



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 14 October and may be subject to revision.

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1. Key findings

- Official publicly available data on the numbers of deaths among care home residents linked to COVID-19 is not available in many countries.
- International comparisons are difficult due to differences in testing capabilities and policies, 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 46% (based on 21 countries)**.
- To compare the relative impact of COVID-19 on care home residents in different countries it may be more useful to focus on the share of all care home residents whose deaths have been linked to COVID-19. We found that that, for the countries where this data is available, **the share of all care home residents who have died (linked to COVID-19) ranges from 0.01% in South Korea to over 4%** (which would mean that over one in 25 care home residents have died linked to COVID-19) **in Belgium, Ireland, Spain, the UK and the US. This share 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 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.

Data on the COVID-19 impacts among people living in care homes is important, as, if the levels of infections and deaths of care residents and staff are not measured in a timely (even if imperfect) manner, there is a danger that opportunities to alert policymakers to the scale of the impact of COVID-19 in care homes will be missed. This may result in allocations of scarce resources (including testing, personal protection equipment, medical personnel and medicines) that leave out the settings that are experiencing some of the biggest challenges in relation to COVID-19.

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.

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.

a. 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 symptoms¹.

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 symptoms². The second is that, particularly among care home residents who have underlying health conditions, the infection may present with atypical symptoms (such as

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

² https://read.oecd-ilibrary.org/view/?ref=129_129658-l62d7lr66u&title=Testing-for-COVID-19-A-way-to-lift-confinement-restrictions

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.

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

Another approach to measure deaths linked to COVID-19 is to count suspected cases, as is currently done in Belgium, Canada, France, Ireland, the United Kingdom, some regions of Spain and the United States. In the short-term, 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 available³.

c. 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.

³ <https://icd.who.int/browse10/2019/en#/U07.1>

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, as well as deaths among users of home care services. By 11th October there have been 2,050 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 677 deaths among residents (95% of those in Victoria). Among people who use government-subsidized home care, there had been 82 cases of infections and 7 deaths⁴. A weekly report (data from 9th October) also includes data on the number of outbreaks and staff infected in care homes. By the 9th October⁵ there were 35 care homes with active outbreaks (involving 21 residents and 15 staff) and in total there had been 2,217 staff with COVID-19 infections.

In total, by the 9th October, there had been 27,286 cases and 898 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).

In 2020 there were approximately 208,500 people living in aged care residential accommodation in Australia⁶, so the numbers of deaths so far would amount to 0.32%.

Austria

Data from the 17th September⁷ shows that, up to that date, 1,170 residents in care homes (including all ages) tested positive for COVID-19 and of these, 276 had died with COVID-19. Compared to the 771 total deaths linked to COVID-19 in Austria on the same date, deaths of care home residents would represent 36% of all deaths (data from the Austrian epidemiological alert system). There have been 756 cases among staff in care homes, but no deaths among staff.

⁴ <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>

⁵ https://www.health.gov.au/sites/default/files/documents/2020/10/covid-19-outbreaks-in-australian-residential-aged-care-facilities-9-october-2020_1.pdf

⁶ <https://www.aihw.gov.au/reports/australias-welfare/aged-care> (calculated as number of residents minus those using temporary respite care)

⁷ https://goeg.at/PK_COVID-19_in_Alten-_und_Pflegeheimen

At the end of 2018 there were 69,730 residents in care homes in Austria, using this as the denominator for the total number of care home residents, 0.4% of care home residents would have died with COVID-19⁸.

Belgium

Belgium first reported official estimates of the number of deaths in care homes on the 11th April. The data is collected by Sciensano, a public research institution, which publishes very detailed epidemiological daily reports on COVID-19⁹. 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 11th October, there had been 10,175 deaths linked to COVID-19 in Belgium, of these, 4,892 people died in care homes (48%). This number also includes suspected cases.

Data on the number of care home residents who died in hospital is only publicly available up to the 20th June. Of the 6,249 deaths linked to COVID-19 up to that date, 22% (1,377) happened in hospital. On that date, there had been 9,731 deaths in total, so including the deaths of care home residents in hospital would bring the share of deaths of care residents compared to all deaths to 64%¹⁰. The weekly bulletin¹¹ of the 19th June reports estimates that in total, there had been 6,213 deaths of care home residents, including 1,353 deaths in hospital and 15 in other locations, 21.8% of care home residents had died in hospital. Based on this, 64% of all deaths linked to COVID-19 in Belgium would have been of care home residents.

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 4.9% of all care home residents aged 65 or over, without including the care home residents who died in hospital, the share would be 3.9%.

Since the 10th of April, 611,384 tests have been carried out in care homes, this would have included tests on staff, but to give an idea of the scale, compared to the number of care home residents, this would be equivalent to 4.89 tests per resident¹³.

On the 26th August, the data on COVID-related deaths in Belgium was corrected using a retrospective detailed survey of deaths in care homes in Flanders. This resulted in the elimination of duplicated entries and mis-coded cases for the period between the 18th March and the 2nd June. As a result the

⁸ BM Arbeit, Soziales, Gesundheit und Konsumentenschutz (BMASGK) (2019), *Österreichischer Pflegevorsorgebericht* (Austrian Report on Long-term Care 2018), Vienna, BMASGK.⁸

⁹ <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>

¹⁰ https://covid-19.sciensano.be/sites/default/files/Covid19/COVID-19_Weekly%20report_20200626%20-%20FR_0.pdf

¹¹ https://covid-19.sciensano.be/sites/default/files/Covid19/COVID-19_Weekly%20report_20200619%20-%20FR.pdf

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

¹³ <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>

total number of deaths in Belgium up to the 26th August was adjusted to 9,878 (instead of 9,999) and the total number of deaths in care home residents in Flanders was adjusted to 2,623 instead of 2,744¹⁴

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 difficulties¹⁵.

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-19¹⁶. 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 Control¹⁷ starting on March 23 and Public Health Ontario on March 31¹⁸. As of October 1, 8 of 13 Canadian provinces and territories still have had either no or very few cases in care homes¹⁹.

According to the 2016 Census, 425,755 Canadians live in long-term care or retirement homes as well as assisted living facilities. Data collected by Hsu et al²⁰ and the NIA's Long-Term Care COVID-19 Tracker Open Data Working Group, as of the 1st of October, found that approximately 20,994 of these residents (representing 4.9% of all residents in care homes) had been infected with COVID-19, and 7,411 of them died as a result (1.7% of all care home residents). This amounted to 80% of all COVID-19 deaths in Canada.

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

¹⁴ <https://covid-19.sciensano.be/sites/default/files/Covid19/MORTALITE%20COVID-19%20%E2%80%93%20MISE%20C3%80%20JOUR%20DES%20DONNEES%20%E2%80%93%2026%20AO%C3%9BT%202020.pdf>

¹⁵ 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/>

¹⁶ <https://www.theglobeandmail.com/canada/article-how-the-coronavirus-took-north-vancouvers-lynn-valley-care-centre/>

¹⁷ <http://www.bccdc.ca/health-info/diseases-conditions/covid-19/data>

¹⁸ <https://www.ontario.ca/page/how-ontario-is-responding-covid-19#section-0>

¹⁹ <https://ltccovid.org/wp-content/uploads/2020/04/LTC-COVID19-situation-in-Canada-22-April-2020-1.pdf>

²⁰ Hsu AT, Lane NE, Sinha SK, Dunning J, Dhuper M, Kahiel Z, Sveistrup H. Report: Understanding the impact of COVID-19 on residents of Canada's long-term care homes — ongoing challenges and policy responses. LTCcovid, International Long-Term Care Policy Network, CPEC-LSE, 10 May 2020 https://ltccovid.org/wp-content/uploads/2020/05/LTCCovid-country-reports_Canada_Hsu-et-al_May-10-2020-2.pdf

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.

