



International “living” report: Long-Term Care and COVID-19 vaccination, prioritization and data

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Last updated 26th January 2021

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This document is available through the website [Itccovid.org](#), which was set up in March 2020 as a rapidly shared collection of resources for community and institution-based long-term care responses to Covid-19. The website is hosted by CPEC at the London School of Economics and Political Science and draws on the resources of the International Long Term Care Policy Network.

Corrections and comments are welcome at s.e.lauter@lse.ac.uk. This document was last updated on 26th January 2021 and may be subject to updates and revision.

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Suggested citation

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

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1. Key points

- This report aims to provide an overview of progress in the delivery of COVID-19 vaccinations to people who use and provide long-term care. It is a collaborative “living report” that is updated and expanding regularly, please email s.e.lauter@lse.ac.uk if you would like to contribute.
- The report shows data on COVID-19 vaccinations for populations that either use and provide long-term care or are likely to do so. As of 26th January, these data are only available for a few countries, as most countries do not yet share disaggregated vaccination figures according to the characteristics of people who are vaccinated. In contrast, many countries provide data disaggregated by geographical area.
- An initial review of vaccine prioritization documents shows that care home residents and personnel are consistently listed among the group with the highest priority. Care partners and family members of care home residents and unpaid carers of people living in the community are only explicitly mentioned in a few countries. There are few mentions of people living with dementia or people with learning disabilities, although there is growing pressure in some countries (e.g. United Kingdom) for people with learning disabilities to be prioritised.
- On the 26th of January we have found data on COVID-19 vaccinations for LTC populations for 11 countries, but there are important problems with comparability, so the data in this report can only provide a broad indication of scale and is not suitable for detailed analysis.
- While most countries for which we have found data stated that care home residents were amongst the highest priority group, this does not necessarily translate into practice. In some countries the initial vaccination effort was entirely directed towards care homes, despite logistical challenges. So far, Israel, Denmark, Scotland and Cyprus, and some regions in Spain and Canada’s provinces have completed (or nearly completed) the 1st doses of vaccination of care home residents and staff, while England, Northern Ireland and Croatia, are close to achieving this goal too.
- There is marked contrast in the targeting of vaccinations, whereas some countries have initiated their vaccination rollout by targeting care homes, England, Germany, Italy and the United States have adopted a broader vaccination approach, targeting health care professionals and older people living in the community before care home residents and staff. This may be due to the logistical difficulties in delivering vaccines requiring very cold storage to care homes.
- This report also includes a summary of early (non-scientific) evidence on the international experiences in vaccination the LTC population. Countries are facing major challenges in respecting their rollout plans (in LTCFs and among the whole population) due to logistical challenges related to, on the one hand, the logistical challenges posed by some of the vaccines in terms of refrigeration and, on the other, the delay in the vaccine delivery announced by both Pfizer and AstraZeneca. There are also some indications of reluctance of part of LTC staff and, to a lesser extent, residents, to get vaccines. Finally, the need for consent policies for residents who lack capacity is another reason why it is more challenging to vaccinate people living in care homes, where a high proportion of residents have dementia, compared to older people living in the community.

2. Introduction

This document gathers data on the COVID-19 vaccine rollout among people who use and provide long-term care. The aim is to update this document regularly and collaboratively, expanding the countries covered. Please email s.e.lauter@lse.ac.uk if you would like to provide information on your country or if you would like to be involved in future versions of the report.

3. Data on COVID-19 vaccination 1st doses among people who use and provide Long-Term Care

In this section we report available data on COVID-19 1st dose vaccinations for the population who use and provide Long-Term Care. For overall country vaccination progress, the website [Ourworldindata.org](https://ourworldindata.org) provides regularly updated data at national level¹. Similarly to Ourworldindata, we include data from official sources (in some cases media reports of official announcements). We seek to include data on the following groups: people who live and work in care homes, people who use and provide care in the community (including unpaid carers) and groups of people who have higher probabilities of using LTC (older people and people with conditions such as dementia and people with other disabilities).

Data on vaccinations of populations who use and provide LTC is publicly available for very few countries, and it is not always presented in the same way. For example, in some countries data on vaccinations in care homes shows vaccinations of care home staff and residents together, whereas in others only data for residents is available. In some countries, only the share of care homes that have been visited by vaccination teams is available. Data on the share of care home residents who cannot be vaccinated due to existing COVID infections, counter indications, delays in obtaining consent or refusals is rarely available. In some cases we have not included data because we have not found the correct denominator.

Please note that the data presented here are not robust enough for analysis or for detailed country comparisons, but are reported in order to document early evidence on the degree of prioritisation, in practice, of LTC populations in the roll out of the COVID-19 vaccination programmes.

¹ Many of the data sources on vaccinations we have used in this report were identified through <https://ourworldindata.org/covid-vaccinations>.
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Table 1. Data on COVID-19 Vaccination rollout in groups that use or provide long-term care and older people², most recent disaggregated data available up to 26th January

