

Disclaimer: We kindly ask to acknowledge that due to the diverse and heterogeneous nature of the questions and the dynamic pandemic situation some of the information might be incomplete or only correct for the time being. Thus, please consider the date and date of the last update with the below information. All available information was provided by a country representative from the PHIRI network during or in connection to the respective meeting.

Date: 29.03.2021 Last update: 29.03.2021

Table 1: Overview of country responses

| Country | Q1: Vaccination strategy/products/age groups | Q1: short | Availability of data on effectiveness of vaccines | Studies to assess effectiveness of vaccination planned |
|---------|---|--|--|--|
| Belgium | <p>The summary below was last updated in the beginning of March:</p> <ul style="list-style-type: none"> • Pfizer: Residents and staff of nursing homes – since the 5th of January • Pfizer and Moderna: First-line health-care professionals working in hospitals - 18th of January • Pfizer, Moderna and AstraZeneca: Not first-line health-care professionals – 12th of February • Thereafter and sequentially, over 65 year old and persons with defined high risk comorbidities, essential workers and finally the adult general population. • Pfizer, Moderna, AstraZeneca and J&J: June and July <p>Detailed information regarding the people vaccinated in Belgium: https://datastudio.google.com/embed/u/0/reporting/c14a5cfc-cab7-4812-848c-0369173148ab/page/hOMwB</p> <p>AstraZeneca’s vaccine can be administered to everyone over the age of 18, including over 55s, in Belgium, according to the latest advice of the Superior Health Council.</p> <p>Belgium’s vaccination campaign officially began on the 5 January 2021, after an initial pilot phase end of December 2020. The first phase of roll-out has targeted residents and staff of nursing homes. On the 18th of January, vaccination was extended to first-line health-care professionals working in hospitals. Pfizer vaccine has been used since the pilot phase, Moderna since the 18th January 2020 and Astra-Zeneca started on the 12th of February 2021. The next phase of the vaccine campaign will target first line workers outside of hospital settings, collective care institutions (disability care, etc.) and other hospital staff. Thereafter and sequentially, over 65 year old and persons with defined high risk comorbidities, essential workers and finally the adult general population.</p> <ul style="list-style-type: none"> • Individuals with comorbidities to consider for priority groups. An advice over vaccination during pregnancy/breastfeeding is also available. <p>Source: https://covid-19.sciensano.be/sites/default/files/Covid19/COVID-19_fact_sheet_ENG.pdf Figure: Belgium vaccine strategy (23rd of February):</p> | <p>BioNTech/Pfizer (mainly for residents and staff in nursing homes) Moderna AstraZeneca Johnson&Johnson (planned for June/July 2021)</p> | <p>Studies on nursing homes are ongoing but there are issues regarding the quality of data. Results are not available yet.</p> | <p>PICOV will provide most valuable results on immune response (1st paper submitted). 20 Belgian residential care centers. The PICOV study will monitor 2 groups of 1000 staff and residents of residential care centers during the winter of 2020-2021. The people in one group have already been infected with the corona virus, those in the other group have not. The aim of the study is to find out whether there is a difference between these two groups in the number of influenza or acute respiratory infections. In addition, this study examines:</p> <ul style="list-style-type: none"> • whether the group that was already infected with the corona virus is possibly protected against a new corona infection • whether or not people who were already infected with the coronavirus become more seriously ill with a new COVID -19, flu or respiratory infection • the antibodies that are built up after influenza vaccination |