Denmark²¹

By the 6th October, there had been confirmed COVID-19 infections in 16% of Danish nursing homes (145 out of 937). 675 residents in nursing homes in Denmark had tested positive for COVID-19 and 232 of these had died²². In the total population, 663 COVID-19 related deaths were confirmed, the share of confirmed deaths among nursing home residents was 35%.

There were just over 40,000 nursing home residents in Denmark, this suggests that 0.6% of nursing home residents would have died from confirmed COVID-19. 19,338 residents have been tested so far.

Finland²³

As of the 9th October, 11,580 people had tested positive for COVID-19 in Finland and 346 people died. Of those, 42% (145) died in social care 24-hour units²⁴. In 2018 there 50,298 residents in 24-hour units²⁵, the share of COVID-19-related deaths in these units represents 0.29% 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 8th October reported a total of 32,365 deaths as a result of COVID-19, of which 14,955 (46%) were residents in care homes²⁶. Of these, 10,785 (72%) died in the care home and, particularly in the earlier part of the pandemic, were mostly “probable cases” where a doctor confirmed that the symptoms were associated with COVID-19. The remaining 4,170 (28%) died in hospital and were confirmed through testing²⁷.

Until the 8th October there have been 46,520 confirmed infections among care home residents, and 25,171 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 France²⁸, thus the number of deaths of care home residents linked to COVID-19 would represent 2.4% of all the available beds.

Germany²⁹

Germany’s Robert Koch-Institute 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

²¹ With thanks to Tine Rostgaard

²² <https://www.ssi.dk/sygdomme-beredskab-og-forskning/sygdomsovervaagning/c/covid19-overvaagning>

²³ <https://itccovid.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, Julta Pulkki and Mari Aaltonen

²⁴ <https://thl.fi/en/web/infectious-diseases-and-vaccinations/what-s-new/coronavirus-covid-19-latest-updates/situation-update-on-coronavirus>

²⁵ <https://thl.fi/fi/tilastot-ja-data/tilastot-aiheittain/ikaantyneet/sosiaalihuollon-laitos-ja-asumispalvelut>

²⁶ établissements sociaux et médico-sociaux (ESMS)

²⁷ <https://www.santepubliquefrance.fr/maladies-et-traumatismes/maladies-et-infections-respiratoires/infection-a-coronavirus/documents/bulletin-national/covid-19-point-epidemiologique-du-24-septembre-2020>

²⁸ <https://www.insee.fr/fr/statistiques/3676717?sommaire=3696937>

²⁹ With thanks to Klara Lorenz-Dant

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 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.

On 11th October 2020, 20,798 people living in communal settings and 11,535 people working in these settings (as defined by §36 IfSG) had been infected with COVID-19. Out of these, 3,752 residents as well as 41 staff have died. The total deaths in Germany on the 11th October were 9,615, so deaths in communal settings represent 39% 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, 0.5% of all care home residents would have died due to COVID-19 so far. Because the death figures includes people living in other establishments, the percentage is likely to be lower.

Hong Kong SAR China³²

According to the daily update of the Government as of 29th September 2020, there have been 5,080 confirmed cases of COVID-19. Among them, 105 people have passed away³³. There have been 16 care homes in outbreaks, resulting in 105 residents and 28 staff members testing positive. 30 residents have died (29% 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%.

³⁰ https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Situationsberichte/Sept_2020/2020-09-28-en.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 (28 Sept.2020). 安老院疫情資訊. Retrieved from https://m.facebook.com/fernandochiuhungcheung/photos/a.10150240176145721/10164103553345721/?type=3&source=48&__tn__=EH-R

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

Hungary³⁶

On 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. However, the number of notified deaths in care homes is only made publicly sporadically, the last data we found was from mid-July 2020, in an expert panel report on nursing homes and COVID-19⁴⁰. Until the 14th July 2020 there had been 985 COVID-19 related deaths in nursing homes, representing 56% of total deaths (at the time 1,748) in Ireland. The latest report from HPSC is that there have been a total of 1826 Covid-19 related deaths in Ireland on the 11th October⁴¹.

Ireland carried out a census of mortality in long-term care residential facilities⁴² for the period from the 1st January to 19th April. The data published on the 1st May showed that in that period there had been 3,368 deaths in these facilities, of these, 616 were linked to COVID-19. Of the 616 COVID-19 related deaths, 395 had been confirmed with a laboratory test and 221 were probable COVID-19 deaths.

There are an estimated 30,000 people living in nursing homes. Out of these, 3.3% of all nursing home care residents would have died as a result of COVID-19 up to mid-July.

Israel⁴³

The first COVID-19 patient in Israel was diagnosed on February 27th and, by the 8th of October, the number of confirmed cases has risen to 282,000, with 1,824 deaths⁴⁴. Of the deaths, 704⁴⁵ were

[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%20of%20RCHes%20(Subsidised%20versus%20Non-subsidised%20Places)(30.6.20).pdf) and <https://www.statistics.gov.hk/pub/B72002FA2020XXXXB0100.pdf>

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://itccovid.org/wp-content/uploads/2020/04/Ireland-COVID-LTC-report-updated-28-April-2020.pdf>

⁴⁰ COVID-19 Nursing Homes Expert Panel (2020) Examination of Measures

to 2021, Report to the Minister for Health (<https://www.gov.ie/en/publication/3af5a-covid-19-nursing-homes-expert-panel-final-report/>)

⁴¹ <https://www.gov.ie/en/press-release/18291-statement-from-the-national-public-health-emergency-team-sunday-11-october/>

⁴² <https://www.gov.ie/en/publication/868ad8-mortality-census-of-long-term-residential-care-facilities-1-january-/>

⁴³ With thanks to Shuli Brammli and Sharona Zadok

⁴⁴ Daily report Corona spread – situation in Israel, MoH

<https://www.gov.il/he/departments/publications/reports/daily-report-20201008>

⁴⁵ MoH internal report 12.10.2020

residents in long-term care facilities (39%). There were 45,000⁴⁶ 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 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 facilities⁴⁷.

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%⁴⁸. No new data was available as of 11th October 2020.

Jamaica⁴⁹

As of 11th October 2020, 7,343 people have tested positive and there have been 132 deaths. About 67% of all deaths have occurred among persons 60 years and older⁵⁰. There is no information on whether any of these cases, deaths or recoveries have taken place among residents or staff of care homes.⁵¹

Jordan⁵²

On 29th of September⁵³ there have been 9,226 cases of Covid-19 in the country and 51 deaths, but no infections or deaths in care homes have been reported so far.

Malaysia⁵⁴

Up to the 30th of September, 11,224 people have tested positive and 136 of these have died⁵⁵. There is no official data on the number of deaths of care home residents, but some are known to have occurred. As of 31st July, a total of 16,425 residents and staff had been screened, finding 47 positive cases, of these, 36 were asymptomatic (76%)⁵⁶.

⁴⁶ Shnoor, Y., & Cohen, Y. (2020). Elderly in Israel Statistical Yearbook. Retrieved from <https://brookdale.idc.org.il/publication/statistical-abstract-elderly-israel-2020/>

⁴⁷ <https://ltccovid.org/2020/04/30/the-impact-of-covid-19-on-people-using-and-providing-long-term-care-in-israel/>

⁴⁸ <https://ltccovid.org/2020/06/26/updated-estimates-of-mortality-of-nursing-home-residents-and-staff-linked-to-the-covid-19-pandemic-in-italy/>

⁴⁹ With thanks to Rochelle Amour

⁵⁰ <https://jamcovid19.moh.gov.jm/>

⁵¹ <http://jamaica-gleaner.com/article/lead-stories/20200527/nursing-home-scare-infirmiry-worker-infected-coronavirus-triggering>

⁵² With thanks to John Black

⁵³ <https://petra.gov.jo/>

⁵⁴ With thanks to Maw Pin Tan

⁵⁵ <http://covid-19.moh.gov.my/>

⁵⁶ <https://ltccovid.org/2020/10/09/updated-country-report-the-long-term-care-covid-19-situation-in-malaysia/>

Malta⁵⁷

On the 28th September 3,006 people have tested positive in Malta and there have been 33 deaths⁵⁸. While during the first wave care homes in Malta remained free of COVID-19 infections, infections in care homes have been reported since the 4th of September 2020, so far up to 8 deaths have been linked to care home residents⁵⁹.

