfermedad-coronavirus-2019-09-sep-2020.pdf (accessed on 2020).	[218]
Government of Mexico (2020), <i>Prevencion enfermedad personas mayores</i> , http://www.geriatria.salud.gob.mx/contenidos/institucional/prevencion-enfermedad-personas-mayores.htm (accessed on 2020).	[216]
Government of Nova Scotia (2020), COVID-19-Management-in-Long-Term-Care-Facilities- Directive.	[190]
Government of the Netherlands (2020), <i>Dutch measures against coronavirus: basic rules for everyone</i> , https://www.government.nl/topics/coronavirus-covid-19/tackling-new-coronavirus-in-the-netherlands/basic-rules-for-everyone (accessed on 9 march 2021).	[219]
Harrington, C. et al. (2012), "Nursing Home Staffing Standards and Staffing Levels in Six Countries", <i>Journal of Nursing Scholarship</i> , Vol. 44/1, pp. 88-98, http://dx.doi.org/10.1111/j.1547-5069.2011.01430.x .	[119]
HAS (2021), Avis n° 2021.0061/AC/SEESP du 23 août 2021 du collège de la HAS relatif à la définition des populations à cibler par la campagne de rappel vaccinal chez les personnes ayant eu une primovaccination complète contre la Covid-19, https://www.has-sante.fr/jcms/p_3283044/fr/avis-n-2021-0061/ac/seesp-du-23-aout-2021-du-college-de-la-has-relatif-a-la-definition-des-populations-a-cibler-par-la-campagne-de-rappel-vaccinal-chez-les-personnes-ayant-eu-une-primovaccination-complete-contre	[169]
Haug, N. et al. (2020), "Ranking the effectiveness of worldwide COVID-19 government interventions", <i>Nature Human Behaviour</i> , Vol. 4/12, pp. 1303-1312, http://dx.doi.org/10.1038/s41562-020-01009-0 .	[101]
Health Quality and Safety Commission New Zealand (2020), Guidance for preventing and controlling COVID-19 outbreaks in New Zealand aged residential care.	[225]
Health Quality and Safety Commission New Zealand (2020), Guidance on cleaning aged residential care facilities following a suspected, probable or confirmed case of COVID19.	[226]
Homeland Security Council (2006), pandemic-influenza-implementation.	[230]
Homeland Security Council (2005), THE NATIONAL STRATEGY FOR PANDEMIC INFLUENZA.	[229]
HSE (2021), getting your COVID-19 vaccine, https://www2.hse.ie/screening-and-vaccine/get-the-vaccine/getting-your-vaccine/ .	[57]
HSE (2021), Temporary Assistance Payment Scheme for nursing homes (COVID-19), https://www.hse.ie/eng/services/news/newsfeatures/covid19-updates/temporary-assistance-payment-scheme-for-nursing-homes/ (accessed on 17 May 2021).	[46]
HSE - Ireland (2020), Covid-19 HSE Clinical Guidance and Evidence, https://hse.drsteevenslibrary.ie/c.php?g=679077&p=4867437 (accessed on 15 march 2021).	[99]

