



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

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Corrections and comments are welcome at [info@itccovid.org](mailto:info@itccovid.org). This document was last updated on 21 May 2020 and may be subject to revision.

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## 1. Key findings

- Official data on the numbers of deaths among care home residents linked to COVID-19 is not available in many countries but an increasing number of countries are publishing data
- Due to differences in testing availabilities and policies, and to different approaches to recording deaths, international comparisons are difficult
- 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), 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).
- Trusted data from 19 countries suggests that the share of care home residents whose deaths are linked to COVID-19 tends to be **lower in countries where there have been fewer deaths** in total, although as the number of deaths grows the share seems to reach a plateau, for now.
- There have been no infections or deaths in care homes in Hong Kong (only 4 deaths in total and 1,056 cases of infections in the total population).
- In the other countries where there have been at least 100 deaths in total and we have official data, the **% of COVID-related deaths among care home residents ranges from 24% in Hungary to 82% in Canada)**
- Data from England illustrates well the importance of paying attention to differences in definitions and methods used to estimate these percentages: the share of all probable COVID-19 deaths in care homes is 27% and the share of deaths of care home residents is 38%. The share of excess deaths in care homes during the pandemic has been 44% and the share of deaths of care home residents is 52% of all excess deaths. Also, in France, deaths in care homes are 34% of all COVID-19 deaths, whereas deaths of care home residents are 51%.
- For a few countries we have been able to estimate the share of all care home residents whose deaths can be linked to COVID-19. These range from 0 in Hong Kong, 0.3% in Austria, 0.4% in Germany and 0.9% in Canada, to 2% in Sweden, 2.4% in France and 3.7% in Belgium. In the UK, if only deaths in care homes registered as linked to COVID-

19, the figure would be 2.8, whereas if excess deaths of care home residents is used, it would be 6.7%<sup>1</sup>.

## **2. Measuring the impact of COVID-19 on care home residents and staff: imperfect and limited data, but essential for resource allocation decisions**

There is growing international evidence that people living in care homes are particularly vulnerable to severe COVID-19 infections and that they are experiencing high rates of mortality as a result. There are also numerous examples from those countries of care homes becoming unviable as not enough staff is 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.

The impact of COVID-19 on residents and staff has become apparent in two ways: distressing news reports of care homes becoming overwhelmed due to large number of deaths in a short amount of time and too many staff members being either sick or self-isolating, and, increasingly, estimates of deaths of care home residents both from official and non-official sources.

A few countries have started to test people in care homes (staff and residents) systematically, as a result of growing awareness of the scale of the infections and deaths in care homes and of the limitations of relying symptoms to track the spread of the disease. For example, in Ontario, Canada, where the population in care homes now represent over 70% of deaths<sup>2</sup> from probable cases of COVID-19 have led to a recent order by the provincial government for increased testing, beginning with care homes that are currently experiencing an outbreak<sup>3</sup>. This population-level testing is critical for determining the true impact of COVID-19, including secondary infection rate and secondary clinical attack rate<sup>4</sup> among care home staff and residents, asymptomatic fraction of infection, and case fatality ratio of COVID-19 infection.

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 in this report where possible. There may also be differences in the extent to which care home residents are transferred to hospital or not.

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<sup>1</sup> This does not include deaths of Scottish care home residents in hospitals or deaths in care homes in Northern Ireland, so the share may be higher

<sup>2</sup> <https://www.ontario.ca/page/how-ontario-is-responding-covid-19#section-1>

<sup>3</sup> <https://news.ontario.ca/opo/en/2020/04/ontario-takes-immediate-steps-to-further-protect-long-term-care-residents-and-staff-during-covid-19.html>

<sup>4</sup> The secondary attack rate is the probability that an infection occurs among susceptible people within a specific group (ie, household or close contacts)

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, it is important to share these data 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 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.

### **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 also 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 was 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 in order 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.

This approach has a number of 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 symptoms<sup>5</sup>. 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.

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<sup>5</sup> [https://read.oecd-ilibrary.org/view/?ref=129\\_129658-l62d7lr66u&title=Testing-for-COVID-19-A-way-to-lift-confinement-restrictions](https://read.oecd-ilibrary.org/view/?ref=129_129658-l62d7lr66u&title=Testing-for-COVID-19-A-way-to-lift-confinement-restrictions)

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 try to measure deaths linked to COVID-19 is to count suspected cases, as is currently done in Belgium, Canada and Ireland. This approach has the risk of mis-attribution of deaths. In the short-term this approach has the advantage of providing timely information that is not subject to biases introduced by testing priorities. In the case 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 that can support decisions to, for example, increase testing in care homes or of staff that provide care in private homes as we have observed in Ontario, Canada.

#### **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 best way to estimate the mortality impact of COVID-19. This approach has the advantage of being able to also include 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 and 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.

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

This section aims to collect the latest information available from a number of countries and will be updated regularly as new information becomes available.

It is very important to note that the data reported here are not comparable. Data from official sources have been used where possible, and, when not available, information from news reports has been collected. There are a number of caveats that should be noted:

- We only have information on a few countries so far (please email [a.comas@lse.ac.uk](mailto:a.comas@lse.ac.uk) if you can contribute, please see annex 1).
- The systems for recording deaths linked to COVID-19 in care homes (and the definition of what is a care home) vary between different countries and even regions.

## Australia

The Department of Health of the Australian Government first published deaths linked to COVID-19 in care homes on the 15<sup>th</sup> of April, as well as deaths among users of home care services. On May 18, Australia has had a total of 99 deaths, of these 26 were residents in subsidized aged care facilities. There were also 3 deaths among people who used publicly subsidized home care. Care home residents represented 29% of total deaths<sup>6</sup>. 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).

## Austria<sup>7</sup>

Data for the 22<sup>nd</sup> April shows that, as of the 22<sup>nd</sup> April, 788 residents and 448 staff in care homes for older people, and 52 residents and 56 staff in care homes for people disabilities tested positive for COVID-19. On that same date, 219 residents in care homes for older people and 1 in a care home for people with disabilities had died with COVID-19. Compared to the 510 total deaths linked to COVID-19 on the same date, deaths of care home residents would represent 41% of all deaths<sup>8</sup>.

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, 0.3% of care home residents would have died with COVID-19<sup>9</sup>.

## Belgium

Belgium first reported official estimates of the number of deaths in care homes on the 11<sup>th</sup> April. The data is collected by Sciensano, a public research institution, which publishes very detailed epidemiological daily reports on COVID-19<sup>10</sup>. They include data on the number of deaths in care homes (“maisons de repos”). As of the 15<sup>th</sup> 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 1<sup>st</sup> 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.

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<sup>6</sup> <https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert/coronavirus-covid-19-current-situation-and-case-numbers>

<sup>7</sup> With thanks to Andrea E. Schmidt, Kai Leichsenring, Heidemarie Stafflinger, Annette Bauer

<sup>8</sup> <https://ltccovid.org/wp-content/uploads/2020/05/The-COVID-19-Long-Term-Care-situation-in-Austria-15-May.pdf>

<sup>9</sup> See table with data from Austria in the annex for sources.

<sup>10</sup> <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>

On the May 18 there had been 9,080 deaths linked to COVID-19 in Belgium, of these, 4,646 people died in care homes (51%). This number also includes suspected cases and, of the total deaths, 77% of all care home deaths were suspected cases, and only 23% had been confirmed with a test. The reported % of deaths in care homes has increased since the first date these data were published, from 42% on the 11<sup>th</sup> April to 51% on May 18.

The report also contains data on the numbers of care home staff and residents that have been tested since the 10<sup>th</sup> of April. As of May 18, 138,373 staff were tested, of these, 2% were positive, and of those who tested positive, 73% were asymptomatic. Of the 142,592 residents who had been tested, 4% were positive and of these, 76% were asymptomatic.

Although data on the number of deaths among care home residents is not reported in the statistical bulletin (only number of deaths in care homes), the bulletin does report that in the last 24 hours to May 18, 19% of all new hospital admissions were from care homes.

Belgium has an estimated 125,000 people aged 65 and over living in care homes<sup>11</sup>, the number of care home residents died in care homes so far would represent 3.7% of all care home residents aged 65 or over. This does not include care home residents who may died in hospital.