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 29th of September 2020, there have been 1,479 confirmed and 356 probable cases of COVID-19 identified, for a total of 1,835 cases, and 25 deaths⁶⁰. 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.

Norway⁶¹

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 12 October there were 15,524 people with a positive COVID-19 test in Norway and 276 deaths⁶². Of those deaths, 145 (53%) happened in care homes. The Norwegian newspaper VG publishes detailed data on the location of all deaths, including care homes⁶³. At the end of 2019, there were 39,466 beds in care homes in Norway⁶⁴, so deaths in care homes would amount to 0.4% 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 on May 9, 450 people have died in these nursing homes, 40% of all deaths in the country⁶⁵. We have not found more recent data.

Singapore⁶⁶

The Ministry of Health centrally collects and publishes epidemiological information about COVID-19 on a daily basis⁶⁷. As of the 11th October there had been 57,876 cases of COVID-19 infection (the majority, 54,484, in dormitories of migrant workers) and 27 deaths. There have been 3 COVID-19 related deaths in nursing homes (representing 11% of all deaths). Compared to 16,059 nursing home beds in Singapore, the number of deaths would represent 0.02% of all beds⁶⁸.

⁵⁷ With thanks to Maria Aurora Fenech

⁵⁸ <https://deputyprimeminister.gov.mt/en/health-promotion/covid-19/Pages/covid-19-infographics.aspx>

⁵⁹ <https://timesofmalta.com/articles/view/coronavirus-patient-82-dies-at-elderly-home.820858>

⁶⁰ <https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-current-situation/covid-19-current-cases#summary>

⁶¹ With thanks to Norwegian newspaper VG

⁶² <https://www.fhi.no/en/id/infectious-diseases/coronavirus/daily-reports/daily-reports-COVID19/>

⁶³ <https://www.vg.no/spesial/2020/corona/#norge-dode>

⁶⁴ <https://www.ssb.no/en/pleie/>

⁶⁵ «Coronavírus: já morreram 450 idosos em lares». may 09, 2020, Accedido: may 10, 2020. [En línea]. Disponible en: <https://www.sabado.pt/portugal/amp/coronavirus-ja-morreram-450-idosos-em-lares>.

⁶⁶ With thanks to Wan Chen K Graham and Chek Hooi Wong

⁶⁷ <https://www.moh.gov.sg/covid-19/situation-report>

⁶⁸ <https://itccovid.org/wp-content/uploads/2020/08/The-COVID-19-Long-Term-Care-situation-in-Singapore-27July-2020.pdf>

Slovenia⁶⁹

As of the 29th of September, 5,487 people had had positive tests in Slovenia, of these, 713 were in care homes, corresponding to 481 residents and 232 members of staff. In total, there had been 149 deaths⁷⁰. Data on the numbers of deaths of care home residents can be obtained from an announcement that, as of the 20th of May (when there had been 105 deaths in Slovenia), 52% of these deaths happened in care homes and another 29% were deaths in hospital of care home residents. This would bring the total share of deaths of care home residents to 81%⁷¹. The COVID-19 Sledilnik (tracker) team has advised that, as of late September 2020, they considered that these percentages had not changed substantially. Therefore, we estimate that, as of 29th September there would have been 121 deaths of care home residents, 43 of whom would have died in hospital. In 2017 there were 22,904 people living in long-term care institution in Slovenia⁷², the share of residents who would have died linked to COVID-19 would be 0.5%.

South Korea⁷³

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 homes⁷⁴, 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 2018⁷⁵, the share of deaths linked to COVID-19 would also amount to 0.01%.

Spain

The mortality impact of COVID-19 in nursing homes in Spain can be analyzed using two different data sources, which have significant methodological differences. The first relies on the information provided by the regional governments with regards to the number of deaths in nursing homes. The second option is based on analyzing excess mortality among people registered with the National Long Term Care Service system (SAAD). This analysis has been carried out by the Spanish public agency in charge of the long term care system (IMSERSO), and includes both people living in their own homes who use care and people living in nursing homes.

In order to obtain a national estimate of the mortality linked to COVID-19 among people living in care homes, on the 3rd of April, the Spanish Health Ministry required that every regional Government provides data on COVID-19 related deaths in care homes in a homogenous way. The data that each community is required to send to the Ministry every Tuesday and Friday are as follows:

⁶⁹ With thanks to Alenka Oven and the COVID-19 Sledilnik team

⁷⁰ <https://covid-19.sledilnik.org/en/stats>

⁷¹ <https://www.gov.si/novice/2020-05-29-celotna-izjava-dr-beovic-glede-zdravstvene-oskrbe-stanovalcev-domov-za-starejse/>

⁷² <https://www.stat.si/StatWeb/en/News/Index/8579>

⁷³ With thanks to Hongsoo Kim

⁷⁴ <https://stats.oecd.org/Index.aspx>

⁷⁵ 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>

- Total sum of deaths in care homes from the 8th of March, 2020 to the present date.
- Total sum of confirmed COVID-19 deaths in the nursing home from the 8th of March, 2020 to the present date.
- Total sum of deaths with symptoms that are compatible with COVID-19 (not confirmed) in the nursing home from the 8th of March, 2020 to the present date.

Despite this requirement, the Health Ministry has not yet made public the data regarding the total number of deaths in nursing homes. All of the available information comes from the media⁷⁶ and from regional governments. Although the information offered by regional governments has been progressively clarified, the data are not yet completely comparable: some regions differentiate between deaths of people who have been diagnosed with COVID-19 and deaths of those with symptoms of the illness but who have not been diagnosed, while other regions do not make that distinction. In the latter case, there is no way of knowing whether a region's data refers only to confirmed cases or if non-confirmed cases are also included. In addition, some regions, but not all, have included deaths in care homes for adults with disabilities or mental illness in their data.

Taking these limitations into account, and using the last data provided by the regional Governments, the total number of deaths attributed COVID-19 on 7th October are estimated to be 20,649). 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. These deaths would represent 63% of all COVID-19 confirmed deaths in Spain (32,929) which only include deaths of people with a positive test. There are no national estimates of suspected COVID-19 deaths for the whole population. The most recent estimate of care home residents is 333.920⁷⁷, based on these estimates, the deaths linked to COVID-19 would amount to 6.18% of the care home population in Spain.

The data from IMSERSO on excess mortality shows that, between March and end of July 2020, there was an estimated excess mortality of 35,120 among people registered the public long-term care system⁷⁸. This was a 43% increase on the expected mortality rate, and represents 76% of the total excess mortality estimated in Spain. Of these excess deaths, 18,911 (53%) would have been of people living in care homes, equivalent to 7.6% of the population who lives in care homes. The rest were people receiving long-term care in the community. The excess mortality rate in nursing homes represents nearly 50% of the total mortality rate excess recorded amongst long-term care users in Spain.