Hsu, A. (n.d.), www.ltccovid19.org.	[135]
Hsu, A. and S. Allin (2020), Hazard pay for LTC workers during COVID-19: a multi-country study of policy approaches.	[45]
Hussain, A. (2020), "Stringency in Policy Responses to Covid-19 Pandemic and Social Distancing Behavior in Selected Countries", <i>SSRN Electronic Journal</i> , http://dx.doi.org/10.2139/ssrn.3586319 .	[103]
Hussein, S. (2020), https://www.pssru.ac.uk/blog/the-impact-of-covid-19-on-social-care-workers-workload/.	[33]
Il Sole 24 Ore (2021), <i>Vaccini in tempo reale</i> , https://lab24.ilsole24ore.com/numeri-vaccini-italia-mondo/# .	[71]
IMSERSO (2021), Actualización nº 25. Enfermedad por coronavirus (COVID-19) en Centros Residenciales. 15/08/2021, https://www.imserso.es/InterPresent2/groups/imserso/documents/binario/inf_resid_20210404.pdf .	[160]
Institute for Health Metrics and Evaluation (2021), Estimation of total mortality due to COVID-19, http://www.healthdata.org/special-analysis/estimation-excess-mortality-due-covid-19-and-scalars-reported-covid-19-deaths (accessed on 13 May 2021).	[20]
International Labour Organisation (2021), State practice to address COVID-19 infection as a work-related injury, https://www.ilo.org/global/topics/geip/publications/WCMS_768009/lang-en/index.htm (accessed on 4 May 2021).	[50]
International Long-Term Care Policy Network (2021), Country reports: COVID-19 and Long-Term Care – Resources to support community and institutional Long-Term Care responses to COVID-19, https://ltccovid.org/country-reports-on-covid-19-and-long-term-care/ (accessed on 1 April 2021).	[177]
Intrado (2021), Two studies to determine the impact of COVID-19 vaccines in residents of long-term care facilities in BC and Alberta, https://www.globenewswire.com/news-release/2021/02/10/2172919/0/en/Two-studies-to-determine-the-impact-of-COVID-19-vaccines-in-residents-of-long-term-care-facilities-in-BC-and-Alberta.html (accessed on 30 march 2021).	[244]
Ipsos (2021), <i>Global attitudes : COVID-19 vaccine</i> , https://www.ipsos.com/en/global-attitudes-covid-19-vaccine-january-2021 .	[64]
Istituto Superiore di Sanità (2021), <i>Epidemia COVID-19. Aggiornamento nazionale: 28 aprile 2021</i> , https://www.epicentro.iss.it/coronavirus/bollettino/Bollettino-sorveglianza-integrata-COVID-19 28-aprile-2021.pdf (accessed on 4 May 2021).	[158]
Istituto Superiore di Sanità (2006), Piano nazionale di preparazione e risposta a una pandemia influenzale.	[88]
Italian Ministry oh Health (2014), PIANO NAZIONALE PER LE EMERGENZE DI TIPO EPIDEMICO.	[89]

J. Díaz, E. (2021), After 14 days of the second dose vaccines against SARS-CoV2 show 56.5 percent effectiveness in preventing infections, https://www.uchile.cl/noticias/174186/resultados-primer-estudio-de-efectividad-de-las-vacunas-en-chile .	[245]
Jamie Lopez Bernal, N. (2021), "Effectiveness of Covid-19 Vaccines against the B.1.617.2 (Delta) Variant", <i>The new england journal of medicine</i> .	[170]
Jim Larson, T. (2021), Winning the fight Against Endemic COVID-19, BCG.	[173]
Jones, A. et al. (2021), "Impact of a Public Policy Restricting Staff Mobility Between Nursing Homes in Ontario, Canada During the COVID-19 Pandemic", <i>Journal of the American Medical Directors Association</i> , Vol. 22/3, pp. 494-497, http://dx.doi.org/10.1016/j.jamda.2021.01.068 .	[126]
Jordan Wildon, Joscha Weber (2021), Fact check: No links found between vaccination and deaths, https://www.dw.com/en/fact-check-no-links-found-between-vaccination-and-deaths/a-56458746 .	[65]
Koen B. Pouwels, E. (2021), Impact of Delta on viral burden and vaccine effectiveness against new SARS-CoV-2 infections in the UK.	[171]
Korczyn, A. (2020), "Dementia in the COVID-19 Period", <i>Journal of Alzheimer's Disease</i> , Vol. 75/4, pp. 1071-1072, http://dx.doi.org/10.3233/jad-200609 .	[106]
Koshkouei, M., L. Abel and C. Pilbeam (2020), <i>How can pandemic spreads be contained in care homes?</i> , https://www.cebm.net/covid-19/how-can-pandemic-spreads-be-contained-in-care-homes/ .	[109]
Kuntz, J. et al. (2020), "Feasibility and Acceptability of Inpatient Palliative Care E-Family Meetings During COVID-19 Pandemic", <i>Journal of Pain and Symptom Management</i> , Vol. 60/3, pp. e28-e32, http://dx.doi.org/10.1016/j.jpainsymman.2020.06.001 .	[145]
Lazarus, J. et al. (2020), "A global survey of potential acceptance of a COVID-19 vaccine", Nature Medicine, http://dx.doi.org/10.1038/s41591-020-1124-9 .	[73]
Le Gouvernement du grand-duché de Luxembourg (2006), Haut-Commissariat à la Protection Nationale Pandémie grippale.	[215]
Lee, M. et al. (2019), "Effectiveness and core components of infection prevention and control programmes in long-term care facilities: a systematic review", <i>Journal of Hospital infection</i> , pp. 377-393.	[26]
Leichsenring, K., A. Schmidt and H. Staflinger (2020), <i>The second wave has hit Austria harder – also in care homes</i> , LTCcovid, https://ltccovid.org/2020/11/27/the-second-wave-has-hit-austria-harder-also-in-care-homes/ (accessed on 9 December 2020).	[52]
Levin, A. et al. (2020), "Assessing the age specificity of infection fatality rates for COVID-19: systematic review, meta-analysis, and public policy implications", <i>European Journal of Epidemiology</i> , Vol. 35/12, pp. 1123-1138, http://dx.doi.org/10.1007/s10654-020-00698-1 .	[5]
Lin, H. et al. (2011), "Institutional risk factors for norovirus outbreaks in Hong Kong elderly homes: a retrospective cohort study.", <i>BMC Public Health</i> , pp. 11:297.	[124]

