



Mortality associated with COVID-19 in care homes: international evidence

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Corrections and comments are welcome at info@itccovid.org. This document was last updated on 1 February 2021 and may be subject to revision.

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1. Key findings

- Not all countries publish data on the numbers of deaths among care home residents linked to COVID-19 and international comparisons of the data available are difficult due to differences in testing capabilities and policies (particularly in the earlier part of the pandemic), different approaches to recording deaths, and differing definitions of what constitutes a “care home”.
- There are three main approaches to quantifying deaths in relation to COVID-19: **deaths of people who test positive** (before or after their death), **deaths of people suspected** to have COVID-19 (based on symptoms or epidemiologically linked), and **excess deaths** (comparing total number of deaths with those in the same weeks in previous years). Another important distinction is whether the data covers deaths of care home residents or only deaths in the care home (as there are variations in the share of care home residents who are admitted to hospital and may die there).
- Despite the difficulties arising from differences in definitions, in almost all countries where there have been deaths linked to COVID-19, a substantial proportion of those deaths were among care home residents.
- Based on the data gathered for this report, the current average of the share of **all COVID-19 deaths that were care home residents is 41% (based on 22 countries), this is lower than in previous phases in the pandemic.**
- Adding up all the deaths of care home residents counted in the data available for the 22 countries covered in this report amounts to just over 325,000 deaths of care home residents attributed to COVID-19 since the beginning of the pandemic, this would be equivalent to the entire population of Thessaloniki (Greece) or Cordoba (Spain)¹.
- To compare the relative impact of COVID-19 on care home residents in different countries it is useful to focus on the share of all care home residents whose deaths have been linked to COVID-19. For the countries where data is available, **the share of all care home residents who have died (linked to COVID-19) ranges from 0.02% in Singapore and 0.04% in New Zealand to over 5% (which would mean that over one in 20 care home residents have died linked to COVID-19) in Belgium, France, the Netherlands, Slovenia, Spain, Sweden, the UK and the USA.**
- The share of all care home residents who have died (linked to COVID-19) is highly correlated to the total number of COVID-19 deaths in the population who live outside care homes.
- It is also worth noting that whilst the focus of this report is on care homes, many older people receive care in the community. Currently, there is limited evidence from anywhere in the world on how those individuals have been directly or indirectly affected by COVID-19.

2. Measuring the impact of COVID-19 on care home residents and staff: imperfect and limited data

International evidence has shown that people living in care homes are particularly vulnerable to severe COVID-19 infections and they have experienced high rates of mortality as a result. There are also

¹ https://en.wikipedia.org/wiki/List_of_cities_in_the_European_Union_by_population_within_city_limits

numerous examples from those countries of care homes becoming unviable, as not enough staff are available due to sickness and self-isolation measures.

This document uses “care homes” for all non-acute residential and nursing facilities that house people with some form of long-term care needs. It is important to note that what is considered a care home is different in most countries and as a result, this means that the data summarised in this report is not strictly comparable. We have sought to use a consistent definition within each country for both the number of deaths in care homes, and the total population living in care homes.

Another difficulty in comparing data on deaths is that, in some countries, the data only record the place of death, while others also report deaths in hospital of care home residents. We have tried to clarify this where possible. There may also be differences in the extent to which care home residents are transferred to hospital or not.

The authors of this report are fully aware of the limitations of existing data and do not consider that the data presented here are directly comparable, however, the differences on the impact of COVID-19 related mortality in care homes between countries are large, suggesting very different international experiences.

Measuring the COVID-19 impacts among people living in care homes is important. In the earlier part of the pandemic, lack of public awareness of the levels of infections and deaths of care residents and staff may have meant that the settings (other than hospitals) that were experiencing the biggest challenges in relation to COVID-19 were not able to access scarce resources (including testing, personal protection equipment, medical personnel and medicines).

This document, which will continue to be updated and improved as new information and data become available, summarises information from three types of sources: epidemiological studies, official estimates and news reports and relies on national experts for confirmation of sources and definitions. The countries that are included are those for which the authors had information, mostly with thanks to the authors of the LTCcovid.org country reports on the COVID-19 long-term care situation, or where information was accessible through official websites. The authors are grateful for information that enables the addition of more countries and that helps interpret the data.

The European Centre for Disease Prevention and Control (ECDC) gathers epidemiological data on COVID-19 in long-term care facilities for European Union and European Economic Area countries; and also provides guidance and shares resources from official bodies through their website^{2,3}.

3. Methods to estimate deaths linked to COVID-19

There are three main approaches to recording deaths linked to COVID-19. It is important to understand the differences in the data that is obtained through these different approaches, and to consider the role of each of these approaches in terms of generating the information that is needed to develop strategies to reduce the impact of COVID-19.

² [Risk factors and risk groups \(europa.eu\)](https://www.europa.eu) and <https://www.ecdc.europa.eu/sites/default/files/documents/Increase-fatal-cases-of-COVID-19-among-long-term-care-facility-residents.pdf>

³ [Surveillance of COVID-19 at long-term care facilities in the EU/EEA \(europa.eu\)](https://www.europa.eu)

3.1. Numbers of deaths of people who have tested positive for COVID-19

If it were possible to test everyone suspected of having COVID-19, either while still alive or post-mortem, this method would offer the most accurate count of the numbers of people who have died while being infected with COVID-19. These data are very important to learn more about the epidemiology of the disease and how it affects people with different characteristics and underlying health conditions in terms of case fatality, long-term sequelae, etc.

Under this definition, the new International Classification of Diseases, Tenth Revision (ICD-10) emergency code U07.1 is used in mortality coding. Specifically, this code is used when COVID-19 has been confirmed by laboratory testing, irrespective of severity of clinical signs or symptoms⁴.

This approach has several limitations in terms of offering an estimate of the impact of the disease in the population or among a certain population group. The first limitation is that very few countries have the capacity to test all people with symptoms⁵. The second is that, particularly among care home residents who have underlying health conditions, the infection may present with atypical symptoms (such as delirium) that may be attributed to other potential conditions (for example urinary tract infections) and, as a result, it is possible that some people may not be tested because their symptoms are not identified as potential COVID-19. It is also important to note that in many countries, at least initially, care homes were not prioritised for testing, which means that relying on the numbers of people who died with a positive test for COVID-19 would leave out most of the deaths that happened in care homes. Another limitation of this approach is that it does not include deaths that are indirectly linked to COVID-19, for example, due to people not using health care services for other conditions, or due to difficulties linked to social isolation measures.

3.2. Number of deaths of people suspected of having COVID-19

Another approach to measure deaths linked to COVID-19 is to count suspected cases, to reflect that, particularly at the beginning of the first waves, in many countries there was very limited testing capacity in care homes. This approach has the advantage of providing timely information that is not subject to biases introduced by testing priorities. In terms of estimating the number of deaths in care homes, particularly where initial testing priorities were entirely focused on hospital, a system that records suspected cases can provide important timely information on the potential scale of deaths linked to COVID-19 in care homes and private households. Such information can be used to support decisions, for example, to increase testing in care homes or of staff that provide care in private homes, as we have observed in Ontario, Canada. However, this approach has the risk of miss-attribution of deaths and could lead to an overestimation of fatalities attributable to COVID-19. Not surprisingly, countries that have taken this approach report higher proportions of deaths due to COVID-19 than countries that report deaths among confirmed cases only (see figure 1 in this report).

Under this definition, ICD-10 emergency code U07.2 is used in mortality coding. Specifically, this code should be used when COVID-19 is diagnosed clinically or epidemiologically but laboratory testing is inconclusive or not available⁶.

⁴ <https://icd.who.int/browse10/2019/en#/U07.1>

⁵ https://read.oecd-ilibrary.org/view/?ref=129_129658-l62d7lr66u&title=Testing-for-COVID-19-A-way-to-lift-confinement-restrictions

⁶ <https://icd.who.int/browse10/2019/en#/U07.1>

3.3. Number of excess deaths during the COVID-19 pandemic compared to previous years

Comparing the deaths during the COVID-19 pandemic to deaths that have happened in previous years in the same weeks or months (“excess mortality”) is the most accurate way to estimate the mortality impact of COVID-19. This approach has the advantage of including deaths that are indirectly linked to COVID-19. These data on mortality will typically be collected by national statistical offices through the registration of deaths. It is important to note that in most countries there is a lag between the date in which a death occurs, and the date in which it is registered, and that disaggregation by place of death (for example between hospital, care homes and private homes) is not always made available in a timely manner. Excess deaths should also take into account year-on-year variability in weekly death rates, which can be affected by, among other things, seasonal flu outbreaks. Ideally, comparisons should show the range of deaths on each week over a historical time period – such as the previous five years.

4. International data on mortality associated with COVID-19 among care home residents

This section describes the data available in as many countries as the authors have been able to find, in many cases with thanks to national experts, including those who have contributed to LTCcovid.org country reports.

It is very important to note that the data reported here are not directly comparable. Data from official sources have been used where possible, and, when not available, information from official announcements collected in reliable news sources have been collected. We have tried to be as explicit as possible about the approaches to data collection in each of the countries and about potential caveats. All data sources are acknowledged in the footnotes, with links where possible to facilitate checking and updating.

Australia

The Department of Health of the Australian Government first published deaths linked to COVID-19 in care homes on the 15th of April 2020, as well as deaths among users of home care services. By 22nd January 2021 there have been 2,051 confirmed cases of COVID-19 infections among government-subsidized residents in aged care facilities, 97% of which were in the state of Victoria. There have also been 685 deaths among residents (95% of those in Victoria). Among people who use government-subsidized home care, there had been 81 cases of infections and 8 deaths⁷. A weekly report (data from 14th January) also includes data on the number of outbreaks and staff infected in care homes. There have been no active cases of COVID-19 among people living in care homes since 28th October 2020. There had been 2,238 staff with COVID-19 infections.

In total, by the 22nd January 2021, there had been 28,755 cases and 909 deaths, suggesting that 75% of all COVID-19 deaths so far in Australia have been among care home residents. These figures are based on people who have tested positive for COVID-19 and are for the place of residence, not place of death (may include residents who died in hospital).

⁷ <https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert/coronavirus-covid-19-current-situation-and-case-numbers#cases-in-aged-care-services>

In 2020 there were approximately 208,500 people living in aged care residential accommodation in Australia⁸, so the numbers of deaths so far would amount to 0.33%.

Austria

During the earlier part of the pandemic Austria was among those countries that had reported less infections per 100,000 inhabitants, and less deaths in care homes. During the second wave of the COVID-19 pandemic Austria experienced very high rates of infections and this was also reflected in a steep rise of infections and deaths due to COVID-19 in care homes⁹. By January 2021, infection growth rates are decreasing again, as is the number of SARS-CoV-2 cases in care homes. With infection rates and case fatality rates increasing, Austria extended systematic screening and monitoring in care homes. Staff and care home residents are being tested on a regular basis. Significant differences remain between regions due to different policies by regional governments that are responsible for care homes.

Data from the 24th January 2021 shows that, up to that date, 18,080 residents in care homes (including all ages) tested positive for COVID-19 and of these, 3,243 had died with COVID-19. Compared to the 7,328 total deaths linked to COVID-19 in Austria on the same date, deaths of care home residents would represent 44% of all deaths (data from the Austrian epidemiological alert system and based on care home data reported by the Länder). There have been 10,180 cases among staff in care homes, of which one was fatal.

While, after the first wave, only 0.4% of care home residents had died according to data from 17th September 2020, by January 2021 this number has risen to 4.7%, using 69,730 residents in care homes in Austria as the denominator for the total number of care home residents¹⁰.