Country	Date	% Population given at least 1 dose of vaccine	% Care home residents given at least one dose of vaccine	% Care home residents & staff given at least 1 dose of COVID-19	% Population aged 60 + given at least one dose of COVID-19	% Population 80+ given at least one dose of COVID-19	% of all 1 st vaccination doses given to care home residents and staff
Belgium ³	22/01/2021	1.22%	N.A.	N.A.	N.A.	11.18%	N.A.
Canada ⁴	22/01/2021	1.83%	N.A.	N.A.	N.A.	N.A.	Uncertain
Costa Rica ⁵	15/01/2021	0.19%	N.A.	N.A.	N.A.	N.A.	10.93%
Croatia ⁶	11/01/2020	0.72%	66.90%	N.A.	N.A.	N.A.	55.43%
Cyprus ⁷	16/01/2021	0.85%	Around 90%	N.A.	N.A.	N.A.	53.99%
Denmark ⁸	25/01/2021	3.16%	90.47%	N.A.	N.A.	N.A.	19.82%
Germany ⁹	25/01/2021	1.97%	64.16%	47.6%**.	N.A.	8.36%	79.5%**
Israel ¹⁰	25/01/2021	26.25%	Completed*	Completed	N.A.	N.A.	8.86%
Italy ¹¹	26/01/2021	2.16%	46.47%	N.A.	2.09%	2.64%	N.A.
Netherlands ¹²	19/01/2021	0.44%	Starting 18/01/2021	N.A.	N.A.	N.A.	48.05%
England (UK) ¹³	24/01/2021	10.18%	75.00%*	N.A.	N.A.	Over 75%	5.57%
Northern Ireland (UK) ¹⁴	05/01/2021	2.43%	64.57%	65.32%	N.A.	N.A.	45.40%
Scotland (UK) ¹⁵	24/01/2021	8.22%	95.00%*	N.A.	N.A.	N.A.	20.50%
Wales (UK) ¹⁶	24/01/2021	8.59%	66.18%	71.34%	N.A.	40.06%	12.98%
United States ¹⁷	25/01/2021	6.60%	N.A.	66.90%***	N.A.	N.A.	11.75%***

*The data for Israel combines care home staff and residents. Also, the data for England and Scotland is based on an announcement of the share of people vaccinated, but no information is provided on, for example, the percentage of care home residents who may have refused the vaccine or may have been excluded from vaccination due to contraindications (for example allergies).

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*** the data for care homes in the US is only for the number of doses and not the numbers of people, so this figure is an overestimate

Sources: as indicated in the footnotes for each country

² All data on population sizes has been obtained from: <https://population.un.org/wpp/> All data on number of care home residents, unless specified, has been obtained from <https://itccovid.org/wp-content/uploads/2020/10/Mortality-associated-with-COVID-among-people-living-in-care-homes-14-October-2020-3.pdf>

³ [COVID-19 Weekly report FR.pdf \(sciensano.be\)](https://www.sciensano.be/en/covid-19-weekly-report-fr)

⁴ <https://covid19tracker.ca/>

⁵ <https://www.ccss.sa.cr/noticias/general?ccss-registra-24-859-vacunas-contra-la-covid19-aplicadas>

⁶ <https://vlada.gov.hr/news/beros-croatia-registering-fewer-infections-hospitalisations/31274>

⁷ [Ανακοινωθέντα Άρθρο - PIO](#) estimated based on the % of care homes where staff and residents have been vaccinated

⁸ <https://covid19.ssi.dk/overvagningsdata/vaccinationstilslutning> and <https://www.sst.dk/-/media/Udgivelser/2021/Corona/Vaccination/Kalender/Vaccinationskalender-8->

⁹ https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Daten/Impfquotenmonitoring.html

¹⁰ <https://www.israel21c.org/israel-has-vaccinated-everyone-in-elder-care-facilities/>

¹¹ <https://www.governo.it/it/cscovid19/report-vaccini/>

¹² <https://www.rivm.nl/covid-19-vaccinatie/cijfers-vaccinatieprogramma>

¹³ <https://coronavirus.data.gov.uk/details/healthcare?areaType=overview&areaName=United%20Kingdom>, <https://www.bbc.co.uk/news/uk-55786409> and [Analysis of population estimates tool - Office for National Statistics \(ons.gov.uk\)](https://ons.gov.uk)

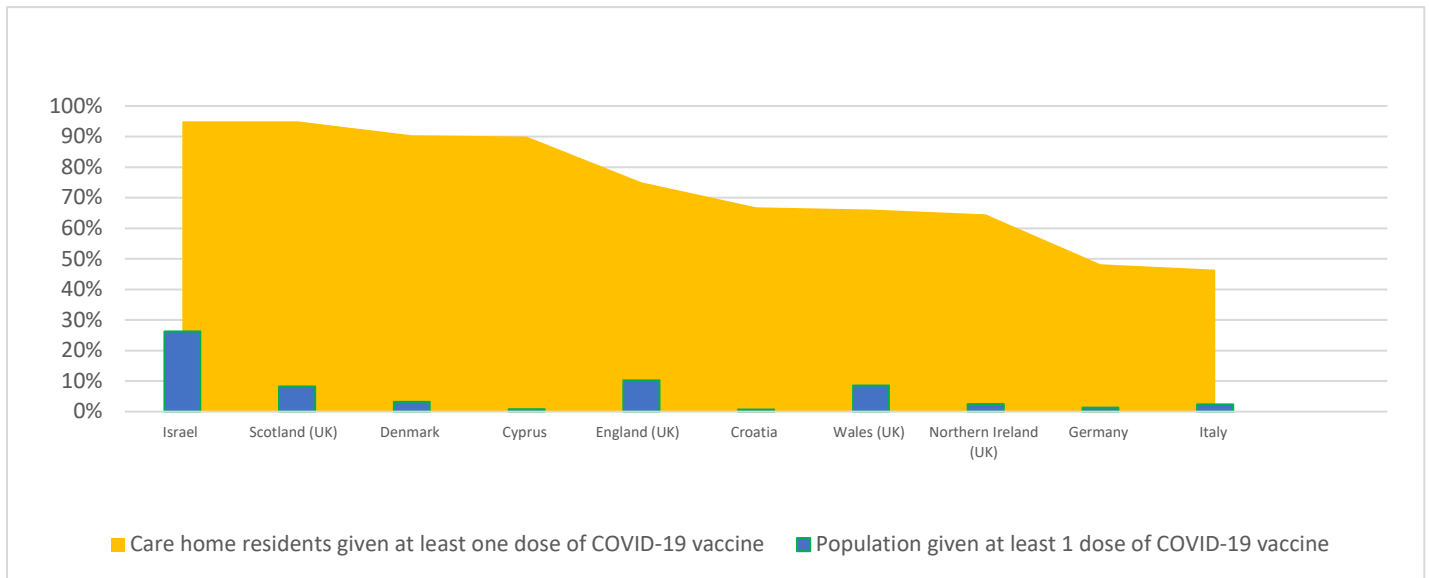
¹⁴ [New phase in Covid-19 vaccination programme is a game-changer | Department of Health \(health-ni.gov.uk\)](https://www.health-ni.gov.uk/news/new-phase-in-covid-19-vaccination-programme-is-a-game-changer)