## 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-19<sup>12</sup>. 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. However, it was not until recently that reports about care homes have been presented systematically as part of the provinces' epidemiological reports, such as the ones produced by the BC Centre for Disease Control<sup>13</sup> starting on March 23 and Public Health Ontario on March 31<sup>14</sup>. Quebec is the latest province to disclose the number of cases and deaths of residents in long-term care homes, as of April 13. Other Canadian provinces and territories have had either no cases or too few cases in long-term care homes to provide meaningful estimates<sup>15</sup>.

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<sup>11</sup> <https://kce.fgov.be/fr/les-maisons-de-repos-ne-se-pr%C3%A9parent-pas-un-avenir-de-tout-repos>

<sup>12</sup> <https://www.theglobeandmail.com/canada/article-how-the-coronavirus-took-north-vancouvers-lynn-valley-care-centre/>

<sup>13</sup> <http://www.bccdc.ca/health-info/diseases-conditions/covid-19/data>

<sup>14</sup> <https://www.ontario.ca/page/how-ontario-is-responding-covid-19#section-0>

<sup>15</sup> <https://ltccovid.org/wp-content/uploads/2020/04/LTC-COVID19-situation-in-Canada-22-April-2020-1.pdf>



According to the 2016 Census, 425,755 Canadians live in long-term care or retirement homes as well as assisted living facilities. Hsu et al<sup>16</sup> estimate published on the 12<sup>th</sup> of May found that between 13,360 to 14,860 of these residents (representing 3.1 to 3.5% of all residents in long-term care and retirement homes) had been infected with COVID-19, and 3,890 of them died as a result (0.9% of all care home residents). This amounted to 82% of all COVID-19 deaths in Canada at the time.

## Denmark<sup>17</sup>

On the 7<sup>th</sup> of May, 525 residents in nursing homes in Denmark had tested positive for COVID-19 and 170 had died<sup>18</sup>. In the total population, 506 COVID-19 related deaths were confirmed, the share of confirmed deaths among nursing home residents was 34%.

## France

France first published official death estimates for people in care homes on the 31<sup>st</sup> of March, then again on the 7<sup>th</sup> April and, from the 12<sup>th</sup> of April the figures are available daily. The % of all deaths among care home residents has ranged from 39.2% to 51%).

The most recent numbers published by the Ministry of Health on the 18<sup>th</sup> of May reported a total of 28,239 deaths as a result of COVID-19, of which 14,363 (51%) were residents in care homes<sup>19</sup>. Of these, 10,650 (74% of all deaths among care home residents, and 38% of all deaths) died in the care homes and were mostly “probable cases” (where a doctor confirmed that the symptoms were associated with COVID-19) and 3,713 died in hospital (and were confirmed through testing)<sup>20</sup> (1). There had been 142,903 cases of confirmed COVID-19 infections, of these, 73,623 were care home residents.

The detailed epidemiological report of the 1<sup>th</sup> of May provides additional information. Between the 1<sup>st</sup> March and 11<sup>th</sup> May there were 40,503 members of staff with suspected COVID-19, of these, 19,156 cases of infection were confirmed through tests, and 73,435 among residents (35,437 confirmed).

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<sup>16</sup> 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](https://ltccovid.org/wp-content/uploads/2020/05/LTCcovid-country-reports_Canada_Hsu-et-al_May-10-2020-2.pdf)

<sup>17</sup> With thanks to Tine Rostgaard

<sup>18</sup> <https://files.ssi.dk/COVID19-epi-trendogfokus-07052020-4eu7>

<sup>19</sup> établissements sociaux et médico-sociaux (ESMS)

<sup>20</sup> <https://www.santepubliquefrance.fr/maladies-et-traumatismes/maladies-et-infections-respiratoires/infection-a-coronavirus/articles/infection-au-nouveau-coronavirus-sars-cov-2-covid-19-france-et-monde#block-242818>



There are an estimated 605,061 care home beds in France, so the number of deaths of care home residents linked to COVID-19 would represent 2.4% of all the available beds.

## Germany<sup>21</sup>

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 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 20<sup>th</sup> May 2020, 15,251 people living in communal settings and 8,682 people working in these settings (as defined by §36 IfSG) had been infected with COVID-19. Out of these, 3,427 residents/care recipients and 370 staff have been hospitalised and 3,029 residents/care recipients as well as 43 staff have died. The total deaths in Germany on the 20<sup>th</sup> May were 8,090, so deaths in communal settings represent 37% of all deaths<sup>22</sup>. So far there is no information 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 818,000<sup>23</sup>, assuming that there were a similar number in 2020 and that all the deaths in communal establishment had been care home residents, 0.4% of all care home residents would

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<sup>21</sup> With thanks to Klara Lorenz-Dant

<sup>22</sup> [https://www.rki.de/DE/Content/InfAZ/N/Neuartiges\\_Coronavirus/Situationsberichte/Gesamt.html](https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Situationsberichte/Gesamt.html)

<sup>23</sup> <https://de.statista.com/statistik/daten/studie/36438/umfrage/anzahl-der-zu-hause-sowie-in-heimen-versorgten-pflegebeduerftigen-seit-1999/>

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 China

According to the daily update of the Government as of 20<sup>th</sup> May 2020, there have been 1,056 confirmed cases of COVID-19. Among them, 4 people have passed away<sup>24</sup>. There have been no infections or deaths in care homes so far.<sup>25</sup>

## Hungary<sup>26</sup>

On the 11<sup>th</sup> May, the Surgeon General of Hungary reported a total of 421 deaths related to COVID-19, with 100 of those being residents in LTC homes (24%)<sup>27</sup>. COVID-19 deaths are defined as people who have tested positive and died. 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.

## Ireland<sup>28</sup>

Ireland has a centralised system to collect epidemiological information in relation to cases of COVID-19 infections<sup>29</sup>. All deaths, in all care settings and dwellings, related to COVID-19 that are notified to the Health Prevention Surveillance Centre are included in the official count of deaths. The number of notified deaths in care homes has now been published in governmental daily reports.

As of the 6<sup>th</sup> of May, Ireland had registered 22,248 confirmed cases of COVID-19, 1,375 deaths<sup>30</sup>. A total of 5,370 cases were in community residential settings of which 4,268 were in nursing homes. 857 of the total deaths happened in community residential settings, 740 of which in nursing homes. Therefore an estimated 62% of COVID-19 related deaths are people who died in community residential settings (54% in nursing homes).

Ireland carried out a census of mortality in long-term care residential facilities<sup>31</sup> for the period from the 1<sup>st</sup> January to 19<sup>th</sup> April. The data published on the 1<sup>st</sup> May shows that in that period

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<sup>24</sup> <https://chp-dashboard.geodata.gov.hk/covid-19/en.html>

<sup>25</sup> <https://ltccovid.org/wp-content/uploads/2020/04/Hong-Kong-COVID-19-Long-term-Care-situation-27-April-2020-1.pdf>

<sup>26</sup> With thanks to Robert Gal

<sup>27</sup> <https://koronavirus.gov.hu/cikkek/100-ra-nott-az-idosotthonban-koronavirussal-fertozott-elhunytak-szama>

<sup>28</sup> With thanks to Maria Pierce

<sup>29</sup> <https://ltccovid.org/wp-content/uploads/2020/04/Ireland-COVID-LTC-report-updated-28-April-2020.pdf>

<sup>30</sup> <https://www.gov.ie/en/publication/20f2e0-updates-on-covid-19-coronavirus-since-january-2020/#april>

<sup>31</sup> <https://www.gov.ie/en/publication/868ad8-mortality-census-of-long-term-residential-care-facilities-1-january/>

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 have been confirmed with a laboratory test and 221 are probable COVID-19 deaths.

## Israel<sup>32</sup>

The first COVID-19 patient in Israel was diagnosed on February 27<sup>th</sup> and since then the number of confirmed cases has risen to 15,782 (as of April 29<sup>th</sup>), with 120 in serious condition and 202 deaths. Of the deaths, 65 were long-term care residents (32%). 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 facilities<sup>33</sup>.

## Italy

The most recent official source is a preliminary report of the National Institute of Health published on the 6<sup>th</sup> of April based on a survey sent to 2,166 of the 4,629 care homes for older people in Italy. At the time it was published, 577 homes, with 44,457 residents, responded (26% of those invited to take part in the survey, and just over 10% of all care homes in Italy). Between the 1st February and the 6<sup>th</sup> of April, there were 3,859 deaths in the homes that responded, about 8.6% of residents, with regional differences, for example 13.1% in Lombardy and 7.0% in Veneto. It is estimated that 37% of these deaths were associated with COVID-19 (3% of the total number of residents). There is more information about how COVID-19 has impacted people using and providing long-term care in Italy in the country report published in LTCcovid.org<sup>34</sup>.