There is emerging evidence to understand the factors that may have contributed to the high mortality rates in care homes in Spain. One of these studies⁷⁹ reached interesting conclusions on the factors related to the mortality rate in nursing homes in Navarra. According to this study, the factors most closely related to high mortality rates are the general contagion rate of the area in which the home is located, the size of the home (number of users), the amount of people who visited the home during the week previous to lockdown and staff ratios. There are also some other factors related to higher mortality rates such as the

⁷⁶ «Radiografía del coronavirus en residencias de ancianos: más de 20.600 muertos con Covid-19 o síntomas compatibles». oct 7, 2020, Accedido: oct 8, 2020. <https://www.rtve.es/noticias/20201007/radiografia-del-coronavirus-residencias-ancianos-espana/2011609.shtml>

⁷⁷ <http://envejecimientoenred.es/una-nueva-estimacion-de-poblacion-en-residencias-de-mayores/>

⁷⁸ "MoMo en el sistema para la autonomía y atención a la dependencia (SAAD)". Disponible en: https://www.imserso.es/InterPresent1/groups/imserso/documents/binario/inf_momo_dep_20200831.pdf

⁷⁹ "Auditoría de los centros residenciales en Navarra ante la crisis de la Covid-19". Disponible en: <https://www.navarra.es/appsext/DescargarFichero/default.aspx?CodigoCompleto=Observatorios@@@Estudios/Auditoria-Covid-Navarra-Residencias.pdf>

availability of PPE, the amount of staff on leave, the availability of tests or the completion of general disinfecting. Whether the home is privately or publicly owned was not found to be statistically related to mortality rates.

Sweden⁸⁰

On the 5th October there had been 5,863 deaths in Sweden where COVID-19 was mentioned in the death certificate, of which 2,714 (46%) were among care home residents, and 2,646 COVID-19 related deaths happened in care homes (45%)⁸¹.

On the 31st October 2019 there were 82,217 care home residents in Sweden, using that as the denominator for total number of residents, 3.3% of care home residents would have died.

Turkey⁸²

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 2020⁸³.

As of the 2nd October 2020, the total number of patients (hasta sayısı) is 321,512 and 8,325 COVID-19 related deaths were recorded⁸⁴.

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 Turkey⁸⁵. 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 deaths⁸⁶. 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 2nd of October, there had been 467,146 lab-confirmed COVID-19 cases in the UK and 42,268 deaths. In addition, NHS England provides the same figures disaggregated by NHS Trust, region, age of the patient, and recently by ethnicity⁸⁷. 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 nations⁸⁸. 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

⁸⁰ With thanks to Marta Szebehely

⁸¹ <https://www.socialstyrelsen.se/statistik-och-data/statistik/statistik-om-covid-19/statistik-over-antal-avlidna-i-covid-19/>

⁸² With thanks to Başak Akkan and Cemre Canbazer

⁸³ <https://www.euronews.com/2020/10/01/turkey-not-counting-positive-covid-19-cases-unless-there-are-symptoms-health-minister-admi>

⁸⁴ https://covid19.saglik.gov.tr/?_Dil=2

⁸⁵ <https://itccovid.org/wp-content/uploads/2020/06/The-COVID-19-Long-Term-Care-situation-in-Turkey.pdf>

⁸⁶ <https://coronavirus.data.gov.uk/>

⁸⁷ <https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-daily-deaths/>

⁸⁸

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

U07.1 and U07.2 were used) i.e. irrespective if the individual had a confirmed positive test. Up to 12th September, there had been 57,113 deaths registered where COVID-19 was mentioned on the death certificate.

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)⁸⁹.

England

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 18th of September, there were 49,982 deaths registered in England involving COVID-19⁹⁰. ONS weekly figures are usually published approximately 11 days in arrears as the registration process takes time. As of 18th of September, 31,624 COVID-19 related deaths occurred in hospital (63%), 14,850 occurred in care homes (30%), 2,368 occurred in private homes (5%) and 1,140 in hospices, other communal establishments and elsewhere (2%)⁹¹.

The ONS also publishes estimates of excess mortality during the period of the pandemic. Between week 11 (starting 9th March) and the 18th of September 2020 there were 56,481 additional deaths in England compared to the same time of the year in the previous five years⁹². Therefore, deaths linked to COVID-19 represented 88% of all excess deaths during that period.

In England, since 11th April, ONS have published CQC data on all care home resident deaths, not only those occurring in the care home. Data up until the 18th September show that 18,833 care home residents in England died from COVID-19 or related causes⁹³. For this period, of those where the place of death was stated (18,825), 14,117 (75%) died in the care homes. Prior to the ONS release of the CQC data, ONS also published data on location on death for care home residents occurring between 28th December and 19th June and registered up to 20th June. These data show that between 6th March and 10th April, a total of 3,454 care home residents' deaths were registered in England where COVID-19 was mentioned on the death certificate. Thus, in total since the first death of a care home resident due to COVID-19, 22,287 deaths of care home residents have been registered in England⁹⁴.

⁸⁹Bell 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>

⁹⁰

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

⁹¹

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

⁹²

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/weeklyprovisionalfiguresondeathsregisteredinenglandandwales> Weekly figures 2020.

⁹³

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/numberofdeathsincarehomesnotifiedtothecarequalitycommissionengland> Table 5.

⁹⁴ This figure only includes COVID-19 deaths of care home residents in Wales up until 1st June.

Furthermore, Public Health England publish data on the number of care homes with COVID-19 outbreaks in England. During the period up to the 19th of July 6,811 care homes have experienced outbreaks, this represents 44% of all care homes⁹⁵.

Wales

In Wales the ONS show that up to the 18th of September, there were 2,575 deaths registered in Wales involving COVID-19⁹⁶. Of those, 1,696 occurred in hospital (66%), 707 occurred in care homes (27%), 134 occurred in private homes (5%) and 38 in hospices, other communal establishments and elsewhere (1%)⁹⁷.

Care inspectorate Wales (CIW) also publish weekly data on notifications of deaths of care home residents by date of notification and cause⁹⁸. Since the first notification of a care home resident COVID-19 related death on the 16th March, up until the 18th September, a total of 745 care home resident COVID-19 deaths had been notified to CIW.

England and Wales

Between week 11 (starting 9th March) and the 18th of September 2020 there were 25,374 excess deaths in care homes in England and Wales⁹⁹.

Thus, up until the 18th September, 23,032 (745 + 22,287) care home residents died due to COVID-19 in England and Wales. Accordingly, deaths of care home residents linked to COVID-19 represent 39% (23,032/58,371) of all excess deaths in England and Wales.

Northern Ireland

Since 19 April, the Department of Health of Northern Ireland has been releasing daily statistics on COVID-19¹⁰⁰. As of 2nd of October, 13,612 cases of COVID-19 have been confirmed in Northern Ireland, with 583 deaths. Of those deaths, 188 (32%) occurred in care homes. There were 39 active confirmed or suspected COVID-19 cases in care homes and 209 closed outbreaks¹⁰¹.

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 certificate¹⁰². According to these data,

95

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/903085/COVID19_Care_Homes_22_July.pdf

96

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

97

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

98 <https://gov.wales/notifications-deaths-residents-related-covid-19-adult-care-homes-1-march-25-september-2020>

99

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsregisteredweeklyinenglandandwalesprovisional/weekending18september2020>. Data for Figure 5.

100

<https://app.powerbi.com/view?r=eyJrjoiZGYxNjYzNmUtOTlmZS00ODAxLWE1YTEtMjA0NjZhMzlmN2JmliwidCI6IjIjOWEzMGRILWQ4ZDctNGFhNC05NjAwLTRiZTc2MjVmZjZiNSIsImMiOiJh9>

101

<https://app.powerbi.com/view?r=eyJrjoiZGYxNjYzNmUtOTlmZS00ODAxLWE1YTEtMjA0NjZhMzlmN2JmliwidCI6IjIjOWEzMGRILWQ4ZDctNGFhNC05NjAwLTRiZTc2MjVmZjZiNSIsImMiOiJh9>

102 <https://www.nisra.gov.uk/publications/weekly-deaths> Excel Spreadsheet Weekly Deaths 2020

between the 21st March and the 25th September, there had been 900 registered COVID-19 deaths in Northern Ireland. Of those, 356 (40%) occurred in care homes. Excess deaths during this period were 1,157, meaning that COVID-19 related deaths accounted for 77% of excess deaths in Northern Ireland.