¹⁵ <https://coronavirus.data.gov.uk/details/healthcare?areaType=overview&areaName=United%20Kingdom> and <https://www.bbc.co.uk/news/uk-55710758>

¹⁶ [Rapid COVID-19 virology - Public - Public Health Wales Health Protection | Tableau Public](https://public.tableau.com/viz/public-health-wales/rapid-covid-19-virology)

¹⁷ <https://covid.cdc.gov/covid-data-tracker/#vaccinations>, this may include 2nd doses

Figure 1. Share of total population and of care home population who have had the 1st dose of the COVID-19 vaccine, most recent data available up to 26th January 2021



Source: as per table 1.

Data for vaccinations of people who use or provide LTC in Spain is not available at national level, but some Autonomous Communities report having completed the first dose vaccinations for all care homes that had no COVID-19 outbreaks (Asturias¹⁸, Galicia¹⁹, La Rioja²⁰) and are starting the second doses.

4. Prioritisation of people who use and provide Long-Term Care for COVID-19 vaccinations

As countries began approving major pharmaceutical companies’ COVID-19 vaccines in early December, the question of which populations would be first (and second and third) to receive them loomed large. Most countries are prioritising groups at highest risk of death and or infections based on their age and health status, job-related exposure and living in congregate settings.

LTC Covid has begun reviewing the prioritization plans of different countries with a particular focus on the language regarding long-term care residents, carers, and personnel (see Table 2).

In terms of priority trends (i.e. those whom councils typically declare “Group 1” sub-populations), we find long-term care **residents** and **personnel** consistently listed, while **partners/families** of residents and **unpaid/at-home carers** are not explicitly mentioned in most countries. We also note that those deemed **clinically vulnerable** are amongst the top-prioritized, but there is little mention of those receiving long-term care for neurological illnesses (e.g. dementia, Alzheimer’s) and people with learning disabilities. In the United Kingdom, people with Down’s Syndrome were added to the list of individuals classed as ‘[clinically extremely vulnerable](#)’ in November 2020, due to [evidence of increased risk](#), hence will be higher priority for vaccination. [There have been calls in the UK](#) for this to be extended further, including a [legal challenge](#). It is rare to find explicit mention of those receiving at-home and outpatient long-term care.

¹⁸ <https://coronavirus.asturias.es/-/el-gobierno-del-asturias-comienza-la-administraci%C3%B3n-de-la-segunda-dosis-de-vacuna-anticovid>

¹⁹ <https://www.laregion.es/articulo/galicia/nieves-cabo-es-primera-persona-completar-fase-vacunacion-galicia/20210117093914999688.html>

²⁰ <https://www.larioja.com/la-rioja/coronavirus/directo-sala-alba-20210114111414-nt.html>

An analysis of the [COVID-19 Actuaries Response Group](#) has compared the groups prioritized in the UK vaccination rollout plan to the COVID-19 deaths observed among those groups. They found that the priority groups represent less than half of the UK population yet amount to 99% of the COVID-attributed deaths. They also estimated the number of vaccinations required to prevent one COVID-19 death and found that this increased rapidly when moving down the priority order; for example, among care home residents 20 vaccinations would be needed to prevent one death, compared to 2,000 among people aged 60 and over, and to 47,000 for the rest of the population.

Table 2. Long-Term Care Group Prioritization (Based on Countries' Advisory Council Reports)

	Older People (typically 75+)	People living in Care Homes	Care Home Personnel	Care Partners of people who live in Care Homes	Unpaid Carers	Community LTC workers	People who use community-based LTC services	LTC workers (all)	Clinically vulnerable groups (i.e. comorbidities)	People with dementia, neurological illness	People with learning disabilities	Other Notable Populations
Australia	✓(1)	✓	✓(1)					✓(1)	✓(1)			✓(1) (indigenous communities, non-medical essential workers)
Austria	✓(2)	✓(1)	✓(1)						✓(1)	✓(2)		✓ (staff in health care with high risk of infection) (1) ✓(2) (people working in critical infrastructure)
Belgium	✓		✓						✓			
Canada	✓	✓	✓	✓	In 4 Canadian Provinces	✓		✓	✓			
Denmark	✓(3)	✓(1)	✓(4)	✓(6)	✓(6)	✓(4)	✓(2)	✓(4)	✓(5)			✓(2) (those performing critical functions in society)
Estonia	✓	✓	✓						✓			
France	✓(1)	✓(1)	✓(1)			✓(1)		✓(1)	✓(1)			
Germany	✓(1)	✓(1)	✓(1)	✓(2)	✓(2)	✓(1)		✓ (1)(2)	✓(2)(3)	✓(2)	✓(2) ²¹	✓ ²²
Greece	✓(2)	✓(1)	✓(1)					✓(1)	✓(1)(2)			

²¹ and staff supporting people with learning disability in residential and community/ domiciliary care settings

²² (1) staff in health care with very high risk of infection and those caring for people at greatest risk, (2) those at high risk and staff in public health services and relevant hospital positions

Hungary	√(3)	√(2)	√(2)			√(2)	√(2)	√(2)	√(5)			
India		√(2)	√(1)			√(1)		√(1)	√(2)			√ Non-medical frontline essential workers (e.g. teachers)
Indonesia			√			√		√				√ (working age adults)
Ireland	√	√(1)	√(1)									
Israel	√	√	√			√	√					
Italy	√	√	√(1)									
Malta	√(1)	√(1)	√(1)			√(2)		√(2)				√(1) (Staff and residents of mental hospitals)
The Netherlands			√(1)			√(1)		√(1)				
Norway	√(2)	√(1)	√(1)									
Singapore	√ (2)		√(1)					√(1)				
Spain	√	√	√				√		√			
United Kingdom	√	√	√						√		√	
USA	√	√	√				√		√			√ Non-medical frontline essential workers (e.g. teachers)

Annex 1 contains details of advisory council reports on vaccination priorities.