Belgium

Belgium first reported official estimates of the number of deaths in care homes on the 11th April 2020. The data is collected by Sciensano, a public research institution, which publishes very detailed epidemiological daily reports on COVID-19¹¹. They include data on the number of deaths in care homes (“maisons de repos”). As of the 15th April, reports have also included the number of tests done within care homes. For deaths outside hospital, Belgium reports both “confirmed” cases (through a test or, since the 1st April, a chest scan), and “suspected” cases where the patient had not been tested but a doctor confirmed that their symptoms were consistent with COVID-19.

On 19th January 2021, there had been 20,457 deaths linked to COVID-19 in Belgium, of these, 11,722 people lived in care homes (57%). This number also includes suspected cases, particularly during the earlier part of the pandemic. Of the 11,343 deaths of care home residents, 8,852 happened in care homes (76%) and the rest (2,850) in hospital. Belgium has an estimated 125,000 people aged 65 and over living in care homes¹², the number of care home residents whose deaths are linked to COVID-19 so far would represent 9.38% of all care home residents.

⁸ <https://www.aihw.gov.au/reports/australias-welfare/aged-care> (calculated as number of residents minus those using temporary respite care)

⁹ Leichsenring, K., Schmidt, A.E. & Stafflinger, H. (2020) The second wave has hit Austria harder – also in care homes, LTCCovid Blog, available at <https://ltccovid.org/2020/11/27/the-second-wave-has-hit-austria-harder-also-in-care-homes/> (27th November 2020).

¹⁰ BM Arbeit, Soziales, Gesundheit und Konsumentenschutz (BMASGK) (2019), *Österreichischer Pflegevorsorgebericht* (Austrian Report on Long-term Care 2018), Vienna, BMASGK.¹⁰

¹¹ <https://covid-19.sciensano.be/sites/default/files/Covid19/Derni%C3%A8re%20mise%20%C3%A0%20jour%20de%20la%20situation%20%C3%A9pid%C3%A9miologique.pdf>

¹² <https://kce.fgov.be/fr/les-maisons-de-repos-ne-se-pr%C3%A9parent-pas-un-avenir-de-tout-repos>

Brazil

There are no official data on the number of cases and mortality related to COVID-19 in Brazilian care homes, nor on the profile of the residents who have died. A report published in September 2020 found that, based on data collated informally by the researchers, there have been over 4,015 confirmed cases and 937 deaths in Brazilian care homes, which represents a case fatality rate of 23.33%. Nearly 65% of care home managers reported to be currently experiencing financial difficulties¹³.

Canada

On March 5, the first outbreak in a Canadian long-term care home was reported in the province of British Columbia (BC), where a staff member at the Lynn Valley Care Centre in Vancouver had tested positive for COVID-19¹⁴. On March 8, a resident at the home became the first Canadian to die from COVID-19. Since early March, BC's Provincial Health Officer has provided regular updates to the public on the number of cases and deaths in care homes through press conferences. Similarly, many other provincial medical officers of health and premiers have provided frequent updates on the spread of COVID-19 in Canadian care homes. Some jurisdictions have been publishing updates on care homes systematically as part of the provinces' epidemiological reports since late-March, such as the ones produced by the BC Centre for Disease Control¹⁵ starting on March 23 and Public Health Ontario on March 31¹⁶. As of October 1, 8 of 13 Canadian provinces and territories still have had either no or very few cases in care homes¹⁷.

According to the 2016 Census, 425,755 Canadians live in long-term care or retirement homes as well as assisted living facilities. According to the Public Health Agency of Canada,¹⁸ 11,114 out of 18,974 (59%) COVID-19 deaths in Canada were reported from these settings as of the 23rd January.

Due to variation in reporting across the provinces, we are unable to determine whether the location of death was in a care home at this time. It is important to note that, in Canada, many official sources have been reporting total counts of deaths in care homes, whether or not COVID-19 was determined to be a contributing or underlying cause of death. This may have inflated the estimates of the proportion of deaths due to COVID-19. Unfortunately, given the low rates of testing early on in the pandemic, some residents who died remain suspected rather than confirmed cases without post-mortem testing. Comparing the deaths during the COVID-19 pandemic to deaths during the same period in previous years (e.g., in the same weeks or months to determine the excess mortality) may be the best way to estimate the true mortality impact of COVID-19.

Denmark¹⁹

By the 19th January 2021 there had been confirmed COVID-19 infections in 40% of Danish nursing homes (380 out of 937). 3,232 residents in nursing homes in Denmark had tested positive for COVID-19 and 719

¹³ Wachholz PA, Ferri CP, Mateus E, Da Mata F, Villas-Boas P, Watanabe HAW, Oliveira D. The COVID-19 situation in Brazilian care homes and actions taken to mitigate infection and reduce mortality. LTCcovid.org, International Long-Term Care Policy Network, CPEC-LSE, September 2020. <https://ltccovid.org/2020/09/14/updated-report-covid-19-situation-in-brazilian-care-homes-and-actions-taken-to-mitigate-infection-and-reduce-mortality/>

¹⁴ <https://www.theglobeandmail.com/canada/article-how-the-coronavirus-took-north-vancover-s-lynn-valley-care-centre/>

¹⁵ <http://www.bccdc.ca/health-info/diseases-conditions/covid-19/data>

¹⁶ <https://www.ontario.ca/page/how-ontario-is-responding-covid-19#section-0>

¹⁷ <https://ltccovid.org/wp-content/uploads/2020/04/LTC-COVID19-situation-in-Canada-22-April-2020-1.pdf>

¹⁸ <https://www.canada.ca/content/dam/phac-aspc/documents/services/diseases/2019-novel-coronavirus-infection/surv-covid19-weekly-epi-update-20210129-eng.pdf>

¹⁹ With thanks to Tine Rostgaard

of these had died²⁰. In the total population, 1,837 COVID-19 related deaths were confirmed, the share of confirmed deaths among nursing home residents was 39%.

There were just over 40,000 nursing home residents in Denmark, this suggests that 1.79% of nursing home residents would have died from confirmed COVID-19.

On the 8th January 2021 Denmark reported that all care home residents who wished to had received the 1st dose of the COVID-19 vaccine²¹.

Finland²²

As of 22nd January 2021, 41,915 people had tested positive for COVID-19 in Finland and 644 people died. Of those, 33% (213) died in social care 24-hour units²³. In 2018 there were 50,298 residents in 24-hour units²⁴, the share of COVID-19-related deaths in these units represents 0.42% of residents.

France

France first published official death estimates for people in care homes on the 31st of March. Deaths linked to COVID-19 among care home residents had been stable from the end of July until the week ending 20th September, when they started to increase again.

The most recent numbers published by the Ministry of Health on the 21st January reported a total of 71,342 deaths as a result of COVID-19, of which 30,395 (43%) were residents in care homes²⁵. Of these, 21,646 (71%) died in the care homes and, particularly in the earlier part of the pandemic, were mostly “probable cases” (people who were not tested but a doctor confirmed that the symptoms were associated with COVID-19). The remaining 8,749 died in hospital and were confirmed through testing²⁶.

Until the 21st January there have been 162,430 confirmed infections among care home residents, and 83,930 among care home staff. Deaths among care home staff are not reported in this bulletin. There are an estimated 605,061 care home beds in France²⁷, thus the number of deaths of care home residents linked to COVID-19 would represent 5.02% of all the available beds.

Germany²⁸

Germany’s Robert Koch-Institute (RKI) published the first official number of infections and deaths in different care settings on 22 April. People in care and nursing homes are covered under §36 of the Protection Against Infection Law (IfSG). §36 also includes people living in facilities for people with disabilities or other care needs, homeless shelters, community facilities for asylum-seekers, repatriates and refugees as well as mass accommodation and prisons.

Since the 22nd April, the RKI has provided daily updates. In Germany, medical doctors and other health and care professionals must inform the local health authorities about each suspected case of COVID-19. The health authorities transmit the information within one working day to the relevant highest health

²⁰ <https://covid19.ssi.dk/overvagningsdata/ugentlige-opgorelser-med-overvaagningsdata>

²¹ <https://www.sst.dk/da/Udgivelser/2021/Vaccinationskalender>

²² <https://ltccovid.org/2020/06/14/new-report-covid-19-and-clients-of-long-term-care-in-finland-impact-and-measures-to-control-the-virus/>, with thanks to Leena Forma, Juitta Pulkki and Mari Aaltonen

²³ <https://thl.fi/en/web/infectious-diseases-and-vaccinations/what-s-new/coronavirus-covid-19-latest-updates/situation-update-on-coronavirus>

²⁴ <https://thl.fi/fi/tilastot-ja-data/tilastot-aiheittain/ikaantyneet/sosiaalihuollon-laitos-ja-asumispalvelut>

²⁵ établissements sociaux et médico-sociaux (ESMS)

²⁶ <https://www.santepubliquefrance.fr/maladies-et-traumatismes/maladies-et-infections-respiratoires/infection-a-coronavirus/documents/bulletin-national/covid-19-point-epidemiologique-du-21-janvier-2021>

²⁷ <https://www.insee.fr/fr/statistiques/3676717?sommaire=3696937>

²⁸ With thanks to Klara Lorenz-Dant

authority within their federal state. They then provide the Robert Koch-Institute with the relevant data. There can be a delay in reporting, which is why the data presented here may not entirely represent the number of cases of COVID-19 and COVID-19 related deaths for the specific dates. Data that is being transmitted later is being added to the relevant dates as it comes in and feeds into the total case count. Data recorded here includes only confirmed cases following a laboratory diagnosis independent of clinical assessment. In addition, the Robert Koch-Institute advises that information on care setting is missing in 37% of transmitted cases, which means that the number of people affected in specific care settings, represents the minimum number of cases. A report by Rothgang and colleagues²⁹ estimated that, based on a survey of care homes, the share of all care home residents' deaths attributed to COVID-19 by May 2020 was 49% of all COVID-19 deaths, which is higher than the rate that would result from the RKI data at the time (36%).

Based on the RKI data, on 22nd January 2021, 90,625 people living in communal settings and 44,209 people working in these settings (as defined by §36 IfSG) had been infected with COVID-19. Out of these, 14,066 residents as well as 119 staff have died. The total deaths in Germany on the same date were 40,686, so deaths in communal settings represent 28% of all deaths³⁰. So far, we have not found data on the suspected numbers of deaths or excess mortality in care homes.

It is important to emphasize that these data from Germany includes communal settings such as homeless shelters, accommodation for refugees and prisons, which may house a younger population, so it is not directly comparable with the data on care homes presented for the other countries in this report. However, these data suggest that in Germany care residents represent a smaller share of all deaths compared to other countries with similar number of deaths in total. The total number of people living in care and nursing homes in Germany in 2017 was 818,000³¹, assuming that there were a similar number in 2020 and that all the deaths in communal establishment had been care home residents, 1.72% of all care home residents would have died due to COVID-19 so far.

Hong Kong SAR China³²

According to the daily update of the Government as of 25th January 2021, there have been 10,086 confirmed cases of COVID-19. Among them, 169 people have passed away³³. There have been 20 care homes in outbreaks, resulting in 124 residents and 29 staff members testing positive. 32 residents have died (19% of all deaths in Hong Kong)³⁴. It is estimated that there are 73,231 care home residents in Hong Kong³⁵, the share of deaths among residents would be 0.04%.

²⁹ Rothgang H, Wolf-Ostermann K, Domhoff D, Friedrich AC, Heinze F, Preuss B, Schmidt A, Seibert K and Stolle C (2020) Care homes and COVID-19: results of an online survey in Germany. LTCovid, International Long-Term Care Policy Network, CPEC-LSE, 7 July 2020.