[118] Li, Y. et al. (2020), "COVID -19 Infections and Deaths among Connecticut Nursing Home Residents: Facility Correlates", Journal of the American Geriatrics Society, Vol. 68/9, pp. 1899-1906, http://dx.doi.org/10.1111/jgs.16689. [44] Lorenz-Dant, K. (2020), Germany and the COVID-19 long-term care situation, International long term care policy network, https://www.spiegel.de/politik/deutschland/coronakrise-bayernbeschliesst-exit-fahrplan-a-7eab9983-c0d4- (accessed on 9 December 2020). [208] Lorenz-Dant, K. (2020), Germany and the COVID-19 long-term care situation, https://ltccovid.org/wp-content/uploads/2020/04/Germany LTC COVID-19-23-April-2020_updated.pdf. [227] LTC covid (2020), COVID-19 and Long-Term Care in Slovenia: impact, measures and lessons learnt, https://www.gov.si/teme/koronavirus/,. [162] Mahase, E. (2021), "Covid-19: Reports from Israel suggest one dose of Pfizer vaccine could be less effective than expected", BMJ, p. n217, http://dx.doi.org/10.1136/bmj.n217. [174] Mandavilli, A. (2021), Reaching 'Herd Immunity' Is Unlikely in the U.S., Experts Now Believe. [111] McArthur, C. et al. (2021), "Evaluating the Effect of COVID-19 Pandemic Lockdown on Long-Term Care Residents' Mental Health: A Data-Driven Approach in New Brunswick", Journal of the American Medical Directors Association, Vol. 22/1, pp. 187-192, http://dx.doi.org/10.1016/j.jamda.2020.10.028. [131] McGregor, M. and C. Harrington (2020), COVID-19 and long-term care facilities: Does ownership matter?, Canadian Medical Association, http://dx.doi.org/10.1503/cmaj.201714. McMichael, T. et al. (2020), "Epidemiology of Covid-19 in a Long-Term Care Facility in King [29] County, Washington", The New England Journal of Medicine, pp. 382:2005-2011. [141] Médecins Sans Frontières (2020), Les laissés pour compte de la réponse au Covid-19, Partage d'expérience sur l'intervention de Médecins Sans Frontières dans les maisons de repos de Belgique, https://www.msfazg.be/sites/default/files/imce/Rapport_MaisonsDeRepos/MSF_lessons%20learned%20repor t FR FINAL.pdf. [27] Médecins Sans Frontières (2020), Les laissés pour compte de la réponse au Covid-19, Partage d'expérience sur l'intervention de Médecins Sans Frontières dans les maisons de repos de Belgique,, https://www.msfazg.be/sites/default/files/imce/Rapport MaisonsDeRepos/MSF lessons%201. [4] Meyerowitz-Katz, G. and L. Merone (2020), "A systematic review and meta-analysis of published research data on COVID-19 infection fatality rates", International Journal of Infectious Diseases, Vol. 101, pp. 138-148, http://dx.doi.org/10.1016/j.ijid.2020.09.1464. [74] MHRA (2021), Coronavirus vaccine - weekly summary of Yellow Card reporting, https://www.ecdc.europa.eu/en/publications-data/rollout-covid-19-vaccines-eueea-challengesand-good-practice. [200] Ministerio de salud y protección social (2020), for the prevention of covid-19 infection for personnel involved in social care activities, https://www.minsalud.gov.co/Ministerio/Institucional/Procesos%20y%20procedimientos/GPS G02.pdf (accessed on 14 April 2021).

https://www.siseministeerium.ee/en/taxonomy/term/176 (accessed on 23 Feb 2021).