5. From prioritisation to delivery: initial evidence of international experiences and challenges

The speed of regulatory approval, as well as constraints in the supply of vaccines, means that some countries have started vaccinating earlier than others. This, as well as differences in logistical approaches to delivering vaccinations, explains national differences in [overall vaccination rates](#).

As prioritisation plans are finalized and rolled out, countries are facing new challenges regarding the delivery of vaccinations to long-term care populations—some that were expected, and others that may have prompted unforeseen ethical and logistical questions. Here we highlight some of initial findings on what has been happening internationally in the transition from prioritization plan to vaccination delivery. This information has been gathered from news reports and government announcements.

5.1. Logistical challenges for getting vaccines into care homes

1. A major challenge presented early in the rollout of vaccinations has been the storage of the Pfizer/BioNTech and Moderna vaccines. Most countries have found it challenging to work around the requirement of providing ultra-cold (-70 degree Celsius in the case of the Pfizer/ BioNTech vaccine) storage units to care homes²³. The Oxford/Astrazeneca vaccine (which can be stored at normal cold temperatures, between 2 and 8 degrees Celsius) was approved for administration in early January in the United Kingdom but has not yet been approved in other countries. The challenge of meeting the Pfizer vaccine requirements may explain why in some countries, despite a stated first priority for people living in care homes, in practice people who could travel to vaccination centres were vaccinated first.
2. In Germany, [mobile teams](#) have started to provide the vaccine in care homes, however, the [limited number](#) of available vaccine doses and the complex [cooling chains](#) that so far were required have been posing challenges to quick progress.
 - There appears to have been a [lag in vaccination delivery](#) during the holiday season, when staffing was low and clinics had reduced hours.
 - In the United Kingdom, the responsibility of vaccination of long-term care home residents has been placed on GP-led clinics, creating new challenges for their already-demanding schedules and [disallowing care home nurses](#) from taking initiative to vaccinate residents with whom they have established relationships. To encourage GP assistance in long-term care facility vaccination drives, [the NHS is giving GPs £10 per jab boost](#).
 - In the United States most vaccinations in long-term care facilities are being administered under contract by major drug store chains (Walgreens, CVS, and others), but there are [concerns that this may have slowed down the speed of delivery](#).
 - In the USA an [‘aspirational target’](#), set by the Trump administration, of having all residents and staff in long-term care facilities vaccinated by Christmas 2020 was not achieved, with reports of uneven access in different areas of the country contributing to this.
 - In Canada, there are reports of [100% first-dose vaccination](#) in long-term care facilities having been achieved in [PEI](#) and [Alberta](#) (as of 15th and 17th Jan 2020 respectively). Other provinces such as Quebec and BC are nearly complete. However, in Manitoba, concerns have been reported regarding [access of vulnerable home-dwelling individuals to the vaccine](#), whilst in Ontario, there has been [concern around how it initially prioritized non-LTC frontline health care workers over LTC residents and staff that worsened its ability to vaccinate LTC residents efficiently](#) especially as vaccine shortages emerged.

²³ Anecdotally, vaccinations in Catalonia (Spain) were partly delayed due to a delivery of [refrigerating units being delayed](#) when France closed its border with the United Kingdom in response to the COVID-19 VUI – 202012/01 variant.

- Following Pfizer’s announcement of a delay in the delivery of the vaccine, many [European Countries are facing great challenges](#) in guaranteeing their rollout plan’s schedule. This could harm the possibility of administering the second dose to the prioritized groups who already received the vaccine, which in most countries include nursing homes’ residents. For example, Italy received [29% less of the expected doses](#) in the January 18-24 week, with sharp variability among regions: some received less than half (e.g. – 53% in Veneto, which is currently among the hardest hit territories by the virus) of the planned doses. It will receive -20% of the expected doses in the January 25-31 week. Pfizer noted two reasons for the delay: 1) the major plant of [Puurus requires some maintenance](#) to increase the production, 2) EMA [confirmed](#) that six doses, rather than five, can be extracted from each BioNTech/Pfizer vial through a low dead volume syringe. The company [asserts](#) that its agreement with the European Union is based on a set numbers of doses (not vials). The Italian Government announced it will take legal action against Pfizer over the coming days. Also, AstraZeneca [announced](#) that initial volumes will ‘be lower than originally anticipated’, further harming the sustainability of European Governments’ vaccination plans.

5.2. Staff and residents hesitant about and/or refusing the vaccine

- Many care home personnel in the United States are [reportedly wary of receiving the vaccination](#)²⁴, with some studies suggesting that close to 30% of healthcare workers are ‘vaccine hesitant.’ [Much of the uncertainty](#) is rooted in the newness of vaccination and the expediency of its approval, as well as the convenience and cost related to getting the vaccine as has been the case in parts of Canada where LTC workers must travel to vaccination clinics to receive their vaccine. Similar hesitancies have been reported on in the [United Kingdom, Malta, Italy](#), and [Canada](#) though exact numbers of refusals by care workers in any of these countries are difficult to find (as of January 25th, 2021).
- Wariness and refusal of the vaccination in the United States also stem from a [long history of distrust due to mistreatment](#) of lower-income communities of colour and migrants by the healthcare sector.
- [In Germany, a](#) survey suggested less than half of nurses wanted the vaccine, but this is response to a theoretical question. In practice, a more confusing portrait appears to be manifesting; the Minister of Health says some nursing homes are seeing staff vaccination rates of 80%, while others are at approximately 20%.
- A “high degree of reluctance” is also being seen [amongst care home personnel in European countries such as France and Austria](#); one December [study in France](#) showed skepticism amongst French care home workers as high as 76%. According to Austrian national radio, around only half of care facility staff in the Vorarlberg region were willing to be inoculated. Health Ministries are trying to remain hopeful that the end of January will bring results with different numbers than what polls have suggested.