<https://lccovid.org/wp-content/uploads/2020/07/Care-homes-and-Covid19-survey-of-care-homes-in-Germany-16-July-2020.pdf>

³⁰ https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Situationsberichte/Jan_2021/2021-01-22-de.pdf?__blob=publicationFile

³¹ <https://de.statista.com/statistik/daten/studie/36438/umfrage/anzahl-der-zu-hause-sowie-in-heimen-versorgten-pflegebeduerftigen-seit-1999/>

³² With thanks to Kayla Wong

³³ <https://chp-dashboard.geodata.gov.hk/covid-19/en.html>

³⁴ Fernando Chiu Hung Cheung Legislative Councilor's Office (26 Nov.2020). 安老院疫情資訊. Retrieved from https://m.facebook.com/fernandochiuhungcheung/photos/a.10150240176145721/10164335519515721/?type=3&source=54&ref=page_inter and Labour and Welfare Bureau (13 Dec 2020). 院舍之「須檢必檢」(二). Retrieved from https://www.lwb.gov.hk/tc/blog/post_13122020.html

³⁵ Based on data from:

[https://www.swd.gov.hk/storage/asset/section/632/en/15.Number_of_Homes_Providing_Residential_Care_Services_for_the_Elderly_\(By_district\)\(30.6.20\).pdf](https://www.swd.gov.hk/storage/asset/section/632/en/15.Number_of_Homes_Providing_Residential_Care_Services_for_the_Elderly_(By_district)(30.6.20).pdf), [https://www.swd.gov.hk/storage/asset/section/632/en/3.Provision_of_RCHes_\(Subsidised_versus_Non-subsidised_Places\)\(30.6.20\).pdf](https://www.swd.gov.hk/storage/asset/section/632/en/3.Provision_of_RCHes_(Subsidised_versus_Non-subsidised_Places)(30.6.20).pdf) and <https://www.statistics.gov.hk/pub/B72002FA2020XXXXB0100.pdf>

Hungary³⁶

The last data publicly available is from the 27th August 2020 there had been 614 COVID-19 deaths in Hungary and, of these, 142 were in care homes (23%)³⁷. COVID-19 deaths are defined as people who have tested positive and died. The current number of deaths (28th September) is 749, but no data on care home residents data has been published since the 27th August.

As less than 3% of the population aged 65 or more lives in care homes in Hungary, it is expected that the share of deaths in care homes in Hungary will be lower than in other countries. In 2018, the total number of residents of care homes was 55,170 of which 50,589 were aged 65 or more. No newer figures are available, assuming that the number of residents hasn't changed, the share of care home residents who died until the 27th August would be 0.3%.

Ireland³⁸

Ireland has a centralised system to collect epidemiological information in relation to cases of COVID-19 infections³⁹. All deaths, in all care settings and dwellings, related to COVID-19 that are notified to the Health Prevention Surveillance Centre (HPSC) are included in the official count of deaths. While the number of outbreaks in nursing home is published regularly, the number of notified deaths in care homes is only made publicly sporadically,

A report⁴⁰ by the Department of Health and the HPSC published in December 2020 estimates that, up to 13th December 2020, there had been 1,112 deaths linked to COVID-19 in nursing homes. On that date, there had been 2,110 deaths attributed to COVID-19 in Ireland. Overall, deaths of nursing home residents represent 51% of all deaths linked to COVID-19, but this figure has changed during the pandemic, suggesting lessons from the first wave may have improved the nursing homes' capacity to fight the pandemic. Based on the data on the same report, during what is considered to be the first wave in Ireland (up to early August 2020, the share was 54%, but in the 2nd (August to October 2020) it was 38% and between November and mid-December the share was 34%. There are an estimated 30,000 people living in nursing homes. Out of these, 4.75% of all nursing home care residents would have died as a result of COVID-19 up to mid-July.

Israel⁴¹

The first COVID-19 patient in Israel was diagnosed on February 27th 2020 and, by the 8th of October, the number of confirmed cases has risen to 282,000, with 1,824 deaths⁴². Of the deaths, 704⁴³ were residents in long-term care facilities (39%). There were 45,000⁴⁴ people in long-term care facilities in Israel, comparing this to the numbers of residents who died would suggest a rate of 1.56%.

The first outbreak in Israeli long-term care facilities began in mid-March, sixteen days after the first patient was diagnosed in Israel. Only a month after the initial outbreak, and following massive public

³⁶ With thanks to Robert Gal

³⁷ <https://koronavirus.gov.hu/cikkek/idosotthonok-142-koronavirussal-fertozott-gondozott-hunyt-el-kozuluk-55-en-pesti-uton>

³⁸ With thanks to Maria Pierce

³⁹ <https://ltccovid.org/wp-content/uploads/2020/04/Ireland-COVID-LTC-report-updated-28-April-2020.pdf>

⁴⁰ <https://www.gov.ie/pdf/?file=https://assets.gov.ie/118922/5384823a-76c9-4c95-9638-3b09853846c4.pdf#page=1>

⁴¹ With thanks to Shuli Brammli and Sharona Zadok, <https://ltccovid.org/2020/10/14/update-on-covid-related-mortality-in-care-homes-in-israel-12th-october-2020/>

⁴² Daily report Corona spread – situation in Israel, MoH <https://www.gov.il/he/departments/publications/reports/daily-report-20201008>

⁴³ MoH internal report 12.10.2020

⁴⁴ Shnoor, Y., & Cohen, Y. (2020). Elderly in Israel Statistical Yearbook. Retrieved from <https://brookdale.idc.org.il/publication/statistical-abstract-elderly-israel-2020/>

criticism and a call for help from the managers of long-term care facilities, the Israeli government appointed a national-level team to manage the COVID-19 outbreaks long-term care facilities⁴⁵.

Italy

The only data available on the COVID-19 outbreak in nursing homes is from the results of the National Health Institute (Istituto Superiore di Sanità, ISS)'s survey, which was sent to 3,276 nursing homes out of the 4,629 operating on the national territory.

On June 17th ISS published the final results of the survey. Data are referred to the period between February 1st and May 5^h. As of May 5th, 1,356 nursing homes responded. The total mortality rate during that timeframe is 9.1% (considering all deaths). The Covid-19 related mortality rate (tests + suspected) is 3.1%⁴⁶. No new data was available as of 23rd January 2021.

The Netherlands

The National Institute for Public Health and the Environment (RIVM)⁴⁷ is one of the main providers of data on the COVID-19 pandemic in the Netherlands. At the beginning of the pandemic, however, RIVM struggled to provide data for the LTC sector. The first statistics on the effect of the pandemic in the LTC sector were provided instead by the Dutch Association of Geriatric Specialists (Verenso)⁴⁸. This has changed and the availability of COVID-19 mortality and case statistics within the LTC sector has improved. There is, for example, a dashboard⁴⁹ which presents the number of confirmed cases and deaths in the LTC sector, using RIVM data. In addition, RIVM has made available a public dataset⁵⁰ which includes the number of total cases, total deceased, total new infected locations and total infected locations per day and per region.

The latest statistics (15 January 2021) show that 6529 deaths of care home residents are linked to COVID-19. This accounts for 51% of the total COVID-19 deaths in the Netherlands and accounts for 5.44% of all nursing home residents. These numbers are an underestimation of the actual COVID-19 deaths because not all those who died due to COVID-19 will have been tested (especially at the beginning of the pandemic). RIVM may still adjust these latest figures because there can be a delay of a few days in filing mortality reports and figures may be adjusted after double-checking. The reported COVID-19 deaths are linked to nursing home residents either via an electronic administration portal called OSIRIS or via postcodes. These postcodes were collected from 'ZorgkaartNederland'⁵¹, an online client-rating website that provides a large coverage of nursing homes sites. Only people 70+ are included in these statistics.

Statistics on the pandemic from the RIVM are based on registered confirmed cases and deaths. However, these figures may be distorted by constrained reporting and testing capacity, causing a misclassification of the causes of death⁵². These caveats do not apply to excess mortality figures – a reliable metric for comparing countries⁵³. Statistics Netherlands (CBS), a governmental organisation,

⁴⁵ <https://ltccovid.org/2020/04/30/the-impact-of-covid-19-on-people-using-and-providing-long-term-care-in-israel/>

⁴⁶ <https://ltccovid.org/2020/06/26/updated-estimates-of-mortality-of-nursing-home-residents-and-staff-linked-to-the-covid-19-pandemic-in-italy/>

⁴⁷ [Actuele informatie over COVID-19 | RIVM](#)

⁴⁸ [Home - Verenso](#)

⁴⁹ [Dashboard Coronavirus COVID-19 | Rijksoverheid.nl](#)

⁵⁰ [RIVM Data Catalogus](#)

⁵¹ [ZorgkaartNederland](#)

⁵² <https://journals.sagepub.com/doi/full/10.1177/0141076820956802>

⁵³ <https://www.health.org.uk/news-and-comment/charts-and-infographics/understanding-excess-mortality-the-fairest-way-to-make-international-comparisons>

provides weekly updates on observed mortality per week. CBS distinguishes the mortality figures by long-term care users⁵⁴ and age. They also provide expected figures⁵⁵, based on the previous 5 years, to estimate excess mortality.

Recent figures show that there was 13% excess mortality (observed-expected)/expected) among long-term care users in 2020 compared to 7% excess mortality among the wider population (outside long-term care).

New Zealand

In Aotearoa New Zealand the Aged Residential Care (ARC) sector comprises 38,000 beds accommodated in over 650 facilities throughout the country. On the 23rd January 2021, there had been 25 deaths⁵⁶. Of these, 16 were in ARC Facilities, accounting for 64% of all COVID-19 related fatalities in the country. The number of deaths in aged care facilities represents 0.04% of all beds.

Norway⁵⁷

On the 15th of April, the Norwegian Institute of Public Health published data on the number of deaths linked to COVID-19 that have occurred in institutions/care homes for the first time. On the 20th January 2021 there were 59,062 people with a positive COVID-19 test in Norway and 533 deaths⁵⁸. Of those deaths, 318 (60%) happened in care homes⁵⁹. At the end of 2019, there were 39,466 beds in care homes in Norway⁶⁰, so deaths in care homes would amount to 0.81% of all beds.

Portugal

Although no official reports have been published, the Government of Portugal released to the media the number of deaths in nursing homes. According to data published in the media, on 10th January 2021, 2,254 people have died in these nursing homes corresponding to 2.27% of all the 99,000 residents in legal care homes in Portugal⁶¹. On the same date, 7,803 deaths attributed to COVID-19 had been reported in Portugal⁶², so deaths of care home residents as a share of total deaths would be 28.9%.

Singapore⁶³

The Ministry of Health centrally collects and publishes epidemiological information about COVID-19 on a daily basis⁶⁴. As of the 24th January there had been 59,308 cases of COVID-19 infection (the majority, 54,508, in dormitories of migrant workers) and 29 deaths. There have been 4 COVID-19 related deaths in nursing homes (representing 12% of all deaths). Compared to 16,059 nursing home beds in Singapore, the number of deaths would represent 0.02% of all beds⁶⁵.

⁵⁴ Long-term care users are defined as users that fall under the Long-term care Act (Wet Langdurige zorg). "Residential care is intended for clients who need permanent supervision to avoid escalation or serious damage and clients who need 24 h care because of physical problems or self-control problems." Maarse, J. H., & Jeurissen, P. P. (2016). The policy and politics of the 2015 long-term care reform in the Netherlands. *Health Policy*, 120(3), 241-245.