Ministry oh Health - Japan (2020), Response to new coronavirus infection (for elderly people), https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/hukushi_kaigo/kaigo_koureisha/yobou/index_00013.html (accessed on 2021).	[96]
Minsalud Gobierno de Colombia (2018), MANUAL DE MEDIDAS BÁSICAS PARA EL CONTROL DE INFECCIONES EN IPS.	[196]
Morgan, D. et al. (2020), "Excess mortality: Measuring the direct and indirect impact of COVID-19", OECD Health Working Papers, No. 122, OECD Publishing, Paris, https://dx.doi.org/10.1787/c5dc0c50-en .	[13]
Mutambudzi, M. et al. (2020), "Occupation and risk of severe COVID-19: prospective cohort study of 120 075 UK Biobank participants", <i>Occupational and Environmental Medicine</i> , pp. oemed-2020-106731, http://dx.doi.org/10.1136/oemed-2020-106731 .	[8]
National Center for Epidemiology (2016), <i>Preparing for the flu</i> , http://www.oek.hu/oek.web?to=1679,2081,1950&nid=1057&pid=1⟨=hun (accessed on 22 march 2021).	[209]
National Coordinator for Security and Counterterrorism (NCTV) (2019), <i>Be prepared Sickness wave and epidemic</i> , https://crisis.nl/wees-voorbereid/ziektegolf-en-epidemie/ (accessed on 9 march 2021).	[94]
National Ethics Advisory Committee – Ka ⁻ hui Matatika o te Motu (2007), <i>Getting Through Together - Ethical values for a pandemic</i> .	[220]
National Public Health and Medical Officer Service (2021), <i>National Public Health and Medical Officer Service</i> , https://www.antsz.hu/felso_menu/temaink/jarvany/jarvany_archivum (accessed on 22 march 2021).	[210]
Naylor, M., K. Hirschman and K. McCauley (2020), "Meeting the Transitional Care Needs of Older Adults with COVID-19", <i>Journal of Aging & Social Policy</i> , Vol. 32/4-5, pp. 387-395, http://dx.doi.org/10.1080/08959420.2020.1773189 .	[113]
Neumann-Podczaska, A. et al. (2020), "COVID 19 - Clinical Picture in the Elderly Population: A Qualitative Systematic Review", <i>Aging and disease</i> , Vol. 11/4, p. 988, http://dx.doi.org/10.14336/ad.2020.0620 .	[3]
New Zealand Government - Ministry of Health (2020), <i>Advice for aged care providers – residents with dementia</i> , https://www.health.govt.nz/system/files/documents/pages/advice for aged care providers supporting_residents_with_dementia.pdf .	[224]
New Zealand Government - Ministry oh Health (2020), COVID-19 Information for visiting Aged Residential Care facilities, https://www.health.govt.nz/system/files/documents/pages/covid-19_information_for_visiting_aged_residential_care_facilities.pdf .	[223]
Newfoundland and Labrador - Canada (2021), Long-Term Care and Community Support Services, https://www.gov.nl.ca/covid-19/long-term-care-and-community-support-services/ (accessed on 15 march 2021).	[192]
NHS (2021), COVID-19 VACCINATION, https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-vaccinations/ .	[72]

Nuño, M. et al. (2008), "Protecting residential care facilities from pandemic influenza", Proceedings of the National Academy of Sciences, pp. 105(30):10625. [115] NZ Ministry of Health (2020), Independent Review of COVID 19 Clusters in Aged Residential Care Facilities | Ministry of Health NZ, https://www.health.govt.nz/publication/independentreview-covid-19-clusters-aged-residential-care-facilities (accessed on 30 June 2020). [22] OECD (2020), Assessing the comparability of Long-Term Care spending estimates under the Joint Health Accounts Questionnaire, OECD, Paris, https://www.oecd.org/health/healthsystems/LTC-Spending-Estimates-under-the-Joint-Health-Accounts-Questionnaire.pdf (accessed on 13 May 2021). [25] OECD (2020), Flattening the COVID-19 peak: Containment and mitigation policies, OECD Publishing,. [133] OECD (2020), Realising the Potential of Primary Health Care, OECD Health Policy Studies, OECD Publishing, Paris, https://dx.doi.org/10.1787/a92adee4-en. [2] OECD (2020), Who Cares? Attracting and Retaining Care Workers for the Elderly, OECD Health Policy Studies, OECD Publishing, Paris, https://dx.doi.org/10.1787/92c0ef68-en. [51] OECD (2020), Who Cares? Attracting and Retaining Elderly Care Workers, OECD, http://dx.doi.org/10.1787/92c0ef68-en. [127] OECD (2020), Workforce and safety in long-term care during the COVID-19 pandemic, OECD Publishing, Paris, https://www.oecd.org/coronavirus/policy-responses/workforce-and-safetyin-long-term-care-during-the-covid-19-pandemic-43fc5d50/ (accessed on 11 December 2020). [82] OECD (2019), RESILIENCE STRATEGIES AND APPROACHES TO CONTAIN SYSTEMIC THREATS, https://www.oecd.org/naec/averting-systemic-collapse/SG-NAEC(2019)5 Resilience strategies.pdf (accessed on 11 May 2021). [100] OECD/European Union (2020), Health at a Glance: Europe 2020: State of Health in the EU Cycle, OECD Publishing, Paris, https://dx.doi.org/10.1787/82129230-en. [91] Ogata, T. (2016), Disaster Management in Japan * 1 Developing Role-specific Disaster Management Plans by a Three-tiered Administration Consisting of the National, Prefectural, and Municipal Governments The Emergency Measures Activity Plan Goes into Action Immediately without Waiting for Assistance Request. [128] Oliveira Hashiguchi, T., N. Eze and M. Cecchini (2021, forthcoming), Antimicrobial resistance in long-term care facilities, OECD Publishing. [187] Ontario Ministry of Long Term Care (2020), Guidance for Health Sector, http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/2019_guidance.aspx# LTC (accessed on 9 march 2021). [144] Onwuteaka-Philipsen, B. et al. (2021), "Dying in times of the coronavirus: An online survey among healthcare professionals about end-of-life care for patients dying with and without