5.3. Residents unable to be vaccinated

- While countries may state that they are looking to vaccinate all care home residents and staff (and sometime announce this has been achieved), in practice there will be some people who cannot be vaccinated. This may be due to **counterindications** (for example for people with a history of [severe allergic reactions](#) to the vaccines or components of the vaccines). While negative reactions to the vaccinations appear to be rare, health ministries across the globe are cautious to remind long-term care residents and personnel that allergies and allergic reactions to past vaccinations and medications are justifiable reasons as to refuse the vaccine.

²⁴ See also <https://pubmed.ncbi.nlm.nih.gov/33370448/>

- **Pregnancy and Vaccination:** [The Netherlands](#) explicitly advises *against* those who are pregnant receiving the vaccination. [The United States](#) determines it to be a ‘personal choice,’ and encourages those who are pregnant to speak with their healthcare providers. [Israel](#) is now recommending that pregnant people receive it; according to the Health Ministry’s position paper (in cooperation with Israel’s fertility research association), “the illness caused by the coronavirus is liable to cause harm during pregnancy...and lead to early deliver,” so the importance of immunization outweighs unsubstantiated fears.
- There are also different approaches to vaccination in **care homes where there are active COVID-19 outbreaks**, which may result in delays in vaccinations in affected care homes, due to risk considerations.

5.4. Consent policies and challenges for people who lack capacity

Obtaining consent for people who lack capacity is another reason why vaccinations in care homes take longer than vaccinating other population groups.

- Disagreements between families and care home staff over the vaccination of residents who are unable to consent have already reached the courts. [In Spain, a care home went to court](#) to overturn the refusal of vaccination by the family (legal guardians) of a person living with dementia in the care home. The judge ruled in favour of the care home, claiming that “the low risk’ of vaccine harming the woman’s health was outweighed by the dangers of remaining exposed to the infection.”
- In the UK, [The Alzheimer’s Society has released a report](#) on consent to COVID-19 vaccination in relation to dementia and the Mental Capacity Act of 2005.
- In Germany, there have also been discussions about information and consent among people living in care homes and especially for those who lack capacity. It is required that the legal guardian of people without capacity have received [information](#) from a medical doctor before being asked for their consent.
- In Italy, there has been large [discussion](#) regarding vaccination consent for elderly residents of nursing homes who lack capacity and are without legal guardianship: the law has established that the nursing home becomes the legal guardian and has 48 hours to identify relatives (up to the third degree of relationship) that can express the consent for the elderly to be vaccinated.

5.5. Outbreaks following the first round of vaccination

- There are reports in many countries²⁵ of care homes where there have been COVID-19 infections shortly after the first round of vaccines were administered. It is understood that [full protection](#) from the vaccine should have been developed around one week following the second vaccination. In the reported cases, it was assumed that infection took place shortly before or after the first round of vaccines were delivered. [A particular dire case](#) of a long-term care home recently hit hard with the virus amidst its vaccination program is in Barrie, Ontario.
- On a positive note, early [reports from Israel](#) suggest that, 14 days after the 1st dose was administered, infection rates decreased by 50% among those who received the dose.

5.6. Reported side effects from the vaccine

- Reporting of [side effects](#) from the vaccine in Germany is very low. By 14 January, 842,455 people had received the vaccine. Out of this total, there were 325 reported cases with suspected side effects (0.53 suspected cases per 1,000 vaccine doses), 51 suspected cases with severe side effect (0.08 suspected cases with severe side effects per 1,000 vaccine doses) and 10 deaths following vaccination. Those who were

²⁵ [Rödinghausen: Corona-Ausbruch in Seniorenheim nach Impfungen - Westfalen-Lippe - Nachrichten - WDR](#), [Dos residencias de mayores sufren brotes después de la primera dosis de la vacuna \(lavozdeg Galicia.es\)](#), <https://www.timesofisrael.com/240-israelis-diagnosed-after-vaccination-underscore-need-for-continued-vigilance/>
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recorded to have died until up to four days after they had received the vaccine were between 79 to 93 years old and suffered from severe underlying illnesses. It is not assumed that these deaths were linked to the receipt of the vaccine.

- The Norwegian Medicines Agency is [currently investigating the recent deaths of 23 frail older patients](#) after receiving the Pfizer vaccination, however, these deaths were among a population that experiences on average 400 every week. “The agency has...concluded that common adverse reactions of mRNA vaccines, such as fever, nausea, and diarrhea, may have contributed to fatal outcomes in some of the frail patients,” but is not alarmed and determines these to be unique and rare occurrences. [In Germany](#), specialists at the Paul Ehrlich Institute are similarly investigating ten deaths of older patients in palliative care following vaccination; they have determined thus far using current data that “they died from their main diseases, coinciding in time with the vaccination.” A similar report is ongoing in [France](#).

5.7. Vaccination and other public health measures

The impact of vaccination on transmission is as yet unknown, leading to growing recognition that public health measures, such as physical distancing will need to continue even after the roll out of vaccination programmes. A recent modelling study has highlighted that this will need to include long-term care [facilities](#).

6. Brief summaries of country vaccine rollout experiences

Canada

[See the full report on Canada’s rollout by Samir Sinha, Cameron Feil, and Natalie Iciaszczyk here \(published January 25th, 2020\).](#)

Information on Canada’s COVID-19 vaccination rollout comes from the National Advisory Committee on Immunization, which recommended that the first stage of dosage distribution prioritize residents and staff in senior homes, adults over 70, health-care workers, and adults in Indigenous communities. However, jurisdiction over the provision of health care ultimately falls to each province and territory; their corresponding strategies include complete vaccination of long-term care home residents and staff by February 2021. Four provinces have also chosen to prioritize family caregivers of LTC users in their strategies.