⁵⁵ [Oversterfte en verwachte sterfte \(cbs.nl\)](https://www.cbs.nl/en-gb/oversterfte-en-verwachte-sterfte)

⁵⁶ <https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-current-situation/covid-19-current-cases#summary>

⁵⁷ With thanks to Norwegian newspaper VG

⁵⁸ <https://www.fhi.no/en/id/infectious-diseases/coronavirus/daily-reports/daily-reports-COVID19/>

⁵⁹ <https://www.fhi.no/contentassets/8a971e7b0a3c4a06bdf381ab52e6157/vedlegg/2021/2021.01.20-ukerapport-uke-2-covid-19.pdf>

⁶⁰ <https://www.ssb.no/en/pleie/>

⁶¹ <https://www.publico.pt/2021/01/10/sociedade/noticia/covid19-ja-provocou-2254-mortes-utentes-lares-idosos-1945619>

⁶² https://covid19.min-saude.pt/wp-content/uploads/2021/01/314_DGS_boletim_20210110.pdf

⁶³ With thanks to Wan Chen K Graham and Chek Hooi Wong

⁶⁴ <https://www.moh.gov.sg/covid-19/situation-report>

⁶⁵ <https://itccovid.org/wp-content/uploads/2020/08/The-COVID-19-Long-Term-Care-situation-in-Singapore-27July-2020.pdf>

Slovenia⁶⁶

As of the 17th January 2021, 149,434 people had had positive tests in Slovenia, of these, 11,681 were in care homes. There had been 3,371 deaths in total, and 1,875 among care home population⁶⁷, representing 56% of all deaths.

In 2017 there were 22,904 people living in long-term care institution in Slovenia⁶⁸, the share of residents who would have died linked to COVID-19 would be 8.19%.

South Korea⁶⁹

Based on data provided by the Ministry of Health and Welfare and the Korea Centers for Disease Control and Prevention, of 336 deaths linked to COVID-19 in South Korea on the 7th of September, 27 (8.0%) were people presumed to have been infected in nursing homes, and another 76 deaths (22.6% of the total) in Long-Term Care Hospitals. Deaths among residents in both types of settings would amount to 31% of total deaths. However, there were no deaths in care homes as all residents with potential COVID infections were transferred to hospitals.

In 2018 there were 177,318 beds in nursing homes⁷⁰, comparing the number of beds to the number of COVID-19 related deaths of nursing home residents suggests that the share of nursing home residents who have died from COVID-19 so far is around 0.01%. Of the 483,433 patients hospitalized in the 1,560 long-term care hospitals in 2018⁷¹, the share of deaths linked to COVID-19 would also amount to 0.01%.

Spain⁷²

Data on COVID-19 related mortality in care homes is gathered by regional Governments and a regular compilation of that data is reported by the Spanish national television⁷³. According to this source, the total number of deaths attributed COVID-19 up to the 22nd January 2021 are estimated to be 26,300⁷⁴). This number includes both the deaths of people who have been diagnosed with COVID-19 and the deaths of those with symptoms of the illness but who have not been diagnosed. Estimating the share that the COVID-19 deaths of care home residents represent of all COVID-19 deaths in Spain is complicated because the national estimates of COVID-19 deaths only include deaths of people with a confirmed diagnostic test, missing the deaths of people that were not tested at the beginning of the pandemic. The national estimate for (confirmed) COVID-19 deaths on 22nd January 2021 was 56,563⁷⁵, however, excess mortality during the period of the pandemic is currently estimated to be over 77,000⁷⁶. Regular official data on the impact of COVID-19 on care homes are expected soon. The Spanish National Institute of Older people and Social Services (IMSERSO) estimated that, in the first part of the pandemic (up to July 2021), there had been 20,268 deaths of care home residents in care homes, of which 9,904 were of people who had not been

⁶⁶ With thanks to Alenka Oven and the COVID-19 Sledilnik team

⁶⁷ https://www.nijz.si/sites/www.nijz.si/files/uploaded/umrli_covid-19_18012021_0.pdf

⁶⁸ <https://www.stat.si/StatWeb/en/News/Index/8579>

⁶⁹ With thanks to Hongsoo Kim

⁷⁰ <https://stats.oecd.org/Index.aspx>

⁷¹ Kim, H (2020) *The impact of COVID-19 on long-term care in South Korea and measures to address it*. LTCcovid, International Long-Term Care Policy Network, CPEC-LSE, 7 May 2020. <https://ltccovid.org/wp-content/uploads/2020/05/The-Long-Term-Care-COVID19-situation-in-South-Korea-7-May-2020.pdf>

⁷² We thank Imsero for help finding data sources and interpretation

⁷³ This needs to be treated with caution as the methods and definitions used to gather the data by the regional Governments are not homogeneous.

⁷⁴ <https://www.rtve.es/noticias/20210122/curva-contagios-muertes-coronavirus-espana-dia-dia/2010514.shtml>

⁷⁵ <https://cnecevid.isciii.es/covid19/#documentaci%C3%B3n-y-datos>, file: https://cnecevid.isciii.es/covid19/resources/casos_hosp_uci_defsexo_edad_provres.csv

⁷⁶ https://momo.isciii.es/public/momo/dashboard/momo_dashboard.html#nacional

tested⁷⁷. That report highlighted that the national estimate for total deaths linked to COVID-19 does not include people who have not been tested and recommended adding the number of suspected deaths in care homes to the current total of confirmed deaths nationally. Using a similar approach would bring the total of confirmed and suspected deaths in the whole population to 66,557⁷⁸ by 22nd January, which, particularly given the increased availability of testing, may be a reasonable denominator in order to calculate the share of all COVID-19 deaths that were of care home residents. This would suggest that 40% of all deaths linked to COVID-19 in Spain have been among care home residents. This figure is lower compared to the estimate of 47% produced by IMSERSO up to 23rd of June using the same method, suggesting that, proportionally, care home residents have not been as impacted as in the initial part of the pandemic.

The most recent estimate of care home residents is 333.920⁷⁹, based on these estimates, the deaths linked to COVID-19 would amount to 7.88% of the care home population in Spain.

IMSERSO also publishes a monthly report⁸⁰ on the excess mortality (compared to previous years) for people registered with the Spanish public long-term care system. Between March and November 2020, there had been 45,665 excess deaths among those who had applied for (and or received) care benefits. This was 31.8% higher than expected. The highest number of deaths were among people receiving benefits for institutional care (22,718, representing 9.12% of all recipients of this benefit). About 72.6% of care home residents of care home residents are estimated to be in receipt of care benefits, and these are expected to be those who are most frail⁸¹.

Among people receiving benefits for care at home there were 17,612 excess deaths, amounting to 2.02% of recipients (the share was a bit lower for people receiving cash payments for family care, 1.41%, compared to people receiving benefits in kind, 2.62%).

Sweden⁸²

On the 18th January 2021 there had been 9,940 deaths in Sweden where COVID-19 was mentioned in the death certificate, of which 4,656 (47%) were among care home residents, and 2,630 among people who use care services in their own home (26%)⁸³. Of the deaths of care home residents, 4,240 happened in the care home (91%).

On the 31st October 2019 there were 82,217 care home residents in Sweden, using that as the denominator for total number of residents, 5.66% of care home residents would have died.

Switzerland

Data on COVID-19-related mortality among people living in care homes is only available for a few cantons. In the canton of Geneva, where these data are published regularly, up to the 27th January there have been 674 deaths linked to COVID-19⁸⁴. Of these, 511 were of care home residents, and 110 of people who received domiciliary care. An estimated 46% (310) of all deaths happened in the care homes, suggesting that 39% of all care home residents who died from COVID-19 did so in hospital. There

⁷⁷ https://www.imserso.es/InterPresent2/groups/imserso/documents/binario/gtccovid_residencias_vf.pdf

⁷⁸ This may be an underestimate, as the National Institute of Statistics suggests that there were up to 13,032 suspected deaths in the community.

⁷⁹ <http://envejecimientoenred.es/nivel-de-ocupacion-en-residencias-de-personas-mayores/>

⁸⁰ https://www.imserso.es/InterPresent2/groups/imserso/documents/binario/momo_dep_202012.pdf

⁸¹ https://www.imserso.es/InterPresent2/groups/imserso/documents/binario/gtccovid_residencias_vf.pdf

⁸² With thanks to Marta Szebehely

⁸³ <https://www.socialstyrelsen.se/statistik-och-data/statistik/statistik-om-covid-19/statistik-over-antal-avlidna-i-covid-19/>

⁸⁴ <https://www.ge.ch/document/19696/telecharger>

are an estimated 4,125 care home beds in Geneva⁸⁵, suggesting that up to 12.4% of care home residents would have died from COVID-19.

Turkey⁸⁶

On the 30th of September 2020, the Minister of Health announced that the official figures of COVID-19 of Turkey refers to the number of COVID-19 'patients' (who have received treatment), whereas COVID-19 'cases' (who tested positive but do not show any symptoms) have not been included in the published data since 29 July 2020⁸⁷. As of the 2nd October 2020, the total number of patients (hasta sayısı) is 321,512 and 8,325 COVID-19 related deaths were recorded⁸⁸.

No recent official data on deaths of care home residents has been released by the Ministry, based on public statements of government officials provided in different platforms, as of 7th May, there were 1,030 diagnosed COVID-19 cases in care institutions who had been admitted to hospitals and 150 deaths of care home patients had been reported. The deaths in nursing homes accounted for 4% of all COVID-19 deaths in Turkey⁸⁹. No data has been provided so far concerning the infection or mortality rates of care home staff.

United Kingdom

The UK Government publishes daily statistics on COVID-19 related deaths⁹⁰. These data include information on deaths of people who have had a positive test result confirmed by a Public Health or NHS laboratory. As of the 15th of January, there had been 3,411,686⁹¹ lab-confirmed COVID-19 cases in the UK and 90,974 deaths within 28 days of a positive test (by date of death). In addition, NHS England provides the same figures disaggregated by NHS Trust, region, age of the patient, and recently by ethnicity⁹². These death figures do not include people who had not been tested.

The Office for National Statistics (ONS) also provide weekly updates of deaths registered in each of the four UK home nations⁹³. The nature of these figures differ from the NHS figures in that they include all deaths where "COVID-19" was mentioned (by a doctor) on death certificates (i.e. where ICD10 codes U07.1 and U07.2 were used) i.e. irrespective if the individual had a confirmed positive test. Up to 15th January, there had been 104,232, deaths registered where COVID-19 was mentioned on the death certificate in the UK.

Figures including care homes are not reported in the same way in England, Wales, Northern Ireland and Scotland, therefore we present them in separate sub-sections. For a detailed analysis of COVID-19 related deaths in care homes across the UK please see Bell et al (2020)⁹⁴.

England

⁸⁵ <https://www.bfs.admin.ch/bfs/fr/home/statistiques/sante/etat-sante/personnes-agees.assetdetail.15724050.html>

⁸⁶ With thanks to Başak Akkan and Cemre Canbazer

⁸⁷ <https://www.euronews.com/2020/10/01/turkey-not-counting-positive-covid-19-cases-unless-there-are-symptoms-health-minister-admi>

⁸⁸ <https://covid19.saglik.gov.tr/? Dil=2>

⁸⁹ <https://ltccovid.org/wp-content/uploads/2020/06/The-COVID-19-Long-Term-Care-situation-in-Turkey.pdf>

⁹⁰ <https://coronavirus.data.gov.uk/>

⁹¹ Cases by date reported.