COVID-19 (the CO-LIVE study)", Palliative Medicine, p. 026921632110037,

http://dx.doi.org/10.1177/02692163211003778.

Our World in Data (2021), COVID-19 vaccine doses administered per 100 people, <a href="https://ourworldindata.org/explorers/coronavirus-data-explorer?zoomToSelection=true&time=327432&pickerSort=desc&pickerMetric=total_vaccin_ations_per_hundred&Metric=Vaccinations&Interval=Cumulative&Relative+to+Population=true_align+outbreaks=false&country_(accessed on 29 march 2021).</th><th>[152]</th></tr><tr><td>Our World in Data (2021), Vaccinations and the impact of COVID-19 – our continuously-updated data for Israel, https://ourworldindata.org/vaccination-israel-impact . <td>[155]</td>	[155]
Overton, C. et al. (2020), "Using statistics and mathematical modelling to understand infectious disease outbreaks: COVID-19 as an example", <i>Infectious Disease Modelling</i> , Vol. 5, pp. 409-441, http://dx.doi.org/10.1016/j.idm.2020.06.008 .	[18]
Padala, S., A. Jendro and L. Orr (2020), "Facetime to reduce behavioral problems in a nursing home resident with Alzheimer's dementia during COVID-19", <i>Psychiatry Research</i> , Vol. 288, p. 113028, http://dx.doi.org/10.1016/j.psychres.2020.113028 .	[108]
Pappa, S. et al. (2020), "Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis", <i>Brain, Behavior, and Immunity</i> , Vol. 88, pp. 901-907, http://dx.doi.org/10.1016/j.bbi.2020.05.026 .	[53]
Pelling, L. (2021), On the Corona Frontline - The experiences of care workers in nine countries - summary report, http://library.fes.de/pdf-files/bueros/stockholm/17490.pdf .	[49]
Phillips, N. (2021), "The coronavirus is here to stay — here's what that means", <i>Nature</i> , Vol. 590.	[172]
Public Health England (2021), <i>A guide to your COVID-19 vaccination</i> , https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/961301/PHE_11843_Covid-19_vaccination_Easy_Read_guide.pdf .	[62]
Public Health England (2021), <i>Admission and care of residents in a care home during COVID-19</i> , https://www.gov.uk/government/publications/coronavirus-covid-19-admission-and-care-of-people-in-care-homes .	[228]
Public Health Ontario (2021), COVID-19 Long-Term Care Resources, https://www.publichealthontario.ca/en/diseases-and-conditions/infectious-diseases/respiratory-diseases/novel-coronavirus/long-term-care-resources (accessed on 2021).	[188]
Rajan, D. et al. (2020), "Governance of the Covid-19 response: a call for more inclusive and transparent decision-making", <i>BMJ Global Health</i> , Vol. 5/5, p. e002655, http://dx.doi.org/10.1136/bmjgh-2020-002655 .	[38]
Red Cross EU Office (2020), COVID-19 conversations: Stay safe while helping others, https://redcross.eu/latest-news/covid-19-conversations-stay-safe-while-helping-others (accessed on 30 April 2021).	[147]
Red Cross EU Office (2020), COVID-19 conversations: The socio-economic crisis is worrying, https://redcross.eu/latest-news/covid-19-conversations-the-economic-crisis-is-worrying (accessed on 30 April 2021).	[148]
Rios, P. et al. (2020), "Preventing the transmission of COVID-19 and other coronaviruses in older adults aged 60 years and above living in long-term care: a rapid review", <i>Systematic Reviews</i> , Vol. 9/1, http://dx.doi.org/10.1186/s13643-020-01486-4	[23]