For the same period, the total number of care home residents¹⁰³ who died from suspected or confirmed COVID-19 was 437, meaning that around 81% of all COVID-19 care home resident deaths occurred within the care home. Furthermore, this would mean that care home resident deaths make up 49% of all COVID-19 deaths in Northern Ireland.

Scotland

The Scottish Government publish daily data confirmed COVID-19 deaths¹⁰⁴. As of 2nd October, 2,526 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 codes¹⁰⁵. Data for the period 16th March up to the 13th September show that there were 4,236 deaths where COVID-19 was mentioned on the death certificate. Of those, 1,966 deaths occurred in care homes, representing 46% of all COVID-19 related deaths. During the same period there were 5,032 excess deaths (compared to the 5-year average) in total and 2,263 excess deaths in care homes (45%). COVID-related deaths in Scotland represented 84% of all excess mortality.

Similarly to Wales, since 25th May, the Care Inspectorate Scotland (CIS) has reported weekly data on notifications of deaths of care home residents¹⁰⁶. This data report that up until 13th September, 220 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 residents¹⁰⁷. Thus, in total, there were at least 1,997 care home resident deaths due to COVID-19. This represents 47% of all COVID-19 related deaths registered up until 13th September. Overall, care home resident COVID-19 related deaths accounted for 40% of all excess deaths in Scotland.

The Scottish Government daily data also report data on infections in care homes in Scotland¹⁰⁸. There are 38,614 registered beds in care homes in Scotland and figures from 2017 suggest 93% occupancy rates¹⁰⁹. Based on this, the number of residents in Scotland in 2020 would be around 35,911.

As of the 30th of September, 92 (9%) 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 3,948 cumulative cases of confirmed

¹⁰³ 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.

¹⁰⁴ <https://www.gov.scot/publications/coronavirus-covid-19-trends-in-daily-data/> (Excel spreadsheet at the bottom of the page, Table 8.)

¹⁰⁵ <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>

¹⁰⁶ <https://www.webarchive.org.uk/wayback/archive/20200716093128/https://www.gov.scot/publications/coronavirus-covid-19-additional-data-about-adult-care-homes-in-scotland/>

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/related-statistics> Deaths of care home residents involving COVID-19 (3 June 2020)

¹⁰⁸ 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/>

¹⁰⁹ 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>

COVID-19 have been reported in care homes between 9th March and 4th October¹¹⁰. Up until 20th July, it was reported that 65% of care homes in Scotland had reported at least one case of COVID-19.¹¹¹ More recent figures are not available due to concerns in the reporting of suspected cases to the Care Inspectorate.

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-19¹¹². 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 has fallen steadily, to just 1.2% as of 5th October.

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 through September 20, 2020. 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 COVID-19 in nursing facilities. 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) and The Atlantic's COVID Tracking Project (CTP). Information about the number of COVID-19 deaths in the general population comes from the Johns Hopkins University Coronavirus Resource Center.

The CMS data¹¹³ 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 17th May 2020 with instructions to nursing facilities that they report cumulative figures from January through 17th May. Data consist of weekly and cumulative totals for number of COVID-19 cases and deaths, both confirmed and suspected, for nursing facility residents and staff, each of which is supported 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 until the 20th September. We aggregated facility level deaths up to the state level.

¹¹⁰ <https://www.gov.scot/publications/coronavirus-covid-19-trends-in-daily-data/> (Excel spreadsheet at the bottom of the page, Table 7a.)

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 LongTerm 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 7b.)

¹¹³ Centers for Medicare and Medicaid Services. (2020). COVID-19 Nursing Home Data. Retrieved from <https://data.cms.gov/stories/s/COVID-19-Nursing-Home-Data/bkwz-xpvg>

The KFF collects data on both resident and staff deaths in nursing facilities and other care homes¹¹⁴. Data collection began the week of 29th March. 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 29th of March 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 the 16-17th September.

The CTP system for COVID-19 in LTC facilities¹¹⁵ is similar in data collection strategy and content to the KFF system. Although 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 has staff and volunteers that 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 the 24th of September.

Other figures in this report include total population COVID-19 deaths taken from the Johns Hopkins University Coronavirus Resource Center (199,509)¹¹⁶; the number of beds in care homes, which we 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 (2,582,775); number of residents in care homes which was approximated using data from the same two sources; and total population figures from the US Census¹¹⁷ (1,937,345).

To obtain the best estimate of total number of COVID-19 related deaths in care homes, reflecting nursing facilities and other settings, we derived the best estimates of deaths from each state by selecting the highest number of deaths recorded for that state from among the three sources. In most states, the choice was between the KFF and CTP figure, whichever was highest. 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

¹¹⁴ Kaiser Family Foundation. (2020). COVID-19 LTC Facilities. Retrieved from <https://www.kff.org/coronavirus-covid-19/issue-brief/state-data-and-policy-actions-to-address-coronavirus/>

¹¹⁵ The Atlantic Monthly Group. (2020). The COVID Tracking Project: Long Term Care COVID Tracker. Retrieved from <https://covidtracking.com/data/longtermcare>

¹¹⁶ Johns Hopkins Coronavirus Resource Center. (2020). COVID-19 US Cases. Retrieved from <https://coronavirus.jhu.edu/us-map>

¹¹⁷ U.S. Census Bureau: Population Division. (2020). Annual Estimates of the US Resident Population - 2019.

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 deaths at the national level were 80,006 from KFF and 80,193 from CTP. The final best estimate was 82,105 COVID-19 linked deaths in care homes. When comparing this figure to the 57,894 deaths in nursing facilities (obtained from the CMS data), we estimate that of the total care home deaths linked to COVID-19, about 70% of deaths were in nursing facilities and 30% were in assisted living facilities and other care homes.

Based on these data, the share of all deaths linked care homes up to the 24th September would be 41%, and, assuming that all those who died were residents, the share of all care home residents who died would be 4.24%.

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 20 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 46%. 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%.

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	11/10/2020	C	898	677		75%	
Austria	17/09/2020	C	771	276		36%	
Belgium	11/10/2020	C + P	10,175	6249	4,892	61%	48%
Canada	01/10/2020	C + P	9,319	7,411		80%	
Denmark	06/10/2020	C	663	232		35%	
Finland	09/10/2020	C	346		145		42%
France	08/10/2020	C + P	32,365	14,955	10,785	46%	33%
Germany	11/10/2020	C	9,615	3,752		39%	
Hong Kong	28/09/2020	C	105	30	0	29%	0%
Hungary	27/08/2020	C	612	142		23%	
Ireland	14/07/2020	C + P	1,748		985		
Israel	08/10/2020	C	1,824	704		39%	
Jordan	28/09/2020	C	9	0	0	0%	0%
New Zealand	10/10/2020	C + P	25		16		64%
Norway	12/10/2020	C	276		145		53%
Singapore	11/10/2020	C	27	3	0	11%	
Slovenia	29/09/2020	C	149	121	78	81%	
South Korea	07/09/2020	C	336	27	0	8%	0%
Spain	07/10/2020	C + P	32,929*	20,649		63%	
Sweden	05/10/2020	C + P	5,863	2,714	2,646	46%	45%
England (UK)	18/09/2020	C + P	49,982	22,287	14,850	45%	30%
Wales (UK)	18/09/2020	C + P	2,575	745	707	29%	27%
N. Ireland (UK)	25/09/2020	C + P	900	437	356	49%	40%
Scotland (UK)	13/09/2020	C + P	4,236	1,997	1,966	47%	46%
United Kingdom	As above	C + P	57,693	25,466	17,879	44%	31%
United States	27/09/2020	C + P	199,509	82,105		41%	