⁹² <https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-daily-deaths/>

⁹³

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/weeklyprovisionalfiguresondeathsregistereinenglandandwales>

⁹⁴ Bell D, Comas-Herrera A, Henderson D, Jones S, Lemmon E, Moro M, Murphy S, O'Reilly D and Patrignani P (2020) COVID-19 mortality and long-term care: a UK comparison. Article in LTCcovid.org, International Long-Term Care Policy Network, CPEC-LSE, August 2020. Available: <https://ltccovid.org/wp-content/uploads/2020/08/COVID-19-mortality-in-long-term-care-final-Sat-29-1.pdf>

The ONS provide weekly updates of deaths registered in England, these deaths include any death where COVID-19 was mentioned (by a doctor) on death certificates. Up to the 15th of January, there were 88,674 deaths registered in England involving COVID-19⁹⁵. ONS weekly figures are usually published approximately 11 days in arrears as the registration process takes time. As of 15th of January, 61,101 COVID-19 related deaths occurred in hospital (69%), 21,615 occurred in care homes (24%), 4,376 occurred in private homes (5%) and 1,882 in hospices, other communal establishments and elsewhere (2%)⁹⁶.

In terms of deaths of care home residents in England, that is, those care home residents who died from COVID-19 but whose death did not occur within the care home, there are several sources of published data available. ONS has published figures for registered care home resident deaths occurring from 2nd March 2020 registered up until the 20th June 2020⁹⁷. These data include England and Wales. Further, ONS have published CQC data on the notifications of care home resident deaths for death notifications from 11th April up to present, for England only. Finally, ONS also publish data on weekly deaths of care home residents that are registered in England and Wales⁹⁸. These data run from 20th March 2020 to present. The data are available for England and Wales but can only be broken down by the two nations as of 2021.

This data show that between 20th March 2020 and 15th January 2021, there were 30,851 deaths of care home residents in England and Wales. Subtracting the total number of care home resident deaths in Wales (1,470 deaths as described below) this give a total of 29,381 care home resident deaths in England up until the 15th January. Therefore, care home residents accounted for 33% of all COVID-19 related deaths in England.

Wales

The ONS show that up to the 15th of January, there were 5,884 deaths registered in Wales involving COVID-19⁹⁹. Of those, 4,247 occurred in hospital (72%), 1,267 occurred in care homes (22%), 286 occurred in private homes (5%) and 84 in hospices, other communal establishments and elsewhere (1%)¹⁰⁰.

Care inspectorate Wales (CIW) also publish weekly data on notifications of deaths of care home residents by date of notification and cause¹⁰¹. Since the first notification of a care home resident COVID-19 related death on the 16th March, up until the 15th January, a total of 1,470 care home resident COVID-19 deaths had been notified to CIW.

⁹⁵

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/weeklyprovisionalfiguresondeathsregisteredinenglandandwales> COVID-19- Place of occurrence

⁹⁶

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/weeklyprovisionalfiguresondeathsregisteredinenglandandwales>

⁹⁷

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/deathsinvolvingcovid19inthecaresectorenglandandwales>

⁹⁸

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/carehomeresidentdeathsregisteredinenglandandwalesprovisional>

⁹⁹

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/weeklyprovisionalfiguresondeathsregisteredinenglandandwales> COVID-19- Place of occurrence

¹⁰⁰

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/weeklyprovisionalfiguresondeathsregisteredinenglandandwales> COVID-19- Place of occurrence

¹⁰¹ https://gov.wales/notifications-care-inspectorate-wales-related-covid-19-adult-care-homes-1-march-2020-15-january-2021Table_7

England and Wales

During 2020 and up to 8th January 2021, there were 82,712 excess deaths in England and Wales¹⁰². Care home resident deaths (30,851) therefore accounted for 37% of all excess deaths during the same period.

Northern Ireland

The Northern Ireland Statistics and Research Agency also publish data on deaths, including those where COVID-19 (suspected or confirmed) is mentioned on the death certificate¹⁰³. According to these data, between the 21st March and the 15th January, there had been 2,129 registered COVID-19 deaths in Northern Ireland. Of those, 642 (30%) occurred in care homes.

For the same period, the total number of care home residents¹⁰⁴ who died from suspected or confirmed COVID-19 was 862, meaning that around 74% of all COVID-19 care home resident deaths occurred within the care home¹⁰⁵. This would mean that care home resident deaths make up 40% of all COVID-19 deaths in Northern Ireland. Furthermore, excess deaths during this period were 2,068, meaning that COVID-19 related deaths of care home residents accounted for 42% of excess deaths in Northern Ireland.

Scotland

The Scottish Government publish daily data of confirmed COVID-19 deaths¹⁰⁶. As of 17th January, 5,709 confirmed COVID-19 deaths had been registered in Scotland. National Records of Scotland (NRS) also publish a weekly analysis of death registrations that mention COVID-19 in the death certificate, again using the new emergency ICD10 codes¹⁰⁷. Data for the period 16th March up to the 17th January show that there were 7,448 deaths where COVID-19 was mentioned on the death certificate. Of those, 2,867 deaths occurred in care homes, representing 38% of all COVID-19 related deaths. During the same period, there were 7,426 excess deaths (compared to the 5-year average) in total and 2,376 excess deaths in care homes (32%).

Similarly to Wales, since 25th May, the Care Inspectorate Scotland (CIS) has reported weekly data on notifications of deaths of care home residents¹⁰⁸. These data show that up until 17th January, 1,222 care home residents had died where COVID-19 had been confirmed or suspected. Prior to this, NRS published data up until 17th May, which showed there had been 1,777 COVID-19 related registered deaths of care home residents¹⁰⁹. Including those deaths that occurred within a care home during the week between 17th May and 25th May (124 deaths), in total, there were at least 3,266 care home resident deaths due to COVID-19. This represents 44% of all COVID-19 related deaths registered up until 17th January. Overall, care home resident COVID-19 related deaths accounted for 44% of all excess deaths in Scotland.

¹⁰²

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/weeklyprovisionalfiguresondeathsregisteredinenglandandwales> Weekly Figures 2021

¹⁰³ <https://www.nisra.gov.uk/publications/weekly-deaths> Table 9

¹⁰⁴ In these statistics, care home residents have been identified where either (a) the death occurred in a care home, or (b) the death occurred elsewhere but the place of usual residence of the deceased was recorded as a care home.

¹⁰⁵ Weekly Deaths Statistics in Northern Ireland 2020 | Northern Ireland Statistics and Research Agency (nisra.gov.uk) Table 12

¹⁰⁶ <https://www.gov.scot/publications/coronavirus-covid-19-trends-in-daily-data/> (Excel spreadsheet at the bottom of the page, Table 8.)

¹⁰⁷ <https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/weekly-and-monthly-data-on-births-and-deaths/deaths-involving-coronavirus-covid-19-in-scotland>

¹⁰⁸ <https://www.webarchive.org.uk/wayback/archive/20200716093128/https://www.gov.scot/publications/coronavirus-covid-19-additional-data-about-adult-care-homes-in-scotland/>

¹⁰⁹ <https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/weekly-and-monthly-data-on-births-and-deaths/deaths-involving-coronavirus-covid-19-in-scotland/related-statistics> Deaths of care home residents involving COVID-19 (3 June 2020)

The Scottish Government daily data also report data on infections in care homes in Scotland¹¹⁰. There are 38,614 registered beds in care homes in Scotland and figures from 2017 suggest 93% occupancy rates¹¹¹. Based on this, the number of residents in Scotland in 2020 would be around 35,911.

As of the 13th of January, 180 (17%) adult care homes in Scotland had a current case of suspected COVID-19, down from a peak of 45% on 30th May. A total of 8,915 cumulative cases of confirmed COVID-19 have been reported in care homes between 9th March 2020 and 17th January 2021¹¹².

In addition, the Scottish Government publish data returned to the Care Inspectorate on the number of care home staff being reported as absent in adult care homes due to COVID-19¹¹³. Since 21st April, where 10% all adult care home staff in those care homes who submitted a return were reported as absent, the proportion of staff being reported as absent fell steadily until, then began to rise again in October. As of 19th January, 4.1% of staff in care homes who submitted a return were reported as absent.

United States

This report covers cumulative deaths in US care homes (nursing facilities, assisted living facilities and other long-term care facilities) from January 1, 2020 through January 7, 2021. Information about deaths in care homes comes from three sources. First, the Center for Medicare and Medicaid Services (CMS), the official government data system for tracking COVID-19 in nursing facilities¹¹⁴. The other sources are two independent organizations that track COVID-19 in nursing facilities, assisted living facilities, and other types of care homes: the Kaiser Family Foundation (KFF)¹¹⁵ and The Atlantic Magazine's COVID Tracking Project (CTP)¹¹⁶. Information about the number of COVID-19 deaths in the general population comes from the Johns Hopkins University Coronavirus Resource Center¹¹⁷.

The CMS data are collected and reported weekly at the facility level for the over 15,000 certified nursing facilities in the US. The CMS can impose a financial penalty on facilities that do not report; as a result, compliance is nearly 100%. Data collection began on May 17, 2020 with instructions to nursing facilities that they report cumulative figures from January through May 17th. After that date, facilities were required to provide weekly and cumulative totals for the number of COVID-19 cases and deaths, both confirmed and suspected, for nursing facility residents and staff, each of which is reported separately. The facilities also must report number of beds, occupied beds, resident admissions with COVID-19, and total deaths from all causes during the week and cumulatively. The CMS performs edit checks for completeness and for outlier or implausible data entries. The main weaknesses of this data source are its coverage of nursing facility data only, and the possibility that historical data on COVID-19 related cases and deaths from January through May were under-reported because of the long lag between early outbreaks and the beginning of reporting. The main strengths of these data are their full coverage of all nursing facilities and the detailed data about COVID-19 cases and deaths. In this report we included CMS nursing facility deaths that were confirmed and suspected among both residents and staff through January 3, 2021. We aggregated facility level deaths up to the state level.

¹¹⁰ Bell D, Henderson D and Lemmon E (2020) *Deaths in Scottish care homes and COVID-19*. LTCcovid, International Long-Term Care Policy Network, CPEC-LSE, 17 May 2020 <https://ltccovid.org/2020/05/18/deaths-in-scottish-care-homes-and-covid-19/>

¹¹¹ Bell D, Comas-Herrera A, Henderson D, Jones S, Lemmon E, Moro M, Murphy S, O'Reilly D and Patrignani P (2020) COVID-19 mortality and long-term care: a UK comparison. Article in LTCcovid.org, International Long-Term Care Policy Network, CPEC-LSE, August 2020. Available: <https://ltccovid.org/wp-content/uploads/2020/08/COVID-19-mortality-in-long-term-care-final-Sat-29-1.pdf>

¹¹² <https://www.gov.scot/publications/coronavirus-covid-19-trends-in-daily-data/> (Excel spreadsheet at the bottom of the page, Table 7a.)

¹¹³ <https://www.gov.scot/publications/coronavirus-covid-19-trends-in-daily-data/> (Excel spreadsheet at the bottom of the page, Table 7b.)

¹¹⁴ <https://data.cms.gov/stories/s/COVID-19-Nursing-Home-Data/bkwz-xpvg/>

¹¹⁵ <https://www.kff.org/coronavirus-covid-19/issue-brief/state-covid-19-data-and-policy-actions/#long-term-care-cases-deaths>

¹¹⁶ <https://covidtracking.com/>

¹¹⁷ <https://coronavirus.jhu.edu/>

The KFF collects data on both resident and staff deaths in nursing facilities and other care homes. Data collection began the week of March 29th. Cumulative figures are updated weekly. Its staff and volunteers collect these data from state health departments, local health departments, press releases, newspaper accounts, and other sources. Figures are reported at the state level. According to the KFF web site, the number of cases is reported for residents and staff, where available. Presumed and confirmed cases/deaths are also reported, where available. Definition of "long-term care facility" differs by state, but data reflect a combination of nursing facilities, assisted living facilities, adult care centers, intermediate care facilities, and/or other long-term care facilities. The main weakness of the KFF system is its heavy reliance on state and local data sources which are of inconsistent quality and completeness. The main strength of this system is its history of data collection going back to the March 29th and the reporting of deaths occurring in both nursing facilities and other care homes, when available. In this report we included all state-level COVID-19 linked care home deaths reported by KFF through January 5, 2021.