Robert Koch Institut (2020), Pandemic plans of the federal states, <a 10.31235="" bj3fk"="" dx.doi.org="" href="https://www.rki.de/DE/Content/InfAZ/I/Influenza/Pandemieplanung/</th><th>[207]</th></tr><tr><td>Rodrigues, R. et al. (2020), Care in times of COVID-19: The impact of the pandemic on informal caregiving in Austria, Center for Open Science, http://dx.doi.org/10.31235/osf.io/bj3fk . <td>[78]</td>	[78]
Rolland, Y. et al. (2020), "A COVID-19 Support Platform for Long Term Care Facilities", <i>The journal of nutrition, health & aging</i> , Vol. 24/5, pp. 461-462, http://dx.doi.org/10.1007/s12603-020-1364-x .	[136]
Rostgaard, T. (2020), COVID-19 long-term care situation in Denmark, International long term care policy network, https://ltccovid.org/wp-content/uploads/2020/05/The-COVID-19-Long-Term-Care-situation-in-Denmark-29-May-2020.pdf (accessed on 9 December 2020).	[34]
Rothgang, H., M. Fünfstück and T. Kalwitzki (2019), "Personalbemessung in der Langzeitpflege", in <i>Pflege-Report 2019</i> , Springer Berlin Heidelberg, Berlin, Heidelberg, http://dx.doi.org/10.1007/978-3-662-58935-9 11.	[121]
Roy, D. (2020), Surmortalité en Ehpad : le terrible constat, EHPA, https://www.ehpa.fr/actualite/surmortalite-en-ehpad-le-terrible-constat/ (accessed on 13 May 2021).	[14]
Salcher-Konrad, M. (2020), "COVID-19 related mortality and spread of disease in long-term care: a living systematic review of emerging evidence".	[12]
Santé et Services Sociaux Québec (2021), <i>Directives COVID-19 du ministère de la Santé et des Services sociaux</i> , https://publications.msss.gouv.qc.ca/msss/directives-covid-19/ (accessed on 15 march 2021).	[189]
Schmidt, A. et al. (2020), <i>The impact of COVID-19 on users and providers of Long-Term Care services in Austria</i> , https://info.gesundheitsministerium.at/dashboard GenTod.html?l=de;	[180]
Secretaria de Estado de Derechos Sociales España (2020), INFORME DEL GRUPO DE TRABAJO COVID 19 Y RESIDENCIAS.	[122]
Senat (2020), Santé publique : pour un nouveau départ - Leçons de l'épidémie de Covid-19, https://www.senat.fr/presse/cp20201210a.html (accessed on 11 May 2021).	[28]
Shared Health Soins Commun Manitoba (2021), Infection Prevention and Control Guidance for Personal Care Homes.	[186]
Singer, M. (2020), Performance of Care Homes for the Elderly in Chile against Covid-19, Pontificia Universidad Católica de Chile.	[137]
Sitoh, Y. (2003), "Severe acute respiratory syndrome: effect on community and residential aged care services in Singapore", <i>J Am Geriatr Soc. 51. United States</i> , pp. 1505-1506.	[104]
SNS (2021), Perguntas Frequentes, https://www.sns.gov.pt/vacinacaocovid19/perguntas-frequentes/ .	[60]
Soiza, R., C. Scicluna and E. Thomson (2020), "Efficacy and safety of COVID-19 vaccines in older people". <i>Age and Ageing</i> , http://dx.doi.org/10.1093/ageing/afaa274.	[63]