Alongside some globally observed issues in vaccine rollout (e.g. freezer storage planning, vaccine hesitancy), many Canadian provinces and territories have not yet released updates with details of their long-term care vaccination rollout plans. Canada has further announced a slight delay in their Pfizer-BioNtech shipments from Europe (with new deliveries only picking up again during the week of February 1st), forcing provinces and territories to revise their strategies and delay second-dosage administration. Ontario has indicated that despite the delay, the province has no intention of letting this affect their LTC resident population and in fact announced on January 25th that it would speed up its target to administer an initial vaccine dose to all of its LTC home residents by 10 days with a target completion date of February 5th, 2021.

By the 22nd January 2021 two provinces have completed vaccination of their designated LTC populations receiving publicly-funded LTC: Prince Edward Island and Alberta (on 15th and 17th January respectively). The authors are seeking data for other provinces, but so far: British Columbia (90%), Quebec (87%) and Ontario (60%) have reported these levels of vaccination.

United States

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

The rollout of the vaccines is targeted to “long-term care facilities” defined broadly to include nursing facilities, assisted living facilities, memory centres and other congregate settings for older or disabled people. Most vaccinations in long-term care facilities are being administered under contract by major drug store chains (Walgreens, CVS, and others). Facilities sign up to participate in the program. Vaccines are administered en masse through “clinics” held on-site in long-term care facilities. Vaccinations are reported as number of doses. A total of 2,714,487 doses, either 1st or 2nd doses, had been administered in long-term care facilities as of January 25, 2021. This is nearly double the number doses administered on January 15 (1,384,963); it represents an increase of nearly 133,000 doses per day. The number of long-term care facility residents probably exceeds 2 million, while the number of health and other workers associated with long-term care facilities is probably roughly the same. A total of 22,734,243 doses (19,252,279 1st, and 3,346,390 2nd) had been administered to the overall population, including long-term care, as of that date. With the rapid rollout of the vaccines, the numbers are increasing rapidly.

[West Virginia](#) has been unique in being the only US state to opt-out of a federal partnership program that uses major pharmacy chains to deliver vaccines to nursing homes, but rather used its local pharmacies with the additional help of the US National Guard to get all of its 214 vaccinated by December 30th, 2020. [Connecticut](#) became the second US State to announce the completion of vaccinating all of its long-term care facilities by January 8th, 2020.

The [CDC offers guidance to long-term care residents and staff](#) on the risks, benefits, and decision to be vaccinated for COVID-19. Individuals can refuse vaccination for any reason. Written consent is not required by Federal law but states may have their own requirements. Pharmacy chains or facilities may establish their own requirements regarding verbal, email, or formal written consent from residents or persons making medical decisions for them. No data are yet reported by the CDC, pharmacy partners, or the states on the rate of persons refusing the vaccine.

7. Discussion

Despite most countries announcing that people living in care homes had the highest priority, there is divergence, in some countries, between this statement and the degree to which vaccinations have been targeted to care home residents. The evidence on the rollout of vaccines (at this stage mostly captured by media reports of official announcements) shows that the process of vaccinating people in care homes poses particular challenges: from the complexity of obtaining consent of some care home residents (see this [article outlining the issues in relation to people living with dementia](#)), to the logistical difficulties posed by the vaccines that require very low temperatures and the challenge of delivering the vaccines at a when infection rates in care homes are very high in many countries. This means that, in some countries, despite statements of priority for care home residents, it has been easier to first vaccinate older people who could travel to vaccination sites (such as hospitals or health care centres) instead of care home residents.

For further information:

The [Our World in Data](#) site, which tracks weekly the announcements of countries beginning to vaccinate.

[The Oxford COVID-19 Government Response Tracker \(OxGCRT\)](#) is an ongoing collection of coronavirus pandemic policy responses from 180+ countries tackling issues related to travel, education, and healthcare administration.

The World Health Organization's (WHO) Strategic Advisory Group of Experts on Immunization (SAGE) produced a [values framework for the allocation and prioritization of COVID-19 vaccination](#) (September 12th, 2020) and [is currently making a request for information on vaccine rollout effectiveness and impacts](#).

The European Center for Disease Control and Prevention's (ECDC) [Overview of COVID-19 vaccination strategies and vaccine deployment plans](#) in the EU/EEA and the UK (as of December 2nd, 2020).

The Federation of European Social Employers has published a report [on how individual EU countries are prioritizing vaccination of the social care workforce](#) (as of January 15th, 2021).

We are hoping to continuously update and curate the above tables to reflect various countries' rollout plans, specifically with regards to long-term care users and personnel. If you would like to contribute information on your respective country, please contact us at s.e.lauter@lse.ac.uk.

ANNEX 1. Advisory Councils prioritisation plans, by country.

This table provides an ongoing summary with links to the reports by which Table 2 was formulated.

Table 3. List of Advisory Boards and Published Prioritization Plans (By Country)

Country	Advisory Board	Vaccine Rollout Priority Groups (Summary)
Australia	Australian Technical Advisory Group on Immunisation (ATAGI)	<p>“As of 13 November 2020, the initial priority groups for COVID-19 immunisation identified by ATAGI are:</p> <ul style="list-style-type: none"> • People who have an increased risk, relative to others, of developing severe disease or dying from COVID-19: older people; people with certain pre-existing underlying medical conditions; Aboriginal and Torres Strait Islander people • People at an increased risk of exposure, infection and transmission of COVID-19, or are in a setting with high transmission potential: health and aged care workers; other care workers such as group residential care workers and disability care workers; people in other settings where the risk of virus transmission is increased such as correctional and detention facilities, and meat processing plants. • People working in critical services: select essential services staff such as emergency services providers, defence forces, public health staff and staff managing quarantine facilities; people working in supply and distribution of essential goods and services such as food, water, electricity, telecommunications and other critical infrastructure. <p>Regular updates from the Department of Health are accessible here.</p> <p>Read the full ATAGI report here.</p>
Austria	Bundesministerium Soziales, Gesundheit, Pflege und Konsumentenschutz	<p>On 26 December 2020 the Federal Ministry of Social Affairs, Health, Care and consumer protection published the COVID-19 vaccine prioritization recommendations developed by the national vaccination committee.</p> <p>In the first phase people with the highest priority including residents and staff in care and nursing home, staff in health care sector with high risk of exposure and people aged 80 years and older.</p> <p>The second phase will include people with existing illnesses (including dementia) and their close contacts (especially of those living in residential care settings), domiciliary care workers, people aged 75 to 79 years.</p> <p>The full strategy providing an overview of the seven priority groups is available here, in German.</p>
Belgium	Government Commission on Coronavirus	<p>Published in July 2020, The Superior Health Council of Belgium advised prioritization of 1) workers in the healthcare sector (broadly), 2) people over 65 years of age, and 3) people with higher risk due to comorbidity (e.g. cancers, cardiovascular diseases, diabetes).</p> <p>On December 3rd, the COVID-19 Task Force produced a vaccination rollout strategy available here, in Dutch.</p>