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| | <p>Projetion théorique, sous réserve des approbations et livraisons Le type de vaccin administré à chaque groupe sera défini en fonction de ses caractéristiques techniques et des lieux de vaccination</p> | | | |
|-----------------------|--|---|-----------------------------------|--|
| Bulgaria | <p>Vaccination prioritization: First: medical professionals; then teachers, residents of elderly care, security, front line workers, age 65+, and people with health risk according to COVID-19. Due to a lack of willingness to get vaccinated, registry corridors (online platform) are opened at the moment. In the moment the rate of the people who want to get vaccinated in Bulgaria raised to 62%, however, the vaccines' supply is not fast enough as the demand.</p> | BioNTech/Pfizer Moderna AstraZeneca | Will reply in written | |
| Croatia | <p>There are no age differences for the used vaccination products. Amongst others, the main groups vaccinated are health care workers, patients with comorbidities, and vulnerable groups. Currently, the portal is opened for registration. After registration, the potential vaccination candidates are further prioritized.</p> | BioNTech/Pfizer Moderna AstraZeneca | No | Yes, studies on the effectiveness of AstraZeneca vaccinations are being planned. |
| Czech Republic | <p>1.2 Mio. people got at least one dose; approx. 450.000 have completed full vaccination; There is a strategy in place with 3 phases: 1st phase 1: age 80+, those who are living in social care establishments 2nd phase (currently ongoing): age 70+ and at risk (the risk system includes age, profession, and health risk); pedagogical workers and hospital workers; 3rd phase Overview for the Czech Republic at the following link: https://onemocneni-aktualne.mzcr.cz/vakcinace-cr</p> | | Not aware of any studies | Yes, as part of the ECDC effectiveness study |
| Estonia | <p>Currently there is a recommendation of using all COVID-19 vaccines for people 60+, starting with the eldest and those in the risk group. All COVID-19 vaccines that have EU Market Authorization can be used according to the SPC. As a precautionary measure EE recommends using AstraZeneca only for people 60+. As of now, 14,6% of the population is vaccinated with full doses.</p> | BioNTech/Pfizer AstraZeneca (60+) | Data are not available at moment. | Yes, as part of the ECDC effectiveness study |



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| <p>Ireland</p> | <p>Ireland's vaccine strategy & allocation groups are available at the following link: https://www.gov.ie/en/publication/39038-provisional-vaccine-allocation-groups/ (most recently updated on 23rd February to move those at high/very high risk of severe death/disease up the list)</p> <p>Strategy prioritises those most vulnerable to COVID-19 and those who care for them. IE is currently vaccinating cohorts 1-4 (15 cohorts overall), which includes LTCF residents/staff, frontline healthcare workers, aged 70+, and aged 16-69 at v. high risk of severe illness/death</p> <p><u>Vaccine Progress:</u> (as of 26th March):</p> <ul style="list-style-type: none"> - 567,023 have received one dose / 219,546 fully vaccinated - ~4.4% of total population/~5.8% of adult population fully vaccinated - Data on vaccine progress in Ireland available here: Ireland's COVID19 Data Hub - Vaccinations (geohive.ie) <p><u>Vaccine Goals:</u> To have all 70+ vaccinated by mid-May, 4 in 5 adults to have received one dose by the end of June, build capacity to deliver 250,000 doses a week.</p> <p>There are 4 vaccines authorised for use in IE (by the EMA), and three of these are currently being administered (BioNTech/Pfizer, Moderna, & AstraZeneca). All 3 of these vaccines can be used in individuals over 18, with only Pfizer for 16-17 year olds. However, largely speaking, Pfizer & Moderna are preferred for those aged 70+. It is predicted that IE will start receiving Janssen vaccines in Q2, in line with EU projections.</p> | <p>BioNTech/Pfizer (16/17, 18+) Moderna (18+) AstraZeneca (18+) Johnson & Johnson (planned for Q2)</p> | <p>No data as of yet, but we have seen COVID-19 infections in LTCF, healthcare workers, and 85 years+ fall dramatically. This is evidenced by the fact that recently visits to nursing home residents resumed (twice a week), in facilities where 80% of staff and residents are vaccinated.</p> | <p>Studies have been planned, and will be implemented by the Health Protection Surveillance Centre (www.hpsc.ie), as part of larger international ECDC/WHO studies on vaccine effectiveness. Currently work is ongoing with national partners and implementation sites on agreeing sites for participation, necessary resources, methodologies, protocols and research ethic requirements.</p> <p>Objectives:</p> <ol style="list-style-type: none"> 1. Primary objective: to estimate overall and product-specific COVID-19 VE 2. Secondary objective (depending on sample size): to estimate overall and product-specific COVID-19 VE by health, age, disease severity, SARS-CoV-2 variant, and other variables appropriate to each study population <p>Population Groups/Study Types:</p> <ol style="list-style-type: none"> (i) Primary care patients in GP settings (retrospective test negative design case control study) (ii) Patients with Severe Acute Respiratory Infections admitted to acute hospitals (as above) (iii) Healthcare workers in hospitals (prospective longitudinal cohort study) (iv) Comparing illness rate in vaccinated vs unvaccinated during outbreaks (screening methodology/analytic study) |
| <p>Italy</p> | <p>Three vaccination products are used in IT, namely BioNTech/Pfizer, Moderna, and AstraZeneca. A vaccination strategy plan is in place, which in summary includes:</p> <ul style="list-style-type: none"> - BioNTech/Pfizer for 80+ and vulnerable groups - 1st priority: health care personnel, teachers, security staff - currently the general population at the age of 70+ is being vaccinated - 3 Mio. people completed vaccination <p>Updates on COVID-19 vaccination in Italy are available at the following link: https://www.governo.it/it/cscovid19/report-vaccini/</p> <p>COVID-19 Vaccination strategic plan: https://www.trovanorme.salute.gov.it/norme/renderPdf.spring?seriegu=SG&datagu=24/03/2021&redaz=21A01802&artp=1&art=1&subart=1&subart1=10&vers=1&prog=001</p> | <p>BioNTech/Pfizer (80+, vulnerable groups) Moderna AstraZeneca</p> | <p>Not aware of any studies</p> | |
| <p>Malta</p> | <p>In MT, BioNTech/Pfizer, Moderna, and AstraZeneca are being used. In total 130.000 people have received at least one dose.</p> | <p>BioNTech/Pfizer (70+, vulnerable groups/people with</p> | <p>Regarding BioNTech/Pfizer and Moderna, infections</p> | |