Spanish Government (2021), Estrategia de vacunación COVID-19, https://www.vacunacovid.gob.es/ .	[59]
Spanish Ministry of Science and Innovation (2020), Estudio ENE-COVID: una de cada diez personas en España habría sido infectada por el coronavirus desde el inicio de la pandemia, https://www.isciii.es/Noticias/Noticias/Paginas/Noticias/ResultadosCuartaRondaENECOVID.aspx (accessed on 14 April 2021).	[7]
Spasova, S. et al. (2018), <i>Challenges in long-term care in Europe. A study of national policies</i> , European Social Policy Network (ESPN).	[21]
Spiteri, G. et al. (2020), "First cases of coronavirus disease 2019 (COVID-19) in the WHO European Region, 24 January to 21 February 2020", <i>Eurosurveillance</i> , Vol. 25/9, http://dx.doi.org/10.2807/1560-7917.es.2020.25.9.2000178 .	[248]
Stall, N. et al. (2020), "Finding the Right Balance: An Evidence-Informed Guidance Document to Support the Re-Opening of Canadian Nursing Homes to Family Caregivers and Visitors during the Coronavirus Disease 2019 Pandemic", <i>Journal of the American Medical Directors Association</i> , Vol. 21/10, pp. 1365-1370.e7, http://dx.doi.org/10.1016/j.jamda.2020.07.038 .	[81]
Stall, N. et al. (2020), "For-profit long-term care homes and the risk of COVID-19 outbreaks and resident deaths", <i>CMAJ</i> , Vol. 192/33, pp. E946-E955, http://dx.doi.org/10.1503/cmaj.201197 .	[130]
Sugg, M. et al. (2021), "Mapping community-level determinants of COVID-19 transmission in nursing homes: A multi-scale approach", <i>Science of The Total Environment</i> , Vol. 752, p. 141946, http://dx.doi.org/10.1016/j.scitotenv.2020.141946 .	[116]
Summan, A. and A. Nandi (2020), <i>Timing of non-pharmaceutical interventions to mitigate COVID-19 transmission and their effects on mobility: A cross-country analysis</i> , Cold Spring Harbor Laboratory, http://dx.doi.org/10.1101/2020.05.09.20096420 .	[102]
Tahan, H. (2020), "Essential Case Management Practices Amidst the Novel Coronavirus Disease 2019 (COVID-19) Crisis: Part 2", <i>Professional Case Management</i> , Vol. 25/5, pp. 267-284, http://dx.doi.org/10.1097/ncm.000000000000000055 .	[142]
The COVID-19 Immunity Task Force (2020), <i>Helping to Guide Canada's Epidemic Response</i> , https://www.covid19immunitytaskforce.ca/ (accessed on 22 Ferbuary 2021).	[234]
the COVID-19 Ontario Modelling Group (2020), Failing our Most Vulnerable: COVID-19 and Long-Term Care Facilities in Ontario, Cold Spring Harbor Laboratory, http://dx.doi.org/10.1101/2020.04.14.20065557 .	[114]
Torjesen, I. (2021), "Covid-19: Norway investigates 23 deaths in frail elderly patients after vaccination", <i>BMJ</i> , p. n149, http://dx.doi.org/10.1136/bmj.n149 .	[66]
Tse, M., S. Pun and I. Benzie (2003), "Experiencing SARS: perspectives of the elderly residents and health care professionals in a Hong Kong nursing home.", <i>Geriatric nursing</i> , pp. 24(5):266-269.	[105]
U.S. CDC (2016), CDC-LTC-Planning-Guide.	[231]
UK Government (2021), Free PPE for unpaid carers, https://www.gov.uk/government/news/free-ppe-for-unpaid-carers (accessed on 3 May 2021).	[80]

Yeung, W., W. Tam and T. Wong (2011), "Clustered randomized controlled trial of a hand hygiene intervention involving pocket-sized containers of alcohol-based hand rub for the control of infections in long-term care facilities", *Infect Control Hosp Epidemiol*, pp. Jan;32(1):67-76.

https://www.japantimes.co.jp/how-to-coronavirus-vaccinations-japan/.

[30]

OECD Health Working Papers

A full list of the papers in this series can be found on the OECD website:

http://www.oecd.org/els/health-systems/health-working-papers.htm

No. 130 – THE ECONOMICS OF PATIENT SAFETY PART IV: SAFETY IN THE WORKPLACE - OCCUPATIONAL SAFETY AS THE BEDROCK OF RESILIENT HEALTH SYSTEMS (September 2021) Katherine de Bienassis, Luke Slawomirski and Nicolaas S. Klazinga

No. 129 - EMPOWERING THE HEALTH WORKFORCE TO MAKE THE MOST OF THE DIGITAL REVOLUTION (June 2021)

Karolina Socha-Dietrich

No. 128 - LAYING THE FOUNDATIONS FOR ARTIFICIAL INTELLIGENCE IN HEALTH (June 2021) Tiago Cravo Oliveira Hashiguchi, Luke Slawomirski and Jillian Oderkirk

No. 127 – SURVEY RESULTS: NATIONAL HEALTH DATA INFRASTRUCTURE AND GOVERNANCE (April 2021) Jillian Oderkirk