Sources: as per the data described in this document

*For some countries the national total number of COVID-19 related deaths only refers 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 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	11/10/2020	0.32%	0.82%	3.55
Austria	17/09/2020	0.40%	0.77%	8.63
Belgium	11/10/2020	5.00%	1.08%	88.75
Canada	01/10/2020	1.74%	1.13%	19.63
Denmark	06/10/2020	0.58%	0.69%	11.53
Finland	09/10/2020	0.29%	0.91%	6.30
France	08/10/2020	2.47%	0.93%	50.05
Germany	11/10/2020	0.46%	0.98%	11.48
Hong Kong	28/09/2020	0.04%	0.98%	1.41
Hungary	27/08/2020	0.26%	0.57%	6.37
Israel	08/10/2020	1.56%	0.52%	21.18
New Zealand	10/10/2020	0.04%	0.79%	0.52
Norway	12/10/2020	0.37%	0.73%	5.09
Singapore	11/10/2020	0.02%	0.27%	0.46
Slovenia	29/09/2020	0.53%	1.10%	7.25
South Korea	07/09/2020	0.01%	0.42%	0.66
Spain	07/10/2020	6.18%	0.69%	70.92
Sweden	05/10/2020	3.30%	0.81%	58.53
England (UK)	18/09/2020	5.24%	0.76%	89.47
Wales (UK)	18/09/2020	3.13%	0.75%	82.29
Northern Ireland (UK)	25/09/2020	2.93%	0.79%	47.90
Scotland (UK)	13/09/2020	5.55%	0.66%	78.05
United Kingdom	As above	5.09%	0.75%	87.0
United States	27/09/2020	4.24%	0.59%	60.63

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

Since the last update of this report, there have been major changes in the number of COVID-19 related deaths among people living in care homes in Australia, following a major COVID-19 outbreak in Victoria, more information is available in the LTCcovid country report for Australia¹¹⁹. The number of deaths have also increased substantially in Israel and the USA. While much of Europe, until September, had comparatively low rates of COVID-19 infections and deaths in care homes, rates are starting to increase in many countries in the last few weeks (see Figures 4 and 5 with detailed data from Denmark).

¹¹⁸ <https://population.un.org/wpp>

¹¹⁹ Charlesworth, S & Low, L-F (2020) The Long-Term Care COVID-19 situation in Australia. Report in LTCcovid.org, International Long-Term Care Policy Network, CPEC-LSE, 12 October 2020. <https://lccovid.org/wp-content/uploads/2020/10/Australia-LTC-COVID19-situation-12-October-2020-1-2.pdf>

Table 3. Changes in the number of deaths of care home residents since the previous report (26th June)

	Number of deaths of care home residents linked to COVID-19, up to 12 October	Number of deaths of care home residents linked to COVID-19, 26 June report	% increase in the number of deaths in care homes compared to data in the 26 of June report
Australia	677	29	2,234%
Austria	276	222	24%
Canada	7,411	6,236	19%
Denmark	232	211	10%
France	14,955	14,341	4%
Germany	3,752	3,491	7%
Hong Kong	30	0	
Hungary	142	127	12%
Israel	704	137	414%
New Zealand	16	16	0%
Norway	145	144	1%
Singapore	3	2	50%
Slovenia	121	85	42%
Spain	20,649	19,553	6%
Sweden	2,714	2,280	19%
United Kingdom	25,466	21,889	16%
United States	82,105	50,185	64%

The figures below seek to illustrate some of the data summarized in Tables 1 and 2.

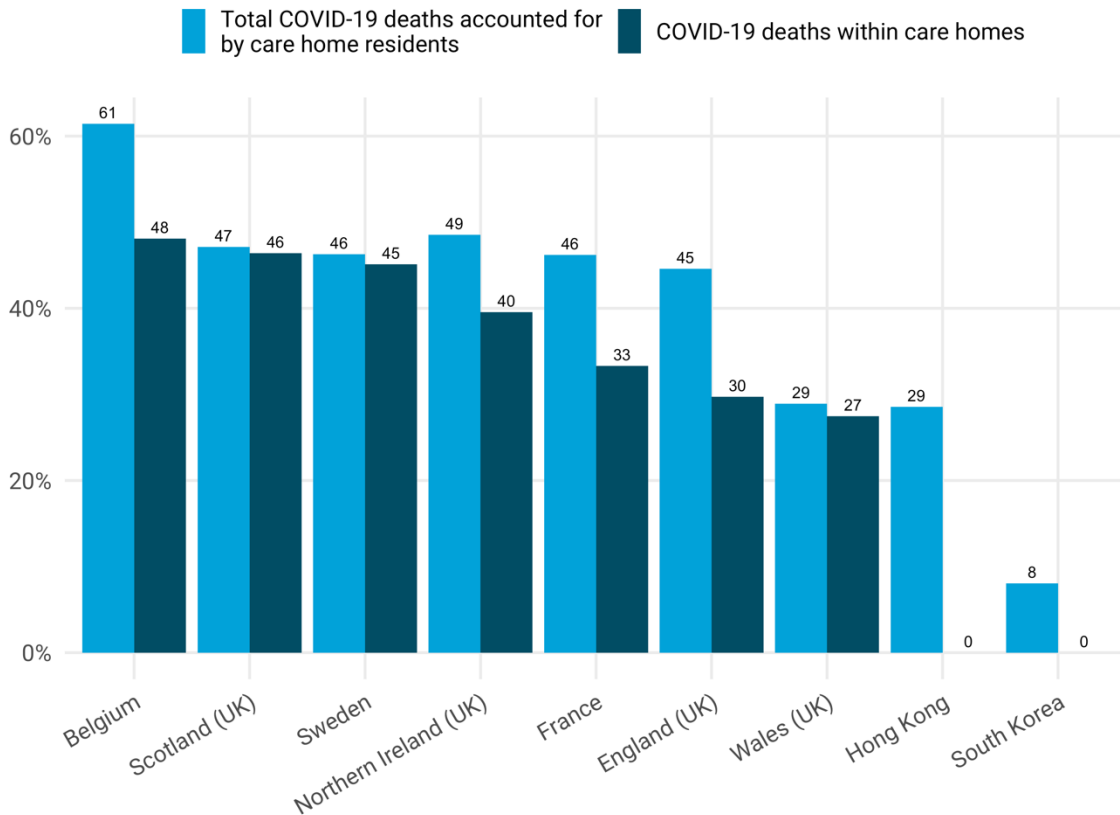
a. Comparing deaths in care homes and deaths of care home residents

In Figure 1, 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 1 percentage point in Scotland and Sweden, to 29 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)¹²⁰, and differences in hospital capacity, particularly in the earlier part of the pandemic. Where countries only provide data of deaths in care homes, these figures are likely to be an

¹²⁰ 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

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 1: Confirmed and probable or suspected COVID-19 deaths accounted for by deaths within care homes and by care home residents overall¹²¹