The CTP system for COVID-19 in LTC facilities is similar in data collection strategy and content to the KFF system. Although in 2020 the CTP had been collecting data related to COVID-19 for several months, it did not begin its COVID in LTC initiative until August. Cumulative figures were recorded up to the mid-August start date and then updated weekly. The CTP staff and volunteers collect these data from a variety of state and local, official and unofficial sources. Figures are reported at the state level. Depending on the state, its count of deaths could be among residents of nursing facilities, assisted living facilities, long-term care facilities (undifferentiated between nursing facility and other types) or other long-term care facilities. Also, deaths could have been among residents or residents and staff. Similar to the KFF data system, the main weakness of CTP system is its heavy reliance on state and local data sources which are of inconsistent quality and completeness. The main strength of the CTP system is its reporting of deaths occurring in both nursing facilities and other care homes, when available. We have included all state-level COVID-19 linked care home deaths reported by CTP through January 7, 2021.

Other figures in this report include the January 5, 2021 daily update of total population COVID-19 deaths taken from the Johns Hopkins University Coronavirus Resource Center. The number of beds in care homes was approximated by adding beds in nursing facilities from the CMS data and number of beds in assisted living facilities taken from a report by the National Center for Assisted Living. The number of residents in care homes was approximated using data from the same two sources. Total population figures came from the 2019 update of population estimates from the US Census.

Our goal in this report was to obtain the best estimate of total number of COVID-19 related deaths in care homes, reflecting nursing facilities and other long-term care settings. Both residents and staff deaths were included in these totals because for two of our sources (KFF and CTP) the deaths could not be separated. Based on analysis of the deaths in nursing facilities in the CMS data, where resident and staff deaths are reported separately, we estimate that that staff deaths account for only about 1% of total COVID-19 deaths in nursing facilities and, by extrapolation, in care homes.

We derived COVID-19 mortality estimates by starting with state-level figures, which were reported directly by KFF and CTP and which we aggregated from the CMS facility-level data. We started with state-level figures to address inconsistencies between the three data systems in the number of recorded COVID-19 deaths. Because KFF, CMS, and CTP draw from different sources, their state totals differ. Since the national figures on care home COVID-19 deaths are the sum of the state totals, the national figures also differ. By starting at the state level, we are able to pick the "best" estimate of care home COVID-19 deaths from each state from among the three data systems.

To obtain the "best" estimate of care home COVID-19 deaths, we selected the highest number of deaths recorded for each state from among the three sources. In most states, the choice was between the KFF

and CTP figure, whichever was highest, because the figures from these systems included all care homes and not nursing facilities as in the CMS system. In a few cases, the CMS number of deaths exceeded the KFF and CTP figure. We wanted to achieve high sensitivity in our estimate— capturing as many “true” COVID-19 linked deaths as possible. We assumed that each death recorded by each source was accurate. That is, each source was identifying “true” COVID-19 linked deaths. We further assumed that differences in recorded deaths between sources resulted from differences in the completeness of their data. For example, the CMS system would have lower deaths recorded for a state than KFF or CTP because the CMS system collected data only on nursing facility deaths. The KFF and CTP systems could vary in their figures for a state because they were drawing from different state and local sources.

Even though figures varied at the state-level, the aggregate counts of COVID-19 care home deaths at the national level were close between KFF with 131,178 deaths in 30,802 care homes and CTP with 133,350 deaths in 29,107 care homes. The CMS figures were substantially lower, as expected, with 102,867 deaths in 14,793 nursing facilities. Since we selected number of deaths separately for each state based on the maximum number from the three sources, the total for the combined sources was higher than either source alone. COVID-19 deaths for people not in care homes (217,425) were derived by subtracting care home deaths from total population COVID-19 deaths.

Our best estimate was a cumulative number of 139,699 COVID-19 deaths in care homes through January 5, 2021. When comparing this figure to the 102,867 deaths in nursing facilities (obtained from the CMS data), we estimate that of the total care home deaths linked to COVID-19, about 74% of deaths were in nursing facilities and 26% were in assisted living facilities and other care homes. Based on these data, the share of all deaths linked to care homes through January 5, 2021 would be 39.12%. Assuming residents constituted 99% of all COVID-19 deaths in care homes, the number of resident deaths is estimated to be 138,302, and rate of resident deaths is estimated to be 7.14 per 100 care home residents.

Information on COVID-19 vaccinations comes from the US CDC COVID-19 Vaccine Tracker and CDC LTC and Pharmacy Partnership web sites. According to CDC guidelines, residents and staff of nursing homes and other long-term care facilities, along with healthcare workers, are to receive top priority for vaccinations. Most states, which can set their own priorities, have followed the CDC guidelines.

The rollout of the vaccines is targeted to “long-term care facilities” defined broadly to include nursing facilities, assisted living facilities, memory centers and other congregate settings for older or disabled people. Most vaccinations in long-term care facilities are being administered under contract by major drug store chains (Walgreens, CVS, and others). They are administered en masse through “clinics” held on-site in long-term care facilities. Vaccinations are reported as number of doses. A total of 1,384,963 doses, either 1st or 2nd doses, had been administered in long-term care facilities as of January 15, 2021. A total of 12,279,180 doses (10,595,866 1st, and 1,610,524 2nd) had been administered to the overall population, including long-term care, as of that date. With the rapid rollout of the vaccines, the numbers are increasing rapidly.

5. Summary tables and graphs

This section summarises the most recent data from official sources gathered in this document so far, but needs to be interpreted with the limitations and caveats described above. In Table 1, we have tried to distinguish the numbers of deaths among care home residents from the number of deaths in care homes and between confirmed and probable deaths. There are more details on the differences in sources and definitions of the data provided in this table in the descriptions of the data available for

each country above. As emphasized throughout this document, differences in data collection methods mean that these data are not suitable for direct comparisons or for ranking countries.

Where data for both care home residents who died and deaths in care homes are available for the same country, we have prioritized data on the numbers of care home residents, as this provides a proxy for the infections in care homes. Data on the number of people living in care homes who tested positive for COVID-19 has not been included, as, in many countries, in the earlier part of the pandemic there was very little testing in care homes.

On average, for the 22 countries in the report for which there were deaths in care homes, the average share of all COVID-19 related deaths that were care home residents was 41%. While this average needs to be treated with caution (due to differences in data collection method and definitions, as illustrated in figure 1 below), these figures show that the care home population has been disproportionately affected by COVID-19. The average share of the population living in care homes is 0.73%.

Adding up all the deaths of care home residents counted in the data available for the 22 countries covered in this report amounts to just over 325,000 deaths of care home residents attributed to COVID-19 since the beginning of the pandemic.

Table 1. Number of COVID-related or confirmed deaths in the population and in care homes (or among care home residents).

Country	Date	Approach to measuring COVID-19 linked deaths in care homes <i>C: confirmed P: probable</i>	Total number deaths linked to COVID-19*	Number of deaths of care home residents linked to COVID-19	Number of deaths in care homes linked to COVID-19	Number of care home resident deaths as % of all COVID-19 deaths	Number of deaths in care homes as % of all COVID-19 deaths
Australia	22/01/2021	C	909	685		75%	
Austria	24/01/2021	C	7,328	3,243		44%	
Belgium	19/01/2021	C + P	20,457	11,722	8,854	57%	43%
Canada	23/01/2021	C + P	18,974	11,114		59%	
Denmark	19/01/2021	C	1,837	719		39%	
Finland	22/01/2021	C	644		243		33%
France	20/01/2021	C + P	71,342	30,395	21,646	43%	30%
Germany	22/01/2021	C	50,642	14,066		28%	
Hong Kong	25/01/2021	C	169	32	0	19%	0%
Hungary	27/08/2020	C	612	142		23%	
Ireland	13/12/2020	C + P	2,110		1,084		51%
Israel	25/10/2020	C	2,404	861		36%	
Netherlands	15/01/2021	C	12,774	6,529		51%	
New Zealand	12/01/2021	C + P	25		16		64%
Norway	20/01/2021	C	533		318		60%
Portugal	10/01/2021	Unclear	7,803	2,254**		29%**	
Singapore	24/01/2021	C	29	4	0	14%	0%
Slovenia	17/01/2021	C	3,371	1,875		56%	
South Korea	07/09/2020	C	336	27	0	8%	0%
Spain	22/01/2021	C + P	66,557	26,328		40%	
Sweden	18/01/2021	C + P	9,949	4,656	4,249	47%	43%
England (UK)	15/01/2021	C + P	88,674	29,381	21,615	33%	24%
Wales (UK)	15/01/2021	C + P	5,884	1,470	1,267	25%	22%
N. Ireland (UK)	15/01/2021	C + P	2,124	862	642	41%	30%
Scotland (UK)	17/01/2021	C + P	7,448	3,266	2,867	44%	38%
United Kingdom	As above	C + P	104,130	34,979	26,391	34%	25%
United States	07/01/2021	C + P	357,124	139,699		39%	

Sources: as per the data described in this document, the data for countries in italics have not been updated

*For some countries the national total number of COVID-19 related deaths only refer to confirmed deaths, so the national figures may be an underestimate as, particularly in the early part of the pandemic, people who died outside hospitals were not tested.

**For Portugal the authors could not establish whether the data covered people living in care homes or people dying in care homes

For some countries, we have been able to obtain number of care home residents (or beds) that would correspond to the definition used in the number of deaths statistics in this report. Table 2 shows the share of care home residents who died (linked to COVID-19) compared to all care home residents, the share of the population who live in care homes, and the rate of deaths attributed to COVID-19 per 100,000 of the population who do not live in care homes. We found no correlation between the share of care home residents who have died and the proportion of the total population who have died.