No. 126 – INTERNATIONAL MIGRATION AND MOVEMENT OF DOCTORS TO AND WITHIN OECD COUNTRIES - 2000 TO 2018 - DEVELOPMENTS IN COUNTRIES OF DESTINATION AND IMPACT ON COUNTRIES OF ORIGIN (February 2021) Karolina Socha-Dietrich and Jean-Christophe Dumont

No. 125 – INTERNATIONAL MIGRATION AND MOVEMENT OF NURSING PERSONNEL TO AND WITHIN OECD COUNTRIES - 2000 TO 2018 - DEVELOPMENTS IN COUNTRIES OF DESTINATION AND IMPACT ON COUNTRIES OF ORIGIN (February 2021) Karolina Socha-Dietrich and Jean-Christophe Dumont

No. 124 – SKILLS FOR THE FUTURE HEALTH WORKFORCE - PREPARING HEALTH PROFESSIONALS FOR PEOPLE-CENTRED CARE (February 2021) Akiko Maeda and Karolina Socha-Dietrich

No. 123 - CHALLENGES IN ACCESS TO ONCOLOGY MEDICINES: POLICIES AND PRACTICES ACROSS THE OECD AND THE EU (November 2020) Suzannah Chapman, Valérie Paris and Ruth Lopert

No. 122 - EXCESS MORTALITY: MEASURING THE DIRECT AND INDIRECT IMPACT OF COVID-19 (October 2020) David Morgan, Junya Ino, Gabriel Di Paolantonio and Fabrice Murtin

No. 121 – THE ECONOMICS OF PATIENT SAFETY PART III: LONG-TERM CARE - VALUING SAFETY FOR THE LONG HAUL (September 2020) Katherine de Bienassis, Ana Llena-Nozal and Nicolaas S. Klazinga

No. 120 – SYSTEM GOVERNANCE TOWARDS IMPROVED PATIENT SAFETY - KEY FUNCTIONS, APPROACHES AND PATHWAYS TO IMPLEMENTATION (September 2020) Ane Auraaen, Kristin Saar and Nicolaas S. Klazinga

Recent related OECD publications

OECD HEALTH STATISTICS 2021 - Online Database available from:

http://www.oecd.org/health/health-data.htm

PRICING LONG-TERM CARE FOR OLDER PERSONS (2021)

A NEW BENCHMARK FOR MENTAL HEALTH SYSTEMS - TACKLING THE SOCIAL AND ECONOMIC COSTS OF MENTAL ILL-HEALTH (2021)

PREVENTING HARMFUL ALCOHOL USE (2021)

OECD REVIEWS OF PUBLIC HEALTH: LATVIA (2020)

HEALTH AT A GLANCE: EUROPE (2020)

HEALTH AT A GLANCE: ASIA/PACIFIC (2020)

EMPOWERING THE HEALTH WORKFORCE - STRATEGIES TO MAKE THE MOST OF THE DIGITAL **REVOLUTION (2020)**

HEALTH AT A GLANCE: LATIN AMERICA AND THE CARIBBEAN (2020)

WHO CARES? ATTRACTING AND RETAINING CARE WORKERS FOR THE ELDERLY (2020)

REALISING THE POTENTIAL OF PRIMARY HEALTH CARE (2020)

WAITING TIMES FOR HEALTH SERVICES: NEXT IN LINE (2020)

IS CARDIOVASCULAR DISEASE SLOWING IMPROVEMENTS IN LIFE EXPECTANCY? OECD AND THE KING'S FUND WORKSHOP PROCEEDINGS (2020)

ADDRESSING CHALLENGES IN ACCESS TO ONCOLOGY MEDICINES (2020)

OECD REVIEWS OF PUBLIC HEALTH: KOREA - A HEALTHIER TOMORROW (2020)

COUNTRY HEALTH PROFILES (2019)

HEALTH IN THE 21ST CENTURY: PUTTING DATA TO WORK FOR STRONGER HEALTH SYSTEMS (2019)

THE SUPPLY OF MEDICAL ISOTOPES: AN ECONOMIC DIAGNOSIS AND POSSIBLE SOLUTIONS (2019)

HEALTH AT A GLANCE (2019)

THE HEAVY BURDEN OF OBESITY - THE ECONOMICS OF PREVENTION (2019)

HEALTH FOR EVERYONE? - SOCIAL INEQUALITIES IN HEALTH AND HEALTH SYSTEMS (2019)

RECENT TRENDS IN INTERNATIONAL MIGRATION OF DOCTORS, NURSES AND MEDICAL STUDENTS (2019)

For a full list, consult the OECD health web page at http://www.oecd.org/health/

New Health Brochure