Countries with missing data excluded

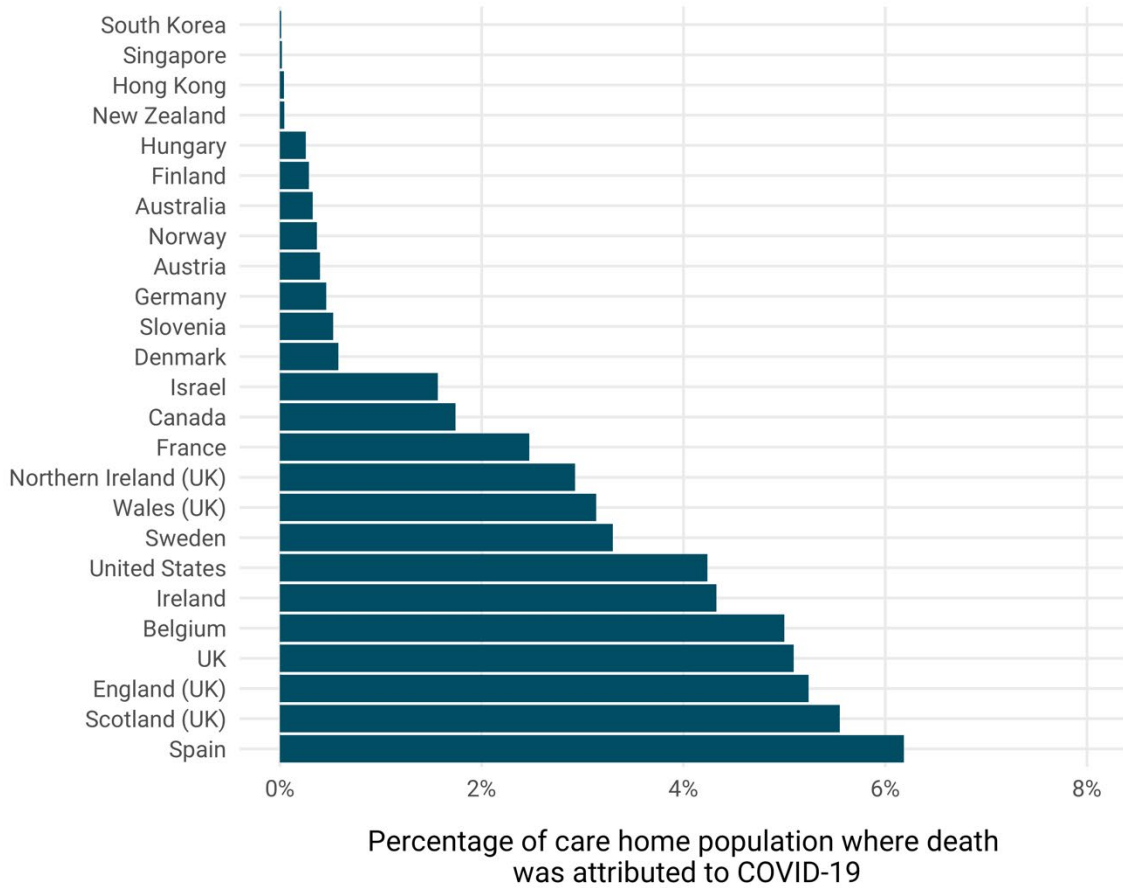
Source: table 1 in this report, data sources are summarized in each country section

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

In Figure 2 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. Once again, there is substantial variation between countries. In Spain, over 6% of the care home resident population died due to COVID-19 compared to in South Korea where this figure was only 0.01%.

¹²¹ Scotland’s data based on figures up until 17th May.

Figure 2. Share of care home residents whose deaths were linked to COVID-19, compared to the care home population



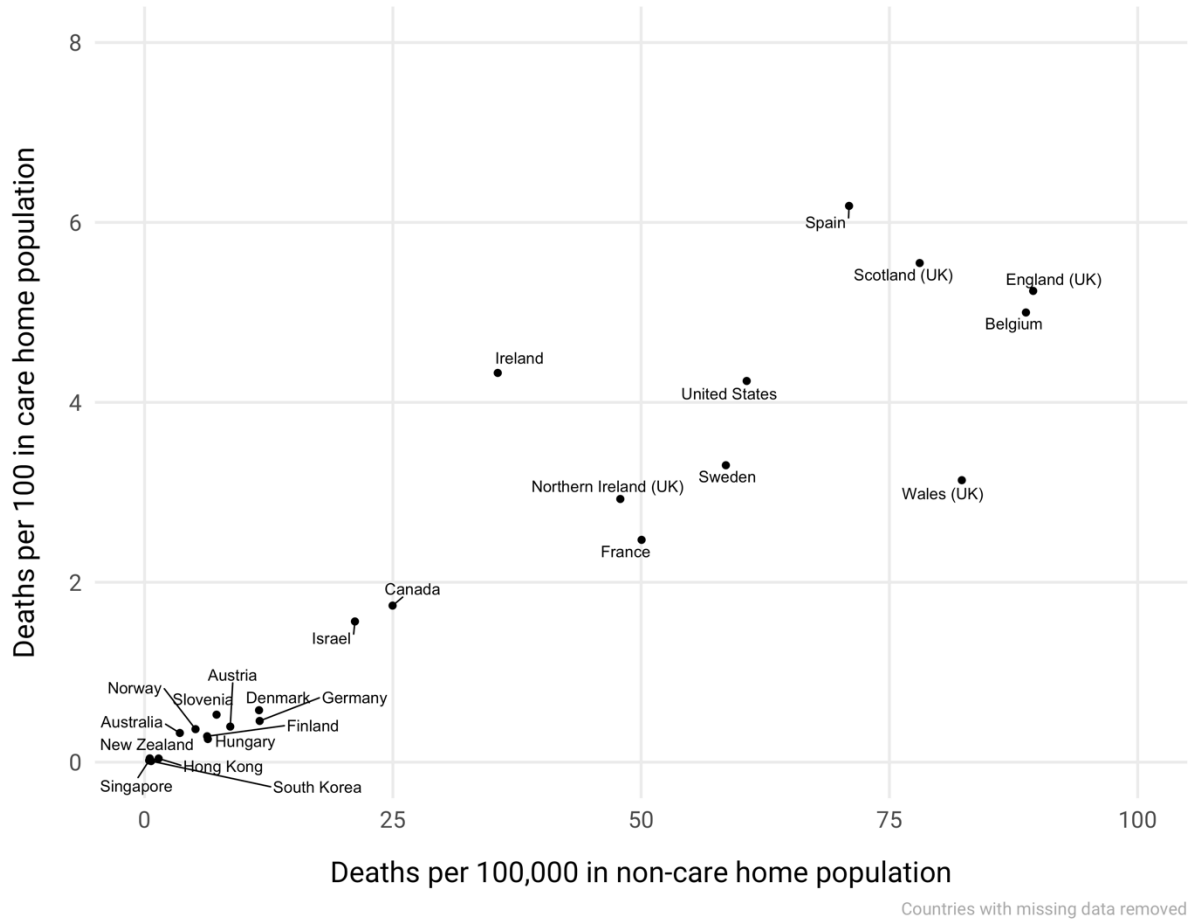
Countries with missing data removed

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

c. 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 3, 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. Interestingly, Canada has a relatively low number of deaths both within and out with the care home population, yet of all COVID-19 deaths, 80% were accounted for by care home residents.