## Norway<sup>35</sup>

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. This has since been included in their daily report<sup>36</sup> (7,8) published every day at 1pm. The most recent report from the 18<sup>th</sup> of May shows that, out of 233 confirmed deaths related to COVID-19, 89 (38%) occurred in hospitals, 135 (58%) in health institutions (care homes and other

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<sup>32</sup> With thanks to Shuli Brammli

<sup>33</sup> <https://ltccovid.org/2020/04/30/the-impact-of-covid-19-on-people-using-and-providing-long-term-care-in-israel/>

<sup>34</sup> <https://ltccovid.org/wp-content/uploads/2020/05/LTC-COVID19-situation-in-Italy-30-April-2020.pdf>

<sup>35</sup> With thanks to Norwegian newspaper VG

<sup>36</sup> <https://www.fhi.no/sv/smittsomme-sykdommer/corona/dags--og-ukerapporter/dags--og-ukerapporter-om-koronavirus/>; <https://www.vg.no/spesial/2020/corona/#norge-dode>

institutions) and 3 (1%) in private homes. The Norwegian newspaper VG publishes detailed data on the location of all deaths, including care homes.

## 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 country<sup>37</sup>.

## Singapore<sup>38</sup>

The Ministry of Health centrally collects and publishes epidemiological information about COVID-19 on a daily basis<sup>39</sup>. As of the 3<sup>rd</sup> May, there are 18,205 confirmed cases of COVID-19 infection and 18 deaths (0.1%). There have been 2 COVID-19 related deaths in nursing homes. The deaths among nursing home residents represented 11% of the total number of deaths among people with confirmed COVID-19 infections.

## South Korea<sup>40</sup>

Based on data provided in the LTCcovid report for South Korea<sup>41</sup>, of 247 deaths linked to COVID-19 in South Korea on the 30<sup>th</sup> of April, 20 (8.1%) were people presumed to have been infected in nursing homes, and another 64 deaths (25.9% of the total) in Long-Term Care Hospitals. Deaths in both types of settings would amount to 34% of total deaths. However, there were no deaths in care homes as all residents with potential COVID infections were transferred to hospitals.

## Spain

On April 3<sup>rd</sup>, the Spanish Health Ministry required that every regional Government provide them with their data on deaths in care homes in a homogenous way. This was done in order to have a national estimate. The data that each community is required to send to the Ministry every Tuesday and Friday are as follows:

- Total sum of deaths in care homes from the 8<sup>th</sup> of March, 2020 to the present date.

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<sup>37</sup> «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>.

<sup>38</sup> With thanks to Wong Chek Hooi and Wan Chen K Graham

<sup>39</sup> <https://www.moh.gov.sg/news-highlights/details/61-more-cases-discharged-657-new-cases-of-covid-19-infection-confirmed>

<sup>40</sup> With thanks to Hongsoo Kim

<sup>41</sup> 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 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 media<sup>42</sup> 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.

Furthermore, the care home mortality rate that the Government of Catalonia has provided (which they gathered from funeral services) is double the mortality rate provided by the Health Ministry for this region<sup>43</sup>. 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, a total of 16,678 people have passed away in care homes (10<sup>th</sup> of May). 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 represent a 52.3% of all COVID-19 confirmed COVID-19 deaths in Spain.

However, if the deaths of people without a positive test are not taken into account, the number of deaths in care homes would be reduced to 9,642, a 30.2% of the officially recorded deaths in Spain. This percentage is probably closer to reality, since the general data about COVID-19 mortality in Spain references the total of cases confirmed via a diagnostic test (PCR or antibody testing)<sup>44</sup>.

## Sweden<sup>45</sup>

On the 10th May there had been around 3,700 confirmed COVID-19 cases among residents in care homes (representing 14% of all positive cases in the country). There are no national statistics on the number of care homes that experienced outbreaks, but a journalistic

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<sup>42</sup> «Radiografía del coronavirus en residencias de ancianos: más de 17.600 fallecidos a falta de test generalizados». may 10, 2020, Accedido: may 10, 2020. [En línea]. Disponible en:

<https://www.rtve.es/noticias/20200509/radiografia-del-coronavirus-residencias-ancianos-espana/2011609.shtml>.

<sup>43</sup> Generalitat de Catalunya, «Dades territorials d'impacte de Covid-19 per regió sanitària de Catalunya – Dades 8 de maig de 2020». [En línea]. Disponible en: <https://govern.cat/govern/docs/2020/05/08/21/31/8afd6243-8dc1-4f2f-803c-e79d89b59ef0.pdf>.

<sup>44</sup> Ministerio de Sanidad, «Orden SND/352/2020, de 16 de abril, por la que se modifica la Orden SND/234/2020, de 15 de marzo, sobre adopción de disposiciones y medidas de contención y remisión de información al Ministerio de Sanidad ante la situación de crisis sanitaria ocasionada por el COVID-19». abr. 17, 2020, [En línea]. Disponible en: <https://boe.es/boe/dias/2020/04/17/pdfs/BOE-A-2020-4493.pdf>

<sup>45</sup> With thanks to Marta Szebehely

investigation reported that two thirds of all care homes in Stockholm, and 18% in the whole country had had COVID-19 outbreaks by the end of April. By the 12th May, the Stockholm region reported that there had been cases of infection in 57% of all care homes<sup>46</sup>.

On the 14th May there had been 3,395 deaths in Sweden where COVID-19 was mentioned in the death certificate 1,661 deaths of care home residents<sup>47</sup>, that is 48.9% of all deaths.

On the 31st October there were 82,217 care home residents in Sweden, using that as the denominator for total number of residents, 2.0% of care home residents would have died.

## United Kingdom

The UK Government publishes daily statistics on COVID-19 related deaths<sup>48</sup>. 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 20<sup>th</sup> of May there had been 248,293 lab-confirmed COVID-19 cases in the UK and 35,704 deaths (of these, 28,970 people had died in hospital). In addition, NHS England provides the same figures disaggregated by NHS Trust, region, age of the patient, and recently by ethnicity<sup>49</sup>. These death figures do not include people who had not been tested.

Figures including care homes are not reported in the same way in England and Wales, Northern Ireland and Scotland, therefore we present them in separate sub-sections.

### *England and Wales*

The Office for National Statistics (ONS) provides weekly updates of deaths registered in England and Wales. The nature of these figures differs from the NHS figures in that they include all deaths where “COVID-19” was mentioned (by a doctor) on death certificates. Up to the 8<sup>th</sup> of May, there were 37,375 deaths registered in England and Wales involving COVID-19. ONS’ weekly figures are usually published approximately 11 days in arrears as the registration process takes time. As of 8<sup>th</sup> of May, 24,883 COVID-19 related deaths occurred in hospital (66%), 9,980 occurred in care homes (27%), 1,727 occurred in private homes (5%) and 464 in hospices (1%)<sup>50</sup>. Data up to the 1<sup>st</sup> of May by the ONS showed that there had been 12,526<sup>51</sup>

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<sup>46</sup> see table for Sweden in the annex for sources

<sup>47</sup> <https://www.socialstyrelsen.se/statistik-och-data/statistik/statistik-om-covid-19/statistik-over-antal-avlidna-i-covid-19/>

<sup>48</sup> <https://coronavirus.data.gov.uk/>

<sup>49</sup> <https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-daily-deaths/>

<sup>50</sup>

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

<sup>51</sup>

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

deaths of care home residents linked to COVID-19 up to that period, this would be 38% of all COVID-19 deaths registered up to the 1<sup>st</sup> of May (33,365<sup>52</sup>).

The ONS also publishes estimates of excess mortality during the period of the pandemic. Between week 11 (starting 9<sup>th</sup> March) and the 8<sup>th</sup> of May 2020 there have been 49,470 additional deaths in England and Wales compared to the same time of the year in the previous five years. Deaths linked to COVID-19 represented 75% of all excess deaths.