<p>Canada</p>	<p>National Advisory Committee on Immunization (NACI)</p>	<p>Recommended prioritization (but determined by federal/provincial/territorial discussions):</p> <p>“1) Those at high risk of severe illness and death from COVID-19 (Advanced age; Other high-risk conditions (to be defined as the evidence base evolves)</p> <p>2) Those most likely to transmit COVID-19 to those at high risk of severe illness and death from COVID-19 and workers essential to maintaining the COVID-19 response (Healthcare workers, personal care workers, and caregivers providing care in long-term care facilities, or other congregate care facilities for seniors; Other workers most essential in managing the COVID-19 response or providing frontline care for COVID-19 patients; Household contacts of those at high-risk of severe illness and death from COVID-19</p> <p>3) Those contributing to the maintenance of other essential services for the functioning of society (Examples: those who cannot work virtually and have differential exposure to COVID-19 (e.g., police, firefighters, grocery store staff)</p> <p>4) Those whose living or working conditions put them at elevated risk of infection and where infection could have disproportionate consequences, including Indigenous communities (Examples: settings where physical distancing and other infection prevention and control measures are challenging, access to healthcare infrastructure is reduced, and infection could have disproportionate consequences).”</p> <p>Read the full preliminary guidance statement here and the policy report here (modified Nov. 03, 2020).</p> <p>Read the full guidance statement on the prioritization of initial doses of COVID-19 vaccine(s) here (modified Dec. 12, 2020)</p>
<p>Denmark</p>	<p>Danish Health Authority</p>	<p>“It is the Danish Health Authority's professional assessment that the target groups for the vaccination programme should be given priority in the following order:</p> <p>1) Residents in nursing homes, etc.</p> <p>2) People aged ≥ 65 years who receive both personal care and practical assistance.</p> <p>3) People aged ≥ 85 years.</p> <p>4) Personnel in healthcare, elderly care and selected parts of the social sector who are at particular risk of infection or who has been identified as performing a critical function in society.</p> <p>5) Selected persons with conditions and diseases that result in a significantly increased risk of severe illness from COVID-19.</p> <p>6) Selected relatives of persons at significantly increased risk of severe illness from COVID-19 or relatives who are indispensable as carers.”</p> <p>Read the full vaccination programme site here (in English or Danish).</p>
<p>Estonia</p>	<p>Ministry of Social Affairs</p>	<p>Notice from the Ministry of Social Affairs (3rd January 2021): Priority is for health professionals and healthcare professionals, nursing home staff and residents, people over 70 years of age, and people with health conditions that increase their vulnerability to COVID-19. Vaccination to other target groups and the general population will take place as soon as sufficient COVID-19 vaccines become available.</p>
<p>France</p>	<p>Ministry of Solidarity and Health</p>	<p>First phase, scheduled for January and February, prioritizes:</p> <p>“-The elderly residing in institutions (eg nursing homes)</p> <p>-The professionals working there and at high risk (age over 50 years, diseases)</p> <p>-All health professionals, including police, firemen and to-home aids for over 50 years and / or patients with comorbidities</p>

		<p>-People with disabilities housed in institutions and personnel are engaged aged 50 and older / or with comorbidities.”</p> <p>Full plan presented here.</p>
Germany	<p>Standing Committee on Vaccination (STIKO), German Ethics Council, The National Academy of Science Leopoldina</p>	<p>The initial position paper produced by the advisory committee in November 2020 is linked here (in English).</p> <p>The rollout plan beginning January 2021 is linked here in German.</p> <p>A summary of the German vaccination strategy can be found on LTC Covid’s Blog here. From the summary:</p> <p>“The German Federal Ministry of Health emphasises that high risk groups and medical staff will be among those who will be given first access to the vaccination once it becomes available. It specifically lists: 1) people living in care and nursing homes; 2) people aged 80 years and older; 3) staff working in health care settings with particularly high risk of exposure (e.g. A&E, staff caring for COVID-19 patients); 4) staff in health care setting in close contact with groups at particularly high risk (e.g. Haemato-oncology, transplant medicine); 5) care workers in domiciliary and residential long-term care for older people; 6) others working in care in nursing homes in contact with residents.</p>
Greece	<p>Ministry of Health</p>	<p>The nationwide campaign entitled “Eleftheria” prioritizes (Group One): health and social services staff, staff and residents of nursing homes; patients, staff and residents of rehabilitation centers and care centers for the chronically ill; priority staff for critical functions in Government. Group Two will prioritize those 70 and older and those deemed clinically vulnerable.</p> <p>The full report (in Greek) can be found here.</p>
Hungary	<p>National Public Health Centre</p>	<p>National Public Health Centre: only people over 18 with a valid social security number who have not been diagnosed with COVID-19 in the past 6 months are eligible for vaccination, in the following order of priority:</p> <ol style="list-style-type: none"> 1. Health care professionals (started on December 26) 2. Residents and staff in care homes 3. Law enforcement staff working in epidemic defence 4. People aged 60 or above 5. Younger people with chronic conditions 6. Critical infrastructure workers 7. General public
India	<p>Ministry of Health and Family Welfare</p>	<p>India’s vaccination rollout will begin on January 16th, following recent approval of Covaxin (Indian firm Bharat Biotech) and Covishield (Astrazeneca).</p> <p>Priority will be given to healthcare workers and non-medical frontline workers (appx. 30 million people). This will be followed by those 50 and older and under-50 population groups with co-morbidities deemed clinically vulnerable (appx. 270 million people). You can find the Prime Minister’s press release here.</p>
Indonesia	<p>Health Ministry</p>	<p>According to Reuters (January 4th, 2021), Indonesia is taking a novel approach and prioritizing working-age adults following the vaccinations of frontline health workers and public servants.</p>