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| | BioNTech/Pfizer vaccine has been used for the elderly in nursing homes, additionally, nursing homes observe a regular testing strategy. | chronic conditions) Moderna (some of essential working groups) AstraZeneca (primarily under 70 years of age) | have been reported in 9% of the vaccinated population. So far, only the first dose of the AstraZeneca vaccine has been administered, therefore no information on AstraZeneca effectiveness is available yet. Furthermore, infections after the second dose are not observed yet. | |
| Netherlands | <p>Priorization of vaccination:</p> <p>1. Health and care workers (the order for health and care workers is available at the following link: https://www.government.nl/topics/coronavirus-covid-19/dutch-vaccination-programme/order-of-vaccination-against-coronavirus/health-and-care-workers)</p> <p>2. People who do not work in healthcare (the order for people who do not work in healthcare is available at the following link: https://www.government.nl/topics/coronavirus-covid-19/dutch-vaccination-programme/order-of-vaccination-against-coronavirus/order-of-vaccination-for-people-who-do-not-work-in-healthcare)</p> <p>Currently, BioNTech/Pfizer, Moderna and AstraZeneca are all being used, but health and care workers who are aged 65 and over will receive the BioNTech/Pfizer vaccine. AstraZeneca was put on a 2-week hold as a temporary precaution, its use resumed before the 2 weeks had passed.</p> | BioNTech/Pfizer (health and care workers aged 65+) Moderna AstraZeneca | In the Netherlands, safety and effectiveness of vaccines are evaluated by the Medicines Evaluation Board (CBG-MEB; next to the European Medicines Agency (EMA)). Information from RIVM on efficacy and protection is available at the following links: https://www.rivm.nl/en/covid-19-vaccination/vaccines/efficacy-and-protection https://www.rivm.nl/en/covid-19-vaccination/covid-19-vaccines#effectiveness https://www.rivm.nl/en/covid-19-vaccination/questions-and-answers | 22 European organisations participate in the ACCESS (vaccine Covid-19 monitoring Readiness) project, commissioned by EMA. From the Netherlands, UMC Utrecht (coordinator of the EU Pharmacovigilance Research Network) and Utrecht University lead the project, and RIVM, the Netherlands Pharmacovigilance Centre Lareb and research institute PHARMO also participate. More information can be found here: EMA commissions independent research to prepare for real-world monitoring of COVID-19 vaccines European Medicines Agency: https://www.ema.europa.eu/en/news/ema-commissions-independent-research-prepare-real-world-monitoring-covid-19-vaccines |
| Norway | <p>There are Comirnaty (Pfizer/Biontech), Moderna and Astra Zeneca used in Norway. Astra Zeneca has been used for Health Personnel with age 65 years and less till 11th March 2021 (on hold now). The rest was offered to the prioritised age groups 65+.</p> <p>Comirnaty is also offered to adolescents 16-17 years old with a high risk of severe disease course.</p> <p>More information in English: https://www.fhi.no/en/id/vaccines/coronavirus-immunisation-programme/who-will-get-coronavirus-vaccine-first/ https://www.fhi.no/en/news/2021/fortsatt-pause-i-astrazeneca-vaksineringen/</p> | BioNTech/Pfizer (16/17 with a high risk of severe disease course) Moderna AstraZeneca (health personnel under the age of 65) - on hold since 11th March | | Please see the relevant article: "See signs of protection against COVID-19 among those vaccinated" https://www.fhi.no/en/news/2021/ser-tegn-pa-beskyttelse-blant-de-som-er-vaksinert-mot-covid-19/ |
| Poland | According to the priority groups, BioNTech/Pfizer is used for health care workers and AstraZeneca for teachers. | BioNTech/Pfizer (health care workers) | Not aware of any studies | |