There were 21,753 excess deaths in care homes during that period<sup>53</sup>. Data from CQC for the period between the 10<sup>th</sup> of April and the 15<sup>th</sup> of May shows that during that period 85% of all deaths of care home residents happened in the care homes. This suggests that the total number of excess deaths among care home residents (including those who died elsewhere) would be 25,591<sup>54</sup>. Deaths registered as linked to COVID-19 in care homes represented 39% of all excess deaths of care home residents in England and Wales.

There is data on the number of care homes with COVID-19 outbreaks in England available from Public Health England. During the period up to the 10<sup>th</sup> of May 5,546 care homes have experienced outbreaks, this represents 35.7% of all care homes<sup>55</sup>.

#### *Northern Ireland*<sup>56</sup>

Since 19 April, the Department of Health of Northern Ireland has been releasing daily statistics on COVID-19. As of 20<sup>th</sup> of May, 4,439 cases of COVID-19 have been confirmed in Northern Ireland, with 494 deaths. There were 70 active COVID-19 in care homes and 30 closed outbreaks<sup>57</sup>.

#### *Scotland*<sup>58</sup>

There is a detailed report analysing data on infection and deaths in care homes in Scotland<sup>59</sup>. There are 40,969 registered beds in care homes in Scotland<sup>60</sup> and figures from 2017 suggest an

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<sup>52</sup>

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

<sup>53</sup>

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsregisteredweeklyinenglandandwalesprovisional/weekending8may2020>

<sup>54</sup>

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

<sup>55</sup>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/885015/COVID19\\_Care\\_Homes\\_13\\_May.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/885015/COVID19_Care_Homes_13_May.pdf)

<sup>56</sup> With thanks to Corrina Grimes

<sup>57</sup> <https://www.health-ni.gov.uk/sites/default/files/publications/health/db-200520.pdf>

<sup>58</sup> With thanks to David Bell and Elizabeth Lemmon

<sup>59</sup> 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/>

<sup>60</sup> <https://www.careinspectorate.com/index.php/publications-statistics/93-public/datastore>



87% occupancy rates (see table in the annex). Based on this, the number of residents in Scotland in 2020 would be around 35,643.

As of the 20th of May, 480 (44%) adult care homes in Scotland have a current case of suspected COVID-19, 644 (59%) adult care homes have lodged at least one notification for suspected COVID-19 to the Care Inspectorate since the start of the epidemic and 474 of these care homes have reported more than one case of suspected COVID-19. A total of 3,221 cumulative cases of suspected COVID-19 have been reported in care homes<sup>61</sup>.

In addition, 3,381 staff were reported as absent in adult care homes due to COVID-19, which represents 7.3% of all adult care home staff in those care homes who submitted a return<sup>62</sup>[2].

Whereas the daily data on deaths refer only to symptomatic cases recorded in hospitals, National Records of Scotland (NRS) publishes a weekly analysis of death registrations which mention COVID-19 in the death certificate. This measure captures COVID-related deaths in care homes and other settings as well as those in hospital. Data for the period up to the 17th May show that 3,546 of all deaths (13%) were related to COVID-19. During the same period there had been 3,926 excess deaths (compared to the 5-year average) in total and 2006 excess deaths in care homes (51%)<sup>63</sup>. COVID-related deaths in Scotland represented 90% of all excess mortality in Scotland. A total of 1,623 COVID-19 deaths occurred in care homes (46% of all COVID-19 deaths)<sup>64</sup>.

## United States

Forty-five states are now reporting statistics on deaths in nursing homes and other long-term care facilities, however the US Centers for Medicare and Medicaid Services (CMS) has required that all nursing homes report to the CDC infections and deaths in the weeks ahead. This would not cover all possible long-term care deaths because of differences in regulations for assisted living facilities, independent living facilities, and memory care units, when they are not a part of the Medicare or Medicaid program<sup>65</sup>.

The Kaiser Family Foundation (KFF) is tracking deaths at state level. As of the 20<sup>th</sup> of May, data from 45 (out of 50) states showed that there had been 152,118 people with COVID-19

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<sup>61</sup> <https://www.gov.scot/publications/coronavirus-covid-19-trends-in-daily-data/> (Excel spreadsheet at the bottom of the page, Table 7a.)

<sup>62</sup> <https://www.gov.scot/publications/coronavirus-covid-19-trends-in-daily-data/> (Excel spreadsheet at the bottom of the page, Table 7b.)

<sup>63</sup> <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>

<sup>64</sup> <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> (Data and charts icon, Tables 1 and 2)

<sup>65</sup> <https://itccovid.org/wp-content/uploads/2020/04/USA-LTC-COVID-situation-report-24-April-2020.pdf>

infections in long-term care facilities (16% of all US confirmed cases) and 30,130 deaths (41% of all US deaths) <sup>66</sup>.

## 5. Comparison table and graphs

This table 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 this version of the table we have tried to distinguish between numbers of deaths among care home residents and number of deaths in care homes. So far, only France seems to regularly provide data on the numbers of care home residents who died in hospital as well as the numbers who died in the care homes. There are more details on the differences in sources and definitions of the data provided in this table in the country sections above. As emphasized throughout this document, differences in data collection methods mean that these data are not suitable for direct comparisons.

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<sup>66</sup> <https://www.kff.org/health-costs/issue-brief/state-data-and-policy-actions-to-address-coronavirus/>

**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 deaths	Total number deaths linked to COVID-19	Number of deaths of care home residents linked to COVID-19	Number of deaths in care homes	Number of care home resident deaths as % of all COVID-19 deaths	Number of deaths in care homes as % of all COVID-19 deaths
Austria	22/04/2020	Confirmed	510	220		41%	
Australia	18/05/2020	Confirmed	99	29		29%	
Belgium	18/05/2020	Confirmed + Probable	9,080		4,646		51%
Canada	08/05/2020	Confirmed + Probable	4,740	3,890		82%	
Denmark	07/05/2020	Confirmed	506	170		34%	
France	18/05/2020	Confirmed + Probable	28,239	14,363	10,650	51%	38%
Germany <sup>67</sup>	20/05/2020	Confirmed	8,090	3,029		37%	
Hong Kong	20/05/2020	Confirmed	4	0	0	0%	0%
Hungary	11/05/2020	Confirmed	421	100		24%	
Ireland	06/05/2020	Confirmed + Probable	1,375		857	62%	
Israel	29/04/2020	Confirmed	202	65		32%	
Norway	18/05/2020	Confirmed	233		135		58%
Portugal	09/05/2020		1,125	450		40%	
Singapore	03/05/2020	Confirmed	18	2	0	11%	
South Korea	30/04/2020	Confirmed	247	84	0	34%	0%
Spain	10/05/2020	Confirmed + Probable	31,889 (confirmed)		9,642 (confirmed) 16,678 (confirmed + probable)		30% (confirmed)
Sweden	14/05/2020	Confirmed	3,395	1,661		49%	
England & Wales (United Kingdom)	08/05/2020	Probable + Excess deaths	37,375 (probable) 49,470 (excess deaths)	12,526 <sup>68</sup> (probable) 25,591 (excess deaths)	9,980 (probable) 21,753 (excess deaths)	38% (probable) 52% (excess deaths)	27% (probable) 44% (excess deaths)
Scotland (United Kingdom)	17/05/2020	Probable + Excess deaths	3,546 (probable) 3,946 (excess deaths)		1,623 (probable) 2,006 (excess deaths)		46% (probable) 51% (excess deaths)
United States <sup>69</sup>	20/05/2020	Confirmed	93,163	30,130		41%	

Sources: as per the data described in this document

<sup>67</sup> Germany's definition includes communal establishments such as prisons, so the rate of care home residents may be lower.

<sup>68</sup> This figure is for 1<sup>st</sup> of May

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/deathsinvolvinginthehealthandcaresectorenlandandwales>, so compared to total COVID-19 deaths on that date (33,365).

<sup>69</sup> Data from 45 states, see country description above.

For a small number of 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. The annex has a table describing this and providing sources for these countries.