		For more information on COVID-19 developments and protocols, the government provides this website .
Ireland	National Immunisation Advisory Committee (NIAC) and Department of Health	Ireland's Vaccination Allocation Scheme can be found here . As of December 13 th , Ireland is first and foremost prioritizing those 65+ who live in long-term care facilities, and those who work in them. These groups are followed by those 70 and older in the following order: 85+, 80-84, 75-79, 70-74.
Israel	Ministry of Health's Corona National Campaign Information and Knowledge Center	According to the Israeli Ministry of Health's Coronavirus Information website , those first eligible for the COVID-19 vaccine were healthcare workers and individuals over the age of 60. Through a decentralized approach, long-term care institutions and nursing homes are amongst the top-priority vaccination sites. The Ministry of Health aims to have all nursing home and LTC residents and workers vaccinated by mid-January. More information can be found on the regularly-updated COVID-19 dashboard here .
Italy	Ministry of Health	On December 12 th , the Ministry of Health published the Italian strategic plan for the vaccination against Covid-19. The plan identifies three priority groups for the vaccination: 1) Front-line health and LTC personnel 2) Nursing homes' residents 3) People aged 80 or above These three categories together account for 6,416,372 people (although there might be an overlap between groups), almost 11% of the Italian population. For more information, read the Italian strategic plan for vaccination against Covid-19 . Italy has also produced a national immunisation campaign website with live tracking of vaccinations .
Malta	Ministry of Health	On December 7 th , Malta's Health Minister informed Parliament of three priority cohorts to receive the vaccine in January: 1) Staff and residents in homes for the elderly and mental hospital patients, 2) healthcare workers in private and public hospitals, 3) People aged 85 and over. The second round in February would prioritize all other frontline workers and people aged 80+. The Minister's speech in parliament and review of the vaccination rollout plan can be found at this site . For more details, access the ministry's COVID-19 dashboard here .
The Netherlands	Ministry of Health, Welfare and Sport	Prioritization of vaccination (beginning in January) includes: -Acute care hospital staff (staff working in intensive care units, A&E departments and on COVID-19 wards) and ambulance crews, who are directly involved in the care and treatment of COVID-19 patients. -Care professionals working in nursing homes, small-scale residential homes and disability care homes, district nurses and social support workers. -Nursing home residents and residents of homes for people with intellectual disabilities. Platform can be found here , with a flowchart in Dutch available here .
Norway	Folkehelseinstituttet (National Institute of Public Health)	First prioritization groups include: 1) Residents in nursing homes and selected health personnel groups, 2) Age 85 years and older and selected health personnel groups, 3) Age 75-84 years, 4) Age 65-74 years <i>and</i> persons between 18 and 64 years with diseases / conditions with a high risk of serious course.

		Full programme site and plan accessible here (in English and Norwegian).
Singapore	Ministry of Health	<p>According to a press conference with Health Minister Gan Yim Yong on January 4th, Singapore is currently prioritizing the vaccination of frontline health workers, including staff at community care facilities and dedicated stay-home notice facilities. Starting in February, seniors aged 70+ will be prioritized.</p> <p>Read up on the Health Ministry's COVID-19 developments and vaccination protocols here.</p>
Spain	Ministry of Health	<p>"The following group prioritization has been established for the first stage:</p> <ol style="list-style-type: none"> 1. Residents and health and social care personnel in care homes for older people and people with disabilities 2. Front-line health personnel. 3. Other health and social care personnel. 4. Dependent people with disabilities who require help from others (noninstitutionalized highly dependents)." <p>Last update of document setting out priorities (November 23rd, 2020).</p>
United Kingdom	Joint Committee on Vaccination and Immunization (JCVI)	<p>The initial December report by JCVI is linked here, with continuous updates (last: December 31st, 2020) found here.</p> <p>Summary: "Nine Priority Groups, Primarily Based on Age:</p> <ol style="list-style-type: none"> 1) Residents in a care home for older adults and their carers 2) All those 80 years of age and over; Frontline health and social care workers 3) All those 75 years of age and over 4) All those 70 years of age and over; those deemed clinically extremely vulnerable, etc... - includes people with Down's Syndrome since November 2020. <p>A press release by the Department of Health and Social Care published on 4th January states that "GPs and local vaccination services have been asked to ensure every care home resident in their local area is vaccinated by the end of January."</p>
USA	Center for Disease Control's Advisory Committee on Immunization Practices (CDC's ACIP)	<p>"ACIP's ethical principles for allocating initial supplies of COVID-19 vaccine, namely to maximize benefits and minimize harms, promote justice, and mitigate health inequities, support the early vaccination of 1) <i>health care personnel (HCP)</i> and 2) <i>long-term care facility (LTCF) residents</i>." December 3rd, 2020 statement here.</p> <p style="text-align: center;">Sub-prioritization details were updated December 23rd:</p> <p>Phase 1a (ongoing) includes healthcare personnel and long-term care facility residents.</p> <p style="padding-left: 40px;">Phase 1b includes frontline essential workers and those aged 75+.</p> <p>Phase 1c includes those 65+, those with underlying medical conditions, and a broader definition of essential workers.</p> <p style="text-align: center;">A CDC Report on the importance of vaccinating LTCF Residents was published on December 28th.</p> <p>The National Governors Association has also released a report that looks at key themes, strategies, and challenges of COVID-19 vaccination plans in individual states</p>

		and territories (December 9th, 2020).
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