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|-----------------|---|---|--|---|
| | Poland has now started vaccinating the population from 65 to 69 years of age, as well as chronically ill patients with AstraZenca. | AstraZeneca (teachers, chronically ill, 65-69) | | |
| Portugal | AstraZeneca, Sanofi, Johnson&Johnson, BioNTech/Pfizer, CureVac, Moderna; BioNTech/Pfizer, CureVac, and AstraZeneca vaccines are mainly used. There are 3 phases of the vaccination strategy. Portugal is currently in phase 1, which has started with the vaccination of medical professionals and further proceeded with the start of vaccination 65+ with chronic diseases and teachers from high schools in February. Phase 2 will start soon with the vaccination of the population from 50 to 65 years of age. The first priority groups are patients with chronic diseases (e.g. diabetes, cancer). Portugal Vaccination reports are available at: https://covid19.min-saude.pt/vacinacao/# | BioNTech/Pfizer Moderna AstraZeneca Sanofi Johnson&Johnson CureVac | | |
| Slovakia | In Slovakia, 3 types of vaccines are used, namely BioNTech/Pfizer, Moderna, and AstraZeneca, with the biggest proportion of BioNTech/Pfizer. So far, 600.000 people have been vaccinated for the first time. About 2 Mio. doses of the Russian vaccine Sputnik V are stored, however, they are not released for utilization yet. Some tests regarding the approval of the Sputnik V vaccine are currently ongoing. The approval depends on the decision of the EMA and the National Institute of drug control. | BioNTech/Pfizer Moderna AstraZeneca | Data are not evaluated nor published yet. | |
| Slovenia | AstraZeneca is used for ages up to 64, but also for older immobile patients. BioNTech/Pfizer and Moderna are used for the high priority groups. | BioNTech/Pfizer Moderna AstraZeneca (up to 64) | No data available yet, but there are plans for starting a study. | |
| Spain | BioNTech/Pfizer and Moderna vaccines are authorized for people over 18 years old, whereas AstraZeneca is authorized for people from 18 to 65 years old (until March 22 the limit was 55 years old). The decision on which groups are first vaccinated is decided according to risk of severe morbidity and mortality, risk of exposure, socioeconomic impact and risk of transmission. So, taken that into account, BioNTech/Pfizer and Moderna vaccines are being administered to residents and workers in long-term care facilities and assisted living nursing homes, frontline healthcare and social care workers and to non-institutionalized highly dependent people. Whereas, AstraZeneca is being given to essential workers up to 65 years old. The current prioritised groups are described in the following table below. | BioNTech/Pfizer (18+; residents and workers in long-term care facilities and assisted living nursing homes, frontline healthcare and social care workers and to non-institutionalized highly dependent people) Moderna (18+; residents and workers in long-term care facilities and assisted living nursing homes, frontline healthcare and social care workers and to non-institutionalized highly dependent people) AstraZeneca (18-65, essential workers up to 65) | There are preliminary data available on vaccination effectiveness against infection, hospitalization and mortality among inpatients and residents in long term care facilities and nursing homes. They are going to be published soon in the updates of the Strategy of COVID-19 vaccination from Ministry of Health. At National level, it has been reported a sharp decline in the number of cases and deaths in residences: https://www.imsero.es/IntePresent2/groups/imsero/documentos/binario/inf_resid_20210314.pdf Some regions (e.g Asturias) have reported a decline in | The National Centre of Epidemiology is involved in the Horizon 2020 I-MOVE-COVID-19 project. Among the objectives of this project is the evaluation of the vaccine effectiveness against COVID-19. The study design is the case control negative design within the surveillance of Acute Respiratory Infection. |