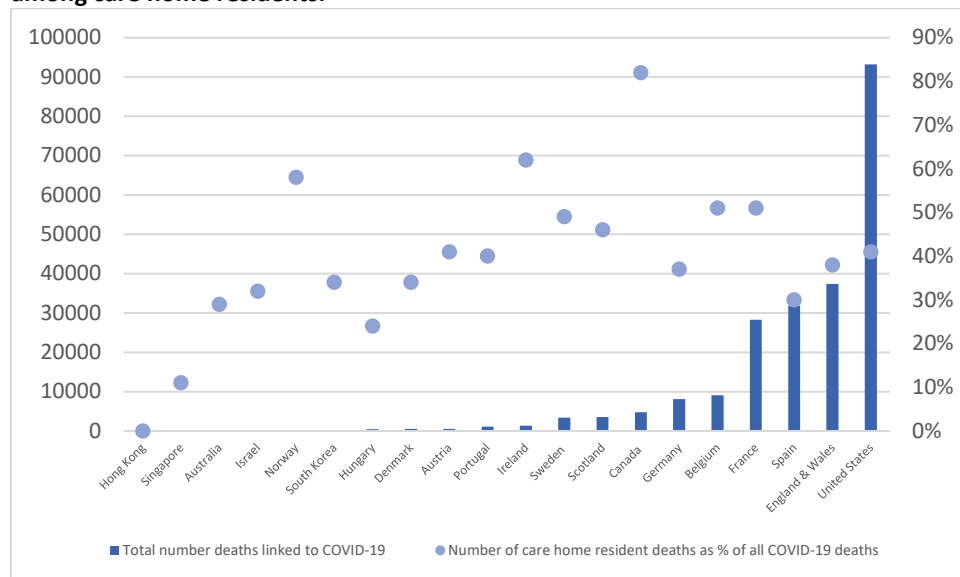
**Table 2. Share of care home residents who may have died as a direct or indirect result of the COVID-pandemic**

	Number of care home residents (or beds)	Deaths attributed to COVID (as per table 1) as percentage of care home residents	Excess deaths compared to previous years, as percentage of care home residents
<b>Austria</b>	69,730	0.3%	
<b>Belgium</b>	125,000	3.7%	
<b>Canada</b>	425,755	0.9%	
<b>France</b>	605,061	2.4%	
<b>Germany</b>	818,000 (beds)	0.4%	
<b>Sweden</b>	82,217	2.0%	
<b>United Kingdom<sup>70</sup></b>	411,000	3.4%	6.7%

*Source: based on data collected for this report*

In the graph below we have presented the data from table 1, comparing the total numbers of deaths linked to COVID-19 and the share of COVID-19 related deaths among care home residents. When data from more countries becomes available, we may be able to analyse the relationship between the total numbers of death in a country and the share of those deaths among care home residents.

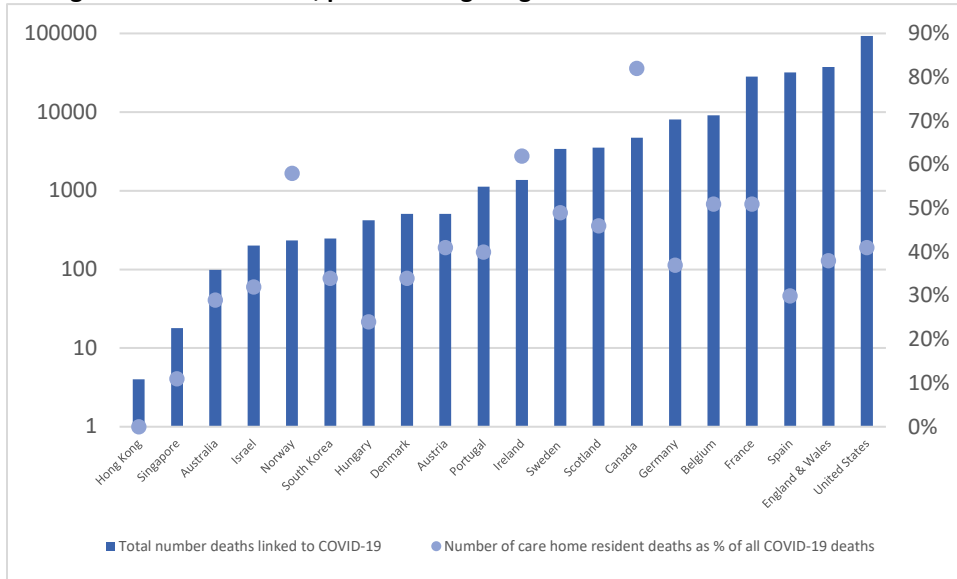
**Figure 1. Total number of deaths linked to COVID-19 in the total population compared to the number of deaths among care home residents.**



*Source: based on figures collected in this report*

<sup>70</sup> The share is likely to be an underestimate as data for deaths in care homes are not available for Northern Ireland and deaths of residents in care homes from Scotland who died in hospital have not been included.

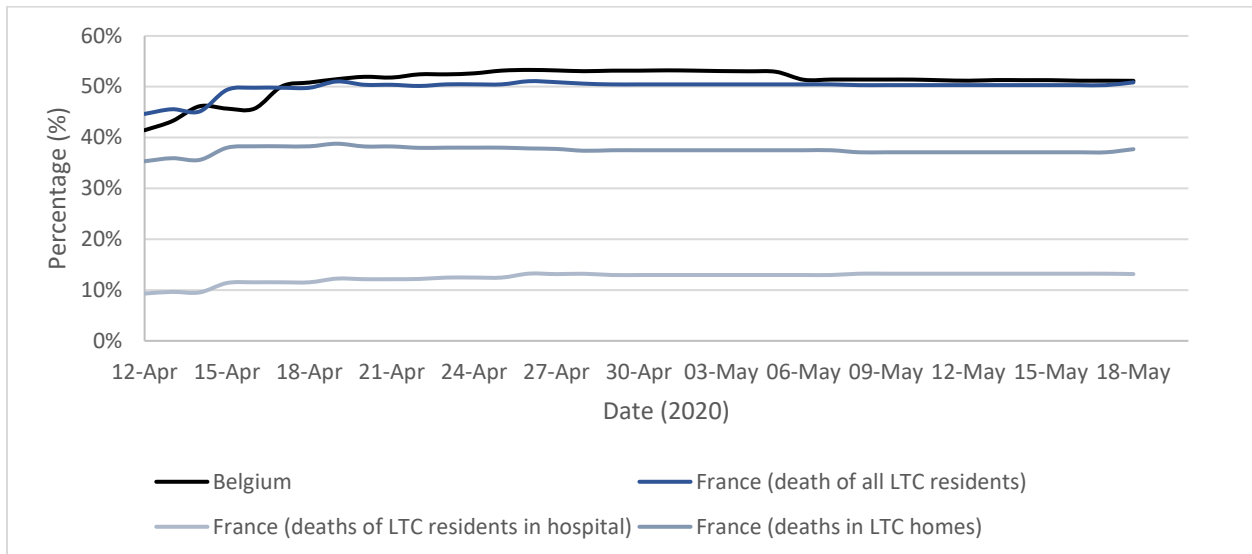
**Figure 2. Total number of deaths linked to COVID-19 in the total population compared to the number of deaths among care home residents, plotted using a logarithmic scale for the total of deaths.**



Source: based on figures collected in this report

Finally, in figure 3 we plot the trends in share of care home COVID-19 deaths compared to total deaths for Belgium and France since the 12<sup>th</sup> of April. While there appears to be a growth in the share of deaths initially, in both countries the share has remained very stable over time. As longer time series become available for more countries we will explore further the relationship between

**Figure 3. Share of total COVID-19 deaths linked to care homes in Belgium and France since the 12<sup>th</sup> of April.**



Source: based on figures collected for this report

## 6. Discussion

Since the first version of this report of the 12<sup>th</sup> 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.

There continues to be a lot of differences in how the data is collected and what it covers. The key differences 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. 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 was considered to be the probable cause of death, or excess mortality during the period of the pandemic.

For England we have data on both probable COVID-19 deaths of people who died in care homes, and on excess deaths in care homes and of care home residents. This provides a good example of why it is important to ensure that we have, as much as possible, similar approaches to reporting deaths of care home residents: in England the share of all **probable** COVID-19 deaths **in** care homes is 27%, the share of all probable deaths **of** care home residents is 38%. The share of **excess deaths in** care homes is 44% and the share of deaths **of** care home residents is 52% of all excess deaths. Also, in France, deaths in care homes are 34% of all COVID-19 deaths, whereas deaths of care home residents are 51%.

This report aims to present the data in a way that illustrates these differences. To help improve comparability of data, the authors have developed the form included in Annex 1. This is based on an earlier version piloted in Austria, England, Germany, Scotland and Sweden (see annex 2).