Table 2. Share of care home residents who may have died as a direct or indirect result of the COVID-pandemic

Country	Date	Deaths attributed to COVID as % of all care home residents/beds	% of pop living in care homes	Deaths per 100,000 community-living population
Australia	22/01/2021	0.33%	0.82%	3.59
Austria	24/01/2021	4.65%	0.77%	82.00
Belgium	19/01/2021	9.38%	1.08%	178.43
Canada	23/01/2021	2.61%	1.13%	50.85
Denmark	19/01/2021	1.79%	0.69%	31.94
Finland	22/01/2021	0.42%	0.91%	11.73
France	20/01/2021	5.02%	0.93%	110.32
Germany	22/01/2021	1.72%	0.98%	61.04
Hong Kong	25/01/2021	0.04%	0.98%	2.28
Hungary	27/08/2020	0.26%	0.57%	6.37
Ireland	13/12/2020	4.76%	0.46%	42.93
Israel	25/10/2020	1.91%	0.52%	27.92
Netherlands	15/01/2021	5.44%	0.69%	73.63
New Zealand	12/01/2021	0.04%	0.79%	0.52
Norway	20/01/2021	0.81%	0.73%	9.90
Portugal	10/01/2021	2.28%	0.97%	76.52
Singapore	24/01/2021	0.02%	0.27%	0.50
Slovenia	17/01/2021	8.19%	1.10%	163.95
South Korea	07/09/2020	0.01%	0.42%	0.66
Spain	22/01/2021	7.88%	0.69%	119.43
Sweden	18/01/2021	5.66%	0.81%	99.32
England (UK)	15/01/2021	6.91%	0.76%	158.74
Wales (UK)	15/01/2021	6.19%	0.75%	188.04
Northern Ireland (UK)	15/01/2021	5.77%	0.79%	113.05
Scotland (UK)	17/01/2021	9.07%	0.66%	137.23
United Kingdom	As above	7.22%	0.75%	157.07
United States	07/01/2021	7.21%	0.59%	108.53

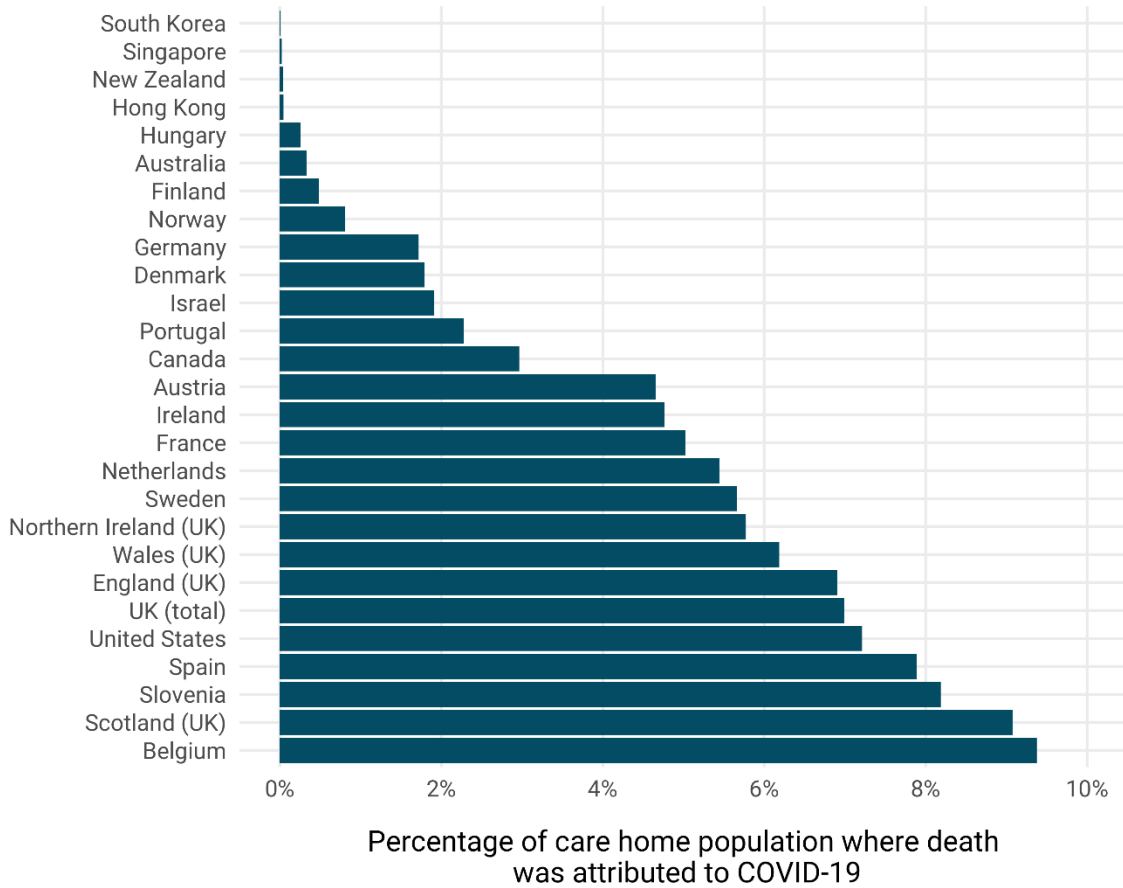
Sources: based on data collected for this report (see each country section for sources), data on population (used to calculate size of community-living population) is from United Nations¹¹⁸

a. Share of care home residents whose deaths were linked to COVID-19, compared to the care home population

In Figure 1 we plot the data presented in Table 2, specifically, the share of the care home population (based on number of residents, or beds where resident numbers are not available) whose deaths were attributed to COVID-19. There is substantial variation between countries. In Belgium, 9.38% of the care home resident population died due to COVID-19 compared to in Singapore where this figure was only 0.02%, or 0.04% in New Zealand.

¹¹⁸ <https://population.un.org/wpp>

Figure 1. Share of care home residents whose deaths were linked to COVID-19, compared to the care home population



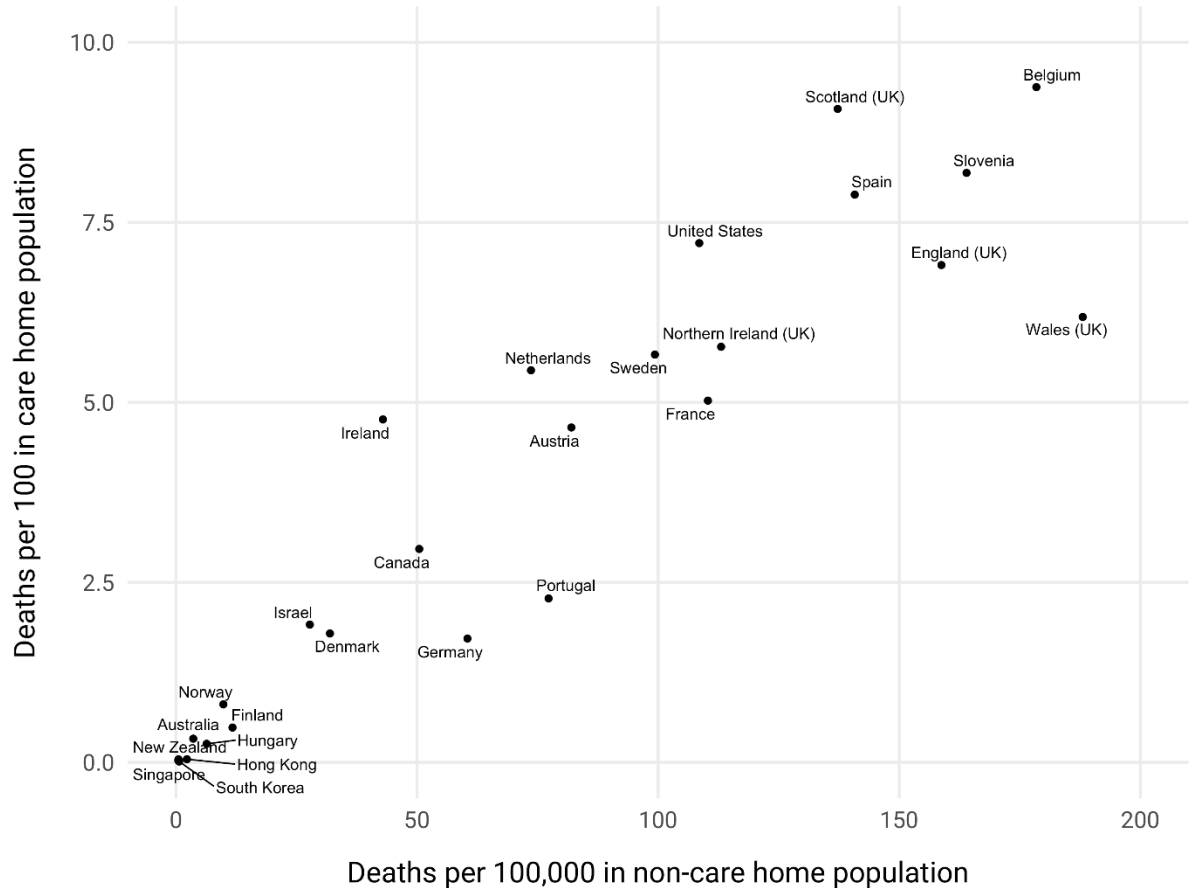
Countries with missing data removed

Source: table 2 in this report, data sources are summarized in each country section

b. Relationship between deaths linked to COVID-19 of care home residents and deaths linked to COVID-19 among the population living in the community

In Figure 2 COVID-19 deaths per 100 in the care home population are compared to COVID-19 deaths per 100,000 in the non-care home population. This chart demonstrates the relationship between community transmission and deaths in care homes. Specifically, in countries where deaths in the community were low, deaths in care homes were also low. This highlights that once there is a high transmission of the virus within the community, it is likely that it will also spread to care homes. It is important to highlight that some of the differences between the countries may be due to different definitions of deaths or, in some countries, under-reporting, as discussed earlier in this report and illustrated in figure 3.

Figure 2. Total number of deaths linked to COVID-19 in the population living in the community, compared to the number of deaths among care home residents



Countries with missing data removed

Source: based on figures collected for this report

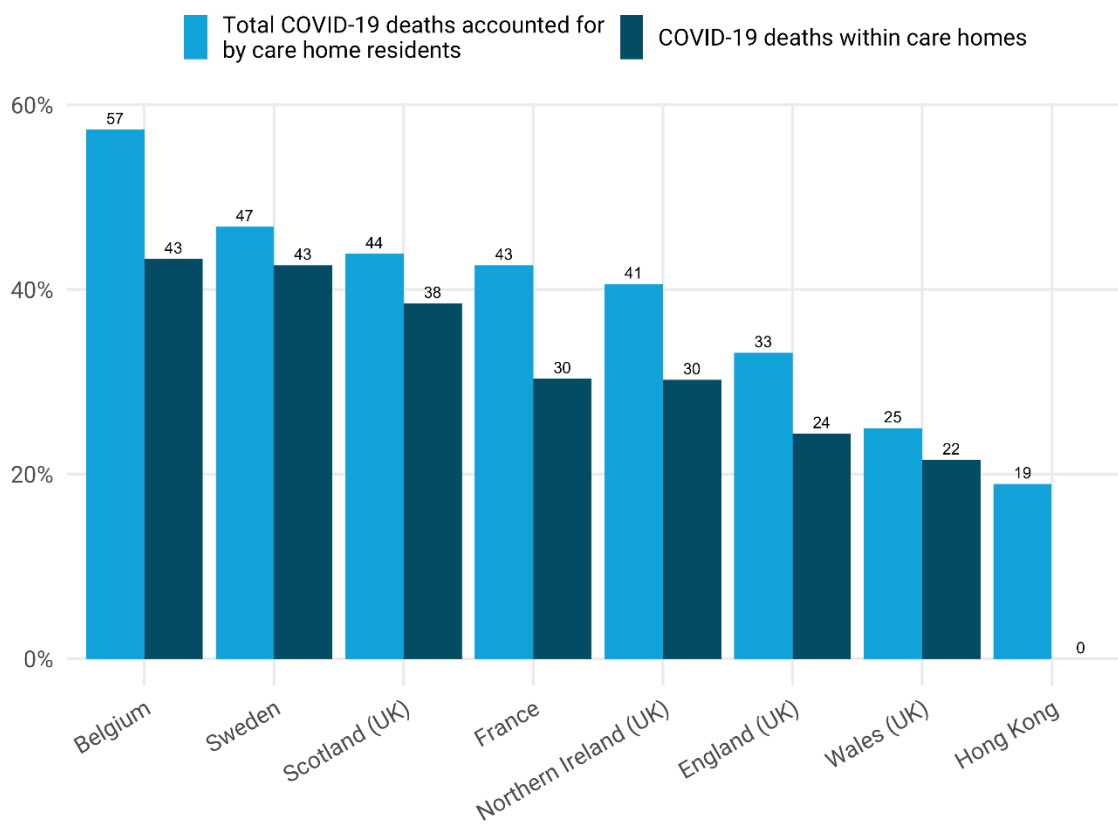
c. Comparing deaths in care homes and deaths of care home residents