| | Pfizer-BioNtech | Moderna | Astra-Zeneca | | |
|-----------------------|---|---------|--------------|--------------------------------|--|
| | Over 18 | Over 18 | From 18 to 6 | | deaths among residents in LTCF compared to non-residents: https://obsaludasturias.com/obsa/wp-content/uploads/MORTALIDAD_CORONAVIRUS_160221.pdf |
| | PRIORITISED GROUPS | | | | |
| | Group 1. Residents and workers in assisted-living nursing homes as well as care centres for highly-disabled people. | | | X | X |
| | Group 2. Front line healthcare and social care workers | | | X | X |
| | Group 3. Other health and social care workers | | | | |
| | 3A. Hospital and primary care workers not included in group 2; Odontologist, hygienists | | | X | X |
| | 3B. Pandemic management personnel, physiotherapists, occupational therapists, chemist's assistants, etc. | | | | X |
| | 3C. Other health and social care workers | | | | X |
| | Group 4. Non-institutionalised highly dependent people. | | | X | X |
| | Group 5. Older people | | | | |
| | 5A. People older than 80 years old | | | X | X |
| | 5B. People from 70 to 79 years old | | | X | X |
| | 5C. People from 60 to 69 years old | | | X | X |
| | Group 6. Essential workers | | | | |
| | 6A. Security forces, emergency personnel and the army | | | | X |
| | 6B. Teachers in special and infant schools | | | | X |
| | 6C. Teachers in primary and high school | | | | X |
| | Group 7. people below 60 years old with high risk conditions for serious COVID-19 | | | X | X |
| United Kingdom | In the UK, BioNTech/Pfizer and AstraZeneca are used as vaccine products. The implementation of others is under consideration. The UK has started vaccinations in care homes, for care workers, and vulnerable groups with no age restrictions for the used products. The rollout is going well, so far 30 Mio. people have been vaccinated. | | | BioNTech/Pfizer AstraZeneca | In the UK vaccine effectiveness research is being undertaken by each of the four countries. Care home efficacy: https://www.medrxiv.org/content/10.1101/2021.03.19.21253940v1 From Public Health England: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/971017/SP_PH_VE_report_20210317_CC_JLB.pdf Simon Cottrell (Public Health Wales) Simon.Cottrell@wales.nhs.uk leads on vaccine effectiveness analyses in Wales and links to UK groups. |



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3. Additional Information:

- **ECDC COVID-19 Vaccine roll-out overview:**

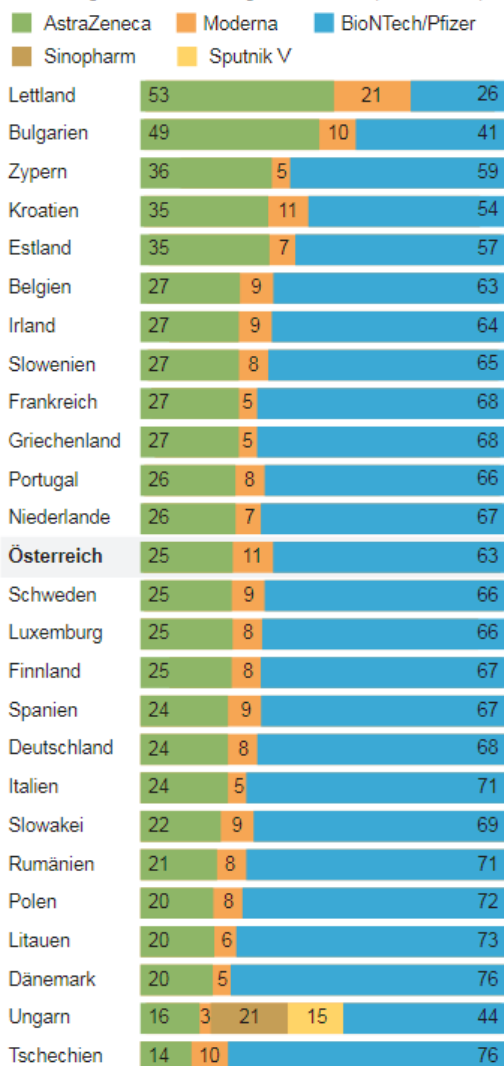
<https://www.ecdc.europa.eu/en/covid-19/vaccine-roll-out-overview>

- **Overview of vaccine delivery in EU countries (in German):**

https://grafik.apa.at/fastbuild/2021_12_2203-2803/0410-21/index.html?fbclid=IwAR2VS0v6I0aPWCGfGpo5f_Fd0Jv8O-621qxWG6NqKZ1t3jmt1k5A2H2GgAA

Corona: Impfstoffe in der EU

Anteil an gesamten Lieferungen in Prozent (Stand 24. 3.)



Zahlen gerundet, Malta: keine Daten

Grafik: © APA, Quelle: ECDC



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