The authors will try 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. As improved comparable data becomes available for more countries, we will be able to present graphs that are more comparable too and we may be able to generate datasets that may contribute to improve our understanding of the relationships between different measures adopted to prevent COVID-19 and mortality of care home residents.

While an early trend observed was that the share of deaths in care homes seemed to increase as the total number of deaths increase, it seems that, at least for the two countries where we have the longest time trends so far (Belgium and France), the share of death becomes relatively stable after a while. In future versions of the report we will seek to include trends for more countries and, where possible, data disaggregated by age and gender.

For a few countries we have been able to estimate the share of all care home residents whose deaths are linked to COVID-19. These range from 0 in Hong Kong, 0.3% in Austria, 0.4% in Germany and 0.9% in Canada, to 2% in Sweden, 2.4% in France and 3.7% in Belgium. In the UK, if only deaths in care homes registered as linked to COVID-19, the figure would be 2.8, whereas if excess deaths of care home residents is used, it would be 6.7% (this does not include deaths of Scottish care home residents in hospitals or deaths in care homes in Northern Ireland, so the share may be a bit higher).

## ANNEX 1.

### Form to collect data on numbers of long-term care users and staff who have had COVID-19 and number of deaths

If you are able to complete these data, please email the form to [a.comas@lse.ac.uk](mailto:a.comas@lse.ac.uk)

Please state the source and any calculations used to generate these data (ideally using footnotes) and mark as “not found” any data that is not publicly available in your country yet. In some countries it may make sense to do this separately for different States or Regions. If data is available by age group and gender, please include the breakdowns.

If the definition of services used for some of the data does not match the definition used to describe services, please explain the differences.

Please provide the date in which the data were reported.

Links to all sources need to be provided, as the authors will verify all data and use these sources for future updates.

Where data is not available, just mark the cell as “N.A.”

	<b>How many people have been tested for COVID in your country?</b>	
	<b>How many have tested positive?</b>	
	<b>How many people died for whom COVID was mentioned in the death register even if they did not have a positive test?</b>	
	<b>What has been the excess mortality in your country during the period of the COVID pandemic?</b>	

		Residents	Staff
	<b>How are care homes defined in the official mortality statistics in your country?</b>		
	<b>What is the total number of people who live in care homes (as per the definition of care homes used in the official mortality data in your country) And how many staff work there?</b>		
	<b>What is the age and gender breakdown of care home residents?</b>		N.A.



	<b>Numbers of tests carried out in care homes in your country</b>		
	<b>Number of tests carried out in whole country on the same date (to calculate %)</b>		
	<b>Number of care home residents and staff who tested positive for COVID-19</b>		
	<b>Number of people who tested positive in your country on the same date (to calculate %)</b>		
	<b>Number of care homes that have experienced outbreaks (compared to total number of care homes)</b>		
	<b>Number of care home residents transferred to hospital due to suspected or confirmed COVID</b>		<i>N.A.</i>
	<b>Number of care home residents who died in hospital, deaths linked to COVID-19</b>		<i>N.A.</i>
	<b>Number of care home residents and staff who died and tested positive (before or after death) for COVID-19</b>		
	<b>Number of people who died in the care home, and tested positive for COVID-19</b>		<i>N.A.</i>
	<b>Number of care home residents and staff who died from suspected/probable COVID-19 (in the home or in hospital or other place)</b>		
	<b>Number of people who died IN the care home from suspected/probable COVID-19</b>		<i>N.A.</i>
	<b>Number of people who died with suspected/probable COVID-19 in the whole country on the same date (to calculate %)</b>		
	<b>Number of excess deaths in care homes compared to same time period in previous years</b>		<i>N.A.</i>
	<b>Number of excess deaths of care home residents, compared to same period in previous years</b>		
	<b>Number of excess deaths in the whole population compared to previous years on the same date (to calculate %)</b>		

	<b>Service users</b>	<b>Staff</b>
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<b>How are community-based long-term care services defined in your country? (please list type of services included)</b>		
<b>Number of people who use and provide community-based care</b>		
<b>Number of users of community-based care (home care, day care, etc) and staff who have been tested for COVID</b>		
<b>Number of users and staff who have had a positive test</b>		
<b>Number of users and staff who have died with confirmed COVID infection</b>		
<b>Number of users and staff who have died from suspected/probable COVID infection</b>		
<b>Excess deaths among users or staff</b>		

## ANNEX 2.

Initial piloting of earlier versions of the data form

### Austria

Last updated 15 May, with thanks to Andrea E. Schmidt, Kai Leichsenring, Heidemarie Staflinger, Charles Litwin, Annette Bauer<sup>71</sup>

	Residents	Staff															
<b>How are care homes defined in the official mortality statistics in your country?</b>	<p>All residential facilities that cater for accommodation (housing and food) as well as for health and social care with constant presence of health and care staff according to §3 of the Pflegefondsgesetz (Care Fund Act)</p> <p>There are about 870 care homes in Austria, about 50% public, 25% private for-profit, 25% non-profit</p>																
<b>What is the total number of people who live in care homes (as per the definition of care homes used in the official mortality data in your country) And how many staff work there?</b>	<p>95,100 (all residents per year, 2018), all ages (+31.5 since 2011)</p> <p>At end of the year 2018:</p> <table style="margin-left: 40px;"> <tr> <td>85+:</td> <td>37,200</td> <td>53%</td> </tr> <tr> <td>75&lt;85:</td> <td>19,981</td> <td>29%</td> </tr> <tr> <td>60&lt;75:</td> <td>9,647</td> <td>14%</td> </tr> <tr> <td>&lt;60:</td> <td>2,902</td> <td>4%</td> </tr> <tr> <td><b>Total:</b></td> <td><b>69,730</b></td> <td></td> </tr> </table> <p>In addition, there are about 8,200 people in day-care, about 10,000 clients used short-term care and about 3,500 people are living in alternative housing facilities.</p> <p>Source: BM Arbeit, Soziales, Gesundheit und Konsumentenschutz (BMASGK) (2019), <i>Österreichischer Pflegevorsorgebericht</i> (Austrian Report on Long-term Care 2018), Vienna, BMASGK.<sup>72</sup></p> <p><b>Staff in residential care (head-count):</b>  Registered Nurses: 13,051  Health and Social Care Assistants: 24,322  Other (Home helpers): 3,481</p>		85+:	37,200	53%	75<85:	19,981	29%	60<75:	9,647	14%	<60:	2,902	4%	<b>Total:</b>	<b>69,730</b>	
85+:	37,200	53%															
75<85:	19,981	29%															
60<75:	9,647	14%															
<60:	2,902	4%															
<b>Total:</b>	<b>69,730</b>																

<sup>71</sup> <https://ltccovid.org/wp-content/uploads/2020/05/The-COVID-19-Long-Term-Care-situation-in-Austria-15-May.pdf>

<sup>72</sup> As of 2020, with the new Austrian Government, this Ministry changed its name and partly its responsibilities and is now titled Ministry of Social Affairs, Health, Care and Consumer Protection.