In Figure 3, we plot the data for those countries who record both the number of COVID-19 deaths occurring within the care home and the number of COVID-19 deaths of care home residents (including those who may have died in hospital). In this figure, COVID-19 deaths are based on confirmed and suspected cases, with the exception of Hong Kong and South Korea who use confirmed cases only. As one might expect, the share of deaths accounted for by care home residents is considerably higher than the share of deaths occurring within care homes. The differences between the countries ranges from 3 percentage points in Wales (UK), to 19 percentage points in Hong Kong. These differences may reflect both differences in policies (for example in Hong Kong and South Korea all care home residents with confirmed COVID-19 infections were moved to quarantine centres or hospitals, so there have been no deaths in care homes)¹¹⁹, and differences in hospital capacity, particularly in the earlier part of the

¹¹⁹ Kim, H (2020) The impact of COVID-19 on long-term care in South Korea and measures to address it. LTCcovid.org, International Long-Term Care Policy Network, CPEC-LSE, 7 May 2020. <https://lccovid.org/wp-content/uploads/2020/05/The-Long-Term-Care-COVID19-situation-in-South-Korea-7-May-2020.pdf> and Wong K, Lum T and Wong G (2020) The COVID-19 Long-Term Care situation in Hong Kong: impact and measures. LTCcovid.org, International Long-Term Care Policy Network, CPEC-LSE, 8 July 2020. https://lccovid.org/wp-content/uploads/2020/07/Hong-Kong-COVID-19-Long-term-Care-situation_updates-on-8-July-1.pdf

pandemic. Where countries only provide data of deaths in care homes, these figures are likely to be an underestimate of the deaths of care home residents. In many countries, there are no information systems that allow the identification of care home residents in death certificates, particularly where people have only lived in a care home for a short period.

Figure 3: Confirmed and probable or suspected COVID-19 deaths accounted for by deaths within care homes and by care home residents overall



Countries with missing data excluded

Source: table 1 in this report, data sources are summarized in each country section

d. Comparison with previous versions of this report

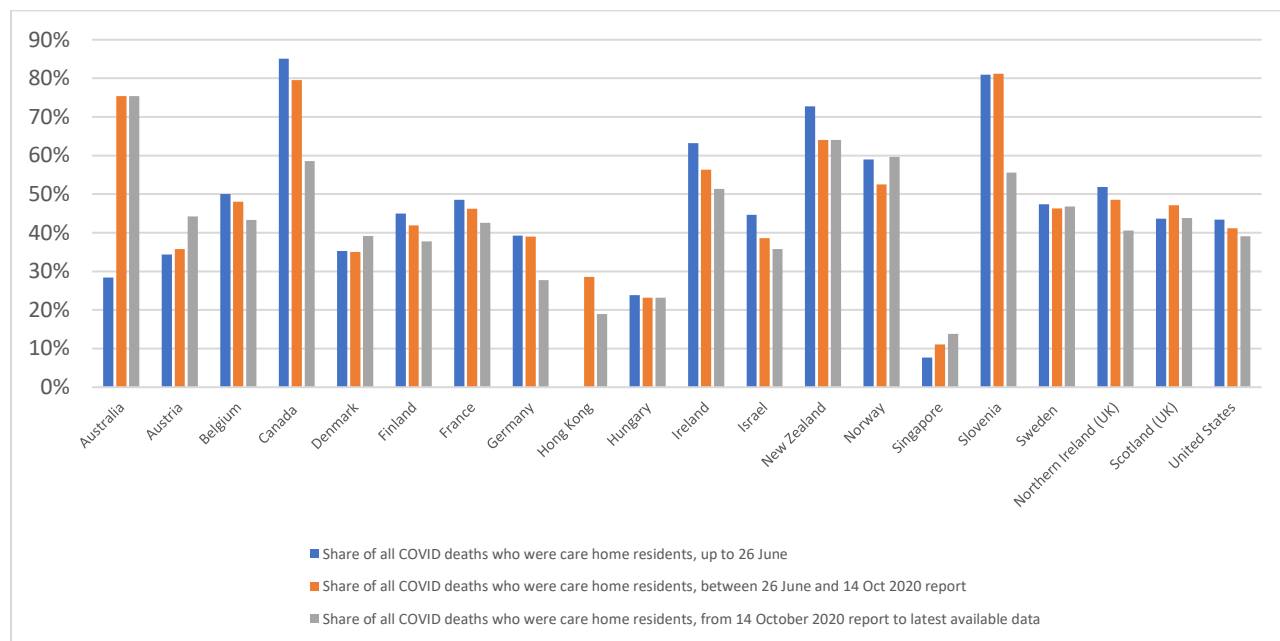
Figure 4 shows the share of all COVID-19 deaths that have been of care home residents in the period from the beginning of the pandemic to our report of the 26th of June¹²⁰, from the 26th of June report to the 14th October, and from the 14th October report¹²¹ to this current report. The figure shows that, in many countries, the share of COVID-19 deaths of care home residents has decreased over time. The

¹²⁰ <https://itccovid.org/wp-content/uploads/2020/06/Mortality-associated-with-COVID-among-people-who-use-long-term-care-26-June-1.pdf>, this includes a correction of the data for the United States

¹²¹ <https://itccovid.org/wp-content/uploads/2020/10/Mortality-associated-with-COVID-among-people-living-in-care-homes-14-October-2020-3.pdf>

authors of this report are aware that some of the data sources have been revised and improved between different versions of the report, so this figure can only claim to represent the data as published in our previous and current report and should be treated with caution.

Figure 4. Comparison of share of all COVID-19 deaths that have occurred among care home residents in the periods covered by this report and the versions of this report published on 26th June and 14th October 2020.



Sources: *this report and previous versions*¹²²

6. Discussion

Since the first version of this report of the 12th of April, an increasing number of countries are publishing data on deaths of care home residents (or deaths in care homes) linked to COVID-19. The authors are very grateful to all who have provided information about data availability in their countries. However, in some countries (for example Ireland), these data are increasingly difficult to find.

There continue to be substantial differences in how the data is collected and what it covers. The key differences in the data reported are due to whether the data covers deaths of care home residents (irrespective of whether they die in the care home or hospital) or just deaths that happen in the care homes, and the definition used for care homes. Another important difference is whether the deaths reported (both among care home residents and the whole population) cover cases confirmed through testing, cases where COVID-19 was considered to be the probable cause of death, or excess mortality during the period of the pandemic. Contextual data on the number of tests carried out in care homes are very difficult to find, except for in Denmark where these data are published regularly.

As outlined earlier in this report, the most reliable way to measure the impact of COVID-19 on mortality is via excess deaths. Unfortunately, historical data on deaths in care homes or among care home

¹²² <https://itccovid.org/wp-content/uploads/2020/06/Mortality-associated-with-COVID-among-people-who-use-long-term-care-26-June-1.pdf> and <https://itccovid.org/wp-content/uploads/2020/10/Mortality-associated-with-COVID-among-people-living-in-care-homes-14-October-2020-3.pdf>

residents are rare internationally. Excess mortality in care homes is only available for very few countries. Without historical mortality data on care home residents, it is difficult to quantify the full impact of the COVID-19 pandemic, in the terms of mortality, among the care home population.

This report aims to present the data in a way that illustrates the differences in definitions and coverage. The authors are continuing to work to obtain more complete data for all countries included in the report, and hopefully additional countries, therefore continuing to improve the quality and comparability of the data presented here.

A striking finding of the first version of this report published on the 12th of April and when data were only available for 5 countries, was that in all those countries the share of deaths of care home residents was around 50% of all deaths linked to COVID-19. As data for more countries have been added, and more detailed data has become available for some of the countries, it has become clear that the impact of COVID-19 on care home residents has been very different internationally. The latest version of this report suggests that the share of all care home residents who have died compared to all COVID-19 deaths has decreased over time in many countries. The current average, for 22 countries, is 41%. There are many possible explanations for this, one reason could be that there have been improvements in the ability of care homes to implement Infection Prevention and Control measures, particularly as earlier shortages of testing capacity and PPE have been addressed. Other reasons may be due to some levels of immunity in care homes where there had been previous outbreaks, or to survival effects, but establishing this would require longitudinal data at care home level, not the time of data collected in this report.

To compare the relative impact of COVID-19 on care home residents in different countries, it is more useful to focus on the share of care home residents whose deaths have been linked to COVID-19. There are issues with comparability of care home definitions- in this report we have sought to use the same definition within the same country for both the numerator (reported COVID-19 deaths among care residents) and the denominator (number of care home residents or, where not available, beds)- even if this results in slightly different definitions across countries. Using this approach, we have found that the share of all care home residents who have died (linked to COVID-19) ranges from 0.02% in Singapore and 0.04% in New Zealand to over 5% (which would mean that over one in 20 care home residents have died linked to COVID-19) in Belgium, France, the Netherlands, Slovenia, Spain, Sweden, the UK and the USA. This share is highly correlated to the total number of COVID-19 deaths in the population who live outside care homes, but it is not correlated to the share of the population who live in care homes.

In addition to its direct impact on the lives of care residents and their families, mortality associated with COVID-19 is likely to have important consequences on the care sectors' economy for years to come. It is for instance likely to lead to changes in public perceptions of the risk associated with care homes, and therefore to reductions in levels of demand for institutional care. Even ignoring such demand effects, it is likely that the observed reductions in care home residents generated by COVID-19 excess mortality will take several years to be "absorbed" by new cohorts of care home admissions. Finally, many governments are likely to introduce regulatory changes aimed at preventing the risk of the spread of infectious diseases in care homes, through for instance changes in training, use of PPE, testing regimes and staffing levels. Such changes are likely to increase the costs of providing institutional care, and as a result push prices up and reduce further demand or impose additional financial burdens on public coffers at a particularly difficult fiscal time.

Although the rollout of COVID-19 vaccinations has started in many countries covered in this report, we have not considered the impact of vaccination programmes on the care home resident population. This is partly due to the difficulties associated with obtaining disaggregated data on vaccines this early on in the rollout. Attempts to gather international data on vaccinations in care homes and among care home

residents is underway¹²³ and eventually, this data will show the extent to which different vaccination approaches have protected this population.

Finally, this report only covers the mortality impacts of COVID-19 among people living in care homes. It does not cover other impacts of the infection for example potential sequaele or “long COVID”, or the wellbeing, conditioning and mental health impact of isolation measures¹²⁴. Where data on the mortality among community-based users of care was available we have included it in the report, but very few countries seem to report this.

¹²³ Lauter S, Lorenz-Dant K, Perobelli E, Caress A, Sinha SK, Arling G and Comas-Herrera A (2021) International “living” report: LongTerm Care and COVID-19 vaccination, prioritization and data. LTCcovid.org, International Long-Term Care Policy Network, CPEC-LSE, 26th January 2021 [Article from ltccovid.org](https://ltccovid.org)

¹²⁴ Low L-F, Hinsliff-Smith K, Sinha S, Stall N, Verbeek H, Siette J, Dow B, Backhaus R, Devi R, Spilsbury K, Brown J, Griffiths C, Bergman C, Comas- Herrera A (2021) Safe visiting at care homes during COVID-19: A review of international guidelines and emerging practices during the COVID-19 pandemic. LTCcovid.org, International Long-Term Care Policy Network, CPEC-LSE, 19th January 2021. <https://ltccovid.org/2021/01/19/safe-visiting-at-care-homes-during-covid-19-a-review-of-international-guidelines-and-emerging-practices-during-the-covid-19-pandemic/>