Figure 3. 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



Source: based on figures collected for this report

d. A good example of public data reporting: the case of Denmark

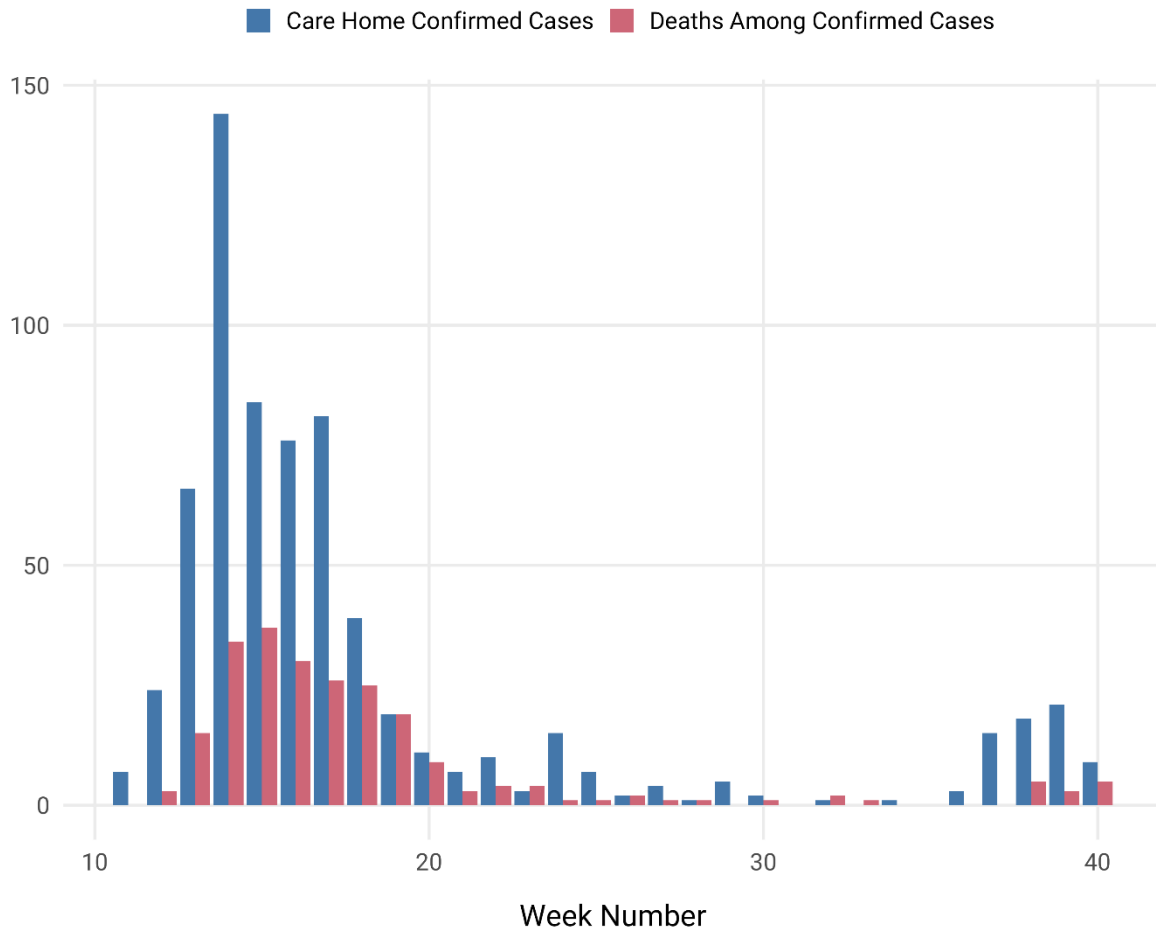
Data on the impact of COVID-19 among care home residents is not available for many countries, in some the data is only mentioned sporadically in press releases or official reports, and in others it is only provided in daily or weekly snapshots. In most countries it is also very difficult to find out about the numbers of COVID-19 tests carried out in care homes over time, which makes it difficult to ascertain the extent to which data on number of confirmed cases provides a reliable estimate of infection rates. Being able to compare the numbers of tests carried out per resident, or the positivity rates, would enable a much better comparison of the infection rates in care homes than the data we have been able to find so far.

In the case of Denmark¹²² it is possible to obtain weekly data on number of cases, numbers of tests carried out and numbers of deaths linked to COVID-19 since the beginning of the first cases in March in a single table, which provides a much clearer picture than we have been able to find for all other countries, of what the evolution of the pandemic in the care homes sector. Figures 4 and 5

¹²² <https://www.ssi.dk/sygdomme-beredskab-og-forskning/sygdomsovervaagning/c/covid19-overvaagning>

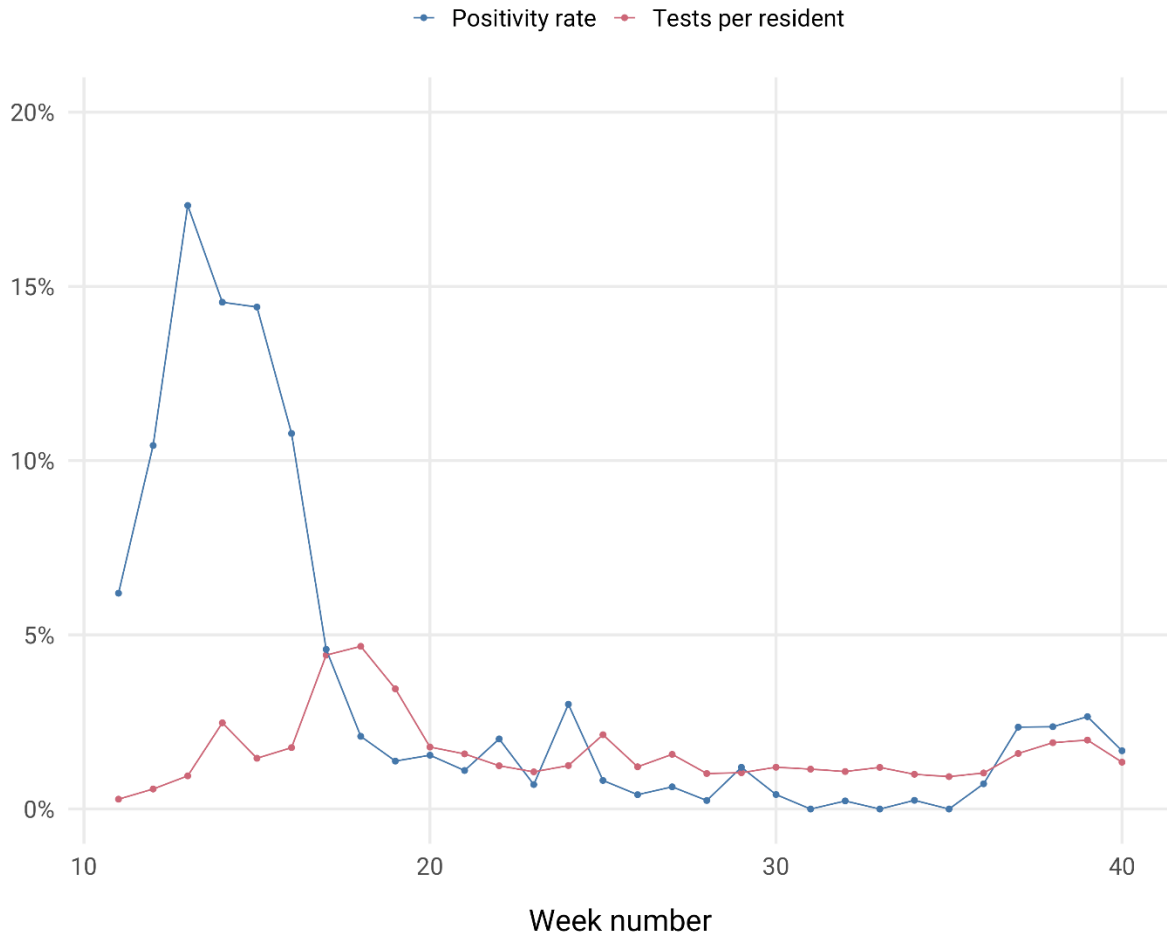
reproduce data showing how, as in many other European countries, after almost no new infections in care homes during July and August, infections started to increase in early September (week 37) and deaths in mid September (week 38).

Figure 4: Confirmed COVID-19 infections in care homes and deaths in Denmark, by week, 2020



Source: <https://www.ssi.dk/sygdomme-beredskab-og-forskning/sygdomsovervaagning/c/covid19-overvaagning>

Figure 5: Testing of care home residents and positivity rates in Denmark, by week, 2020



Source: <https://www.ssi.dk/sygdomme-beredskab-og-forskning/sygdomsovervaagning/c/covid19-overvaagning>

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 residents are rare internationally. Excess mortality in care homes is only available in the UK and in Spain (for those registered with the social care system in Spain who receive institutional care benefits). Without historical mortality data, 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. Notably, one country (Jordan) reported no deaths (or infections) in care homes and two countries (Canada and Slovenia) reported that over 80% of COVID-19 deaths were of care home residents. With the caveat that the definitions used vary, on average the share of all COVID-19 deaths that were care home residents is 46% (based on 21 countries).

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 care home residents who have died ranges from 0.01% in South Korea to over 4% (which would mean that over one in 25 care home residents have died linked to COVID-19) in Belgium, Ireland, Spain, the UK and the US (see Table 2 for all countries for which we have found data so far). 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.

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 sequelae or "long COVID", or the wellbeing, conditioning and mental health impact of isolation measures. 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.