	Total about 47,100 (full-time equivalent about 35,400) Source: Austrian National Public Health Institute (Gesundheit Österreich GmbH, GÖG)	
<b>Numbers of tests carried out in care homes in your country</b>	<p>On 16 April, the Minister for Social Affairs, Health Care and Consumer Protection announced that all residents and staff in care homes (about 130,000 people) should be tested (<a href="https://orf.at/stories/3162069/">https://orf.at/stories/3162069/</a> - <a href="https://www.wienerzeitung.at/nachrichten/politik/oesterreich/2057536-Die-weiteren-Massnahmen-der-Regierung.html">https://www.wienerzeitung.at/nachrichten/politik/oesterreich/2057536-Die-weiteren-Massnahmen-der-Regierung.html</a>)</p> <p><i>The testing programme was criticised in particular by the Viennese City Councillor as resources (incl. tests) would not be sufficient (<a href="https://kurier.at/chronik/wien/coronavirus-wien-bremst-bei-flaechendeckenden-tests/400818323">https://kurier.at/chronik/wien/coronavirus-wien-bremst-bei-flaechendeckenden-tests/400818323</a>) and this type of testing would not be efficient. No further information is available about further proceedings and/or results.</i></p> <p><i>As of 21 April, discussions started about improving the possibilities for visits in care homes to thwart loneliness and 14 days of quarantine for residents, e.g. when they return from a doctors appointment (<a href="https://wien.orf.at/stories/3045008/">https://wien.orf.at/stories/3045008/</a>). As of 4 May, visits got allowed again, though under specific security measures, e.g. visiting zones, definition of visiting times, registration, special hygiene, physical distancing, one visitor at a time, masks and/or plexiglass windows (<a href="https://kurier.at/chronik/oesterreich/besuche-wieder-erlaubt-begegnungszonen-im-altersheim/400825352">https://kurier.at/chronik/oesterreich/besuche-wieder-erlaubt-begegnungszonen-im-altersheim/400825352</a>).</i></p> <p><i>Testing is on-going ...</i></p> <p><i>There was a significantly high number of residents dying in care homes in Styria (72 as of 10 May) where the share of private for-profit care homes is also higher than in other regions.</i></p> <p><i><a href="https://www.falter.at/zeitung/20200513/patient--nicht-stabil/8229380a77?ref=related">https://www.falter.at/zeitung/20200513/patient--nicht-stabil/8229380a77?ref=related</a></i></p> <p><i>However, Styria is also the region with one of the highest shares of positively tested inhabitants (except for Vienna).</i></p>	
<b>Number of care home residents and staff who tested positive for COVID-19</b>	788 (as of 22 April) in residential care for older people 52 in residential care for people with disabilities	448 (as of 22 April) in residential care for older people 56 in residential care for people with disabilities
<b>Number of care homes that have experienced outbreaks (compared to total number of care home)</b>		
<b>Number of care home residents transferred to hospital due to</b>		N.A.

suspected or confirmed COVID		
Number of care home residents who died in hospital, deaths linked to COVID-19		N.A.
Number of care home residents and staff who died and tested positive (before or after death) for COVID-19		0
Number of people who died in the care home, and tested positive for COVID-19	219 in residential care for older people 1 in residential care for people with disabilities (as of 22 April)	N.A.
Number of care home residents and staff who died from suspected/probable COVID-19		
Number of people who died in the care home from suspected/probable COVID-19		N.A.
Number of excess deaths in care homes compared to same time period in previous years		N.A.
Number of excess deaths of care home residents, compared to same period in previous years		

## England

Last updated 17 May

		Residents	Staff
1	Numbers of tests carried out in care homes in your country	Not found	Not found
2	Number of care home residents and staff who tested positive for COVID-19	Not found	Not found
3	Number of care homes that have experienced outbreaks	5,546 out of the 15,517 care homes in England (36%) had reported confirmed or suspected outbreaks of COVID-19 in care homes to Public	N.A.

		Health England by 10 May	
4	<b>Number of care home residents transferred to hospital due to suspected or confirmed COVID</b>	<i>Not found</i>	<i>N.A. (although data on care home staff admitted to hospital would be of interest too)</i>
5	<b>Number of care home residents who died in hospital, deaths linked to COVID-19</b>	3,345 (ONS: 2 March to 1 <sup>st</sup> May, deaths registered up to 9 <sup>th</sup> May), 28% of all care home resident deaths linked to COVID-19 happened in hospital	<i>N.A.</i>
6	<b>Number of care home residents and staff who died and tested positive (before or after death) for COVID-19</b>	<i>Not found</i>	<i>Not found</i>
7	<b>Number of people who died in the care home, and tested positive for COVID-19</b>	<i>Not found</i>	<i>N.A.</i>
8	<b>Number of care home residents and staff who died from suspected/probable COVID-19</b>	12,185 (CQC: 10 April to 8 May)	131 across all social care sector (up to 20 <sup>th</sup> April, includes home care staff)
9	<b>Number of people who died in care homes from suspected/probable COVID-19</b>	8,314 (CQC: 10 April to 8 May) or 8,602 (ONS: 2 March to 1 May, registered up to 9 May)	<i>N.A.</i>
10	<b>Number of excess deaths in care homes compared to same time period in previous years</b>	19,319 (calculation based on ONS data to 1 <sup>st</sup> May): 48% of all excess mortality	<i>N.A.</i>
11	<b>Number of excess deaths of care home residents, compared to same period in previous years</b>	22,231 (ONS to 1 May, registered by 9 May) and 26,194 (CQC to 8 May). This is 55% of all excess mortality	<i>N.A.</i>
12	<b>How are care homes defined in the official mortality statistics in your country?</b>	Definition from CQC <sup>73</sup> : A care home is a place where personal care and accommodation are provided together. People may live in the service for short or long periods. For many people, it is their sole place of residence and so it becomes their home, although they do not legally own or rent it. Both the care that people receive and the premises are regulated. Examples: Residential home, rest home, convalescent home, respite care, mental health crisis house, therapeutic communities, nursing home	

<sup>73</sup> <https://www.cqc.org.uk/guidance-providers/regulations-enforcement/service-types#care-homes-nursing>

<b>13</b>	<b>What is the total number of people who live in care homes (as per the definition of care homes used in the official mortality data in your country) And how many staff work there?</b>	Data from CQC reported by the BBC: 411,000 people living in care homes in England and Wales <sup>74</sup>	Data from Skills for care: in 2019 there were 685,000 jobs in residential adult social care settings <sup>75</sup>
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## Germany

Last updated 20<sup>th</sup> May, with thanks to Klara Lorenz-Dant

		<b>Residents</b>	<b>Staff</b>
	<b>How are care homes defined in the official mortality statistics in your country?</b>	In Germany care homes are reported together with a group of other residential setting as defined by §36 of the German Infection Protection Act. §36 groups care facilities, homeless shelters, people living in group residences for asylum seekers, other forms of mass accommodation and prisons.	
	<b>What is the total number of people who live in care homes (as per the definition of care homes used in the official mortality data in your country) And how many staff work there?</b>	818,000 (2017) <sup>76</sup> (number of people in care and nursing homes) There is no grouped data on the number of people living in these settings	Staff in nursing homes in 2017 All 764,648 Full-time staff 220,958 <sup>77</sup>
	<b>Numbers of tests carried out in care homes in your country</b>	<i>No information</i>	<i>No information</i>
	<b>Number of care home residents and staff who tested positive for COVID-19</b>	15,251 <sup>78</sup> (20.05.2020, as reported including other residential settings)	8,682 (20.05.2020, as reported including other residential settings)
	<b>Number of care homes that have experienced outbreaks (compared to total number of care home)</b>	<i>Outbreaks in at least 520 nursing homes (media investigation)<sup>79</sup> (from 7 April, not all federal states reported information)</i>  <i>Number of nursing homes in Germany 14,480<sup>80</sup></i>	
	<b>Number of care home residents transferred to hospital due to suspected or confirmed COVID</b>	3,427 (20.05.2020, as reported including other residential settings)	370 (20.05.2020, as reported including other residential settings)
	<b>Number of care home residents who died in hospital, deaths linked to COVID-19</b>	N.A.	N.A.

<sup>74</sup> <https://www.bbc.co.uk/news/health-52284281>

<sup>75</sup> <https://www.skillsforcare.org.uk/adult-social-care-workforce-data/Workforce-intelligence/documents/Size-of-the-adult-social-care-sector/Size-and-Structure-2019.pdf>

<sup>76</sup> <https://de.statista.com/statistik/daten/studie/36438/umfrage/anzahl-der-zu-hause-sowie-in-heimen-versorgten-pflegebeduerftigen-seit-1999/>

<sup>77</sup> <https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Gesundheit/Pflege/Tabellen/personal-pflegeeinrichtungen.html>

<sup>78</sup> [https://www.rki.de/DE/Content/InfAZ/N/Neuartiges\\_Coronavirus/Situationsberichte/2020-05-20-en.pdf?\\_\\_blob=publicationFile](https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Situationsberichte/2020-05-20-en.pdf?__blob=publicationFile)

<sup>79</sup> <https://www.mdr.de/nachrichten/politik/inland/covid-infektionen-pflegeheime-deutschland-100.html>

<sup>80</sup> <https://de.statista.com/themen/785/pflege-in-deutschland/>



	<b>Number of care home residents and staff who died and tested positive (before or after death) for COVID-19</b>	3,049 (20.05.2020, as reported including other residential settings)	43 (20.05.2020, as reported including other residential settings)
	<b>Number of people who died in the care home, and tested positive for COVID-19</b>	N.A.	N.A.
	<b>Number of care home residents and staff who died from suspected/probable COVID-19</b>	N.A.	N.A.
	<b>Number of people who died in the care home from suspected/probable COVID-19</b>	N.A.	N.A.
	<b>Number of excess deaths in care homes compared to same time period in previous years</b>	N.A.	N.A.
	<b>Number of excess deaths of care home residents, compared to same period in previous years</b>	N.A.	N.A.

## Scotland

Last updated 17<sup>th</sup> May, with thanks to David Bell, David Henderson and Elizabeth Lemmon<sup>81</sup>

	Residents	Staff
<b>How are care homes defined in the official mortality statistics in your country?</b>	<p>Definition of care home according to Care Information Scotland: "A care home is where people live and have their care needs met in homely surroundings. They can also be called:</p> <ul style="list-style-type: none"> <li>• residential care</li> <li>• residential care homes</li> <li>• nursing homes</li> <li>• retirement homes</li> </ul> <p>They are usually for people needing more care than they could get in their own home or in supported housing.</p> <p>In care homes, trained staff give you care that meets health and social care standards."</p>	
<b>What is the total number of people who live in care homes (as per the definition of care homes used in the official mortality data in your country) And how many staff work there?</b>	<p>40,969 registered places (2020)  <a href="https://www.careinspectorate.com/index.php/publications-statistics/93-public/datastore">https://www.careinspectorate.com/index.php/publications-statistics/93-public/datastore</a>            40,929 registered places (2017)            35,989 care home residents (2017)</p> <p><a href="https://www.isdscotland.org/Health-Topics/Health-and-Social-Community-Care/Publications/2018-09-11/2018-09-11-CHCensus-Report.pdf">https://www.isdscotland.org/Health-Topics/Health-and-Social-Community-Care/Publications/2018-09-11/2018-09-11-CHCensus-Report.pdf</a></p>	
<b>Numbers of tests carried out in care homes in your country</b>	Not found	Not found

<sup>81</sup> <https://ltccovid.org/wp-content/uploads/2020/05/Deaths-in-Scottish-care-homes-17-May.pdf>

<b>Number of care home residents and staff who tested positive for COVID-19</b>	4,738 residents with <b>suspected</b> COVID-19 (cumulative as of 13 <sup>th</sup> May 2020) <a href="https://www.gov.scot/publications/coronavirus-COVID-19-trends-in-daily-data/">https://www.gov.scot/publications/coronavirus-COVID-19-trends-in-daily-data/</a>  No data available on positive tests in care homes.	Not found
<b>Number of care homes that have experienced outbreaks (compared to total number of care home)</b>	620 care homes have reported at least one <b>suspected</b> case of COVID-19 (cumulative as of 13 <sup>th</sup> May 2020) <a href="https://www.gov.scot/publications/coronavirus-COVID-19-trends-in-daily-data/">https://www.gov.scot/publications/coronavirus-COVID-19-trends-in-daily-data/</a>  Total number of care homes in 2020 was 1,084-  Total number of care homes for older people in 2020 was 817  <a href="https://www.careinspectorate.com/index.php/publications-statistics/93-public/datastore">https://www.careinspectorate.com/index.php/publications-statistics/93-public/datastore</a>	
<b>Number of care home residents transferred to hospital due to suspected or confirmed COVID</b>	Not found. It is not possible to identify care home residents who were transferred to hospital due to COVID-19 or other causes from current publicly available data	N.A.
<b>Number of care home residents who died in hospital, deaths linked to COVID-19</b>	Not found. It is not possible to identify care home residents who died in hospital due to COVID-19 or other causes from current publicly available data	N.A.
<b>Number of care home residents and staff who died and tested positive (before or after death) for COVID-19</b>	Not found	
<b>Number of people who died in the care home, and tested positive for COVID-19</b>	Not found	N.A.
<b>Number of care home residents and staff who died from suspected/probable COVID-19</b>	Not found. It is not possible to identify care home residents who died in hospital due to COVID-19 or other causes from current publicly available data. All we know are the care home residents who died in a care home.	
<b>Number of people who died in the care home from suspected/probable COVID-19</b>	Total deaths in care homes from COVID19 w/c Dec 30 <sup>th</sup> - w/c 4 <sup>th</sup> May = 1,438  Deaths where codes U07.1 or U07.2 are mentioned on the death certificate according to the WHO International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10).	N.A.

<b>Number of excess deaths in care homes compared to same time period in previous years</b>	Total deaths in care homes w/c 16 <sup>th</sup> March – 4 <sup>th</sup> May 2020 = 4,070  <a href="https://www.nrscotland.gov.uk/COVID19stats">https://www.nrscotland.gov.uk/COVID19stats</a>  Total deaths in in care homes average w/c 16 <sup>th</sup> March – w/c 4 <sup>th</sup> May 2015-2019 = 2,017  <a href="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">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</a>	
<b>Number of excess deaths of care home residents, compared to same period in previous years</b>	It is not possible to identify care home residents who died in hospital due to COVID-19 or other causes from current publicly available data	

Sweden, last updated 17 May, with thanks to Marta Szebehely<sup>82</sup>

	<b>Residents</b>	<b>Staff</b>
<b>How are care homes defined in the official mortality statistics in your country?</b>	The only form of care home in Swedish statistics and legislation is called “special housing for services and care” and is a needs assessed, publicly subsidised form of service for older persons (65+). Personal care (24/7) is provided in all homes.	
<b>What is the total number of people who live in care homes (as per the definition of care homes used in the official mortality data in your country) And how many staff work there?</b>	82,217 residents (all 65+) (Oct 31 2019)	Approximately 200,000 care aides/assistant nurses and 17,000 RNs in social care (home based pr residential). Probably around 60% work in care homes
<b>Numbers of tests carried out in care homes in your country</b>	<i>Not found</i>	<i>Not separated from health care staff</i>
<b>Number of care home residents and staff who tested positive for COVID-19</b>	3,700 <sup>83</sup>	<i>Not found</i>
<b>Number of care homes that have experienced outbreaks (compared to total number of care home)</b>	No national statistics but a journalistic investigation reported infected cases in 25% of Swedish long term care homes (2/3 of long term care homes in the Stockholm region and 18% in rest of Sweden) by end of April. <sup>84</sup> By May 12, the Stockholm region reported that there had been infected cases in 217 of 313 long	

<sup>82</sup> <https://ltccovid.org/2020/05/08/covid-19-reveals-serious-problems-in-swedish-long-term-care/>

<sup>83</sup> Calculated from <https://www.folkhalsomyndigheten.se/globalassets/statistik-uppfoljning/smittsamma-sjukdomar/veckorapporter-covid-19/2020/covid-19-veckorapport-vecka-19-final.pdf> By the end of week 19 there have been 24,700 confirmed cases in Sweden; of these 14% are/were care home residents=3,700.

<sup>84</sup> <https://ltccovid.org/2020/05/08/covid-19-reveals-serious-problems-in-swedish-long-term-care/>

	term care homes and 70 short term care homes (57% of homes) <sup>85</sup>	
<b>Number of care home residents transferred to hospital due to suspected or confirmed COVID</b>	<i>Not found</i>	<i>N.A.</i>
<b>Number of care home residents who died in hospital, deaths linked to COVID-19</b>	<i>Not found</i>	<i>N.A.</i>
<b>Number of care home residents and staff who died and tested positive (before or after death) for COVID-19</b>	1,661 <sup>86</sup>	<i>Not found</i>
<b>Number of people who died in the care home, and tested positive for COVID-19</b>	1,663 <sup>87</sup>	<i>N.A.</i>
<b>Number of care home residents and staff who died from suspected/probable COVID-19</b>		
<b>Number of people who died in the care home from suspected/probable COVID-19</b>		<i>N.A.</i>
<b>Number of excess deaths in care homes compared to same time period in previous years</b>	Not found but excess death in the population is reported: 3,500 of which around 2,500 are confirmed COVID-19 cases	<i>N.A.</i>
<b>Number of excess deaths of care home residents, compared to same period in previous years</b>	Not found	

<sup>85</sup> <https://www.sll.se/verksamhet/halsa-och-varld/nyheter-halsa-och-varld/2020/05/12-maj-lagesrapport-om-arbetet-med-det-nya-coronaviruset/>

<sup>86</sup> <https://www.socialstyrelsen.se/statistik-och-data/statistik/statistik-om-covid-19/statistik-over-antal-avlidna-i-covid-19/> (by May 14) According to death certificate – most but not all cases are confirmed by test.

<sup>87</sup> Ibid.